2015-2016 Surface Water Quality Baseline Report

Kudz Ze Kayah Project

BMC-16-01-1025_007_Surface Water Quality Baseline Report_RevB_161209

09 December 2016

Prepared for:

BMC Minerals (No.1) Ltd.

DISTRIBUTION LIST

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

ALEXCO ENVIRONMENTAL GROUP INC. SIGNATURES

Report prepared by: 09 DECEMBER 2016

Nichole Speiss, B.Sc., EPt
Environmental Scientist

Report prepared by: 09 DECEMBER 2016

Andrew Gault, MChem, PhD
Environmental Chemist

Report reviewed by: 09 DECEMBER 2016

Kai Woloshyn, B.Sc.
Environmental Manager

EXECUTIVE SUMMARY

On behalf of BMC Minerals (No. 1) Ltd. (BMC), Alexco Environmental Group Inc. (AEG) was retained to conduct baseline water quality sampling at the Kudz Ze Kayah (KZK) property in April 2015, with monthly water quality sampling program conducted at twelve surface water stations located on South Creek, Fault Creek, Geona Creek, Finlayson Creek, and East Creek. These data were combined with the historic Cominco water quality surveys in 1994-1995 and subsequent water licence biannual sampling between 2002 and 2014 to evaluate the natural background chemistry of the major watercourses located on the KZK property. All creek waters were circumneutral to mildly alkaline (pH 6.8 – 8.7; median 7.8), with hardness increasing from moderately hard (South Creek and Fault Creek) to hard (Geona Creek) in the upper watershed to very hard (Finlayson Creek and East Creek) in the lower watershed.

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

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

A comparison of the 1994-1995 results with those from 2015-2016 showed that the majority of parameters had a similar concentration range, suggesting the site water quality has remained largely unchanged in the past two decades of monitoring. Only total chromium and selenium exhibited clear differences between the datasets, which may be attributable to differences in sampling frequency, flow conditions at the time of sampling, and pre-concentration used to improve the detection limits of these two elements in the historic dataset.

LIST OF ACRONYMS

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

GLOSSARY

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

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

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

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

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

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

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

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

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

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

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

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

True Colour Unit: units used to express colour measurements.

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

TABLE OF CONTENTS

1. INTRODUCTION 1
1.1 BACKGROUND 4
1.1.1 Initial Environmental Evaluation Baseline Data 4
1.1.2 Water Licence QZ09-026 Monitoring 8
2. METHODOLOGY 9
2.1 SAMPLE LOCATIONS 9
2.2 FIELD METHODOLOGY 10
2.3 ANALYSES 10
2.4 QUALITY ASSURANCE/QUALITY CONTROL 14
2.4.1 Laboratory Quality Control Sample Analysis 14
2.4.2 Field Variability 14
2.4.3 Field and Travel Blanks 16
2.5 SURFACE WATER QUALITY GUIDELINES 20
2.6 DATA QUALITY ASSESSMENT 21
3. RESULTS AND DISCUSSION 23
3.1 SOUTH CREEK 23
3.1.1 Setting 23
3.1.2 Physical Parameters and Nutrients 23
3.1.3 Metals 26
3.2 GEONA CREEK WATERSHED 28
3.2.1 Setting 28
3.2.2 Physical Parameters and Nutrients 28
3.2.3 Metals 39
3.3 GEONA CREEK SEEPS 47
3.3.1 Setting 47
3.3.2 Physical Parameters and Nutrients 47
3.3.3 Metals 50
3.4 FINLAYSON CREEK 56
3.4.1 Setting 56
3.4.2 Physical Parameters and Nutrients 56
3.4.3 Metals 64
3.5 EAST CREEK 70
3.5.1 Setting 70
3.5.2 Physical Parameters and Nutrients 70
3.5.3 Metals 72
3.6 COMPARISON OF HISTORIC AND RECENT WATER QUALITY DATA 74
4. SUMMARY 76
5. REFERENCES 78

LIST OF TABLES

Table 1-1: Surface Water Quality Monitoring Stations from 1994 and 1995 5
Table 1-2: Surface Water Quality Monitoring Frequency in 1994 and 1995 6
Table 1-3: Surface Water Quality Parameters Monitored in 1994 and 1995 7
Table 2-1: KZK Surface Water Quality Monitoring Locations 9
Table 2-2 Analytical Methods used for Physical, Anion, and Nutrient Constituents Analyzed in the Laboratory 12
Table 2-3 Analytical Methods used for Element Constituents Analyzed in the Laboratory 13
Table 2-4: Duplicate Analytes with RPD greater than 25% that met the PQL 15
Table 2-5: Duplicate Analytes with RPD greater 25% that did not meet the PQL 16
Table 2-6: Field Blank Analytes with Concentrations >2 times the DL 19
Table 2-7: Generic Water Quality Guidelines for the Protection of Aquatic Life 20
Table 3-1: Summary Statistics for In Situ Parameters at Site KZ-13, South Creek 24
Table 3-2: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-13, South Creek 25
Table 3-3: Summary Statistics for Metals of Interest at Site KZ-13, South Creek 27
Table 3-4: Summary Statistics for In Situ Parameters at Site KZ-6, Tributary to Geona Creek 29
Table 3-5: Summary Statistics for In Situ Parameters at Site KZ-7, Geona Creek 29
Table 3-6: Summary Statistics for In Situ Parameters at Site KZ-9, Geona Creek 30
Table 3-7: Summary Statistics for In Situ Parameters at Site KZ-18, Tributary to Geona Creek 30
Table 3-8: Summary Statistics for In Situ Parameters at Site KZ-17, Geona Creek 31
Table 3-9: Summary Statistics for In Situ Parameters at Site KZ-2, Fault Creek 31
Table 3-10: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-6, Tributary to Geona Creek 33
Table 3-11: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-7, Geona Creek 34
Table 3-12: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-9, Geona Creek 35
Table 3-13: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-18, Tributary to Geona Creek 36
Table 3-14: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-17, Geona Creek 37
Table 3-15: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-2, Fault Creek 38
Table 3-16: Summary Statistics for Metals of Interest at Site KZ-6, Tributary to Geona Creek 41
Table 3-17: Summary Statistics for Metals of Interest at Site KZ-7, Geona Creek 42

Table 3-18: Summary Statistics for Metals of Interest at Site KZ-9, Geona Creek 43
Table 3-19: Summary Statistics for Metals of Interest at Site KZ-18, Tributary to Geona Creek 44
Table 3-20: Summary Statistics for Metals of Interest at Site KZ-17, Geona Creek 45
Table 3-21: Summary Statistics for Metals of Interest at Site KZ-2, Fault Creek 46
Table 3-22: In Situ Parameters at Seep Sites 48
Table 3-23: CCME/BCMoE Guideline Anions and Nutrients at Seep Sites 49
Table 3-24: Concentrations of Metals of Interest at East Seep Near KZ-9 51
Table 3-25: Concentrations of Metals of Interest at West Seep Near KZ-9 52
Table 3-26: Concentrations of Metals of Interest at Seep 3 53
Table 3-27: Concentrations of Metals of Interest at Seep 4 54
Table 3-28: Concentrations of Metals of Interest at Seep 5 55
Table 3-29: Summary Statistics for In Situ Parameters at Site KZ-16, Finlayson Creek 57
Table 3-30: Summary Statistics for In Situ Parameters at Site KZ-15, Finlayson Creek 57
Table 3-31: Summary Statistics for In Situ Parameters at Site KZ-22, Finlayson Creek 58
Table 3-32: Summary Statistics for In Situ Parameters at Site KZ-26, Finlayson Creek 58
Table 3-33: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-16, Finlayson Creek 60
Table 3-34: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-15, Finlayson Creek 61
Table 3-35 :Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-22, Finlayson Creek 62
Table 3-36: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-26, Finlayson Creek 63
Table 3-37: Summary Statistics for Metals of Interest at Site KZ-16, Finlayson Creek 66
Table 3-38: Summary Statistics for Metals of Interest at Site KZ-15, Finlayson Creek 67
Table 3-39: Summary Statistics for Metals of Interest at Site KZ-22, Finlayson Creek 68
Table 3-40: Summary Statistics for Metals of Interest at Site KZ-26, Finlayson Creek 69
Table 3-41: Summary Statistics for In Situ Parameters at Site KZ-21, East Creek 71
Table 3-42: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-21, East Creek 71
Table 3-43: Summary Statistics for Metals of Interest at Site KZ-21, East Creek 73

LIST OF FIGURES

Figure 1-1: Project Location 2

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

LIST OF APPENDICES

APPENDIX A. HISTORIC AND 2015-16 SURFACE WATER MONITORING DATA

APPENDIX B. 2015-16 SURFACE WATER MONITORING PHOTO LOG

APPENDIX C. HISTORIC AND 2015-16 SURFACE WATER PLOTS

APPENDIX D. AUGUST HISTORIC AND 2015-16 SURFACE WATER PLOTS

APPENDIX E. 2015-16 MAXXAM CERTIFICATES OF ANALYSIS

1. INTRODUCTION

BMC Minerals (No. 1) Ltd. (BMC) retained Alexco Environmental Group Inc. (AEG) to conduct water quality baseline studies at its Kudz Ze Kayah (KZK) property (i.e., the Project) to update and expand existing baseline information that exists for the Project area. BMC proposes the development of the Project involving the design, construction, operation, closure and reclamation of a mine in southeast Yukon and in the Kaska traditional territory. The Project encompasses the ABM deposit containing copper, lead, zinc, gold and silver. BMC acquired the KZK property in January 2015 from Teck Resources.

The Project is located approximately 260 km northwest of Watson Lake and 115 km southeast of Ross River (Figure 1-1). Access to the Project is via a 24 km long, all weather, single lane gravel tote road that connects the Project to the Robert Campbell Highway. The Project is in the northern foothills of the Pelly Mountains of the Yukon Plateau and in the Finlayson Creek watershed.

In March 2015, a gap analysis was undertaken to review the historic baseline surface water quality data available (described in Section 1.1) and based on the review of historical data and current regulatory requirements, the baseline water quality program was designed to update the dataset and fill in any data gaps. The baseline surface water quality program was implemented in April 2015 and this report discusses data collected through October 2016 (Figure 1-2). The monthly baseline monitoring is ongoing and the report will be updated following the completion of the second year of monitoring. This report also presents and discusses the historic surface water quality collected as part of the baseline studies in 1994 and 1995 and previously presented in the Initial Environmental Evaluation (IEE) (Cominco, 1996). The report also includes and discusses the surface water quality monitoring undertaken for the Project's type A Water Licence QZ97-026 as part of the bi-annual aquatic monitoring program from 2002-2014 (Laberge Environmental Services and Can-Nic-A-Nick Environmental, 2003, 2005, 2007, 2009, 2011, 2013, 2015).

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

BMC MINERALS

KUDZ ZE KAYAH PROJECT

FIGURE 1 -1

PROJECT LOCATION

JULY 2016

KUDZ ZE KAYAH PROJECT

ALEXCO ENVIRONMENTAL GROUP

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

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

Datum: NAD 83; Projection UTM Zone 9N

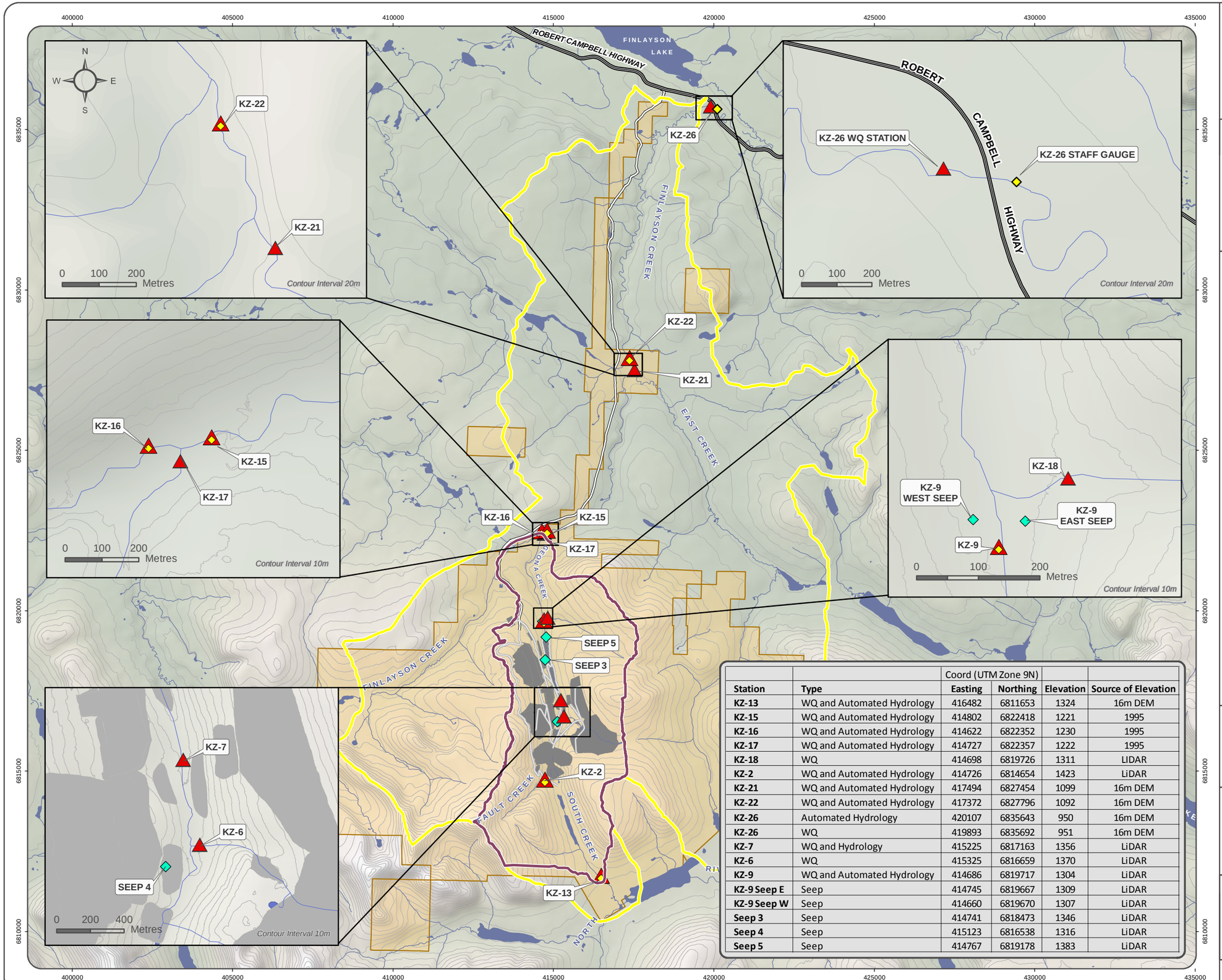
This drawing has been prepared for the use of Alexco Environmental Group Inc.'s client and may not be used, reproduced or relied upon by third parties, except as agreed by Alexco Environmental Group Inc. and its client, as required by law or for use of governmental reviewing agencies. Alexco Environmental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

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

0 20 40 60 80

Kilometers

D:\Project\AllProjects\Kudz_Ze_Kayah\Maps\01_Overview\03-Intermeditate\Project_Overview_Veg_Baseline_20160520.mxd
(*Last edited by: amatiashevska; 5/20/2016/13:05 PM*)



		Coord (UTM Zone 9N)			
Station	**Type**	**Easting**	**Northing**	**Elevation**	**Source of Elevation**
KZ-13	WQ and Automated Hydrology	416482	6811653	1324	16m DEM
KZ-15	WQ and Automated Hydrology	414802	6822418	1221	1995
KZ-16	WQ and Automated Hydrology	414622	6822352	1230	1995
KZ-17	WQ and Automated Hydrology	414727	6822357	1222	1995
KZ-18	WQ	414698	6819726	1311	LIDAR
KZ-2	WQ and Automated Hydrology	414726	6814654	1423	LiDAR
KZ-21	WQ and Automated Hydrology	417494	6827454	1099	16m DEM
KZ-22	WQ and Automated Hydrology	417372	6827796	1092	16m DEM
KZ-26	Automated Hydrology	420107	6835643	950	16m DEM
KZ-26	WQ	419893	6835692	951	16m DEM
KZ-7	WQ and Hydrology	415225	6817163	1356	LiDAR
KZ-6	WQ	415325	6816659	1370	LiDAR
KZ-9	WQ and Automated Hydrology	414686	6819717	1304	LiDAR
KZ-9 Seep E	Seep	414745	6819667	1309	LiDAR
KZ-9 Seep W	Seep	414660	6819670	1307	LiDAR
Seep 3	Seep	414741	6818473	1346	LiDAR
Seep 4	Seep	415123	6816538	1316	LiDAR
Seep 5	Seep	414767	6819178	1383	LiDAR

BMC MINERALS

KUDZ ZE KAYAH PROJECT

FIGURE 1-2

SURFACE WATER QUALITY AND HYDROLOGY MONITORING LOCATIONS

FEBRUARY 2017

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

ALEXCO ENVIRONMENTAL GROUP

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

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

Datum: NAD 83; Projection UTM Zone 9N

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

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

0 1 2 3 4 5

Kilometres

D:\Project\AllProjects\Kudz_Ze_Kayah\Maps\01_WaterQuality\01-Surface\General\WholeSite_150k_with Insets_and_all_Seeps_Baseline_20170215.mxd
(*Last edited by: amatlashevska; 15/02/2017/11:39 AM*)

1.1 BACKGROUND

1.1.1 INITIAL ENVIRONMENTAL EVALUATION BASELINE DATA

Baseline studies for surface water quality were undertaken in 1994 and 1995 by Cominco Ltd. and included in the IEE. The stations sampled in 1994 and 1995 including frequency and parameters analyzed for, are provided in the tables below (Table 1-1, Table 1-2 and Table 1-3). The sampling methods and analytical techniques employed in the 1994-1995 Cominco work were collected to industry standard and are deemed fit for use here. The detection limits reported for many constituents in the 1994 through 1995 Cominco water quality dataset are comparable to those reported in the current (2015 through 2016) baseline water quality program.

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

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

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

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

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

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

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

1.1.2 WATER LICENCE QZ09-026 MONITORING

Surface water monitoring was also conducted by Cominco at stations KZ-7, KZ-9, KZ-15, KZ-16, KZ-17, KZ-21, KZ-26 and KZ-27 in August every two years between 2002 and 2014 to fulfill Water Licence QZ97-026 requirements. BMC undertook water sampling in August 2016 with the 2016 Water Licence Monitoring report anticipated in the first quarter of 2017. As with the 1994 and 1995 data, some results from the Water Licence monitoring were removed from the database if they did not meet the data quality assessment guidelines (i.e. detection limit above regulatory guideline). This information has been included in APPENDIX A.

2. METHODOLOGY

2.1 SAMPLE LOCATIONS

The surface water quality monitoring program was re-evaluated and re-initiated in April 2015 and is currently being conducted monthly at 12 surface water sample stations (Table 2-1). Initially the 2015-2016 baseline program included 10 stations on South Creek, Fault Creek, Geona Creek, Finlayson Creek and East Creek (Figure 1-2). Station KZ-6, located on a Geona Creek tributary, was added to the program in December 2015. Station KZ-18, also located on a Geona Creek tributary, was added to the program in September 2016 and sampled twice in the reporting period. Groundwater seeps were also sampled during June, July and October 2015, and monthly June through October 2016.

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

Table 2-1: KZK Surface Water Quality Monitoring Locations

Station	Description	UTM Easting	UTM Northing
KZ-26	Finlayson Creek at Robert Campbell Highway	419,893	6,835,692
KZ-22	Finlayson Creek 100 m downstream of East Creek	417,372	6,827,796
KZ-21	East Creek at Mouth	417,494	6,827,454
KZ-16	Finlayson Creek immediately upstream of confluence with Geona Creek	414,622	6,822,352
KZ-15	Finlayson Creek 100 m downstream of confluence with Geona Creek	414,802	6,822,418
KZ-17	Geona Creek at Mouth. A new sampling station was re-established as close as possible to the original KZ-17 site. The original site is currently flooded due to a beaver dam constructed since 2008.	414,727	6,822,357
KZ-7	Upper Geona Creek near proposed ABM open pit	415,225	6,817,163
KZ-9	Geona Creek near proposed discharge location	414,686	6,819,717
KZ-18	East tributary to Geona Creek	414,698	6,819,726
KZ-2	Fault Creek	414,726	6,814,654
KZ-13	South Creek near mouth	416,482	6,811,653
KZ-6	Tributary to Geona Creek	415,325	6,816,659
Seeps			
KZ-9 Seep East	Seep approximately 50 m east of Geona Creek at KZ-9	414,745	6,819,667
KZ-9 Seep West	Seep approximately 50 m west of Geona Creek at KZ-9	414,660	6,819,670
Seep 3	20 m wide seep located on west side of Geona Creek downstream of KZ-7	414,741	6,818,473
Seep 4	Wide seep network located on west side of Geona Creek upstream of KZ-7	415,123	6,816,538
Seep 5	Seep coming inside side channel of Geona Creek upstream of KZ-9	414,767	6,819,178

2.2 FIELD METHODOLOGY

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

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

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

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

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

2.3 ANALYSES

During each of the sampling events from April 2015 to October 2016, surface water samples were analyzed for general chemical parameters, as well as total and dissolved metals, and nutrients. A list of the parameters is provided below. Stream flow measurements or stream flow estimates were made for all sites. Field replicate samples were collected during each field visit to document variability between simultaneous grab samples. Photographic records of the sampling sites are provided in APPENDIX B.

Field parameters:

- pH;
- Specific conductivity;

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

Parameters measured in the laboratory:

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

Maxxam Analytical (Maxxam) in Burnaby, BC performed all of the laboratory analyses. Maxxam is certified with the Canadian Association for Environmental Analytical Laboratories (CAEAL). The certificates of analysis provided by Maxxam for the 2015-16 samples have been included in APPENDIX E.

A summary of the analytical technique used for each constituent and the source method upon which the analyses were based are presented in Table 2-2 and Table 2-3.

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

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

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

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

2.4 QUALITY ASSURANCE/QUALITY CONTROL

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

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

Relative Percent Difference (RPD) was used to determine field variability and is the difference between the sample result and replicate result, divided by the average of the sample result and replicate result and expressed as a percentage. Where analyte results have RPD greater than 25% a subsequent check was done against the laboratory detection limit (DL) to establish if the practical quantitation limit (PQL) was met. The PQL is five times the DL and is defined as the minimum concentration that can be measured within specified limits of precision and accuracy. Both results need to be above the PQL for the analyte to be considered as 'meeting the PQL'. If one result from the sample or duplicate is greater than 5X DL and one result is greater than 5X DL then the 'PQL is not met'. An analyte with results below the PQL indicates that the constituent being analyzed is not present in a sufficient amount to be reliably quantified. Typically, as parameters approach their detection limit, high variability is more likely to occur. The RPD of 25% can be used as a benchmark whereby an RPD greater than 25% warrants further comment or consideration.

2.4.1 LABORATORY QUALITY CONTROL SAMPLE ANALYSIS

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

2.4.2 FIELD VARIABILITY

During the monitoring program field replicates were collected to measure field variability between simultaneous grab samples. A total of 20 field replicates were collected over 19 months between April 2015 and October 2016 as part of the surface water quality monitoring program (with two monitoring events and duplicates in May 2016). The highest variability was observed in June 2015 for a duplicate collected from KZ-9; twenty analytes had an RPD greater than 25% of which 16 met the PQL. The next highest variability was observed in February and August 2016 where 11 and 10 duplicate analytes met the PQL at stations KZ-7 and KZ-22, respectively. The remaining 17 duplicate samples had between zero and five analytes with RPD greater than 25% that satisfied the PQL.

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

With the exception of June 2015, February 2016 and August 2016 there is relatively low variability between simultaneous grab samples; however, results indicate that there is natural variability at any given sampling

location. This natural variability appears to be more than the variability introduced from laboratory analytical methods.

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

Analyte	Number of times RPD >25% and PQL met
Alkalinity, bicarbonate HCO_3	1
Alkalinity, total	1
Aluminum (Al), dissolved	2
Aluminum (Al), total	8
Ammonia (N)	1
Arsenic (As), dissolved	1
Arsenic (As), total	3
Cadmium (Cd), total	3
Calcium (Ca), total	2
Cobalt (Co), total	5
Copper (Cu), total	4
Hardness (from total)	1
Iron (Fe), dissolved	2
Iron (Fe), total	9
Lead (Pb), total	7
Lithium (Li), total	1
Manganese (Mn), dissolved	4
Manganese (Mn), total	7
Nickel (Ni), dissolved	1
Nickel (Ni), total	1
Phosphorus (P), total	3
Selenium (Se), dissolved	1
Selenium (Se), total	2
Sodium (Na), dissolved	1
Total Acidity	1
Zinc (Zn), dissolved	2
Zinc (Zn), total	1

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

Analyte	Number of times RPD >25% and PQL not met
Aluminum (Al), dissolved	4
Aluminum (Al), total	2
Ammonia (N)	7
Antimony (Sb), total	1
Cadmium (Cd), dissolved	2
Cadmium (Cd), total	2
Chloride	2
Cobalt (Co), dissolved	2
Cobalt (Co), total	4
Colour	2
Copper (Cu), total	1
Cyanide, Weak Acid Dissociable	2
Dissolved Organic Carbon	1
Lead (Pb), dissolved	4
Lead (Pb), total	3
Lithium (Li), dissolved	1
Lithium (Li), total	2
Manganese (Mn), dissolved	2
Phosphate, total	1
Phosphorus (P), dissolved	6
Phosphorus (P), total	4
Silver (Ag), total	1
Thallium (Tl), dissolved	2
Thallium (Tl), total	1
Titanium (Ti), total	4
Total Acidity	1
Total Suspended Solids	1
Vanadium (V), total	2
Zinc (Zn), dissolved	1
Zinc (Zn), total	1

2.4.3 FIELD AND TRAVEL BLANKS

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

Concentrations of parameters should not be detectable, though a PQL of less than or equal to 2 times the reportable detection limit allows for slight "noise" around the detection limit.

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

Twenty field blanks were collected between April 2015 and October 2016. Field blank analytes with concentrations greater than 2 times the DL are shown in Table 2-6. Between April and August 2015, two to four analytes were detected in the field blanks at concentrations greater than 2 times the DL, but not more than 10 times the DL. In September and October 2015 there were ten analytes each month that were greater than 2 times the DL and nine analytes in November 2015 that were greater than 2 times the DL. In September 2015 total barium and iron were present in the field blank at concentrations 15 and 20 times the DL respectively. In October 2015 total aluminum was present at concentrations 35 times the DL. Total and dissolved barium were detected at 12 and 13 times the DL in November 2015. Between December 2015 and October 2016 field blanks had between zero and four analytes greater than 2 times the DL, with the exception of the April field blank which had six analytes greater than 2 times the DL. Most of these detected analytes between December 2015 and October 2016 were between two and three times the DL. In December 2015 total aluminum was detected at 12 times the DL. Total copper was detected at seven times the DL in January 2016 and May 2016, while dissolved uranium was detected at seven times the DL in April 2016.

Aluminum and ammonia are the most frequently detected parameters in the field blanks, in addition to alkalinity (bicarbonate). Alkalinity (bicarbonate) is not calculated to be more than three times the DL and ammonia is also typically between two and three times the DL, while aluminum concentrations in the field blanks were typically more than an order of magnitude below their respective CCME and BCMoE guidelines. Only the October 2015 field blank had a total aluminum concentration (0.017 mg/L) that was within an order of magnitude of the CCME guideline (0.1 mg/L). Nevertheless, all the samples collected for this sampling event were well below the CCME guideline, and had concentrations that spanned the blank result (0.011 – 0.028 mg/L), suggesting they were not significantly impacted by this elevated blank result. In addition, the total aluminum concentrations observed across the watershed for sampling events where total aluminum was detected in the field blanks were in line with those measured in samples collected at other non-freshet times of the year where the field blanks contained no detectable aluminum. Such contamination is likely related to the bottles, preservative and/or laboratory handling, although sporadic contamination during fieldwork cannot be ruled out. Field blank re-analysis requests to Maxxam have indicated that sample carry-over during laboratory analysis had impacted the January, February, March and April 2016 field blank samples. Subsequent re-analysis returned fewer analytes present at twice the detection limit in these field blanks (data reported in Table 2-4). Older field blanks were not available for re-analysis and it is possible that such laboratory carry-over may have also impacted the 2015 field blank samples. This laboratory issue has been identified by Maxxam and appears to be rectified. In any event, it is AEG's opinion that the contaminant concentrations observed in the field blanks collected as part of the 2015-2016 water quality monitoring program do not affect the data quality.

Trip blanks (sample of de-ionized water) are supplied and prepared by the lab and are meant to accompany the sample bottles provided by the lab for the monitoring program. The trip blank travels with the sample bottles to the sample stations and is returned unopened back to the lab with the collected samples. The purpose of the trip blank is to identify any potential contamination (e.g. cross contamination from other samples or ambient air conditions) to which the samples may be exposed. Twenty trip blanks were analyzed between April 2015 and October 2016, three of which in September 2015, December 2015 and May 2016 had alkalinity concentrations present at slightly >2 times the DL. The remaining seventeen travel blanks had no analyte concentrations greater than 2 times the DL.

Since laboratory method blanks showed no notable results greater than 2 times the DL, it can be assumed that the original lab water is not a source of contamination. For the purposes of this data quality assessment, periodic field and trip blank results greater than 2 times the DL do not call sample results into question; rather the relevance and potential for actual sample results to have been affected have been considered when interpreting results.

Table 2-6: Field Blank Analytes with Concentrations >2 times the DL

Parameter	Units	Result	DL	Result / DL (where >2)
April 2015				
Alkalinity, bicarbonate HCO3	mg/L	1.12	0.5	2.2
Ammonia (N)	mg/L	0.0106	0.005	2.1
Nickel (Ni), total	mg/L	0.000102	0.00002	5.1
May 2015				
Dissolved Organic Carbon	mg/L	1.38	0.5	2.8
Nickel (Ni), dissolved	mg/L	0.000042	0.00002	2.1
June 2015				
Aluminum (Al), dissolved	mg/L	0.00219	0.0005	4.4
Manganese (Mn), dissolved	mg/L	0.000159	0.00005	3.2
Nickel (Ni), total	mg/L	0.000129	0.00002	6.5
Phosphorus (P), dissolved	mg/L	0.0109	0.002	5.5
July 2015				
Ammonia (N)	mg/L	0.0104	0.005	2.1
Nickel (Ni), total	mg/L	0.000079	0.00002	4.0
Phosphorus (P), dissolved	mg/L	0.0053	0.002	2.7
August 2015				
Nickel (Ni), dissolved	mg/L	0.000203	0.00002	10.2
Zinc (Zn), total	mg/L	0.00028	0.0001	2.8
September 2015				
Alkalinity, bicarbonate HCO3	mg/L	1.02	0.5	2.0
Aluminum (Al), dissolved	mg/L	0.00285	0.0005	5.7
Aluminum (Al), total	mg/L	0.00391	0.0005	7.8
Arsenic (As), total	mg/L	0.000049	0.00002	2.5
Barium (Ba), total	mg/L	0.0003	0.00002	15.0
Iron (Fe), total	mg/L	0.0205	0.001	20.5
Lead (Pb), total	mg/L	0.000042	0.000005	8.4
Manganese (Mn), total	mg/L	0.000184	0.00005	3.7
Phosphorus (P), total	mg/L	0.0041	0.002	2.1
Vanadium (V), dissolved	mg/L	0.00074	0.0002	3.7
October 2015				
Alkalinity, bicarbonate HCO3	mg/L	1.35	0.5	2.7
Alkalinity, total	mg/L	1.11	0.5	2.2
Aluminum (Al), total	mg/L	0.0174	0.0005	34.8
Barium (Ba), dissolved	mg/L	0.000041	0.00002	2.1
Barium (Ba), total	mg/L	0.000087	0.00002	4.4
Lead (Pb), total	mg/L	0.000011	0.000005	2.2
Strontium (Sr), total	mg/L	0.000239	0.00005	4.8
Titanium (Ti), total	mg/L	0.00174	0.0005	3.5
Vanadium (V), dissolved	mg/L	0.00069	0.0002	3.5
Vanadium (V), total	mg/L	0.00054	0.0002	2.7
November 2015				
Alkalinity, bicarbonate HCO3	mg/L	1.18	0.5	2.4
Aluminum (Al), total	mg/L	0.00144	0.0005	2.9
Barium (Ba), dissolved	mg/L	0.000261	0.00002	13.1
Barium (Ba), total	mg/L	0.000232	0.00002	11.6
Specific Conductance (lab)	µS/cm	2.5	1	2.5
Strontium (Sr), dissolved	mg/L	0.000151	0.00005	3.0
Strontium (Sr), total	mg/L	0.000153	0.00005	3.1
Uranium (U), dissolved	mg/L	0.000005	0.000002	2.5
Uranium (U), total	mg/L	0.000005	0.000002	2.5
December 2015				
Aluminum (Al), total	mg/L	0.00609	0.0005	12.2

Parameter	Units	Result	DL	Result / DL (where >2)
January 2016				
Ammonia (N)	mg/L	0.022	0.005	4.4
Copper (Cu), total	mg/L	0.000378	0.00005	7.6
Strontium (Sr), dissolved	mg/L	0.000161	0.00005	3.2
Zinc (Zn), total	mg/L	0.00025	0.0001	2.5
February 2016				
Aluminum (Al), total	mg/L	0.00138	0.0005	2.8
March 2016				
n/a	-	-	-	-
April 2016				
Alkalinity, bicarbonate HCO3	mg/L	1.15	0.5	2.3
Ammonia (N)	mg/L	0.0165	0.005	3.3
Phosphorus (P), dissolved	mg/L	0.0043	0.002	2.2
Strontium (Sr), dissolved	mg/L	0.000134	0.00005	2.7
Uranium (U), dissolved	mg/L	0.000014	0.000002	7.0
Uranium (U), total	mg/L	0.000009	0.000002	4.5
May 2016				
Alkalinity, bicarbonate HCO3	mg/L	1.43	0.5	2.9
Alkalinity, total	mg/L	1.17	0.5	2.3
Ammonia (N)	mg/L	0.0116	0.005	2.3
Zinc (Zn), total	mg/L	0.0004	0.0001	4.0
May 2016				
Ammonia (N)	mg/L	0.011	0.005	2.2
Copper (Cu), total	mg/L	0.000546	0.00005	10.9
Lead (Pb), total	mg/L	0.000025	0.000005	5.0
June 2016				
n/a	-	-	-	-
July 2016				
Zinc (Zn), total	mg/L	0.00022	0.0001	2.2
August 2016				
n/a	-	-	-	-
September 2016				
Lead (Pb), total	mg/L	0.000011	0.000005	2.2
Zinc (Zn), total	mg/L	0.00023	0.0001	2.3
October 2016				
Ammonia (N)	mg/L	0.013	0.005	2.6

2.5 SURFACE WATER QUALITY GUIDELINES

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

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

Parameter	Guideline	Source
pH	6.5-9	CCME
Nitrate as N	3 mg/L	CCME
Nitrite as N	0.02 mg/L-0.2 (chloride dependent)	BCMOE
Ammonia as N	pH and temperature dependent	CCME
Free CN	0.005 mg/L	CCME
Chloride	120 mg/L	CCME
Fluoride	0.12 mg/L	CCME
Sulphate	128 – 429 mg/L (hardness dependent)	BCMoE
Total Phosphorus	>0.035 mg/L classed as eutrophic	CCME
Total Metals		
Aluminum	0.005 mg/L if pH < 6.5 0.1 mg/L if pH ≥ 6.5	CCME
Antimony	0.009 mg/L	BCMoE
Arsenic	0.005 mg/L	CCME
Boron	1.5 mg/L	CCME
Cadmium	0.00006 - 0.00037 mg/L (hardness dependent)	CCME
Chromium	0.001 mg/L	CCME
Copper	0.002 - 0.01 mg/L (hardness dependent)	BCMoE
Iron	1.0 mg/L	BCMoE
Lead	0.0034- 0.020 mg/L (hardness dependent)	BCMoE
Manganese	hardness dependent	BCMoE
Mercury	0.000026 mg/L	CCME
Molybdenum	0.073 mg/L	CCME
Nickel	0.025 – 0.15 mg/L (hardness dependent)	CCME
Selenium	0.002 mg/L	BCMoE
Silver	0.00025 mg/L	CCME
Thallium	0.0008 mg/L	CCME
Uranium	0.015 mg/L	CCME
Zinc	0.0075 – 0.224 mg/L (hardness dependent)	BCMoE
Dissolved Metals		

Parameter	Guideline	Source
Aluminum	pH dependent	BCMoE
Cadmium	0.00012 – 0.00046 mg/L (hardness dependent)	BCMoE
Iron	0.35 mg/L	BCMoE

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

- Fluoride: KZ-21, KZ-22, KZ-26;
- Total aluminum: KZ-13, KZ-26;
- Total arsenic: KZ-21;
- Total cadmium: KZ-2, KZ-7;
- Total chromium: KZ-13, KZ-16, KZ-17, KZ-18, KZ-21, KZ-7;
- Total copper: KZ-2, KZ-13;
- Dissolved cadmium: KZ-2;
- Total zinc: KZ-13, KZ-2, KZ-7;
- Total selenium: KZ-2; and
- Total iron: KZ-21, KZ-22, KZ-9.

2.6 DATA QUALITY ASSESSMENT

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

An assessment of outliers has been carried out for water quality data from monitoring stations from July 1994 to October 2016. Outliers for a station dataset are considered to be results exceeding the average concentration ±3 standard deviations. There were many outliers in the historic data where the DLs were greater than the 2015-16 dataset range and those values were removed from the database (not used in statistical analysis or graphs). Suspect outlier results affected by poor DLs that are within three times the detection limit, have also been removed from the database. It is not unexpected for historical data that have poorer detection limits relative to present standards to have a relatively high number of outliers.

The outlier assessment showed high numbers of outliers or maxima in the May 2015 spring freshet sample event for most stations, accompanied by maximum TSS concentrations for the sites. Such maxima are also typical in the historic May sample event in 1995 which also had higher associated TSS concentrations.

Station KZ-13 had second notable outlier event on August 31, 1994 with many results establishing maximum analyte concentrations for the station detected to date. No TSS analysis was available for this event but this outlier sample could be due to a precipitation and run-off event.

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

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

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

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

3. RESULTS AND DISCUSSION

To simplify the discussion of water quality data, results are delineated by geography in terms of the major watercourse. The in situ and CCME/BCMoE-regulated anion (sulphate, chloride, fluoride, cyanide, nitrite, nitrate) and nutrient (ammonia, phosphorus) parameters are discussed for each watercourse. Constituents such as hardness and dissolved organic carbon that act as modifiers of metal toxicity are also discussed, whereas only those elements that exhibited BCMoE or CCME exceedances on more than one occasion at any site across the KZK surface water quality monitoring locations are examined (aluminum, arsenic, cadmium, chromium, copper, iron, lead, selenium, and zinc). Ongoing waste rock geochemical testing has indicated that antimony and uranium may be constituents of concern from a waste rock metal leaching perspective so they have also been included in the summary statistic tables; however, they have not exceeded the applicable BCMoE/CCME guidelines in sampling performed to date. All of the summary statistics tables are based on the water quality dataset collated from the Cominco sampling (1994 and 1995), water licence sampling (biannual sampling in August between 2002 and 2014), and currently available baseline water quality sampling data (April 2015 to October 2016). Where results were below laboratory detection levels one half the detection limit was used in the calculation of summary statistics, as well as presented on graphs. Figures that present the temporal changes in the concentration of metals of interest are present in APPENDIX C.

3.1 SOUTH CREEK

3.1.1 SETTING

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

3.1.2 PHYSICAL PARAMETERS AND NUTRIENTS

South Creek waters, monitored at KZ-13, were circumneutral (pH range 6.82 to 7.99; median pH 7.7; Table 3-1) and well oxygenated (87 to 110% saturated). Water sampled at KZ-13 was also relatively dilute (median field specific conductance 148 µS/cm and total hardness of 69 mg/L) compared to the other surface water quality monitoring sites that are regularly sampled as part of the Project. Temperature ranged seasonally between -2 and 10°C.

No CCME or BCMoE exceedances were recorded for any of the anions or nutrients monitored at KZ-13 with the exception of total phosphorus (Table 3-2), for which two samples returned values that exceeded the CCME eutrophic guideline (0.035 mg/L). The highest total phosphorus concentration was observed in August 1994 (0.21 mg/L); however, the dissolved phosphorus concentration was much lower for this sampling event

(0.08 mg/L). This sampling event had a high proportion of particulate iron as evidenced by the much higher iron concentration in the total fraction than the dissolved. Phosphorus is known to have an affinity for iron oxyhydroxides, suggesting that this total phosphorus was particle-bound and not reflective of typical conditions (median 0.005 mg/L). The other total phosphorus exceedance occurred during the May 2015 sampling event (0.066 mg/L) during freshet, again when the particulate iron fraction was highest.

Nitrogen species (nitrate, nitrite, cyanide, and ammonia) were typically below or marginally above the detection limit, with the exception of nitrate-Nitrogen (N), which was detected in the majority of samples (greater than 0.020 to 0.159 mg/L, median 0.045 mg/L; Table 3-2), but well below its CCME guideline (3 mg/L). Nitrate-N concentrations were typically highest during the winter months; primary producers are significant consumers of nitrate in aquatic systems; therefore, lower primary productivity due to winter conditions may be responsible for the higher nitrate-N levels observed at this time.

Dissolved organic carbon (DOC) has only been monitored since 2015, and ranged between greater than 0.50 and 11 mg/L (median 3.2 mg/L). DOC peaked during the May 2015 freshet as snowmelt rinsed the surrounding organic soils, flushing organic carbon into the streams. The freshet DOC peak coincided with the peak in colour (122 true color units (TCU); median 17 TCU), due to the presence of humic substances in the DOC that may lend a brown coloration to the water.

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

	KZ-13					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
CCME Guideline	6.5-9			6.5		
BCMoE Guideline						
Average	7.67	144.5	3.5	11.12	96.4	152.8
Count	19	19	19	19	19	18
Minimum	6.82	60.9	-2	9.3	87	39.7
Maximum	7.99	196.8	10.3	13.58	110.4	303.8
Geometric Mean	7.67	140.3	2.1	11.06	96.1	130.4
Standard Deviation	0.26	32.3	3.9	1.2	7.6	85.7
1st Quartile	7.55	127.8	0.3	10.41	89.8	89.1
Median	7.7	147.5	1.5	10.85	95.8	113.9
3rd Quartile	7.81	163	6.9	12.1	101.6	236.2
Count Over Guideline	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%

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

	KZ-13							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
CCME Guideline [a]	120	0.12		0.005	0.197		3	0.035
BCMoE Guideline [a]			128 - 429			0.02		
Average	0.46	0.044	11.85	0.00049	0.0093	0.0015	0.0616	0.0161
Count	19	19	30	27	29	27	29	30
Minimum	0.25	0.033	0.25	0.00025	0.0025	0.001	0.01	0.001
Maximum	1.2	0.064	41.3	0.00119	0.051	0.0025	0.159	**0.21**
Geometric Mean	0.4	0.044	9.9	0.00043	0.0063	0.0014	0.0478	0.0065
Count <DL	10	0	1	18	11	27	2	8
Standard Deviation	0.27	0.006	6.64	0.00025	0.0103	0.0007	0.0446	0.0387
1st Quartile	0.25	0.042	7.89	0.00025	0.0025	0.001	0.03	0.0042
Median	0.25	0.044	11.85	0.0005	0.007	0.001	0.0452	0.005
3rd Quartile	0.57	0.045	13.78	0.00055	0.0102	0.0025	0.0808	0.008
Count Over Guideline	0	0	0	0	0	0	0	2
% Over Guideline	0%	0%	0%	0%	0%	0%	0%	7%

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

3.1.3 METALS

Total concentrations of arsenic, cadmium, and iron showed sporadic water quality guidelines exceedances (Table 3-3). These occurred during sampling events on either 31 August 1994 (0.007 mg/L arsenic, 9.43 mg/L iron) or May 12, 2015 (0.00011 mg/L cadmium, 1.34 mg/L iron), when elevated levels of particulates were present as evidenced by the high TSS in the May 2015 sampling event and the elevated total iron and aluminum concentrations in the August 1994 sampling event (no TSS data available), which were at least an order of magnitude higher than the respective dissolved concentrations (APPENDIX A). Such elevated TSS is related to higher amounts of run-off during snowmelt and precipitation, resulting in a higher particulate load due to erosive transport and potential resuspension of stream sediments during higher flows.

More frequent exceedances (greater than 10% of samples) were observed for total aluminum, chromium and copper (Table 3-3). The average total aluminum concentration was in exceedance of its guideline, although it should be noted that the maximum total aluminum concentration observed (3.25 mg/L) was almost an order of magnitude higher than the next highest concentration, which has skewed the average concentration. The guideline exceedances observed for both total copper and total aluminum concentrations generally occurred during periods of elevated TSS, typically during freshet (May-June). Although total chromium concentrations also exceeded the CCME guideline during high TSS sampling events, total chromium was also elevated at other sampling events that were not characterized by high levels of TSS or discharge. In general, more water quality guideline exceedances were noted for total metal concentrations than their dissolved counterparts, suggesting that a significant portion of the metals were particulate-bound, especially during freshet and/or other periods characterized by elevated TSS levels.

Overall, total concentrations of most elements of interest (with the exception of selenium) were at their highest during freshet, when enhanced run-off and associated higher flow rates resulted in erosive transport of particulate material. The concentration of most elements did not follow a clear seasonal trend for the remainder of the year with the exception of selenium and hardness. Concentrations of total selenium, uranium, and hardness were typically at their lowest at freshet, then increased over the winter months (APPENDIX C, Figures C-18, C-24, and C-22, respectively). This suggests that selenium, uranium, and hardness levels are influenced by groundwater, since the groundwater contribution to surface waters is highest during winter baseflow conditions. Indeed, groundwater monitoring data from wells installed on the Project site indicate that selenium (<0.00004 to 0.003 mg/L), uranium (0.0006 to 0.014 mg/L), and hardness (180 to 700 mg/L) concentrations in shallow groundwater either overlap or markedly exceed the range of concentrations observed in South Creek.

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

	KZ-13											
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Lead	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.000005	0.00004	0.000002	0.0001
CCME Guideline [a]	n/a	0.1		0.005	0.00007 - 0.00034	0.001					0.015	
BCMoE Guideline [a]	n/a		0.009				0.002 - 0.01	1	0.0042 - 0.014	0.002		0.0075 - 0.129
Average	76.7	**0.185**	0.000026	0.000495	0.0000291	0.00071	0.00175	0.494	0.000143	0.00019	0.000786	0.00716
Count	30	29	19	29	28	29	29	29	28	29	19	29
Minimum	36.1	0.0072	0.00001	0.000025	0.000005	0.00005	0.000269	0.0664	0.000023	0.000025	0.000402	0.0018
Maximum	252	**3.25**	0.000055	**0.0069**	0.000109	**0.008**	0.022	**9.43**	0.00106	0.0009	0.00259	0.07
Geometric Mean	71.7	0.044	0.000024	0.000193	0.0000241	0.00024	0.000866	0.146	0.0000846	0.000139	0.000692	0.00473
Count <DL	0	0	9	4	2	13	0	0	5	4	0	0
Standard Deviation	37	0.606	0.00001	0.001282	0.0000192	0.00151	0.00406	1.73	0.000201	0.000165	0.000515	0.01253
1st Quartile	61.1	0.0228	0.000024	0.00015	0.0000199	0.00005	0.00052	0.082	0.0000443	0.000123	0.000492	0.00353
Median	69	0.0280	0.000025	0.000207	0.0000288	0.00025	0.000779	0.1	0.0000674	0.000147	0.000606	0.004
3rd Quartile	84.5	0.0567	0.000029	0.00026	0.0000345	0.0005	0.0009	0.206	0.0002	0.000251	0.000824	0.005
Count Over Guideline	0	5	0	1	1	7	4	2	0	0	0	3
% Over Guideline	0%	17%	0%	3%	4%	24%	14%	7%	0%	0%	0%	10%

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

3.2 GEONA CREEK WATERSHED

3.2.1 SETTING

Geona Creek is approximately 8 km in length, originating on the north side of the watershed divide of South Creek and Geona Creek (Figure 1-2). Geona Creek's headwaters consist of a series of small ponds that flow north for approximately 2 km before eventually entering a well-defined channel. This channel flows north for approximately 6 km through a broad valley until it eventually converges with Finlayson Creek. A few small ponds can be found intermittently throughout Geona Creek and are suspected to be the result of historical beaver activity. Three water quality stations are located on Geona Creek: KZ-17, KZ-9 and KZ-7. KZ-17 is located at the mouth of Geona Creek, KZ-9 is located near the proposed discharge location, and KZ-7 is located in upper Geona Creek near the proposed open pit. Water quality station KZ-6 is located on a tributary to Geona Creek, upstream of KZ-7. Station KZ-18, which had monitoring initiated in August 2016, is also located on a tributary, which enters Geona Creek approximately 100 m downstream of KZ-9. Photos of KZ-17, KZ-9, KZ-7 and KZ-6 can be found in APPENDIX B (pages B-2 to B-6).

Fault Creek is approximately 2 km in length and is a mountainous alpine stream confined by a narrow valley. Fault Creek converges with Geona Creek near its headwaters and is highly braided before entering Geona Creek. One water quality station is located on Fault Creek at KZ-2. Photos of KZ-2 can be found in APPENDIX B (page B-7).

3.2.2 PHYSICAL PARAMETERS AND NUTRIENTS

Geona Creek waters (KZ-7, KZ-9, and KZ-17) and its tributaries (KZ-6 and KZ-18) were circumneutral (pH range 7.0 to 8.7; Table 3-4, Table 3-5, Table 3-6, Table 3-7, and Table 3-8) and well oxygenated (median 84 to 91% saturated). The median pH at KZ-9 (pH 7.46) was lower than that of the upstream sites KZ-7 and KZ-6 (median pH 7.79 and 8.05, respectively), perhaps due to the influence of the nearby KZ-9 East Seep, which had a much lower pH range (pH 5.78 to 5.99; Table 3-22). Seep 5, located upstream of KZ-9, also had sporadically low pH waters (pH 5.95 to 7.85; median pH 6.73) which may contribute to the lower pH observed at KZ-9 relative to the upstream Geona Creek waters. Temperature varied seasonally between -0.2 and 12°C.

Fault Creek waters, as monitored at KZ-2, were also circumneutral (pH 7.2 to 8.0) and well oxygenated (median 95% saturation; Table 3-9). Fault Creek was more dilute than Geona Creek, as indicated by its lower conductivity (median 208 µS/cm at KZ-2 compared to median 268 – 334 µS/cm at sites on Geona Creek) and lower total hardness (median 101 mg/L compared to median 143 to 185 mg/L in Geona Creek).

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

	KZ-6					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
CCME Guideline	6.5-9			6.5		
BCMoE Guideline						
Average	8.02	269.3	3.3	10.71	95.5	141.8
Count	10	10	10	10	10	10
Minimum	7.69	226.3	0	9.56	88	83.3
Maximum	8.35	331.7	8.9	12.82	104.1	292.9
Geometric Mean	8.02	267.2	1.4	10.67	95.3	129.2
Standard Deviation	0.19	36.4	3.6	1.03	5.2	73.2
1st Quartile	7.99	245.5	0.2	10.07	90.7	99.7
Median	8.05	263.5	1.7	10.38	96.2	118.9
3rd Quartile	8.09	285.3	6.7	11.04	99.1	124.8
Count Over Guideline	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%

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

	KZ-7					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
CCME Guideline	6.5-9			6.5		
BCMoE Guideline						
Average	7.76	266.8	4.3	10.39	90.9	124.1
Count	25	25	25	23	23	20
Minimum	7.06	74.7	-0.2	8.7	81.6	23.9
Maximum	8.3	348.6	10.7	12.29	100.1	288.4
Geometric Mean	7.75	258.1	2.3	10.35	90.6	95
Standard Deviation	0.3	57.4	3.9	0.94	6.8	88
1st Quartile	7.63	240.6	0.4	9.91	85.5	58.1
Median	7.79	268.3	4.7	10.05	90.9	90
3rd Quartile	7.92	299.8	8.1	10.85	98.1	223.6
Count Over Guideline	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%

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

	KZ-9					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
CCME Guideline	6.5-9			6.5		
BCMoE Guideline						
Average	7.49	302.9	4.2	10.56	91.6	92.3
Count	25	25	25	23	23	20
Minimum	6.97	81.1	-0.2	8.98	78.5	-32.2
Maximum	8.71	404.7	12	12.2	105	299.5
Geometric Mean	7.48	291.8	3	10.52	91.4	34.8
Standard Deviation	0.41	69.7	3.8	0.96	6.7	99.7
1st Quartile	7.21	272.5	0	9.82	86	14.1
Median	7.46	297.3	5.2	10.6	90.6	54.6
3rd Quartile	7.59	351.9	7.1	11.12	97.2	146.6
Count Over Guideline	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%

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

	KZ-18					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
CCME Guideline	6.5-9			6.5		
BCMoE Guideline						
Average	7.46	344.5	2.7	10.38	89.9	130
Count	3	3	3	3	3	3
Minimum	7.4	308.2	0.4	9.45	84.6	72.5
Maximum	7.51	397.6	4	10.87	97.1	209.4
Geometric Mean	7.46	342.5	1.8	10.36	89.7	117.9
Standard Deviation	0.06	47	2	0.8	6.5	71
1st Quartile	7.44	318	2.1	10.13	86.2	90.2
Median	7.47	327.8	3.8	10.81	87.9	108
3rd Quartile	7.49	362.7	3.9	10.84	92.5	158.7
Count Over Guideline	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%

Table 3-8: Summary Statistics for In Situ Parameters at Site KZ-17, Geona Creek

	KZ-17					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
CCME Guideline	6.5-9			6.5		
BCMoE Guideline						
Average	7.7	337.7	3.9	9.56	82.1	172.8
Count	22	21	22	22	22	20
Minimum	7.13	109.3	-0.2	5.23	50	56.7
Maximum	8.5	476.7	8.6	12.71	102.6	332.4
Geometric Mean	7.69	324	2	9.4	81.3	153.2
Standard Deviation	0.31	87.9	3.5	1.67	11.2	86.2
1st Quartile	7.6	288	0.4	9.02	75.2	107.3
Median	7.71	334.1	4.9	9.46	83.5	139.8
3rd Quartile	7.79	405.5	6.9	10.28	88.4	236.3
Count Over Guideline	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%

Table 3-9: Summary Statistics for In Situ Parameters at Site KZ-2, Fault Creek

	KZ-2					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
CCME Guideline	6.5-9			6.5		
BCMoE Guideline						
Average	7.69	202.4	2.7	10.68	92.1	172.1
Count	21	21	21	21	21	21
Minimum	7.22	129.6	-0.3	4.8	39	78.7
Maximum	7.97	257.2	7.9	12.5	108.5	371.1
Geometric Mean	7.69	198.2	1.6	10.52	90.6	151.3
Standard Deviation	0.23	41	2.8	1.58	14.3	90.7
1st Quartile	7.58	179.7	0.2	10.35	88	104.6
Median	7.77	207.8	1.6	10.9	94.6	123.1
3rd Quartile	7.89	238.4	5.5	11.2	100.4	253.5
Count Over Guideline	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%

No CCME or BCMoE exceedances were recorded for any of the anions or nutrients monitored on Geona Creek with the exception of total phosphorus and fluoride. Total phosphorus exhibited one CCME exceedance for KZ-7 (Table 3-11), KZ-9 (Table 3-12) and KZ-17 (Table 3-14). These all occurred for the May 11, 2015 sampling event, which was characterized by high levels of TSS, total iron and total aluminum. As indicated earlier, phosphorus has an affinity for iron oxyhydroxides and was likely associated with such particulates during this freshet sampling event. Dissolved phosphorus concentrations at these three sites were below the 0.035 mg/L CCME eutrophic guideline for the May 2015 sampling event, further indicating the particulate nature of the phosphorus for these samples. The median total phosphorus concentrations at these three sites were greater than 0.08 mg/L. Fluoride marginally exceeded the CCME guideline (0.12 mg/L) for the April 2015 sampling event at KZ-17 (0.14 mg/L). The median fluoride concentration at this site was 0.09 mg/L (Table 3-14).

No water quality guideline exceedances were noted for anions or nutrients in either of the tributaries to Geona Creek, with the exception of two marginal total phosphorus excursions at KZ-18 (both 0.036 mg/L; Table 3-13), which were slightly above the CCME eutrophic threshold (0.035 mg/L).

Nitrogen species (nitrate, nitrite, cyanide, ammonia) were typically below or marginally above the detection limit, with the exception of nitrate-N, which was detected in the majority of samples collected at the Geona Creek sites (<0.010 – 0.51 mg/L, median 0.03 – 0.06 mg/L; Table 3-10, Table 3-11, Table 3-12, Table 3-13, and Table 3-14), but well below its CCME guideline (3 mg/L). Nitrate-N concentrations were close to an order of magnitude higher during the winter months, likely due to a lack of primary productivity over these months, which would otherwise limit dissolved nitrate concentrations. Site KV-17 had one ammonia-N CCME exceedance (0.29 mg/L) in October 2016, which was markedly higher than other measurements collected to date.

DOC, monitored only since 2015, ranged between greater than 0.50 and 17.2 mg/L (median 1.65 to 2.0 mg/L) for the Geona Creek and associated tributary sites. DOC peaked during the May 2015 freshet as snow melt rinsed the surrounding organic soils, flushing organic carbon into the streams. The freshet DOC peak coincided with the peak in colour measurements at all three sites (218 to 242 TCU; median 8.0 to 15 TCU), due to the high DOC concentrations. A spike in DOC and colour levels was also observed in May 2016, however, the peaks were more muted than in 2015. It is hypothesized that the higher DOC and colour levels observed in May 2015 likely reflect sampling closer to peak freshet conditions, whereas the May 2016 sampling event possibly captured early freshet conditions.

No CCME or BCMoE exceedances were recorded for any of the anions or nutrients monitored on Fault Creek (Table 3-15). As noted for Geona Creek, the nitrogen species concentrations in Fault Creek were typically below the detection limit or slightly above it (Table 3-15). Only nitrate-N was consistently detected, with higher concentrations observed during the winter months. DOC concentrations in Fault Creek (median 0.91 mg/L), which were two fold lower than those observed in Geona Creek, exhibited a peak during freshet (5.8 mg/L and 2.5 mg/L in May 2015 and May 2016, respectively), coincident with the peak colour observed at these periods (APPENDIX A).

Table 3-10: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-6, Tributary to Geona Creek

	KZ-6							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
CCME Guideline [a]	120	0.12		0.005	0.197		3	0.035
BCMoE Guideline [a]			128 - 429			0.02		
Average	0.67	0.058	18.9	0.0005	0.0076	0.0015	0.0697	0.0052
Count	10	10	18	15	16	15	16	16
Minimum	0.25	0.051	11.5	0.00025	0.0025	0.001	0.0046	0.0015
Maximum	1	0.066	25	0.00108	0.022	0.0025	0.2	0.023
Geometric Mean	0.61	0.058	18.5	0.00044	0.0058	0.0014	0.0379	0.0035
Count <DL	2	0	0	10	6	15	3	8
Standard Deviation	0.27	0.005	3.8	0.00027	0.0057	0.0007	0.0669	0.0057
1st Quartile	0.54	0.054	15.7	0.00025	0.0025	0.001	0.0114	0.0015
Median	0.69	0.06	19.4	0.0005	0.006	0.001	0.0502	0.0032
3rd Quartile	0.9	0.06	20.7	0.00057	0.0112	0.0025	0.1313	0.0053
Count Over Guideline	0	0	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%	0%	0%

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

Table 3-11: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-7, Geona Creek

	KZ-7							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
CCME Guideline [a]	120	0.12		0.005	0.197		3	0.035
BCMoE Guideline [a]			128 - 429			0.02		
Average	0.56	0.059	29.55	0.00051	0.0185	0.0019	0.0531	0.0069
Count	20	20	37	27	35	33	35	28
Minimum	0.25	0.033	0.25	0.00025	0.0025	0.001	0.005	0.001
Maximum	1.3	0.1	52.3	0.00153	0.18	0.0044	0.14	**0.042**
Geometric Mean	0.48	0.058	26.11	0.00045	0.0092	0.0017	0.0328	0.0050
Count <DL	8	0	1	16	9	29	8	8
Standard Deviation	0.31	0.014	8.12	0.00028	0.0322	0.0009	0.0456	0.0077
1st Quartile	0.25	0.051	26.4	0.00025	0.0037	0.001	0.0103	0.0039
Median	0.56	0.057	29.6	0.0005	0.0083	0.0021	0.05	0.005
3rd Quartile	0.72	0.066	33.5	0.00056	0.017	0.0025	0.0925	0.0071
Count Over Guideline	0	0	0	0	0	0	0	1
% Over Guideline	0%	0%	0%	0%	0%	0%	0%	4%

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

Table 3-12: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-9, Geona Creek

	KZ-9							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
CCME Guideline [a]	120	0.12		0.005	0.197		3	0.035
BCMoE Guideline [a]			128 - 429			0.02		
Average	0.62	0.066	26.94	0.00047	0.0207	0.0017	0.0882	0.013
Count	20	20	34	24	32	30	32	25
Minimum	0.25	0.032	0.25	0.00025	0.0025	0.001	0.01	0.001
Maximum	1.1	0.097	41.7	0.00151	0.12	0.0025	0.507	**0.098**
Geometric Mean	0.54	0.064	23.69	0.0004	0.0117	0.0015	0.0504	0.008
Count <DL	6	0	1	16	9	27	4	5
Standard Deviation	0.31	0.014	7.26	0.00031	0.0257	0.0007	0.1019	0.019
1st Quartile	0.25	0.058	23.23	0.00025	0.0025	0.001	0.0255	0.005
Median	0.56	0.065	26.2	0.00038	0.0176	0.001	0.0393	0.007
3rd Quartile	0.88	0.069	32.03	0.00056	0.0223	0.0025	0.147	0.012
Count Over Guideline	0	0	0	0	0	0	0	1
% Over Guideline	0%	0%	0%	0%	0%	0%	0%	4%

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

Table 3-13: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-18, Tributary to Geona Creek

	KZ-18							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
CCME Guideline[a]	120	0.12		0.005	0.197		3	0.035
BCMoE Guideline[a]			128 - 429			0.02		
Average	0.88	0.06	17.7	0.00046	0.0087	0.0019	0.0864	0.0203
Count	3	3	7	7	7	7	7	7
Minimum	0.72	0.059	13.7	0.00025	0.0025	0.001	0.01	0.0015
Maximum	1	0.061	25.8	0.0007	0.018	0.0025	0.21	**0.036**
Geometric Mean	0.87	0.06	17.2	0.00043	0.0064	0.0017	0.0626	0.014
Count <DL	0	0	0	6	3	7	1	1
Standard Deviation	0.14	0.001	4.7	0.00016	0.0064	0.0008	0.0667	0.0136
1st Quartile	0.81	0.059	14.1	0.00038	0.0025	0.001	0.0508	0.0097
Median	0.91	0.059	16	0.0005	0.0085	0.0025	0.0601	0.0243
3rd Quartile	0.96	0.06	20	0.0005	0.0135	0.0025	0.1115	0.0305
Count Over Guideline	0	0	0	0	0	0	0	**2**
% Over Guideline	0%	0%	0%	0%	0%	0%	0%	29%

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

Table 3-14: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-17, Geona Creek

	KZ-17							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
CCME Guideline[a]	120	0.12		0.005	0.197		3	0.035
BCMoE Guideline[a]			128 - 429			0.02		
Average	0.65	0.097	27.49	0.00046	0.0193	0.0015	0.0796	0.0120
Count	20	20	29	24	29	27	29	25
Minimum	0.25	0.046	0.25	0.00025	0.0025	0.001	0.0065	0.0015
Maximum	1.3	**0.14**	38.6	0.00152	0.29	0.0025	0.228	**0.156**
Geometric Mean	0.56	0.095	23.86	0.0004	0.0081	0.0014	0.0419	0.0058
Count <DL	6	0	1	16	9	25	7	7
Standard Deviation	0.34	0.019	6.97	0.00029	0.0526	0.0007	0.0777	0.0302
1st Quartile	0.25	0.09	25.4	0.00025	0.0025	0.001	0.01	0.0035
Median	0.61	0.097	27.4	0.00038	0.008	0.001	0.03	0.0052
3rd Quartile	0.88	0.103	31.7	0.00057	0.014	0.0025	0.156	0.0088
Count Over Guideline	0	1	0	0	1	0	0	1
% Over Guideline	0%	5%	0%	0%	3%	0%	0%	4%

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

Table 3-15: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-2, Fault Creek

	KZ-2							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
CCME Guideline[a]	120	0.12		0.005	0.197		3	0.035
BCMoE Guideline[a]			128 - 429			0.02		
Average	0.7	0.041	41	0.00046	0.0094	0.0014	0.1192	0.0038
Count	20	20	27	24	25	24	25	25
Minimum	0.25	0.033	19.8	0.00025	0.0025	0.001	0.0536	0.001
Maximum	5.4	0.058	53.7	0.001	0.02	0.0033	0.18	0.0187
Geometric Mean	0.44	0.04	39.6	0.0004	0.0072	0.0013	0.1123	0.0026
Count <DL	11	0	0	15	7	22	0	10
Standard Deviation	1.13	0.007	10.3	0.00025	0.0061	0.0007	0.0395	0.004
1st Quartile	0.25	0.035	34	0.00025	0.0025	0.001	0.0829	0.0015
Median	0.25	0.039	43.7	0.00038	0.0079	0.001	0.12	0.0022
3rd Quartile	0.68	0.044	48.5	0.00059	0.0158	0.0013	0.147	0.0041
Count Over Guideline	0	0	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%	0%	0%

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

3.2.3 METALS

The tributary sites exhibited the fewest water quality guideline exceedances (one total chromium exceedance for KZ-18 and one each for total aluminum, chromium, and zinc for KZ-6; Table 3-19 and Table 3-16); however, monitoring of these sites as part of the 2015-16 program only commenced in December 2015 (KZ-6) and August 2016 (KZ-18) so they have smaller datasets relative to the other Geona Creek sites. The total aluminum and zinc exceedances for KZ-6 occurred for the May 1995 sampling event when TSS levels were elevated due to freshet. The high chromium concentrations for KZ-6 and KZ-18 were both observed in the August 1994 sampling event.

Moving downstream, occasional exceedances were observed for total aluminum, iron, and copper at site KZ-7 (Table 3-17). These occurred during high flow periods such as freshet (April 1995, iron; May 2015, aluminum, iron, and copper) or following high rainfall events (August 2016, aluminum) when TSS levels were high and the particulate fraction hosted a significant portion of the metal load. Slightly more frequent (greater than 10%) exceedances were observed for total chromium (12% of samples), cadmium (30% of samples), and zinc (36% of samples), although the median concentration for all three parameters was below their respective CCME/BCMoE water quality guidelines (Table 3-17). No clear seasonal trend was observed for these exceedances, although the lack of exceedances for dissolved chromium and zinc, and three CCME exceedance observed for dissolved cadmium suggests that particulate-associated metal was responsible for these exceedances (APPENDIX A). Total chromium exceedances were confined to the 1995 dataset.

Further downstream at site KZ-9, the same suite of elements exceeded their respective water quality guideline for at least one sample event. Total concentrations of aluminum, cadmium, chromium, copper, iron, selenium, and zinc exhibited concentrations in excess of their respective water quality guideline for one or two sampling events, with high flow conditions associated with freshet (May 2015) or heavy precipitation (August 2016) accounting for the majority of these exceedances. Dissolved metals were generally present at levels below their water quality guidelines for those sampling events, indicating the total exceedances were largely related to particulates. Only total iron had more than 10% of its samples in exceedance of its water quality guideline (Table 3-18). Indeed, more total iron exceedances were noted for KZ-9 (5 of 32 samples) than at the other sites on Geona Creek (one to two samples in exceedance of BCMoE). This may be related to inputs from the KZ-9 East Seep, which had particularly high concentrations of dissolved iron (0.5 to 13 mg/L, median 4.2 mg/L; Table 3-24).

KZ-17, located farther downstream on Geona Creek, exhibited occasional exceedances for total aluminum, arsenic, cadmium, chromium, copper, iron and zinc (Table 3-20). The majority of these guideline exceedances occurred in the May 2015 sampling event. As observed at other sites, the dissolved concentrations of these elements were markedly lower for this sampling event, pointing towards the particulate nature of these exceedances. The few other total cadmium and chromium exceedances did not appear to follow a seasonal trend.

Overall, total concentrations of most elements of interest (with the exception of selenium and uranium) were at their highest during freshet or following the high rainfall event in August 2016, when enhanced run-off and associated higher flow rates resulted in erosive transport of particulate material. The concentration of most elements did not follow a clear seasonal trend for the remainder of the year with the exception of total iron,

selenium, uranium, and hardness. Total iron concentrations broadly appeared to rise over the winter months (APPENDIX C, Figure C-14). This was most evident for KZ-9, which may be related to the greater proportional input of load from the iron-rich seeps located immediately upgradient of KZ-9 (Seep 5 and KZ-9 East Seep) during the lower flow winter period. Concentrations of total selenium, uranium, and hardness were typically at their lowest at freshet, then increased over the winter months (APPENDIX C, Figures C-18, C-24, and C-22, respectively). This suggests that selenium, uranium, and hardness levels are influenced by groundwater, since the groundwater contribution to surface waters is highest during winter baseflow conditions.

Fault Creek waters showed sporadic exceedances for total chromium, aluminum (one sample each), and copper (two samples) with more frequent exceedances observed for total selenium, total zinc (both 21% of samples) and total cadmium (76% of samples). Total selenium exceedances appeared to occur during the winter months (April 2015 and January to May 2016), whereas total cadmium exceedances occurred throughout the year, but primarily in the 2015-16 dataset. Dissolved cadmium concentrations showed a similar exceedance frequency and comprised the bulk of the total concentration, indicating cadmium was primarily transported in dissolved form.

Similar to Geona Creek, the total concentrations of most analytes in Fault Creek exhibited maxima during periods of high flow (spring freshet, heavy rainfall events) with the exception of selenium, uranium, and hardness. These parameters were at their lowest in the spring, then increased steadily through the year, similar to the trends observed in Geona Creek for these three constituents. Indeed, groundwater monitoring data from wells installed on the Project site indicate that selenium (<0.00004 to 0.003 mg/L), uranium (0.0006 to 0.014 mg/L), and hardness (180 to 700 mg/L) concentrations in shallow groundwater either overlap or markedly exceed the range of concentrations observed in both Geona Creek and Fault Creek.

Table 3-16: Summary Statistics for Metals of Interest at Site KZ-6, Tributary to Geona Creek

	KZ-6											
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Lead	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.000005	0.00004	0.000002	0.0001
CCME Guideline[a]	n/a	0.1		0.005	0.0001 - 0.00026	0.001					0.015	
BCMoE Guideline[a]	n/a		0.009				**0.0024 - 0.0073**	1	**0.005 - 0.010**	0.002		0.0075 - 0.077
Average	144	0.0250	0.000017	0.000117	0.000023	**0.00139**	0.000608	0.1221	0.000142	0.0006	0.00088	0.00662
Count	18	17	10	15	15	16	17	17	15	17	10	17
Minimum	59.4	0.00117	0.00001	0.000025	0.000005	0.00005	0.000103	0.0087	0.0000025	0.000025	0.000439	0.00018
Maximum	183	**0.24**	0.00005	0.0007	0.00004	**0.018**	0.0023	1	0.0011	0.0016	0.00135	0.073
Geometric Mean	140.7	0.0105	0.000014	0.000074	0.000021	0.00021	0.000458	0.0576	0.0000433	0.000368	0.000836	0.00178
Count <DL	0	4	10	5	1	10	2	0	6	4	0	5
Standard Deviation	29.3	0.0561	0.000013	0.000166	0.00001	0.00444	0.000518	0.2351	0.000285	0.000471	0.000289	0.0173
1st Quartile	131	0.0075	0.00001	0.000038	0.000018	0.00005	0.0003	0.0274	0.00002	0.00025	0.00068	0.00067
Median	155	0.00809	0.00001	0.000077	0.000021	0.00025	0.0005	0.0516	0.000045	0.00051	0.000838	0.00131
3rd Quartile	167	0.0140	0.000021	0.000107	0.00003	0.0006	0.0008	0.0932	0.000089	0.000822	0.00106	0.005
Count Over Guideline	0	1	0	0	0	1	0	0	0	0	0	1
% Over Guideline	0%	6%	0%	0%	0%	6%	0%	0%	0%	0%	0%	6%

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

Table 3-17: Summary Statistics for Metals of Interest at Site KZ-7, Geona Creek

	KZ-7											
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Lead	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.000005	0.00004	0.000002	0.0001
CCME Guideline[a]	n/a	0.1		0.005	0.00008 - 0.00027	0.001					0.015	
BCMoE Guideline[a]	n/a		0.009				**0.002 - 0.0076**	1	**0.0045 - 0.011**	0.002		0.0075 - 0.083
Average	142	0.0384	0.000066	0.000396	0.000185	0.00066	0.001011	0.467	0.000375	0.000604	0.000999	0.0349
Count	37	36	22	33	33	33	35	36	33	35	26	36
Minimum	46.6	0.00197	0.000035	0.000025	0.00002	0.00005	0.000202	0.0618	0.0000081	0.000025	0.000278	0.005
Maximum	191	**0.333**	0.000124	0.00105	0.00053	**0.0056**	0.00358	**2.02**	0.00275	0.00139	0.00167	0.091
Geometric Mean	138	0.0218	0.000063	0.00032	0.000133	0.00019	0.00082	0.360	0.000209	0.000443	0.000925	0.0269
Count <DL	0	2	0	4	0	22	2	0	4	6	0	0
Standard Deviation	30.8	0.0639	0.000023	0.000228	0.000142	0.00133	0.000789	0.390	0.000510	0.000353	0.00038	0.0233
1st Quartile	126	0.0144	0.000048	0.000266	0.00008	0.00005	0.00055	0.224	0.000119	0.000327	0.000776	0.0175
Median	143	0.0199	0.000065	0.000399	0.000163	0.00011	0.0008	0.327	0.0002	0.000643	0.000851	0.0307
3rd Quartile	168	0.0308	0.000079	0.0005	0.000221	0.0005	0.001095	0.61	0.000438	0.000852	0.00134	0.0511
Count Over Guideline	0	2	0	0	10	4	1	2	0	0	0	13
% Over Guideline	0%	6%	0%	0%	30%	12%	3%	6%	0%	0%	0%	36%

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

Table 3-18: Summary Statistics for Metals of Interest at Site KZ-9, Geona Creek

	KZ-9											
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Lead	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.000005	0.00004	0.000002	0.0001
CCME Guideline [a]	n/a	0.1		0.005	0.0001 - 0.00033	0.001					0.015	
BCMoE Guideline [a]	n/a		0.02				0.0022 - 0.0096	1	0.0048 - 0.013	0.002		0.0075 - 0.119
Average	163	0.0550	0.000051	0.000501	0.0001143	0.00032	0.000882	0.716	0.000398	0.000821	0.00125	0.0139
Count	33	32	22	29	29	29	31	32	29	31	26	32
Minimum	54	0.00272	0.00002	0.000117	0.00002	0.00005	0.000069	0.0028	0.000033	0.000025	0.000359	0.00171
Maximum	239	**0.689**	0.000117	0.00192	0.001	**0.00179**	0.00469	**5.2**	0.00247	**0.00307**	0.00313	0.0479
Geometric Mean	158	0.0253	0.000046	0.000418	0.0000758	0.00019	0.00066	0.423	0.000189	0.000612	0.00112	0.01082
Count <DL	0	2	2	1	0	16	2	0	3	5	0	4
Standard Deviation	39	0.1239	0.000021	0.000367	0.0001822	0.00039	0.000881	0.969	0.000654	0.000561	0.000584	0.01014
1st Quartile	144	0.0141	0.000034	0.000279	0.000056	0.00005	0.0004	0.285	0.000078	0.000514	0.000814	0.00753
Median	165	0.0227	0.000051	0.00038	0.000073	0.00021	0.00061	0.471	0.000165	0.000655	0.00123	0.01075
3rd Quartile	188	0.0349	0.000063	0.0005	0.000092	0.00044	0.001	0.610	0.000266	0.00107	0.00155	0.01748
Count Over Guideline	0	3	0	0	2	2	1	5	0	1	0	2
% Over Guideline	0%	9%	0%	0%	7%	7%	3%	16%	0%	3%	0%	6%

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

Table 3-19: Summary Statistics for Metals of Interest at Site KZ-18, Tributary to Geona Creek

	KZ-18											
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Lead	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.000005	0.00004	0.000002	0.0001
CCME Guideline [a]	n/a	0.1		0.005	0.00025 - 0.00029	0.001					0.015	
BCMoE Guideline [a]	n/a		0.02				0.0069 - 0.0084	1	0.0097 - 0.012	0.002		0.070 - 0.098
Average	191	0.0168	0.000019	0.000507	0.000051	0.00049	0.00034	0.0159	0.00035	0.000597	0.00177	0.0043
Count	7	7	3	7	7	7	7	7	7	7	3	7
Minimum	173	0.0108	0.00001	0.00025	0.000018	0.00005	0.0001	0.009	0.000006	0.000025	0.00166	0.00102
Maximum	211	0.041	0.000025	0.0011	0.00017	**0.0017**	0.0008	0.033	0.0012	0.00115	0.00192	0.009
Geometric Mean	190	0.0148	0.000017	0.000451	0.000035	0.00022	0.000267	0.0146	0.000119	0.000288	0.00177	0.00339
Count <DL	0	0	1	0	0	3	1	0	0	1	0	0
Standard Deviation	13	0.0111	0.000008	0.000289	0.000056	0.0006	0.000261	0.008	0.000419	0.000513	0.00013	0.00287
1st Quartile	184	0.0112	0.000016	0.000316	0.00002	0.00005	0.000177	0.0114	0.000071	0.00009	0.0017	0.00254
Median	187	0.0115	0.000021	0.000468	0.000024	0.0004	0.0002	0.0138	0.0002	0.000729	0.00174	0.004
3rd Quartile	198	0.016	0.000023	0.00055	0.000051	0.0006	0.000462	0.0162	0.00045	0.00105	0.00183	0.0055
Count Over Guideline	0	0	0	0	0	1	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	14%	0%	0%	0%	0%	0%	0%

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

Table 3-20: Summary Statistics for Metals of Interest at Site KZ-17, Geona Creek

	KZ-17											
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Lead	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.000005	0.00004	0.000002	0.0001
CCME Guideline [a]	n/a	0.1		0.005	0.00012 - 0.00037	0.001					0.015	
BCMoE Guideline [a]	n/a		0.02				**0.0027 - 0.011**	1	**0.0053 - 0.015**	0.002		0.0075 - 0.146
Average	191	0.0367	0.000047	0.000827	0.0000659	**0.00111**	0.000852	0.297	0.0001768	0.000803	0.00323	0.00689
Count	29	28	20	27	27	27	27	28	27	27	23	28
Minimum	68	0.00137	0.000025	0.000236	0.00001	0.00005	0.0002	0.0037	0.000007	0.000025	0.000794	0.00103
Maximum	274	**0.595**	0.000079	**0.00598**	0.000428	**0.023**	0.00467	**4.40**	0.00156	0.00151	0.00589	0.0427
Geometric Mean	184	0.0123	0.000045	0.000651	0.0000444	0.00016	0.000622	0.126	0.0000737	0.000589	0.00288	0.00525
Count <DL	0	0	2	2	0	21	0	0	7	4	0	3
Standard Deviation	49	0.110	0.000016	0.00105	0.0000889	0.00439	0.000978	0.808	0.000327	0.000451	0.00150	0.00746
1st Quartile	159	0.00542	0.000033	0.00054	0.0000305	0.00005	0.000407	0.105	0.0000317	0.000543	0.00216	0.0039
Median	185	0.0095	0.000048	0.000637	0.000044	0.00005	0.0006	0.125	0.000058	0.0007	0.00270	0.00566
3rd Quartile	217	0.0262	0.000056	0.000735	0.000053	0.0004	0.000745	0.195	0.000115	0.00126	0.00452	0.00792
Count Over Guideline	0	1	0	1	2	3	1	1	0	0	0	1
% Over Guideline	0%	4%	0%	4%	7%	11%	4%	4%	0%	0%	0%	4%

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

Table 3-21: Summary Statistics for Metals of Interest at Site KZ-2, Fault Creek

	KZ-2											
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Lead	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.000005	0.00004	0.000002	0.0001
CCME Guideline [a]	n/a	0.1		0.005	0.00009 - 0.00022	0.001					0.015	
BCMoE Guideline [a]	n/a		0.02				**0.0021 - 0.0058**	1	**0.0048 - 0.0084**	0.002		0.0075 - 0.049
Average	100	0.0260	0.000028	0.000102	0.000231	0.00039	0.00112	0.0368	0.0002427	0.00112	0.00277	0.0358
Count	27	27	20	25	25	25	27	27	25	27	20	27
Minimum	53.6	0.00299	0.00002	0.000025	0.00008	0.00005	0.000427	0.0017	0.000019	0.000025	0.00109	0.017
Maximum	145	**0.168**	0.000039	0.000322	0.000597	**0.0057**	0.00567	0.228	0.000983	**0.00308**	0.00545	0.118
Geometric Mean	96.7	0.0147	0.000027	0.00009	0.000212	0.00011	0.000906	0.0182	0.0001254	0.00074	0.00241	0.0326
Count <DL	0	3	0	2	0	17	2	2	0	2	0	0
Standard Deviation	25.2	0.0350	0.000006	0.000058	0.000104	0.00113	0.00106	0.0498	0.0002722	0.000868	0.00148	0.0196
1st Quartile	82.7	0.00758	0.000024	0.000074	0.000194	0.00005	0.00062	0.0088	0.000043	0.000445	0.00159	0.0247
Median	101	0.0135	0.000026	0.000094	0.000214	0.00005	0.0008	0.019	0.000109	0.000795	0.0023	0.0288
3rd Quartile	121	0.0265	0.000032	0.000112	0.000246	0.00016	0.00105	0.0436	0.000375	0.00169	0.00409	0.0411
Count Over Guideline	0	1	0	0	20	1	2	0	0	6	0	19
% Over Guideline	0%	4%	0%	0%	80%	4%	7%	0%	0%	22%	0%	70%

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

3.3 GEONA CREEK SEEPS

3.3.1 SETTING

Numerous seeps can be observed along the Geona Creek drainage, five of which have been sampled since June 2015 to gain an understanding of their chemistry and how it compares to that of Geona Creek. KZ-9 East Seep and West Seep are located near water quality station KZ-9 on the east and west side of Geona Creek at about 50 m and 30 m from the creek, respectively (Figure 1-2). KZ-9 East Seep has an orange colour and bubbles can be seen coming up, whereas KZ-9 West Seep does not have a distinctive coloration or noticeable bubbles. Moving upstream along Geona Creek, Seep 5 is located on the east side of Geona Creek, and enters as a side channel of Geona Creek. It has a distinct orange color and bubbles can be observed coming up. Further upstream, Seep 3 is located on the West side of Geona Creek and is approximately 20 m wide. It is located further up the hillside compared to the previous three seeps (about 100 m from the creek) and has no distinct coloration or noticeable bubbles. Finally, Seep 4 is located upstream of water quality station KZ-7 and about 140 m from Geona Creek, and is part of a wide seep network on the west side of Geona Creek; algae growth can be observed in some of the more stagnant areas. Photos of all seeps can be found in APPENDIX B (page B-8).

3.3.2 PHYSICAL PARAMETERS AND NUTRIENTS

Seep 3, Seep 4 and the KZ-9 West Seep shared similar circumneutral to mildly alkaline pH (pH 7.3 to 8.1) and oxygen content (72 to 98% saturation) ranges (Table 3-22). In contrast, the KZ-9 East Seep, and to a lesser extent Seep 5, had a lower pH range (pH 5.8 to 6.0 for KZ-9 East Seep and pH 6.0 to 7.9 for Seep 5) and lower oxygen content (21 to 54% saturation for KZ-9 East Seep and 26 to 128% saturation for Seep 5). Both of these seeps were also characterized by orange precipitates, likely composed of poorly crystalline iron oxyhydroxides. The measurable dissolved iron concentrations in these waters (Table 3-24 and Table 3-28), and typically lower dissolved oxygen content relative to the other seeps suggest that suboxic groundwater discharges here. Upon exposure to the atmosphere, the dissolved ferrous iron oxidizes rapidly to precipitates, producing the orange ochreous precipitates observed at the KZ-9 East Seep and Seep 5. This process also produces acidity, leading to the lower pH observed at both these sites.

No CCME or BCMoE guideline exceedances were recorded for any of the anions or nutrients monitored in the five seeps with the exception of fluoride in the KZ-9 East Seep (0.86 to 0.97 mg/L; Table 3-23), which was seven times higher than the CCME guideline (0.12 mg/L).

Table 3-22: In Situ Parameters at Seep Sites

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

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

Table 3-23: CCME/BCMoE Guideline Anions and Nutrients at Seep Sites

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

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

[b] Dash denotes no sample collected.

3.3.3 METALS

The dissolved concentrations of metals of interest in the seep waters are presented in Table 3-24 to Table 3-28. Dissolved aluminum and dissolved iron exceeded their respective BCMoE guidelines in the majority of KZ-9 East Seep samples (Table 3-24). The aluminum exceedance is partly due to the relatively low pH of the seep waters, which enhances aluminum solubility. Seep 5 waters also returned samples with dissolved iron exceedances (Table 3-28). The elevated iron concentrations (0.5 to 13 mg/L) observed in both these seeps are likely due to iron(III)-reducing conditions present in the aquifer which feeds them. This is evidenced by the low dissolved oxygen, low nitrate concentration, and elevated manganese concentrations (1.8 to 2.2 mg/L for KZ-9 East Seep and 0.016 to 0.58 mg/L for Seep 5) relative to the other seeps that were not characterized by an orange precipitate. Nitrate- and manganese(IV)-reduction are thermodynamically more favourable than iron(III)-reduction, hence the relatively low nitrate concentrations and elevated dissolved manganese (due to the reductive dissolution of oxidized manganese minerals) would be expected as precursors to iron(III)-reduction. Under iron(III)-reducing conditions, poorly crystalline ferric oxyhydroxide phases undergo reductive dissolution, resulting in the elevated levels of dissolved ferrous iron observed. Upon exposure to the atmosphere, oxidation of the dissolved ferrous iron and subsequent precipitation of ferric oxyhydroxide precipitates is rapid, giving rise to the orange coloration observed at these sites and the lower pH, since hydrolysis of ferric iron is an acid-producing reaction.

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

Seep 5 samples also showed occasional exceedances for dissolved cadmium, zinc, and copper (Table 3-28). The KZ-9 West Seep returned dissolved selenium concentrations (0.0020 – 0.0036 mg/L) that were marginally above the BCMoE guideline (0.002 mg/L). No parameters of interest in samples collected from Seeps 3 and 4 exceeded any water quality guidelines (Table 3-26 and Table 3-27).

Table 3-24: Concentrations of Metals of Interest at East Seep Near KZ-9

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

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

Table 3-25: Concentrations of Metals of Interest at West Seep Near KZ-9

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

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

Table 3-26: Concentrations of Metals of Interest at Seep 3

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

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

Table 3-27: Concentrations of Metals of Interest at Seep 4

Seep 4												
Sampling Date	Dissolved Hardness	Dissolved Aluminum	Dissolved Antimony	Dissolved Arsenic	Dissolved Cadmium	Dissolved Chromium	Dissolved Copper	Dissolved Iron	Dissolved Lead	Dissolved Selenium	Dissolved Uranium	Dissolved Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
CCME Guideline [a]	n/a	0.1		0.005		0.001					0.015	
BCMoE Guideline [a]	n/a	0.05 at pH ≥6.5	0.02		0.00027 - 0.00031		**0.0057 - 0.0067**	**0.35**	**0.0086 - 0.0094**	0.002		0.047 - 0.065
24-Jun-15	142	0.00126	<0.000020	0.000056	0.0000137	<0.00010	0.000295	<0.0010	<0.0000050	0.000709	0.000944	0.00026
15-Oct-15	167	0.00146	<0.000020	0.000087	0.000018	<0.00010	0.000178	<0.0010	<0.0000050	0.00082	0.00137	0.00015
16-Jun-16	156	0.00155	<0.000020	0.000062	0.00001	0.00094	0.000352	0.0070	<0.0000050	0.000833	0.00131	0.00037
27-Aug-16	159	0.00234	<0.000020	0.000052	0.000013	<0.00010	0.000347	0.0025	0.0000060	0.00086	0.00119	0.00084
8-Sep-16	151	0.00159	<0.000020	0.000062	0.000013	<0.00010	0.000319	<0.0010	<0.0000050	0.000826	0.000879	0.00014
3-Oct-16	152	0.00103	<0.000020	0.000044	0.000015	<0.00010	0.00021	<0.0010	<0.0000050	0.000814	0.00106	0.00027

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

Table 3-28: Concentrations of Metals of Interest at Seep 5

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

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

3.4 FINLAYSON CREEK

3.4.1 SETTING

Finlayson Creek in its entirety is approximately 38 km in length, with 28 km of its reach located downstream of the potential zone of influence of the Project (Figure 1-2). Finlayson Creek originates west of the Project area and flows northeast until eventually draining into the Finlayson River. Four water quality stations are located on Finlayson Creek: KZ-16, KZ-15, KZ-22 and KZ-26. KZ-16 is located immediately upstream of the confluence with Geona Creek, KZ-15 is located 100 m downstream of the confluence with Geona Creek, KZ-22 is located 100 m downstream of the confluence with East Creek and KZ-26 is located at the convergence of Finlayson Creek and the Robert Campbell Highway. Photos of Finlayson Creek can be found in APPENDIX B (pages B-9 to B-12).

3.4.2 PHYSICAL PARAMETERS AND NUTRIENTS

Finlayson Creek waters (KZ-16, KZ-15, KZ-22 and KZ-26) were circumneutral to mildly alkaline (pH range 6.9 to 8.5; Table 3-29 to Table 3-32) and well oxygenated (78 to 111% saturation). Temperature varied seasonally between -0.3 and 11.5°C. The median pH at KZ-26 (pH 8.18), the most downstream station, was higher than that of the three upstream sites (median pH 7.75 to 7.82), suggesting downstream input(s) of alkalinity, likely from tributaries to Finlayson Creek that enter the lower portion of its reach , as concentrations of both hardness and alkalinity increased progressively at each monitoring site along the reach of Finlayson Creek (Figure 1-2, Table 3-37 to Table 3-40, and APPENDIX A). This appears primarily due to the contribution of harder waters with higher alkalinity from Geona Creek, East Creek, and likely other tributaries that feed into the northern reach of Finlayson Creek, upstream of KZ-26.

Table 3-29: Summary Statistics for In Situ Parameters at Site KZ-16, Finlayson Creek

	KZ-16					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
CCME Guideline	6.5-9			6.5		
BCMoE Guideline						
Average	7.65	298.96	4.67	10.71	92.59	172.08
Count	26	26	26	24	24	21
Minimum	6.9	110.8	-0.4	8.79	80	33.4
Maximum	8.14	535.6	11.3	13.1	104.4	368.2
Geometric Mean	7.65	279.69	3.1	10.64	92.28	149.78
Standard Deviation	0.32	111.49	4.66	1.24	7.72	89.68
1st Quartile	7.43	221.05	0	9.94	86.65	106.7
Median	7.75	277.75	3.9	10.41	92.95	145.3
3rd Quartile	7.89	373.18	9.82	11.44	99.25	236.8
Count Over Guideline	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%

Table 3-30: Summary Statistics for In Situ Parameters at Site KZ-15, Finlayson Creek

	KZ-15					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
CCME Guideline	6.5-9			6.5		
BCMoE Guideline						
Average	7.78	312	4.5	10.59	91.49	168
Count	26	26	26	24	24	21
Minimum	7.18	109.1	-0.2	8.3	78	72.2
Maximum	8.3	483.4	10.1	12.83	102	296.7
Geometric Mean	7.77	297.8	2.8	10.52	91.21	151.5
Standard Deviation	0.29	92.9	4	1.26	7.19	76
1st Quartile	7.65	250.6	0.2	9.8	86.62	99.9
Median	7.82	299.1	4.9	10.33	91.35	160.5
3rd Quartile	7.99	376	8.3	11.4	98.3	233.2
Count Over Guideline	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%

Table 3-31: Summary Statistics for In Situ Parameters at Site KZ-22, Finlayson Creek

	KZ-22					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
CCME Guideline	6.5-9			6.5		
BCMoE Guideline						
Average	7.78	388.8	4	11.12	95.4	133.7
Count	20	20	20	20	20	20
Minimum	7.07	146	-0.3	9.47	82	32.8
Maximum	8.07	565	11.5	13	108	307.6
Geometric Mean	7.78	373.3	2.5	11.08	95.1	116.1
Standard Deviation	0.27	105.8	4.4	0.96	7.4	77.1
1st Quartile	7.63	327.1	0	10.47	90.2	97.7
Median	7.81	368.9	1.4	10.91	96.5	107
3rd Quartile	8.03	478.1	8.6	11.76	101.2	147.5
Count Over Guideline	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%

Table 3-32: Summary Statistics for In Situ Parameters at Site KZ-26, Finlayson Creek

	KZ-26					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
CCME Guideline	6.5-9			6.5		
BCMoE Guideline						
Average	8.1	387.3	4.7	11.55	97.5	160.6
Count	24	24	24	22	22	19
Minimum	7.54	159.9	-0.3	10.1	83	71.6
Maximum	8.5	549.3	10.2	13.55	110.7	295.7
Geometric Mean	8.1	376.6	2.8	11.51	97.2	143.7
Count <DL	0	0	0	0	0	0
Standard Deviation	0.25	86.1	4	1.06	7.7	77.9
1st Quartile	7.88	329.6	0.2	10.9	90.8	100.9
Median	8.18	383.9	5.8	11.24	98	136.4
3rd Quartile	8.26	438.4	8.4	12.54	102	231.4
Count Over Guideline	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%

No CCME or BCMoE exceedances were recorded for any of the anions or nutrients monitored on Finlayson Creek with the exception of total phosphorus, fluoride, and ammonia. Total phosphorus exhibited one CCME eutrophic (greater than 0.035 mg/L) exceedance for the May 2015 sampling event at all three sites downstream of the confluence of Geona Creek, and one further exceedance for the May 1995 sampling event at KZ-26. Both these sampling events occurred during freshet when the phosphorus was largely associated with particulate material, since dissolved phosphorus concentrations did not exceed the CCME guideline at any site for any sampling event (APPENDIX A). KZ-22 also exhibited a total phosphorus exceedance in August 2016 (0.08 mg/L), which appears related to a high flow event following heavy rainfall, as evidenced in the elevated TSS and discharge levels comparable to those observed during freshet. The dissolved phosphorus concentration for this sample was 90% lower and below the CCME eutrophic threshold indicating the phosphorus was largely particulate in nature. In any event, total and dissolved phosphorus concentrations are not of concern given these sporadic, freshet-related exceedances.

No fluoride CCME exceedances were observed at KZ-16 or KZ-15, and only two samples at KZ-26 (0.13 and 0.14 mg/L; April 2015) marginally exceeded the CCME guideline (0.12 mg/L). Site KZ-22 returned eight (40%) CCME exceedances (0.13 to 0.17 mg/L; Table 3-35), due to the impact of higher fluoride water from East Creek (0.07 to 0.21 mg/L; median 0.17 mg/L; Table 3-42) which flows into Finlayson Creek approximately 100 m upstream of site KZ-22.

Nitrogen species were typically below detection (nitrite-N, cyanide), or present at levels that were well below their respective CCME guidelines (ammonia-N, nitrate-N). Nitrate-N levels were lowest in summer and highest over winter, likely linked to when primary productivity, which consumes nitrate, was highest and lowest, respectively. DOC ranged from greater than 0.5 to 14.9 mg/L at all four sites on Finlayson Creek, and increased progressively moving downstream from KZ-16 (median 1.5 mg/L) to the mouth at KZ-26 (median 4.1mg/L), reflecting inputs from the higher DOC waters of Geona Creek, East Creek and likely the other tributaries to Finlayson Creek located over its northernmost reach. As observed at other sites, DOC concentrations peaked markedly during periods of high flow (freshet and following high rainfall events), which was also reflected in the peak colour measurements observed at all sites at these times.

Table 3-33: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-16, Finlayson Creek

	KZ-16							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
CCME Guideline [a]	120	0.12		0.005	0.197		3	0.035
BCMoE Guideline [a]			128 - 429			0.02		
Average	0.63	0.063	23.22	0.00048	0.0124	0.0017	0.0846	0.0035
Count	21	21	37	30	37	36	37	30
Minimum	0.25	0.039	1.21	0.00025	0.0025	0.001	0.0087	0.001
Maximum	2.3	0.087	41.5	0.00122	0.1	0.0032	0.259	0.025
Geometric Mean	0.51	0.062	20.86	0.00044	0.0073	0.0016	0.0452	0.0022
Count <DL	8	0	0	19	15	35	7	15
Standard Deviation	0.47	0.014	8.83	0.00021	0.0172	0.0008	0.0875	0.0050
1st Quartile	0.25	0.054	18.5	0.00025	0.0025	0.001	0.0139	0.001
Median	0.57	0.061	21.6	0.0005	0.0086	0.001	0.04	0.0021
3rd Quartile	0.78	0.073	28	0.00057	0.0129	0.0025	0.175	0.0031
Count Over Guideline	0	0	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%	0%	0%

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

Table 3-34: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-15, Finlayson Creek

	KZ-15							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
CCME Guideline [a]	120	0.12		0.005	0.197		3	0.035
BCMoE Guideline [a]			128 - 429			0.02		
Average	0.61	0.079	24.75	0.00049	0.014	0.0017	0.0746	0.0091
Count	21	21	38	30	38	36	38	31
Minimum	0.25	0.042	0.25	0.00025	0.0025	0.001	0.0093	0.001
Maximum	1.7	0.12	37.3	0.00146	0.11	0.0025	0.217	**0.103**
Geometric Mean	0.51	0.076	21.79	0.00044	0.007	0.0015	0.0429	0.0046
Count <DL	7	0	1	19	16	36	6	12
Standard Deviation	0.37	0.02	7.45	0.00025	0.0233	0.0008	0.0743	0.0183
1st Quartile	0.25	0.066	21.62	0.00025	0.0025	0.001	0.0165	0.0019
Median	0.55	0.074	24	0.0005	0.006	0.001	0.036	0.005
3rd Quartile	0.74	0.093	29.23	0.00054	0.0142	0.0025	0.1425	0.007
Count Over Guideline	0	0	0	0	0	0	0	1
% Over Guideline	0%	0%	0%	0%	0%	0%	0%	3%

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

Table 3-35 :Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-22, Finlayson Creek

	KZ-22							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
CCME Guideline [a]	120	0.12		0.005	0.197		3	0.035
BCMoE Guideline [a]			128 - 429			0.02		
Average	0.7	**0.122**	30.3	0.00054	0.0304	0.0014	0.0646	0.0165
Count	20	20	24	24	24	23	24	24
Minimum	0.25	0.059	7.1	0.00025	0.0025	0.001	0.001	0.0015
Maximum	1.2	**0.17**	45.7	0.00122	0.2	0.0025	0.247	**0.0795**
Geometric Mean	0.65	0.119	26.98	0.00048	0.0154	0.0013	0.0286	0.0106
Count <DL	3	0	0	11	4	21	5	3
Standard Deviation	0.25	0.027	11.81	0.00025	0.0423	0.0006	0.0752	0.019
1st Quartile	0.63	0.107	28.4	0.00025	0.0075	0.001	0.01	0.0067
Median	0.73	0.12	32.75	0.00051	0.0145	0.001	0.0196	0.011
3rd Quartile	0.84	**0.143**	40.15	0.00067	0.0361	0.0015	0.0942	0.0148
Count Over Guideline	0	8	0	0	1	0	0	2
% Over Guideline	0%	40%	0%	0%	4%	0%	0%	8%

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

Table 3-36: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-26, Finlayson Creek

	KZ-26							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
CCME Guideline [a]	120	0.12		0.005	0.197		3	0.035
BCMoE Guideline [a]			128 - 429			0.02		
Average	0.71	0.109	32.4	0.00052	0.0168	0.0018	0.0577	0.0122
Count	19	19	35	28	35	33	35	28
Minimum	0.25	0.057	13.3	0.00025	0.0025	0.001	0.0057	0.001
Maximum	1.2	**0.14**	47.6	0.00108	0.17	0.0026	0.272	**0.042**
Geometric Mean	0.63	0.107	31.4	0.00047	0.008	0.0016	0.0286	0.0079
Count <DL	4	0	0	16	13	31	10	7
Standard Deviation	0.32	0.018	7.5	0.00024	0.0306	0.0008	0.0771	0.0114
1st Quartile	0.55	0.1	29.4	0.00025	0.0025	0.001	0.01	0.00470
Median	0.73	0.11	31.1	0.0005	0.0086	0.0022	0.028	0.008
3rd Quartile	0.96	0.12	36.7	0.00061	0.0155	0.0025	0.0552	0.0146
Count Over Guideline	0	2	0	0	0	0	0	2
% Over Guideline	0%	11%	0%	0%	0%	0%	0%	7%

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

3.4.3 METALS

KZ-16, located the farthest upstream on Finlayson Creek, exhibited one water quality guideline exceedance each for total aluminum, and total zinc (Table 3-37). The latter two exceedances occurred during the May 1995 sampling event, when freshet was likely responsible for flushing aluminum-bearing particulates into the watercourse, as evidenced by the much lower dissolved aluminum concentration (0.12 mg/L total vs 0.053 mg/L dissolved aluminum; APPENDIX A). The total and dissolved zinc concentrations were comparable, perhaps suggesting that flushing of a soluble zinc-bearing source occurred upgradient of KZ-15; however, the total zinc concentration observed on May 15, 1995 (0.063 mg/L) was significantly higher than the rest of the data set as a result of spring freshet conditions.

The only other parameter that displayed a CCME exceedance at KZ-16 was total chromium, which was present at levels greater than 0.001 mg/L in four samples (15%), all of which were collected in the 1994-1995 sampling program. Total chromium has been below the detection limit in all but one sample collected since 2004, perhaps suggesting a contamination or analytical issues associated with this analyte in the 1994-1995 dataset.

More elements displayed at least one water quality guideline exceedance at site KZ-15 (Table 3-38), likely due to the contribution of Geona Creek water which flows into Finlayson Creek approximately 100 m upstream of this site. Solitary exceedances were observed for total aluminum, copper, and iron at KZ-15. The total aluminum, copper and iron exceedances occurred in the May 2015 sampling event and are related to the high particulate load present due to freshet; dissolved levels of these constituents were significantly lower, pointing towards the particulates mobilized by freshet as the cause for these exceedances.

Total cadmium, zinc, and chromium concentrations presented between two and three exceedances (Table 3-38). All of the total chromium exceedances were marginal (0.0010 to 0.0014 mg/L) compared to the CCME guideline (0.001 mg/L), and the corresponding dissolved chromium concentrations were either below the detection limit (greater than 0.0001 mg/L) or less than half of the total chromium level, suggesting that such chromium is largely particulate. Given the marginal CCME exceedance and the much lower bioavailability of particulate-bound metals compared to dissolved forms (Prothro, 1993), such exceedances are not of particular concern. Similarly, the total zinc exceedances occurred during the freshet conditions of May 1995 and May 2015 and had companion dissolved zinc levels that were below the water quality guideline. The May 2015 cadmium exceedance was also particulate related as the dissolved cadmium concentration was over an order of magnitude lower (APPENDIX A); the second total cadmium exceedance was observed for the August 2008 monitoring event. In any case, the presence of only two CCME exceedances from a pool of 28 samples which span 11 years of monitoring including three years (1995 and 2015 to 2016) of detailed monthly sampling suggests these exceedances are not frequent.

Site KZ-22, located approximately 100 m downstream of the confluence with East Creek, showed between one and two water quality guideline exceedances for total concentrations of aluminum, arsenic and cadmium, and four exceedances for total iron (Table 3-39). The May 2015 and August 2016 sampling events accounted for exceedances of aluminum, arsenic and iron, when all three constituents were primarily associated with particulates during these high TSS events. Similarly, the total cadmium exceedance observed for the August

1995 sampling event had a significant particulate component, as did the two other total iron exceedances noted in the February and March 2016 sampling events in which dissolved iron comprised greater than 6% of the total iron concentration.

Finally, KZ-26, located at the mouth of Finlayson Creek, exhibited water quality guideline exceedance for total concentrations of zinc (one sample), chromium (two samples), and aluminum (eight samples; Table 3-40). The two chromium exceedances occurred in two of the three August 1995 sampling events. The fact that the companion dissolved chromium concentrations were much lower (greater than 22% of the total concentration) and were below the CCME guideline suggests that the particulate chromium is responsible for this exceedance, which is likely less bioavailable than its dissolved counterpart (Prothro, 1993). All of the total aluminum exceedances occurred during high flow conditions around freshet (May, June 1995, May, June 2015) or following periods of elevated precipitation (August 1995, August 2015, and August 2016) as evidence by elevated levels of flow and TSS. The corresponding dissolved aluminum concentrations were between 3% and 15% of the total aluminum concentration, and were below the CCME guideline (0.1 mg/L). The solitary total zinc exceedance occurred in the May 1995 freshet sample whereas its companion dissolved concentration was below detection and over an order of magnitude lower.

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

Table 3-37: Summary Statistics for Metals of Interest at Site KZ-16, Finlayson Creek

	KZ-16											
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Lead	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.000005	0.00004	0.000002	0.0001
CCME Guideline [a]	n/a	0.1		0.005	0.00012 - 0.00037	0.001					0.015	
BCMoE Guideline [a]	n/a		0.009				**0.0028 - 0.013**	1	**0.0054 - 0.017**	0.002		0.0075 - 0.174
Average	157	0.0131	0.000015	0.000276	0.0000235	0.00045	0.00053	0.0334	0.0000861	0.000669	0.00153	0.00323
Count	37	37	23	36	36	36	36	37	36	36	27	37
Minimum	70.7	0.00091	0.00001	0.000025	0.000005	0.00005	0.000184	0.0025	0.0000025	0.000025	0.000389	0.00026
Maximum	312	**0.12**	0.000025	0.000614	0.00012	**0.003**	0.0022	0.256	0.0006	0.00179	0.00345	0.063
Geometric Mean	146	0.00611	0.000014	0.000227	0.0000176	0.00015	0.000445	0.0193	0.0000252	0.000465	0.00130	0.00122
Count <DL	0	1	15	4	5	25	0	1	16	3	0	7
Standard Deviation	63.3	0.0246	0.000006	0.000143	0.0000227	0.0008	0.000412	0.0557	0.0001309	0.000485	0.000874	0.0102
1st Quartile	118	0.003	0.00001	0.000201	0.0000127	0.00005	0.0003	0.0119	0.000007	0.000325	0.000827	0.00056
Median	137	0.005	0.00001	0.000258	0.0000195	0.00005	0.00044	0.0175	0.00002	0.0005	0.00136	0.0008
3rd Quartile	167	0.00981	0.000022	0.000308	0.000025	0.00043	0.0005	0.025	0.0001	0.001008	0.00211	0.0025
Count Over Guideline	0	1	0	0	0	4	0	0	0	0	0	1
% Over Guideline	0%	3%	0%	0%	0%	11%	0%	0%	0%	0%	0%	3%

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

Table 3-38: Summary Statistics for Metals of Interest at Site KZ-15, Finlayson Creek

	KZ-15											
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Lead	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.000005	0.00004	0.000002	0.0001
CCME Guideline [a]	n/a	0.1		0.005	0.00012 - 0.00036	0.001					0.015	
BCMoE Guideline [a]	n/a		0.009				**0.0028 - 0.011**	1	**0.0053 - 0.015**	0.002		0.0075 - 0.143
Average	168	0.0233	0.00003	0.000494	0.000058	0.00033	0.000694	0.142	0.000186	0.000661	0.00232	0.00572
Count	38	37	23	36	36	36	36	37	36	36	27	37
Minimum	70.1	0.00204	0.000025	0.000025	0.000005	0.00005	0.0002	0.012	0.0000102	0.000025	0.000685	0.00165
Maximum	271	**0.356**	0.000041	0.00318	0.00081	**0.00144**	0.00342	**2.07**	0.00223	0.00156	0.00514	0.055
Geometric Mean	161	0.0109	0.00003	0.000387	0.0000308	0.00018	0.000557	0.0789	0.0000696	0.000475	0.00196	0.00398
Count <DL	0	2	6	3	1	25	0	0	11	3	0	4
Standard Deviation	51.5	0.0586	0.000005	0.000488	0.000135	0.00035	0.000611	0.3314	0.000397	0.000445	0.00142	0.00903
1st Quartile	140	0.0057	0.000025	0.000363	0.00002	0.00005	0.0004	0.044	0.000025	0.000376	0.00132	0.0025
Median	156	0.01	0.00003	0.000423	0.0000283	0.00025	0.00047	0.0764	0.0000531	0.0005	0.00171	0.0038
3rd Quartile	180	0.0169	0.000033	0.000535	0.000038	0.0005	0.00074	0.112	0.0001325	0.00111	0.00284	0.005
Count Over Guideline	0	1	0	0	2	3	1	1	0	0	0	2
% Over Guideline	0%	3%	0%	0%	6%	8%	3%	3%	0%	0%	0%	5%

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

Table 3-39: Summary Statistics for Metals of Interest at Site KZ-22, Finlayson Creek

	KZ-22											
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Lead	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.000005	0.00004	0.000002	0.0001
CCME Guideline [a]	n/a	0.1		0.005	0.00006 - 0.00037	0.001					0.015	
BCMoE Guideline [a]	n/a		0.009				**0.002 - 0.015**	1	**0.004 - 0.020**	0.002		0.0075 - 0.212
Average	197	0.0241	0.000066	0.00204	0.0000292	0.00023	0.000673	0.555	0.000120	0.000597	0.00264	0.00298
Count	24	24	20	24	24	24	24	24	24	24	20	24
Minimum	30.1	0.00074	0.000028	0.000025	0.000005	0.00005	0.0002	0.0025	0.0000025	0.000025	0.000881	0.00043
Maximum	363	**0.2**	0.000119	**0.00906**	0.000144	0.0009	0.00182	**3.05**	0.0007	0.00123	0.00435	0.0153
Geometric Mean	173	0.0108	0.000061	0.00114	0.0000205	0.00015	0.000559	0.274	0.00005	0.000404	0.00247	0.00212
Count <DL	0	1	0	1	3	15	0	1	7	3	0	1
Standard Deviation	85.8	0.0475	0.000027	0.00201	0.0000325	0.00024	0.000437	0.710	0.000191	0.000358	0.000938	0.0032
1st Quartile	172	0.00685	0.000045	0.00114	0.0000157	0.00005	0.000339	0.194	0.000025	0.000465	0.00190	0.00145
Median	191	0.0098	0.00006	0.00142	0.0000205	0.00016	0.000594	0.255	0.000036	0.000542	0.00236	0.00198
3rd Quartile	260	0.0167	0.000085	0.00226	0.0000256	0.00025	0.000833	0.604	0.0000828	0.00085	0.00345	0.0026
Count Over Guideline	0	2	0	2	1	0	0	4	0	0	0	0
% Over Guideline	0%	8%	0%	8%	4%	0%	0%	17%	0%	0%	0%	0%

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

Table 3-40: Summary Statistics for Metals of Interest at Site KZ-26, Finlayson Creek

	KZ-26											
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Lead	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.000005	0.00004	0.000002	0.0001
CCME Guideline [a]	n/a	0.1		0.005	0.00017 - 0.00037	0.001					0.015	
BCMoE Guideline [a]	n/a		0.009				**0.0043 - 0.015**	1	**0.0068 - 0.021**	0.002		0.02 - 0.222
Average	218	0.0489	0.00009	0.00093	0.00002	0.00058	0.000958	0.239	0.000168	0.000532	0.00239	0.00375
Count	35	35	21	34	34	34	34	35	34	34	25	35
Minimum	107	0.0008	0.00006	0.000025	0.000005	0.00005	0.0003	0.01	0.0000025	0.000025	0.000937	0.00028
Maximum	376	**0.193**	0.000159	0.0028	0.00008	**0.0072**	0.002	1	0.0008	0.00133	0.00376	0.053
Geometric Mean	213	0.0222	0.000086	0.000723	0.0000147	0.00026	0.000829	0.142	0.0000816	0.000411	0.00229	0.00174
Count <DL	0	0	0	3	6	19	0	0	12	3	0	10
Standard Deviation	50	0.0557	0.000031	0.000614	0.0000173	0.00129	0.000515	0.249	0.000190	0.000305	0.00069	0.00882
1st Quartile	196	0.00815	0.000067	0.0005	0.00001	0.00016	0.0006	0.0797	0.000025	0.0004	0.0019	0.0007
Median	213	0.0201	0.000077	0.000772	0.0000126	0.00025	0.000765	0.16	0.0001	0.0005	0.00229	0.002
3rd Quartile	232	0.0909	0.000102	0.00125	0.0000242	0.0005	0.00133	0.300	0.000233	0.000664	0.00267	0.00276
Count Over Guideline	0	8	0	0	0	2	0	0	0	0	0	1
% Over Guideline	0%	23%	0%	0%	0%	6%	0%	0%	0%	0%	0%	3%

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

3.5 EAST CREEK

3.5.1 SETTING

East Creek is approximately 18 km in length and flows northwest into Finlayson Creek (Figure 1-2). East Creek originates at the southeast end of the property and contains a small pond midway through its reach. One water quality station is located on East Creek at KZ-21, which is immediately upstream with the confluence with Finlayson Creek. Photos of KZ-21 can be found in APPENDIX B (page B-13).

3.5.2 PHYSICAL PARAMETERS AND NUTRIENTS

East Creek waters, as monitored at KZ-21, were also circumneutral (pH 6.98 to 8.21) and well oxygenated (median 97% saturation; Table 3-41). East Creek waters were of higher ionic strength than those of Finlayson Creek, reflected in its higher conductivity (median 402 µS/cm at KZ-21 compared to median 277 to 384 µS/cm at sites on Finlayson Creek) and higher total hardness (median 238 mg/L compared to median 137 to 213 mg/L in Finlayson Creek).

Fluoride concentrations exceeded the CCME guideline (0.12 mg/L) for 19 of 20 samples collected (median 0.17 mg/L; Table 3-42), suggesting that East Creek drains an area of fluoride-bearing rocks. CCME eutrophic exceedances for total phosphorus were also noted on five occasions, three of which were during high flow events in May 1995, May 2015, and August 2016. For all five instances, the total phosphorus concentration was ≥5 times higher than dissolved phosphorus (APPENDIX A), and total iron concentrations were also generally elevated, suggesting that phosphorus was largely transported in particulate form. Nitrogen species (cyanide, ammonia-N, nitrite-N, nitrate-N) were largely either below the detection limit, or present at concentrations within an order of magnitude of it. Where detected, all such parameters were well below their respective CCME guideline. As observed elsewhere, nitrate concentrations tended to be highest during winter due to the depressed primary productivity at this time and the associated lower demand for nitrate. DOC concentrations ranged between 1.4 and 11.2 mg/L (median 5.6 mg/L), with the maximum concentration observed for the May 2015 freshet event, coincident with the highest colour measurement observed to date (182 TCU; median 58 TCU) likely related to the organic material washed into the watercourse during freshet.

Table 3-41: Summary Statistics for In Situ Parameters at Site KZ-21, East Creek

	KZ-21					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
CCME Guideline	6.5-9			6.5		
BCMoE Guideline						
Average	7.68	429.6	5.2	11.17	96.8	147.9
Count	25	25	25	23	23	20
Minimum	6.98	141.4	-0.3	9.48	82.4	51.4
Maximum	8.21	609.6	12	13.2	111	344.9
Geometric Mean	7.67	415.3	3.2	11.1	96.5	127.3
Standard Deviation	0.33	101.6	4.8	1.2	7.3	85.5
1st Quartile	7.45	364	0	10.33	92.4	95.2
Median	7.74	402	6.2	10.89	97	110.6
3rd Quartile	7.9	500.9	10	12.3	101.3	182.7
Count Over Guideline	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%

Table 3-42: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-21, East Creek

	KZ-21							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
CCME Guideline [a]	120	0.12		0.005	0.197		3	0.035
BCMoE Guideline [a]			128 - 429			0.02		
Average	0.83	**0.164**	36.58	0.00058	0.0265	0.002	0.0399	0.0316
Count	20	20	36	29	36	35	36	29
Minimum	0.25	0.065	9.95	0.00025	0.0025	0.001	0.001	0.005
Maximum	1.3	**0.21**	50	0.00117	0.14	0.0055	0.24	**0.251**
Geometric Mean	0.76	**0.16**	35.28	0.00053	0.0121	0.0018	0.0134	0.0189
Count <DL	2	0	0	14	10	29	20	0
Standard Deviation	0.31	0.034	7.93	0.00025	0.0334	0.001	0.0663	0.0481
1st Quartile	0.66	**0.147**	34.83	0.0005	0.0025	0.001	0.01	0.0103
Median	0.77	**0.17**	38.25	0.00052	0.0098	0.0025	0.01	0.017
3rd Quartile	1.05	**0.19**	40.92	0.00069	0.0393	0.0025	0.0314	0.0291
Count Over Guideline	0	19	0	0	0	0	0	5
% Over Guideline	0%	95%	0%	0%	0%	0%	0%	17%

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

3.5.3 METALS

Solitary water quality guideline exceedances were observed for total concentrations of cadmium, lead, and zinc at site KZ-21 (Table 3-43). None of these exceedances were observed in the dissolved fraction, suggesting that they were largely particulate-related, which is likely of lower bioavailability (Prothro, 1993), and hence of less concern.

CCME exceedances were observed for total aluminum (3 samples), total arsenic (4 samples) and total iron (5 samples) during the high flow May 1995, May 2015 (freshet), and August 2016 (rainfall) events, and are related to the high TSS and particulate material present at these times. For the other sampling occasions, the total concentrations of arsenic and iron in samples that exceeded their respective CCME and BCMoE guidelines typically exceeded their companion dissolved concentrations by an order of magnitude. In all cases, none of the dissolved concentrations of aluminum, arsenic or iron exceeded their water quality guidelines, indicating these constituents were largely transported as particulates.

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

Table 3-43: Summary Statistics for Metals of Interest at Site KZ-21, East Creek

	KZ-21											
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Lead	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.000005	0.00004	0.000002	0.0001
CCME Guideline [a]	n/a	0.1		0.005	0.00015 - 0.00037	0.001					0.015	
BCMoE Guideline [a]	n/a		0.009				**0.0037 - 0.015**	1	**0.0062 - 0.021**	0.002		0.01 - 0.224
Average	245	0.0414	0.000105	0.00384	0.0000298	0.00042	0.000759	**1.02**	0.00103	0.000423	0.00262	0.00465
Count	36	36	22	35	35	35	35	36	35	35	26	36
Minimum	92.9	0.00082	0.000025	0.00072	0.000005	0.00005	0.000204	0.0965	0.0000025	0.000025	0.000758	0.00041
Maximum	378	**0.538**	0.000262	**0.0331**	0.00036	**0.0022**	0.0031	**9.98**	0.032	0.000836	0.00336	0.046
Geometric Mean	237	0.0151	0.000086	0.00261	0.0000144	0.00027	0.000619	0.617	0.000062	0.000326	0.00254	0.00258
Count <DL	0	1	1	0	6	15	0	0	17	4	0	5
Standard Deviation	60	0.0987	0.000064	0.00553	0.0000662	0.00048	0.000576	1.70	0.00539	0.000236	0.00053	0.00873
1st Quartile	215	0.00815	0.00006	0.00155	0.00001	0.00013	0.000407	0.427	0.000025	0.000231	0.00237	0.0019
Median	238	0.0122	0.000089	0.0028	0.000013	0.00025	0.00066	0.498	0.000049	0.00043	0.00258	0.00227
3rd Quartile	280	0.0266	0.000146	0.00356	0.00002	0.0005	0.00078	0.852	0.0001	0.000583	0.00295	0.00317
Count Over Guideline	0	3	0	4	1	4	0	7	1	0	0	1
% Over Guideline	0%	8%	0%	11%	3%	11%	0%	19%	3%	0%	0%	3%

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

3.6 COMPARISON OF HISTORIC AND RECENT WATER QUALITY DATA

Sample collection has regularly occurred in August with 3 sampling events in 1995, biannual August sampling between 2002 and 2014, and the August 2015 and 2016 sampling events making it the best month over which to compare the water quality data collected to date. APPENDIX D presents graphical comparisons of the August sampling events for a range of constituents of interest.

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

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

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

With the exception of selenium and chromium, overall, the three water quality datasets (Cominco 1994-1995, biannual water licence sampling 2002-2014, and 2015-present) are in broad agreement, suggesting that the site water quality has not changed substantively in the past two decades of monitoring.

4. SUMMARY

Creeks that drain the KZK property were circumneutral to alkaline (pH 6.8 to 8.7; median 7.8) and had hardness ranging from moderately hard (Fault Creek and South Creek) to hard (Geona Creek) in the upper watershed and very hard in the lower watershed (Finlayson Creek and East Creek). Water quality guideline exceedances were observed sporadically for a number of constituents including fluoride, and total concentrations of phosphorus, aluminum, arsenic, cadmium, chromium, copper, iron, lead, selenium, and zinc. Of these, only fluoride, total cadmium, total chromium, and total zinc exceedances occurred in 10% or more of the samples collected in the sample locations.

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

The fluoride CCME exceedances were primarily localized to East Creek (KZ-21), where greater than 90% of samples were in exceedance, and site KZ-22 on Finlayson Creek, which is immediately downstream of the confluence with East Creek.

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

Total selenium concentrations were also notable in that although only 2% of samples exceeded the BCMoE water quality guideline (0.002 mg/L), a further 20% of samples were within a factor of two of this guideline. In general, more water quality guideline exceedances were noted for total metal concentrations than their dissolved counterparts, suggesting that a significant portion of the metals were particulate-bound, especially during freshet and/or other periods characterized by elevated TSS levels. That dissolved metal concentrations exhibited much less frequent water quality guideline exceedances is important since it is the dissolved fraction that is the most bioavailable (Prothro, 1993).

The majority of constituent concentrations peaked during spring as the high run-off and associated stream flow during freshet increased the particulate content of the streams, leading to higher total metal concentrations. Conversely, concentrations of fluoride, total selenium, uranium, and hardness were lowest during freshet. The levels of these parameters subsequently increased throughout the year to be highest during the winter months, suggesting that groundwater may be an important contributor to surface water concentrations of these four constituents. This is supported by groundwater monitoring data from wells installed on the Project site in which fluoride (0.05 to 0.9 mg/L), selenium (<0.00004 to 0.003 mg/L), uranium (0.0006 to 0.014 mg/L), and hardness (180 to 700 mg/L) concentrations in shallow groundwater either overlap or markedly exceed the range of concentrations observed in both Geona Creek and Fault Creek.

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

A comparison of the Cominco 1994-1995 water quality dataset with that collected during the more recent baseline water quality monitoring conducted since 2015 indicated that the majority of constituents shared a similar concentration span, suggesting there were no obvious differences between the two datasets. Two exceptions were total selenium and total chromium. Total chromium concentrations were typically lower in the 2015-2016 dataset compared to the historic sampling, perhaps due to a preponderance of higher flow sampling events in the historic samples which may have resulted in higher particulate chromium concentrations. In any case, the CCME exceedances for total chromium were relatively marginal, with dissolved chromium concentrations exhibiting three-fold lower incidence of CCME exceedance. Conversely, total selenium concentrations were generally higher in the more recently collected samples than in the 1994-1995 survey. Selenium concentrations appear to be sensitive to flow conditions, exhibiting minima during periods of high flow (i.e. dilution during freshet and following extended precipitation events) and elevated levels during baseflow winter conditions. The paucity of winter sampling in the 1994-1995 dataset allied with likely high precipitation events in the August 1995 samples, may have low-biased the historic dataset.

5. REFERENCES

British Columbia Ministry of Environment (BCMoE) (2015). British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife and Agriculture Summary Report.

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

Canadian Council of Ministers of the Environment (CCME) (2016). Canadian Environmental Quality Guidelines, Water quality Guidelines for the Protection of Aquatic Life.

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

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

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

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

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

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

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

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

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

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

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

APPENDIX A.

Historic and 2015-16 Surface Water Monitoring Data

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2
		Guideline	18-Jul-94	31-Aug-94	3-Dec-94	5-Apr-95	11-Jun-95	22-Aug-95	13-Sep-95	30-Apr-15	12-May-15	22-Jun-15	29-Jul-15	23-Aug-15	11-Sep-15	15-Oct-15	20-Nov-15	3-Dec-15	20-Jan-16	9-Feb-16
Discharge (Flow)	L/s									4.9	16.4	79	39.7	67.1	69.1	27.8	10.7	8.1	6.2	4.7
Total Suspended Solids	mg/L				<4	<4	<4	<4	<4	2.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
pH (field)	pH units	**6.5-9**								7.89	7.9	7.79	7.93	7.72	7.8	7.6	7.92	7.33	7.78	7.83
pH (lab)	pH units	**6.5-9**	7.7	7.8	7.2	8	7.3	7.5	7.2	8.1	7.7	7.75	7.75	7.77	7.86	7.87	7.73	8	7.72	8
Specific Conductance (field)	µS/cm									245	131.8	145.1	187.9	174.9	180.8	221.5	238.4	246.6	220.5	257.2
Specific Conductance (lab)	µS/cm		128	173	198	252	126	204	190	279	160	143	184	183	188	220	239	249	264	275
Temperature (field)	C									-0.3	1.6	5.5	7.9	5.6	4.7	0	0.1	0.2	0	0
Dissolved Oxygen (field)	mg/L	**6.5**								11.1	11.2	11.18	10.28	10.9	9.5	12.5	12.4	10.9	**4.8**	10.4
Dissolved Oxygen (field)	%									91	95	88.8	86.6	103	88	101	103	91	39	84
ORP (field)	mV									371.1	279.2	79.8	80.1	233.3	123.1	229.3	155.8	285.3	299	253.5
Turbidity (internal)	NTU											0.04	0.15	0.47	0.72	0.45	1.75	0.3	0.114	0.902
Hardness (from total)	mg/L		54.0	90.7	109	126	53.6	101	108	135	79.6	67.8	92.5	90.3	101	101	112	124	129	127
Hardness (from dissolved)	mg/L			94.7	109	126	50.7	98.1	106	140	82.7	67.3	90.7	89.8	93.3	100	114	116	131	130
Colour	TCU									<5.0	66.1	6.2	5.3	6.4	7	<5.0	<5.0	<5.0	<5.0	<5.0
Total Acidity	mg/L									<0.50	<0.50	1.3	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.92	<0.50
Acidity (pH 4.5)	mg/L									<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		33.9	46.3	65.2	58.9	27.9	49	45.3	87.9	49.6	38.7	53.3	48.3	48.9	56.6	63.1	69.9	79.1	84.6
Alkalinity, bicarbonate HCO3	mg/L		33.9	46.3				59.7	55.2	107	60.5	47.2	65	59	59.7	69.1	76.9	85.3	96.5	103
Alkalinity, hydroxide OH	mg/L							<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L							<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.5	<0.5				<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**								<0.50	0.66	<0.50	<0.50	<0.50	<0.50	<0.50	5.4	<0.50	<0.50	<0.50
Fluoride	mg/L	**0.12**								0.05	0.044	0.038	0.037	0.035	0.034	0.035	0.058	0.037	0.051	0.042
Sulphate, dissolved	mg/L	*	26.3	46.3	45.2	48.7	21.9	31	49.8	47.2	24.6	28	36.5	38.3	40.2	43.7	48.2	48.4	52.7	52.8
Cyanide, total	mg/L	**0.005**				<0.001	<0.001	0.001	<0.001	<0.00050	0.00084	0.00058	<0.00050	<0.00050	0.00066	<0.00050	<0.00050	<0.00050	0.00053	<0.00050
Cyanide, Weak Acid Dissociable	mg/L					<0.001	<0.001	<0.001	<0.001	<0.00050	0.00093	0.00054	<0.00050	0.00088	0.0006	<0.00050	<0.00050	<0.00050	0.00062	<0.00050
Ammonia (N)	mg/L	**0.197**			0.005	0.016	<0.005	<0.005	<0.005	0.0169	0.0087	<0.0050	0.0122	<0.0050	0.0051	0.0054	<0.0050	<0.0050	0.0158	0.0064
Nitrite (N)	mg/L	*				<0.005	<0.005	<0.005	<0.005	0.0033	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3**			0.18	0.18	0.08	0.12	0.18	0.119	0.0536	0.0559	0.0636	0.105	0.0796	0.125	0.134	0.138	0.163	0.165
Nitrite & Nitrate, as N	mg/L				0.18	0.18	0.08	0.12	0.18	0.122	0.0536	0.0559	0.0636	0.105	0.0796	0.125	0.136	0.138	0.163	0.165
Phosphorus,total-colourimetric	mg/L									<0.0020	0.0063	<0.0020	0.0036	0.0041	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus, Total Dissolved	mg/L									<0.0020	0.0082	<0.0020	0.0022	0.0037	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021
Dissolved Organic Carbon	mg/L									0.71	5.77	1.61	<0.50	0.68	0.81	1.15	0.54	0.76	0.8	<0.50
Aluminum (Al), total	mg/L	*	<0.06	<0.06	<0.006	0.023	0.05	0.02	0.019	0.0688	0.0858	0.00962	0.00841	0.00793	0.0112	0.0176	0.00724	0.00959	0.00318	0.0194
Antimony (Sb), total	mg/L	**0.009**								0.000033	0.000032	0.000024	0.000025	0.000037	0.000023	0.000022	0.000026	0.000028	0.00002	0.000033
Arsenic (As), total	mg/L	**0.005**			<0.00005	<0.00005	0.0001	0.0002	0.00006	0.000147	0.000128	0.000096	0.000101	0.000124	0.000112	0.000102	0.000077	0.000088	0.000069	0.000105
Barium (Ba), total	mg/L		0.03	0.048	0.05	0.057	0.029	0.052	0.054	0.0766	0.0487	0.0386	0.0547	0.0545	0.0619	0.059	0.0685	0.0695	0.0725	0.0752
Beryllium (Be), total	mg/L		<0.001			<0.0001	<0.0001	<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L					<0.002	<0.002	<0.002	<0.002	0.0000078	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	**1.5**	<0.04	<0.04	<0.04	0.028	0.021	0.038	0.013	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*			**0.00023**	0.00009	**0.00013**	0.00008	0.00011	**0.000246**	**0.000194**	**0.000229**	**0.000205**	**0.000346**	**0.000311**	**0.000199**	**0.000209**	**0.000237**	**0.00022**	**0.00024**
Calcium (Ca), total	mg/L		19.2	32.2	36.5	41	19	35	38	42.4	25.8	23.7	31.7	31.5	35	34.4	36.9	40.7	41.5	41
Chromium (Cr), total	mg/L	**0.001**			0.0008	**0.0057**	0.0005	0.0007	0.0007	0.00016	0.00016	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), total	mg/L					<0.0004	<0.0004	<0.0004	<0.0004	0.0000688	0.0000442	0.0000113	0.0000092	0.000013	0.000014	0.000026	0.000009	0.000007	0.000009	0.000031
Copper (Cu), total	mg/L	*	<0.002	<0.002	0.0005	0.0007	0.0013	0.0011	0.0008	0.00128	**0.00567**	0.000698	0.000637	0.000785	0.000726	0.000609	0.000501	0.000541	0.000531	0.000869
Iron (Fe), total	mg/L	**1**	<0.05	<0.05	0.01	0.061	0.084	0.019	0.025	0.134	0.0711	0.0105	0.0081	0.0067	0.016	0.0354	0.0094	0.0017	0.0051	0.0518
Lead (Pb), total	mg/L	*			0.0007	0.0005	0.0005	0.0002	0.0002	0.000743	0.000371	0.0000875	0.0000518	0.000043	0.000042	0.000148	0.000033	0.000019	0.000028	0.000552
Lithium (Li), total	mg/L									0.00179	0.00125	0.00066	0.00096	0.00083	0.00088	0.00093	0.00145	0.0009	0.00091	0.00148
Magnesium (Mg), total	mg/L		1.46	2.49	4.37	5.7	1.5	3.3	3.3	6.95	3.7	2.1	3.26	2.82	3.3	3.76	4.76	5.38	6.23	6.04
Manganese (Mn), total	mg/L	*	<0.002	<0.002	<0.002	0.001	0.0021	0.0006	0.0005	0.00472	0.0021	0.000479	0.000203	0.000264	0.000503	0.00139	0.000183	<0.000050	0.000103	0.00207
Mercury (Hg), total	mg/L	**0.000026**			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000020	0.0000045	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**				<0.0004	0.0007	<0.0004	0.0005	0.000717	0.000587	0.000598	0.000651	0.000677	0.000611	0.000604	0.00067	0.0007	0.00073	0.00076
Nickel (Ni), total	mg/L	*			0.0007		<0.001	<0.001	<0.001	0.00049	0.000778	0.000337	0.000302	0.000462	0.000427	0.000327	0.000267	0.000292	0.000263	0.000307
Phosphorus (P), total	mg/L				<0.003	<0.003	<0.003	<0.003	<0.003	0.0187	0.0087	<0.0020	0.0023	0.0022	<0.0020	0.003	<0.0020	<0.0020	0.0026	0.0063
Potassium (K), total	mg/L		1	1.5	1.6	2.0	1.1	1.7	1.8	2.33	2.14	1.24	1.76	1.5	1.74	1.75	2.05	2.07	2.36	2.23
Selenium (Se), total	mg/L	**0.002**	<0.0005	0.0005	0.00135	0.0016	<0.00005	0.00024	0.00007	**0.0028**	0.00125	0.000442	0.000621	0.000543	0.000667	0.0011	0.00147	0.00178	**0.0021**	**0.00206**

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2
		Guideline	18-Jul-94	31-Aug-94	3-Dec-94	5-Apr-95	11-Jun-95	22-Aug-95	13-Sep-95	30-Apr-15	12-May-15	22-Jun-15	29-Jul-15	23-Aug-15	11-Sep-15	15-Oct-15	20-Nov-15	3-Dec-15	20-Jan-16	9-Feb-16
Silicon (Si), total	mg/L		1.5	1.9	1.9	2.1	1.6	2.3	2.2	2.69	2.03	2.04	2.27	2.53	2.26	2.31	2.47	2.62	2.55	2.43
Silver (Ag), total	mg/L	**0.00025**			<0.00001	<0.00001	<0.00001		<0.00001	<0.0000050	0.0000059	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L		<0.4	0.5	0.6	0.76	0.45	0.73	0.74	0.907	0.873	0.502	0.659	0.605	0.738	0.732	0.821	0.89	0.946	0.881
Strontium (Sr), total	mg/L		0.057	0.097	0.098	0.11	0.051	0.1	0.1	0.153	0.0882	0.0749	0.0997	0.102	0.108	0.114	0.127	0.13	0.152	0.138
Sulphur (S), total	mg/L		8	14.4	13.8	15	7.5	16	17	17.4	8.8	8.8	13.1	14.1	12.9	15.6	16.3	18	18.5	18.1
Thallium (Tl), total	mg/L	**0.0008**								0.0000026	0.0000035	<0.0000020	0.0000041	0.000004	0.000004	0.000002	0.000002	0.000002	0.000002	0.000002
Tin (Sn), total	mg/L					<0.002	<0.002	<0.002	<0.002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		<0.003	<0.003	<0.003	0.0031	0.0039	0.0016	0.0019	0.00438	0.00257	<0.00050	<0.00050	<0.00050	0.00062	0.00123	<0.00050	<0.00050	<0.00050	0.00078
Uranium (U), total	mg/L	**0.015**								0.00506	0.00193	0.00109	0.00171	0.00165	0.00202	0.00258	0.00311	0.00348	0.00441	0.00452
Vanadium (V), total	mg/L					<0.0003	0.0003	<0.0003	<0.0003	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00033	0.0002	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	**0.04**	**0.03**	**0.047**	0.021	**0.044**	**0.017**	**0.025**	0.0309	**0.0239**	**0.0326**	**0.0244**	**0.0542**	**0.0472**	**0.0265**	**0.0253**	0.0286	0.0285	0.0288
Zirconium (Zr), total	mg/L					<0.0003	0.0004	0.0004	0.0006	<0.00010	0.00016	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*		<0.02	<0.002	0.008	0.02	0.014	0.008	0.00161	0.023	0.00502	0.00416	0.00479	0.00484	0.00276	0.00662	0.00193	0.00113	0.00199
Antimony (Sb), dissolved	mg/L									0.000032	0.000036	0.000023	0.000028	0.000026	0.000022	<0.000020	0.000021	0.000021	<0.000020	0.00003
Arsenic (As), dissolved	mg/L				0.00002	<0.00005	<0.00005	0.00023	<0.00005	0.000091	0.000122	0.000101	0.000104	0.000096	0.000103	0.000076	0.000078	0.000061	0.000066	0.00008
Barium (Ba), dissolved	mg/L			0.045	0.053	0.057	0.027	0.051	0.054	0.0801	0.0513	0.0415	0.0566	0.0491	0.053	0.0594	0.0671	0.0654	0.0733	0.0736
Beryllium (Be), dissolved	mg/L					<0.0001	<0.0001	<0.0001	<0.0001	<0.000010	0.000042	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L					<0.002	<0.002	<0.002	<0.002	<0.0000050	0.00001	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L			<0.008	<0.008	0.008	0.012	0.013	0.009	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*			0.00009	0.0001	0.00013	0.00007	0.00011	0.000229	**0.000182**	**0.000242**	**0.000204**	**0.000306**	**0.000275**	0.000185	0.000198	0.000171	0.000218	0.000235
Calcium (Ca), dissolved	mg/L			33.9	36.3	41	18	34	37	44.3	26.8	23.2	31	31.4	32.3	33.9	37.3	38	42.3	41.8
Chromium (Cr), dissolved	mg/L				0.0003	0.003	0.0004	0.0004	0.0007	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L					<0.0004	<0.0004	<0.0004	<0.0004	0.0000106	0.0000257	0.0000081	0.0000082	0.00001	0.00001	0.000007	0.000008	0.000007	0.000007	0.000005
Copper (Cu), dissolved	mg/L			<0.001	0.002	0.0005	0.0011	0.001	0.0008	0.000606	0.00528	0.00069	0.000623	0.000774	0.000652	0.000478	0.000568	0.00042	0.000414	0.000949
Iron (Fe), dissolved	mg/L	**0.35**		<0.003	0.004	0.022	0.017	<0.005	0.01	0.0017	0.0283	0.0022	0.0019	0.0012	0.0011	<0.0010	0.0012	<0.0010	<0.0010	<0.0010
Lead (Pb), dissolved	mg/L				0.0006	0.0003	0.0003	<0.0001	<0.0001	0.0000242	0.00021	0.0000241	0.0000929	0.00001	0.00001	0.000006	0.000015	0.000005	0.000016	0.000059
Lithium (Li), dissolved	mg/L									0.00162	0.00124	0.00076	0.00101	0.00058	0.00111	0.00081	0.00123	0.00111	0.00105	0.00174
Magnesium (Mg), dissolved	mg/L			2.45	4.34	5.7	1.4	3.2	3.2	7.18	3.84	2.27	3.22	2.74	3.07	3.73	4.94	5.16	6.12	6.1
Manganese (Mn), dissolved	mg/L			<0.002	0.002	0.0005	0.0007	0.0004	0.0003	0.000491	0.00125	0.000101	0.000123	0.000116	0.000119	0.000052	<0.000050	<0.000050	<0.000050	0.000086
Mercury (Hg), dissolved	mg/L					<0.00001	<0.00001	<0.00001	<0.00001	<0.0000020	0.0000033	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L					<0.0004	0.0005	<0.0004	0.0004	0.00085	0.000561	0.000633	0.000617	0.000682	0.000589	0.000605	0.000652	0.000665	0.000748	0.000749
Nickel (Ni), dissolved	mg/L				0.0006		<0.001	<0.001	<0.001	0.00028	0.000763	0.000404	0.000332	0.00045	0.000408	0.000273	0.000333	0.000275	0.00025	0.000267
Phosphorus (P), dissolved	mg/L						0.008	0.004	0.008	<0.0020	0.0044	<0.0020	0.0082	0.0022	0.0038	0.0031	0.0032	<0.0020	<0.0020	<0.0020
Potassium (K), dissolved	mg/L			1.6	1.7	2	1	1.7	1.7	2.5	2.14	1.37	1.81	1.41	1.67	1.76	2.19	1.97	2.37	2.31
Selenium (Se), dissolved	mg/L			<0.0005	0.0014	0.00015	<0.00005	<0.00005	0.00007	0.00306	0.00112	0.000486	0.0006	0.000552	0.000635	0.000945	0.00143	0.0018	0.00186	0.00189
Silicon (Si), dissolved	mg/L			1.98	2.09	2	1.5	2.2	2.2	2.71	1.91	2.04	2.25	2.12	2.28	2.18	2.33	2.51	2.47	2.4
Silver (Ag), dissolved	mg/L				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000050	0.0000075	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L			0.56	0.67	0.74	0.41	0.68	0.72	1.58	0.551	0.573	0.686	0.608	0.677	0.715	0.884	0.867	0.924	0.915
Strontium (Sr), dissolved	mg/L			0.093	0.105	0.11	0.048	0.099	0.1	0.162	0.0899	0.0822	0.0998	0.0882	0.105	0.109	0.128	0.127	0.148	0.142
Sulphur (S), dissolved	mg/L			14.19	14.7	14	7.1	15	17	17.1	8.1	9.2	12.7	13.1	14	14.6	16.1	17.1	16.9	17.5
Thallium (Tl), dissolved	mg/L									<0.0000020	0.0000094	<0.0000020	0.0000035	0.000004	0.000003	0.000003	0.000002	<0.0000020	0.000002	0.000002
Tin (Sn), dissolved	mg/L						<0.002	<0.002	<0.002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L			<0.003	<0.003	0.0021	0.0009	0.0011	0.0015	<0.00050	0.00052	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L									0.00498	0.00196	0.00111	0.00173	0.00157	0.00182	0.00243	0.00315	0.00326	0.00438	0.00442
Vanadium (V), dissolved	mg/L					<0.0003	<0.0003	<0.0003	<0.0003	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00022	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.017	0.049	0.022	0.041	0.014	0.025	0.0266	0.0206	0.0355	0.0242	0.0468	0.0405	0.0232	0.027	0.0207	0.0263	0.0257	
Zirconium (Zr), dissolved	mg/L					<0.0003	<0.0003	<0.0003	<0.0003	<0.00010	0.00015	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6
		Guideline	20-Mar-16	21-Apr-16	5-May-16	19-May-16	14-Jun-16	26-Jul-16	28-Jul-16	27-Aug-16	8-Sep-16	4-Oct-16	18-Jul-94	31-Aug-94	3-Dec-94	6-Apr-95	8-May-95	11-Jun-95	22-Aug-95	13-Sep-95
Discharge (Flow)	L/s		3.2	3.4	5.1		69.7		30.2	145.1	89.1	37								
Total Suspended Solids	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		9.9	<1.0	<1.0			<4	<4	16	<4	<4	<4
pH (field)	pH units	**6.5-9**	7.63	7.42	7.75	7.27	7.93	7.58	7.46	7.97	7.77	7.22								
pH (lab)	pH units	**6.5-9**	7.96	8.06	7.96	7.82	7.85	7.92		7.76	7.93	7.59	8.1	8.2	8	8.3	6.9	7.9	8.1	8
Specific Conductance (field)	µS/cm		257.2	238.2	245.9	129.6	149.3	179.7	188.6	207.8	195.1	209.9								
Specific Conductance (lab)	µS/cm		280	282	244	131	153	178		179	209	236	237	269	311	302	112	215	293	208
Temperature (field)	C		0.4	0.6	1.1	1.8	6.2	5.2	5.7	6	4.3	0.4								
Dissolved Oxygen (field)	mg/L	**6.5**	10.01	10.43	12.01	12.4	10.33	10.69	11.55	10.37	10.35	10.94								
Dissolved Oxygen (field)	%		82.8	85.7	100.4	105	99.5	99.9	108.5	97.8	94.6	89.8								
ORP (field)	mV		104.6	98.9	117.6	135.7	78.7	115.1	112.1	269.9	111.4	81.2								
Turbidity (internal)	NTU		0.306	1.57	0.08		0.202	0.35		5.806	0.34	0.918								
Hardness (from total)	mg/L		133	145	117	64.9	72.3	85.8		78.6	92	112	132	158	170	167	59.4	117	156	173
Hardness (from dissolved)	mg/L		136	142	114	65.3	67.1	84.4		80.9	101	108		167	171	167	35.7	114	156	167
Colour	TCU		<5.0	<5.0	7.7	18.3				<5.0										
Total Acidity	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50								
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50								
Alkalinity, total	mg/L		87.7	90.4	78.4	43.2	43.3	48		38.9	52.9	56.5	120	137	140	152	50.2	94.7	132	137
Alkalinity, bicarbonate HCO3	mg/L		107	110	95.6	52.7	52.9	58.5		47.4	64.6	68.9	120	137					161	167
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50							<0.5	<0.5
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50							<0.5	<0.5
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.5	<0.5					<0.5	<0.5
Chloride	mg/L	**120**	0.68	0.83	0.99	<0.50	0.68	<0.50		0.6	0.78	0.56								
Fluoride	mg/L	**0.12**	0.041	0.044	0.049	0.039	0.035	0.035		0.033	0.043	0.039								
Sulphate, dissolved	mg/L	*	51.3	47.8	41.3	19.8	31.6	37.3		42.2	53.2	53.7	18.9	18.3	20.7	19.8	11.5	15.3	15.3	16.9
Cyanide, total	mg/L	**0.005**	<0.00050	<0.00050	0.0005	0.00063	0.00099	<0.00050		<0.00050	0.00073	<0.00050				<0.001	<0.001	<0.001	0.001	<0.001
Cyanide, Weak Acid Dissociable	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00064		<0.00050	0.00081	<0.00050				<0.001	<0.001	<0.001	<0.001	<0.001
Ammonia (N)	mg/L	**0.197**	0.0079	0.0161	0.0164	0.018	0.0099	0.02		0.015	0.014	0.0079			0.005	<0.005	<0.005	<0.005	<0.005	0.005
Nitrite (N)	mg/L	*	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020				<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (N)	mg/L	**3**	0.163	0.129	0.0973	0.11	0.0829	0.0743		0.105	0.129	0.147			0.15	0.2	<0.02	<0.02	<0.02	0.04
Nitrite & Nitrate, as N	mg/L		0.163	0.129	0.0973	0.11	0.0829	0.0743		0.105	0.129	0.147			0.15	0.2	<0.02	0.02	<0.02	0.04
Phosphorus,total-colourimetric	mg/L		<0.0020	<0.0020	0.0021	0.0036	<0.0020	0.0022		0.0069	<0.0020	0.0027								
Phosphorus, Total Dissolved	mg/L		0.0025	<0.0020	0.0026	0.0039	<0.0020	<0.0020		0.0081	<0.0020	0.0023								
Dissolved Organic Carbon	mg/L		1	1.37	2.26	2.49	<0.50	1.87		2.07	<0.50	1.13								
Aluminum (Al), total	mg/L	*	0.003	0.00299	0.00611	0.0475	0.0135	0.0222		**0.168**	0.00947	0.00637	<0.06	<0.06		<0.006	**0.24**	0.014	0.013	0.008
Antimony (Sb), total	mg/L	**0.009**	0.000025	0.000027	0.000024	0.000031	0.000035	0.000026		0.000039	0.000021	0.00002								
Arsenic (As), total	mg/L	**0.005**	0.000076	0.000094	0.00008	0.000122	0.000093	0.000074		0.000322	0.000073	0.000067				<0.00005	0.0007	<0.00005	<0.00005	<0.00005
Barium (Ba), total	mg/L		0.0774	0.0785	0.0639	0.0405	0.0403	0.047		0.0493	0.0517	0.0623	0.033	0.041	0.038	0.041	0.04	0.027	0.04	0.042
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		0.000015	<0.000010	<0.000010				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.000010	<0.0000050	<0.0000050				<0.002	<0.002	<0.002	<0.002	<0.002
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	0.05	<0.04	<0.04	0.019	0.026	<0.004	0.008	0.016
Cadmium (Cd), total	mg/L	*	0.000198	0.000199	**0.000194**	**0.000172**	**0.000214**	**0.00028**		**0.000597**	**0.000382**	**0.000272**				0.00003	0.00004	0.00003	<0.00001	0.00002
Calcium (Ca), total	mg/L		42.4	46.1	37.4	22.9	25.4	30.2		27.6	31.7	38.4	45.1	53.5	58.5	57	20	40	53	59
Chromium (Cr), total	mg/L	**0.001**	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		0.00026	<0.00010	<0.00010		**0.018**		0.0006	0.0008	0.0005	0.0006	0.0006
Cobalt (Co), total	mg/L		0.000008	0.000008	0.000011	0.000049	0.000014	0.000024		0.000193	0.000017	0.000011				<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Copper (Cu), total	mg/L	*	0.000427	0.000983	0.00157	**0.00289**	0.000825	0.000813		0.00225	0.000724	0.000592	<0.002	<0.002		0.0005	0.0023	0.0005	0.0003	0.0008
Iron (Fe), total	mg/L	**1**	0.0018	0.0031	0.0109	0.082	0.0207	0.0325		0.228	0.0096	0.007	0.1	0.13		0.022	1.0	0.027	0.037	0.021
Lead (Pb), total	mg/L	*	0.000021	0.00004	0.000069	0.000375	0.000109	0.000115		0.000983	0.000072	0.000065				0.0004	<0.0001	0.0011	<0.0001	0.0002
Lithium (Li), total	mg/L		0.00191	0.00153	0.0014	0.00052	0.00072	0.00076		<0.00050	0.0007	0.00113								
Magnesium (Mg), total	mg/L		6.6	7.29	5.83	1.9	2.14	2.49		2.34	3.11	3.87	4.64	5.95	5.8	6.1	2.3	4.1	5.8	6.2
Manganese (Mn), total	mg/L	*	<0.000050	0.000081	0.000324	0.00235	0.000934	0.00092		0.0125	0.000537	0.000312	0.008	0.007	0.003	0.0024	0.16	0.0011	0.0025	0.0013
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	0.0000024	<0.0000020	<0.0000020		<0.0000020	<0.0000020	<0.0000020				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Mo), total	mg/L	**0.073**	0.00076	0.000791	0.0007	0.000498	0.000581	0.000604		0.000559	0.000568	0.000595				<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Nickel (Ni), total	mg/L	*	0.000254	0.000283	0.000309	0.000581	0.000351	0.000398		0.00107	0.000515	0.000407				<0.001	0.001	<0.001	<0.001	<0.001
Phosphorus (P), total	mg/L		0.0021	0.0024	0.0068	0.0089	0.0022	0.0029		0.0084	<0.0020	0.0041			<0.003	<0.003	0.023	<0.003	<0.003	<0.003
Potassium (K), total	mg/L		2.33	2.51	2.24	1.28	1.28	1.35		1.14	1.39	1.64	<0.6	0.8	0.6	1.0	1.8	0.62	0.79	0.98
Selenium (Se), total	mg/L	**0.002**	**0.00219**	**0.00308**	**0.00244**	0.000448	0.000435	0.000496		0.000443	0.000795	0.00116	<0.0005	<0.0005		0.0016	0.0002	<0.00005	<0.00005	0.0001

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6
		Guideline	20-Mar-16	21-Apr-16	5-May-16	19-May-16	14-Jun-16	26-Jul-16	28-Jul-16	27-Aug-16	8-Sep-16	4-Oct-16	18-Jul-94	31-Aug-94	3-Dec-94	6-Apr-95	8-May-95	11-Jun-95	22-Aug-95	13-Sep-95
Silicon (Si), total	mg/L		2.28	2.44	2.31	1.53	1.91	2.11		2.06	2.07	2.17	2	2.4	2.5	2.7	2	2.1	2.7	2.7
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.000010	<0.0000050	<0.0000050				<0.00001	0.00001	<0.00001	<0.00001	<0.00001
Sodium (Na), total	mg/L		0.929	0.925	0.717	0.321	0.469	0.515		0.48	0.654	0.724	0.7	0.7	0.6	0.74	0.65	0.54	0.74	0.81
Strontium (Sr), total	mg/L		0.148	0.155	0.129	0.0694	0.0789	0.0864		0.0779	0.0878	0.12	0.12	0.149	0.138	0.14	0.056	0.1	0.14	0.15
Sulphur (S), total	mg/L		17	16.5	14.2	6.1	9.8	11.9		14.5	14.9	17.3	4.7	5.6	6.4	6.3	2.8	5	6.1	6.8
Thallium (Tl), total	mg/L	**0.0008**	0.000003	0.000003	0.000004	0.000005	0.000003	0.000004		0.000009	0.000003	0.000003								
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	<0.00020	<0.00020					<0.002	<0.002	<0.002	<0.002
Titanium (Ti), total	mg/L		<0.00050	<0.00050	<0.00050	0.00259	0.00081	0.00115		0.0063	<0.00050	<0.00050	<0.003	<0.003	<0.003	0.008	0.0085	0.0017	0.0017	0.0018
Uranium (U), total	mg/L	**0.015**	0.00493	0.00545	0.00399	0.00114	0.00112	0.00133		0.00139	0.00193	0.00261								
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		0.0003	<0.00020	<0.00020				<0.0003	0.0004	<0.0003	<0.0003	<0.0003
Zinc (Zn), total	mg/L	*	0.0232	0.0241	0.0227	**0.0279**	**0.0341**	**0.0422**		**0.118**	**0.0591**	**0.0391**	<0.01	<0.01		0.007	**0.073**	0.01	0.001	0.002
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		<0.00010	<0.00010	<0.00010				<0.0003	0.0003	<0.0003	0.0011	0.0004
Aluminum (Al), dissolved	mg/L	*	0.00596	0.00225	0.00295	0.0103	0.00349	0.00429		0.0221	0.00476	0.00281		<0.02		0.009	0.021	0.013	0.01	0.008
Antimony (Sb), dissolved	mg/L		0.000029	0.000031	0.000025	0.000027	0.000023	0.000026		0.000032	0.000026	0.000023								
Arsenic (As), dissolved	mg/L		0.000079	0.000082	0.000074	0.000087	0.000064	0.000071		0.000109	0.000072	0.000076				<0.00005	0.0001	<0.00005	0.00008	<0.00005
Barium (Ba), dissolved	mg/L		0.0769	0.0776	0.0647	0.0386	0.0387	0.0454		0.0455	0.0548	0.0612		0.04	0.039	0.041	0.014	0.026	0.039	0.041
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		<0.000010	<0.000010	<0.000010				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.0000050	<0.0000050	<0.0000050				<0.002	<0.002	<0.002	<0.002	<0.002
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010		<0.008	<0.008		0.02	0.005	0.009	0.008
Cadmium (Cd), dissolved	mg/L	*	0.000204	0.000201	0.00019	0.000144	**0.000205**	**0.000274**		**0.000542**	**0.000385**	**0.000261**				0.00001	0.00004	0.00002	<0.00001	0.00002
Calcium (Ca), dissolved	mg/L		43.5	44.6	36	22.3	23.3	29.7		28.4	35.3	36.8		57	58.3	57	11	39	53	57
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		<0.00010	<0.00010	<0.00010				0.0004	0.0002	0.0005	0.0006	0.0007
Cobalt (Co), dissolved	mg/L		0.000007	0.000007	0.000007	0.000015	0.000007	0.000008		0.000106	0.000011	0.000008				<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Copper (Cu), dissolved	mg/L		0.000388	0.000929	0.00143	0.00241	0.000632	0.000748		0.0015	0.000648	0.000501		<0.001		0.0005	0.0017	0.0005	0.0004	0.0005
Iron (Fe), dissolved	mg/L	**0.35**	<0.0010	0.0015	0.002	0.0068	0.0012	0.0012		0.0042	0.0011	<0.0010		0.022		0.008	0.008	0.015	0.016	0.015
Lead (Pb), dissolved	mg/L		0.000016	0.000032	0.000023	0.000048	0.00001	0.000009		0.000058	0.000014	0.000018				0.0004	<0.0001	0.0007	<0.0001	0.0002
Lithium (Li), dissolved	mg/L		0.00172	0.00182	0.0016	0.00089	<0.00050	0.00076		0.0008	0.00094	0.00053								
Magnesium (Mg), dissolved	mg/L		6.69	7.38	5.76	2.31	2.13	2.49		2.45	3	3.83		6.03	6.2	6	2	4	5.7	5.9
Manganese (Mn), dissolved	mg/L		<0.000050	0.000091	0.000118	0.0003	0.000085	0.000133		0.00594	0.00017	<0.000050		0.004	<0.002	0.0006	0.0073	0.0005	0.0011	0.0011
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	0.000003	<0.0000020	<0.0000020		<0.0000020	<0.0000020	0.0000023				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Mo), dissolved	mg/L		0.000751	0.000775	0.000674	0.000457	0.000581	0.000583		0.000555	0.000597	0.000581				<0.0004	0.0004	<0.0004	<0.0004	<0.0004
Nickel (Ni), dissolved	mg/L		0.000254	0.000275	0.000318	0.000459	0.000318	0.000363		0.000848	0.000498	0.000401				<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus (P), dissolved	mg/L		0.0021	<0.0020	0.003	<0.0020	<0.0020	<0.0020		0.0032	0.003	0.0027			<0.04	0.031	0.008	0.011	<0.004	<0.004
Potassium (K), dissolved	mg/L		2.34	2.49	2.22	1.5	1.19	1.18		1.09	1.48	1.62		0.9	0.7	0.97	1.7	0.59	0.78	0.93
Selenium (Se), dissolved	mg/L		0.00218	0.003	0.0024	0.000425	0.000442	0.000522		0.000427	0.000837	0.0011		<0.0005		0.00065	0.0002	<0.00005	<0.00005	0.00008
Silicon (Si), dissolved	mg/L		2.39	2.43	2.22	1.73	1.76	2.27		1.73	2.35	2.16		2.56	2.74	2.5	2.2	2.1	2.6	2.6
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.0000050	<0.0000050	0.000014				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium (Na), dissolved	mg/L		0.907	0.944	0.718	0.376	0.469	0.539		0.508	0.633	0.744		0.72	0.67	0.78	0.64	0.56	0.73	0.78
Strontium (Sr), dissolved	mg/L		0.154	0.151	0.128	0.064	0.0713	0.0812		0.0767	0.0998	0.113		0.149	0.146	0.14	0.04	0.099	0.14	0.15
Sulphur (S), dissolved	mg/L		16.9	17	14	6.9	10	12.5		14.1	16.3	17.1		5.98	6.65	6.3	2.8	4.9	6	6.5
Thallium (Tl), dissolved	mg/L		0.000002	0.000003	0.000004	0.000005	0.000005	0.000004		0.000006	0.000002	0.000007								
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	<0.00020	<0.00020				<0.002	<0.002	<0.002		<0.002
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		<0.00050	<0.00050	<0.00050		<0.003	<0.003	0.0023	0.0005	0.0015	0.0016	0.0017
Uranium (U), dissolved	mg/L		0.00494	0.00535	0.00388	0.00112	0.00112	0.0013		0.00132	0.00181	0.00251								
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	<0.00020	<0.00020				<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Zinc (Zn), dissolved	mg/L		0.0241	0.0238	0.0226	0.0235	0.0306	0.0385		0.0974	0.0589	0.0381		<0.002		0.007	0.001	0.006	0.002	0.002
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		<0.00010	<0.00010	<0.00010				<0.0003	0.0006	0.0003	<0.0003	<0.0003

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7
		Guideline	2-Dec-15	20-Jan-16	20-Apr-16	5-May-16	14-May-16	14-Jun-16	27-Jul-16	27-Aug-16	8-Sep-16	3-Oct-16	18-Jul-94	31-Aug-94	2-Dec-94	6-Apr-95	11-Jun-95	15-Aug-95	22-Aug-95	30-Aug-95
Discharge (Flow)	L/s		10.3	5.1	3.5	7.8		46.2	18.3	57.7	62.8	51.7								
Total Suspended Solids	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	1.5	3.9	<1.0			<4	5	<4	<4	7	<4
pH (field)	pH units	**6.5-9**	7.98	7.73	8.07	7.69	8.09	8.35	8.16	8.03	8.08	8.04								
pH (lab)	pH units	**6.5-9**	8.25	8.16	8.31	8.15	8.31	8.25	8.27	8.17	8.26	7.99	7.9	8.1	7.8	8	7.5	7.5	7.8	7.5
Specific Conductance (field)	µS/cm		323.7	331.7	256.8	226.3	227.3	241.7	291.2	267.7	261.1	265.9								
Specific Conductance (lab)	µS/cm		327	340	308	227	256	252	294	229	281	298	188	231	332	337	168	266	257	261
Temperature (field)	C		0.1	0	0.2	0.3	2.7	7.2	8.9	7.7	5	0.7								
Dissolved Oxygen (field)	mg/L	**6.5**	10.6	11.1	12.03	12.82	10.17	10.13	9.78	9.56	10.05	10.85								
Dissolved Oxygen (field)	%		88	90	97	104.1	98.9	99.7	99.2	95.3	92.8	89.7								
ORP (field)	mV		125.2	292.9	83.3	118.8	123.7	97.8	89.9	261.5	105.4	119								
Turbidity (internal)	NTU		0.75	0.27	0.244	0.10		0.226	0.4	0.936	0.26	0.158								
Hardness (from total)	mg/L		166	183	167	118	131	132	155	123	138	154	102	131	182	185	84.8	134	149	143
Hardness (from dissolved)	mg/L		165	183	168	111	136	126	159	118	147	155		135	180	179	81.4	139	149	138
Colour	TCU		5.1	<5.0	11.7	23.2	11.1			19.7										
Total Acidity	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50								
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50								
Alkalinity, total	mg/L		147	160	142	103	119	117	139	120	124	132	85.3	106	146	160	62.5	123	120	120
Alkalinity, bicarbonate HCO3	mg/L		180	195	172	125	143	143	170	147	151	161	85.3	106				150	146	146
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50						<0.5	<0.5	<0.5
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	0.76	<0.50	1.15	<0.50	<0.50	<0.50	<0.50	<0.50						<0.5	<0.5	<0.5
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	0.63	<0.50	0.96	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<0.5				<0.5	<0.5	<0.5
Chloride	mg/L	**120**	<0.50	<0.50	1	0.95	0.63	0.74	0.51	0.98	0.67	0.71								
Fluoride	mg/L	**0.12**	0.055	0.066	0.06	0.051	0.064	0.054	0.06	0.051	0.06	0.06								
Sulphate, dissolved	mg/L	*	23.6	23.9	20.6	15.2	20	17.6	20	13.8	25	23.5	21.5	22.9	31.7	29.5	19.8	28.9	21.6	28.7
Cyanide, total	mg/L	**0.005**	<0.00050	<0.00050	<0.00050	0.00064	0.00051	0.00108	<0.00050	<0.00050	0.00077	<0.00050				<0.001	<0.001	<0.001	<0.001	<0.001
Cyanide, Weak Acid Dissociable	mg/L		<0.00050	<0.00050	<0.00050	0.00052	<0.00050	0.00059	<0.00050	<0.00050	0.00087	<0.00050				<0.001	<0.001	<0.001	<0.001	<0.001
Ammonia (N)	mg/L	**0.197**	0.0116	0.0117	0.0069	<0.0050	<0.0050	0.0077	0.022	0.015	0.011	0.011			0.005	0.074	<0.005	0.006	<0.005	<0.005
Nitrite (N)	mg/L	*	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020				<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (N)	mg/L	**3**	0.138	0.173	0.129	0.0604	0.0605	0.012	0.0119	0.0046	0.0248	0.0813			0.14	0.14	<0.02	0.05	0.06	0.06
Nitrite & Nitrate, as N	mg/L		0.138	0.173	0.129	0.0604	0.0605	0.012	0.0119	0.0046	0.0248	0.0813			0.14	0.14	<0.02	0.05	0.06	0.06
Phosphorus,total-colourimetric	mg/L		0.0022	0.0028	0.0025	0.0058	0.004	0.0039	0.0029	0.0065	0.0039	0.0045								
Phosphorus, Total Dissolved	mg/L		0.0026	0.0027	0.0024	0.006	0.0034	0.0035	0.0027	0.0071	0.0024	0.0023								
Dissolved Organic Carbon	mg/L		1.35	1.27	2.57	4.97	2.48	1.12	2.2	3.67	2.13	1.55								
Aluminum (Al), total	mg/L	*	0.00117	0.00758	0.00809	0.0095	0.008	0.0271	<0.015	0.00837	0.0051	0.00504	<0.06	<0.06		0.018	0.036	0.016	0.081	0.029
Antimony (Sb), total	mg/L	**0.009**	<0.000020	<0.000020	<0.000020	<0.000050	<0.000050	<0.000020	<0.00010	<0.000020	<0.000020	<0.000020								
Arsenic (As), total	mg/L	**0.005**	0.000069	0.000086	0.000147	0.000109	0.000105	0.000133	<0.00010	0.000101	0.000077	0.000077				0.0003	0.0003	<0.00005	0.0002	0.00056
Barium (Ba), total	mg/L		0.0446	0.054	0.0494	0.0363	0.0422	0.0372	0.0475	0.035	0.0365	0.0388	0.058	0.075	0.07	0.11	0.045	0.061	0.071	0.066
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000050	<0.000010	<0.000010	<0.000010				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.000020	<0.0000050	<0.000050	<0.0000050	<0.0000050	<0.0000050				<0.002	<0.002	<0.002	<0.002	<0.002
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.050	<0.050	<0.010	<0.050	<0.010	<0.010	<0.010	<0.04	<0.04	<0.04	0.012	0.019	0.019	0.014	0.015
Cadmium (Cd), total	mg/L	*	0.000009	0.000036	0.00003	0.00002	0.000021	0.000033	0.000029	0.00002	0.000015	0.000013				0.00008	0.00006	0.00002	0.00003	0.00002
Calcium (Ca), total	mg/L		55.1	60.6	55.7	39.1	42.8	44.9	51.4	41.2	45.5	51.1	35	44.2	62.6	62	29	46	51	49
Chromium (Cr), total	mg/L	**0.001**	<0.00010	<0.00010	<0.00010	<0.00050	<0.00050	<0.00010	<0.00050	<0.00010	<0.00010	<0.00010				**0.0049**	0.0006	**0.003**	**0.0056**	**0.0021**
Cobalt (Co), total	mg/L		0.000008	0.000018	0.000027	0.000019	0.000017	0.000053	<0.000050	0.00002	0.000015	0.000014				0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Copper (Cu), total	mg/L	*	0.000103	0.000174	0.000525	0.0008	0.00061	0.000353	0.00062	0.000392	0.000214	0.000147	<0.002	<0.002		0.0003	0.0011	0.0006	0.0008	0.0007
Iron (Fe), total	mg/L	**1**	0.0087	0.0932	0.0516	0.0378	0.0274	0.281	0.06	0.0805	0.0414	0.0578	0.42	0.28		**1.4**	0.3	0.26	0.61	0.36
Lead (Pb), total	mg/L	*	<0.0000050	0.000027	0.000045	<0.000050	<0.000050	0.000128	<0.00010	0.000015	0.000008	0.000011				0.001	0.0009	0.001	0.0002	0.0001
Lithium (Li), total	mg/L		0.00072	0.00081	0.00105	0.00081	0.00058	0.00066	<0.0025	0.0006	0.0009	0.00065								
Magnesium (Mg), total	mg/L		7.04	7.74	6.91	4.95	5.94	4.94	6.4	4.99	5.98	6.35	3.58	4.97	6.34	7.3	3	4.6	5.3	5.1
Manganese (Mn), total	mg/L	*	0.000105	0.0148	0.0081	0.00175	0.00307	0.0442	0.00447	0.00957	0.00556	0.0107	0.05	0.04	0.017	0.36	0.032	0.048	0.062	0.049
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Mo), total	mg/L	**0.073**	0.00057	0.000629	0.000652	0.000506	0.000519	0.000367	0.00044	0.000304	0.000362	0.000431				<0.0004	<0.0004	0.0004	0.0004	<0.0004
Nickel (Ni), total	mg/L	*	0.00012	0.000176	0.000339	0.00043	0.00032	0.000281	<0.00050	0.000315	0.000195	0.000171					<0.001	0.001	0.004	0.001
Phosphorus (P), total	mg/L		0.0034	0.0061	0.003	<0.010	<0.010	0.0089	<0.025	0.0033	0.0026	0.0021			<0.003	<0.003	<0.003	0.005	0.007	0.01
Potassium (K), total	mg/L		0.936	1.08	1.52	1.41	1.17	0.57	<1.3	0.754	0.691	0.728	1.2	1.5	1.3	1.8	1.2	1.3	1.4	1.4
Selenium (Se), total	mg/L	**0.002**	0.00108	0.00124	0.00122	0.000797	0.000822	0.00043	0.00051	0.000333	0.000619	0.000699	<0.0005	<0.0005		0.0007	<0.00005	0.0001	0.00023	<0.00005

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7
		Guideline	2-Dec-15	20-Jan-16	20-Apr-16	5-May-16	14-May-16	14-Jun-16	27-Jul-16	27-Aug-16	8-Sep-16	3-Oct-16	18-Jul-94	31-Aug-94	2-Dec-94	6-Apr-95	11-Jun-95	15-Aug-95	22-Aug-95	30-Aug-95
Silicon (Si), total	mg/L		3.36	3.19	3.31	2.53	2.54	2.42	2.75	2.54	2.55	2.57	1.8	2.7	3	3.7	1.7	2.3	2.8	2.6
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000050	<0.0000050	<0.0000050	<0.0000050				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium (Na), total	mg/L		0.76	0.819	0.732	0.49	0.6	0.54	<1.3	0.606	0.665	0.676	0.7	0.9	0.9	1.3	0.59	1	0.97	0.96
Strontium (Sr), total	mg/L		0.166	0.19	0.17	0.117	0.135	0.133	0.158	0.124	0.127	0.152	0.103	0.143	0.155	0.18	0.081	0.13	0.15	0.14
Sulphur (S), total	mg/L		8.4	8.5	6.9	<15	<15	6.2	<15	4.8	7.8	8.3	6.3	7.4	9.5	9.7	6.4	7.5	8.2	8.3
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	<0.0000020	<0.0000020	0.000002	0.000002	<0.0000020	<0.000010	<0.0000020	<0.0000020	<0.0000020								
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.0010	<0.00020	<0.00020	<0.00020	<0.02			0.002	<0.002	<0.002	<0.002	0.003
Titanium (Ti), total	mg/L		<0.00050	<0.00050	<0.00050	<0.0050	<0.0050	0.00109	<0.010	<0.00050	<0.00050	<0.00050	<0.003	<0.003	<0.003	0.003	0.0025	0.0022	0.0064	0.0031
Uranium (U), total	mg/L	**0.015**	0.00111	0.00135	0.00127	0.000691	0.000915	0.00067	0.000785	0.000439	0.000676	0.000891								
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00050	<0.00050	<0.00020	<0.0010	<0.00020	<0.00020	<0.00020				<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Zinc (Zn), total	mg/L	*	0.00018	0.00131	0.00101	<0.0010	<0.0010	0.0014	<0.0050	0.00089	0.00058	0.00067	**0.02**	0.02		0.034	**0.018**	0.005	0.009	0.007
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00050	<0.00010	<0.00010	<0.00010				0.0005		0.0003	<0.0003	0.0004
Aluminum (Al), dissolved	mg/L	*	0.00108	0.00209	0.00428	0.00654	0.00441	0.00367	0.00288	0.00465	0.00347	0.00244		<0.02		0.008	0.018	<0.006	**<0.06**	<0.006
Antimony (Sb), dissolved	mg/L		<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020								
Arsenic (As), dissolved	mg/L		0.000066	0.000094	0.000086	0.000081	0.000096	0.000079	0.000075	0.000093	0.000087	0.000059				<0.00005	0.0002	<0.00005	0.00024	0.0003
Barium (Ba), dissolved	mg/L		0.0445	0.051	0.0503	0.0359	0.0406	0.0366	0.0436	0.034	0.0403	0.0387		0.068	0.073	0.11	0.042	0.062	0.068	0.0641
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050				<0.002	<0.002	<0.002	<0.002	<0.002
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.008	<0.008	0.022	0.022	0.017	0.013	0.015
Cadmium (Cd), dissolved	mg/L	*	0.00001	0.000016	0.000013	0.000011	0.00001	0.00001	0.00001	0.000012	0.000008	0.000009				0.00008	0.00004	0.00002	<0.00001	0.00001
Calcium (Ca), dissolved	mg/L		54.8	60.9	55.7	36.6	44.7	42.2	53.3	39.2	49.5	51.4		46.1	62	60	28	48	51	47
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010				0.0048	0.00005	0.0008	0.0004	0.0004
Cobalt (Co), dissolved	mg/L		0.000006	0.000006	0.000018	0.000018	0.000013	0.000009	0.000006	0.000015	0.000011	0.000009				<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Copper (Cu), dissolved	mg/L		0.000105	0.000155	0.000503	0.000579	0.000437	0.000195	0.000205	0.000345	0.000199	0.000115		<0.001		0.0004	0.0009	0.0004	0.0006	0.0007
Iron (Fe), dissolved	mg/L	**0.35**	0.0083	0.0024	0.0098	0.0234	0.0093	0.0073	0.008	0.0193	0.011	0.0084		0.041		0.073	0.14	0.05	0.13	0.13
Lead (Pb), dissolved	mg/L		<0.0000050	0.000016	<0.0000050	<0.0000050	<0.0000050	0.000009	<0.0000050	<0.0000050	<0.0000050	<0.0000050				0.0008	0.0004	<0.0001	<0.0001	<0.0001
Lithium (Li), dissolved	mg/L		0.00082	0.00056	0.00092	<0.00050	0.00054	<0.00050	0.0007	<0.00050	0.00104	<0.00050								
Magnesium (Mg), dissolved	mg/L		6.92	7.46	6.93	4.77	5.88	5	6.16	4.76	5.69	6.4		4.84	6.21	7.1	2.8	4.7	5.3	4.9
Manganese (Mn), dissolved	mg/L		0.000077	0.000104	0.000178	0.000225	0.000225	0.000281	<0.000050	0.000677	0.00162	0.000729		0.002	0.017	0.32	0.019	0.048	0.05	0.04
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Mo), dissolved	mg/L		0.000585	0.000636	0.000675	0.00049	0.000533	0.000388	0.000419	0.0003	0.000372	0.000442				<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Nickel (Ni), dissolved	mg/L		0.000126	0.000122	0.000298	0.00041	0.000308	0.000196	0.000193	0.00027	0.000189	0.000144					<0.001	<0.001	<0.001	<0.001
Phosphorus (P), dissolved	mg/L		<0.0020	<0.0020	0.0051	0.0068	<0.0020	0.0055	<0.0020	<0.0020	<0.0020	0.0031				<0.004	0.009	<0.004	0.008	0.004
Potassium (K), dissolved	mg/L		0.916	1.04	1.51	1.43	1.22	0.575	0.587	0.738	0.749	0.705		1.3	1.4	1.8	1.1	1.3	1.3	1.4
Selenium (Se), dissolved	mg/L		0.00114	0.00119	0.00121	0.000811	0.000686	0.000395	0.000511	0.000301	0.000551	0.000651		<0.0005		0.00076	<0.00005	0.0001	0.00012	0.00006
Silicon (Si), dissolved	mg/L		3.4	3.16	3.13	2.37	2.43	2.2	2.9	2.47	2.73	2.57		2.74	3.3	3.5	1.6	2.3	2.7	2.5
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium (Na), dissolved	mg/L		0.741	0.793	0.737	0.488	0.604	0.577	0.686	0.607	2.45	1.26		0.87	0.97	1.3	0.62	1.1	0.96	0.97
Strontium (Sr), dissolved	mg/L		0.166	0.185	0.166	0.114	0.133	0.13	0.146	0.12	0.15	0.141		0.137	0.165	0.18	0.077	0.13	0.15	0.14
Sulphur (S), dissolved	mg/L		8	8.4	6.9	5.4	6.1	6	6.4	4.6	7.8	8		7.6	10.2	8.8	6.1	7.8	8.2	8
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000005	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000002								
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020				0.003	<0.002	<0.002	0.002	
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		<0.003	<0.003	0.0021	0.0012	0.0016	0.0015	0.0012
Uranium (U), dissolved	mg/L		0.00116	0.00132	0.00129	0.000666	0.00087	0.000642	0.000774	0.000424	0.000675	0.000873								
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020				<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Zinc (Zn), dissolved	mg/L		0.00016	0.00052	0.00061	0.00056	0.0004	0.0003	<0.00010	0.00036	0.00031	0.0003		0.006		0.028	0.015	0.006	0.006	0.007
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010				<0.0003	0.0003	0.0004	<0.0003	0.0006

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7
		Guideline	6-Sep-95	13-Sep-95	23-Aug-02	19-Aug-04	24-Aug-06	14-Aug-08	19-Aug-10	16-Aug-12	21-Aug-14	30-Apr-15	12-May-15	22-Jun-15	28-Jul-15	23-Aug-15	11-Sep-15	14-Oct-15	20-Nov-15	2-Dec-15
Discharge (Flow)	L/s											21.3	293.7	184	115.5	162.1	196.5	107.4	53.9	50
Total Suspended Solids	mg/L		<4	<4	<4	<4	<4	<4	<1	<4.0	<4.0	<1.0	14.4	<1.0	<1.0	1.2	1.9	<1.0	1.1	<1.0
pH (field)	pH units	**6.5-9**					8.3	8.2	8.2	8.0	8.02	7.86	7.32	7.88	7.88	7.81	7.92	7.81	7.66	7.79
pH (lab)	pH units	**6.5-9**	8	7.8		8.2	8	8.1	8.3	8.1	8.16	8.22	7.45	7.83	8.01	7.92	8.14	8.15	8.16	8.07
Specific Conductance (field)	µS/cm						243	270	282	222	279	302	74.7	216.4	263.9	240.6	250.6	299.8	341.2	338
Specific Conductance (lab)	µS/cm		382	205	209	280	250	270	302	233	277	343	89.6	220	256	250	266	339	329	342
Temperature (field)	C						5.9	8.3	9.8	8.1	8.5	0.4	-0.2	10.7	7.4	7.6	5.1	0.3	0	0.1
Dissolved Oxygen (field)	mg/L	**6.5**					10.0	10.0		9.8		10.5	11.3	9.69	9.6	9.9	8.7	12.2	11.6	10.3
Dissolved Oxygen (field)	%						86	100		82.2		87	91	87.4	84.1	98	82	98	94	85
ORP (field)	mV											239.2	238.7	58.5	107.9	172.5	78.7	218.7	98.3	40.3
Turbidity (internal)	NTU													0.56	0.65	0.66	2.302	0.74	2.39	1.45
Hardness (from total)	mg/L		144	160	107	147	140	150	150	117	136	178	46.6	111	137	126	149	177	168	175
Hardness (from dissolved)	mg/L		138	163	114	152	140	147	155	119	127	186	46.9	121	137	126	139	174	188	169
Colour	TCU											13.4	230	14.9	12.3	13	12.7	10.6	8.5	<5.0
Total Acidity	mg/L				1.4	1.2	0.9	3	0.9	0.81	<0.50	<0.50	1.1	1.02	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L				<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		109	116	77	117	130	110	130	91	107	145	35.7	82	99.4	92.5	97.9	141	128	135
Alkalinity, bicarbonate HCO3	mg/L		133	141	93.9	143	158	140	160	111	130	177	43.5	100	121	113	119	172	156	165
Alkalinity, hydroxide OH	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.5	<0.5	<1	<1.0	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**										<0.50	1.3	<0.50	<0.50	<0.50	0.74	0.54	<0.50	<0.50
Fluoride	mg/L	**0.12**										0.075	0.033	0.051	0.054	0.056	0.051	0.1	0.071	0.054
Sulphate, dissolved	mg/L	*	26.4	28.2	29.6	29.4	30.5	27	26	27.3	24.9	31.3	<0.50	27	31.6	32.4	38.4	32.4	38	38.5
Cyanide, total	mg/L	**0.005**	<0.001	<0.001								<0.00050	0.00153	0.00068	<0.00050	<0.00050	0.00072	0.00054	<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L		<0.001	<0.001								<0.00050	0.00147	0.0006	<0.00050	<0.00050	0.00072	0.00058	<0.00050	<0.00050
Ammonia (N)	mg/L	**0.197**	0.044	<0.005	<0.005	0.016	0.006	<0.005	0.18	0.0057	0.012	0.0116	0.0064	<0.0050	0.0062	<0.0050	<0.0050	0.0091	0.0131	0.0229
Nitrite (N)	mg/L	*	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	0.0044		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.002	<0.0020
Nitrate (N)	mg/L	**3**	0.05	0.07	<0.02	<0.02	<0.02	0.02	<0.02	<0.020	<0.020	0.0973	<0.020	0.005	0.0112	0.0107	0.0116	0.101	0.0952	0.0959
Nitrite & Nitrate, as N	mg/L		0.05	0.07	<0.02	<0.02	<0.02	0.02	<0.02	<0.020	<0.020	0.102	<0.020	0.005	0.0112	0.0107	0.0116	0.101	0.0972	0.0959
Phosphorus,total-colourimetric	mg/L											0.0021	0.0318	0.0032	0.0034	0.0035	0.0028	0.0064	0.003	0.002
Phosphorus, Total Dissolved	mg/L											0.0027	0.0282	0.0029	0.0036	0.0029	0.0024	<0.0020	0.0024	0.0022
Dissolved Organic Carbon	mg/L											1.18	17.2	2.18	1.83	1.8	1.8	2.41	0.99	1.64
Aluminum (Al), total	mg/L	*	0.028	0.015	0.06	0.005	0.01	0.02	0.011	0.0114	0.0174	0.00197	**0.237**	0.0206	0.0227	0.0121	0.0435	0.0114	0.0195	0.0288
Antimony (Sb), total	mg/L	**0.009**								0.000079	0.00008	0.000039	0.000066	0.000073	0.000105	0.000078	0.000102	0.000043	0.000056	0.000061
Arsenic (As), total	mg/L	**0.005**	0.00009	0.00012		<0.001	<0.001	0.0002	<0.0001	0.000266	0.000298	0.000184	0.000966	0.000407	0.000401	0.000329	0.000685	0.000301	0.000473	0.000428
Barium (Ba), total	mg/L		0.065	0.072	0.064	0.086	0.066	0.065	0.084	0.0614	0.0708	0.0974	0.0429	0.0575	0.0754	0.0614	0.0761	0.0574	0.0916	0.0953
Beryllium (Be), total	mg/L		<0.0001	<0.0001				<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	0.000027	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.002	<0.002				<0.001	<0.001	<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.0000050	<0.0000050	<0.000020	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	**1.5**	0.022	0.021	<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.050	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	0.00003	0.00004		0.00008	0.00012	**0.00053**	0.00007	**0.000182**	0.000136	0.0000859	**0.000415**	0.000145	0.000169	0.000163	**0.00044**	0.000176	**0.000296**	**0.000281**
Calcium (Ca), total	mg/L		49	55	35.7	48.9	45.1	50.7	49.2	38.8	44.7	58.8	15.2	36.5	45.3	42.3	49.4	60.9	55.5	57.3
Chromium (Cr), total	mg/L	**0.001**	0.0005	0.0005		<0.001	<0.001	<0.001	<0.001	<0.00010	0.00011	<0.00010	<0.00050	<0.00010	<0.00010	<0.00050	0.00011	<0.00010	<0.00010	<0.00010
Cobalt (Co), total	mg/L		<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	<0.0005	0.000032	0.000055	0.0000419	0.000391	0.000057	0.0000499	0.000035	0.000116	0.000042	0.00015	0.000156
Copper (Cu), total	mg/L	*	0.0034	0.0008		0.0009	0.0008	0.0008	0.0005	0.000738	0.000688	0.000202	**0.00281**	0.00077	0.000866	0.0011	0.00191	0.000693	0.000534	0.000489
Iron (Fe), total	mg/L	**1**	0.34	0.28	0.354	0.226	0.135	0.136	0.215	0.187	0.215	0.128	**2.02**	0.363	0.311	0.216	0.61	0.238	0.751	0.71
Lead (Pb), total	mg/L	*	0.0002	<0.0001		<0.0005	<0.0005	0.0003	<0.0002	0.000065	0.00011	0.0000081	0.000855	0.000196	0.000137	0.000097	0.000521	0.000176	0.000201	0.000177
Lithium (Li), total	mg/L						<0.002	<0.005	<0.005	0.00115	0.00172	0.0043	0.00115	0.00127	0.00129	0.00131	0.00115	0.00139	0.00262	0.00241
Magnesium (Mg), total	mg/L		5.2	5.5	4.32	5.98	5.34	5.74	6.56	4.92	6	7.47	2.07	4.78	5.77	4.88	6.2	6.02	7.12	7.62
Manganese (Mn), total	mg/L	*	0.043	0.041	0.032	0.03	0.012	0.011	0.014	0.0193	0.0296	0.054	0.199	0.0331	0.0374	0.0231	0.0572	0.0298	0.159	0.141
Mercury (Hg), total	mg/L	**0.000026**	<0.00001	<0.00001			<0.00001	<0.00002	<0.00002		0.0000038	<0.0000020	0.0000042	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	<0.0004	<0.0004				<0.001	<0.001	0.000364	0.000527	0.000677	0.000319	0.000449	0.000508	0.000511	0.000439	0.000716	0.000571	0.000567
Nickel (Ni), total	mg/L	*	0.002	<0.001				<0.001	<0.001	0.000415	0.000396	0.000442	0.00154	0.000472	0.000429	0.00039	0.000624	0.000376	0.000527	0.00059
Phosphorus (P), total	mg/L		0.015	<0.003								<0.0020	0.042	0.0069	0.0073	<0.010	0.0046	0.0035	0.0039	0.005
Potassium (K), total	mg/L		1.4	1.6	2	2	1	1.39	1.44	1.13	1.34	2.13	2.41	1.05	1.56	1.26	1.62	1.49	1.64	1.78
Selenium (Se), total	mg/L	**0.002**	0.00007	0.00011		<0.001	<0.001	0.0005	0.0004	0.000462	0.000523	0.000853	0.000253	0.0006	0.000729	0.000596	0.000866	0.00139	0.00111	0.00111

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7
		Guideline	6-Sep-95	13-Sep-95	23-Aug-02	19-Aug-04	24-Aug-06	14-Aug-08	19-Aug-10	16-Aug-12	21-Aug-14	30-Apr-15	12-May-15	22-Jun-15	28-Jul-15	23-Aug-15	11-Sep-15	14-Oct-15	20-Nov-15	2-Dec-15
Silicon (Si), total	mg/L		2.8	2.8			2.59	2.72	3.18	2.46	2.5	4.03	1.85	2.18	2.55	2.58	2.79	3.02	3.54	3.68
Silver (Ag), total	mg/L	**0.00025**	<0.00001	<0.00001						<0.0000050	<0.0000050	<0.0000050	0.0000222	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L		0.97	1.1	0.75	1.01	0.84	0.95	0.94	0.711	0.91	1.29	0.33	0.674	0.933	0.83	0.893	1.17	1.2	1.23
Strontium (Sr), total	mg/L		0.14	0.15	0.109	0.152	0.127	0.149	0.168	0.118	0.149	0.204	0.0489	0.122	0.148	0.129	0.151	0.19	0.193	0.189
Sulphur (S), total	mg/L		9.6	10	10.1	10	10.5	11	8	10	<15	11	<15	9	11.3	<15	11.8	11.6	13	13.2
Thallium (Tl), total	mg/L	**0.0008**								0.000002	<0.0000020	<0.0000020	0.0000069	<0.0000020	0.0000027	0.000004	0.000004	0.000002	0.000002	0.000002
Tin (Sn), total	mg/L			<0.002				<0.005	<0.005	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		0.0032	0.002	<0.003	<0.003	<0.003	<0.005	<0.005	<0.00050	0.00123	<0.00050	0.0077	0.00091	0.00077	<0.0050	0.00215	<0.00050	0.0008	0.00058
Uranium (U), total	mg/L	**0.015**				0.00083	0.0006	0.0008	0.0008	0.000508	0.000798	0.00134	0.000278	0.000666	0.000872	0.00077	0.0011	0.00167	0.00134	0.00146
Vanadium (V), total	mg/L		<0.0003	<0.0003						<0.00020	<0.00020	<0.00020	0.00051	<0.00020	<0.00020	<0.00050	0.00034	<0.00020	0.00023	<0.00020
Zinc (Zn), total	mg/L	*	0.007	0.006	**0.039**	0.013	0.025	0.016	0.01	**0.0322**	0.0222	0.0295	**0.0554**	**0.0264**	0.0298	0.0317	**0.0764**	0.0316	0.0643	**0.0761**
Zirconium (Zr), total	mg/L		0.0004	0.0005				<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	0.00046	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00011	0.00011
Aluminum (Al), dissolved	mg/L	*	<0.006	0.007	<0.02	0.001	0.002	0.006	<0.003	0.00525	0.00157	0.00389	**0.102**	0.00301	0.00186	0.00201	0.00376	0.00307	0.00691	0.00134
Antimony (Sb), dissolved	mg/L									0.000082	0.000078	0.000092	0.000047	0.000074	0.000099	0.000078	0.000094	0.000037	0.000052	0.000051
Arsenic (As), dissolved	mg/L		0.00005	0.00008		<0.001	<0.001	0.0002	0.0002	0.000233	0.00018	0.000164	0.000327	0.000254	0.000252	0.000233	0.000318	0.000148	0.00017	0.000176
Barium (Ba), dissolved	mg/L		0.061	0.072	0.067	0.084	0.066	0.067	0.088	0.059	0.0678	0.105	0.0343	0.0581	0.0735	0.0643	0.0693	0.0555	0.0911	0.0863
Beryllium (Be), dissolved	mg/L		<0.0001	<0.0001				<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.002	<0.002				<0.001	<0.001	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		0.011	0.012	<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.00002	0.00003		0.00006	0.0001	0.00019	0.00004	0.000117	0.000064	0.0000248	**0.000146**	0.0000838	0.0000977	0.000102	0.00017	0.000094	0.000071	0.000117
Calcium (Ca), dissolved	mg/L		47	56	38.3	50.8	45.2	49.8	51.5	39.3	41.2	61.2	15.4	40.3	45.2	42.1	44.6	59.6	63.2	55.1
Chromium (Cr), dissolved	mg/L		0.0004	0.0005		<0.001	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00010	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	<0.0005	0.000016	0.000009	0.0000385	0.000126	0.0000135	0.0000143	0.000014	0.000028	0.000015	0.0001	0.00009
Copper (Cu), dissolved	mg/L		0.0005	0.0009		0.0005	0.0005	0.0007	0.0004	0.000657	0.000497	0.000183	0.0017	0.000602	0.000558	0.000656	0.000716	0.000421	0.000303	0.000214
Iron (Fe), dissolved	mg/L	**0.35**	0.11	0.12	0.126	0.011	0.055	0.04	0.074	0.092	0.0429	0.0136	0.305	0.0553	0.057	0.0472	0.0528	0.0299	0.0587	0.111
Lead (Pb), dissolved	mg/L		<0.0001	0.0002		<0.0005	<0.0005	0.0002	<0.0002	0.000022	0.000008	<0.0000050	0.0000658	0.0000232	0.0000137	0.000016	0.000045	0.000011	0.000008	<0.0000050
Lithium (Li), dissolved	mg/L						<0.002	<0.005	<0.005	0.00109	0.00172	0.00458	0.00056	0.0015	0.0015	0.00133	0.00174	0.00142	0.00263	0.00216
Magnesium (Mg), dissolved	mg/L		4.9	5.6	4.54	6.14	5.39	5.47	6.29	4.92	5.85	8.05	2.05	4.94	5.78	5.18	6.75	6.05	7.28	7.5
Manganese (Mn), dissolved	mg/L		0.038	0.04	0.023	0.02	0.003	0.002	0.004	0.0132	0.00221	0.0554	0.0507	0.00829	0.0131	0.00924	0.0175	0.0104	0.13	0.11
Mercury (Hg), dissolved	mg/L		<0.00001	<0.00001			<0.00001	<0.00002	<0.00002		0.0000022	<0.0000020	0.0000045	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		<0.0004	0.0004				<0.001	<0.001	0.000371	0.000514	0.000664	0.000265	0.000469	0.000486	0.000498	0.000448	0.000721	0.000617	0.000575
Nickel (Ni), dissolved	mg/L		<0.001	<0.001				<0.001	<0.001	0.000373	0.000339	0.000366	0.00102	0.00046	0.000433	0.000392	0.000537	0.000313	0.000492	0.000479
Phosphorus (P), dissolved	mg/L		0.008	0.011								<0.0020	0.0174	<0.0020	<0.0020	<0.0020	0.0053	<0.0020	0.0026	<0.0020
Potassium (K), dissolved	mg/L		1.3	1.7	1	1	1	1.31	1.47	1.15	1.23	2.21	2.65	1.13	1.55	1.43	1.87	1.49	1.72	1.7
Selenium (Se), dissolved	mg/L		0.00006	0.00011		<0.001	<0.001	0.0006	0.0004	0.000738	0.000522	0.000869	0.000255	0.000632	0.000718	0.000677	0.00075	0.00124	0.00111	0.00118
Silicon (Si), dissolved	mg/L		2.6	2.8			2.59	2.93	3.04	2.57	2.33	4.2	1.68	2.27	2.53	2.55	2.72	3	3.49	3.77
Silver (Ag), dissolved	mg/L		<0.00001	<0.00001						<0.0000050	0.00001	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		0.91	1.1	0.84	1.08	0.89	0.88	1.01	0.713	0.94	1.36	0.482	0.723	0.931	0.858	0.977	1.2	1.24	1.22
Strontium (Sr), dissolved	mg/L		0.13	0.15	0.116	0.152	0.127	0.143	0.174	0.117	0.14	0.218	0.0506	0.133	0.152	0.135	0.17	0.193	0.196	0.184
Sulphur (S), dissolved	mg/L		9.2	10	11.1	10.4	10.7	11	8	10	<15	10.8	<3.0	9	10.9	11.6	14.5	10.7	12.4	14
Thallium (Tl), dissolved	mg/L									0.000002	0.000002	<0.0000020	0.0000031	<0.0000020	0.0000027	0.000002	0.000003	<0.0000020	0.000002	<0.0000020
Tin (Sn), dissolved	mg/L		<0.002	0.002				<0.005	<0.005	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		0.0017	0.0018	<0.003	<0.003	<0.003	<0.005	<0.005	<0.00050	<0.00050	<0.00050	0.0008	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L					0.00033	0.0007	0.0008	0.001	0.000485	0.000768	0.00141	0.000199	0.000667	0.000865	0.000831	0.00108	0.00168	0.00136	0.00137
Vanadium (V), dissolved	mg/L		<0.0003	<0.0003						<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.004	0.006	0.031	0.01	0.029	0.016	0.007	0.0273	0.0111	0.029	0.033	0.0182	0.0196	0.025	0.0475	0.0194	0.0478	0.0434
Zirconium (Zr), dissolved	mg/L		<0.0003	<0.0003				<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	0.00017	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9
		Guideline	20-Jan-16	9-Feb-16	20-Mar-16	20-Apr-16	5-May-16	14-May-16	14-Jun-16	27-Jul-16	27-Aug-16	8-Sep-16	3-Oct-16	18-Jul-94	31-Aug-94	3-Dec-94	5-Apr-95	11-Jun-95	22-Aug-95	13-Sep-95
Discharge (Flow)	L/s		32.6	30.5	16.3	31	54.1		177.6	133.3	418	283.4								
Total Suspended Solids	mg/L		<1.0	1	1	1	1.7	<1.0	1	<1.0	8.8	1.7	<1.0			<4	<4	<4	<4	15
pH (field)	pH units	**6.5-9**	7.3	7.55	7.4	7.64	7.06	7.73	8.03	7.6	7.68	7.63	7.65							
pH (lab)	pH units	**6.5-9**	8.16	8.19	8.05	8.25	7.98	8.24	8.1	8.16	8.11	8.06	7.96	7.6	7.5	7.3	7.6	7.7	8	7.9
Specific Conductance (field)	µS/cm		348.6	334.2	344	268.3	222.4	218.8	237.9	255.5	285.4	260.2	272.1							
Specific Conductance (lab)	µS/cm		356	360	357	318	221	250	243	250	248	274	292	225	292	351	387	217	278	223
Temperature (field)	C		0	0	0.5	0.7	0.4	4.4	7.6	9.1	8.4	4.7	0.9							
Dissolved Oxygen (field)	mg/L	**6.5**	10.8	10.1	10.05	11.98	12.29	10.9	9.92	9.91	9.12	9.99	10.34							
Dissolved Oxygen (field)	%		88	82	81.6	98.6	100.1	98.2	98.6	99.9	90.9	91.4	86							
ORP (field)	mV		288.4	243	23.9	37.4	57.4	111.1	81.8	58.8	238.3	31.5	58.3							
Turbidity (internal)	NTU		1.202	2.176	3.304	2.838	2.47		0.474	1.33	9.448	1.56	1.594							
Hardness (from total)	mg/L		191	176	181	176	114	124	128	127	121	128	149	109	161	190	214	118	165	
Hardness (from dissolved)	mg/L		186	178	185	165	112	126	119	127	125	147	143		160	196	209	115	164	170
Colour	TCU		10.7	10.7	<5.0	12.2	44.2	9.4			15.9									
Total Acidity	mg/L		<0.50	<0.50	<0.50	<0.50	0.58	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50							
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50							
Alkalinity, total	mg/L		153	156	154	138	92.4	110	95.7	93.4	85.6	99.9	108	106	131	166	194	92.2	138	135
Alkalinity, bicarbonate HCO3	mg/L		187	190	188	168	113	134	117	114	104	122	132	106	131				168	165
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50						<0.5	<0.5
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50						<0.5	<0.5
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<0.5				<0.5	<0.5
Chloride	mg/L	**120**	0.63	0.63	<0.50	0.65	1.1	0.59	0.71	0.53	0.9	0.82	<0.50							
Fluoride	mg/L	**0.12**	0.073	0.067	0.063	0.061	0.055	0.065	0.045	0.05	0.047	0.058	0.057							
Sulphate, dissolved	mg/L	*	36.2	34.9	33.5	29.6	18.7	23.5	31.6	36.8	33.6	52.3	38.9	21.8	20.9	28.4	23.9	18.9	20.5	25.7
Cyanide, total	mg/L	**0.005**	0.00058	<0.00050	<0.00050	0.0005	0.00062	0.00051	0.00102	0.00051	<0.00050	0.00075	<0.00050				<0.001	<0.001	<0.001	<0.001
Cyanide, Weak Acid Dissociable	mg/L		0.00067	<0.00050	<0.00050	<0.00050	0.00057	0.0005	0.00093	0.00065	<0.00050	0.00077	<0.00050				<0.001	<0.001	<0.001	<0.001
Ammonia (N)	mg/L	**0.197**	0.0378	0.018	0.0083	0.008	0.0158	0.0062	0.023	0.018	0.052	0.011	0.0091			0.025	0.018	<0.005	<0.005	<0.005
Nitrite (N)	mg/L	*	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	<0.0020	<0.0020	<0.0020	0.003	<0.0020	<0.0020				<0.005	<0.005	<0.005	<0.005
Nitrate (N)	mg/L	**3**	0.125	0.131	0.126	0.088	0.0524	0.0639	0.0209	0.0105	0.0157	0.0381	0.0897			0.18	0.2	<0.02	<0.02	0.04
Nitrite & Nitrate, as N	mg/L		0.125	0.131	0.126	0.088	0.0545	0.0639	0.0209	0.0105	0.0187	0.0381	0.0897			0.18	0.2	0.02	<0.02	0.04
Phosphorus,total-colourimetric	mg/L		0.0025	0.003	0.003	0.0029	0.008	0.0042	<0.0020	0.0053	0.018	0.0041	0.0039							
Phosphorus, Total Dissolved	mg/L		0.0025	0.0031	0.0032	0.0038	0.0074	0.0069	<0.0020	0.003	0.0175	0.003	0.0035							
Dissolved Organic Carbon	mg/L		1.61	<0.50	<0.50	3.56	4.85	2.55	1.62	2.54	2.92	2.49	2.22							
Aluminum (Al), total	mg/L	*	0.0151	0.0187	0.0198	0.0208	0.0587	0.0125	0.00296	0.0173	**0.333**	0.0347	0.0331	<0.06	<0.06		0.012	0.023	0.045	
Antimony (Sb), total	mg/L	**0.009**	0.000035	0.000035	0.000042	0.000046	0.00007	0.000057	0.000064	0.000079	0.000124	0.000071	0.000055							
Arsenic (As), total	mg/L	**0.005**	0.000523	0.000645	0.000416	0.000452	0.000622	0.000399	0.000234	0.000395	0.00105	0.000351	0.000414				0.00026	0.0006	0.0009	
Barium (Ba), total	mg/L		0.105	0.112	0.115	0.0999	0.0633	0.0679	0.0504	0.0651	0.0629	0.0622	0.0688	0.054	0.086	0.083	0.09	0.049	0.067	
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.00001	0.000022	<0.000010	<0.000010				<0.0001	<0.0001	<0.0001	
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.000020	<0.0000050	<0.000010	0.000012	<0.0000050	<0.0000050				<0.002	<0.002	<0.002	
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.04	<0.04	<0.04	0.062	0.023	0.024	
Cadmium (Cd), total	mg/L	*	0.000194	0.000204	0.000158	0.000221	0.00017	0.000096	0.000071	**0.000201**	**0.000319**	**0.000366**	**0.000528**				0.00002	0.00003	0.00004	
Calcium (Ca), total	mg/L		62.6	57.4	59.3	58	37.6	40.7	42	42.1	39.7	42	50	37.5	54.7	65	73	39	53	
Chromium (Cr), total	mg/L	**0.001**	<0.00010	<0.00010	<0.00010	<0.00010	<0.00050	<0.00050	<0.00010	<0.00010	0.00063	<0.00010	0.00011				**0.0014**	0.0005	0.0004	
Cobalt (Co), total	mg/L		0.00015	0.000143	0.000121	0.000085	0.000076	0.000034	0.00001	0.000037	0.000301	0.000058	0.000132				<0.0004	<0.0004	<0.0004	
Copper (Cu), total	mg/L	*	0.000409	0.000492	0.00034	0.000545	0.00134	0.00071	0.000556	0.00109	0.00358	0.00157	0.00124	<0.002	<0.002		0.0004	0.001	0.0006	
Iron (Fe), total	mg/L	**1**	0.935	0.893	0.678	0.525	0.506	0.314	0.0618	0.264	0.89	0.212	0.456	0.26	0.51		0.59	0.17	0.42	
Lead (Pb), total	mg/L	*	0.000216	0.000324	0.00016	0.000119	0.000631	0.000149	0.000021	0.000177	0.00275	0.000479	0.000438				0.0001	0.0005	0.0002	
Lithium (Li), total	mg/L		0.00312	0.00344	0.00431	0.0041	0.00236	0.00218	0.00104	0.00171	0.00131	0.00101	0.00129							
Magnesium (Mg), total	mg/L		8.34	7.87	7.88	7.64	4.79	5.53	5.66	5.37	5.27	5.62	5.87	3.69	5.88	6.7	7.8	5.1	7.9	
Manganese (Mn), total	mg/L	*	0.138	0.135	0.0987	0.081	0.0418	0.0272	0.00633	0.0254	0.0617	0.0245	0.0597	0.026	0.057	0.096	0.15	0.026	0.1	
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020				<0.00001	<0.00001	<0.00001	
Molybdenum (Mo), total	mg/L	**0.073**	0.00065	0.00072	0.000749	0.000645	0.000536	0.000596	0.000478	0.000484	0.000405	0.000418	0.000475				<0.0004	<0.0004	<0.0004	
Nickel (Ni), total	mg/L	*	0.000514	0.000555	0.000498	0.000554	0.00067	0.00039	0.000284	0.00044	0.00111	0.000566	0.000625				0.001	<0.001	<0.001	
Phosphorus (P), total	mg/L		0.0076	0.0092	0.0063	0.0065	<0.010	<0.010	0.0041	0.0056	0.0145	0.0039	0.0041			<0.003	<0.003	0.012	0.007	0.032
Potassium (K), total	mg/L		1.95	1.86	1.89	2.22	1.66	1.46	0.968	1.19	1.27	1.27	1.34	0.9	1.5	1.4	1.8	1.1	1.4	
Selenium (Se), total	mg/L	**0.002**	0.00102	0.000916	0.000868	0.000777	0.000652	0.000643	0.000668	0.0007	0.000645	0.000851	0.00126	<0.0005	0.0005		0.0011	<0.00005	<0.00005	

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9
		Guideline	20-Jan-16	9-Feb-16	20-Mar-16	20-Apr-16	5-May-16	14-May-16	14-Jun-16	27-Jul-16	27-Aug-16	8-Sep-16	3-Oct-16	18-Jul-94	31-Aug-94	3-Dec-94	5-Apr-95	11-Jun-95	22-Aug-95	13-Sep-95
Silicon (Si), total	mg/L		3.95	3.75	3.63	3.66	2.7	2.63	2.47	2.8	3.13	2.76	2.72	1.7	3	3.4	3.8	2.1	2.9	
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	0.00002	<0.0000050	<0.0000050				<0.00001	<0.00001	<0.00001	
Sodium (Na), total	mg/L		1.36	1.3	1.36	1.29	0.74	0.91	0.667	0.84	0.71	0.795	0.857	0.6	1	1.2	1.6	0.75	1	
Strontium (Sr), total	mg/L		0.221	0.21	0.21	0.203	0.125	0.143	0.13	0.134	0.119	0.126	0.156	0.11	0.177	0.186	0.21	0.11	0.16	
Sulphur (S), total	mg/L		13.7	12.9	11.9	10.1	<15	<15	11.1	12.2	11.8	12.4	13.2	5.5	6.9	9.2	7.7	6.3	7.7	
Thallium (Tl), total	mg/L	**0.0008**	0.000002	<0.0000020	0.000002	0.000002	0.000003	0.000003	<0.0000020	0.000003	0.000009	0.000003	0.000003							
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020				<0.002	<0.002	<0.002	
Titanium (Ti), total	mg/L		0.00059	0.00087	0.00111	0.00103	<0.0050	<0.0050	<0.00050	<0.0020	0.017	0.00174	0.00147	<0.003	<0.003	<0.003	0.0029	0.002	0.0032	
Uranium (U), total	mg/L	**0.015**	0.00162	0.0015	0.00158	0.00142	0.000796	0.000937	0.000798	0.000735	0.000647	0.000973	0.00114							
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00050	<0.00050	<0.00020	<0.00020	0.0008	<0.00020	<0.00020				<0.0003	<0.0003	<0.0003	
Zinc (Zn), total	mg/L	*	0.0651	0.0638	0.0497	0.0457	**0.035**	0.0199	0.0142	**0.0392**	**0.0642**	**0.0652**	**0.091**	<0.01	<0.01		0.013	0.007	0.009	
Zirconium (Zr), total	mg/L		0.00019	0.00017	0.00013	0.00011	0.00013	<0.00010	<0.00010	<0.00010	0.00014	<0.00010	<0.00010				0.0003	0.0004	0.0011	
Aluminum (Al), dissolved	mg/L	*	0.00227	0.00106	0.00542	0.00655	0.00764	0.00381	0.00192	0.00263	0.00748	0.00498	0.00314		<0.02		0.012	0.014	0.012	0.03
Antimony (Sb), dissolved	mg/L		0.000028	0.000027	0.000034	0.000043	0.00006	0.00006	0.000058	0.000081	0.000072	0.000069	0.000058							
Arsenic (As), dissolved	mg/L		0.000154	0.000114	0.000124	0.00029	0.00043	0.000267	0.000195	0.000249	0.000288	0.000279	0.000175				0.00013	0.0004	0.0006	0.00065
Barium (Ba), dissolved	mg/L		0.103	0.108	0.107	0.0908	0.0614	0.0626	0.0471	0.0621	0.0555	0.0646	0.0681		0.076	0.082	0.086	0.048	0.065	0.073
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010				<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050				<0.002	<0.002	<0.002	<0.002
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.008	<0.008	<0.004	0.024	0.02	0.013
Cadmium (Cd), dissolved	mg/L	*	0.00004	0.000024	0.000025	0.000081	0.000107	0.000059	0.000069	0.000122	0.000151	**0.000323**	**0.000357**				0.00002	0.00002	<0.00001	**0.0005**
Calcium (Ca), dissolved	mg/L		61.7	58.6	61.2	53.9	37.2	41.5	38.8	42.4	40.8	49.9	47.8		54.9	67.3	71	38	53	55
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010				0.0007	0.0006	0.0004	0.0024
Cobalt (Co), dissolved	mg/L		0.000066	0.000058	0.000052	0.000058	0.000045	0.000018	0.00001	<0.0000050	0.000024	0.000025	0.000034				<0.0004	<0.0004	<0.0004	<0.0004
Copper (Cu), dissolved	mg/L		0.000132	0.000143	0.000125	0.000439	0.000853	0.000565	0.000533	0.000699	0.00165	0.00119	0.000657		<0.001		0.0004	0.0009	0.0005	0.0024
Iron (Fe), dissolved	mg/L	**0.35**	0.0091	0.0061	0.0072	0.0894	0.246	0.136	0.044	0.0605	0.0372	0.0684	0.0661		0.16		0.11	0.092	0.054	**0.53**
Lead (Pb), dissolved	mg/L		<0.0000050	<0.0000050	0.000006	0.000012	0.000227	0.000047	0.000015	0.000024	0.000155	0.000115	0.000044				0.0005	0.0002	0.0001	0.0026
Lithium (Li), dissolved	mg/L		0.00285	0.00348	0.00449	0.00393	0.00168	0.0021	<0.00050	0.00131	0.0007	0.00119	0.00079							
Magnesium (Mg), dissolved	mg/L		7.77	7.7	7.76	7.32	4.73	5.46	5.42	5.17	5.53	5.4	5.8		5.52	6.76	7.6	5	7.8	7.9
Manganese (Mn), dissolved	mg/L		0.0981	0.0877	0.0716	0.0592	0.0348	0.0165	0.00624	0.00147	0.0128	0.0166	0.0245		0.05	0.098	0.14	0.019	0.058	0.11
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020				<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Mo), dissolved	mg/L		0.00069	0.000709	0.000731	0.000641	0.000515	0.000542	0.000431	0.000496	0.000396	0.000404	0.000461				<0.0004	0.0004	0.0005	0.0009
Nickel (Ni), dissolved	mg/L		0.000394	0.00042	0.000413	0.000471	0.00048	0.000465	0.00028	0.000368	0.000472	0.000469	0.000431				0.001	<0.001	<0.001	0.004
Phosphorus (P), dissolved	mg/L		<0.0020	0.0031	<0.0020	<0.0020	0.0057	0.0039	0.0035	<0.0020	<0.0020	<0.0020	<0.0020				<0.004	0.011	0.009	0.019
Potassium (K), dissolved	mg/L		1.87	1.87	1.93	2.02	1.66	1.47	0.928	1.16	1.21	1.4	1.29		1.2	1.6	1.7	1.1	1.3	1.5
Selenium (Se), dissolved	mg/L		0.000995	0.000862	0.000901	0.000811	0.000618	0.000562	0.000529	0.000687	0.000638	0.000894	0.00123		<0.0005		0.001	<0.00005	<0.00005	0.00013
Silicon (Si), dissolved	mg/L		3.84	3.68	3.68	3.54	2.52	2.61	2.05	2.83	2.51	2.8	2.73		2.92	3.47	3.7	2	2.8	2.8
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000008	<0.0000050	<0.0000050	<0.0000050	<0.0000050				<0.00001	<0.00001	<0.00001	<0.00001
Sodium (Na), dissolved	mg/L		1.3	1.3	1.34	1.25	0.738	0.925	0.638	0.797	0.753	0.798	0.851		1.01	1.11	1.6	0.75	1	1.1
Strontium (Sr), dissolved	mg/L		0.213	0.206	0.211	0.184	0.122	0.138	0.12	0.122	0.122	0.147	0.146		0.163	0.184	0.2	0.11	0.15	0.16
Sulphur (S), dissolved	mg/L		13	12	11.5	10.3	6.4	7.3	10.4	12.1	11.9	12.9	13		6.85	8.97	7.5	6.2	7.6	8.9
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	0.000002	0.000002	0.000002	0.000003	0.000003	0.000002	0.000003	0.000002	0.000003							
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020				0.004	<0.002	0.003	0.004
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		<0.003	<0.003	0.0027	0.0014	0.0016	0.0022
Uranium (U), dissolved	mg/L		0.00153	0.00146	0.00157	0.00138	0.000764	0.000887	0.000783	0.000718	0.000679	0.000948	0.0011							
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020				<0.0003	<0.0003	<0.0003	<0.0003
Zinc (Zn), dissolved	mg/L		0.04	0.0382	0.0342	0.0319	0.0248	0.0129	0.015	0.0241	0.0281	0.056	0.0669		0.004		0.011	0.018	0.005	0.014
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010				<0.0003	<0.0003	0.0011	0.0009

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9
		Guideline	23-Aug-02	19-Aug-04	24-Aug-06	14-Aug-08	19-Aug-10	16-Aug-12	21-Aug-14	30-Apr-15	11-May-15	13-May-15	23-Jun-15	24-Jun-15	29-Jul-15	23-Aug-15	10-Sep-15	15-Oct-15	20-Nov-15	2-Dec-15
Discharge (Flow)	L/s										967.5	575.7		275.3	202.2	240.8	313.4	165.5	79.2	80.2
Total Suspended Solids	mg/L		<4	<4	<4	<4	2	<4.0	<4.0	1.6	66.2		1.3		1.2	1.9	1.5	1.5	1.1	<1.0
pH (field)	pH units	**6.5-9**			8	8.3	7.4	7.5	7.97	7.08	7.59		7.48		7.52	7.46	7.6	7.31	8.71	7.05
pH (lab)	pH units	**6.5-9**		8.2	8	8.1	8.02	8.01	8.16	7.73	7.52		8.1		7.9	7.95	8.13	8.05	8.15	7.75
Specific Conductance (field)	µS/cm				285	340	333	254	355	351.9	81.1		242.1		297.4	272.5	280.6	348.1	376.1	375.1
Specific Conductance (lab)	µS/cm		269	365	314	310	344	270	342	399	96.8		244		289	283	298	337	362	379
Temperature (field)	C				5.2	7.5	8.6	6.4	7.1	-0.2	-0.2		12		9	6.6	5.7	0	0	0
Dissolved Oxygen (field)	mg/L	**6.5**			10.3	9.1		10.6		10.6	11.9		9.6		9.88	10.2	10.6	12.2	12.1	10.7
Dissolved Oxygen (field)	%				86	89		86.1		86	95		89.1		85.6	98	100	97	98	88
ORP (field)	mV									191.3	133.7		1.2		-0.9	184.1	48.9	109.8	34.8	79.1
Turbidity (internal)	NTU												0.71		0.81	1.11	1.622	0.95	1.28	1.05
Hardness (from total)	mg/L		147	196	180	188	154	130	172	208	54		186		159	144	169	181	186	199
Hardness (from dissolved)	mg/L		157	203	180	171	179	145	167	216	50.5		134		156	146	167	176	192	186
Colour	TCU									24.4	218		14		11	13.3	12.6	8.6	6.9	16.4
Total Acidity	mg/L		1.2	1.3	1.4	1.7	4.9	1.71	<0.50	4.66	0.94		<0.50		<0.50	0.8	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50		<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		120	173	144	140	160	111	150	176	42.4		101		124	114	120	139	153	161
Alkalinity, bicarbonate HCO3	mg/L		146	211	176	170	190	135	183	214	51.7		123		151	139	146	170	187	197
Alkalinity, hydroxide OH	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50		<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.5	<0.5	<0.5	0.8	<0.5	<0.50	<0.50	<0.50	<0.50		<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<1	<1.0	<0.5	0.6	<0.5	<0.50	<0.50	<0.50	<0.50		<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**								<0.50	1		0.72		<0.50	<0.50	<0.50	0.56	0.52	<0.50
Fluoride	mg/L	**0.12**								0.097	0.032		0.057		0.066	0.063	0.059	0.064	0.079	0.068
Sulphate, dissolved	mg/L	*	25.3	22.7	24.8	23	26	25.5	25.2	29.4	<0.50		25.8		28.2	31	33.8	32.2	34.2	31.5
Cyanide, total	mg/L	**0.005**								<0.00050	0.00151		<0.00050		<0.00050	<0.00050	0.00071	<0.00050	<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L									<0.00050	0.00146		<0.00050		0.00068	<0.00050	0.00077	0.00053	<0.00050	<0.00050
Ammonia (N)	mg/L	**0.197**	<0.005	0.022	<0.005	<0.005	0.12	0.0051	0.019	0.0241	0.01		0.0085		0.01	<0.0050	<0.0050	0.0185	0.0194	0.0234
Nitrite (N)	mg/L	*	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	0.0023			<0.0020		<0.0020	0.002	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3**	<0.02	0.03	0.02	0.05	0.02	0.028	0.033	0.116	<0.020		0.0115		0.034	0.0387	0.0453	0.139	0.171	0.175
Nitrite & Nitrate, as N	mg/L		<0.02	0.03	0.02	0.05	0.02	0.028	0.033	0.118	<0.020		0.0115		0.034	0.0407	0.0453	0.139	0.171	0.175
Phosphorus,total-colourimetric	mg/L									0.006	0.0272		0.0023		<0.0020	0.0059	0.0022	0.0038	0.003	0.0023
Phosphorus, Total Dissolved	mg/L									0.0059	0.028		<0.0020		0.0027	0.0024	0.0023	0.0026	<0.0020	0.0021
Dissolved Organic Carbon	mg/L									1.89	16.1		2.63		0.56	1.7	1.6	1.59	1.88	1.9
Aluminum (Al), total	mg/L	*	0.02	0.01	0.007	0.025	0.008	0.0197	0.0218	0.0117	**0.689**		0.0626		0.026	0.0142	0.0346	0.0227	0.0194	0.0226
Antimony (Sb), total	mg/L	**0.009**						0.000064	0.000051	0.00003	0.000058		0.00006		0.000063	0.000063	0.00007	0.000052	0.000043	0.000041
Arsenic (As), total	mg/L	**0.005**		0.001	<0.001	0.0004	0.0002	0.000236	0.00108	0.000387	0.00192		0.000455		0.000303	0.000279	0.000427	0.000357	0.000377	0.00037
Barium (Ba), total	mg/L		0.068	0.086	0.067	0.074	0.088	0.0727	0.073	0.105	0.0606		0.0609		0.0815	0.0685	0.083	0.0814	0.0949	0.0979
Beryllium (Be), total	mg/L					<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	0.000043		<0.000010		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L					<0.001	<0.001	<0.0000050	<0.0000050	<0.0000050	<0.000020		<0.0000050		<0.0000050	<0.000020	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	**1.5**	<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.050		<0.010		<0.010	<0.050	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*		0.00004	0.00003	**0.001**	0.00005	0.000058	0.000057	0.0000637	**0.000378**		0.000084		0.0000703	0.000069	0.000105	0.000092	0.000097	0.000082
Calcium (Ca), total	mg/L		46.7	60.3	55.4	59.3	51.1	43.1	51.7	69.5	17.8		66.6		53	48	56.5	60.9	61.8	66.2
Chromium (Cr), total	mg/L	**0.001**		<0.001	<0.001	<0.001	<0.001	<0.00010	0.00011	<0.00010	**0.00179**		0.00015		<0.00010	<0.00050	0.00012	0.0004	<0.00010	<0.00010
Cobalt (Co), total	mg/L			<0.0005	<0.0005	<0.0005	<0.0005	0.00007	0.000111	0.000217	0.000859		0.000147		0.0000864	0.000061	0.000112	0.00011	0.000127	0.000129
Copper (Cu), total	mg/L	*		0.0005	0.0004	0.0007	0.0004	0.000605	0.000503	0.000369	**0.00469**		0.00105		0.000542	0.00096	0.000879	0.000514	0.000359	0.000341
Iron (Fe), total	mg/L	**1**	0.279	0.213	0.081	0.373	0.564	0.311	0.307	0.486	**5.2**		0.866		0.431	0.266	0.466	0.548	**1.11**	**1.18**
Lead (Pb), total	mg/L	*		<0.0005	<0.0005	0.0019	<0.0002	0.000068	0.00007	0.000112	0.00247		0.000482		0.0000966	0.000067	0.000227	0.000165	0.000078	0.00006
Lithium (Li), total	mg/L				0.002	<0.005	<0.005	0.00191	0.00258	0.00472	0.0012		<0.00050		0.00233	0.00193	0.00174	0.002	0.00341	0.00306
Magnesium (Mg), total	mg/L		7.42	11.1	9.35	9.8	6.41	5.42	10.4	8.33	2.34		4.75		6.38	5.76	6.83	6.98	7.7	8.11
Manganese (Mn), total	mg/L	*	0.062	0.087	0.021	0.055	0.081	0.0497	0.0926	0.15	0.234		0.0434		0.0549	0.0405	0.0431	0.0609	0.0888	0.0898
Mercury (Hg), total	mg/L	**0.000026**			<0.00001	<0.00002	<0.00002		<0.0000020	<0.0000020	0.0000033		<0.0000020		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**				<0.001	<0.001	0.00049	0.0014	0.000719	0.000435		0.000471		0.000563	0.000576	0.00054	0.000661	0.000623	0.000641
Nickel (Ni), total	mg/L	*				<0.001	<0.001	0.000391	0.00058	0.000667	0.00271		0.000481		0.000475	0.00036	0.00132	0.000656	0.000414	0.000415
Phosphorus (P), total	mg/L									0.0045	0.098		0.0116		0.0046	0.026	0.0077	0.0052	0.0086	0.0044
Potassium (K), total	mg/L		2	1	2	1.22	1.38	1.26	1.17	2.2	2.21		1.19		1.53	1.3	1.6	1.52	1.69	1.71
Selenium (Se), total	mg/L	**0.002**		<0.001	<0.001	0.0006	0.0004	0.000647	0.000673	0.00104	0.000303		0.000973		0.00064	0.00069	0.000967	0.00144	0.00126	0.00124

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9
		Guideline	23-Aug-02	19-Aug-04	24-Aug-06	14-Aug-08	19-Aug-10	16-Aug-12	21-Aug-14	30-Apr-15	11-May-15	13-May-15	23-Jun-15	24-Jun-15	29-Jul-15	23-Aug-15	10-Sep-15	15-Oct-15	20-Nov-15	2-Dec-15
Silicon (Si), total	mg/L				2.91	2.84	3.16	2.59	3.03	4.33	2.69		2.38		2.92	2.64	2.96	3.32	3.73	3.88
Silver (Ag), total	mg/L	**0.00025**						<0.0000050	<0.0000050	<0.0000050	0.0000284		0.0000107		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L		0.93	1.2	1.05	7.28	0.98	0.864	1.13	1.52	0.4		0.748		1.06	0.97	1	1.08	1.31	1.36
Strontium (Sr), total	mg/L		0.143	0.186	0.155	0.185	0.181	0.143	0.176	0.248	0.0573		0.139		0.171	0.152	0.173	0.187	0.218	0.212
Sulphur (S), total	mg/L		8.8	8	8.7	9	8	<10	<15	10.5	<15		8.7		10.3	<15	10.8	11.9	11.5	11.4
Thallium (Tl), total	mg/L	**0.0008**						<0.0000020	<0.0000020	<0.0000020	0.0000125		<0.0000020		<0.0000020	0.000002	0.000002	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L							<0.00020	<0.00020	<0.00020	<0.00020		<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		<0.003	<0.003	<0.003	<0.005	<0.005	0.00086	0.00104	0.0007	0.0323		0.00442		0.00173	<0.0050	0.00235	0.00122	0.00096	<0.00050
Uranium (U), total	mg/L	**0.015**		0.00201	0.0015	0.0013	0.0009	0.000668	0.00169	0.00156	0.000359		0.000624		0.000989	0.000861	0.00123	0.00144	0.00148	0.00164
Vanadium (V), total	mg/L							<0.00020	<0.00020	<0.00020	0.00218		0.00032		<0.00020	<0.00050	0.00026	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	0.006	<0.005	<0.005	0.009	0.006	0.0109	0.00771	0.00905	**0.0479**		0.0137		0.0098	0.0103	0.0202	0.0186	0.0212	0.02
Zirconium (Zr), total	mg/L					<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	0.0005		<0.00010		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*	<0.02	0.002	0.001	0.007	<0.003	0.00556	0.002	0.00345	**0.0556**		0.00228		0.00165	0.00178	0.00452	0.00121	0.00286	0.001
Antimony (Sb), dissolved	mg/L							0.00006	0.00005	0.000056	0.000037		0.000063		0.000066	0.000057	0.000061	0.000044	0.000039	0.000036
Arsenic (As), dissolved	mg/L			<0.001	<0.001	0.0003	0.0003	0.000222	0.000756	0.000288	0.000308		0.000208		0.000212	0.00021	0.000218	0.000185	0.000158	0.000181
Barium (Ba), dissolved	mg/L		0.072	0.085	0.069	0.069	0.098	0.0713	0.0721	0.107	0.0375		0.0658		0.0794	0.0695	0.0773	0.0819	0.0949	0.0916
Beryllium (Be), dissolved	mg/L					<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010		<0.000010		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L					<0.001	<0.001	<0.0000050	<0.0000050	0.0000081	<0.0000050		<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.010		<0.010		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*		0.00002	0.00002	0.00007	0.00003	0.000044	0.000031	0.0000606	0.0000685		0.0000341		0.0000399	0.000043	0.000071	0.000071	0.000061	0.000054
Calcium (Ca), dissolved	mg/L		50.1	62.6	55	54.2	60.3	48.8	49.2	72	16.8		45.4		52.2	48.7	56.2	59.5	64	61.5
Chromium (Cr), dissolved	mg/L			<0.001	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00010	0.00011		<0.00010		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L			<0.0005	<0.0005	<0.0005	<0.0005	0.00006	0.000055	0.000147	0.0000932		0.0000263		0.0000459	0.000044	0.000035	0.000051	0.000105	0.000088
Copper (Cu), dissolved	mg/L			0.0004	0.0004	0.0004	0.0004	0.000581	0.000306	0.000398	0.00171		0.00066		0.000382	0.000574	0.000574	0.000308	0.000241	0.000222
Iron (Fe), dissolved	mg/L	**0.35**	0.067	0.009	0.026	0.102	0.229	0.186	0.0852	0.0889	0.289		0.0646		0.0855	0.101	0.101	0.0735	0.0672	0.111
Lead (Pb), dissolved	mg/L			<0.0005	<0.0005	<0.0002	<0.0002	0.000018	0.000006	0.0000067	0.0000565		0.0000067		<0.0000050	0.000007	0.000017	0.000006	<0.0000050	<0.0000050
Lithium (Li), dissolved	mg/L				0.002	<0.005	<0.005	0.00191	0.00264	0.00511	0.00101		0.00156		0.00219	0.00174	0.00216	0.00216	0.0033	0.00319
Magnesium (Mg), dissolved	mg/L		7.85	11.4	9.55	8.58	6.83	5.61	10.6	8.94	2.09		5.04		6.32	5.8	6.4	6.76	7.76	7.97
Manganese (Mn), dissolved	mg/L		0.048	0.076	0.011	0.031	0.09	0.0483	0.0581	0.147	0.0436		0.0183		0.0409	0.0337	0.0264	0.0471	0.0839	0.0797
Mercury (Hg), dissolved	mg/L				<0.00001	<0.00002	<0.00002		0.0000042	<0.0000020	0.0000034		<0.0000020		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L					<0.001	<0.001	0.000463	0.00142	0.000699	0.000273		0.000511		0.000589	0.000568	0.000527	0.000641	0.00062	0.000661
Nickel (Ni), dissolved	mg/L					<0.001	<0.001	0.000318	0.00042	0.00068	0.00101		0.000355		0.000332	0.000514	0.00035	0.000309	0.000364	0.000373
Phosphorus (P), dissolved	mg/L									0.0021	0.0138		0.0026		<0.0020	<0.0020	0.0029	<0.0020	<0.0020	<0.0020
Potassium (K), dissolved	mg/L		1	1	<1	1.09	1.57	1.31	1.16	2.28	2.22		1.38		1.49	1.39	1.58	1.5	1.72	1.68
Selenium (Se), dissolved	mg/L			<0.001	<0.001	0.0007	0.0004	0.000479	0.000647	0.00106	0.000218		0.000576		0.000625	0.000686	0.000876	0.00126	0.00119	0.00134
Silicon (Si), dissolved	mg/L				2.94	3.11	3.4	2.93	2.91	4.41	1.65		2.5		2.82	2.72	2.97	3.12	3.63	4.09
Silver (Ag), dissolved	mg/L							<0.0000050	0.000006	<0.0000050	<0.0000050		<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		0.97	1.32	1.04	0.93	1.19	0.91	1.1	1.61	0.353		0.877		1.07	0.976	0.976	1.05	1.31	1.3
Strontium (Sr), dissolved	mg/L		0.153	0.187	0.157	0.164	0.203	0.141	0.171	0.263	0.0559		0.15		0.178	0.156	0.173	0.184	0.217	0.211
Sulphur (S), dissolved	mg/L		9.5	8.2	8.7	9	9	<10	<15	10.8	<3.0		8.8		10.3	10.8	11.3	11.2	11.5	12.3
Thallium (Tl), dissolved	mg/L							<0.0000020	<0.0000020	<0.0000020	<0.0000020		<0.0000020		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L							<0.00020	<0.00020	<0.00020	<0.00020		<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.003	<0.003	<0.003	<0.005	<0.005	<0.00050	<0.00050	<0.00050	0.00068		<0.00050		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L			0.00035	0.0016	0.0012	0.0011	0.000642	0.00169	0.00165	0.000185		0.000707		0.000964	0.000908	0.00118	0.00138	0.00152	0.00157
Vanadium (V), dissolved	mg/L							<0.00020	<0.00020	<0.00020	<0.00020		<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		<0.005	<0.005	0.005	0.006	<0.005	0.00966	0.00263	0.00891	0.0134		0.00561		0.00646	0.00705	0.0129	0.0139	0.0182	0.0132
Zirconium (Zr), dissolved	mg/L					<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	0.00014		<0.00010		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13
		Guideline	20-Jan-16	9-Feb-16	20-Mar-16	20-Apr-16	4-May-16	19-May-16	14-Jun-16	27-Jul-16	27-Aug-16	7-Sep-16	4-Oct-16	31-Aug-94	2-Dec-94	7-Apr-95	8-May-95	11-Jun-95	23-Jul-95	15-Aug-95
Discharge (Flow)	L/s		45.2	40.4	26.9	43.2	94.5		220.3	183.4	535	471.7	301.7							
Total Suspended Solids	mg/L		1	1.4	<1.0	2.4	4.1	13.8	2.1	1.1	19.1	5.9	2.7		<4	<4	25	11	<4	<4
pH (field)	pH units	**6.5-9**	7.21	7.01	6.97	7.31	7.31	7.33	7.1	7.19	7.79	7.52	7.5							
pH (lab)	pH units	**6.5-9**	8	7.9	8.14	8.04	7.84	8.16	8.07	8.22	8.05	7.97	7.95	7.9	7.3	8	7	7.1	7.4	7.4
Specific Conductance (field)	µS/cm		397.1	392.1	404.7	301.7	236.7	235.9	250.6	286.1	295	283.7	297.3							
Specific Conductance (lab)	µS/cm		405	421	480	361	239	236	257	283	251	298	331	374	154	188	91	84	125	110
Temperature (field)	C		0	0	0.8	0.7	2.6	4	7.9	8.4	6.8	5.8	-0.1							
Dissolved Oxygen (field)	mg/L	**6.5**	10.9	10.1	9.62	12.04	10.78	11.8	9.77	9.53	10.3	8.98	11.33							
Dissolved Oxygen (field)	%		88	81	78.5	97.5	93.3	105	96.8	94.5	98.9	84.8	90.6							
ORP (field)	mV		299.5	273.7	60.4	15.9	15.9	37.6	134.1	8.5	244.7	6.1	-32.2							
Turbidity (internal)	NTU		1.054	1.99	1.054	1.758	1.55		0.218	1.12	7.76	1.26	1.276							
Hardness (from total)	mg/L		228	214	239	153	121	105	132	145	123	150	172	252	69.2	98.9	47.7	47	61.1	54.9
Hardness (from dissolved)	mg/L		219	203	250	188	116	122	127	147	128	157	162	229	71.1	98.9	46.5	46.5	61.1	51.9
Colour	TCU		18.4	28.3	<5.0	12	31.2	16.3			15.5									
Total Acidity	mg/L		3.3	3.76	<0.50	3.73	3.72	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50							
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50							
Alkalinity, total	mg/L		184	193	220	166	106	101	106	114	92.9	120	135	185	69.3	88.7	43.3	37.7	56.8	51.3
Alkalinity, bicarbonate HCO3	mg/L		224	235	268	203	129	124	129	139	113	147	164	185					69.2	62.5
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50						<0.5	<0.5
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50						<0.5	<0.5
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5					<0.5	<0.5
Chloride	mg/L	**120**	0.98	0.87	0.55	1.1	1.1	0.53	<0.50	0.54	0.71	0.77	0.92							
Fluoride	mg/L	**0.12**	0.088	0.086	0.061	0.069	0.065	0.07	0.056	0.05	0.054	0.062	0.067							
Sulphate, dissolved	mg/L	*	34.1	34.1	41.7	26.4	16.6	22.1	29.5	33.3	30.3	35.7	33.3	41.3	10.3	12.1	5	6.6	10.3	7
Cyanide, total	mg/L	**0.005**	0.00055	<0.00050	<0.00050	0.00051	0.00066	0.00057	0.00107	<0.00050	<0.00050	0.00065	<0.00050			<0.001	<0.001	<0.001	<0.001	
Cyanide, Weak Acid Dissociable	mg/L		0.00065	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00144	0.00057	<0.00050	0.0007	<0.00050			<0.001	<0.001	<0.001	<0.001	<0.001
Ammonia (N)	mg/L	**0.197**	0.0339	0.0172	<0.0050	0.0188	0.0171	0.021	0.022	0.035	0.1	0.036	0.017		0.011	0.007	0.008	<0.005	<0.005	<0.005
Nitrite (N)	mg/L	*	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0023	<0.0020	<0.0020			<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (N)	mg/L	**3**	0.199	0.191	0.507	0.123	0.0571	0.0355	0.0274	0.0274	0.0197	0.0902	0.173		0.11	0.15	0.03	0.04	<0.02	0.05
Nitrite & Nitrate, as N	mg/L		0.199	0.191	0.507	0.123	0.0571	0.0355	0.0274	0.0274	0.022	0.0902	0.173		0.11	0.15	0.03	0.04	<0.02	0.05
Phosphorus,total-colourimetric	mg/L		0.0025	0.0021	<0.0020	0.0027	0.006	0.0042	0.003	0.004	0.0308	0.0045	0.0062							
Phosphorus, Total Dissolved	mg/L		0.0021	0.0031	0.0022	0.0026	0.0067	0.0034	0.0024	0.0031	0.0231	0.0048	0.0045							
Dissolved Organic Carbon	mg/L		0.84	<0.50	<0.50	3.36	3.8	1.25	0.96	2.62	3.93	3.08	1.64							
Aluminum (Al), total	mg/L	*	0.00854	0.0193	0.00272	0.0225	0.0422	**0.175**	0.0291	0.0139	**0.216**	0.0357	0.0405	**3.25**		0.021	**0.44**	**0.15**	0.036	0.028
Antimony (Sb), total	mg/L	**0.009**	0.000025	0.000032	0.00002	<0.000050	<0.000050	0.000054	0.000063	0.000064	0.000117	0.000051	0.00004							
Arsenic (As), total	mg/L	**0.005**	0.000416	0.000682	0.000117	0.000304	0.00038	0.000483	0.000267	0.000256	0.000925	0.000268	0.000371	**0.0069**		<0.00005	0.0004	0.002	<0.00005	<0.00005
Barium (Ba), total	mg/L		0.108	0.115	0.18	0.0784	0.0656	0.0534	0.0634	0.0738	0.0682	0.0694	0.0764	0.121	0.084	0.09	0.06	0.065	0.078	0.072
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000013	<0.000010	0.000011	0.000014	<0.000010	<0.000010			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.000020	<0.000020	<0.0000050	<0.000010	0.00001	<0.0000050	<0.0000050			<0.002	<0.002	<0.002	<0.002	<0.002
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.050	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.04	<0.04	0.062	0.025	0.018	0.016	0.015
Cadmium (Cd), total	mg/L	*	0.000074	0.000085	0.000042	0.000073	0.000076	0.000076	0.000056	0.000062	0.000145	0.000104	0.000155			<0.00001	0.00004	0.00002	0.00001	0.00001
Calcium (Ca), total	mg/L		76.4	72	78.7	50.7	40.2	35.4	44.3	48.4	41.1	49.6	57.9	72.6	23.5	34	16	16	21	19
Chromium (Cr), total	mg/L	**0.001**	<0.00010	0.00015	0.00021	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	0.00044	0.00011	0.00013	**0.008**		0.0003	**0.0016**	**0.0012**	0.0004	0.0003
Cobalt (Co), total	mg/L		0.000176	0.000192	0.000006	0.000138	0.000105	0.000258	0.000084	0.000058	0.000239	0.000082	0.000133			<0.0004	0.0004	<0.0004	<0.0004	<0.0004
Copper (Cu), total	mg/L	*	0.000263	0.000381	0.000069	0.00061	0.00124	0.00174	0.000677	0.00078	0.00291	0.00108	0.000789	**0.022**		0.0004	**0.0021**	0.001	0.0006	0.0008
Iron (Fe), total	mg/L	**1**	**1.54**	**2.81**	0.0028	0.476	0.527	0.671	0.328	0.287	0.804	0.265	0.583	**9.43**		0.15	0.085	0.25	0.091	0.082
Lead (Pb), total	mg/L	*	0.000056	0.000196	0.000033	0.00012	0.000283	0.000585	0.000159	0.000076	0.00233	0.000229	0.000266			0.0003	<0.0001	0.0003	0.0003	0.0001
Lithium (Li), total	mg/L		0.00414	0.00438	0.00197	0.00365	0.00248	0.00195	0.00149	0.00235	0.00195	0.00138	0.0016							
Magnesium (Mg), total	mg/L		8.96	8.37	10.2	6.36	4.93	3.99	5.26	5.83	4.94	6.46	6.67	17.2	2.56	3.4	1.8	1.7	2.1	1.8
Manganese (Mn), total	mg/L	*	0.127	0.135	0.00198	0.0852	0.0573	0.0402	0.0379	0.0414	0.0487	0.029	0.06	0.258	0.049	0.045	0.079	0.02	0.02	0.022
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020			<0.00001	<0.00001		<0.00001	<0.00001
Molybdenum (Mo), total	mg/L	**0.073**	0.000703	0.000739	0.00145	0.000564	0.000571	0.000415	0.000497	0.000517	0.000438	0.000496	0.000572			<0.0004	<0.0004	<0.0004	0.0011	0.0006
Nickel (Ni), total	mg/L	*	0.00051	0.000552	0.000102	0.0005	0.0007	0.00083	0.000361	0.00035	0.00089	0.000489	0.000504			<0.001	0.002	<0.001	<0.001	<0.001
Phosphorus (P), total	mg/L		0.007	0.0154	<0.0020	<0.010	<0.010	0.017	0.0095	0.0053	0.0168	0.0084	0.0057	0.21	0.004	<0.003	0.031	0.02	<0.003	<0.003
Potassium (K), total	mg/L		1.97	1.92	1.31	1.6	1.59	1.17	1.21	1.19	1.28	1.34	1.31	4.2	1.6	2.1	2.4	1.3	1.5	1.3
Selenium (Se), total	mg/L	**0.002**	0.00129	0.00116	**0.00307**	0.000695	0.000627	0.000529	0.000611	0.000615	0.000655	0.00104	0.00138	0.0009		0.00016	<0.00005	<0.00005	0.00035	0.0001

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13
		Guideline	20-Jan-16	9-Feb-16	20-Mar-16	20-Apr-16	4-May-16	19-May-16	14-Jun-16	27-Jul-16	27-Aug-16	7-Sep-16	4-Oct-16	31-Aug-94	2-Dec-94	7-Apr-95	8-May-95	11-Jun-95	23-Jul-95	15-Aug-95
Silicon (Si), total	mg/L		4.27	4.08	3.36	3.52	2.78	2.15	2.36	3.03	3.44	2.88	3.01	9.2	3	3.6	2.9	2.6	2.4	2.3
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	0.000007	<0.000010	0.000017	<0.0000050	<0.0000050			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium (Na), total	mg/L		1.58	1.55	1.1	1.12	0.8	0.67	0.759	0.95	0.81	0.946	0.964	1.9	1	1.2	0.61	0.77	0.84	0.79
Strontium (Sr), total	mg/L		0.26	0.247	0.261	0.181	0.136	0.114	0.146	0.152	0.134	0.16	0.183	0.244	0.067	0.087	0.039	0.044	0.057	0.05
Sulphur (S), total	mg/L		12.1	11.5	13.8	<15	<15	<15	9.7	11.4	10.3	12.5	11.5	14.1	3.2	3.7	1.5	1.9	2.2	2.2
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000002	0.000003	<0.0000020	0.000002	0.000006	0.000002	<0.0000020							
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020			<0.002	<0.002	<0.002	<0.002	<0.002
Titanium (Ti), total	mg/L		<0.00050	0.00056	<0.00050	<0.0050	<0.0050	0.0102	0.00216	<0.0020	0.0122	0.00219	0.00274	0.147	0.004	0.002	0.021	0.011	0.0023	0.0019
Uranium (U), total	mg/L	**0.015**	0.00178	0.00183	0.00313	0.00122	0.000851	0.000635	0.000802	0.000778	0.000657	0.00109	0.00134							
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	0.00062	<0.00020	<0.00020	0.01		<0.0003	0.0015	0.0006	<0.0003	<0.0003
Zinc (Zn), total	mg/L	*	0.0171	0.017	0.00171	0.0101	0.0134	0.0157	0.0114	0.0106	**0.0343**	0.026	0.0332	0.07		0.008	**0.008**	**0.019**	0.004	0.003
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00015	<0.00010	<0.00010	0.013		0.0003	0.0004	<0.0003	0.0009	0.0006
Aluminum (Al), dissolved	mg/L	*	0.00202	0.0008	0.00315	0.00267	0.0051	0.00437	0.00114	0.00169	0.00581	0.00321	0.00227	<0.02		0.008	**0.07**	0.026	0.009	<0.006
Antimony (Sb), dissolved	mg/L		0.000025	0.000024	0.00002	0.000035	0.000046	0.000058	0.000053	0.000064	0.00007	0.000054	0.000053							
Arsenic (As), dissolved	mg/L		0.000184	0.000171	0.000109	0.000285	0.000309	0.000219	0.000164	0.000197	0.00025	0.00017	0.000155	0.0016		<0.00005	0.0002	0.0001	<0.00005	<0.00005
Barium (Ba), dissolved	mg/L		0.108	0.108	0.179	0.0929	0.0609	0.0608	0.0581	0.0732	0.0597	0.0704	0.0903	0.037	0.083	0.089	0.051	0.061	0.078	0.066
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000006	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050			<0.002	<0.002	<0.002	<0.002	<0.002
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.008	<0.008	0.007	0.02	0.013	0.016	<0.004
Cadmium (Cd), dissolved	mg/L	*	0.000055	0.000052	0.000033	0.000072	0.000054	0.000036	0.000036	0.000046	0.000063	0.000079	0.000095			0.00001	0.00002	0.00001	<0.00001	<0.00001
Calcium (Ca), dissolved	mg/L		73.5	67.4	83.8	62.2	38.6	40.8	42.7	49.5	43	53.1	54.3	68.7	24.2	34	16	16	21	18
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	0.00017	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010			0.0003	0.0017	0.0003	0.0004	0.005
Cobalt (Co), dissolved	mg/L		0.00013	0.000144	0.000005	0.000091	0.000072	0.000015	0.00002	0.000016	0.00003	0.000024	0.000038				0.0005	<0.0004	<0.0004	<0.0004
Copper (Cu), dissolved	mg/L		0.000189	0.00017	0.000068	0.000488	0.000805	0.000644	0.00048	0.000499	0.00141	0.00074	0.000394	<0.001		0.0004		0.0007	0.0006	0.0004
Iron (Fe), dissolved	mg/L	**0.35**	0.0148	0.0153	<0.0010	0.206	0.238	0.113	0.0625	0.071	0.0475	0.062	0.0666	**0.694**		0.069	0.29	0.047	0.034	0.03
Lead (Pb), dissolved	mg/L		<0.0000050	<0.0000050	0.000006	0.000032	0.000085	0.000048	0.000023	0.000006	0.000153	0.000043	0.000012			0.0014	0.0004	0.0002	0.0002	<0.0001
Lithium (Li), dissolved	mg/L		0.00355	0.0047	0.0022	0.00396	0.00228	0.00176	0.00119	0.00196	0.0015	0.00153	0.00169							
Magnesium (Mg), dissolved	mg/L		8.58	8.3	9.98	7.85	4.78	4.79	5.03	5.72	5.09	5.92	6.33	13.9	2.6	3.4	1.6	1.6	2.1	1.7
Manganese (Mn), dissolved	mg/L		0.115	0.119	0.00146	0.0917	0.0456	0.0173	0.0157	0.0266	0.0153	0.0149	0.0313	0.051	0.021	0.038	0.046	0.0067	0.016	0.013
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020			<0.00001	<0.00001		<0.00001	<0.00001
Molybdenum (Mo), dissolved	mg/L		0.000722	0.000706	0.00149	0.000674	0.000516	0.000533	0.000476	0.000521	0.000443	0.0005	0.000631			<0.0004	<0.0004	0.0006	0.0008	0.0006
Nickel (Ni), dissolved	mg/L		0.000455	0.000501	0.000081	0.000533	0.000514	0.00034	0.000262	0.000299	0.000435	0.000346	0.000323			<0.001		<0.001	<0.001	<0.001
Phosphorus (P), dissolved	mg/L		0.0034	<0.0020	0.0026	<0.0020	0.0029	0.0028	0.006	<0.0020	<0.0020	<0.0020	<0.0020				0.015	0.008	0.008	0.008
Potassium (K), dissolved	mg/L		1.96	1.89	1.28	2	1.56	1.39	1.17	1.19	1.22	1.3	1.25	2.1	1.3	2.1	2.3	1.3	1.5	1.2
Selenium (Se), dissolved	mg/L		0.00119	0.00104	0.00326	0.000943	0.000649	0.000626	0.000557	0.000622	0.000638	0.00097	0.00133	<0.0005		0.00015	<0.00005	<0.00005	0.00032	0.0001
Silicon (Si), dissolved	mg/L		4.15	4.09	3.44	3.88	2.67	2.26	2.17	3.04	2.86	3.07	2.87	4.37	2.99	3.6	2.4	2.4	2.5	2.1
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000005			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium (Na), dissolved	mg/L		1.59	1.53	1.04	1.41	0.797	0.782	0.763	0.918	0.837	0.873	0.952	1.51	0.91	1.2	0.64	0.76	0.87	0.74
Strontium (Sr), dissolved	mg/L		0.259	0.247	0.254	0.22	0.135	0.136	0.136	0.15	0.127	0.16	0.168	0.211	0.068	0.087	0.038	0.043	0.058	0.046
Sulphur (S), dissolved	mg/L		12.1	11.5	13.5	9.5	5.6	7.7	9.6	11.4	9.9	11.2	11.2	14	3.24	3.7	1.5	1.9	2.2	2
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000002	0.000002	0.000002	0.000002	0.000003							
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020			<0.002	<0.002	<0.002	<0.002	<0.002
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.003	<0.003	0.0014	0.0012	0.0015	0.0008	0.0007
Uranium (U), dissolved	mg/L		0.00177	0.00168	0.00303	0.00153	0.000799	0.000729	0.000714	0.00076	0.000661	0.00109	0.00151							
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020			<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Zinc (Zn), dissolved	mg/L		0.0133	0.0122	0.00086	0.0103	0.00973	0.00565	0.00699	0.00624	0.0126	0.0166	0.0211	<0.002				0.003	0.004	0.003
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010			<0.0003	0.0008	<0.0003	0.0005	0.0004

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13
		Guideline	22-Aug-95	30-Aug-95	6-Sep-95	13-Sep-95	30-Apr-15	12-May-15	13-May-15	24-Jun-15	29-Jul-15	23-Aug-15	11-Sep-15	14-Oct-15	6-Nov-15	2-Dec-15	21-Jan-16	8-Feb-16	21-Mar-16	20-Apr-16
Discharge (Flow)	L/s						9.6		334.9	142	93.9	164.4	195.9	94.8	33.9	47.8	13.1	10.5	7.2	23.3
Total Suspended Solids	mg/L		7	<4	<4	<4	7.3	34		1.1	1	1.3	1.7	1	1.3	<1.0	<1.0	<1.0	<1.0	<1.0
pH (field)	pH units	**6.5-9**					7.55	7.96		7.84	7.96	7.69	7.92	7.75	7.79	7.78	7.6	7.51	6.82	7.56
pH (lab)	pH units	**6.5-9**	7.6	7	7.4	7	8.24	7.53		7.86	7.78	7.83	8.02	7.89	8.07	8.05	7.99	7.99	7.83	8.07
Specific Conductance (field)	µS/cm						196.8	60.9		122.3	145.3	128.2	127.4	155.8	156.4	181.4	147.5	168.3	183.5	178.8
Specific Conductance (lab)	µS/cm		124	128	90	107	228	71.7		124	142	137	134	156	166	183	181	179	187	211
Temperature (field)	C						-0.1	0.4		8.1	10.3	6.8	5.3	1.5	-2	0.4	0	0	0.9	0.2
Dissolved Oxygen (field)	mg/L	**6.5**					10.8	11.9		10.51	9.85	10.4	9.3	12.3	12.68	11.1	11.5	10.9	12.35	13.58
Dissolved Oxygen (field)	%						87	96		89.4	87.9	101	87	102	98.4	92	94	87	101.2	109.2
ORP (field)	mV						303.8	268.2		39.7	77.4	187.4	103.4	251.8		113.6	248.9	198.3	66.5	85.6
Turbidity (internal)	NTU									0.47	0.02	0.21	1.94		0.31	0.15		0.482	0.612	0.318
Hardness (from total)	mg/L		66.9	61.1	63.6	69.8	113	36.1		60.8	70.8	64.1	68.7	76	83.4	89.8	88.8	84.9	91.8	91
Hardness (from dissolved)	mg/L		69.8	61.1	64	66.9	111	35.6		61.4	70.5	64.7	70.9	73.4	78.4	87.6	89.4	87	88.4	116
Colour	TCU						24.6	122		22	18.7	18.1	19	15.5	13.6	13.9	10.6	17.2	5.5	14.6
Total Acidity	mg/L						0.95	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	0.56	<0.50	0.67	<0.50	1.96	<0.50
Acidity (pH 4.5)	mg/L						<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		58.5	53.4	48.4	49.8	99.3	33.6		49.7	51.7	53.8	56.3	63.3	66.3	75.6	77.5	77.9	83.8	94.5
Alkalinity, bicarbonate HCO3	mg/L		71.3	65.1	59	60.7	121	40.9		60.7	63.1	65.6	68.7	77.3	80.9	92.3	94.6	95	102	115
Alkalinity, hydroxide OH	mg/L		<0.5	<0.5	<0.5	<0.5	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.5	<0.5	<0.5	<0.5	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.5	<0.5	<0.5	<0.5	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**					1.2	0.85		0.73	<0.50	<0.50	<0.50	0.53	<0.50	<0.50	0.57	<0.50	<0.50	<0.50
Fluoride	mg/L	**0.12**					0.064	0.033		0.043	0.043	0.044	0.044	0.039	0.044	0.039	0.045	0.047	0.045	0.053
Sulphate, dissolved	mg/L	*	7.6	5.9	7.5	7.8	13.7	<0.50		10.2	11.6	14.2	12.4	13.6	16	15.4	13.8	13.5	14.6	14.5
Cyanide, total	mg/L	**0.005**	<0.001	<0.001	<0.001	<0.001	0.0005	0.00119		<0.00050	0.00061	<0.00050	0.0008	<0.00050	0.00057	<0.00050	0.00063	<0.00050	<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L		<0.001	<0.001	<0.001	<0.001	<0.00050	0.00116		<0.00050	0.0007	0.00056	0.00059	<0.00050	<0.00050	<0.00050	0.00072	0.00065	0.00054	<0.00050
Ammonia (N)	mg/L	**0.197**	<0.005	<0.005	0.007	<0.005	0.0074	0.0063		0.0083	0.0102	<0.0050	<0.0050	0.0134	<0.0050	<0.0050	0.009	0.0066	0.051	0.0124
Nitrite (N)	mg/L	*	<0.005	<0.005	<0.005	<0.005	<0.0020			<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3**	<0.02	0.03	0.05	0.06	0.0935	0.035		0.0175	0.0198	0.0378	0.0246	0.0581	0.0793	0.0855	0.154	0.159	0.151	0.0808
Nitrite & Nitrate, as N	mg/L		<0.02	0.03	0.05	0.06	0.0935	0.035		0.0175	0.0198	0.0378	0.0246	0.0581	0.0793	0.0855	0.154	0.159	0.151	0.0808
Phosphorus,total-colourimetric	mg/L						0.0032	0.0197		0.003	0.0038	0.003	0.0029	0.0026	0.0029	0.0037	0.0026	0.0037	<0.0020	0.0062
Phosphorus, Total Dissolved	mg/L						0.0037	0.0197		0.0028	0.0045	0.0031	0.003	<0.0020	0.0044	0.0023	0.0022	0.0047	<0.0020	0.0052
Dissolved Organic Carbon	mg/L						2.94	11		3.77	1.8	2.7	3	3.16	3.71	3.09	1.43	<0.50	1.29	3.74
Aluminum (Al), total	mg/L	*	**0.11**	0.026	0.034	0.037	0.0969	**0.666**		0.0293	0.0567	0.016	0.0262	0.0273	0.0347	0.0273	0.0149	0.0228	0.0136	0.0072
Antimony (Sb), total	mg/L	**0.009**					<0.000050	<0.000050		<0.000050	0.000033	<0.000050	0.000023	0.00003	0.000036	0.000034	<0.000020	<0.000020	<0.000020	<0.000050
Arsenic (As), total	mg/L	**0.005**	0.0001	0.00011	<0.00005	0.0001	0.000291	0.000639		0.000226	0.000276	0.000236	0.000206	0.000185	0.000218	0.000229	0.000188	0.000307	0.000193	0.000151
Barium (Ba), total	mg/L		0.085	0.076	0.078	0.089	0.121	0.0744		0.0864	0.105	0.0907	0.0935	0.0951	0.108	0.111	0.139	0.149	0.153	0.0949
Beryllium (Be), total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	0.000017	0.000039		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.002	<0.002	<0.002	<0.002	<0.000020	<0.000020		<0.000020	<0.0000050	0.000029	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000020
Boron (B), total	mg/L	**1.5**	0.028	0.014	0.016	0.019	<0.05	<0.050		<0.050	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050
Cadmium (Cd), total	mg/L	*	0.00003	<0.00001	0.00001	0.00002	0.0000359	**0.000109**		0.0000197	0.0000275	0.000031	0.000031	0.000026	0.000041	0.000034	0.000041	0.000043	0.000027	0.000021
Calcium (Ca), total	mg/L		23	21	22	24	37.9	11.8		20.5	23.7	21.7	23.2	25.8	28.3	30.3	30	29	31.4	30.8
Chromium (Cr), total	mg/L	**0.001**	**0.0015**	**0.0014**	**0.0011**	0.0005	<0.00050	**0.00192**		<0.00050	0.00015	<0.00050	<0.00010	<0.00010	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	<0.00050
Cobalt (Co), total	mg/L		<0.0004	<0.0004	<0.0004	<0.0004	0.000091	0.000562		0.00003	0.0000634	0.000032	0.000033	0.000035	0.000049	0.000047	0.000051	0.000072	0.000058	0.000024
Copper (Cu), total	mg/L	*	0.0009	0.0005	0.0005	0.0008	0.00082	**0.0026**		0.00084	0.000575	0.00103	0.000561	0.000483	0.000521	0.0005	0.000347	**0.00633**	0.000269	0.00056
Iron (Fe), total	mg/L	**1**	0.23	0.083	0.09	0.1	0.258	**1.34**		0.0664	0.141	0.0697	0.0704	0.0779	0.103	0.132	0.171	0.357	0.221	0.0823
Lead (Pb), total	mg/L	*	0.0002	0.0001	0.0002	0.0002	0.000196	0.00106		<0.000050	0.0000698	<0.000050	0.000045	0.000047	0.000085	0.000052	0.000042	0.000101	0.000023	<0.000050
Lithium (Li), total	mg/L						0.00236	0.00185		0.00087	0.00122	0.00108	0.00113	0.00107	0.00104	0.0013	0.00095	0.00148	0.00157	0.00214
Magnesium (Mg), total	mg/L		2.3	2.1	2.1	2.4	4.47	1.61		2.32	2.8	2.43	2.59	2.81	3.1	3.44	3.41	3.07	3.23	3.43
Manganese (Mn), total	mg/L	*	0.039	0.021	0.019	0.023	0.0748	0.196		0.016	0.0455	0.0197	0.0158	0.0233	0.0376	0.042	0.0824	0.115	0.0945	0.0246
Mercury (Hg), total	mg/L	**0.000026**	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000020	0.0000025		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	<0.0004	0.0005	0.0006	0.0005	0.000953	0.000545		0.000548	0.000595	0.000496	0.000488	0.000611	0.000676	0.000633	0.000737	0.000696	0.000755	0.000664
Nickel (Ni), total	mg/L	*	0.001	<0.001	0.001	<0.001	0.00065	0.00223		0.00063	0.0006	0.00042	0.000423	0.000395	0.00043	0.000398	0.000362	0.000408	0.000345	0.00037
Phosphorus (P), total	mg/L		0.006	0.008	0.008	0.005	0.014	0.066		<0.010	0.0239	<0.010	0.0023	0.0049	0.0116	0.0027	<0.0020	0.0048	0.0034	<0.010
Potassium (K), total	mg/L		1.6	1.5	1.5	1.8	2.63	2.52		1.43	1.74	1.28	1.39	1.62	1.81	1.84	2.35	2.32	2.34	2.19
Selenium (Se), total	mg/L	**0.002**	<0.00005	0.00006	<0.00005	0.00009	0.000236	0.000133		0.000138	0.000152	0.000123	0.000135	0.000198	0.000251	0.000296	0.000297	0.000304	0.000328	0.000252

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13
		Guideline	22-Aug-95	30-Aug-95	6-Sep-95	13-Sep-95	30-Apr-15	12-May-15	13-May-15	24-Jun-15	29-Jul-15	23-Aug-15	11-Sep-15	14-Oct-15	6-Nov-15	2-Dec-15	21-Jan-16	8-Feb-16	21-Mar-16	20-Apr-16
Silicon (Si), total	mg/L		2.6	2.4	2.6	2.7	4.78	3.02		2.54	2.54	2.34	2.59	3	3.5	3.74	4.08	3.62	3.57	4.21
Silver (Ag), total	mg/L	**0.00025**	<0.00001	<0.00001	<0.00001	<0.00001	0.0000128	0.000019		0.0000258	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L		0.96	0.88	1	1	1.41	0.58		0.9	1.09	0.96	0.929	0.976	1.11	1.11	1.19	1.13	1.14	1.02
Strontium (Sr), total	mg/L		0.062	0.056	0.066	0.065	0.106	0.0349		0.0609	0.0751	0.0677	0.0665	0.073	0.0852	0.0911	0.094	0.0862	0.0913	0.0889
Sulphur (S), total	mg/L		2.3	2.3	2.8	2.8	<15	<15		<15	4.7	<15	4.2	4.9	4.7	5.6	5.2	4.8	4.5	<15
Thallium (Tl), total	mg/L	**0.0008**					0.0000051	0.0000128		0.0000049	0.0000023	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000002	<0.0000020
Tin (Sn), total	mg/L		<0.002	<0.002	<0.002	<0.002	<0.00020	<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		0.0071	0.0021	0.0025	0.0029	0.0054	0.0403		<0.0050	0.00238	<0.0050	0.00114	0.00072	0.00169	0.00102	0.00058	0.00104	<0.00050	<0.0050
Uranium (U), total	mg/L	**0.015**					0.00259	0.000844		0.00041	0.000568	0.000456	0.00054	0.000676	0.000804	0.00107	0.000861	0.000733	0.000783	0.00154
Vanadium (V), total	mg/L		0.0003	<0.0003	<0.0003	<0.0003	0.00094	0.0022		<0.00050	0.00026	<0.00050	0.00039	0.00031	<0.00020	<0.00020	<0.00020	0.00021	<0.00020	<0.00050
Zinc (Zn), total	mg/L	*	0.005	0.004	0.004	0.003	0.0038	**0.0114**		0.0028	0.00353	0.0045	0.00436	0.00316	0.00421	0.00377	0.00388	0.00509	0.00255	0.0018
Zirconium (Zr), total	mg/L		<0.0003	0.0004	<0.0003	0.0006	0.0001	0.00023		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*	0.01	0.009	0.011	0.011	0.00495	0.0341		0.00784	0.00715	0.00683	0.00873	0.00592	0.022	0.00487	0.00357	0.00279	0.00485	0.00688
Antimony (Sb), dissolved	mg/L						0.000046	<0.000020		0.000027	0.000028	0.000024	0.000029	0.000021	0.00003	0.00003	<0.000020	<0.000020	<0.000020	0.000032
Arsenic (As), dissolved	mg/L		0.00011	0.00009	<0.00005	0.00006	0.000219	0.000253		0.000193	0.000249	0.000193	0.000196	0.000162	0.000172	0.000156	0.000123	0.000132	0.000122	0.000196
Barium (Ba), dissolved	mg/L		0.085	0.076	0.083	0.083	0.126	0.0504		0.0843	0.109	0.0935	0.0932	0.0947	0.103	0.101	0.139	0.145	0.151	0.126
Beryllium (Be), dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.000010	<0.000010		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.002	<0.002	<0.002	<0.002	<0.0000050	<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		0.016	0.015	0.016	0.019	<0.01	<0.010		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.00001	<0.00001	<0.00001	0.00002	0.00001	0.0000107		0.0000121	0.0000175	0.000014	0.000024	0.000015	0.000022	0.000015	0.000027	0.000026	0.00002	0.00002
Calcium (Ca), dissolved	mg/L		24	21	22	23	37.2	12		20.9	23.7	21.8	24.2	25	26.5	29.6	30.5	29.9	30	39.1
Chromium (Cr), dissolved	mg/L		0.0003	0.0007	0.0009	0.0005	<0.00010	<0.00010		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.0004	0.0000117	0.0000189		0.000016	0.0000219	0.000016	0.000018	0.000015	0.000024	0.000024	0.000022	0.000031	0.000041	0.000024
Copper (Cu), dissolved	mg/L		0.0006	0.0005	0.0005	0.0007	0.000327	0.00086		0.000775	0.000435	0.000474	0.000484	0.000436	0.000571	0.000385	0.000272	0.000282	0.000238	0.000439
Iron (Fe), dissolved	mg/L	**0.35**	0.049	0.028	0.32	0.035	0.0271	0.0961		0.0247	0.0311	0.0198	0.0187	0.0186	0.0291	0.0417	0.0305	0.0373	0.0411	0.0677
Lead (Pb), dissolved	mg/L		<0.0001	<0.0001	<0.0001	0.0003	0.0000051	0.0000161		0.000006	<0.0000050	<0.0000050	0.000006	<0.0000050	0.000046	<0.0000050	0.000005	0.000012	0.000006	0.000006
Lithium (Li), dissolved	mg/L						0.00225	0.00102		0.00101	0.00127	0.00083	0.00175	0.00113	0.0008	0.00147	0.00096	0.00118	0.00196	0.00233
Magnesium (Mg), dissolved	mg/L		2.4	2.1	2.2	2.3	4.31	1.34		2.26	2.77	2.5	2.57	2.68	2.97	3.32	3.24	3.01	3.3	4.45
Manganese (Mn), dissolved	mg/L		0.013	0.013	0.012	0.013	0.0108	0.000376		0.00601	0.0168	0.00842	0.00609	0.00972	0.0226	0.0226	0.0575	0.0636	0.08	0.0298
Mercury (Hg), dissolved	mg/L		<0.00001	<0.00001	<0.00001	<0.00001	<0.0000020	0.0000023		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		<0.0004	0.0004	0.0004	0.0004	0.000939	0.000403		0.000527	0.000566	0.000491	0.000485	0.000566	0.000714	0.000664	0.000755	0.000765	0.000763	0.00077
Nickel (Ni), dissolved	mg/L		<0.001		<0.001	<0.001	0.000427	0.000779		0.000466	0.000492	0.000392	0.000412	0.000341	0.000358	0.000351	0.000291	0.000308	0.000318	0.000455
Phosphorus (P), dissolved	mg/L		0.005	0.005	0.007	0.008	0.0031	0.0087		0.0034	0.0049	<0.0020	0.003	0.0024	0.0124	<0.0020	0.0031	0.0033	0.0024	0.0069
Potassium (K), dissolved	mg/L		1.6	1.5	1.5	1.6	2.84	2.51		1.4	1.48	1.39	1.42	1.59	1.65	1.73	2.37	2.27	2.48	2.92
Selenium (Se), dissolved	mg/L		<0.00005	0.00005	<0.00005	0.00015	0.000237	0.000106		0.000124	0.000138	0.000138	0.000153	0.000176	0.000248	0.000306	0.000277	0.000311	0.000308	0.000274
Silicon (Si), dissolved	mg/L		2.6	2.4	2.8	2.5	4.81	2.03		2.57	2.47	2.44	2.69	2.87	3.05	3.66	3.82	3.71	3.57	5.03
Silver (Ag), dissolved	mg/L		<0.00001	<0.00001	<0.00001	<0.00001	<0.0000050	<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		0.97	0.9	0.97	1	1.29	0.48		0.937	0.989	0.961	0.936	0.942	1.2	1.03	1.16	1.13	1.18	1.37
Strontium (Sr), dissolved	mg/L		0.064	0.056	0.06	0.062	0.117	0.0336		0.0625	0.0758	0.0668	0.0695	0.0718	0.0757	0.0861	0.0956	0.0863	0.0954	0.121
Sulphur (S), dissolved	mg/L		2.4	2.3	2.7	2.6	5	<3.0		3.6	4.9	4.3	4.4	4.6	4.9	5.7	5	4.4	4.6	5
Thallium (Tl), dissolved	mg/L						<0.0000020	0.0000023		<0.0000020	0.0000024	<0.0000020	<0.0000020	<0.0000020	0.000002	<0.0000020	<0.0000020	<0.0000020	0.000002	<0.0000020
Tin (Sn), dissolved	mg/L		<0.002	<0.002	<0.002	<0.002	<0.00020	<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		0.0009	0.0008	0.001	0.001	<0.00050	<0.00050		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L						0.00244	0.00033		0.000396	0.000565	0.000403	0.000521	0.000649	0.000781	0.000939	0.000788	0.000684	0.000784	0.002
Vanadium (V), dissolved	mg/L		<0.0003	<0.0003	<0.0003	<0.0003	<0.00020	0.00031		<0.00020	<0.00020	<0.00020	0.00023	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.003	0.002	0.002	0.002	0.00099	0.0012		0.00158	0.00179	0.00233	0.00297	0.00203	0.00261	0.00142	0.00243	0.00298	0.00197	0.00183
Zirconium (Zr), dissolved	mg/L		<0.0003	0.0004	<0.0003	0.0006	<0.00010	<0.00010		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15
		Guideline	16-May-16	14-Jun-16	26-Jul-16	28-Aug-16	6-Sep-16	3-Oct-16	3-Dec-94	5-Apr-95	8-May-95	11-Jun-95	23-Jul-95	15-Aug-95	22-Aug-95	30-Aug-95	6-Sep-95	13-Sep-95	23-Aug-02	19-Aug-04
Discharge (Flow)	L/s		80.6	104.5	121.9	268.2	327.4	144												
Total Suspended Solids	mg/L		1	1.6	1.4	3	1.4	1.1	<4	<4	5	<4	<4	<4	<4	<4	<4	<4	<4	5
pH (field)	pH units	**6.5-9**	7.53	7.99	7.49	7.75	7.62	7.7												
pH (lab)	pH units	**6.5-9**	7.99	7.98	7.98	7.95	7.96	7.66	7.9	7.9	7.3	7.6	7.8	7.8	7.7	7.7	8	7.9		8.2
Specific Conductance (field)	µS/cm		98	126.1	149.5	157.7	128.5	133.5												
Specific Conductance (lab)	µS/cm		119	130	148	135	136	151	398	479	162	179	269	272	266	290	202	231	239	333
Temperature (field)	C		2.4	9.7	8.6	6.1	7	1.1												
Dissolved Oxygen (field)	mg/L	**6.5**	12.7	9.33	10.43	9.96	10.76	10.85												
Dissolved Oxygen (field)	%		110.4	95.8	104.4	94.1	105	90.1												
ORP (field)	mV		109.1	130.4	65.6	286.2	114.2	99.7												
Turbidity (internal)	NTU			0.746	0.81	1.402	0.53	0.292												
Hardness (from total)	mg/L		56.5	61.5	71.2	68	60.6	70.9	213	271	89.7	108	158	148	158	148	150	155	132	179
Hardness (from dissolved)	mg/L		59.4	61.5	72.6	64	63.4	69	214	285	29.8	92.6	162	148	152	138	144	162	143	185
Colour	TCU		18.3			11.8														
Total Acidity	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50											1	1.3
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50											<0.5	<0.5
Alkalinity, total	mg/L		53.5	55.3	60.3	54.4	55.9	59.9	193	251	78.3	78.6	145	133	124	125	111	118	110	154
Alkalinity, bicarbonate HCO3	mg/L		65.2	67.5	73.6	66.4	68.2	73.1					177	162	151	152	135	144	134	188
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1.0
Chloride	mg/L	**120**	0.54	0.54	<0.50	0.72	<0.50	0.57												
Fluoride	mg/L	**0.12**	0.044	0.042	0.043	0.042	0.046	0.044												
Sulphate, dissolved	mg/L	*	8.17	11.4	12.8	11.5	12.8	13.8	27.5	32	9.8	15.8	24.8	25.5	19.7	24.1	23.8	21.1	21.3	22.7
Cyanide, total	mg/L	**0.005**	0.00053	0.00107	<0.00050	<0.00050	0.00071	<0.00050		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		
Cyanide, Weak Acid Dissociable	mg/L		<0.00050	0.00065	0.00055	<0.00050	0.00073	<0.00050		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		
Ammonia (N)	mg/L	**0.197**	<0.0050	0.0073	0.024	0.03	0.012	0.01	0.011	<0.005	0.006	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	<0.005	<0.005	0.02
Nitrite (N)	mg/L	*	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (N)	mg/L	**3**	0.0344	0.0404	0.0287	0.0452	0.0412	0.0618	0.19	0.2	0.03	0.03	<0.02	<0.02	0.03	<0.02	0.05	0.05	<0.02	<0.02
Nitrite & Nitrate, as N	mg/L		0.0344	0.0404	0.0287	0.0452	0.0412	0.0618	0.19	0.2	0.03	0.03	<0.02	<0.02	0.03	<0.02	0.05	0.05	<0.02	<0.02
Phosphorus,total-colourimetric	mg/L		0.0053	0.0036	0.0053	<0.0020	0.0053	0.006												
Phosphorus, Total Dissolved	mg/L		0.0062	0.009	0.0049	0.0088	0.0068	0.0056												
Dissolved Organic Carbon	mg/L		3.17	2.5	3.9	4.63	4.11	4.8												
Aluminum (Al), total	mg/L	*	0.02	0.081	0.0343	0.0261	0.0251	0.0182		0.007	0.1	0.017	0.009	<0.006	0.02	0.01	0.009	0.011	<0.02	0.035
Antimony (Sb), total	mg/L	**0.009**	<0.000050	0.000055	0.000028	0.000023	0.000026	0.000028												
Arsenic (As), total	mg/L	**0.005**	0.00015	0.000252	0.00026	0.000231	0.000199	0.000207		0.00024	0.0006	0.0003	<0.00005	0.00009	0.0007	0.00015	0.00011	0.00026		<0.001
Barium (Ba), total	mg/L		0.0768	0.0975	0.0988	0.093	0.0839	0.0918	0.069	0.079	0.036	0.043	0.056	0.05	0.056	0.051	0.053	0.055	0.056	0.076
Beryllium (Be), total	mg/L		<0.000010	<0.000010	0.000015	<0.000010	<0.000010	<0.000010		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		
Bismuth (Bi), total	mg/L		<0.000020	0.000005	<0.000010	<0.0000050	<0.0000050	<0.0000050		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		
Boron (B), total	mg/L	**1.5**	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.04	0.012	0.02	0.036	0.019	0.013	0.026	0.011	0.012	0.02	<0.008	<0.008
Cadmium (Cd), total	mg/L	*	0.000015	0.000039	0.000033	0.000034	0.00003	0.000027		0.00002	0.00002	0.00002	0.00001	0.00001	0.00002	<0.00001	0.00001	0.00006		0.00007
Calcium (Ca), total	mg/L		19.1	21	24.1	23.1	20.2	24.1	65.5	79	28	35	49	47	50	47	48	50	41.3	55.5
Chromium (Cr), total	mg/L	**0.001**	<0.00050	0.00019	0.00012	<0.00010	<0.00010	0.0001		0.0004	0.0005	0.0004	0.0004	0.0008	0.0005	0.0009	0.0004	**0.0011**		<0.001
Cobalt (Co), total	mg/L		0.000025	0.000078	0.000055	0.000037	0.000037	0.000032		<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004		<0.0005
Copper (Cu), total	mg/L	*	0.00083	0.000779	0.00088	0.000596	0.000583	0.00196		0.0002	0.002	0.001	0.0004	0.0018	0.0009	0.0004	0.0004	0.0008		0.001
Iron (Fe), total	mg/L	**1**	0.0758	0.206	0.119	0.0877	0.0675	0.0747		0.035	0.34	0.059	0.029	0.042	0.077	0.052	0.044	0.04	0.131	0.186
Lead (Pb), total	mg/L	*	<0.000050	0.000204	0.000065	0.000056	0.000038	0.000058		0.0005	<0.0001	0.0005	0.0002	<0.0001	0.0001	<0.0001	<0.0001	0.0001		<0.0005
Lithium (Li), total	mg/L		0.00103	0.00102	0.00144	0.00137	0.00113	0.00105												
Magnesium (Mg), total	mg/L		2.13	2.22	2.66	2.5	2.51	2.61	12	18	4.8	5	8.6	7.4	8	7.4	7.3	7.4	6.91	9.91
Manganese (Mn), total	mg/L	*	0.0136	0.0398	0.0382	0.0175	0.0144	0.0187	0.02	0.016	0.047	0.01	0.0057	0.011	0.019	0.015	0.013	0.011	0.035	0.082
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020		<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001		
Molybdenum (Mo), total	mg/L	**0.073**	0.0005	0.000547	0.00057	0.000462	0.000448	0.000552		<0.0004	<0.0004	<0.0004	<0.0004	0.0004	<0.0004	<0.0004	<0.0004	0.0005		
Nickel (Ni), total	mg/L	*	0.00044	0.000519	0.00049	0.000498	0.000462	0.000972		<0.001	0.002	<0.001	<0.001	0.002	0.001	<0.001	<0.001	<0.001		
Phosphorus (P), total	mg/L		<0.010	0.008	0.0074	0.0055	0.0048	0.007	<0.003	<0.003	0.021	0.006	<0.003	<0.003	<0.003	0.007	0.007	<0.003		
Potassium (K), total	mg/L		1.66	1.35	1.27	1.22	1.17	1.33	1.1	1.5	1.4	1.1	1.1	1.1	1.2	1.1	1.1	1.3	1	1
Selenium (Se), total	mg/L	**0.002**	0.000158	0.000142	0.000147	0.000143	0.000142	0.000164		0.0011	0.0003	<0.00005	0.00033	0.0001	0.00047	0.00005	0.00006	0.00011		<0.001

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15
		Guideline	16-May-16	14-Jun-16	26-Jul-16	28-Aug-16	6-Sep-16	3-Oct-16	3-Dec-94	5-Apr-95	8-May-95	11-Jun-95	23-Jul-95	15-Aug-95	22-Aug-95	30-Aug-95	6-Sep-95	13-Sep-95	23-Aug-02	19-Aug-04
Silicon (Si), total	mg/L		2.55	2.46	2.31	2.31	2.43	2.88	3.3	3.7	2.2	2.2	2.7	2.5	2.8	2.6	2.8	2.7		
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	0.000006	<0.000010	<0.0000050	<0.0000050	<0.0000050			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		
Sodium (Na), total	mg/L		0.72	0.814	0.92	0.871	0.879	0.917	1.1	1.5	0.61	0.79	0.96	0.92	0.98	0.93	0.95	1	0.82	1.11
Strontium (Sr), total	mg/L		0.055	0.0681	0.0698	0.07	0.0593	0.0701	0.182	0.22	0.076	0.1	0.15	0.13	0.14	0.13	0.14	0.14	0.127	0.17
Sulphur (S), total	mg/L		<15	3.9	4.3	4.1	3.7	4.3	8.5	9.9	3	5.2	6.8	7.1	7.6	7.3	8.2	8	6.9	8.1
Thallium (Tl), total	mg/L	**0.0008**	0.000003	<0.0000020	0.000003	<0.0000020	0.000002	<0.0000020												
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		0.005	0.002	<0.002	0.004	0.004	0.003	0.002	0.003	<0.002		
Titanium (Ti), total	mg/L		<0.0050	0.00538	<0.0020	0.00111	0.00092	0.00066	<0.003	0.0025	0.0032	0.0015	0.0016	0.0017	0.0021	0.0017	0.0019	0.0017	<0.003	<0.003
Uranium (U), total	mg/L	**0.015**	0.000402	0.000457	0.000605	0.00049	0.000494	0.000606												0.00216
Vanadium (V), total	mg/L		<0.00050	0.00037	0.00024	<0.00020	<0.00020	<0.00020		<0.0003	0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003		
Zinc (Zn), total	mg/L	*	0.0022	0.00502	0.0038	0.00461	0.0049	0.00425		0.008	**0.055**	0.005	0.004	0.004	0.006	0.004	0.003	0.004	<0.005	0.005
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		0.0005	0.0003	0.0004	0.0004	<0.0003	<0.0003	<0.0003	0.0003	0.0003		
Aluminum (Al), dissolved	mg/L	*	0.0108	0.00827	0.00754	0.00879	0.00853	0.00789		0.011	0.016	0.01	0.007	<0.006	0.01	<0.006	0.01	<0.006	<0.02	0.002
Antimony (Sb), dissolved	mg/L		0.00002	0.00002	0.000032	0.000028	0.000027	0.00003												
Arsenic (As), dissolved	mg/L		0.000155	0.000161	0.000226	0.000202	0.00016	0.000188		<0.00005	0.0012	0.0002	<0.00005	<0.00005	0.0004	0.00013	0.00009	0.00023		<0.001
Barium (Ba), dissolved	mg/L		0.0719	0.0897	0.0982	0.092	0.0904	0.0945	0.069	0.082	0.0048	0.036	0.055	0.051	0.053	0.048	0.051	0.057	0.06	0.072
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050			<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.008	0.037	0.013	0.038	0.008	0.015	0.021	0.012	0.012	0.013	<0.008	<0.008
Cadmium (Cd), dissolved	mg/L	*	0.000012	0.000013	0.000008	0.000015	0.000019	0.000021		0.00003	<0.00001	0.00001	<0.00001	<0.00001	<0.0001	<0.00001	0.00001	0.00006		0.00003
Calcium (Ca), dissolved	mg/L		20.3	21	24.8	21.5	21.4	23.4	65.6	83	6	30	50	47	48	44	46	52	44.7	57.2
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		0.0003	<0.0002	0.0005	0.0005	0.0004	0.0004	0.0004	0.0005	0.0004		<0.001
Cobalt (Co), dissolved	mg/L		0.000013	0.000009	0.000011	0.000018	0.000015	0.000014		<0.0004	0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004		<0.0005
Copper (Cu), dissolved	mg/L		0.000634	0.000423	0.000472	0.000558	0.000537	0.000455		0.0003	0.0019	0.001	0.0005	0.0005	0.0005	0.0004	0.0005	0.0007		0.0006
Iron (Fe), dissolved	mg/L	**0.35**	0.0369	0.0123	0.0171	0.0215	0.0153	0.0195		0.018	0.0007	0.026	0.024	0.007	0.011	0.009	0.031	0.018	0.023	0.023
Lead (Pb), dissolved	mg/L		0.000007	<0.0000050	<0.0000050	0.000019	0.000005	0.000005		0.0007	<0.0001	0.0002	0.0002	<0.0001	0.0001	<0.0001	<0.0001	0.0001		<0.0005
Lithium (Li), dissolved	mg/L		0.00102	<0.00050	0.00133	0.00115	0.00114	0.00057												
Magnesium (Mg), dissolved	mg/L		2.14	2.18	2.6	2.52	2.44	2.56	12.3	19	3.6	4.3	9.1	7.5	7.7	6.9	7.1	7.8	7.53	10.3
Manganese (Mn), dissolved	mg/L		0.00559	0.00136	0.000187	0.00566	0.00269	0.00288	0.013	0.0063	0.0002	0.0027	0.0059	0.0077	0.0081	0.0078	0.0085	0.01	0.017	0.018
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020		<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001		
Molybdenum (Mo), dissolved	mg/L		0.000499	0.000528	0.000549	0.000463	0.000457	0.000544		<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.0004		
Nickel (Ni), dissolved	mg/L		0.000451	0.000336	0.000358	0.000439	0.000438	0.00039		0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001		
Phosphorus (P), dissolved	mg/L		0.0065	0.0039	<0.0020	0.0029	0.0051	0.0034			0.009	0.009	0.005	0.008	0.005	0.008	0.004	0.006		
Potassium (K), dissolved	mg/L		1.69	1.32	1.29	1.22	1.32	1.3	1.3	1.5	1.3	0.94	1.2	1.1	1.1	1.1	1.1	1.3	<1	1
Selenium (Se), dissolved	mg/L		0.000123	0.000115	0.00012	0.000128	0.000131	0.000148		0.00027	0.0003	<0.00005	0.0003	0.0001	0.00045	0.00005	0.00005	0.00011		<0.001
Silicon (Si), dissolved	mg/L		2.57	2.2	2.52	2.24	2.73	2.82	3.24	3.8	2.2	1.9	2.7	2.6	2.7	2.4	2.8	2.8		
Silver (Ag), dissolved	mg/L		0.000005	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		
Sodium (Na), dissolved	mg/L		0.719	0.801	0.917	0.914	0.9	0.923	1.08	1.6	0.57	0.69	1	0.92	0.95	0.89	0.92	1.1	0.98	1.18
Strontium (Sr), dissolved	mg/L		0.0557	0.064	0.0684	0.066	0.068	0.065	0.183	0.23	0.034	0.085	0.16	0.13	0.14	0.12	0.13	0.15	0.137	0.171
Sulphur (S), dissolved	mg/L		<3.0	3.9	4.3	3.8	3.7	4.1	8.61	10	2.8	4.5	7.1	7.2	7.3	7.1	8	8.3	7.6	8.5
Thallium (Tl), dissolved	mg/L		0.000004	0.000003	0.000002	<0.0000020	0.000002	0.000002												
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		0.005	0.002	<0.002	0.002	0.004	0.003	0.003	0.003	<0.002		
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.003	0.0026	0.0003	0.0011	0.0016	0.0015	0.0014	0.0014	0.002	0.0017	<0.003	<0.003
Uranium (U), dissolved	mg/L		0.000355	0.000418	0.000593	0.000473	0.000478	0.000604												0.00164
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003		
Zinc (Zn), dissolved	mg/L		0.00165	0.00137	0.00096	0.00315	0.00309	0.00277		0.009	0.002	0.005	0.004	0.005	0.005	0.001	0.002	0.004	<0.005	<0.005
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		<0.0003	0.0003	0.0005	<0.0003	<0.0003	0.0004	<0.0003	0.0005	0.0003		

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15
		Guideline	24-Aug-06	14-Aug-08	19-Aug-10	16-Aug-12	21-Aug-14	29-Apr-15	11-May-15	12-May-15	13-May-15	22-Jun-15	23-Jun-15	28-Jul-15	22-Aug-15	9-Sep-15	11-Sep-15	14-Oct-15	19-Nov-15	2-Dec-15
Discharge (Flow)	L/s							83.7	1803.6	2305	2562.7		789.5	634.0	973.8	1085.3		700.2	269.4	341.2
Total Suspended Solids	mg/L		<4	<4	<1	<4.0	<4.0	<1.0	40.2			<1.0		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
pH (field)	pH units	**6.5-9**	8.1	8.3	8.0	8.0	7.79	7.63	7.71			7.86		7.94	7.81	8.19	8.03	7.76	7.7	7.29
pH (lab)	pH units	**6.5-9**	8.1	8.2	8.3	8.18	8.22	8.42	7.67			8.18		8.08	8.05	8.17	8.07	8.21	8.42	8.07
Specific Conductance (field)	µS/cm		246	320	337	265	342	418.2	109.1			232.9		289.2	257.7	250.7	253.3	340.3	393.2	421.5
Specific Conductance (lab)	µS/cm		253	300	355	280	337	476	132			231		282	269	267	262	335	406	426
Temperature (field)	C		7.2	9.6	9.7	7.8	8.5	-0.1	-0.2			8.6		10.1	7.7	6.2	7.2	0.8	0	0.1
Dissolved Oxygen (field)	mg/L	**6.5**	10.0	8.3		10.4		12.6	12.2			10.26		9.14	9.9	10.2	8.8	12.4	11.4	10.8
Dissolved Oxygen (field)	%		87	84		86.6		100	96			88.5		81.4	96	96	85	100	91	88
ORP (field)	mV							292.1	234.3			72.2		94.1	231.9	170.3	165.3	278.1	136	208.8
Turbidity (internal)	NTU											0.24		0.18	0.16	1.5		0.19	0.800	0.34
Hardness (from total)	mg/L		140	177	180	147	163	255	70.1			120		157	141	140	143	178	219	236
Hardness (from dissolved)	mg/L		140	168	189	144	163	270	72.9			141		156	140	146	148	175	212	224
Colour	TCU							6.1	199			11.1		8.7	11.1	9.5	9.2	<5.0	5.8	<5.0
Total Acidity	mg/L		1.2	1.6	1.6	0.69	<0.50	<0.50	0.74			1.1		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L		<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50			<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		114	140	170	127	148	224	59.4			102		125	115	114	112	146	181	193
Alkalinity, bicarbonate HCO3	mg/L		139	160	200	154	181	263	72.5			124		153	141	139	137	178	221	235
Alkalinity, hydroxide OH	mg/L		<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50			<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.5	0.8	0.8	<0.50	<0.50	5.1	<0.50			<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.5	0.6	0.6	<0.50	<0.50	4.25	<0.50			<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**						<0.50	0.98			<0.50		<0.50	<0.50	<0.50	1.7	0.55	<0.50	0.59
Fluoride	mg/L	**0.12**						0.12	0.042			0.073		0.074	0.065	0.064	0.067	0.069	0.093	0.078
Sulphate, dissolved	mg/L	*	18.6	22	29	21.5	25.8	35	<0.50			19.5		23.1	24.4	23.9	25.3	29.3	33.1	31.9
Cyanide, total	mg/L	**0.005**						<0.00050	0.00146			0.00064		0.0005	<0.00050	0.00074	0.00074	<0.00050	<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L							<0.00050	0.00137			0.00055		0.00069	<0.00050	0.00062	0.00074	<0.00050	<0.00050	<0.00050
Ammonia (N)	mg/L	**0.197**	0.006	<0.005	<0.05	0.006	0.023	0.0199	<0.0050			<0.0050		<0.0050	0.0059	<0.0050	0.0093	0.0101	0.0089	0.0084
Nitrite (N)	mg/L	*	<0.005	<0.005	<0.005	<0.0050	<0.0050	<0.0020				<0.0020		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3**	0.04	0.06	0.02	0.032	0.032	0.164	<0.020			0.0093		0.0153	0.0229	0.0429	0.0299	0.135	0.188	0.194
Nitrite & Nitrate, as N	mg/L		0.04	0.06	0.02	0.032	0.032	0.164	<0.020			0.0093		0.0153	0.0229	0.0429	0.0299	0.135	0.188	0.194
Phosphorus,total-colourimetric	mg/L							0.0021	0.0257			0.0032		0.0028	0.0022	0.0029	<0.0020	0.0076	<0.0020	0.0028
Phosphorus, Total Dissolved	mg/L							0.0021	0.0257			0.002		0.0025	0.0022	<0.0020	0.0025	0.0038	0.0027	0.0023
Dissolved Organic Carbon	mg/L							0.85	14.9			2.26		0.93	1.4	1.7	1.8	1.06	1.22	1.55
Aluminum (Al), total	mg/L	*	0.007	0.008	0.01	0.0183	0.00363	0.00204	**0.356**			0.0163		0.0169	0.0057	0.00465	0.00335	0.0283	0.0103	0.0103
Antimony (Sb), total	mg/L	**0.009**				0.000041	0.000038	0.000025	<0.000050			0.000033		0.000038	<0.000050	0.000027	0.000029	0.000025	0.000041	0.000033
Arsenic (As), total	mg/L	**0.005**	<0.001	0.0003	0.0004	0.000462	0.000414	0.000371	0.00318			0.0004		0.000433	0.00038	0.000398	0.000408	0.000561	0.000547	0.000505
Barium (Ba), total	mg/L		0.054	0.066	0.072	0.0622	0.0654	0.0893	0.0509			0.0531		0.067	0.0533	0.0588	0.0598	0.0649	0.0792	0.0859
Beryllium (Be), total	mg/L			<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	0.000026			<0.000010		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L			<0.001	<0.001	<0.0000050	<0.0000050	<0.0000050	<0.000020			<0.0000050		<0.0000050	<0.000020	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	**1.5**	<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.050			<0.010		<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	0.00002	**0.00081**	0.00002	0.000028	0.000022	0.0000329	**0.000261**			0.0000287		0.0000229	0.000026	0.00003	0.000026	0.000038	0.000048	0.000038
Calcium (Ca), total	mg/L		45.2	56.6	53.9	45.9	48.5	74.1	21.3			38.4		48.6	43.5	44	44.7	54.9	65.9	69.8
Chromium (Cr), total	mg/L	**0.001**	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00010	**0.00103**			<0.00010		<0.00010	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), total	mg/L		<0.0005	<0.0005	<0.0005	0.000062	0.000023	0.0000344	0.000725			0.0000524		0.0000374	0.000026	0.000031	0.000026	0.000056	0.000061	0.00004
Copper (Cu), total	mg/L	*	0.0005	0.0006	0.0003	0.000576	0.000434	0.000265	**0.00342**			0.000531		0.000425	0.00072	0.00044	0.00042	0.000417	0.000331	0.000279
Iron (Fe), total	mg/L	**1**	0.029	0.012	0.066	0.0931	0.0418	0.0357	**2.07**			0.104		0.0917	0.0607	0.0633	0.0581	0.141	0.112	0.0764
Lead (Pb), total	mg/L	*	<0.0005	0.0002	<0.0002	0.00006	0.000011	0.0000102	0.000939			0.0000561		0.0000233	<0.000050	0.000021	0.000014	0.00008	0.00223	0.00002
Lithium (Li), total	mg/L		<0.002	<0.005	<0.005	0.00184	0.00251	0.0039	0.00125			0.00196		0.00208	0.00165	0.00164	0.00226	0.0016	0.00328	0.00312
Magnesium (Mg), total	mg/L		6.68	8.72	11.1	7.98	10.1	17	4.13			5.95		8.67	7.8	7.26	7.66	10	13.1	14.9
Manganese (Mn), total	mg/L	*	0.008	0.003	0.02	0.0272	0.0146	0.0334	0.338			0.0279		0.023	0.0177	0.0193	0.0153	0.0335	0.0473	0.032
Mercury (Hg), total	mg/L	**0.000026**	<0.00001	<0.00002	<0.00002		<0.0000020	<0.0000020	0.0000044			<0.0000020		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**		<0.001	0.001	0.000721	0.00108	0.00132	0.000667			0.000677		0.000854	0.000698	0.000683	0.000691	0.000851	0.000998	0.00107
Nickel (Ni), total	mg/L	*		<0.001	<0.001	0.000483	0.000501	0.000946	0.00314			0.00044		0.000483	0.00043	0.000385	0.000401	0.000474	0.00064	0.00065
Phosphorus (P), total	mg/L							0.0032	0.103			0.0036		0.0228	<0.010	<0.0020	<0.0020	0.0184	0.0062	0.0023
Potassium (K), total	mg/L		1	1.27	1.23	1.12	1.21	1.65	1.98			1.01		1.34	1	1.16	1.2	1.19	1.33	1.44
Selenium (Se), total	mg/L	**0.002**	<0.001	0.0006	0.0005	0.000687	0.000534	0.0013	0.000283			0.000434		0.00047	0.000474	0.000657	0.000701	0.00117	0.0013	0.00134

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15
		Guideline	24-Aug-06	14-Aug-08	19-Aug-10	16-Aug-12	21-Aug-14	29-Apr-15	11-May-15	12-May-15	13-May-15	22-Jun-15	23-Jun-15	28-Jul-15	22-Aug-15	9-Sep-15	11-Sep-15	14-Oct-15	19-Nov-15	2-Dec-15
Silicon (Si), total	mg/L		2.49	2.71	3.48	2.86	2.85	4.34	2.52			2.3		2.9	2.54	2.73	2.65	2.99	3.3	3.76
Silver (Ag), total	mg/L	**0.00025**				<0.0000050	<0.0000050	<0.0000050	0.0000238			<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000021	<0.0000050
Sodium (Na), total	mg/L		0.91	1.12	1.03	0.914	1	1.86	0.74			0.745		1.08	0.9	0.889	0.909	1.03	1.21	1.32
Strontium (Sr), total	mg/L		0.128	0.174	0.185	0.144	0.171	0.262	0.0733			0.126		0.16	0.142	0.136	0.142	0.172	0.219	0.216
Sulphur (S), total	mg/L		6.8	9	9	<10	<15	12.6	<15			5.9		8	<15	8.5	8.9	10	10.9	11.5
Thallium (Tl), total	mg/L	**0.0008**				<0.0000020	<0.0000020	<0.0000020	0.0000085			<0.0000020		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L			<0.005	<0.005	<0.00020	<0.00020	<0.00020	<0.00020			<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		<0.003	<0.005	<0.005	0.00097	<0.00050	<0.00050	0.0139			0.00073		0.00051	<0.0050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), total	mg/L	**0.015**	0.001	0.0017	0.0023	0.00143	0.00216	0.00461	0.000685			0.00114		0.00171	0.00132	0.00144	0.00148	0.00234	0.00312	0.0036
Vanadium (V), total	mg/L					<0.00020	<0.00020	<0.00020	0.00119			<0.00020		<0.00020	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	<0.005	<0.005	<0.005	0.00202	0.00216	0.00322	**0.0229**			0.00288		0.00208	0.0035	0.00281	0.00247	0.00417	0.00576	0.00435
Zirconium (Zr), total	mg/L			<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	0.00023			<0.00010		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*	0.001	0.015	<0.003	0.00674	0.00212	0.00064	**0.0502**			0.00307		0.00168	0.00175	0.00806	0.00354	0.00128	0.00411	0.00051
Antimony (Sb), dissolved	mg/L					0.000033	0.00003	0.000037	0.000027			0.000037		0.000033	0.000031	0.000028	0.000032	0.00003	0.000032	0.000031
Arsenic (As), dissolved	mg/L		<0.001	0.0004	0.0004	0.00043	0.000362	0.000359	0.000437			0.000363		0.000386	0.000349	0.000359	0.00035	0.000367	0.000344	0.000412
Barium (Ba), dissolved	mg/L		0.053	0.066	0.074	0.0638	0.0648	0.0931	0.0366			0.0566		0.0667	0.058	0.0592	0.0626	0.0632	0.0817	0.0798
Beryllium (Be), dissolved	mg/L			<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010			<0.000010		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L			<0.001	<0.001	<0.0000050	<0.0000050	<0.0000050	<0.0000050			<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.010			<0.010		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.00001	**0.00301**	0.00002	0.000025	0.000018	0.0000305	0.0000584			0.000017		0.0000209	0.000018	0.000022	0.000021	0.000022	0.000029	0.000022
Calcium (Ca), dissolved	mg/L		44.6	54.1	57.9	44.8	48.3	78.7	22.2			46.6		48.3	43.5	46	46.7	54.1	62.9	65.1
Chromium (Cr), dissolved	mg/L		<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00010	<0.00010			<0.00010		<0.00010	<0.00010	0.00013	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		<0.0005	<0.0005	<0.0005	0.000019	0.000017	0.0000099	0.0000486			0.0000167		0.0000186	0.00002	0.000019	0.000016	0.00002	0.000023	0.000019
Copper (Cu), dissolved	mg/L		0.0006	0.001	0.0004	0.000434	0.000304	0.000218	0.00175			0.000494		0.000353	0.000469	0.000536	0.00054	0.000255	0.000253	0.000226
Iron (Fe), dissolved	mg/L	**0.35**	<0.005	0.015	0.01	0.0272	0.0179	0.0037	0.145			0.0156		0.0127	0.0174	0.0201	0.011	0.0092	0.0076	0.0102
Lead (Pb), dissolved	mg/L		<0.0005	0.0004	<0.0002	0.000008	0.000009	<0.0000050	0.0000173			0.0000091		<0.0000050	<0.0000050	0.000005	0.000009	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), dissolved	mg/L		<0.002	<0.005	<0.005	0.00192	0.00234	0.00436	0.00092			0.00155		0.00187	0.00144	0.00221	0.00211	0.00162	0.00301	0.00262
Magnesium (Mg), dissolved	mg/L		6.68	8.06	10.9	7.84	10.4	17.9	4.26			6.1		8.65	7.64	7.44	7.52	9.66	13.3	14.9
Manganese (Mn), dissolved	mg/L		0.005	0.003	0.012	0.0194	0.012	0.0138	0.0119			0.00741		0.0119	0.0117	0.012	0.0103	0.0129	0.0221	0.0191
Mercury (Hg), dissolved	mg/L		<0.00001	<0.00002	<0.00002		0.0000038	<0.0000020	0.0000038			<0.0000020		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L			<0.001	0.001	0.000859	0.000993	0.00127	0.000432			0.000714		0.000839	0.000758	0.000672	0.000697	0.000836	0.00104	0.00116
Nickel (Ni), dissolved	mg/L			<0.001	<0.001	0.000411	0.000458	0.00109	0.00146			0.000405		0.000424	0.000524	0.000447	0.000403	0.000378	0.000589	0.0006
Phosphorus (P), dissolved	mg/L							0.0023	0.0126			0.003		<0.0020	<0.0020	<0.0020	<0.0020	0.0041	0.0029	<0.0020
Potassium (K), dissolved	mg/L		<1	1.15	1.3	1.1	1.16	1.74	2.07			1.15		1.31	1.15	1.25	1.32	1.15	1.37	1.35
Selenium (Se), dissolved	mg/L		<0.001	0.0007	0.0006	0.000636	0.000529	0.00127	0.000252			0.000465		0.000481	0.000507	0.000602	0.000598	0.000984	0.00122	0.00155
Silicon (Si), dissolved	mg/L		2.49	2.96	3.42	2.81	2.72	4.18	2			2.41		2.88	2.69	2.83	2.89	2.91	3.49	3.85
Silver (Ag), dissolved	mg/L					<0.0000050	<0.0000050	<0.0000050	<0.0000050			<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		0.91	1.05	1.15	0.894	1.14	1.58	0.484			0.841		1.06	0.945	0.918	0.954	0.995	1.23	1.31
Strontium (Sr), dissolved	mg/L		0.127	0.161	0.193	0.149	0.17	0.269	0.0701			0.131		0.162	0.14	0.148	0.149	0.167	0.218	0.221
Sulphur (S), dissolved	mg/L		6.7	9	9	<10	<15	11.9	<3.0			6.6		8.1	8.1	8.1	8.3	9.2	10.7	12.2
Thallium (Tl), dissolved	mg/L					<0.0000020	<0.0000020	0.000007	<0.0000020			<0.0000020		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L			<0.005	<0.005	<0.00020	0.00035	<0.00020	<0.00020			0.00031		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.003	<0.005	<0.005	<0.00050	<0.00050	<0.00050	0.00065			<0.00050		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.0011	0.0017	0.0027	0.00146	0.00207	0.00471	0.000521			0.00116		0.00174	0.00138	0.00142	0.00144	0.00229	0.00321	0.00352
Vanadium (V), dissolved	mg/L					<0.00020	<0.00020	<0.00020	<0.00020			<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		<0.005	0.008	<0.005	0.00146	0.00192	0.00291	0.00566			0.00255		0.00125	0.00129	0.00227	0.00199	0.00193	0.0039	0.00226
Zirconium (Zr), dissolved	mg/L			<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	<0.00010			<0.00010		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16
		Guideline	20-Jan-16	9-Feb-16	20-Mar-16	20-Apr-16	4-May-16	15-May-16	13-Jun-16	26-Jul-16	27-Aug-16	7-Sep-16	1-Oct-16	6-Apr-95	8-May-95	11-Jun-95	23-Jul-95	15-Aug-95	22-Aug-95	30-Aug-95
Discharge (Flow)	L/s		94.5	92.7	84.7	103.5	319.5		530	804.3	2544.6	1490.9	780.7							
Total Suspended Solids	mg/L		<1.0	<1.0	<1.0	<1.0	1.5	2.7	<1.0	<1.0	4.7	10.1	3.6	<4	8	<4	<4	<4	<4	<4
pH (field)	pH units	**6.5-9**	7.18	7.35	7.23	7.81	7.43	7.85	8.01	7.84	7.91	7.6	7.86							
pH (lab)	pH units	**6.5-9**	8.19	8.16	8.02	8.17	8.12	8.18	8.09	8.2	8.05	8.13	8.25	7.3	7.3	7.6	7.9	7.8	7.8	7.7
Specific Conductance (field)	µS/cm		483.4	474.2	476.1	387.4	325.1	219.4	206.9	256.7	248.3	250.6	309.1							
Specific Conductance (lab)	µS/cm		490	504	501	462	328	221	259	254	208	268	347	496	181	160	248	241	237	258
Temperature (field)	C		0	0	1	0.5	0.9	3.9	9.3	8.5	4.9	4.9	-0.1							
Dissolved Oxygen (field)	mg/L	**6.5**	10.8	10.1	9.52	12.41	11.22	11.4	9.21	10.03	10.8	9.47	12.83							
Dissolved Oxygen (field)	%		87	80	78	99.3	91.7	102	93.9	99.2	98	86.63	100.5							
ORP (field)	mV		296.7	253	123.7	99.9	122.8	88.9	160.5	103.1	233.2	86.2	76.5							
Turbidity (internal)	NTU			0.414	0.628	0.02	0.72		0.234	0.42	3.19	0.49	0.01							
Hardness (from total)	mg/L		271	259	266	238	169	121	131	137	109	140	174	283	95.5	78.9	146	132	155	130
Hardness (from dissolved)	mg/L		282	259	263	286	170	118	132	135	108	141	178	276	98.4	73.1	140	130	140	130
Colour	TCU		<5.0	7.8	<5.0	<5.0	14.8	14.2	5.6		18									
Total Acidity	mg/L		1.51	<0.50	2.13	1.18	0.73	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50							
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50							
Alkalinity, total	mg/L		235	242	242	220	154	102	114	111	81.6	116	151	253	87.6	63.7	129	113	112	109
Alkalinity, bicarbonate HCO3	mg/L		286	295	295	269	188	125	139	136	99.6	141	185				157	138	137	133
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				<0.5	<0.5	<0.5	<0.5
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				<0.5	<0.5	<0.5	<0.5
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				<0.5	<0.5	<0.5	<0.5
Chloride	mg/L	**120**	0.82	0.55	0.52	0.62	1.1	0.54	0.74	<0.50	0.96	0.7	0.59							
Fluoride	mg/L	**0.12**	0.1	0.1	0.1	0.11	0.092	0.074	0.075	0.066	0.052	0.06	0.078							
Sulphate, dissolved	mg/L	*	36.7	37.3	36.5	34	22.3	15.8	22.5	23.2	22.6	26.6	32.1	34.9	12.4	13.1	21.6	24.7	19.5	18.5
Cyanide, total	mg/L	**0.005**	0.0005	<0.00050	<0.00050	<0.00050	0.00053	0.00055	0.00068	<0.00050	<0.00050	0.00067	0.00054	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cyanide, Weak Acid Dissociable	mg/L		0.00062	<0.00050	0.0005	<0.00050	<0.00050	0.00053	0.00053	0.00069	<0.00050	0.00069	0.00084	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Ammonia (N)	mg/L	**0.197**	0.0358	0.0117	0.0058	0.0065	<0.0050	<0.0050	0.015	0.03	0.11	0.015	0.099	<0.005	<0.005	<0.005	<0.005	0.012	<0.005	<0.005
Nitrite (N)	mg/L	*	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (N)	mg/L	**3**	0.209	0.216	0.217	0.145	0.0883	0.0533	0.0123	0.0119	0.0221	0.0722	0.164	0.22	0.04	0.04	<0.02	<0.02	0.03	0.05
Nitrite & Nitrate, as N	mg/L		0.209	0.216	0.217	0.145	0.0883	0.0533	0.0123	0.0119	0.0221	0.0722	0.164	0.22	0.04	0.04	<0.02	<0.02	0.03	0.05
Phosphorus,total-colourimetric	mg/L		0.0034	0.0028	0.0056	0.0044	0.0063	0.0076	0.0023	0.0031	0.0069	0.008	0.0036							
Phosphorus, Total Dissolved	mg/L		0.0057	0.0027	0.0029	0.0043	0.0087	0.0118	0.0023	0.0024	0.0062	0.0051	0.0035							
Dissolved Organic Carbon	mg/L		1.7	<0.50	0.89	1.5	3.24	2.12	1.68	2.54	4.13	2.39	2.02							
Aluminum (Al), total	mg/L	*	0.00305	0.00964	0.00909	0.005	0.0125	0.0158	0.0055	0.00423	0.0271	0.0265	0.0118	0.05	**0.12**	0.012	0.007	0.007	0.014	<0.006
Antimony (Sb), total	mg/L	**0.009**	0.000026	0.00003	0.000032	<0.000050	<0.000050	<0.000050	<0.000050	0.00003	0.00003	0.000031	0.000033							
Arsenic (As), total	mg/L	**0.005**	0.000531	0.000793	0.000563	0.000554	0.000554	0.000398	0.000408	0.000338	0.000473	0.000473	0.000481	0.00005	0.0005	0.0002	<0.00005	<0.00005	0.0006	0.0001
Barium (Ba), total	mg/L		0.0961	0.102	0.0996	0.0832	0.0629	0.0451	0.0563	0.0544	0.0477	0.0556	0.0648	0.09	0.036	0.032	0.052	0.045	0.054	0.045
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.050	<0.050	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010	0.01	0.01	0.037	0.011	0.022	0.028	0.017
Cadmium (Cd), total	mg/L	*	0.000049	0.000054	0.000044	0.000036	0.000031	0.000027	0.000019	0.00002	0.000036	0.000038	0.000038	0.00001	0.00001	<0.00001	<0.00001	0.00009	0.00002	<0.00001
Calcium (Ca), total	mg/L		78.3	74.5	77.6	69.2	50.1	37.6	41.2	43.5	34.6	44.6	53.4	82	30	26	46	43	50	42
Chromium (Cr), total	mg/L	**0.001**	**0.00144**	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010	0.0004	**0.003**	0.0002	**0.0027**	0.0003	**0.0028**	0.001
Cobalt (Co), total	mg/L		0.000059	0.000053	0.000051	0.000028	0.000036	0.000042	0.000018	0.000025	0.000056	0.000082	0.000047	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Copper (Cu), total	mg/L	*	0.000305	0.000355	0.000246	0.00043	0.00072	0.00098	0.0007	0.000501	0.0011	0.000657	0.000432	0.0003	0.0022	0.0008	0.0005	0.0005	0.0008	0.0003
Iron (Fe), total	mg/L	**1**	0.0858	0.175	0.105	0.071	0.146	0.108	0.0554	0.0411	0.126	0.149	0.0844	0.085	0.25	0.019	0.019	0.007	0.025	0.01
Lead (Pb), total	mg/L	*	0.000031	0.000091	0.000033	<0.000050	0.000062	<0.000050	<0.000050	0.000016	0.000324	0.00011	0.000049	0.0003	<0.0001	0.0003	0.0003	<0.0001	0.0002	0.0001
Lithium (Li), total	mg/L		0.00352	0.00373	0.00397	0.0045	0.00277	0.00146	0.00174	0.00175	0.00138	0.00166	0.00187							
Magnesium (Mg), total	mg/L		18.3	17.8	17.5	15.8	10.7	6.69	6.81	6.76	5.4	6.9	9.98	19	5	3.4	7.5	6.1	7.6	6
Manganese (Mn), total	mg/L	*	0.0468	0.0559	0.0434	0.0234	0.0218	0.015	0.0107	0.0153	0.0251	0.036	0.0292	0.0087	0.012	0.0017	0.0018	0.002	0.0036	0.0027
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Mo), total	mg/L	**0.073**	0.00132	0.00134	0.0014	0.00148	0.00101	0.000654	0.000842	0.000756	0.000474	0.000607	0.000928	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Nickel (Ni), total	mg/L	*	0.00183	0.001	0.000942	0.00086	0.00075	0.00058	0.00038	0.000364	0.000614	0.000573	0.000485	0.001		<0.001	<0.001	<0.001		<0.001
Phosphorus (P), total	mg/L		0.0064	0.0087	0.0057	<0.010	<0.010	<0.010	0.01	0.0029	0.0068	0.0024	0.0078	<0.003	0.016	0.006	<0.003	<0.003	<0.003	0.005
Potassium (K), total	mg/L		1.58	1.53	1.54	1.48	1.24	1.02	1.14	1.06	1.07	1.04	1.11	1.4	1.2	0.9	1.2	0.98	1.1	0.96
Selenium (Se), total	mg/L	**0.002**	0.00156	0.00135	0.00142	0.00115	0.000742	0.000434	0.000485	0.000389	0.000335	0.000643	0.00131	0.0015	0.0004	<0.00005	0.00037	0.0001	0.0011	0.00005

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16
		Guideline	20-Jan-16	9-Feb-16	20-Mar-16	20-Apr-16	4-May-16	15-May-16	13-Jun-16	26-Jul-16	27-Aug-16	7-Sep-16	1-Oct-16	6-Apr-95	8-May-95	11-Jun-95	23-Jul-95	15-Aug-95	22-Aug-95	30-Aug-95
Silicon (Si), total	mg/L		4.32	4.02	3.72	4.05	3.08	2.49	2.56	2.88	2.72	2.71	3.03	3.8	2.2	1.9	2.6	2.5	2.9	2.4
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium (Na), total	mg/L		1.53	1.5	1.46	1.39	0.95	0.81	0.78	0.842	0.709	0.834	1.02	1.6	0.6	0.64	0.93	0.84	0.99	0.85
Strontium (Sr), total	mg/L		0.273	0.259	0.26	0.243	0.166	0.115	0.142	0.137	0.113	0.121	0.177	0.24	0.083	0.076	0.14	0.12	0.014	0.12
Sulphur (S), total	mg/L		14	12.8	12	<15	<15	<15	<15	8.1	7.8	8.5	10.1	11	3.4	3.8	6.5	6.7	7.7	6.8
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000003	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000003							
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.005	<0.002	<0.002	0.003	<0.002	0.003	0.003
Titanium (Ti), total	mg/L		<0.00050	<0.00050	0.00051	<0.0050	<0.0050	<0.0050	<0.0050	<0.00050	0.00089	0.00148	0.00093	0.0041	0.0047	0.0007	0.0014	0.0015	0.0017	0.0014
Uranium (U), total	mg/L	**0.015**	0.00498	0.00495	0.00514	0.00477	0.00255	0.00134	0.00132	0.00121	0.000713	0.00124	0.0022							
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020	<0.0003	0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Zinc (Zn), total	mg/L	*	0.00622	0.00755	0.00485	0.0038	0.0034	0.0018	0.002	0.00165	0.00341	0.00496	0.00563	0.005	**0.063**	0.003	0.006	0.004	0.002	<0.001
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0003	0.0005	0.0005	<0.0003	0.0004	<0.0003	0.0005
Aluminum (Al), dissolved	mg/L	*	0.00185	0.00083	0.00261	0.00124	0.00294	0.0032	0.00164	0.00172	0.00556	0.00199	0.00156	0.01	**0.053**	0.007	0.007	<0.006	0.011	<0.006
Antimony (Sb), dissolved	mg/L		0.000025	0.000027	0.000031	0.000033	0.000033	0.000023	0.000039	0.00003	0.000031	0.000032	0.00003							
Arsenic (As), dissolved	mg/L		0.000392	0.000308	0.000341	0.0005	0.00041	0.000261	0.000336	0.000288	0.000316	0.000337	0.000458	<0.00005	0.0005	0.0002	<0.00005	<0.00005	0.0002	0.00007
Barium (Ba), dissolved	mg/L		0.1	0.0985	0.104	0.101	0.0641	0.0445	0.0541	0.0523	0.0446	0.0581	0.0659	0.086	0.036	0.03	0.05	0.045	0.049	0.046
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.023	0.012	0.025	0.012	0.016	0.01	0.011
Cadmium (Cd), dissolved	mg/L	*	0.000042	0.000035	0.000034	0.000031	0.000019	0.000013	0.0000131	0.000014	0.000021	0.000016	0.000022	0.00001	0.00009	<0.00001	<0.00001	<0.00001	0.00001	<0.00001
Calcium (Ca), dissolved	mg/L		83.5	75.8	76	83.4	50.2	36.6	41.3	43.1	34.4	45.1	54.9	81	31	24	44	42	45	42
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		0.0014	0.0004	0.0003	0.0004	0.0008	0.0011
Cobalt (Co), dissolved	mg/L		0.000018	0.000022	0.000025	0.000021	0.000016	0.000014	0.0000137	0.00001	0.000017	0.000016	0.000021	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Copper (Cu), dissolved	mg/L		0.00025	0.000186	0.000241	0.000311	0.000492	0.000705	0.000465	0.000424	0.000962	0.000474	0.000345	0.0006		0.0008	0.0003	0.0005	0.0005	0.0004
Iron (Fe), dissolved	mg/L	**0.35**	0.0035	0.0031	0.0028	0.0165	0.0401	0.0156	0.0138	0.0077	0.0208	0.0097	0.0127	0.072	0.13	0.009	0.007	0.009	0.012	0.012
Lead (Pb), dissolved	mg/L		<0.0000050	<0.0000050	0.000006	<0.0000050	0.000012	<0.0000050	<0.0000050	<0.0000050	0.000034	0.000005	<0.0000050	0.0005	<0.0001	0.0002	0.0003	0.0001	0.0002	<0.0001
Lithium (Li), dissolved	mg/L		0.00362	0.00437	0.00436	0.00418	0.00242	0.00126	0.00188	0.00165	0.00106	0.00142	0.00198							
Magnesium (Mg), dissolved	mg/L		17.9	17	17.8	18.8	11	6.54	6.9	6.73	5.42	6.89	9.89	18	5.1	3.2	7.2	6	6.6	6.2
Manganese (Mn), dissolved	mg/L		0.0306	0.0301	0.028	0.0185	0.00842	0.00385	0.00688	0.00559	0.00608	0.00834	0.016	0.0076	0.011	0.0011	0.0013	0.0017	0.0024	0.0023
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Mo), dissolved	mg/L		0.00143	0.00141	0.00145	0.00157	0.00109	0.000652	0.000826	0.000702	0.000496	0.000603	0.000944	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Nickel (Ni), dissolved	mg/L		0.000824	0.000859	0.000863	0.000899	0.000676	0.000552	0.000363	0.000358	0.000512	0.000386	0.000409			<0.001	<0.001		<0.001	<0.001
Phosphorus (P), dissolved	mg/L		<0.0020	0.0054	0.0029	0.0035	<0.0020	0.0095	<0.0020	<0.0020	0.0044	0.003	0.0026		0.014	0.006	0.008	0.005	0.005	0.005
Potassium (K), dissolved	mg/L		1.6	1.48	1.57	1.81	1.26	1.02	1.18	0.957	1.05	1.15	1.12	1.4	1.3	0.87	1.1	0.96	1	0.98
Selenium (Se), dissolved	mg/L		0.00151	0.00134	0.00143	0.00119	0.000765	0.000403	0.000539	0.000359	0.000346	0.000597	0.00151	0.0016	0.0004	<0.00005	0.00036	<0.00005	0.00026	0.00006
Silicon (Si), dissolved	mg/L		4.21	4.08	4.05	4.32	3.08	2.3	2.67	2.87	2.51	2.93	3.26	3.7	2.2	1.5	2.6	2.4	2.6	2.4
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000006	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium (Na), dissolved	mg/L		1.49	1.43	1.48	1.72	0.976	0.777	0.859	0.84	0.725	0.869	1.21	1.6	0.7	0.59	0.93	0.82	0.91	0.85
Strontium (Sr), dissolved	mg/L		0.281	0.259	0.257	0.302	0.171	0.114	0.13	0.127	0.109	0.142	0.184	0.23	0.085	0.07	0.13	0.12	0.13	0.12
Sulphur (S), dissolved	mg/L		12.9	12.7	11.9	11.2	7.4	4.9	7.8	7.9	7.6	8.6	11	11	3.5	3.6	6.2	6.6	6.9	6.8
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020							
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.003	0.002	<0.002	0.003	<0.002	0.004	<0.002
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0026	0.0018	0.0005	0.0013	0.0015	0.0014	0.0013
Uranium (U), dissolved	mg/L		0.00512	0.00476	0.0051	0.00549	0.00272	0.00128	0.00141	0.00114	0.000682	0.00125	0.00222							
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Zinc (Zn), dissolved	mg/L		0.0056	0.00518	0.00423	0.00329	0.00212	0.00095	0.00116	<0.00010	0.00176	0.00222	0.00213	0.004		0.003	0.003	0.002	0.003	0.001
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00011	<0.00010	<0.00010	<0.0003	<0.0003	0.0003	0.0004	0.0005	0.0005	<0.0003

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16
		Guideline	6-Sep-95	13-Sep-95	23-Aug-02	19-Aug-04	24-Aug-06	14-Aug-08	19-Aug-10	16-Aug-12	21-Aug-14	30-Apr-15	11-May-15	12-May-15	13-May-15	22-Jun-15	28-Jul-15	22-Aug-15	9-Sep-15	14-Oct-15
Discharge (Flow)	L/s											69.8	947.1	1117.1	1470.9	534	406.1	598.2	594.4	308.6
Total Suspended Solids	mg/L		<4	<4	<4	<4	<4	<4	2	<4.0	<4.0	<1.0	4.6			<1.0	<1.0	<1.0	<1.0	<1.0
pH (field)	pH units	**6.5-9**					8.0	8.1	7.8	7.9	7.64	7.21	7.57			7.8	7.89	7.75	7.94	7.75
pH (lab)	pH units	**6.5-9**	7.9	7.8		8.2	8.1	8.2	8.25	8.1	8.18	8.13	7.68			8.01	8.04	8	8.17	8.09
Specific Conductance (field)	µS/cm						229	310	291	225	299	427.8	110.8			200.6	262	227.7	221.2	320.9
Specific Conductance (lab)	µS/cm		176	239	186	277	228	280	306	239	290	490	135			198	257	238	237	319
Temperature (field)	C						8.3	10.5	10.1	11.2	10.5	-0.2	-0.3			10.3	11.3	8.1	6.9	1.2
Dissolved Oxygen (field)	mg/L	**6.5**					9.0	9.6		10.1		11.1	12.1			9.76	9.25	10	10	12.3
Dissolved Oxygen (field)	%						81	99		90.8		89	95			87.1	84.6	99	96	100
ORP (field)	mV											368.2	236.8			72.4	106.7	200.2	169.7	297.4
Turbidity (internal)	NTU															0.23	0.01	0.02	0.875	0.03
Hardness (from total)	mg/L		123	137	97.4	147	120	159	147	120	145	259	70.7			104	137	132	135	170
Hardness (from dissolved)	mg/L		126	137	107	150	120	158	161	121	137	272	72			113	141	125	124	167
Colour	TCU											6.1	165			10.6	8.3	9.4	8.4	<5.0
Total Acidity	mg/L				0.9	1.1	0.9	1.4	1	<0.50	<0.50	<0.50	0.89			0.95	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L				<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50			<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		95.2	102	84	125	100	130	140	104	123	218	58.6			88.4	115	101	102	137
Alkalinity, bicarbonate HCO3	mg/L		116	124	102	152	122	150	170	127	150	266	71.5			108	140	123	125	167
Alkalinity, hydroxide OH	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50			<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.50	<0.50	<0.50	<0.50			<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.5	<0.5	<1	<1.0	<0.5	0.6	<0.5	<0.50	<0.50	<0.50	<0.50			<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**										<0.50	0.78			<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride	mg/L	**0.12**										0.087	0.039			0.061	0.065	0.054	0.054	0.055
Sulphate, dissolved	mg/L	*	21.7	17.4	14.7	20.2	17.4	21	28	18.7	23.3	36.9	1.21			15	19.2	21.6	20	26.8
Cyanide, total	mg/L	**0.005**	<0.001	<0.001								<0.00050	0.00122			0.00071	<0.00050	<0.00050	0.00078	0.00056
Cyanide, Weak Acid Dissociable	mg/L		<0.001	<0.001								<0.00050	0.00107			0.00063	0.00085	0.00051	0.00062	<0.00050
Ammonia (N)	mg/L	**0.197**	0.006	0.006	<0.005	0.021	<0.005	<0.005	<0.05	<0.0050	0.033	0.0131	0.0098			0.0097	0.0114	0.008	0.0086	0.0111
Nitrite (N)	mg/L	*	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	0.0032				<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3**	0.06	0.06	<0.02	<0.02	0.03	0.03	<0.02	0.023	<0.020	0.193	<0.020			0.0113	0.0178	0.0271	0.0492	0.151
Nitrite & Nitrate, as N	mg/L		0.06	0.06	<0.02	<0.02	0.03	0.03	<0.02	0.023	<0.020	0.196	<0.020			0.0113	0.0178	0.0271	0.0492	0.151
Phosphorus,total-colourimetric	mg/L											0.0024	0.0185			0.0025	<0.0020	0.0026	<0.0020	<0.0020
Phosphorus, Total Dissolved	mg/L											0.0022	0.0184			0.002	<0.0020	<0.0020	<0.0020	<0.0020
Dissolved Organic Carbon	mg/L											0.97	10.8			1.72	<0.50	1.3	1.5	1.38
Aluminum (Al), total	mg/L	*	0.009	0.009	0.02	0.004	0.007	0.009	0.005	0.00853	0.00272	0.00095	0.0943			0.01	0.00267	0.00347	0.0035	0.0214
Antimony (Sb), total	mg/L	**0.009**								0.000022	0.000024	<0.000020	<0.000050			0.000021	0.00002	0.000021	<0.000020	<0.000020
Arsenic (As), total	mg/L	**0.005**	0.00007	0.00017		<0.001	<0.001	0.0004	0.0003	0.000344	0.000392	0.000299	0.000614			0.000255	0.000315	0.0003	0.000297	0.000301
Barium (Ba), total	mg/L		0.044	0.019	0.044	0.068	0.052	0.065	0.068	0.0582	0.062	0.0908	0.0339			0.0497	0.0594	0.0548	0.0594	0.0618
Beryllium (Be), total	mg/L		<0.0001	<0.0001				<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	0.000011			<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.002	<0.002				<0.001	<0.001	<0.0000050	<0.0000050	<0.0000050	<0.000020			<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	**1.5**	0.018	0.014	<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.050			<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	<0.00001	<0.00001		0.00002	0.00003	0.00012	0.00001	0.000023	0.000024	0.0000289	0.0000531			0.0000131	0.0000162	0.000018	0.000016	0.000013
Calcium (Ca), total	mg/L		40	45	32	47.6	40.9	51.5	46	38.3	45.5	75.8	21.8			33.4	42.6	42.4	43.1	53.4
Chromium (Cr), total	mg/L	**0.001**	0.0003	**0.0018**		<0.001	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00010	<0.00050			<0.00010	<0.00010	0.0002	<0.00010	<0.00010
Cobalt (Co), total	mg/L		<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	<0.0005	0.000016	0.000019	0.0000616	0.000154			0.0000164	0.0000208	0.000023	0.000026	0.000027
Copper (Cu), total	mg/L	*	0.0004	0.0007		0.0005	0.0005	0.0005	0.0004	0.000485	0.000329	0.000212	0.00182			0.000456	0.00037	0.000525	0.000416	0.000296
Iron (Fe), total	mg/L	**1**	0.013	0.015	0.043	<0.005	0.011	0.014	0.008	0.0119	0.0093	0.0193	0.256			0.015	0.0162	0.0148	0.0175	0.0187
Lead (Pb), total	mg/L	*	<0.0001	0.0006		<0.0005	<0.0005	<0.0002	<0.0002	0.000015	<0.0000050	0.0000118	0.000161			0.0000095	<0.0000050	0.000009	0.000007	0.000019
Lithium (Li), total	mg/L						<0.002	<0.005	<0.005	0.00099	0.00116	0.00399	0.00082			0.00149	0.00161	0.00155	0.00128	0.00151
Magnesium (Mg), total	mg/L		5.5	6.1	4.24	6.82	5.14	7.4	7.85	5.86	7.72	17.1	3.95			5	7.33	6.31	6.6	8.97
Manganese (Mn), total	mg/L	*	0.0032	0.003	<0.001	0.001	0.002	0.002	0.003	0.00192	0.00372	0.0312	0.0323			0.00349	0.00506	0.0047	0.00578	0.00652
Mercury (Hg), total	mg/L	**0.000026**		<0.00001			<0.00001	<0.00002	<0.00002		0.000003	<0.0000020	0.0000037			<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	<0.0004	0.0005				<0.001	<0.001	0.000409	0.000537	0.000542	0.000345			0.000448	0.000504	0.000475	0.000401	0.000484
Nickel (Ni), total	mg/L	*	<0.001	0.001				<0.001	<0.001	0.000215	0.000184	0.00111	0.00101			0.000365	0.000343	0.000395	0.00027	0.000331
Phosphorus (P), total	mg/L		0.004	<0.003								<0.0020	0.025			<0.0020	0.0022	0.0021	<0.0020	0.0029
Potassium (K), total	mg/L		0.91	1.1	1	1	1	1.18	1.05	1.05	1.08	1.53	1.58			1.05	1.22	1.13	1.21	1.14
Selenium (Se), total	mg/L	**0.002**	0.00005	0.00013		<0.001	<0.001	0.0006	0.0006	0.000561	0.000558	0.00135	0.000226			0.000327	0.000447	0.000443	0.000463	0.000963

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16
		Guideline	6-Sep-95	13-Sep-95	23-Aug-02	19-Aug-04	24-Aug-06	14-Aug-08	19-Aug-10	16-Aug-12	21-Aug-14	30-Apr-15	11-May-15	12-May-15	13-May-15	22-Jun-15	28-Jul-15	22-Aug-15	9-Sep-15	14-Oct-15
Silicon (Si), total	mg/L		2.5	2.5			2.3	2.54	3.09	2.45	2.66	4.29	2.01			2.14	2.78	2.97	2.53	2.88
Silver (Ag), total	mg/L	**0.00025**	<0.00001	<0.00001						<0.0000050	<0.0000050	<0.0000050	0.0000181			<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L		0.81	0.92	0.69	0.91	0.83	1.09	0.88	0.801	0.9	1.49	0.93			0.757	1.01	0.881	0.946	1.05
Strontium (Sr), total	mg/L		0.11	0.13	0.098	0.147	0.115	0.158	0.161	0.127	0.154	0.269	0.0747			0.116	0.143	0.136	0.139	0.162
Sulphur (S), total	mg/L		7.1	7.1	5	7.3	6.2	8	9	<10	<15	13	<15			4.8	7.2	7.5	6.2	9.6
Thallium (Tl), total	mg/L	**0.0008**								<0.0000020	<0.0000020	<0.0000020	0.0000021			<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L		<0.002	<0.002				<0.005	<0.005	<0.00020	<0.00020	<0.00020	<0.00020			<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		0.0016	0.0014	<0.003	<0.003	<0.003	<0.005	<0.005	<0.00050	<0.00050	<0.00050	<0.0050			<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), total	mg/L	**0.015**				0.00122	0.0008	0.0015	0.0014	0.000916	0.00136	0.00281	0.000489			0.000728	0.00113	0.000971	0.001	0.00181
Vanadium (V), total	mg/L		<0.0003	<0.0003						<0.00020	<0.00020	<0.00020	<0.00050			<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	0.001	0.004	<0.005	<0.005	<0.005	<0.005	<0.005	0.00045	0.00037	0.00097	0.0032			0.00052	0.00026	0.00056	0.00052	0.00059
Zirconium (Zr), total	mg/L		0.0004	<0.0003				<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	0.0001			<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*	0.007	0.006	<0.02	0.002	0.002	0.008	<0.003	0.00424	0.00233	0.00087	0.0444			0.00228	0.00158	0.00183	0.00546	0.00104
Antimony (Sb), dissolved	mg/L									<0.000020	0.000022	0.000031	<0.000020			<0.000020	0.000021	<0.000020	<0.000020	<0.000020
Arsenic (As), dissolved	mg/L		0.00007	0.00014		<0.001	<0.001	0.0005	0.0004	0.000353	0.000402	0.000301	0.000353			0.00026	0.000317	0.000287	0.000274	0.000262
Barium (Ba), dissolved	mg/L		0.046	0.049	0.049	0.067	0.053	0.064	0.072	0.0578	0.0611	0.0993	0.034			0.0493	0.0606	0.0509	0.0566	0.0605
Beryllium (Be), dissolved	mg/L		<0.0001	<0.0001				<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010			<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.002	<0.002				<0.001	<0.001	<0.0000050	<0.0000050	<0.0000050	<0.0000050			<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		0.015	0.015	<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.010			<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	<0.00001	<0.00001		0.00002	0.00002	0.00013	0.00002	0.000022	0.000021	0.0000279	0.0000356			0.0000135	0.000015	0.000011	0.000014	0.000013
Calcium (Ca), dissolved	mg/L		41	45	35.1	48.8	40.8	51.2	51.1	38.7	42.2	80.3	22.2			36.7	44.7	39.7	39.7	52.3
Chromium (Cr), dissolved	mg/L		0.0004	0.0006		<0.001	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00010	<0.00010			<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	<0.0005	0.000016	0.000019	0.0000333	0.0000381			0.0000111	0.0000133	0.000016	0.000015	0.00002
Copper (Cu), dissolved	mg/L		0.0006	0.0006		0.0004	0.0005	0.0006	0.0004	0.000414	0.000335	0.000219	0.00139			0.000512	0.000338	0.00047	0.000402	0.000217
Iron (Fe), dissolved	mg/L	**0.35**	0.005	0.007	<0.005	<0.005	<0.005	0.012	0.007	0.0051	0.0073	0.0052	0.0704			0.0045	0.0045	0.0044	0.0045	0.0026
Lead (Pb), dissolved	mg/L		<0.0001	0.0009		<0.0005	<0.0005	<0.0002	<0.0002	0.000005	<0.0000050	<0.0000050	0.0000196			<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), dissolved	mg/L						<0.002	<0.005	<0.005	0.00099	0.00106	0.004	0.00101			0.00127	0.00138	0.00101	0.00191	0.00183
Magnesium (Mg), dissolved	mg/L		5.7	6.1	4.69	6.94	5.25	7.24	8.16	5.83	7.71	17.3	4.03			5.06	7.22	6.24	6.04	8.75
Manganese (Mn), dissolved	mg/L		0.0026	0.0028	<0.001	<0.001	0.001	0.002	0.003	0.00122	0.00325	0.0248	0.00312			0.00185	0.00284	0.00287	0.00291	0.00451
Mercury (Hg), dissolved	mg/L			<0.00001			<0.00001	<0.00002	<0.00002		0.0000034	<0.0000020	0.0000031			<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		<0.0004	<0.0004				<0.001	<0.001	0.000473	0.000517	0.000587	0.000243			0.000423	0.000527	0.000463	0.00041	0.000487
Nickel (Ni), dissolved	mg/L		<0.001	<0.001				<0.001	<0.001	0.000195	0.000192	0.00118	0.000916			0.000339	0.000359	0.000477	0.000299	0.000294
Phosphorus (P), dissolved	mg/L		0.005	0.005								<0.0020	0.011			<0.0020	<0.0020	<0.0020	0.0025	0.003
Potassium (K), dissolved	mg/L		0.95	1.1	<1	<1	1	1.11	1.17	1.07	1.01	1.63	1.66			1.09	1.26	1.07	1.15	1.13
Selenium (Se), dissolved	mg/L		<0.00005	0.00012		<0.001	<0.001	0.0008	0.0007	0.000496	0.000536	0.00142	0.000248			0.000347	0.000431	0.000447	0.000449	0.000861
Silicon (Si), dissolved	mg/L		2.6	2.5			2.33	2.9	3.1	2.49	2.64	4.18	1.92			2.28	2.75	2.66	2.62	2.76
Silver (Ag), dissolved	mg/L		<0.00001	<0.00001						<0.0000050	<0.0000050	<0.0000050	<0.0000050			<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		0.85	0.93	0.83	0.9	0.85	0.96	1.01	0.81	0.95	1.68	0.476			0.801	1.03	0.912	0.875	1
Strontium (Sr), dissolved	mg/L		0.12	0.13	0.108	0.148	0.116	0.151	0.17	0.126	0.154	0.277	0.0759			0.123	0.152	0.127	0.127	0.167
Sulphur (S), dissolved	mg/L		7.4	7.1	5.4	7.4	6.3	9	9	<10	<15	12.2	<3.0			4.5	6.9	7.2	6.8	8.9
Thallium (Tl), dissolved	mg/L									<0.0000020	<0.0000020	0.0000049	<0.0000020			<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		0.004	<0.002				<0.005	<0.005	<0.00020	0.00023	<0.00020	<0.00020			<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		0.0016	0.0014	<0.003	<0.003	<0.003	<0.005	<0.005	<0.00050	<0.00050	<0.00050	0.00053			<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L					0.00014	0.0009	0.0015	0.0017	0.000905	0.00134	0.00291	0.000448			0.000669	0.00114	0.000896	0.000974	0.00178
Vanadium (V), dissolved	mg/L		<0.0003	<0.0003						<0.00020	<0.00020	<0.00020	<0.00020			<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.002	0.003	<0.005	<0.005	<0.005	<0.005	<0.005	0.00037	0.00055	0.00112	0.00186			0.00033	0.00026	0.00037	0.00059	0.00036
Zirconium (Zr), dissolved	mg/L		0.0003	0.0003				<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	<0.00010			<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-17	KZ-17	KZ-17	KZ-17
		Guideline	19-Nov-15	2-Dec-15	20-Jan-16	9-Feb-16	20-Mar-16	20-Apr-16	4-May-16	15-May-16	13-Jun-16	26-Jul-16	27-Aug-16	7-Sep-16	1-Oct-16	2-Oct-16	3-Dec-94	6-Apr-95	11-Jun-95	22-Aug-95
Discharge (Flow)	L/s		152.7	130.9	45.1	45.6		82.4	138.1		249.6	484.7	1464.3	931.5	485.6					
Total Suspended Solids	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.1	<1.0	<1.0	<1.0	<4	<4	<4	<4
pH (field)	pH units	**6.5-9**	7.4	7.25	7.06	7.32	6.9	7.5	7.64	7.75	8.14	7.89	7.76	7.75	7.9	7.38				
pH (lab)	pH units	**6.5-9**	8.1	8.03	7.88	7.99	7.77	8.08	8.1	8.13	8.22	8.17	8	8.07	8.19	8.15	8	7.9	7.8	7.9
Specific Conductance (field)	µS/cm		390.6	428.6	535.6	497.1	498.8	420.3	313.00	177.9	177.9	221	214.5	217.1	285.9	269.6				
Specific Conductance (lab)	µS/cm		403	434	544	544	519	494	314	179	226	221	183	231	323	297	400	447	276	299
Temperature (field)	C		0	0	-0.1	0	0.6	-0.1	1.90	3.2	10.2	9	4.6	4.8	-0.4	-0.2				
Dissolved Oxygen (field)	mg/L	**6.5**	10.1	10.9	11.1	10.6	10.08	12.99	11.08	11.9	8.79	10.21	11.29	9.37	12.26	13.1				
Dissolved Oxygen (field)	%		80	88	88	84	81.2	102.5	93.20	103	92.7	102.3	100.7	85.3	95.3	104.4				
ORP (field)	mV		160.9	137.7	327	269.3	145.9	108.3	95.60	123.5	138.7	106.2	269	101.5	145.3	33.4				
Turbidity (internal)	NTU		0.1	0.3	0.122	1.312	0.108	0.122	-0.02		0.874	0.28	0.986	0.26	0.12					
Hardness (from total)	mg/L		213	238	312	289	273	249	167	94.4	114	118	94.2	114	158	147	212	261	125	180
Hardness (from dissolved)	mg/L		219	239	302	291	292	308	165	93.9	115	118	88.9	120	164	154	223	259	122	174
Colour	TCU		5	<5.0	<5.0	9.5	<5.0	<5.0	7.8	16.7	5.9		15.5							
Total Acidity	mg/L		1.37	<0.50	4.77	3.49	7.14	3.12	1.09	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				
Alkalinity, total	mg/L		178	195	263	259	247	237	147	82.5	101	96	68	100	140	126	195	235	149	147
Alkalinity, bicarbonate HCO3	mg/L		217	238	321	316	302	289	179	101	124	117	83	123	170	154				179
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				<0.5
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				<0.5
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				<0.5
Chloride	mg/L	**120**	1.1	0.54	0.78	0.64	0.72	2.3	1	0.51	0.69	<0.50	0.95	<0.50	0.62	0.57				
Fluoride	mg/L	**0.12**	0.071	0.061	0.082	0.073	0.075	0.086	0.076	0.065	0.068	0.053	0.042	0.047	0.059	0.053				
Sulphate, dissolved	mg/L	*	32.8	32.5	41.5	41.5	36.8	36.8	21.7	12.9	16.4	19.9	21.2	21.9	28.5	26.9	27.4	29.3	20	19.5
Cyanide, total	mg/L	**0.005**	<0.00050	<0.00050	0.00051	<0.00050	<0.00050	<0.00050	0.00061	0.00061	0.00063	<0.00050	<0.00050	0.00058	0.00068	0.00052		<0.001	<0.001	<0.001
Cyanide, Weak Acid Dissociable	mg/L		<0.00050	<0.00050	0.00072	<0.00050	0.00066	<0.00050	<0.00050	<0.00050	0.00063	0.00077	<0.00050	0.00076	0.00078	0.00063		<0.001	<0.001	<0.001
Ammonia (N)	mg/L	**0.197**	<0.0050	<0.0050	<0.0050	0.0094	0.0129	0.012	0.0207	<0.0050	0.0063	0.029	0.033	0.016	0.1	0.011	0.006	0.008	<0.005	<0.005
Nitrite (N)	mg/L	*	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020		<0.005	<0.005	<0.005
Nitrate (N)	mg/L	**3**	0.223	0.233	0.253	0.248	0.259	0.182	0.101	0.0486	0.0139	0.0087	0.0248	0.0811	0.175	0.178	0.17	0.19	<0.02	<0.02
Nitrite & Nitrate, as N	mg/L		0.223	0.233	0.253	0.248	0.259	0.182	0.101	0.0486	0.0139	0.0087	0.0248	0.0811	0.175	0.178	0.17	0.19	<0.02	<0.02
Phosphorus,total-colourimetric	mg/L		<0.0020	<0.0020	0.0023	<0.0020	<0.0020	0.0026	0.0025	0.0044	<0.0020	<0.0020	0.004	0.005	0.005	0.0027				
Phosphorus, Total Dissolved	mg/L		<0.0020	<0.0020	0.002	0.0027	0.0027	0.0035	0.0031	0.0046	<0.0020	<0.0020	0.0046	0.0039	0.0022	0.0023				
Dissolved Organic Carbon	mg/L		<0.50	1.29	1.56	<0.50	0.89	1.46	2.5	3.79	1.36	2.34	3.62	2.76	0.99	1.65				
Aluminum (Al), total	mg/L	*	0.00304	0.0103	0.00091	0.0047	0.00199	0.00145	0.00353	0.0096	0.00219	0.00288	0.00981	0.00362	0.00352	0.0027		0.009	0.026	0.048
Antimony (Sb), total	mg/L	**0.009**	0.000022	<0.000020	<0.000020	0.000024	<0.000020	<0.000020	<0.000020	<0.000050	0.000022	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020				
Arsenic (As), total	mg/L	**0.005**	0.000201	0.000247	0.000195	0.000209	0.00018	0.000253	0.000284	0.000292	0.000234	0.000246	0.00026	0.000212	0.000253	0.000306		0.00062	0.0005	0.0006
Barium (Ba), total	mg/L		0.0858	0.0914	0.112	0.104	0.103	0.0838	0.0609	0.0372	0.047	0.0479	0.0413	0.0491	0.0629	0.0622	0.069	0.078	0.047	0.065
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		<0.0001	<0.0001	<0.0001
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.002	<0.002	
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.04	0.023	0.025	0.027
Cadmium (Cd), total	mg/L	*	0.000022	0.000021	0.000028	0.000034	0.00003	0.000023	0.000019	0.00002	0.000012	0.000013	0.00003	0.000015	0.000015	0.000022		0.00003	0.00002	0.00003
Calcium (Ca), total	mg/L		64.1	70.9	92.3	86.1	80.5	72.8	50.6	29.8	36.8	39.1	31	37	49.9	47.5	64.3	75	40	56
Chromium (Cr), total	mg/L	**0.001**	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00014	<0.00010	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		0.0003	0.0006	**0.023**
Cobalt (Co), total	mg/L		0.000026	0.000031	0.000031	0.000038	0.000051	0.000035	0.000034	0.000036	0.000013	0.000015	0.000032	0.00002	0.000031	0.000027		<0.0004	<0.0004	<0.0004
Copper (Cu), total	mg/L	*	0.000246	0.000261	0.000236	0.000324	0.000184	0.000252	0.000474	0.00094	0.000476	0.00046	0.000903	0.000423	0.000301	0.000284		0.0002	0.0011	0.001
Iron (Fe), total	mg/L	**1**	0.0179	0.0224	0.0122	0.0305	0.0159	0.0257	0.0435	0.0677	0.0079	0.0089	0.0301	0.009	0.0207	0.0218		0.068	0.11	0.28
Lead (Pb), total	mg/L	*	0.000058	0.000009	<0.0000050	0.000044	<0.0000050	<0.0000050	0.000021	<0.000050	<0.0000050	<0.0000050	0.000019	0.000007	0.000014	<0.0000050		0.0001	0.0007	<0.0001
Lithium (Li), total	mg/L		0.00302	0.00252	0.00377	0.00398	0.00419	0.00359	0.00164	0.00097	0.00142	0.00123	0.00099	0.00097	0.00152	0.00076				
Magnesium (Mg), total	mg/L		12.8	14.7	19.8	17.9	17.5	16.4	9.91	4.82	5.41	4.97	4.1	5.18	8.08	6.97	12.4	18	6.2	9.8
Manganese (Mn), total	mg/L	*	0.00916	0.00984	0.0121	0.0141	0.0213	0.0137	0.0094	0.00789	0.00286	0.00344	0.00651	0.00287	0.00773	0.00535	0.031	0.059	0.015	0.0052
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020		<0.00001	<0.00001	<0.00001
Molybdenum (Mo), total	mg/L	**0.073**	0.000482	0.000473	0.000403	0.000358	0.000422	0.000449	0.000493	0.000363	0.00046	0.000423	0.000274	0.000368	0.000456	0.000429		0.0009	0.0005	0.0005
Nickel (Ni), total	mg/L	*	0.000461	0.00053	0.000749	0.000733	0.000928	0.000927	0.000583	0.00047	0.000288	0.00026	0.000426	0.00025	0.000313	0.000218		0.002	<0.001	0.012
Phosphorus (P), total	mg/L		0.0029	<0.0020	0.0025	0.0029	<0.0020	<0.0020	0.0032	<0.010	0.0021	0.0026	0.004	<0.0020	<0.0020	<0.0020	<0.003	<0.003	0.005	0.008
Potassium (K), total	mg/L		1.28	1.42	1.64	1.56	1.52	1.42	1.17	0.88	1.06	0.95	1.02	0.928	1.03	0.957	1.3	1.5	1.1	1.4
Selenium (Se), total	mg/L	**0.002**	0.00126	0.00134	0.00179	0.00149	0.00151	0.00109	0.00071	0.000321	0.000397	0.000296	0.000267	0.000454	0.000981	0.000921		0.0013	<0.00005	<0.00005

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-17	KZ-17	KZ-17	KZ-17
		Guideline	19-Nov-15	2-Dec-15	20-Jan-16	9-Feb-16	20-Mar-16	20-Apr-16	4-May-16	15-May-16	13-Jun-16	26-Jul-16	27-Aug-16	7-Sep-16	1-Oct-16	2-Oct-16	3-Dec-94	6-Apr-95	11-Jun-95	22-Aug-95
Silicon (Si), total	mg/L		3.55	3.62	4.38	4.11	3.74	3.68	2.93	2.15	2.31	2.63	2.3	2.34	2.86	2.74	3	3.8	2.2	3.1
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.00001	<0.00001	<0.00001
Sodium (Na), total	mg/L		1.2	1.38	1.69	1.58	1.53	1.42	0.955	0.66	0.72	0.732	0.64	0.773	0.939	0.842	1.1	1.6	0.79	1.1
Strontium (Sr), total	mg/L		0.223	0.235	0.322	0.286	0.263	0.26	0.17	0.0951	0.121	0.121	0.0989	0.106	0.163	0.149	0.18	0.22	0.11	0.16
Sulphur (S), total	mg/L		11	11.1	15.1	14	12.4	10.2	7.3	<15	5.9	6.4	7.7	6.9	8.7	8.3	8.8	9.2	6.3	8.4
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000003	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020				
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020			<0.002	<0.002
Titanium (Ti), total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.003	0.0023	0.0019	0.003
Uranium (U), total	mg/L	**0.015**	0.0024	0.00265	0.00345	0.00298	0.00283	0.00261	0.00175	0.000664	0.000718	0.000667	0.000389	0.000854	0.00161	0.00149				
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.0003	<0.0003	<0.0003
Zinc (Zn), total	mg/L	*	0.00077	0.0008	0.00118	0.00176	0.0008	0.00071	0.00062	<0.0010	0.00039	0.00047	0.00091	0.0007	0.00064	0.0008		0.011	0.008	0.008
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		<0.0003	<0.0003	0.0004
Aluminum (Al), dissolved	mg/L	*	0.00186	<0.00050	0.00179	0.00176	0.00263	0.00083	0.00159	0.00361	0.00161	0.00189	0.0051	0.00198	0.00124	0.00159		0.01	0.016	0.0007
Antimony (Sb), dissolved	mg/L		<0.000020	<0.000020	<0.000020	0.00002	0.000022	0.000027	<0.000020	<0.000020	<0.000020	<0.000020	0.00002	<0.000020	<0.000020	<0.000020				
Arsenic (As), dissolved	mg/L		0.000224	0.000204	0.000165	0.00016	0.000173	0.000218	0.000238	0.000198	0.000217	0.000211	0.000221	0.000202	0.000299	0.000326		0.00037	0.0005	0.0004
Barium (Ba), dissolved	mg/L		0.0794	0.0784	0.112	0.106	0.102	0.103	0.058	0.0361	0.0493	0.046	0.0407	0.0508	0.0626	0.0625	0.07	0.075	0.045	0.061
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		<0.0001	<0.0001	<0.0001
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.002	<0.002	<0.002
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.008		0.026	0.019
Cadmium (Cd), dissolved	mg/L	*	0.000022	0.000016	0.000026	0.00003	0.000033	0.000024	0.000009	0.000011	0.000009	0.000009	0.000016	0.000015	0.000009	0.000015		0.00002	<0.00001	0.00002
Calcium (Ca), dissolved	mg/L		65.9	72.9	88.9	86.7	88.5	90.5	50.8	29.7	36.8	38.4	28.9	39.5	51.9	50	68.2	74	39	54
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	0.00011	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		0.0003	0.0005	0.0006
Cobalt (Co), dissolved	mg/L		0.000028	0.000024	0.00003	0.000018	0.000048	0.000028	0.000017	0.00001	0.0000126	0.000009	0.000018	0.000013	0.000015	0.000023		<0.0004	<0.0004	<0.0004
Copper (Cu), dissolved	mg/L		0.000249	0.000196	0.000199	0.00029	0.000188	0.000236	0.000412	0.000723	0.000464	0.000427	0.000851	0.000427	0.000288	0.000275		0.0002	0.0011	0.0006
Iron (Fe), dissolved	mg/L	**0.35**	0.0046	0.0027	0.0037	0.0028	0.0034	0.004	0.0072	0.0115	0.0035	0.0032	0.0089	0.0044	0.0043	0.0116		0.006	0.035	0.018
Lead (Pb), dissolved	mg/L		0.000024	<0.0000050	<0.0000050	0.000006	0.00001	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		0.0001	0.0004	<0.0001
Lithium (Li), dissolved	mg/L		0.00288	0.00286	0.0035	0.00459	0.00413	0.00444	0.00172	0.00079	0.00154	0.00121	0.00103	0.00108	0.00177	0.00088				
Magnesium (Mg), dissolved	mg/L		13.1	13.8	19.4	18.1	17.1	19.8	9.35	4.77	5.64	5.28	4.03	5.15	8.4	7.08	12.8	18	5.9	9.4
Manganese (Mn), dissolved	mg/L		0.00829	0.00785	0.0112	0.00731	0.0207	0.0148	0.0041	0.00111	0.00214	0.00131	0.00179	0.0019	0.0045	0.00503	0.015	0.037	0.0051	0.016
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020		<0.00001	<0.00001	<0.00001
Molybdenum (Mo), dissolved	mg/L		0.000445	0.000466	0.000406	0.000369	0.00041	0.000568	0.00048	0.000353	0.000495	0.000411	0.000265	0.000354	0.000466	0.000464		0.0007	0.0006	0.0004
Nickel (Ni), dissolved	mg/L		0.000511	0.000458	0.000745	0.000695	0.000923	0.000951	0.000529	0.000441	0.000273	0.000253	0.00039	0.000254	0.00025	0.00019			<0.001	<0.001
Phosphorus (P), dissolved	mg/L		0.0042	<0.0020	0.0045	0.0037	<0.0020	0.0041	0.0023	0.0052	<0.0020	<0.0020	0.0024	0.0063	<0.0020	<0.0020			0.01	0.01
Potassium (K), dissolved	mg/L		1.38	1.32	1.64	1.57	1.5	1.67	1.12	0.907	1.1	0.878	1.01	1	1.07	0.982	1.3	1.5	1.1	1.3
Selenium (Se), dissolved	mg/L		0.00123	0.00143	0.00173	0.00148	0.00161	0.00127	0.000727	0.000317	0.00038	0.000299	0.000255	0.000401	0.00109	0.00109		0.00085	<0.00005	<0.00005
Silicon (Si), dissolved	mg/L		3.45	3.69	4.39	4.34	4.57	4.54	2.96	2.06	2.28	2.74	2.13	2.72	3.16	3.01	3.43	3.8	2.1	2.9
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.00001	<0.00001	<0.00001
Sodium (Na), dissolved	mg/L		1.31	1.28	1.64	1.58	1.47	1.72	0.943	0.635	0.743	0.763	0.641	0.79	0.952	0.853	1.09	1.6	0.79	1.1
Strontium (Sr), dissolved	mg/L		0.23	0.226	0.32	0.288	0.277	0.32	0.167	0.0933	0.118	0.112	0.0937	0.12	0.176	0.161	0.185	0.21	0.11	0.16
Sulphur (S), dissolved	mg/L		11.3	12	14.5	14.2	12.4	12.5	7.3	3.6	5.7	6.3	7.1	7.1	10	9.4	8.89	9.1	6.1	8.2
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020				
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.002	<0.002	
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.003	0.0023	0.0013	0.0016
Uranium (U), dissolved	mg/L		0.00226	0.00248	0.00346	0.00289	0.00264	0.00336	0.00172	0.000632	0.000833	0.000647	0.00036	0.000827	0.00165	0.00153				
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.0003	<0.0003	<0.0003
Zinc (Zn), dissolved	mg/L		0.00085	0.0004	0.00114	0.00177	0.00092	0.00096	0.00046	0.00034	0.00031	<0.00010	0.00077	0.00081	0.0002	0.00029		0.01	0.007	0.003
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		<0.0003		<0.0003

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17
		Guideline	13-Sep-95	23-Aug-02	19-Aug-04	24-Aug-06	14-Aug-08	29-Apr-15	11-May-15	22-Jun-15	28-Jul-15	22-Aug-15	9-Sep-15	14-Oct-15	19-Nov-15	2-Dec-15	20-Jan-16	9-Feb-16	20-Mar-16	20-Apr-16
Discharge (Flow)	L/s							44.6	856.5		227.9	375.6	490.9	391.6	116.7	210.3	49.4	47.1		21.1
Total Suspended Solids	mg/L		<4	<4	<4	<4	<4	<1.0	79.5	<1.0	1	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
pH (field)	pH units	**6.5-9**				8.1	8.5	7.64	7.64	7.8	7.97	8.03	7.91	7.75	7.73	7.46	7.19	7.18	7.13	7.64
pH (lab)	pH units	**6.5-9**	8		8.3	8.1	8.2	8.28	7.25	8.06	8.06	8.04	8.25	8.25	8.26	8.08	8.17	8.11	7.95	8.16
Specific Conductance (field)	µS/cm					288	360	411.4	109.3	275.6	334.1	308.6	297.4	363.1	405.5	410	466.9	471.1	476.7	
Specific Conductance (lab)	µS/cm		261	273	384	326	330	469	126	269	323	321	319	364	399	416	471	501	499	452
Temperature (field)	C					5.8	8.1	-0.1	-0.2	7.9	8.6	7.1	5.3	1	0.2	0.3	0.1	0.2	0.9	0.8
Dissolved Oxygen (field)	mg/L	**6.5**				10.0	9.1	11.7	12	9.33	8.22	9.9	9.1	11.3	11.1	9.6	10	9	9.08	12.71
Dissolved Oxygen (field)	%					85	83	94	95	78.6	72.2	96	84	91	88	79	80	72	74	102.6
ORP (field)	mV							315.5	208.2	70.5	56.7	165.5	222.6	293.5	106.8	153.7	332.4	285.7	126	106.4
Turbidity (internal)	NTU									0.21	0.17	0.27	1.375	0.46	0.38	0.34	0.376	0.922	0.048	0.552
Hardness (from total)	mg/L		195	152	217	180	192	249	68	144	176	159	185	193	213	221	274	263	273	255
Hardness (from dissolved)	mg/L		176	165	217	180	188	263	69.1	149	184	169	161	193	212	223	275	262	262	264
Colour	TCU							9.6	242	13.6	8.6	12.8	11.7	6.5	5.1	5.6	<5.0	8	<5.0	5.7
Total Acidity	mg/L			1	0.9	1	0.6	<0.50	0.79	1.18	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.09	5.07	1.46
Acidity (pH 4.5)	mg/L			<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		140	125	182	148	160	214	54.4	118	143	137	136	161	177	187	223	241	237	215
Alkalinity, bicarbonate HCO3	mg/L		171	152	222	181	190	261	66.3	144	174	168	166	197	216	228	272	294	289	262
Alkalinity, hydroxide OH	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.5	<0.5	<0.5	<0.5	2.7	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.5	<1	<1.0	<0.5	2.2	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**						<0.50	1.2	<0.50	<0.50	<0.50	0.61	0.6	0.66	0.61	1.3	0.85	0.71	0.55
Fluoride	mg/L	**0.12**						**0.14**	0.046	0.09	0.1	0.091	0.087	0.089	0.11	0.096	0.11	0.09	0.092	0.12
Sulphate, dissolved	mg/L	*	25.6	25.4	26.3	25.4	24	32.1	<0.50	25.8	26.7	31.2	31.4	31.7	34.7	31.6	33.7	38.6	35	33.2
Cyanide, total	mg/L	**0.005**	<0.001					<0.00050	0.00152	0.00068	<0.00050	<0.00050	0.00078	<0.00050	<0.00050	<0.00050	0.00061	<0.00050	<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L		<0.001					<0.00050	0.00118	0.00055	0.00065	<0.00050	0.00068	<0.00050	<0.00050	<0.00050	0.00073	<0.00050	0.00053	<0.00050
Ammonia (N)	mg/L	**0.197**	0.005	<0.005	0.021	<0.005	<0.005	0.0237	0.0069	0.0115	<0.0050	<0.0050	0.0067	0.021	<0.0050	0.012	0.0078	<0.0050	0.01	0.0166
Nitrite (N)	mg/L	*	<0.005	<0.005	<0.005	<0.005	<0.005	0.0023		<0.0020	<0.0020	0.0024	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3**	<0.02	<0.02	<0.02	<0.02	0.03	0.127	<0.020	0.0065	0.0269	0.0209	0.0193	0.0963	0.156	0.164	0.204	0.228	0.225	0.148
Nitrite & Nitrate, as N	mg/L		0.02	<0.02	<0.02	<0.02	0.03	0.129	<0.020	0.0065	0.0269	0.0233	0.0193	0.0963	0.156	0.164	0.204	0.228	0.225	0.148
Phosphorus,total-colourimetric	mg/L							0.0041	0.0349	0.003	0.003	0.0037	0.0029	0.0047	0.003	0.0038	0.0033	0.0028	0.0023	0.0049
Phosphorus, Total Dissolved	mg/L							0.0041	0.0369	0.0029	0.003	0.0032	0.0026	0.0026	0.0028	0.0041	0.0028	0.0028	0.0027	0.0054
Dissolved Organic Carbon	mg/L							1.59	15.6	2.91	1.82	1.7	2.2	1.34	1.58	1.87	1.15	0.91	0.52	1.6
Aluminum (Al), total	mg/L	*	0.049	0.03	0.005	0.004	0.01	0.00544	**0.595**	0.0267	0.0106	0.00452	0.0118	0.0272	0.0189	0.014	0.00537	0.00838	0.00829	0.0049
Antimony (Sb), total	mg/L	**0.009**						0.00003	0.000078	0.000053	0.000052	0.000061	0.000056	0.000044	0.000043	0.000051	0.000029	0.000037	0.000032	<0.000050
Arsenic (As), total	mg/L	**0.005**	0.00035		<0.001	<0.001	0.0007	0.000572	**0.00598**	0.000637	0.000578	0.00054	0.000695	0.000982	0.000719	0.000761	0.00075	0.00085	0.000628	0.000711
Barium (Ba), total	mg/L		0.067	0.065	0.089	0.065	0.069	0.087	0.068	0.0639	0.0732	0.0689	0.0761	0.0704	0.077	0.0914	0.0934	0.0978	0.101	0.082
Beryllium (Be), total	mg/L		<0.0001				<0.0001	<0.000010	0.000042	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.002				<0.001	<0.0000050	<0.000020	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000020
Boron (B), total	mg/L	**1.5**	0.024	<0.008	<0.008	<0.008	<0.05	<0.01	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050
Cadmium (Cd), total	mg/L	*	0.00001		0.00005	0.00003	**0.00029**	0.0000483	**0.000428**	0.0000416	0.0000341	0.000037	0.000048	0.00007	0.000057	0.00005	0.000053	0.000056	0.000044	0.000112
Calcium (Ca), total	mg/L		60	46.9	65.1	56	58.9	71.5	20.3	44.6	52.8	48.1	56.2	57.4	62.2	64.5	77.6	76.8	80.3	73.8
Chromium (Cr), total	mg/L	**0.001**	**0.0011**		<0.001	<0.001	<0.001	<0.00010	**0.00153**	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00050
Cobalt (Co), total	mg/L		<0.0004		<0.0005	<0.0005	<0.0005	0.0000414	0.00131	0.0000853	0.0000457	0.000041	0.000074	0.000081	0.000075	0.000057	0.000062	0.000059	0.000048	0.000033
Copper (Cu), total	mg/L	*	0.0034		0.0007	0.0005	0.0006	0.000272	**0.00467**	0.000637	0.000493	0.000516	0.000659	0.000446	0.00043	0.00033	0.000343	0.000352	0.000284	0.00055
Iron (Fe), total	mg/L	**1**	0.18	0.218	0.103	0.066	0.105	0.0817	**4.4**	0.189	0.116	0.124	0.211	0.305	0.159	0.141	0.149	0.185	0.126	0.109
Lead (Pb), total	mg/L	*	0.0002		<0.0005	<0.0005	<0.0002	0.000025	0.00156	0.000103	0.0000315	0.00002	0.000058	0.000092	0.000115	0.000036	0.000044	0.000064	0.000041	<0.000050
Lithium (Li), total	mg/L					0.002	<0.005	0.00493	0.00173	0.00224	0.00301	0.0018	0.00222	0.00203	0.00327	0.0033	0.00287	0.00369	0.00411	0.00432
Magnesium (Mg), total	mg/L		11	8.54	13.3	10.5	10.9	17	4.23	7.95	10.8	9.38	10.8	12.1	14	14.5	19.6	17.2	17.6	17.1
Manganese (Mn), total	mg/L	*	0.023	0.061	0.043	0.03	0.031	0.0548	0.667	0.0478	0.0372	0.0411	0.0601	0.0816	0.069	0.0556	0.07	0.0576	0.0478	0.0336
Mercury (Hg), total	mg/L	**0.000026**	<0.00001			<0.00001		<0.0000020	0.0000035	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.0007				0.002	0.00198	0.001	0.00106	0.00135	0.0012	0.00119	0.00141	0.00149	0.00173	0.00147	0.00127	0.00131	0.00183
Nickel (Ni), total	mg/L	*	<0.001				<0.001	0.00112	0.00492	0.000761	0.000664	0.000644	0.000675	0.000726	0.000788	0.000786	0.000991	0.000905	0.00092	0.00097
Phosphorus (P), total	mg/L		<0.003					0.0052	0.156	0.0074	0.0132	0.0022	0.0048	0.0088	0.0099	0.0035	0.0064	0.0103	0.0075	<0.010
Potassium (K), total	mg/L		1.6	1	1	1	1.29	1.78	2.45	1.15	1.45	1.26	1.47	1.28	1.4	1.44	1.75	1.49	1.59	1.57
Selenium (Se), total	mg/L	**0.002**	0.00013		<0.001	<0.001	0.0007	0.00117	0.00034	0.00058	0.000555	0.00061	0.000903	0.00151	0.00133	0.00142	0.00147	0.00136	0.00141	0.00122

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17
		Guideline	13-Sep-95	23-Aug-02	19-Aug-04	24-Aug-06	14-Aug-08	29-Apr-15	11-May-15	22-Jun-15	28-Jul-15	22-Aug-15	9-Sep-15	14-Oct-15	19-Nov-15	2-Dec-15	20-Jan-16	9-Feb-16	20-Mar-16	20-Apr-16
Silicon (Si), total	mg/L		3.1			2.95	2.84	4.52	2.81	2.5	3.14	3.06	3.04	3.29	3.67	3.79	4.09	4.07	3.75	4.15
Silver (Ag), total	mg/L	**0.00025**	<0.00001					<0.0000050	0.0000272	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L		1.2	0.96	1.3	1.08	1.12	1.55	0.53	0.845	1.13	0.966	1.08	1.07	1.23	1.27	1.68	1.46	1.54	1.45
Strontium (Sr), total	mg/L		0.17	0.144	0.201	0.157	0.183	0.247	0.0653	0.149	0.179	0.154	0.179	0.188	0.216	0.208	0.289	0.265	0.26	0.239
Sulphur (S), total	mg/L		9.7	8.6	9.3	8.9	9	12.1	<15	8	9.7	9.8	9.9	11.1	11.1	11.1	14.4	12.8	12.1	<15
Thallium (Tl), total	mg/L	**0.0008**						<0.0000020	0.0000111	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L		<0.002					<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		0.0038	<0.003	<0.003	<0.003	<0.005	<0.00050	0.0242	0.00124	0.00051	<0.00050	0.00085	0.00052	0.00096	<0.00050	<0.00050	<0.00050	0.00051	<0.0050
Uranium (U), total	mg/L	**0.015**			0.00356	0.0024	0.0027	0.00589	0.000794	0.00183	0.00245	0.00226	0.00241	0.0033	0.00412	0.00491	0.0055	0.00507	0.00517	0.00557
Vanadium (V), total	mg/L		<0.0003					<0.00020	0.00193	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00050
Zinc (Zn), total	mg/L	*	0.005	<0.005	<0.005	<0.005	0.007	0.00586	**0.0427**	0.00545	0.00345	0.0041	0.00754	0.00989	0.0082	0.00724	0.00798	0.00602	0.00512	0.0047
Zirconium (Zr), total	mg/L		0.0014					<0.00010	0.00034	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*	0.015	<0.02	0.001	0.001	0.004	0.00093	**0.0585**	0.00214	0.00127	0.00188	0.00334	0.00141	0.00182	0.0006	0.00185	0.00088	0.00315	0.0012
Antimony (Sb), dissolved	mg/L							0.000038	0.000034	0.000055	0.000055	0.000056	0.000054	0.000047	0.000039	0.000039	0.000031	0.000029	0.000029	0.000041
Arsenic (As), dissolved	mg/L		0.00031		<0.001	<0.001	0.0007	0.000471	0.000492	0.000455	0.000423	0.000485	0.000439	0.000564	0.000447	0.000553	0.000413	0.000307	0.000333	0.000507
Barium (Ba), dissolved	mg/L		0.062	0.068	0.085	0.067	0.069	0.0904	0.0364	0.0644	0.0732	0.07	0.0696	0.0709	0.0778	0.076	0.0973	0.0992	0.102	0.0843
Beryllium (Be), dissolved	mg/L		<0.0001				<0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.002				<0.001	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000006	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		0.026	<0.008	<0.008	<0.008	<0.05	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.00001		0.00003	0.00003	**0.00075**	0.0000372	0.0000643	0.0000244	0.0000233	0.000025	0.000028	0.000034	0.000036	0.00003	0.00004	0.000032	0.000037	0.000035
Calcium (Ca), dissolved	mg/L		55	50.7	64.9	55.8	57.8	76.2	20.9	46.2	55.4	51.1	50.2	58.4	62.2	65.6	80	77	75.6	76
Chromium (Cr), dissolved	mg/L		0.0011		<0.001	<0.001	<0.001	<0.00010	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		<0.0004		<0.0005	<0.0005	<0.0005	0.0000116	0.0000513	0.0000197	0.0000143	0.000025	0.000024	0.000031	0.000022	0.000021	0.000015	0.000011	0.00002	0.000017
Copper (Cu), dissolved	mg/L		0.0034		0.0004	0.0004	0.0004	0.000229	0.00184	0.000505	0.000406	0.000574	0.000426	0.00024	0.000278	0.000228	0.000278	0.000245	0.000216	0.000287
Iron (Fe), dissolved	mg/L	**0.35**	0.082	0.047	<0.005	0.031	0.049	0.0088	0.213	0.0306	0.0198	0.039	0.0486	0.0219	0.0094	0.0183	0.0036	0.0026	0.0032	0.0216
Lead (Pb), dissolved	mg/L		0.0002		<0.0005	<0.0005	<0.0002	<0.0000050	0.000023	0.0000081	<0.0000050	<0.0000050	0.000009	<0.0000050	<0.0000050	<0.0000050	0.000006	<0.0000050	0.000005	<0.0000050
Lithium (Li), dissolved	mg/L					0.003	<0.005	0.00469	0.00124	0.00245	0.0028	0.0021	0.00227	0.00223	0.00311	0.00306	0.00374	0.00394	0.00393	0.00418
Magnesium (Mg), dissolved	mg/L		9.4	9.23	13.3	10.7	10.7	17.7	4.09	8.2	11	10	8.76	11.4	13.8	14.5	18.2	17	17.8	18
Manganese (Mn), dissolved	mg/L		0.018	0.031	0.033	0.023	0.024	0.0284	0.0121	0.0158	0.0168	0.0273	0.0258	0.0362	0.0317	0.03	0.0302	0.0195	0.0249	0.022
Mercury (Hg), dissolved	mg/L		<0.00001			<0.00001		<0.0000020	0.0000049	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.0008				0.002	0.00221	0.000622	0.00108	0.00138	0.00134	0.00116	0.00146	0.00165	0.00174	0.00173	0.00135	0.00141	0.00192
Nickel (Ni), dissolved	mg/L		0.001				<0.001	0.00108	0.00175	0.000524	0.000639	0.000772	0.000507	0.000563	0.000702	0.000674	0.000813	0.000733	0.000826	0.000829
Phosphorus (P), dissolved	mg/L		0.014					<0.0020	0.0166	<0.0020	<0.0020	<0.0020	<0.0020	0.0031	0.0033	<0.0020	<0.0020	0.0033	0.0024	0.01
Potassium (K), dissolved	mg/L		1.5	1	1	<1	1.22	1.88	2.24	1.2	1.51	1.32	1.23	1.23	1.4	1.35	1.62	1.5	1.63	1.63
Selenium (Se), dissolved	mg/L		0.00013		<0.001	<0.001	0.0008	0.0012	0.000273	0.000705	0.000526	0.000668	0.000826	0.00137	0.00134	0.00159	0.00144	0.00132	0.0013	0.00126
Silicon (Si), dissolved	mg/L		2.8			2.97	3.32	4.47	2.04	2.84	3.13	3.09	2.97	3.2	3.52	4.03	4.24	4.04	3.79	4.43
Silver (Ag), dissolved	mg/L							<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		1.1	1.11	1.33	1.08	1.05	2.54	0.445	0.887	1.2	1.06	0.878	1.01	1.23	1.22	1.54	1.46	1.52	1.55
Strontium (Sr), dissolved	mg/L		0.16	0.154	0.196	0.16	0.174	0.254	0.0677	0.151	0.189	0.167	0.158	0.177	0.217	0.211	0.271	0.257	0.272	0.263
Sulphur (S), dissolved	mg/L		9	9.5	9.3	8.9	10	11.5	<3.0	8.8	9.4	10.3	9	9.8	11.1	11.6	12.7	12.7	11.6	12.1
Thallium (Tl), dissolved	mg/L							0.000003	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		<0.002					<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		0.0019	<0.003	<0.003	<0.003	<0.005	<0.00050	0.00069	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L				0.00068	0.0024	0.0027	0.00616	0.000573	0.00178	0.0026	0.00233	0.00223	0.00307	0.0041	0.00426	0.0057	0.00501	0.00509	0.00567
Vanadium (V), dissolved	mg/L		<0.0003					<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.005	<0.005	<0.005	<0.005	<0.005	0.00532	0.00749	0.00289	0.00218	0.0028	0.00426	0.0045	0.00606	0.00375	0.00576	0.00405	0.00393	0.00364
Zirconium (Zr), dissolved	mg/L		<0.0003					<0.00010	0.00015	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-21	KZ-21	KZ-21	KZ-21
		Guideline	4-May-16	15-May-16	13-Jun-16	26-Jul-16	27-Aug-16	7-Sep-16	1-Oct-16	7-Apr-95	11-Jun-95	22-Aug-95	13-Sep-95	27-Aug-16	7-Sep-16	4-Oct-16	5-Apr-95	8-May-95	11-Jun-95	23-Jul-95
Discharge (Flow)	L/s				280.4	319.6	1080.3	559.4	295.1					44.1	57.2	80.8				
Total Suspended Solids	mg/L		2.1	2.9	<1.0	<1.0	5.6	<1.0	<1.0	<4	<4	<4	<4	1.3	<1.0	1.4	<4	28	<4	<4
pH (field)	pH units	**6.5-9**	7.59	7.72	7.75	7.63	7.77	7.47	7.69					7.51	7.4	7.47				
pH (lab)	pH units	**6.5-9**	8.15	8.37	8.31	8.27	8.14	7.96	8.06	8.1	7.8	7.9	8.1	8.04	8.06	8.03	7.3	7.3	7.7	8
Specific Conductance (field)	µS/cm		338.2	361.7	242.7	328.3	331.9	261.6	250.1					397.6	327.8	308.2				
Specific Conductance (lab)	µS/cm		321	355	302	326	282	291	288	354	275	279	274	339	350	349	638	186	291	449
Temperature (field)	C		1	5.2	8.6	8.5	5.7	6.5	4.6					4	3.8	0.4				
Dissolved Oxygen (field)	mg/L	**6.5**	10.37	9.3	7.14	8.15	9.67	**5.23**	8.22					10.81	9.45	10.87				
Dissolved Oxygen (field)	%		84.9	85	70.2	80.8	88.6	50	73.4					97.1	84.6	87.9				
ORP (field)	mV		124.4	122.9	164.2	95.9	277.4	107.5	119.5					209.4	72.5	108				
Turbidity (internal)	NTU		1.44		0.324	0.8	3.87	0.15	-0.08					1.698	0.52	1.218				
Hardness (from total)	mg/L		165	206	160	174	152	151	141	211	173	193	202	187	184	184	378	107	174	284
Hardness (from dissolved)	mg/L		164	206	155	175	147	154	148	209	158	187	202	186	190	182	387	28	156	279
Colour	TCU		22.9	<5.0	6.9		16							12.3						
Total Acidity	mg/L		0.51	<0.50	<0.50	<0.50	<0.50	0.53	<0.50					1.13	<0.50	<0.50				
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50					<0.50	<0.50	<0.50				
Alkalinity, total	mg/L		148	170	132	146	118	128	123	192	149	167	164	161	168	159	356	94.6	137	241
Alkalinity, bicarbonate HCO3	mg/L		181	201	158	178	144	157	150			204	200	196	205	194				294
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50			<0.5	<0.5	<0.50	<0.50	<0.50				<0.5
Alkalinity, carbonate CO3	mg/L		<0.50	2.8	1.92	<0.50	<0.50	<0.50	<0.50			<0.5	<0.5	<0.50	<0.50	<0.50				<0.5
Alkalinity, PP carbonate CO3	mg/L		<0.50	2.33	1.6	<0.50	<0.50	<0.50	<0.50			<0.5	<0.5	<0.50	<0.50	<0.50				<0.5
Chloride	mg/L	**120**	1.1	0.77	<0.50	<0.50	1.1	0.95	0.58					0.72	1	0.91				
Fluoride	mg/L	**0.12**	0.1	0.12	0.087	0.098	0.082	0.099	0.1					0.061	0.059	0.059				
Sulphate, dissolved	mg/L	*	20.8	27.8	28.9	32.3	26.6	26.8	25.1	16.0	13.8	14.4	13.7	17.9	22.1	25.8	38.6	13	26.3	40.2
Cyanide, total	mg/L	**0.005**	0.0005	<0.00050	0.00064	<0.00050	<0.00050	0.00067	0.00056	<0.001	<0.001	<0.001	<0.001	<0.00050	0.0007	<0.00050	<0.001	<0.001	<0.001	<0.001
Cyanide, Weak Acid Dissociable	mg/L		<0.00050	0.0005	0.00071	0.00054	<0.00050	0.0007	0.00072	<0.001	<0.001	<0.001	<0.001	<0.00050	0.00071	<0.00050	<0.001	<0.001	<0.001	<0.001
Ammonia (N)	mg/L	**0.197**	0.0102	0.0112	0.011	0.014	0.028	0.018	**0.29**	0.018	<0.005	<0.005	<0.005	0.014	0.013	0.0085	0.099	0.008	<0.005	<0.005
Nitrite (N)	mg/L	*	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.005	<0.005	<0.005	<0.005	<0.0020	<0.0020	<0.0020	<0.005	<0.005	<0.005	<0.005
Nitrate (N)	mg/L	**3**	0.0702	0.0517	0.0149	0.0227	0.0189	0.0913	0.158	0.21	0.09	<0.02	0.06	0.0415	0.0601	0.133	0.24	<0.02	<0.02	<0.02
Nitrite & Nitrate, as N	mg/L		0.0702	0.0517	0.0149	0.0227	0.0189	0.0913	0.158	0.21	0.09	<0.02	0.06	0.0415	0.0601	0.133	0.24	<0.02	<0.02	<0.02
Phosphorus,total-colourimetric	mg/L		0.0083	0.0047	0.0037	0.0046	0.0096	0.0047	0.0036					0.0206	0.0223	0.0284				
Phosphorus, Total Dissolved	mg/L		0.0101	0.0038	0.0039	0.004	0.0096	0.0054	0.0027					0.0206	0.0194	0.0175				
Dissolved Organic Carbon	mg/L		4.16	3.08	1.47	2.6	4.79	1.58	1.19					3.14	2.1	1.84				
Aluminum (Al), total	mg/L	*	0.0181	0.0075	0.0073	0.0077	0.0612	0.00233	0.00137	0.011	0.041	0.019	0.013	0.0113	0.0108	0.0115	0.01	**0.28**	0.056	0.012
Antimony (Sb), total	mg/L	**0.009**	<0.000050	0.000058	0.00006	0.000056	0.000079	0.000043	0.000033					0.000025	0.000021	<0.000020				
Arsenic (As), total	mg/L	**0.005**	0.000998	0.000657	0.000689	0.00054	0.000805	0.000239	0.000236	0.0011	0.0005	0.0006	0.00025	0.000468	0.00034	0.000291	0.0014	**0.01**	0.002	0.00072
Barium (Ba), total	mg/L		0.0619	0.0721	0.0689	0.0686	0.0628	0.0521	0.0543	0.048	0.041	0.041	0.042	0.045	0.0411	0.0381	0.069	0.045	0.043	0.06
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	0.00001	<0.000010	<0.000010	<0.000010	<0.0001	<0.0001	<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.0001		<0.0001	<0.0001
Bismuth (Bi), total	mg/L		<0.000020	<0.000020	<0.000020	<0.000010	<0.000010	<0.0000050	<0.0000050	<0.002	<0.002	<0.002	<0.002	<0.0000050	<0.0000050	<0.0000050	<0.002	<0.002	<0.002	<0.002
Boron (B), total	mg/L	**1.5**	<0.050	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010	0.014	0.017	0.01	0.014	<0.010	<0.010	<0.010	0.083	0.013	0.11	0.021
Cadmium (Cd), total	mg/L	*	0.000052	0.000031	0.000041	0.000035	0.000053	0.000016	0.000013	0.00003	0.00002	0.00017	0.00002	0.000072	0.000024	0.000018	0.00001	0.00001	<0.00001	<0.00001
Calcium (Ca), total	mg/L		48.5	61.5	49.8	53	47	45.2	43.4	55	46	51	53	49.6	47.2	47.9	92	28	45	71
Chromium (Cr), total	mg/L	**0.001**	<0.00050	<0.00050	<0.00050	<0.00010	0.00018	<0.00010	<0.00010	0.0004	0.0004	**0.0017**	0.0008	<0.00010	<0.00010	<0.00010	0.0003	**0.0011**	0.0006	**0.0012**
Cobalt (Co), total	mg/L		0.00006	0.000034	0.00003	0.000028	0.00009	0.000011	0.000007	<0.0004	<0.0004	<0.0004	<0.0004	0.000021	0.000013	0.000016	<0.0004	0.0008	<0.0004	<0.0004
Copper (Cu), total	mg/L	*	0.00088	0.00061	0.00068	0.00079	0.00158	0.000611	0.000384	<0.0002	0.0006	0.0008	0.0002	0.000325	0.000182	0.000172	0.0003	0.002	0.0016	0.0005
Iron (Fe), total	mg/L	**1**	0.3	0.122	0.124	0.0941	0.234	0.0053	0.0037	0.012	0.033	0.015	0.009	0.0174	0.0108	0.0138	0.51	**2.7**	0.42	0.36
Lead (Pb), total	mg/L	*	0.000115	<0.000050	<0.000050	0.000032	0.000669	0.000007	0.000035	0.0005	0.0004	0.0012	0.0002	0.000132	0.000006	0.000009	0.0007	<0.0001	**0.032**	0.0001
Lithium (Li), total	mg/L		0.00322	0.00341	0.00219	0.00325	0.00241	0.00211	0.0022					0.00172	0.00144	0.001				
Magnesium (Mg), total	mg/L		10.6	12.6	8.72	10	8.31	9.11	7.86	18	14	16	17	15.4	16	15.5	36	8.9	15	26
Manganese (Mn), total	mg/L	*	0.0489	0.0221	0.0235	0.0254	0.0453	0.00147	0.000661	0.0002	0.001	0.0005	0.0004	0.00648	0.00342	0.00338	0.16	0.3	0.036	0.035
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000020	<0.0000020	<0.0000020	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Mo), total	mg/L	**0.073**	0.00149	0.00179	0.00119	0.00142	0.0011	0.00133	0.00121	0.0007	<0.0004	<0.0004	0.0004	0.00107	0.000991	0.000879	<0.0004	<0.0004	<0.0004	<0.0004
Nickel (Ni), total	mg/L	*	0.00101	0.00078	0.00056	0.00059	0.00092	0.000411	0.000317	<0.001	<0.001	0.001	<0.001	0.000584	0.000373	0.000319	0.002	0.006	0.003	0.004
Phosphorus (P), total	mg/L		0.011	<0.010	<0.010	<0.0050	0.0109	0.0025	0.0066	<0.003	0.036	0.036	0.025	0.0243	0.0116	0.0078	0.005	0.094	0.017	0.006
Potassium (K), total	mg/L		1.38	1.48	1.22	1.17	1.16	1.08	1.09	0.69	0.59	0.53	0.57	0.545	0.497	0.434	2.6	1.8	1.2	1.7
Selenium (Se), total	mg/L	**0.002**	0.000756	0.000841	0.000671	0.000541	0.000544	0.000546	0.000711	0.0011	<0.00005	0.00006	0.00012	0.000729	0.000996	0.00115	0.00022	0.0001	<0.00005	0.00043

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-21	KZ-21	KZ-21	KZ-21
		Guideline	4-May-16	15-May-16	13-Jun-16	26-Jul-16	27-Aug-16	7-Sep-16	1-Oct-16	7-Apr-95	11-Jun-95	22-Aug-95	13-Sep-95	27-Aug-16	7-Sep-16	4-Oct-16	5-Apr-95	8-May-95	11-Jun-95	23-Jul-95
Silicon (Si), total	mg/L		3.1	3.41	2.84	3.43	3.43	2.98	2.91	2.9	2.8	2.8	2.8	3.28	2.9	2.94	6.7	2.9	3.5	4.3
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.000010	<0.000010	<0.000010	<0.0000050	<0.0000050	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000050	<0.0000050	<0.0000050	<0.00001	<0.00001	0.00008	<0.00001
Sodium (Na), total	mg/L		0.92	1.29	0.86	1.06	0.89	0.944	0.88	0.9	0.82	0.81	0.82	0.8	0.781	0.751	3.2	0.7	1.3	1.9
Strontium (Sr), total	mg/L		0.161	0.189	0.168	0.17	0.151	0.133	0.146	0.16	0.13	0.15	0.15	0.167	0.145	0.159	0.25	0.073	0.12	0.2
Sulphur (S), total	mg/L		<15	<15	<15	10.6	9.2	8.6	7.8	5	3.9	4.7	4.7	6.2	7.2	8.7	12	4.2	8.2	13
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	0.000003	<0.0000020	<0.0000020	0.000004	<0.0000020	<0.0000020					<0.0000020	<0.0000020	<0.0000020				
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.003	0.005	0.003	0.003	<0.00020	<0.00020	<0.00020	0.008	<0.002	0.005	0.007
Titanium (Ti), total	mg/L		<0.0050	<0.0050	<0.0050	<0.0020	0.0029	<0.00050	<0.00050	0.0018	0.0018	0.0015	0.0017	<0.00050	<0.00050	0.0006	0.0028	0.011	0.003	0.002
Uranium (U), total	mg/L	**0.015**	0.00315	0.00387	0.00205	0.00226	0.00148	0.00187	0.0017					0.00166	0.00192	0.00174				
Vanadium (V), total	mg/L		<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020	<0.0003	<0.0003	<0.0003	<0.0003	<0.00020	<0.00020	<0.00020	<0.0003	0.0007	<0.0003	<0.0003
Zinc (Zn), total	mg/L	*	0.0064	0.004	0.004	0.0036	0.0079	0.00127	0.00103	0.007	0.009	0.004	0.004	0.00376	0.00133	0.00102	0.003	**0.046**	0.007	0.002
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	0.00011	<0.00010	<0.00010	<0.0003	0.0013	<0.0003	0.0003	<0.00010	<0.00010	<0.00010	0.0006	0.0006	0.0007	0.0004
Aluminum (Al), dissolved	mg/L	*	0.00341	0.00157	0.00182	0.00156	0.00488	0.00088	0.00082	0.016	0.018	0.022	0.011	0.00725	0.00694	0.00632	<0.006	<0.006	0.019	<0.0063
Antimony (Sb), dissolved	mg/L		0.000039	0.000047	0.000064	0.000054	0.000062	0.000045	0.000036					0.000029	0.000023	<0.000020				
Arsenic (As), dissolved	mg/L		0.000619	0.000588	0.000518	0.000411	0.000441	0.000241	0.000271	0.00035	0.0004	0.0006	0.00023	0.000493	0.000352	0.000298	0.00021	0.0002	0.0012	0.00018
Barium (Ba), dissolved	mg/L		0.0603	0.0701	0.064	0.0661	0.0572	0.0559	0.0547	0.048	0.038	0.041	0.043	0.0435	0.0448	0.0374	0.072	0.0039	0.041	0.057
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.0001	<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.002	<0.002	<0.002	<0.002	<0.0000050	<0.0000050	<0.0000050	<0.002	<0.002	<0.002	<0.002
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.065	0.016	0.011	0.015	<0.010	<0.010	<0.010	0.015		0.031	0.019
Cadmium (Cd), dissolved	mg/L	*	0.000031	0.000022	0.0000213	0.000018	0.000022	0.000018	0.000011	0.00003	<0.00001	0.00013	0.00002	0.000023	0.000021	0.000016	<0.00001	<0.00001	<0.00001	<0.00001
Calcium (Ca), dissolved	mg/L		47.7	62	48	53.2	44.4	47.1	45.8	54	42	50	53	48.1	50.1	48.2	94	4.8	41	69
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0004	0.0003	0.0018	0.0006	<0.00010	<0.00010	<0.00010	0.0003	<0.0002	0.0004	0.0002
Cobalt (Co), dissolved	mg/L		0.000023	0.000013	0.0000161	0.000006	0.000018	0.000006	0.000009	<0.0004	<0.0004	<0.0004	<0.0004	0.000014	0.000006	0.000008	<0.0004	<0.0004	<0.0004	<0.0004
Copper (Cu), dissolved	mg/L		0.000567	0.00047	0.000504	0.000459	0.00105	0.000606	0.000342	<0.0002	0.0004	0.0009	0.0003	0.000306	0.000178	0.00009	0.0004	0.0007	0.0017	0.0006
Iron (Fe), dissolved	mg/L	**0.35**	0.092	0.0304	0.0339	0.0116	0.0298	<0.0010	<0.0010	<0.005	0.011	0.017	0.005	0.0089	0.0047	0.0025	0.009	<0.005	0.22	0.019
Lead (Pb), dissolved	mg/L		0.000027	0.000007	<0.0000050	<0.0000050	0.000072	<0.0000050	<0.0000050	0.0004	<0.0001	0.0005	0.0001	0.000041	<0.0000050	<0.0000050	0.0007	<0.0001	0.002	0.0002
Lithium (Li), dissolved	mg/L		0.00291	0.00302	0.0023	0.00272	0.0017	0.00256	0.00225					0.00158	0.00138	0.00066				
Magnesium (Mg), dissolved	mg/L		10.9	12.4	8.48	10.2	8.68	8.77	8.31	18	13	15	17	16	15.8	15	37	3.9	13	26
Manganese (Mn), dissolved	mg/L		0.0209	0.01	0.0144	0.0054	0.0111	0.000293	0.000328	<0.0002	0.0002	0.0005	0.003	0.00411	0.00205	0.00185	0.16	<0.0002	0.015	0.008
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000020	<0.0000020	<0.0000020	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Mo), dissolved	mg/L		0.00149	0.00172	0.00121	0.0014	0.00106	0.00138	0.00121	0.0006	<0.0004	<0.0004	0.0006	0.00104	0.000969	0.000857	<0.0004	0.0031	<0.0004	0.0005
Nickel (Ni), dissolved	mg/L		0.000783	0.000711	0.00049	0.000484	0.000756	0.000379	0.000285	<0.001	<0.001	0.002	<0.001	0.000568	0.000349	0.0003	0.002	<0.001	0.003	0.002
Phosphorus (P), dissolved	mg/L		0.0058	0.0033	<0.0020	<0.0020	0.0035	0.0046	<0.0020	0.075	0.045	0.044	0.043	0.0183	0.012	0.0062	0.011	0.009	0.018	0.017
Potassium (K), dissolved	mg/L		1.41	1.56	1.25	1.17	1.14	1.17	1.14	0.67	0.51	0.52	0.59	0.506	0.55	0.423	2.7	1.6	1.3	1.6
Selenium (Se), dissolved	mg/L		0.000782	0.000866	0.000705	0.00049	0.000533	0.000493	0.000772	0.00027	<0.00005	0.00008	0.0001	0.000712	0.000962	0.0011	0.00025	0.0001	<0.00005	0.00038
Silicon (Si), dissolved	mg/L		2.98	3.27	2.7	3.57	3.05	3.19	3.33	2.9	2.5	2.8	2.9	2.98	3.23	2.81	6.9	1.9	3.3	4.3
Silver (Ag), dissolved	mg/L		<0.0000050	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000050	<0.0000050	<0.0000050	<0.00001	<0.00001	<0.00001	<0.00001
Sodium (Na), dissolved	mg/L		0.929	1.27	0.915	1.03	0.919	0.934	0.897	0.81	0.73	0.83	0.84	0.839	0.776	0.737	3.3	0.7	1.1	1.9
Strontium (Sr), dissolved	mg/L		0.162	0.191	0.153	0.164	0.143	0.148	0.154	0.16	0.12	0.15	0.15	0.162	0.169	0.15	0.26	0.03	0.11	0.2
Sulphur (S), dissolved	mg/L		7.5	8.9	10	10.3	8.5	8.1	8.8	4.9	3.6	4.7	4.8	6	6.2	8.4	12	4.2	6.6	13
Thallium (Tl), dissolved	mg/L		<0.0000020	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020					<0.0000020	<0.0000020	<0.0000020				
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.004	0.005	0.002	0.003	<0.00020	<0.00020	<0.00020	0.007	<0.002	0.005	0.006
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0015	0.0013	0.0014	0.0016	<0.00050	<0.00050	<0.00050	0.0023	<0.0003	0.0014	0.0018
Uranium (U), dissolved	mg/L		0.00307	0.00375	0.00194	0.00225	0.00159	0.00196	0.00173					0.00165	0.00193	0.00171				
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.0003	<0.0003	<0.0003	<0.0003	<0.00020	<0.00020	<0.00020	<0.0003	<0.0003	<0.0003	<0.0003
Zinc (Zn), dissolved	mg/L		0.00357	0.00239	0.00239	0.00095	0.00315	0.00093	0.0004	0.006	0.004	0.003	0.003	0.00095	0.00092	0.00074		<0.001	0.006	0.003
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0003	0.0005	<0.0003	0.0004	<0.00010	<0.00010	<0.00010	0.0003	<0.0003	<0.0003	0.0003

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21
		Guideline	15-Aug-95	22-Aug-95	30-Aug-95	6-Sep-95	13-Sep-95	23-Aug-02	19-Aug-04	23-Aug-06	14-Aug-08	19-Aug-10	16-Aug-12	21-Aug-14	29-Apr-15	11-May-15	23-Jun-15	28-Jul-15	23-Aug-15	9-Sep-15
Discharge (Flow)	L/s														153.6	1916	948	809.8	1541.5	1149.6
Total Suspended Solids	mg/L		<4	<4	<4	<4	<4	7	<4	<4	5	1	<4.0	<4.0	3.8	21.3	1.7	2	2.4	1.3
pH (field)	pH units	**6.5-9**								7.9	8.1	7.6	7.8	7.69	7.39	7.76	7.9	8.01	7.82	7.93
pH (lab)	pH units	**6.5-9**	7.8	7.9	7.7	8.3	8.1		8.1	8.1	8.3	8.34	8.22	8.28	8.38	7.78	8.19	8.21	8.04	8.25
Specific Conductance (field)	µS/cm									341	460	526	402	490	500.9	141.4	360.4	411.1	345.6	378.1
Specific Conductance (lab)	µS/cm		451	407	452	392	323	325	473	419	430	552	415	471	572	173	369	407	368	405
Temperature (field)	C									7.3	10.0	10.8	10.0	9.7	-0.3	-0.3	10.2	11.8	6.2	4.5
Dissolved Oxygen (field)	mg/L	**6.5**								9.8	10.7		10.9		12.8	12.2	10.31	9.53	10.5	11.4
Dissolved Oxygen (field)	%									86	111		94.5		101	94	91.7	88.2	97	101
ORP (field)	mV														176.5	158.5	51.7	106.1	344.9	98.8
Turbidity (internal)	NTU																1.4	1.95	2.33	1.82
Hardness (from total)	mg/L		255	264	240	229	279	193	276	240	261	293	221	258	306	92.9	212	231	201	223
Hardness (from dissolved)	mg/L		255	252	235	231	284	205	274	240	253	308	226	239	325	95.3	191	237	208	222
Colour	TCU														75.3	182	60.5	57.7	82.6	52.9
Total Acidity	mg/L							1.5	2.6	2.1	<0.5	4.8	0.53	0.73	2.9	0.66	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L							<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		225	212	200	179	202	149	233	210	200	260	185	213	267	75.9	160	183	160	177
Alkalinity, bicarbonate HCO3	mg/L		274	258	244	218	246	182	284	256	240	310	225	260	317	92.6	195	223	196	216
Alkalinity, hydroxide OH	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.2	3.3	<0.50	<0.50	4.38	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1.0	<0.5	3.5	2.7	<0.50	<0.50	3.65	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**													1.2	1.3	<0.50	0.76	<0.50	0.77
Fluoride	mg/L	**0.12**													**0.2**	0.065	**0.17**	**0.17**	**0.14**	**0.15**
Sulphate, dissolved	mg/L	*	43.9	41	34.6	35.1	38.5	34	29	34.9	37	50	37	33.6	46.6	9.95	35.5	37.7	35.7	38
Cyanide, total	mg/L	**0.005**	<0.001	<0.001	0.001	<0.001	<0.001								0.00059	0.00117	0.00052	0.00105	<0.00050	0.00098
Cyanide, Weak Acid Dissociable	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001								0.00057	0.00121	0.00056	0.00126	<0.00050	0.0009
Ammonia (N)	mg/L	**0.197**	<0.005	<0.005	<0.005	0.005	<0.005	<0.005	0.015	0.006	<0.005	0.14	0.008	0.034	0.0181	0.0074	<0.0050	0.0053	0.006	0.0087
Nitrite (N)	mg/L	*	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	0.0025		<0.0020	<0.0020	0.0025	<0.0020
Nitrate (N)	mg/L	**3**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.020	<0.020	0.0599	<0.020	<0.0020	0.0025	<0.0020	<0.0020
Nitrite & Nitrate, as N	mg/L		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.020	<0.020	0.0624	<0.020	<0.0020	0.0025	0.0036	<0.0020
Phosphorus,total-colourimetric	mg/L														0.0254	0.0318	0.0126	0.0116	0.0128	0.0085
Phosphorus, Total Dissolved	mg/L														0.0262	0.0325	0.0104	0.0124	0.0115	0.0086
Dissolved Organic Carbon	mg/L														4.42	11.2	7.12	7.2	10	6.9
Aluminum (Al), total	mg/L	*	<0.006	0.01	0.012	0.02	0.014	0.03	0.008	0.009	0.054	0.006	0.0127	0.00747	0.0082	**0.142**	0.0264	0.0415	0.027	0.0124
Antimony (Sb), total	mg/L	**0.009**											0.000133	0.000081	<0.000050	0.000068	0.000174	0.000152	0.000173	0.000147
Arsenic (As), total	mg/L	**0.005**	0.0011	0.0012	0.0011	0.0011	0.0012		0.003	0.003	0.0039	0.0017	0.00307	0.00297	0.00305	**0.00961**	0.00236	0.00291	0.00215	0.00219
Barium (Ba), total	mg/L		0.051	0.017	0.048	0.047	0.051	0.047	0.069	0.057	0.064	0.07	0.06	0.0623	0.0681	0.0463	0.0551	0.0612	0.0482	0.0552
Beryllium (Be), total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	0.000022	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.002	<0.002	<0.002	<0.002	<0.002				<0.001	<0.001	<0.0000050	<0.0000050	<0.000020	<0.000020	<0.000020	<0.0000050	<0.000020	<0.0000050
Boron (B), total	mg/L	**1.5**	0.018	0.017	0.045	0.026	0.019	<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02	<0.05	<0.050	<0.050	<0.010	<0.050	<0.010
Cadmium (Cd), total	mg/L	*	<0.00001	0.00003	<0.00001	0.00001	<0.00001		0.00001	0.00001	**0.00036**	<0.00001	0.00002	0.00001	0.0000136	0.0000575	0.0000149	0.0000168	0.000025	0.000018
Calcium (Ca), total	mg/L		64	66	60	57	69	47.9	69.4	61.5	67.1	70.2	55.9	63.2	73.9	23.8	54.3	56.4	48.6	54.4
Chromium (Cr), total	mg/L	**0.001**	**0.0022**	0.0005	0.0005	0.0004	0.0002		<0.001	<0.001	<0.001	<0.001	0.00012	0.00012	<0.00050	0.00058	<0.00050	0.00018	<0.00050	0.00012
Cobalt (Co), total	mg/L		<0.0004	<0.0004	<0.0004	<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	<0.0005	0.000097	0.000088	0.000203	0.000612	0.000093	0.000109	0.000118	0.000106
Copper (Cu), total	mg/L	*	0.0004	0.0007	0.0006	0.0007	0.0007		0.0004	0.0006	0.0008	0.0003	0.000559	0.000414	0.00054	0.0015	0.00108	0.000678	0.0012	0.000688
Iron (Fe), total	mg/L	**1**	0.36	0.44	0.51	0.43	0.43	0.561	0.46	0.508	0.916	0.29	0.484	0.526	**1.25**	**3.71**	0.443	0.488	0.386	0.338
Lead (Pb), total	mg/L	*	<0.0001	<0.0001	<0.0001	0.0006	<0.0001		<0.0005	<0.0005	0.0003	<0.0002	0.000025	0.000026	<0.000050	0.000225	<0.000050	0.0000412	<0.000050	0.000018
Lithium (Li), total	mg/L									0.004	<0.005	0.007	0.00395	0.00483	0.00729	0.00166	0.00262	0.00385	0.00325	0.00338
Magnesium (Mg), total	mg/L		23	24	22	21	26	17.8	24.9	21	22.6	28.6	19.8	24.2	29.6	8.13	18.6	22	19.4	21.1
Manganese (Mn), total	mg/L	*	0.026	0.035	0.056	0.051	0.036	0.074	0.046	0.052	0.109	0.03	0.0553	0.0385	0.19	0.378	0.0418	0.051	0.0562	0.0572
Mercury (Hg), total	mg/L	**0.000026**	<0.00001	<0.00001	<0.00001		<0.00001			<0.00001	<0.00002	<0.00002		0.0000039	<0.0000020	0.0000023	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.0007	<0.0004	<0.0004	0.0007	0.0008				0.002	0.002	0.0017	0.00172	0.00148	0.000888	0.00184	0.00177	0.0014	0.00144
Nickel (Ni), total	mg/L	*	0.002	0.002	0.003	0.003	0.002				0.003	0.002	0.00311	0.00212	0.00232	0.00381	0.00312	0.00318	0.00338	0.00294
Phosphorus (P), total	mg/L		0.007	0.012	0.013	0.008	0.009								0.033	0.102	0.026	0.0389	0.02	0.0103
Potassium (K), total	mg/L		1.4	1.4	1.2	1.2	1.5	<1	2	2	1.56	1.68	1.35	1.68	2.49	2.05	1.18	1.33	0.86	1.19
Selenium (Se), total	mg/L	**0.002**	0.0001	<0.00005	0.00009	0.00012	0.0002		<0.001	<0.001	0.0005	0.0003	0.000378	0.000368	0.000243	0.000215	0.000566	0.000549	0.000489	0.000747

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21
		Guideline	15-Aug-95	22-Aug-95	30-Aug-95	6-Sep-95	13-Sep-95	23-Aug-02	19-Aug-04	23-Aug-06	14-Aug-08	19-Aug-10	16-Aug-12	21-Aug-14	29-Apr-15	11-May-15	23-Jun-15	28-Jul-15	23-Aug-15	9-Sep-15
Silicon (Si), total	mg/L		3.7	3.9	3.9	4.4	4.2			4.14	4	4.32	4.23	3.87	6.07	2.94	3.05	4.2	4.07	4.35
Silver (Ag), total	mg/L	**0.00025**	<0.00001	<0.00001	<0.00001	0.00002	<0.00001						<0.0000050	<0.0000050	0.0000078	0.0000089	0.000018	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L		1.6	1.7	1.5	1.4	1.6	1.19	1.93	1.44	1.53	1.82	1.32	1.71	2.09	0.77	1.12	1.46	1.17	1.23
Strontium (Sr), total	mg/L		0.17	0.18	0.16	0.16	0.18	0.14	0.207	0.165	0.192	0.231	0.17	0.192	0.226	0.0729	0.156	0.182	0.153	0.164
Sulphur (S), total	mg/L		13	15	14	13	14	11.6	10.7	11.6	13	18	15	16	15	<15	<15	14.4	<15	13.7
Thallium (Tl), total	mg/L	**0.0008**											<0.0000020	<0.0000020	0.000002	0.0000024	0.0000035	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L		0.005	0.004	0.007	0.003	0.004				<0.005	<0.005	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		0.002	0.0018	0.002	0.0024	0.002	<0.003	<0.003	<0.003	0.005	<0.005	0.0007	<0.00050	<0.0050	0.006	<0.0050	0.00113	<0.0050	0.00053
Uranium (U), total	mg/L	**0.015**							0.00235	0.0024	0.0029	0.0029	0.00236	0.00254	0.00296	0.000758	0.00268	0.00283	0.00208	0.00262
Vanadium (V), total	mg/L		<0.0003	<0.0003	<0.0003	<0.0003	<0.0003						<0.00020	<0.00020	<0.00050	0.00062	<0.00050	0.00025	<0.00050	0.00036
Zinc (Zn), total	mg/L	*	0.002	0.002	0.001	0.004	0.001	<0.005	<0.005	<0.005	0.006	<0.005	0.0022	0.00229	0.0018	0.0059	0.0021	0.00282	0.0037	0.0028
Zirconium (Zr), total	mg/L		0.0004	0.0006	0.0005	0.0007	0.0014				<0.0005	<0.0005	<0.00010	0.00011	0.00033	0.00045	0.00012	0.00013	0.00015	0.00014
Aluminum (Al), dissolved	mg/L	*	<0.006	0.007	<0.006	0.012	0.014	<0.02	<0.001	0.005	0.003	0.009	0.00819	0.00145	0.00106	0.00619	0.00591	0.00537	0.00868	0.0105
Antimony (Sb), dissolved	mg/L												0.000123	0.000064	0.000045	0.000048	0.000174	0.000139	0.000179	0.000132
Arsenic (As), dissolved	mg/L		<0.00005	0.0005	0.00042	0.00055	0.00052		0.002	0.002	0.002	0.0014	0.00212	0.00154	0.00148	0.00099	0.00172	0.00191	0.00173	0.0017
Barium (Ba), dissolved	mg/L		0.049	0.049	0.044	0.046	0.054	0.047	0.062	0.057	0.06	0.074	0.0599	0.0616	0.0724	0.0302	0.0564	0.0617	0.0497	0.0534
Beryllium (Be), dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.002	<0.002	<0.002	<0.002	<0.002				<0.001	<0.001	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		0.015	0.019	0.014	0.015	0.02	<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	0.00002	0.00003	<0.00001	0.000012	0.000006	0.000009	0.000013	0.0000082	0.0000085	0.000012	0.000011
Calcium (Ca), dissolved	mg/L		64	63	58	58	71	50.9	68.8	61.4	65.6	75.8	58.6	57.4	78.3	24.4	48.4	58.9	51.2	53.1
Chromium (Cr), dissolved	mg/L		0.0003	0.0003	0.0003	0.0006	0.0003		<0.001	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00012	0.00012	0.00016
Cobalt (Co), dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	<0.0005	0.000072	0.000057	0.0000592	0.0000575	0.0000546	0.0000539	0.000069	0.000081
Copper (Cu), dissolved	mg/L		0.0004	0.0008	0.0005	0.0006	0.0006		0.0003	0.0006	0.0004	0.0004	0.000479	0.000277	0.000262	0.000693	0.000607	0.000564	0.000896	0.000627
Iron (Fe), dissolved	mg/L	**0.35**	0.029	0.034	0.1	0.15	0.085	0.232	0.015	0.304	0.095	0.068	0.233	0.0952	0.0981	0.252	0.182	0.157	0.167	0.164
Lead (Pb), dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0005	<0.0005	<0.0002	<0.0002	0.000007	<0.0000050	<0.0000050	0.0000068	0.0000054	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), dissolved	mg/L									0.004	<0.005	0.007	0.00405	0.00491	0.00787	0.00182	0.00355	0.00392	0.00264	0.00335
Magnesium (Mg), dissolved	mg/L		23	23	22	21	26	19	24.9	21.3	21.7	28.8	19.4	23.1	31.4	8.36	17.1	21.9	19.4	21.8
Manganese (Mn), dissolved	mg/L		0.017	0.023	0.037	0.035	0.03	0.034	0.032	0.048	0.034	0.03	0.0422	0.0242	0.139	0.0303	0.0177	0.0166	0.0232	0.0423
Mercury (Hg), dissolved	mg/L		<0.00001	<0.00001	<0.00001		<0.00001			<0.00001	<0.00002	<0.00002		0.0000023	<0.0000020	0.0000021	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		<0.0004	0.0004	0.0006	0.0008	0.0013				0.002	0.002	0.00167	0.00177	0.00157	0.000686	0.00187	0.00171	0.00138	0.00144
Nickel (Ni), dissolved	mg/L		0.002	0.002	0.002	0.003	0.002				0.002	0.002	0.00284	0.00192	0.00284	0.00249	0.00267	0.00302	0.00327	0.00296
Phosphorus (P), dissolved	mg/L		0.011	0.012	0.013	0.02	0.016								0.005	0.0142	0.01	0.0057	0.0069	0.0057
Potassium (K), dissolved	mg/L		1.4	1.4	1.2	1.2	1.6	<1	2	2	1.48	1.79	1.34	1.55	2.69	2.16	1.22	1.36	1	1.27
Selenium (Se), dissolved	mg/L		0.0001	0.00008	0.00009	0.00011	0.00019		<0.001	<0.001	0.0005	0.0003	0.000569	0.000338	0.000311	0.000155	0.000575	0.000525	0.000557	0.000624
Silicon (Si), dissolved	mg/L		3.7	3.7	3.7	4.4	4.5			4.18	4.54	4.56	4.33	3.89	6.6	2.58	3.87	4.17	4.59	4.68
Silver (Ag), dissolved	mg/L		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001						<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		1.6	1.6	1.5	1.4	1.7	1.18	1.96	1.52	1.44	2.04	1.29	1.62	2.5	0.633	1.09	1.42	1.22	1.27
Strontium (Sr), dissolved	mg/L		0.17	0.18	0.16	0.16	0.19	0.15	0.201	0.165	0.186	0.247	0.173	0.189	0.265	0.0759	0.155	0.186	0.152	0.177
Sulphur (S), dissolved	mg/L		13	15	13	13	14	12.4	10.4	12.3	15	17	15	<15	16.7	4	11.9	13.3	11.9	13.1
Thallium (Tl), dissolved	mg/L												<0.0000020	<0.0000020	0.0000028	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		0.005	0.004	0.004	0.005	0.004				<0.005	<0.005	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		0.002	0.0017	0.0018	0.002	0.002	<0.003	<0.003	<0.003	<0.005	<0.005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L								0.00123	0.0025	0.0029	0.0034	0.00237	0.00262	0.00314	0.000635	0.00275	0.00299	0.00217	0.00272
Vanadium (V), dissolved	mg/L		<0.0003	<0.0003	<0.0003	<0.0003	<0.0003						<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00037
Zinc (Zn), dissolved	mg/L		0.003	0.001	0.001	0.003	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	0.00134	0.00048	0.00079	0.00213	0.0009	0.00094	0.00195	0.00208
Zirconium (Zr), dissolved	mg/L		0.0007	0.0006	0.0005	0.0006	0.0016				<0.0005	<0.0005	0.00012	<0.00010	0.00014	<0.00010	<0.00010	<0.00010	0.00013	0.00011

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-22	KZ-22	KZ-22	KZ-22
		Guideline	15-Oct-15	19-Nov-15	1-Dec-15	19-Jan-16	9-Feb-16	20-Mar-16	19-Apr-16	4-May-16	15-May-16	13-Jun-16	25-Jul-16	26-Aug-16	6-Sep-16	30-Sep-16	7-Apr-95	11-Jun-95	22-Aug-95	13-Sep-95
Discharge (Flow)	L/s		855.8	377.6	224	171.4	160.6	116	357.4	433.2		269.5	1040.2	1872.1	1268.2	1039.4				
Total Suspended Solids	mg/L		3.3	<1.0	2.7	<1.0	1.2	1.2	3.2	2.8	2.7	1.3	7.1	81.5	2.5	1.9	<4	<4	<4	<4
pH (field)	pH units	**6.5-9**	7.74	8.21	7.4	6.99	7.13	6.98	7.45	7.42	7.94	8.04	7.57	7.87	7.69	7.66				
pH (lab)	pH units	**6.5-9**	8.29	8.43	8.05	8.02	8.01	7.85	8.14	8.09	8.39	8.39	8.19	8.18	8.18	8.22	7.2	7.3	8.4	7.7
Specific Conductance (field)	µS/cm		470.7	538.1	540.2	563.7	580.8	609.6	364	354.1	400.3	354.9	378.2	455.3	386.4	388.3				
Specific Conductance (lab)	µS/cm		462	534	546	620	624	639	437	356	394	445	375	389	418	439	195	85	96	89
Temperature (field)	C		0	0	0	0	0	0.5	0.5	0.8	10.6	12	9.8	8.3	7.4	1.1				
Dissolved Oxygen (field)	mg/L	**6.5**	13.2	12.4	10.8	11.1	12.9	10.35	12.84	11.85	10.5	9.48	10.13	9.58	10.89	12.65				
Dissolved Oxygen (field)	%		103	97	87	88	101	82.4	98.3	95	108	101.6	101.8	93.1	104.6	100.5				
ORP (field)	mV		287.2	138.7	113.8	255	201.2	107.4	67	51.4	72.4	146	104.5	288	104	84.5				
Turbidity (internal)	NTU		4.23	1.18	3		1.626	2.756	3.206	3.10		2.006	5.56	11.664	1.49	1.72				
Hardness (from total)	mg/L		240	286	303	359	338	340	205	193	216	236	225	209	224	228	106	30.1	55.9	63.8
Hardness (from dissolved)	mg/L		253	295	293	363	331	341	267	189	216	238	223	219	233	227	105	41.9	54.7	63.4
Colour	TCU		23.4	14.2	29	17.1	28.6	<5.0	31.4	46.4	19.6	16.6		42.4						
Total Acidity	mg/L		<0.50	<0.50	<0.50	4.47	4.41	8.85	0.53	2	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				
Alkalinity, total	mg/L		207	243	254	315	312	320	199	164	190	213	168	169	188	195	94.6	39.5	47.5	48.3
Alkalinity, bicarbonate HCO3	mg/L		253	283	310	384	380	391	243	200	225	251	205	207	229	237			55.5	58.9
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50			<0.5	<0.5
Alkalinity, carbonate CO3	mg/L		<0.50	6.62	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	3.55	4.61	<0.50	<0.50	<0.50	<0.50			1.2	<0.5
Alkalinity, PP carbonate CO3	mg/L		<0.50	5.52	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.96	3.84	<0.50	<0.50	<0.50	<0.50			1	<0.5
Chloride	mg/L	**120**	0.7	0.67	0.72	0.6	1.2	0.77	0.63	1.2	0.78	0.87	1	0.97	1.3	0.59				
Fluoride	mg/L	**0.12**	**0.15**	**0.19**	**0.16**	**0.2**	**0.2**	**0.21**	**0.18**	**0.17**	**0.19**	**0.18**	**0.16**	**0.13**	**0.13**	**0.14**				
Sulphate, dissolved	mg/L	*	41.9	42.8	45.5	39.4	40.9	40.2	38.5	27.2	38.9	35.5	40.3	32.4	41.2	42	13.2	7.1	9.1	11.8
Cyanide, total	mg/L	**0.005**	<0.00050	<0.00050	<0.00050	0.00065	<0.00050	0.00059	0.00066	0.00075	0.00062	0.00069	0.00054	<0.00050	0.00084	0.00076	<0.001	<0.001	<0.001	<0.001
Cyanide, Weak Acid Dissociable	mg/L		<0.00050	<0.00050	<0.00050	0.00061	<0.00050	0.0008	<0.00050	0.0007	<0.00050	0.00063	<0.00050	<0.00050	0.00103	0.00077	<0.001	<0.001	<0.001	<0.001
Ammonia (N)	mg/L	**0.197**	0.0191	0.0585	0.0653	0.0955	0.0712	0.0592	0.0172	0.0147	<0.0050	0.011	0.04	0.039	0.026	0.052	0.09	0.018	0.006	<0.005
Nitrite (N)	mg/L	*	<0.0020	0.0026	0.0025	<0.0020	<0.0020	<0.0020	0.0055	<0.0020	<0.0020	<0.0020	0.0031	<0.0020	<0.0020	<0.0020	<0.005	<0.005	<0.005	<0.005
Nitrate (N)	mg/L	**3**	0.0253	0.0855	0.105	0.185	0.189	0.23	0.0615	0.0496	<0.0020	0.0073	0.0041	0.0044	0.0108	0.0122	0.02	<0.02	<0.02	<0.02
Nitrite & Nitrate, as N	mg/L		0.0253	0.0881	0.108	0.185	0.189	0.23	0.067	0.0496	<0.0020	0.0073	0.0072	0.0044	0.0108	0.0122	<0.02	<0.02	<0.02	<0.02
Phosphorus,total-colourimetric	mg/L		0.0133	0.0064	0.01	0.0066	0.0065	0.0058	0.0245	0.0203	0.0193	0.0151	0.0288	0.194	0.0171	0.0148				
Phosphorus, Total Dissolved	mg/L		0.0049	0.0043	0.0095	0.007	0.007	0.0063	0.0254	0.021	0.016	0.005	0.0297	0.191	0.0186	0.0109				
Dissolved Organic Carbon	mg/L		4.74	2.9	3.26	2.38	1.43	1.86	6.21	5.75	5.45	3.86	10.3	11.1	7.13	4.86				
Aluminum (Al), total	mg/L	*	0.0149	0.00329	0.00082	0.0072	0.0136	0.00784	0.0086	0.0103	0.0083	0.004	0.0387	**0.538**	0.0208	0.0128	0.007	<0.006	0.012	0.013
Antimony (Sb), total	mg/L	**0.009**	0.000079	0.000057	0.000049	0.000028	0.000035	0.00003	0.000071	0.000098	0.000105	0.000086	0.000222	0.000262	0.000143	0.000091				
Arsenic (As), total	mg/L	**0.005**	0.0028	0.00086	0.00114	0.00372	**0.00751**	0.00434	0.00339	0.00373	0.00298	0.00212	0.0043	**0.0331**	0.00242	0.0022	0.00016	<0.00005	0.0001	0.00007
Barium (Ba), total	mg/L		0.0603	0.0697	0.0706	0.09	0.0929	0.0888	0.0544	0.0504	0.0532	0.062	0.0575	0.14	0.0566	0.0581	0.049	0.011	0.029	0.024
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.00001	<0.000010	<0.000010	<0.000010	0.000045	<0.000010	<0.000010	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi), total	mg/L		<0.000020	<0.0000050	<0.0000050	0.000005	<0.0000050	<0.0000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.000010	0.000013	<0.0000050	<0.000010	<0.002	<0.002	<0.002	<0.002
Boron (B), total	mg/L	**1.5**	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.050	<0.050	<0.050	0.017	<0.010	<0.010	<0.010	0.016	0.062	0.029	0.007
Cadmium (Cd), total	mg/L	*	0.000013	0.000011	0.000007	0.00002	0.000023	0.000014	0.000021	0.000019	0.000011	0.000005	0.000028	0.0002	0.000015	0.00001	<0.00001	<0.00001	**0.00011**	<0.00001
Calcium (Ca), total	mg/L		58.7	70.4	74.2	88.7	84.3	84.4	50.7	48.1	54.6	59.6	54.7	54.7	55	57.4	26	6.6	13	15
Chromium (Cr), total	mg/L	**0.001**	<0.00050	<0.00010	<0.00010	0.0001	0.00013	<0.00010	<0.00050	<0.00050	<0.00050	<0.00050	0.00018	**0.0018**	0.00012	0.00013	0.0004	0.0002	0.0004	0.0009
Cobalt (Co), total	mg/L		0.000116	0.000071	0.00006	0.000318	0.000316	0.000276	0.000185	0.000149	0.000074	0.000052	0.000203	0.00271	0.000137	0.000089	<0.0004	<0.0004	<0.0004	<0.0004
Copper (Cu), total	mg/L	*	0.00077	0.000258	0.000217	0.000272	0.000299	0.000204	0.00046	0.00079	0.0007	0.00073	0.00125	0.0031	0.00066	0.0006	0.0002	0.0004	0.0007	0.0004
Iron (Fe), total	mg/L	**1**	0.581	0.125	0.0965	**1.32**	**2.07**	**1.47**	0.83	0.811	0.62	0.363	0.955	**9.98**	0.448	0.429	0.73	<0.005	0.05	0.048
Lead (Pb), total	mg/L	*	<0.000050	0.000005	<0.0000050	0.000049	0.000069	0.000024	<0.000050	<0.000050	<0.000050	<0.000050	0.000051	0.000841	0.000041	0.000023	0.0007	0.0006	0.0002	<0.0001
Lithium (Li), total	mg/L		0.00444	0.00714	0.00686	0.00983	0.00924	0.0107	0.00445	0.00415	0.00471	0.00573	0.00386	0.0041	0.00393	0.00338				
Magnesium (Mg), total	mg/L		22.7	26.7	28.7	33.5	30.9	31.4	19.1	17.7	19.4	21.3	21.4	17.7	21.1	20.5	10	3.3	5.7	6.4
Manganese (Mn), total	mg/L	*	0.0906	0.0757	0.0804	0.232	0.261	0.185	0.11	0.11	0.0333	0.0224	0.122	**1.84**	0.0729	0.0724	0.15	<0.0002	0.0046	0.0029
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000021	<0.0000020	<0.0000020	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Mo), total	mg/L	**0.073**	0.00156	0.00147	0.00161	0.00156	0.00156	0.00166	0.00158	0.00193	0.00207	0.00182	0.00157	0.00171	0.00139	0.0014	<0.0004	<0.0004	<0.0004	<0.0004
Nickel (Ni), total	mg/L	*	0.00204	0.0017	0.0018	0.00259	0.00264	0.00256	0.00235	0.00276	0.00239	0.00191	0.00412	0.0113	0.0028	0.00208		0.001	0.002	0.002
Phosphorus (P), total	mg/L		0.018	0.0084	0.0057	0.0228	0.0497	0.0291	0.028	0.017	0.017	0.014	0.0295	0.251	0.0105	0.0156	<0.003	0.01	0.007	<0.003
Potassium (K), total	mg/L		1.55	2.04	2.06	2.62	2.44	2.34	1.81	1.52	1.62	1.55	0.83	1.11	1.13	1.34	1.8	0.96	0.58	0.75
Selenium (Se), total	mg/L	**0.002**	0.000683	0.000744	0.0008	0.000637	0.000544	0.000512	0.000307	0.000343	0.000344	0.000327	0.0006	0.000836	0.00065	0.000811	<0.00005	<0.00005	<0.00005	0.00011

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-22	KZ-22	KZ-22	KZ-22
		Guideline	15-Oct-15	19-Nov-15	1-Dec-15	19-Jan-16	9-Feb-16	20-Mar-16	19-Apr-16	4-May-16	15-May-16	13-Jun-16	25-Jul-16	26-Aug-16	6-Sep-16	30-Sep-16	7-Apr-95	11-Jun-95	22-Aug-95	13-Sep-95
Silicon (Si), total	mg/L		4.33	5.85	6.48	7.29	6.89	6.71	4.63	3.92	3.49	3.8	5.08	5.34	4.22	4.26	5.1	1.4	1.2	1.3
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.000010	0.000016	<0.0000050	<0.000010	<0.00001	0.00002	<0.00001	<0.00001
Sodium (Na), total	mg/L		1.51	1.94	1.98	2.62	2.5	2.59	1.3	1.19	1.53	1.52	1.49	1.14	1.2	1.18	1.5	0.9	0.87	0.94
Strontium (Sr), total	mg/L		0.183	0.233	0.251	0.303	0.271	0.28	0.164	0.153	0.178	0.206	0.158	0.18	0.156	0.177	0.085	0.031	0.048	0.053
Sulphur (S), total	mg/L		<15	15.2	16.5	14.4	14	13.3	<15	<15	<15	<15	13.4	10.6	13.2	12.9	3.9	2.2	2.8	3.7
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000003	<0.0000020	<0.0000020	0.00001	<0.0000020	<0.0000020				
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020				
Titanium (Ti), total	mg/L		<0.0050	<0.00050	<0.00050	0.00056	0.00072	0.00057	<0.0050	<0.0050	<0.0050	<0.0050	<0.0020	0.0212	0.00076	<0.0020	0.0009	<0.0003	0.0006	0.0008
Uranium (U), total	mg/L	**0.015**	0.00323	0.00315	0.00336	0.00333	0.00307	0.00316	0.00237	0.00214	0.00251	0.00237	0.00224	0.00252	0.00253	0.00276				
Vanadium (V), total	mg/L		0.00095	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00050	0.00022	0.0022	<0.00020	<0.00020	<0.0003	<0.0003	<0.0003	<0.0003
Zinc (Zn), total	mg/L	*	0.0019	0.00121	0.00041	0.00225	0.00246	0.00137	0.0019	0.002	0.0012	<0.0010	0.0038	0.0317	0.00694	0.002	0.007	<0.001	0.002	0.001
Zirconium (Zr), total	mg/L		0.00015	0.00014	0.00018	0.00035	0.00039	0.00036	0.00014	0.00019	0.00012	0.00012	0.00019	0.00106	0.00011	0.00011	<0.0003	0.0003		<0.0003
Aluminum (Al), dissolved	mg/L	*	0.00179	0.00144	0.00067	0.00121	0.00071	0.002	0.00234	0.00256	0.0013	0.00096	0.00713	0.00349	0.00422	0.00238	0.007		0.009	0.008
Antimony (Sb), dissolved	mg/L		0.000084	0.000058	0.000043	0.000026	0.000029	0.000029	0.00009	0.000089	0.000097	0.000081	0.000216	0.000134	0.000137	0.000098				
Arsenic (As), dissolved	mg/L		0.00141	0.000595	0.00105	0.000606	0.000694	0.000374	0.00183	0.00172	0.00148	0.00131	0.00192	0.00169	0.00153	0.00141	0.00018	0.0001	0.0001	0.00007
Barium (Ba), dissolved	mg/L		0.0608	0.0711	0.0693	0.0897	0.0849	0.0842	0.0644	0.0482	0.0507	0.0564	0.0516	0.0529	0.056	0.0565	0.048	0.019	0.022	0.023
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	0.000007	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.002	<0.002	<0.002	<0.002
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		0.026	0.023	0.011
Cadmium (Cd), dissolved	mg/L	*	0.000007	0.000012	0.000007	0.000014	0.00001	0.000009	0.000016	0.00001	0.000005	<0.0000050	0.000009	0.000006	<0.0000050	<0.0000050	<0.00001	<0.00001	0.00006	<0.00001
Calcium (Ca), dissolved	mg/L		62.8	71.2	72.5	90.1	82.1	84.6	65.5	47.4	54.4	60.4	54.9	54.2	58.8	58.1	26	11	14	15
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0005	0.0003	0.0004	0.001
Cobalt (Co), dissolved	mg/L		0.00008	0.000061	0.000052	0.000131	0.000143	0.000189	0.000158	0.000078	0.000037	0.0000289	0.000063	0.000021	0.00002	0.000061	<0.0004	<0.0004	<0.0004	<0.0004
Copper (Cu), dissolved	mg/L		0.000265	0.000326	0.00022	0.000191	0.000194	0.000163	0.000391	0.000431	0.00042	0.000415	0.000898	0.000792	0.000581	0.000367	<0.0002		0.0007	0.0005
Iron (Fe), dissolved	mg/L	**0.35**	0.0784	0.0278	0.0802	0.0091	0.084	0.0068	0.316	0.282	0.15	0.0747	0.185	0.156	0.107	0.0432	0.064	0.13	0.02	0.024
Lead (Pb), dissolved	mg/L		<0.0000050	0.000018	<0.0000050	0.000005	<0.0000050	<0.0000050	0.000007	0.000006	<0.0000050	<0.0000050	<0.0000050	0.000011	<0.0000050	<0.0000050	0.0011	<0.0001	0.0002	<0.0001
Lithium (Li), dissolved	mg/L		0.00447	0.00695	0.0071	0.00955	0.00941	0.0109	0.0056	0.00399	0.0043	0.00547	0.00378	0.00342	0.00355	0.00376				
Magnesium (Mg), dissolved	mg/L		23.2	28.6	27.2	33.6	30.5	31.4	25.1	17.2	19.5	21.1	20.8	20.3	21	20	9.7	3.5	4.8	6.3
Manganese (Mn), dissolved	mg/L		0.0658	0.0737	0.074	0.164	0.153	0.143	0.113	0.0671	0.0083	0.0031	0.0327	0.00195	0.00208	0.0549	0.15	0.0051	0.0007	0.0013
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Mo), dissolved	mg/L		0.00167	0.00149	0.00156	0.00171	0.0017	0.00167	0.00176	0.0018	0.00202	0.00176	0.00154	0.00135	0.00136	0.00142	<0.0004	<0.0004	<0.0004	<0.0004
Nickel (Ni), dissolved	mg/L		0.00185	0.00183	0.00172	0.00229	0.00213	0.00233	0.00278	0.0025	0.00202	0.00179	0.00356	0.00296	0.0025	0.00193		0.002	0.002	0.002
Phosphorus (P), dissolved	mg/L		0.0047	0.0035	0.0044	<0.0020	0.0095	0.0033	0.0169	0.0095	0.0059	0.0029	0.0049	0.0082	0.0082	0.0056		0.01	0.006	0.008
Potassium (K), dissolved	mg/L		1.65	2.19	1.91	2.67	2.39	2.34	2.5	1.53	1.63	1.57	0.805	1.03	1.26	1.34	1.7	0.83	0.6	0.73
Selenium (Se), dissolved	mg/L		0.000716	0.0007	0.000783	0.000555	0.000567	0.000493	0.000361	0.000335	0.00034	0.000347	0.000565	0.000414	0.000632	0.00091	<0.00005	<0.00005	0.00005	0.00011
Silicon (Si), dissolved	mg/L		4.44	6.17	6.15	7.11	7.23	6.76	5.38	3.71	3.21	3.62	5.27	4.12	4.66	4.6	5	1.4	1.2	1.3
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.00001	<0.00001	<0.00001	<0.00001
Sodium (Na), dissolved	mg/L		1.49	2.02	1.85	2.7	2.41	2.43	1.86	1.17	1.52	1.6	1.34	1.27	1.22	1.16	1.6	0.78	0.81	0.94
Strontium (Sr), dissolved	mg/L		0.194	0.248	0.225	0.299	0.276	0.278	0.22	0.149	0.17	0.18	0.159	0.162	0.179	0.194	0.085	0.032	0.048	0.052
Sulphur (S), dissolved	mg/L		14.2	15.7	15.2	14.3	14.5	13.3	14.3	9.3	11	11.9	13.2	11.8	12.7	14.1	4	2	2.9	3.6
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020				
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020				
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050				
Uranium (U), dissolved	mg/L		0.0033	0.0033	0.00318	0.00338	0.00329	0.00306	0.00281	0.00216	0.00244	0.00253	0.00221	0.00231	0.00261	0.00279				
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.0003	<0.0003	<0.0003	<0.0003
Zinc (Zn), dissolved	mg/L		0.0005	0.00148	0.00048	0.00114	0.0008	0.00084	0.00134	0.00087	0.00029	0.00033	0.00145	0.00089	0.00161	0.00043	0.005	0.004	0.002	0.001
Zirconium (Zr), dissolved	mg/L		<0.00010	0.00013	0.00016	0.00018	0.00026	0.00018	0.00013	<0.00010	<0.00010	<0.00010	0.00011	0.00013	0.00011	0.0001	<0.0003	<0.0003		

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22
		Guideline	29-Apr-15	11-May-15	23-Jun-15	28-Jul-15	23-Aug-15	9-Sep-15	14-Oct-15	18-Nov-15	1-Dec-15	19-Jan-16	8-Feb-16	20-Mar-16	19-Apr-16	4-May-16	15-May-16	13-Jun-16	25-Jul-16	26-Aug-16
Discharge (Flow)	L/s		337.4	3993.8	1768	1521.0	2703.3	2504.8	1402	730.4	596.3	349.2	771.7	299.7	540.6	612.6		778.4	2012.7	4177
Total Suspended Solids	mg/L		1.5	16.5	<1.0	1.4	3.5	1.3	1	<1.0	1.5	1	1.1	<1.0	1.6	1.7	2.3	1.2	3.8	33.8
pH (field)	pH units	**6.5-9**	7.52	7.71	7.97	8.06	7.95	8.03	7.84	7.79	7.68	8.07	7.41	7.07	7.53	7.59	8.04	8.05	7.73	8.05
pH (lab)	pH units	**6.5-9**	8.36	7.81	8.24	8.19	8.1	8.25	8.32	8.41	8.08	8.15	8.09	8	8.18	8.22	8.38	8.33	8.25	8.21
Specific Conductance (field)	µS/cm		486.9	146	308.2	371.8	327.2	327	417.2	475.1	498.9	559.8	542.1	565	382.1	366	340.6	278.2	338.5	389.5
Specific Conductance (lab)	µS/cm		558	176	317	362	338	343	409	492	506	570	602	588	459	369	339	348	335	333
Temperature (field)	C		-0.2	-0.3	9.4	11.5	6	3.4	1.5	0	0	0	0	0.7	1.2	0.7	9.2	9.5	10.4	8.4
Dissolved Oxygen (field)	mg/L	**6.5**	13	12.4	10.49	9.47	10.6	11.7	12.5	10.4	11.1	11.5	10.8	10.59	11.66	11.93	10.8	10.09	10.01	10.11
Dissolved Oxygen (field)	%		102	96	91.3	86.9	98	101	101	82	88	91	84	84.6	94.2	95.6	108	101.7	102.4	98.8
ORP (field)	mV		145.9	150.7	66.7	98.1	307.1	98.7	307.6	153.3	98.6	127.7	146.4	100.1	96.4	32.8	61.4	125.2	110.3	274.1
Turbidity (internal)	NTU				0.64	0.98	2.03	0.76	1.53	-0.05	1.6	1.692	1.192	1.104	1.432	1.54		0.862	1.9	9.806
Hardness (from total)	mg/L		300	98	165	204	185	193	220	264	273	363	325	316	259	196	189	183	188	174
Hardness (from dissolved)	mg/L		323	102	177	210	187	192	218	265	268	334	326	322	279	193	201	183	192	183
Colour	TCU		44.5	180	28.6	32.2	47.9	30	13.7	9.7	18.3	10.4	17.3	<5.0	21	31.7	13.7	8.8		18.3
Total Acidity	mg/L		1.66	0.57	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.8	3.85	0.96	0.67	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		261	77.8	139	165	148	153	182	223	230	280	300	286	213	171	161	161	148	147
Alkalinity, bicarbonate HCO3	mg/L		311	94.9	170	201	180	187	218	261	281	342	366	349	260	209	190	191	181	179
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		3.95	<0.50	<0.50	<0.50	<0.50	<0.50	1.99	5.44	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.83	2.47	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		3.29	<0.50	<0.50	<0.50	<0.50	<0.50	1.66	4.53	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.36	2.06	<0.50	<0.50
Chloride	mg/L	**120**	0.75	0.87	<0.50	0.5	<0.50	0.62	0.67	0.63	<0.50	0.83	1.2	0.73	0.68	0.82	0.91	0.87	0.74	0.75
Fluoride	mg/L	**0.12**	**0.16**	0.059	0.12	0.12	0.1	0.11	0.11	**0.14**	0.12	**0.16**	**0.17**	**0.15**	**0.15**	**0.13**	**0.13**	0.11	0.12	0.096
Sulphate, dissolved	mg/L	*	45.7	9.12	28.4	32.7	32.3	32.8	35.6	40.4	40.3	42.8	41.1	45.3	40.1	29.6	28.4	28.6	34.9	29.7
Cyanide, total	mg/L	**0.005**	0.00051	0.00122	<0.00050	0.00085	<0.00050	0.00091	<0.00050	<0.00050	0.0005	0.00059	<0.00050	0.00057	0.00055	0.00075	0.00056	0.00066	<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L		0.00053	0.00119	0.00056	0.00091	<0.00050	0.00087	<0.00050	<0.00050	<0.00050	0.00077	0.00055	0.0007	<0.00050	0.00069	0.00054	0.00071	<0.00050	<0.00050
Ammonia (N)	mg/L	**0.197**	0.0273	0.0053	<0.0050	<0.0050	0.0092	<0.0050	0.0095	0.0338	0.0438	0.0431	0.0567	0.055	0.0105	0.0089	0.008	0.011	0.029	0.03
Nitrite (N)	mg/L	*	0.0025		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3**	0.12	<0.020	<0.0020	0.0033	0.0179	0.0192	0.0772	0.103	0.152	0.223	0.205	0.247	0.0913	0.0609	0.0137	0.0112	0.0074	0.0118
Nitrite & Nitrate, as N	mg/L		0.123	<0.020	<0.0020	0.0033	0.0179	0.0192	0.0772	0.103	0.152	0.223	0.207	0.247	0.0913	0.0609	0.0137	0.0112	0.0074	0.0118
Phosphorus,total-colourimetric	mg/L		0.014	0.0508	0.0052	0.0058	0.0072	0.0048	0.0049	0.0026	0.008	0.0042	0.0057	0.0036	0.0163	0.0109	0.0068	0.0038	0.0185	0.0683
Phosphorus, Total Dissolved	mg/L		0.0159	0.0169	0.006	0.009	0.0071	0.0046	0.003	0.0035	0.0082	0.0043	0.0062	0.0039	0.016	0.012	0.0072	0.004	0.0195	0.0726
Dissolved Organic Carbon	mg/L		3.27	12.4	4.96	3.04	6.2	4.5	2.88	2.2	1.91	2.23	0.77	1.39	4.36	5.29	3.77	2.74	6.29	5.14
Aluminum (Al), total	mg/L	*	0.0028	**0.151**	0.0123	0.017	0.0214	0.0088	0.0102	0.00714	0.00074	0.00571	0.015	0.00939	0.006	0.0085	0.0064	0.0072	0.0195	**0.2**
Antimony (Sb), total	mg/L	**0.009**	0.000038	0.000066	0.000092	0.000091	0.000115	0.000082	0.000052	0.000047	0.00004	0.000028	0.000034	0.000036	0.000064	0.000083	0.000056	0.000055	0.000119	0.000097
Arsenic (As), total	mg/L	**0.005**	0.00212	**0.00551**	0.00124	0.00167	0.00141	0.00128	0.00137	0.00113	0.000953	0.00228	0.00472	0.00364	0.00225	0.00227	0.00167	0.00114	0.00223	**0.00906**
Barium (Ba), total	mg/L		0.0793	0.0455	0.0564	0.0666	0.0541	0.0592	0.0625	0.0735	0.0759	0.0914	0.097	0.094	0.0679	0.0646	0.057	0.0604	0.059	0.0875
Beryllium (Be), total	mg/L		<0.000010	0.000014	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000018
Bismuth (Bi), total	mg/L		<0.0000050	<0.000020	<0.000020	<0.0000050	<0.000020	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.000010	<0.000010
Boron (B), total	mg/L	**1.5**	<0.01	<0.050	<0.050	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.050	<0.050	<0.050	0.013	<0.010
Cadmium (Cd), total	mg/L	*	0.0000255	0.0000631	0.0000148	0.0000268	0.000027	0.00002	0.000016	0.000017	0.000011	0.000026	0.000021	0.000021	0.000021	0.00002	0.000019	0.000015	0.000023	0.000144
Calcium (Ca), total	mg/L		78.2	26.1	45	54.3	48.6	52	59.7	70.2	71.3	99.2	83.1	83.7	66.6	52.1	51.6	51.1	50.5	48.4
Chromium (Cr), total	mg/L	**0.001**	<0.00010	0.00075	<0.00050	0.0001	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00050	0.0001	0.00067
Cobalt (Co), total	mg/L		0.000145	0.000386	0.000054	0.0000681	0.000093	0.000068	0.000063	0.000087	0.000039	0.000166	0.000235	0.000201	0.000132	0.000094	0.000057	0.000055	0.000101	0.00099
Copper (Cu), total	mg/L	*	0.000291	0.00166	0.00106	0.000547	0.00134	0.000607	0.000422	0.000355	0.00024	0.000278	0.000287	0.000263	0.00058	0.00067	0.00087	0.00082	0.00096	0.00182
Iron (Fe), total	mg/L	**1**	0.588	**2.1**	0.196	0.254	0.23	0.186	0.226	0.255	0.0546	0.651	**1.27**	**1.07**	0.456	0.459	0.336	0.174	0.472	**3.05**
Lead (Pb), total	mg/L	*	0.0000135	0.000233	<0.000050	0.0000279	0.000074	0.000025	0.000017	0.000109	<0.0000050	0.000036	0.000059	0.000036	<0.000050	<0.000050	<0.000050	<0.000050	0.000027	0.000449
Lithium (Li), total	mg/L		0.00669	0.00172	0.00229	0.00359	0.00264	0.00281	0.00351	0.00684	0.00572	0.00657	0.00857	0.00756	0.00468	0.0046	0.00341	0.00382	0.00329	0.00319
Magnesium (Mg), total	mg/L		25.4	7.99	12.9	16.7	15.4	15.4	17.3	21.6	23.1	28	28.6	26	22.5	16	14.6	13.5	15	13
Manganese (Mn), total	mg/L	*	0.113	0.208	0.0202	0.0279	0.0294	0.0327	0.04	0.0553	0.0392	0.111	0.178	0.117	0.0741	0.0616	0.0238	0.0168	0.0582	0.552
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	0.0000025	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.00144	0.000774	0.00121	0.00131	0.00114	0.000996	0.00118	0.00116	0.0014	0.00128	0.00137	0.00132	0.00154	0.00169	0.0013	0.00113	0.00111	0.001
Nickel (Ni), total	mg/L	*	0.0016	0.00279	0.00162	0.00189	0.002	0.00155	0.00111	0.00115	0.00111	0.0016	0.00204	0.00154	0.0019	0.00177	0.00125	0.00092	0.00205	0.00417
Phosphorus (P), total	mg/L		0.0137	0.067	0.011	0.0222	0.012	0.0054	0.0058	0.0074	0.0033	0.0127	0.0335	0.0244	0.017	0.01	0.011	<0.010	0.0133	0.0795
Potassium (K), total	mg/L		2.08	1.99	1.17	1.32	0.97	1.18	1.38	1.72	1.72	2.16	2.2	1.94	1.95	1.43	1.34	1.31	0.89	1.17
Selenium (Se), total	mg/L	**0.002**	0.000811	0.000222	0.000462	0.000512	0.000477	0.000679	0.001	0.000968	0.00115	0.00123	0.00073	0.00106	0.000661	0.000564	0.000479	0.000466	0.000497	0.000519

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22
		Guideline	29-Apr-15	11-May-15	23-Jun-15	28-Jul-15	23-Aug-15	9-Sep-15	14-Oct-15	18-Nov-15	1-Dec-15	19-Jan-16	8-Feb-16	20-Mar-16	19-Apr-16	4-May-16	15-May-16	13-Jun-16	25-Jul-16	26-Aug-16
Silicon (Si), total	mg/L		5.55	2.78	2.81	3.71	3.51	3.65	3.9	4.8	5.44	7.04	6.32	5.2	4.77	3.51	3.02	3.3	3.95	4.05
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	0.0000179	0.0000155	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.000010	<0.000010
Sodium (Na), total	mg/L		2.16	1.07	1.08	1.34	1.15	1.13	1.31	1.74	1.75	2.35	2.4	2.16	1.79	1.21	1.29	1.16	1.32	1.04
Strontium (Sr), total	mg/L		0.261	0.0839	0.152	0.19	0.158	0.159	0.191	0.23	0.244	0.306	0.271	0.273	0.22	0.176	0.164	0.177	0.147	0.162
Sulphur (S), total	mg/L		16.2	<15	<15	12.4	<15	11.6	13	13.3	14.9	16.3	14.6	15.4	16	<15	<15	<15	10.8	10.3
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	0.0000023	0.0000026	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000005
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		<0.00050	<0.0050	<0.0050	0.00059	<0.0050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00086	0.00052	<0.0050	<0.0050	<0.0050	<0.0050	<0.0020	0.0096
Uranium (U), total	mg/L	**0.015**	0.00392	0.000881	0.00191	0.00243	0.00194	0.00209	0.00294	0.00331	0.00349	0.00403	0.00346	0.00435	0.00345	0.00288	0.00229	0.00186	0.00181	0.0017
Vanadium (V), total	mg/L		<0.00020	0.00057	<0.00050	<0.00020	<0.00050	0.00027	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00050	<0.00020	0.00088
Zinc (Zn), total	mg/L	*	0.00121	0.0072	0.0018	0.00629	0.0031	0.00224	0.00164	0.00196	0.00043	0.00209	0.00216	0.00175	0.0015	0.0018	0.0013	0.0013	0.0022	0.0153
Zirconium (Zr), total	mg/L		0.00016	0.00026	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00014	0.00011	0.00019	0.00028	0.00019	0.00012	0.00011	<0.00010	<0.00010	<0.00010	0.00022
Aluminum (Al), dissolved	mg/L	*	0.00082	0.0139	0.00413	0.00456	0.00526	0.00431	0.00127	0.00168	0.00064	0.00171	0.00158	0.00195	0.00186	0.00184	0.00152	0.00107	0.0041	0.00163
Antimony (Sb), dissolved	mg/L		0.000038	0.000034	0.00009	0.000086	0.000113	0.000077	0.00005	0.000047	0.000042	0.000029	0.000026	0.000031	0.000066	0.000068	0.000057	0.000053	0.000116	0.000064
Arsenic (As), dissolved	mg/L		0.00122	0.000875	0.00108	0.00126	0.00115	0.000976	0.000927	0.000505	0.000906	0.000677	0.000685	0.000553	0.00145	0.00125	0.00105	0.000788	0.00114	0.00102
Barium (Ba), dissolved	mg/L		0.0843	0.0336	0.0578	0.0673	0.0568	0.0584	0.0628	0.0758	0.0699	0.0939	0.0865	0.0918	0.0716	0.0544	0.0558	0.0565	0.057	0.0554
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.0000118	0.0000216	0.0000098	0.0000114	0.000012	0.000014	0.000011	0.000013	0.00001	0.000016	0.000011	0.000013	0.000012	0.000009	0.00001	0.0000088	0.00001	0.000005
Calcium (Ca), dissolved	mg/L		84.3	27.6	48.6	56.1	49.8	51.3	59.7	70.4	69.5	88.1	83.3	84.3	73.3	51.1	56.6	50.6	52.1	51.2
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		0.0000815	0.0000601	0.0000379	0.0000346	0.000057	0.000051	0.000044	0.00005	0.000039	0.000073	0.000105	0.000094	0.000117	0.000071	0.000027	0.0000251	0.000043	0.00001
Copper (Cu), dissolved	mg/L		0.000254	0.000978	0.000575	0.00049	0.000774	0.00054	0.000278	0.000322	0.000237	0.000272	0.000269	0.000202	0.000353	0.000399	0.000539	0.00044	0.000687	0.000545
Iron (Fe), dissolved	mg/L	**0.35**	0.0652	0.202	0.0899	0.0869	0.0835	0.0818	0.0382	0.0281	0.0702	0.0056	0.0734	0.0066	0.194	0.158	0.0821	0.0336	0.0897	0.0559
Lead (Pb), dissolved	mg/L		<0.0000050	0.0000108	0.0000066	<0.0000050	0.000011	<0.0000050	<0.0000050	0.000024	<0.0000050	0.000006	<0.0000050	<0.0000050	<0.0000050	0.000009	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), dissolved	mg/L		0.00649	0.00215	0.00218	0.00316	0.00263	0.00288	0.00355	0.00598	0.0051	0.00674	0.00842	0.00754	0.00493	0.00331	0.00341	0.00369	0.00334	0.00303
Magnesium (Mg), dissolved	mg/L		27.3	7.94	13.5	16.8	15.1	15.4	16.8	21.7	22.9	27.7	28.6	27.2	23.3	15.9	14.6	13.6	15.1	13.5
Manganese (Mn), dissolved	mg/L		0.0974	0.0264	0.00822	0.00916	0.0149	0.0206	0.027	0.0369	0.0392	0.0769	0.113	0.0631	0.0669	0.0409	0.00669	0.00363	0.021	0.000612
Mercury (Hg), dissolved	mg/L		<0.0000020	0.000003	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.00155	0.000582	0.0012	0.0013	0.00107	0.000991	0.00113	0.00116	0.00135	0.00143	0.00155	0.0014	0.00156	0.0014	0.00131	0.00118	0.00111	0.000939
Nickel (Ni), dissolved	mg/L		0.00159	0.00188	0.00143	0.00168	0.0019	0.00149	0.000985	0.00113	0.00113	0.00142	0.00177	0.00134	0.00178	0.00159	0.00108	0.000842	0.00179	0.00126
Phosphorus (P), dissolved	mg/L		0.0035	0.0127	0.0191	0.0241	0.0038	0.003	0.0033	0.0058	0.0034	<0.0020	0.0041	0.0023	0.0151	0.006	<0.0020	<0.0020	<0.0020	0.0065
Potassium (K), dissolved	mg/L		2.43	1.98	1.37	1.36	1.1	1.26	1.36	1.73	1.65	2.17	2.2	1.99	2.05	1.4	1.42	1.35	0.9	1.11
Selenium (Se), dissolved	mg/L		0.000963	0.000214	0.000493	0.000553	0.000517	0.00062	0.000906	0.000957	0.00114	0.00102	0.000772	0.00104	0.000704	0.000542	0.000473	0.000503	0.00047	0.000417
Silicon (Si), dissolved	mg/L		5.68	2.53	3.15	3.68	3.78	3.52	3.53	4.67	5.13	5.84	6.59	4.98	5.09	3.52	2.98	3.17	4.19	3.22
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		2.86	0.676	1.13	1.39	1.19	1.16	1.3	1.71	1.7	2.3	2.42	2.26	1.81	1.18	1.34	1.26	1.18	1.07
Strontium (Sr), dissolved	mg/L		0.299	0.0845	0.166	0.187	0.156	0.163	0.184	0.231	0.233	0.299	0.277	0.296	0.239	0.168	0.166	0.163	0.149	0.165
Sulphur (S), dissolved	mg/L		17.8	4.1	10.1	11.7	10.6	10.5	12	13.4	14.5	15.5	15.1	15.3	15.3	9.5	9	10.1	10.8	9.5
Thallium (Tl), dissolved	mg/L		0.0000021	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.00399	0.000794	0.00197	0.00238	0.00198	0.00211	0.00286	0.00333	0.00342	0.00416	0.00351	0.00406	0.00357	0.00246	0.0023	0.00186	0.00183	0.00177
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00032	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.0009	0.00161	0.00071	0.00111	0.00131	0.0014	0.00068	0.00131	0.00057	0.00134	0.0006	0.00098	0.00109	0.00072	0.00045	0.00054	0.00097	0.00052
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00011	0.00012	0.00011	0.0002	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-22	KZ-22	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26
		Guideline	6-Sep-16	30-Sep-16	5-Apr-95	8-May-95	11-Jun-95	23-Jul-95	15-Aug-95	22-Aug-95	30-Aug-95	6-Sep-95	13-Sep-95	23-Aug-02	19-Aug-04	24-Aug-06	14-Aug-08	18-Aug-10	16-Aug-12	22-Aug-14
Discharge (Flow)	L/s		2891.2	2513.8																
Total Suspended Solids	mg/L		1.8	1.5	<4	11	6	<4	<4	5	14	<4	<4	<4	<4	<4	<4	<1	<4.0	<4.0
pH (field)	pH units	**6.5-9**	7.64	7.87												8.3	8.5	8.4	8.3	8.23
pH (lab)	pH units	**6.5-9**	8.18	8.28	8.2	7.6	8	8.1	8.1	8	7.9	8.2	8		8.4	8.3	8.3	8.47	8.27	8.31
Specific Conductance (field)	µS/cm		317.9	337.2												298	390	423	353	438
Specific Conductance (lab)	µS/cm		340	379	515	224	276	364	382	389	391	350	416	314	424	372	390	447	368	433
Temperature (field)	C		6.9	1.1												7.1	9.5	10.2	9.6	9.4
Dissolved Oxygen (field)	mg/L	**6.5**	11.02	12.21												11.2	10.4		10.1	
Dissolved Oxygen (field)	%		104.4	96.9												98	102		89.0	
ORP (field)	mV		103.7	69																
Turbidity (internal)	NTU		0.91	2.07																
Hardness (from total)	mg/L		177	202	310	126	157	226	220	220	203	197	217	183	241	210	233	219	189	230
Hardness (from dissolved)	mg/L		183	199	310	29.7	136	217	199	222	197	194	212	197	245	210	222	246	193	213
Colour	TCU																			
Total Acidity	mg/L		<0.50	<0.50										0.7	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50
Acidity (pH 4.5)	mg/L		<0.50	<0.50										<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50
Alkalinity, total	mg/L		151	166	272	109	124	197	192	184	176	161	173	151	206	172	180	210	168	193
Alkalinity, bicarbonate HCO3	mg/L		184	203				240	234	224	215	196	211	184	244	210	220	250	205	234
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.7	<0.5	2.8	5.7	<0.50	1.09
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	3.1	<0.5	2.4	4.8	<0.50	0.91
Chloride	mg/L	**120**	1	0.66																
Fluoride	mg/L	**0.12**	0.09	0.099																
Sulphate, dissolved	mg/L	*	33.1	35	42.8	16.3	19.1	31.6	33.8	30.8	27.8	25.2	30.9	26.5	29.9	29	30	36	28.7	29.8
Cyanide, total	mg/L	**0.005**	0.00083	0.0007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001							
Cyanide, Weak Acid Dissociable	mg/L		0.00101	0.00074	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001							
Ammonia (N)	mg/L	**0.197**	0.024	**0.2**	<0.005	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	0.009	0.036	<0.005	0.02	<0.005	<0.005	0.08	0.011	0.019
Nitrite (N)	mg/L	*	<0.0020	<0.0020	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050
Nitrate (N)	mg/L	**3**	0.0361	0.0898	0.26	0.03	<0.02	0.04	0.05	<0.02	0.03	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.020	0.025
Nitrite & Nitrate, as N	mg/L		0.0361	0.0898	0.26	0.03	<0.02	0.04	0.05	0.02	0.03	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.020	0.025
Phosphorus,total-colourimetric	mg/L		0.0091	0.0063																
Phosphorus, Total Dissolved	mg/L		0.0077	0.0057																
Dissolved Organic Carbon	mg/L		5.02	2.95																
Aluminum (Al), total	mg/L	*	0.0166	0.0178	0.011	**0.11**	**0.11**	0.011	0.1	**0.11**	**0.18**	0.047	0.022	0.03	0.003	0.009	0.01	0.006	0.0307	0.00532
Antimony (Sb), total	mg/L	**0.009**	0.00007	0.000051															0.000096	0.000067
Arsenic (As), total	mg/L	**0.005**	0.00124	0.00143	0.00034	0.0028	0.0008	<0.00005	0.00032	0.0004	0.00051	0.00026	0.00035		<0.001	<0.001	0.0008	0.0004	0.00128	0.000659
Barium (Ba), total	mg/L		0.0569	0.0639	0.085	0.041	0.046	0.066	0.065	0.066	0.063	0.055	0.06	0.058	0.08	0.063	0.069	0.077	0.0703	0.0698
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.0000050	<0.000010	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002				<0.001	<0.001	<0.0000050	<0.0000050
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	0.022	0.022	0.031	0.019	0.021	0.032	0.026	0.019	0.015	<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02
Cadmium (Cd), total	mg/L	*	0.000025	0.000019	0.00001	<0.00001	0.00004	<0.00001	<0.00001	0.00008	<0.00001	<0.00001	0.00001		0.00001	0.00001	0.00002	<0.00001	0.000018	0.00001
Calcium (Ca), total	mg/L		48.6	53	83	35	43	61	60	60	55	54	59	49.4	65.9	57.9	64.9	57.6	50.6	61
Chromium (Cr), total	mg/L	**0.001**	<0.00010	0.00013	0.0004	0.0006	0.0007	0.0003	**0.0072**	0.0007	**0.0032**	0.0004	0.0004		<0.001	<0.001	<0.001	<0.001	<0.00010	<0.00010
Cobalt (Co), total	mg/L		0.000091	0.000079	<0.0004	0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	<0.0005	0.000079	0.000021
Copper (Cu), total	mg/L	*	0.000684	0.00069	0.0003	0.002	0.0019	0.0006	0.0011	0.0016	0.0016	0.0011	0.001		0.0006	0.0007	0.0006	0.0005	0.000693	0.000476
Iron (Fe), total	mg/L	**1**	0.227	0.243	0.031	1	0.29	0.032	0.21	0.27	0.47	0.16	0.098	0.158	0.01	0.12	0.09	0.021	0.174	0.0572
Lead (Pb), total	mg/L	*	0.000057	0.000036	0.0008	<0.0001	0.0007	0.0002	0.0004	0.0002	0.0002	0.0002	<0.0001		<0.0005	<0.0005	<0.0002	<0.0002	0.000051	0.000008
Lithium (Li), total	mg/L		0.00206	0.00277												0.004	<0.005	0.006	0.00408	0.0053
Magnesium (Mg), total	mg/L		13.6	16.9	25	9.4	12	18	17	17	16	15	17	14.4	18.5	15.5	17.1	18.3	15.2	18.9
Manganese (Mn), total	mg/L	*	0.0436	0.0504	0.004	0.094	0.015	0.0037	0.0053	0.0077	0.014	0.0088	0.0041	0.014	0.003	0.009	0.007	0.003	0.016	0.00339
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001			<0.00001	<0.00002	<0.00002		0.0000035
Molybdenum (Mo), total	mg/L	**0.073**	0.000903	0.00103	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004				0.001	0.001	0.00104	0.00114
Nickel (Ni), total	mg/L	*	0.00137	0.00125	<0.001	0.003	0.002	<0.001	0.003	0.001	0.003	0.002	<0.001				<0.001	<0.001	0.00138	0.0007
Phosphorus (P), total	mg/L		0.0085	0.0141	<0.003	0.042	0.01	<0.003	0.004	0.008	0.021	0.006	0.003							
Potassium (K), total	mg/L		1.06	1.44	1.5	1.6	1.1	1.4	1.3	1.3	1.2	1.1	1.4	1	2	1	1.44	1.4	1.27	1.4
Selenium (Se), total	mg/L	**0.002**	0.000625	0.00104	0.00092	0.0002	<0.00005	0.00037	0.0001	0.00066	0.00007	0.00006	0.00014		<0.001	<0.001	0.0005	0.0004	0.000665	0.000465

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-22	KZ-22	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26
		Guideline	6-Sep-16	30-Sep-16	5-Apr-95	8-May-95	11-Jun-95	23-Jul-95	15-Aug-95	22-Aug-95	30-Aug-95	6-Sep-95	13-Sep-95	23-Aug-02	19-Aug-04	24-Aug-06	14-Aug-08	18-Aug-10	16-Aug-12	22-Aug-14
Silicon (Si), total	mg/L		3.41	3.53	4.3	2.7	3.1	3.8	3.7	3.7	3.8	3.9	3.6			3.56	3.5	3.92	3.45	3.76
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.000010	<0.00001	<0.00001	**0.00063**	<0.00001	0.00001	<0.00001	<0.00001	0.00002	<0.00001						<0.0000050	<0.0000050
Sodium (Na), total	mg/L		1.03	1.28	2.3	0.95	1.1	1.7	1.5	1.5	1.4	1.3	1.6	1.3	1.72	1.36	1.5	1.52	1.28	1.57
Strontium (Sr), total	mg/L		0.142	0.209	0.23	0.094	0.12	0.18	0.17	0.17	0.16	0.15	0.17	0.15	0.202	0.163	0.192	0.203	0.173	0.204
Sulphur (S), total	mg/L		10.7	14.6	13	4.7	6.6	10	9.9	10	9.5	9.6	10	8.8	10.5	9.8	11	13	12	<15
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	<0.0000020															<0.0000020	<0.0000020
Tin (Sn), total	mg/L		<0.00020	<0.00020	0.007	0.002	0.004	0.005	0.004	0.004	0.005	0.003	0.004				<0.005	<0.005	<0.00020	<0.00020
Titanium (Ti), total	mg/L		0.00071	<0.0020	0.0026	0.0044	0.0035	0.0021	0.0041	0.0035	0.0049	0.0028	0.0021	<0.003	<0.003	<0.003	<0.005	<0.005	0.00056	<0.00050
Uranium (U), total	mg/L	**0.015**	0.00183	0.00225											0.00229	0.0018	0.0024	0.0022	0.00195	0.00231
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.0003	0.0003	<0.0003	<0.0003	0.0003	<0.0003	0.0004	<0.0003	<0.0003						<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	0.00244	0.0033	<0.001	**0.053**	0.009	<0.001	0.002	0.003	0.009	0.004	0.002	<0.005	<0.005	<0.005	<0.005	<0.005	0.0011	0.00063
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	0.0003	0.0004	0.0008	0.0003	0.0005	0.0004	0.0005	<0.0003	0.0004				<0.0005	<0.0005	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*	0.00266	0.00179	0.007	<0.006	0.015	0.006	<0.006	0.008	0.006	0.017	0.023	0.02	<0.001	0.002	0.004	<0.003	0.00603	0.00104
Antimony (Sb), dissolved	mg/L		0.000071	0.000056															0.000097	0.000067
Arsenic (As), dissolved	mg/L		0.000882	0.000989	0.00022	0.0002	0.0005	<0.00005	<0.00005	0.00033	0.00017	0.00017	0.00031		<0.001	<0.001	0.0009	0.0006	0.000845	0.000613
Barium (Ba), dissolved	mg/L		0.0584	0.0595	0.086	0.0044	0.039	0.065	0.057	0.064	0.057	0.053	0.057	0.061	0.077	0.065	0.068	0.085	0.0668	0.0684
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002				<0.001	<0.001	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	0.023	0.092	0.007	0.012	0.011	0.018	0.013	0.021	0.047	<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02
Cadmium (Cd), dissolved	mg/L	*	0.000014	0.000009	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00003		<0.00001	0.00002	0.00003	0.00001	0.000011	0.000008
Calcium (Ca), dissolved	mg/L		51.2	55.7	83	4.3	38	59	55	61	54	53	57	53.3	67.1	58.5	62	67.3	52.5	55
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	0.0003	0.0002	0.0004	0.0004	0.0005	0.0003	0.0007	0.0003	0.0005		<0.001	<0.001	<0.001	<0.001	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		0.000027	0.000038	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	<0.0005	0.000029	0.000014
Copper (Cu), dissolved	mg/L		0.000535	0.000348	0.0004	0.001	0.002	0.0005	0.0007	0.0011	0.0006	0.0008	0.0012		0.0005	0.0006	0.0005	0.0005	0.000662	0.000454
Iron (Fe), dissolved	mg/L	**0.35**	0.0468	0.0532	<0.005	<0.005	0.05	0.011	0.007	0.01	0.024	0.036	0.036	0.041	<0.005	0.06	0.035	0.009	0.0634	0.0224
Lead (Pb), dissolved	mg/L		0.000005	<0.0000050	0.0011	<0.0001	0.0002	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001		<0.0005	<0.0005	<0.0002	<0.0002	0.000007	<0.0000050
Lithium (Li), dissolved	mg/L		0.00238	0.00264												0.004	<0.005	0.006	0.00406	0.00472
Magnesium (Mg), dissolved	mg/L		13.4	14.5	25	4.6	10	17	15	17	15	15	17	15.6	18.9	16	16.3	19	14.9	18.4
Manganese (Mn), dissolved	mg/L		0.00627	0.0237	0.002	<0.0002	0.0024	0.0028	0.0018	0.0023	0.0037	0.0046	0.0034	0.006	0.002	0.005	0.004	0.003	0.00704	0.00211
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001			<0.00001	<0.00002	<0.00002		0.0000039
Molybdenum (Mo), dissolved	mg/L		0.000886	0.00104	<0.0004	0.0009	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004				0.001	0.001	0.0011	0.00112
Nickel (Ni), dissolved	mg/L		0.00118	0.000955	<0.001	0.001	0.001	<0.001	<0.001	<0.001	0.001	0.001	<0.001				<0.001	<0.001	0.00123	0.000711
Phosphorus (P), dissolved	mg/L		0.0049	0.002		0.01	0.012	0.009	0.011	0.007	0.009	0.007	0.017							
Potassium (K), dissolved	mg/L		1.19	1.19	1.6	1.6	0.95	1.3	1.1	1.3	1.1	1.1	1.3	<1	1	<1	1.35	1.55	1.26	1.33
Selenium (Se), dissolved	mg/L		0.000614	0.00114	0.00086	0.0002	<0.00005	0.00032	0.0001	0.00015	0.00007	0.00006	0.00014		<0.001	<0.001	0.0005	0.0005	0.000354	0.000439
Silicon (Si), dissolved	mg/L		3.74	3.84	4.4	1.9	2.1	3.6	3.2	3.6	3.4	3.8	3.7			3.63	4.03	4.18	3.67	3.42
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.00001	<0.00001	0.00004	0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001						<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		1.05	1.09	2.4	1	0.97	1.6	1.4	1.6	1.4	1.3	6	1.46	1.79	1.44	1.45	1.74	1.27	1.64
Strontium (Sr), dissolved	mg/L		0.162	0.185	0.23	0.035	0.1	0.18	0.16	0.18	0.15	0.15	0.16	0.163	0.201	0.167	0.188	0.228	0.17	0.203
Sulphur (S), dissolved	mg/L		10.5	12.5	13	4.7	5.9	9.7	9.1	10	9.3	9.7	9.5	9.8	10.6	9.9	12	13	11	<15
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020															<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	0.002	<0.002	0.004	0.005	0.003	0.003	0.005	0.005	0.003				<0.005	<0.005	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	0.0021	<0.0003	0.0013	0.0016	0.0017	0.0016	0.0017	0.0021	0.0033	<0.003	<0.003	<0.003	<0.005	<0.005	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.00184	0.00238											0.00065	0.0019	0.0024	0.0028	0.00191	0.00234
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003						<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.00112	0.00076	0.003	<0.001	0.002	0.002	0.003	<0.001	0.002	0.002	0.001	<0.005	<0.005	<0.005	<0.005	<0.005	0.00051	0.00025
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0005	<0.0003	0.0004	0.0006				<0.0005	<0.0005	<0.00010	<0.00010

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26
		Guideline	29-Apr-15	11-May-15	14-May-15	23-Jun-15	29-Jul-15	22-Aug-15	8-Sep-15	15-Oct-15	18-Nov-15	1-Dec-15	8-Feb-16	19-Mar-16	19-Apr-16	3-May-16	14-May-16	13-Jun-16	25-Jul-16	26-Aug-16
Discharge (Flow)	L/s		338.3	11389.2	7608.1	2299	1754.8	4762.7	3412.8	1544.8		321.7	442.6	316.1	633.3	974.6		1015.4	2930.8	2945.1
Total Suspended Solids	mg/L		<1.0	15.8		10.6	1.6	13.9	2.2	1.6	<1.0	1.1	3.3	<1.0	1.6	4	1.1	1.1	24.2	29
pH (field)	pH units	**6.5-9**	8.43	7.54		8.18	8.24	8.05	8.24	8.18	8.45	7.81	7.92	7.77	7.82	7.87	8.17	8.08	7.85	8.2
pH (lab)	pH units	**6.5-9**	8.4	7.89		7.9	8.24	8.11	8.31	8.33	8.32	8.2	8.35	8.29	8.35	8.23	8.48	8.29	8.27	8.29
Specific Conductance (field)	µS/cm		476.5	159.9		318.6	387.7	312.9	329.9	438.1	484.4	483	519.8	549.3	380.1	344.2	439.2	304.2	349.3	432.4
Specific Conductance (lab)	µS/cm		541	196		327	383	322	348	434	470	485	547	554	459	380	417	380	344	368
Temperature (field)	C		0.1	-0.3		7	8.4	5.8	4	0.7	0	0	0	-0.1	1.2	2.0	7.9	7	8.5	8.8
Dissolved Oxygen (field)	mg/L	**6.5**	13.3	12.7		10.96	10.34	10.9	12.7	13.2	11.8	10.9	10.9	11.66	12.04	13.55	11.4	10.91	10.59	10.46
Dissolved Oxygen (field)	%		102	96		90.3	88.2	98	110	103	92	85	83	90.4	95.3	110.7	107	101.9	101	101.8
ORP (field)	mV		241.7	289.8		71.6	75.7	249.7	109.2	295.7	153.2	143.7	270.4	102.6	200.9	88.5	99.3	136.4	107.2	221.2
Turbidity (internal)	NTU					6.56	0.71	4.52	1	1.31	0.16	0.5	0.346	0.198	0.94	1.84		0.528	9.61	11.478
Hardness (from total)	mg/L		302	107		178	213	176	200	223	258	273	294	376	246	207	215	201	210	194
Hardness (from dissolved)	mg/L		311	109		182	222	179	196	226	268	263	300	306	288	204	225	202	201	202
Colour	TCU		11.1	161		34.1	27.7	73.5	36.3	12.6	8.7	8	6.7	<5.0	20.4	24.5	9.4	7.2		14.6
Total Acidity	mg/L		<0.50	<0.50		1.03	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L		<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		252	86.1		146	176	145	158	195	213	222	267	271	214	178	199	176	157	166
Alkalinity, bicarbonate HCO3	mg/L		298	105		178	214	177	191	234	254	270	317	330	254	217	229	215	192	203
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		5.1	<0.50		<0.50	<0.50	<0.50	0.68	1.72	3.34	<0.50	4.2	<0.50	3.47	<0.50	6.32	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		4.25	<0.50		<0.50	<0.50	<0.50	0.57	1.43	2.78	<0.50	3.5	<0.50	2.89	<0.50	5.27	<0.50	<0.50	<0.50
Chloride	mg/L	**120**	<0.50	1		0.97	0.55	<0.50	0.88	0.73	<0.50	0.59	0.75	0.55	0.57	1.2	1.2	0.8	<0.50	0.96
Fluoride	mg/L	**0.12**	**0.13**	0.057		0.11	0.12	0.092	0.1	0.11	0.12	0.1	0.11	0.11	0.12	0.12	**0.14**	0.12	0.11	0.099
Sulphate, dissolved	mg/L	*	47.6	13.3		27.8	32.3	29.9	31.1	36.9	40.9	39.5	46.1	44.5	39.8	30.5	37	30.9	36.4	31.9
Cyanide, total	mg/L	**0.005**	0.00051	0.00108		<0.00050	0.0006	<0.00050	0.00099	<0.00050	<0.00050	0.00051	<0.00050	<0.00050	0.00059	0.0007	0.0005	0.00073	<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L		<0.00050	0.00114		<0.00050	0.00067	<0.00050	0.00095	<0.00050	<0.00050	<0.00050	<0.00050	0.0006	0.00052	0.00062	<0.00050	0.0006	0.00055	<0.00050
Ammonia (N)	mg/L	**0.197**	0.0119	0.0078		0.0086	0.013	0.0054	<0.0050	0.0114	<0.0050	0.0084	0.0099	0.0394	<0.0050	0.01	<0.0050	0.019	0.028	0.011
Nitrite (N)	mg/L	*	<0.0020			<0.0020	<0.0020	0.0026	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0022	<0.0020	<0.0020
Nitrate (N)	mg/L	**3**	0.201	<0.020		0.0057	0.0079	0.0168	0.009	0.0565	0.101	0.157	0.252	0.272	0.115	0.0538	0.028	0.0303	0.0166	0.0124
Nitrite & Nitrate, as N	mg/L		0.201	<0.020		0.0057	0.0079	0.0194	0.009	0.0565	0.101	0.157	0.252	0.272	0.115	0.0538	0.028	0.0325	0.0166	0.0124
Phosphorus,total-colourimetric	mg/L		0.0032	0.0223		0.0062	0.0036	0.009	0.0037	0.0041	0.0023	0.0025	0.0031	0.003	0.0075	0.008	0.0052	0.0036	0.0357	0.0371
Phosphorus, Total Dissolved	mg/L		0.0032	0.0223		0.0054	0.0052	0.0068	0.0034	<0.0020	<0.0020	0.0025	0.0032	0.0021	0.0082	0.0085	0.0039	0.0029	0.0366	0.0354
Dissolved Organic Carbon	mg/L		1.84	13.9		5.64	3.32	9.1	5.6	4.12	2.3	1.64	1.48	1.23	4.79	4.61	3.27	2.35	7.49	5.08
Aluminum (Al), total	mg/L	*	0.00243	**0.144**		**0.101**	0.0129	**0.141**	0.0201	0.0107	0.00537	0.0008	0.042	0.00821	0.0078	0.0139	0.0064	0.0081	0.0793	**0.193**
Antimony (Sb), total	mg/L	**0.009**	0.000063	0.000068		0.00014	0.000098	0.000156	0.000102	0.000076	0.000067	0.000064	0.000074	0.00006	0.000067	0.000081	0.000078	0.000067	0.000159	0.000125
Arsenic (As), total	mg/L	**0.005**	0.000654	0.00208		0.00119	0.00106	0.00149	0.00114	0.000932	0.000509	0.000559	0.00193	0.000498	0.00104	0.00129	0.000725	0.000743	0.00139	0.00211
Barium (Ba), total	mg/L		0.0877	0.0425		0.0667	0.0683	0.0576	0.0641	0.0638	0.0752	0.0792	0.0993	0.0964	0.0728	0.06	0.0576	0.0664	0.0691	0.0766
Beryllium (Be), total	mg/L		<0.000010	0.000014		0.000013	<0.000010	0.000012	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.00002
Bismuth (Bi), total	mg/L		<0.0000050	<0.000020		<0.000020	<0.0000050	<0.000020	<0.0000050	<0.000020	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.000010	<0.000010
Boron (B), total	mg/L	**1.5**	<0.01	<0.050		<0.050	<0.010	<0.050	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.050	<0.050	<0.050	<0.050	0.012	<0.010
Cadmium (Cd), total	mg/L	*	0.0000122	0.000058		0.000031	0.0000149	0.00004	0.000019	0.000011	0.00001	0.000005	0.000049	0.000011	0.000019	0.000021	0.000011	0.000013	0.000025	0.000041
Calcium (Ca), total	mg/L		80.4	28.6		47.5	56.5	46.3	52.9	58.9	67.7	73.2	78.2	109	63.7	54.9	59	54.8	55.6	52.2
Chromium (Cr), total	mg/L	**0.001**	<0.00010	<0.00050		<0.00050	<0.00010	<0.00050	0.0001	<0.00050	<0.00010	<0.00010	0.00018	<0.00010	<0.00050	<0.00050	<0.00050	<0.00050	0.00022	0.00054
Cobalt (Co), total	mg/L		0.0000184	0.000258		0.000141	0.000046	0.000203	0.00008	0.000026	0.000022	0.00001	0.000243	0.000024	0.000038	0.000048	0.000027	0.000025	0.000119	0.000302
Copper (Cu), total	mg/L	*	0.000314	0.00163		0.00162	0.000675	0.00183	0.000902	0.00059	0.00049	0.000341	0.00107	0.000339	0.00063	0.00083	0.00067	0.0007	0.00141	0.00182
Iron (Fe), total	mg/L	**1**	0.094	0.994		0.309	0.134	0.477	0.18	0.102	0.0425	0.0166	0.57	0.0694	0.198	0.27	0.0937	0.0687	0.309	0.692
Lead (Pb), total	mg/L	*	0.0000105	0.000237		0.000221	0.0000272	0.000241	0.000058	<0.000050	0.000013	<0.0000050	0.000443	0.000021	<0.000050	<0.000050	<0.000050	<0.000050	0.000153	0.000338
Lithium (Li), total	mg/L		0.00721	0.00225		0.0035	0.00376	0.00371	0.00393	0.00422	0.00584	0.00587	0.00677	0.00747	0.00544	0.00458	0.00406	0.00433	0.00427	0.00379
Magnesium (Mg), total	mg/L		24.6	8.63		14.3	17.6	14.8	16.4	18.5	21.7	22	24	25.3	21.1	17.1	16.5	15.7	17.2	15.3
Manganese (Mn), total	mg/L	*	0.00498	0.0942		0.0174	0.0104	0.0394	0.0245	0.00764	0.00487	0.000649	0.104	0.0071	0.0125	0.0161	0.00556	0.00667	0.0219	0.0555
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	0.000003		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.00115	0.000651		0.00115	0.00121	0.000947	0.000912	0.00109	0.000944	0.00109	0.000963	0.00104	0.00114	0.00126	0.00105	0.00104	0.00107	0.000982
Nickel (Ni), total	mg/L	*	0.00082	0.00239		0.00183	0.00146	0.00249	0.00165	0.00094	0.000744	0.000672	0.00157	0.000698	0.00114	0.00128	0.00089	0.0008	0.00211	0.0025
Phosphorus (P), total	mg/L		0.0035	0.039		0.03	0.0124	0.023	0.0079	<0.010	0.0055	<0.0020	0.0274	0.003	0.012	<0.010	<0.010	<0.010	0.0115	0.0255
Potassium (K), total	mg/L		1.73	1.69		1.19	1.34	0.86	1.16	1.32	1.59	1.57	1.73	1.73	1.68	1.32	1.28	1.29	0.92	1.19
Selenium (Se), total	mg/L	**0.002**	0.000866	0.000206		0.000426	0.000484	0.000455	0.000593	0.000689	0.000912	0.00116	0.000874	0.00133	0.000649	0.000535	0.000543	0.000496	0.000489	0.000401

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26
		Guideline	29-Apr-15	11-May-15	14-May-15	23-Jun-15	29-Jul-15	22-Aug-15	8-Sep-15	15-Oct-15	18-Nov-15	1-Dec-15	8-Feb-16	19-Mar-16	19-Apr-16	3-May-16	14-May-16	13-Jun-16	25-Jul-16	26-Aug-16
Silicon (Si), total	mg/L		5.03	2.66		3.21	3.86	4.02	3.91	3.71	4.45	5.19	4.89	4.43	4.53	3.49	3.36	3.6	4.63	3.93
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	0.0000112		0.0000133	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.000010	<0.000010
Sodium (Na), total	mg/L		2.29	0.69		1.29	1.49	1.21	1.28	1.5	1.7	1.76	2.17	2.23	1.83	1.36	1.56	1.35	1.59	1.25
Strontium (Sr), total	mg/L		0.276	0.0858		0.159	0.198	0.144	0.171	0.187	0.236	0.248	0.276	0.27	0.222	0.19	0.183	0.193	0.162	0.182
Sulphur (S), total	mg/L		16.4	<15		<15	12.3	<15	10.4	<15	13.7	15.2	15.4	15.6	<15	<15	<15	<15	10.9	11
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	0.0000022		0.0000043	<0.0000020	0.000003	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000003	<0.0000020	0.000002	0.000003
Tin (Sn), total	mg/L		<0.00020	<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		<0.00050	<0.0050		<0.0050	<0.00050	<0.0050	0.00077	<0.0050	<0.00050	<0.00050	0.00223	<0.00050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0020	0.0045
Uranium (U), total	mg/L	**0.015**	0.00376	0.000937		0.00188	0.00237	0.00163	0.00204	0.00267	0.00289	0.00325	0.00355	0.00376	0.00309	0.00263	0.00245	0.00205	0.0019	0.00179
Vanadium (V), total	mg/L		<0.00020	0.00054		0.00056	<0.00020	0.00055	0.00028	0.0007	<0.00020	<0.00020	0.00033	<0.00020	<0.00050	<0.00050	<0.00050	<0.00050	0.00037	0.00063
Zinc (Zn), total	mg/L	*	0.00041	0.0044		0.0024	0.00086	0.0038	0.00177	0.0011	0.00077	0.00028	0.00421	0.00053	<0.0010	0.0012	<0.0010	<0.0010	0.0017	0.0045
Zirconium (Zr), total	mg/L		<0.00010	0.00016		0.0002	<0.00010	0.00021	0.00012	<0.00010	<0.00010	<0.00010	0.00012	<0.00010	<0.00010	0.00011	<0.00010	<0.00010	0.00024	0.00017
Aluminum (Al), dissolved	mg/L	*	0.00061	0.00908		0.00352	0.00196	0.00764	0.00583	0.00109	0.00677	0.00076	0.00072	0.0026	0.00186	0.0015	0.00104	0.00085	0.00576	0.00304
Antimony (Sb), dissolved	mg/L		0.000055	0.00005		0.000101	0.000094	0.000138	0.000102	0.00007	0.000073	0.00006	0.000048	0.000066	0.000064	0.000084	0.000086	0.000074	0.000139	0.000091
Arsenic (As), dissolved	mg/L		0.000533	0.000775		0.000799	0.000836	0.000952	0.00084	0.000725	0.000413	0.000514	0.000426	0.000411	0.00086	0.000883	0.000662	0.000582	0.000931	0.000863
Barium (Ba), dissolved	mg/L		0.0941	0.0371		0.0617	0.0715	0.0609	0.0601	0.0653	0.0799	0.0738	0.0914	0.109	0.0823	0.0592	0.066	0.064	0.0648	0.0663
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.01	<0.010		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.0000119	0.0000228		0.0000118	0.0000085	0.000012	0.000011	0.000011	0.000008	0.000005	0.000009	0.000008	0.000014	0.000006	0.000006	0.0000061	0.00001	0.000008
Calcium (Ca), dissolved	mg/L		82	28.7		49.8	58.9	47.7	52.9	59.3	71.4	69.1	80.2	81.5	75.2	54.2	59.4	54.5	53.7	54.5
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010		<0.00010	<0.00010	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		0.0000137	0.0000458		0.0000271	0.000018	0.000049	0.000034	0.000022	0.000013	0.000011	0.000009	0.00001	0.000028	0.000016	0.000015	0.0000123	0.000045	0.000017
Copper (Cu), dissolved	mg/L		0.000334	0.000987		0.000845	0.000565	0.00109	0.000771	0.000423	0.000442	0.000353	0.000331	0.000332	0.000525	0.000519	0.000538	0.00053	0.000977	0.000711
Iron (Fe), dissolved	mg/L	**0.35**	0.0109	0.161		0.0405	0.0357	0.0657	0.0538	0.0241	0.0068	0.0128	0.0034	0.0027	0.0866	0.0607	0.0217	0.0124	0.0509	0.0335
Lead (Pb), dissolved	mg/L		<0.0000050	0.0000087		0.0000112	<0.0000050	0.000008	0.000006	0.000006	0.000014	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000012	0.000006
Lithium (Li), dissolved	mg/L		0.00758	0.00217		0.00358	0.00446	0.00291	0.00328	0.00435	0.00577	0.00566	0.00689	0.00832	0.00627	0.00387	0.00489	0.00473	0.00416	0.00378
Magnesium (Mg), dissolved	mg/L		25.9	9.1		13.9	18.2	14.5	15.6	18.8	21.7	21.9	24.2	24.9	24.3	16.6	18.7	15.9	16.2	15.9
Manganese (Mn), dissolved	mg/L		0.00176	0.00733		0.00212	0.00285	0.00811	0.00985	0.00552	0.00152	0.000557	0.0019	0.0013	0.00822	0.00113	0.00164	0.00141	0.00862	0.000673
Mercury (Hg), dissolved	mg/L		<0.0000020	0.0000029		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.00114	0.000568		0.0011	0.0012	0.000958	0.000913	0.00105	0.000968	0.00103	0.00105	0.00115	0.00118	0.00121	0.00124	0.00106	0.00102	0.00102
Nickel (Ni), dissolved	mg/L		0.000807	0.00178		0.00123	0.00135	0.00184	0.00141	0.000909	0.000792	0.000663	0.000688	0.000621	0.00124	0.00113	0.000876	0.000716	0.00168	0.00119
Phosphorus (P), dissolved	mg/L		<0.0020	0.0116		0.0053	0.0025	0.0037	0.0022	0.0034	0.003	<0.0020	0.0045	0.0032	0.0091	<0.0020	0.0081	<0.0020	0.0026	0.0029
Potassium (K), dissolved	mg/L		1.85	1.86		1.37	1.41	0.942	1.18	1.35	1.63	1.48	1.71	1.74	2.02	1.33	1.43	1.34	0.864	1.14
Selenium (Se), dissolved	mg/L		0.000862	0.000226		0.000449	0.000511	0.00047	0.000547	0.000806	0.000919	0.00107	0.000891	0.000957	0.000664	0.000589	0.000549	0.000539	0.000442	0.000388
Silicon (Si), dissolved	mg/L		5.06	2.46		3.65	3.92	4.36	3.8	3.77	4.4	4.97	5	4.69	5.07	3.46	3.41	3.46	4.63	3.36
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		2.31	0.82		1.3	1.49	1.2	1.22	1.47	1.78	1.77	2.05	2.15	2.07	1.34	1.7	1.45	1.32	1.3
Strontium (Sr), dissolved	mg/L		0.285	0.0902		0.17	0.203	0.144	0.167	0.188	0.244	0.24	0.266	0.279	0.273	0.185	0.207	0.174	0.161	0.178
Sulphur (S), dissolved	mg/L		15.4	4.9		9.3	11.3	8.8	9.9	12.3	13.4	14.4	15	14.4	13.2	10.6	11.5	10.7	10.4	10.8
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.00391	0.000907		0.00182	0.00233	0.00171	0.00202	0.00267	0.00303	0.00307	0.00363	0.00404	0.00354	0.0025	0.00281	0.00224	0.00182	0.00194
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020		<0.00020	<0.00020	<0.00020	0.00027	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.00029	0.00127		0.00031	0.00035	0.00074	0.00081	0.00035	0.0006	0.00023	0.00062	0.00033	0.00059	0.00025	0.00027	0.0003	0.00053	0.00034
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010		<0.00010	<0.00010	0.00011	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-26	KZ-26	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep
		Guideline	6-Sep-16	30-Sep-16	24-Jun-15	29-Jul-15	15-Oct-15	16-Jun-16	27-Jul-16	27-Aug-16	7-Sep-16	4-Oct-16	24-Jun-15	29-Jul-15	15-Oct-15	14-Jun-16
Discharge (Flow)	L/s		3670.8	2532												
Total Suspended Solids	mg/L		8.7	4				11.6		68.6						
pH (field)	pH units	**6.5-9**	7.89	8.06	**5.89**	**5.94**	**5.78**	**5.91**	**5.88**	**5.99**	**5.88**	**5.84**	7.66	7.71	7.7	7.88
pH (lab)	pH units	**6.5-9**	8.25	8.36	**6.48**	6.71	6.63	6.65	6.52	6.7	6.61	6.61	8.31	8.12	8.27	8.21
Specific Conductance (field)	µS/cm		328.9	353.9	1520	1577	1628	1517	1534	1882	1422	1360	443.6	473.4	484.7	465.6
Specific Conductance (lab)	µS/cm		355	399	1550	1560	1600	1550	1530	1260	1560	1560	446	470	465	463
Temperature (field)	C		5.8	0.2	7.2	5.8	0.8	6.4	4.6	2.9	4.3	0.4	6	4.4	0.2	4.2
Dissolved Oxygen (field)	mg/L	**6.5**	11.29	12.82	**2.98**	**3.26**	**2.6**	**2.83**	**5.16**	**6.44**	**3.17**	**4.74**	10.19	9.63	9.4	8.91
Dissolved Oxygen (field)	%		102.2	97.3	24.6	26.5	21	27.1	44.5	53.5	28.6	39	80.9	74.4	75	80.6
ORP (field)	mV		80	114.6	45.7	76.1	153.3	80.8	73.4	127.2	60.4	74.4	94.7	74.3	249.9	39.9
Turbidity (internal)	NTU		4.29	1.64												
Hardness (from total)	mg/L		186	199				848		818						242
Hardness (from dissolved)	mg/L		194	210	993	982	970	834	921	852	895	952	260	268	250	251
Colour	TCU				7.2	44.8	29.4	12.6		80.5			<5.0	<5.0	<5.0	<5.0
Total Acidity	mg/L		<0.50	<0.50	242	188	237	271	296	131	169	199	<0.50	<0.50	<0.50	0.87
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		162	177	889	951	924	901	798	686	771	804	204	218	201	211
Alkalinity, bicarbonate HCO3	mg/L		198	211	1090	1160	1130	1100	974	836	941	981	246	266	245	257
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	2.22	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.34	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	1.85	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.12	<0.50	<0.50	<0.50
Chloride	mg/L	**120**	1.1	0.59		1.5	2.3	2.1		1.4	2			<0.50	0.67	0.91
Fluoride	mg/L	**0.12**	0.091	0.11		**0.86**	**0.91**	**0.97**		**0.97**	**0.92**			0.061	0.056	0.072
Sulphate, dissolved	mg/L	*	32.4	36.5		18.8	11.8	17		16.2	24.6			37.6	45.8	47.2
Cyanide, total	mg/L	**0.005**	0.00077	0.00065				0.00059		<0.00050						0.00078
Cyanide, Weak Acid Dissociable	mg/L		0.00083	0.00079				0.00091		<0.00050						0.00107
Ammonia (N)	mg/L	**0.197**	0.018	0.17				0.12		0.079						0.048
Nitrite (N)	mg/L	*	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020		<0.0020	<0.0020			<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3**	0.0375	0.0812		0.0142	0.0074	0.0152		0.0489	0.0161			0.384	0.59	0.358
Nitrite & Nitrate, as N	mg/L		0.0375	0.0812		0.0142	0.0074	0.0152		0.0489	0.0161			0.384	0.59	0.358
Phosphorus,total-colourimetric	mg/L		0.0176	0.0049				0.0127		0.0116						0.0026
Phosphorus, Total Dissolved	mg/L		0.0187	0.0067				0.0066		0.0138						0.0021
Dissolved Organic Carbon	mg/L		5.53	3.99				0.63		<0.50						1.27
Aluminum (Al), total	mg/L	*	0.0817	0.036				**0.18**		**0.148**						0.0203
Antimony (Sb), total	mg/L	**0.009**	0.000103	0.000077				<0.000050		<0.000020						<0.000050
Arsenic (As), total	mg/L	**0.005**	0.00127	0.00107				**0.0143**		**0.0141**						0.000171
Barium (Ba), total	mg/L		0.0655	0.064				0.174		0.16						0.169
Beryllium (Be), total	mg/L		<0.000010	<0.000010				0.000357		0.000339						<0.000010
Bismuth (Bi), total	mg/L		<0.0000050	<0.000010				<0.000020		<0.0000050						<0.000020
Boron (B), total	mg/L	**1.5**	<0.010	<0.010				<0.050		<0.010						<0.050
Cadmium (Cd), total	mg/L	*	0.000028	0.000022				0.000057		0.000076						0.000065
Calcium (Ca), total	mg/L		50.5	54.3				288		278						81.4
Chromium (Cr), total	mg/L	**0.001**	0.00023	0.00015				<0.00050		<0.00010						<0.00050
Cobalt (Co), total	mg/L		0.000178	0.000086				0.00206		0.00226						0.000025
Copper (Cu), total	mg/L	*	0.00109	0.00084				0.00021		0.000071						0.00038
Iron (Fe), total	mg/L	**1**	0.339	0.229				**13**		**13.3**						0.0447
Lead (Pb), total	mg/L	*	0.000199	0.000069				0.000075		0.000056						0.000063
Lithium (Li), total	mg/L		0.00331	0.00289				0.0827		0.0761						0.0019
Magnesium (Mg), total	mg/L		14.6	15.4				31.5		30.2						9.45
Manganese (Mn), total	mg/L	*	0.0367	0.0255				1.8		1.93						0.00747
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	0.0000023				<0.0000020		<0.0000020						<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.000912	0.000982				0.000466		0.000483						0.00156
Nickel (Ni), total	mg/L	*	0.00179	0.00121				0.00652		0.00692						0.00021
Phosphorus (P), total	mg/L		0.0108	0.0124				0.023		0.0153						<0.010
Potassium (K), total	mg/L		1.04	1.17				4.94		4.8						1.09
Selenium (Se), total	mg/L	**0.002**	0.000569	0.000846				<0.000040		<0.000040						**0.00233**

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-26	KZ-26	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep
		Guideline	6-Sep-16	30-Sep-16	24-Jun-15	29-Jul-15	15-Oct-15	16-Jun-16	27-Jul-16	27-Aug-16	7-Sep-16	4-Oct-16	24-Jun-15	29-Jul-15	15-Oct-15	14-Jun-16
Silicon (Si), total	mg/L		3.74	3.83				18.1		18.6						3.35
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.000010				0.000052		<0.0000050						0.000038
Sodium (Na), total	mg/L		1.14	1.15				8.51		7.85						1.06
Strontium (Sr), total	mg/L		0.154	0.187				1.23		1.17						0.281
Sulphur (S), total	mg/L		10.2	11.5				<15		7.5						16
Thallium (Tl), total	mg/L	**0.0008**	0.000002	<0.0000020				0.000004		0.000003						<0.0000020
Tin (Sn), total	mg/L		<0.00020	<0.00020				<0.00020		<0.00020						<0.00020
Titanium (Ti), total	mg/L		0.00212	<0.0020				<0.0050		0.00072						<0.0050
Uranium (U), total	mg/L	**0.015**	0.00182	0.00229				0.00174		0.00185						0.00287
Vanadium (V), total	mg/L		0.00034	<0.00020				<0.00050		<0.00020						<0.00050
Zinc (Zn), total	mg/L	*	0.00252	0.0019				0.0235		0.0279						<0.0010
Zirconium (Zr), total	mg/L		<0.00010	<0.00010				0.00059		0.00063						0.00011
Aluminum (Al), dissolved	mg/L	*	0.00341	0.00193	**0.0585**	**0.126**	**0.0917**	**0.0586**	**0.0489**	**0.0952**	**0.0793**	**0.0276**	0.00091	0.0012	0.00059	0.00094
Antimony (Sb), dissolved	mg/L		0.000092	0.000071	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000025	0.000023	0.000025	0.000024
Arsenic (As), dissolved	mg/L		0.000789	0.000907	0.00188	0.00275	0.0018	0.000781	0.000605	0.000579	0.000649	0.00115	0.000131	0.000121	0.000122	0.000109
Barium (Ba), dissolved	mg/L		0.0616	0.0639	0.171	0.166	0.148	0.132	0.143	0.147	0.145	0.075	0.18	0.204	0.226	0.176
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	0.000283	0.000333	0.000337	0.000244	0.000247	0.000279	0.000293	0.000122	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.000009	0.000008	0.0000505	0.0000752	0.000069	0.000061	0.00007	0.000062	0.000069	0.000039	0.0000386	0.0000324	0.000016	0.000041
Calcium (Ca), dissolved	mg/L		53.2	56.9	339	333	333	282	315	290	305	325	88.1	90.3	84.2	85
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0002	0.00021	0.00046	0.00015
Cobalt (Co), dissolved	mg/L		0.000025	0.000029	0.00267	0.00274	0.00283	0.00228	0.00225	0.0023	0.00226	0.00223	0.0000059	0.0000056	0.000008	<0.0000050
Copper (Cu), dissolved	mg/L		0.000721	0.000438	<0.000050	<0.000050	<0.000050	<0.000050	0.000066	0.000052	<0.000050	0.000085	0.000115	<0.000050	0.000103	0.000095
Iron (Fe), dissolved	mg/L	**0.35**	0.0331	0.0363	**3.89**	**13**	**9.02**	**3.13**	**1.85**	**6.64**	**4.44**	**0.497**	<0.0010	0.0011	<0.0010	<0.0010
Lead (Pb), dissolved	mg/L		0.000009	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000007	<0.0000050
Lithium (Li), dissolved	mg/L		0.00323	0.0036	0.0758	0.0824	0.0803	0.0726	0.0779	0.0806	0.0831	0.0525	0.00197	0.00191	0.00181	0.00197
Magnesium (Mg), dissolved	mg/L		14.8	16.4	35.8	36.4	33.5	31.5	32.5	30.8	32.3	34.3	9.73	10.3	9.74	9.32
Manganese (Mn), dissolved	mg/L		0.00372	0.0119	2.16	2.17	2.09	2.04	2.04	1.96	2.02	1.82	0.000096	0.000216	0.0014	<0.000050
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020				<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020				<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.000887	0.00105	0.000443	0.000511	0.000452	0.000405	0.000442	0.000459	0.000444	0.000161	0.00153	0.00133	0.000881	0.00155
Nickel (Ni), dissolved	mg/L		0.00125	0.000974	0.00789	0.00836	0.00832	0.00698	0.00712	0.00718	0.00713	0.00735	0.000144	0.000103	0.000123	0.000101
Phosphorus (P), dissolved	mg/L		0.0046	0.0022	0.0045	0.003	0.0052	0.0086	<0.0020	<0.0020	<0.0020	0.006	0.0026	<0.0020	0.0025	0.0041
Potassium (K), dissolved	mg/L		1.15	1.21	6.13	5.68	5.32	5.18	4.65	4.89	5.02	5.1	1.17	1.28	1.17	1.08
Selenium (Se), dissolved	mg/L		0.000543	0.000968	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	0.00247	0.00308	0.00197	0.0024
Silicon (Si), dissolved	mg/L		4.02	4.11	11.9	18.3	16.8	15.9	19.7	19.3	20.1	14.6	3.67	3.43	3.46	3.43
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		1.16	1.2	9.88	9.46	8.74	8.53	8.48	8.18	8.41	9.1	1.09	1.21	1.76	1.04
Strontium (Sr), dissolved	mg/L		0.171	0.195	1.33	1.16	1.08	1.25	1.22	1.28	1.21	1.23	0.269	0.284	0.253	0.268
Sulphur (S), dissolved	mg/L		10	12.4	7.5	6.9	6.9	6.2	7.6	7.2	8.1	8.1	13.1	13.6	14.9	14.3
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000002	0.000004	0.000002	0.000002	0.000004	0.000005	<0.0000020	<0.0000020	<0.0000020	0.000005
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	0.00143	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.00186	0.00233	0.0019	0.00189	0.00178	0.00149	0.00179	0.00183	0.00185	0.00107	0.00301	0.00303	0.0021	0.00311
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.00057	0.0006	0.0302	0.0337	0.0321	0.0266	0.0263	0.0282	0.0287	0.0269	0.00029	0.00053	0.00056	0.00038
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	0.00033	0.00063	0.00043	0.00029	0.00018	0.0004	0.00027	0.00019	<0.00010	<0.00010	<0.00010	<0.00010

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	Seep-3	Seep-3	Seep-3	Seep-3	Seep-3	Seep-3	Seep-3	Seep-4	Seep-4	Seep-4	Seep-4	Seep-4
		Guideline	16-Jun-16	27-Jul-16	27-Aug-16	7-Sep-16	4-Oct-16	24-Jun-15	16-Oct-15	16-Jun-16	27-Jul-16	28-Aug-16	7-Sep-16	4-Oct-16	24-Jun-15	15-Oct-15	16-Jun-16	27-Aug-16	8-Sep-16
Discharge (Flow)	L/s																		
Total Suspended Solids	mg/L		1.1		2.1							1.4					1	8.4	
pH (field)	pH units	**6.5-9**		7.41	7.92	7.6	7.28	7.89	7.31	7.89	7.44	7.8	7.75	7.6	7.51	7.29	7.6	8.08	7.93
pH (lab)	pH units	**6.5-9**		8.24	8.14	8.25	7.99	8.06	8.05		8.25	8.19	8.11	8.03	7.97	8.06	8.17	8.06	7.91
Specific Conductance (field)	µS/cm			475.8	516.6	428	450.1	314.4	344.3	312.9	361	323.3	268.7	299.1	272.4	320	301.1	374.2	274.6
Specific Conductance (lab)	µS/cm			468	457	464	506	320	342		355	319	290	335	269	322	309	320	291
Temperature (field)	C			4.2	2.7	3.5	-0.1	9.6	0.1	9.4	9.9	2.5	6.7	-0.2	7.7	2.4	2	8.2	2.7
Dissolved Oxygen (field)	mg/L	**6.5**		8.18	11.22	8.96	9.02	10.6	10.6	8.53	8.22	11.5	8.7	10.73	10	9	10.76	8.41	9.38
Dissolved Oxygen (field)	%			73	96.5	80.1	72	93.9	86	88.5	84.6	98	84.2	85.7	84.3	78	91.8	84.4	81.6
ORP (field)	mV			107.3	262.7	93.5	22.8	83	22.7	67.3	94.5	69.8	108.1	109.8	71	273.8	130	271.8	103.9
Turbidity (internal)	NTU																		
Hardness (from total)	mg/L				241							159					166	156	
Hardness (from dissolved)	mg/L			259	238	257	258	173	176		193	163	152	172	142	167	156	159	151
Colour	TCU				<5.0			6.1	5.5			5.2			<5.0	<5.0	<5.0	6.9	
Total Acidity	mg/L			1.7	1.5	<0.50	2.76	<0.50	<0.50		2.55	<0.50	<0.50	<0.50	1.11	<0.50	<0.50	0.67	0.83
Acidity (pH 4.5)	mg/L			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L			204	213	210	227	142	142		149	133	131	145	104	120	124	118	112
Alkalinity, bicarbonate HCO3	mg/L			248	260	256	277	173	173		182	163	160	177	127	146	151	144	137
Alkalinity, hydroxide OH	mg/L			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**			0.77	0.75			0.7			0.75	0.73			<0.50	0.71	<0.50	0.64
Fluoride	mg/L	**0.12**			0.067	0.056			0.036			0.032	0.036			0.033	0.038	0.038	0.047
Sulphate, dissolved	mg/L	*			26	40.9			31.1			27.7	18.2			39.3	39.5	38.4	39.2
Cyanide, total	mg/L	**0.005**			<0.00050							<0.00050					0.00081	<0.00050	
Cyanide, Weak Acid Dissociable	mg/L				<0.00050							<0.00050					0.00131	<0.00050	
Ammonia (N)	mg/L	**0.197**			0.07							0.017					0.034	0.036	
Nitrite (N)	mg/L	*			0.0024	<0.0020			<0.0020			<0.0020	<0.0020			<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3**			0.39	0.486			0.566			0.587	0.509			0.269	0.489	0.378	0.495
Nitrite & Nitrate, as N	mg/L				0.392	0.486			0.566			0.587	0.509			0.269	0.489	0.378	0.495
Phosphorus,total-colourimetric	mg/L				0.0081							<0.0020					0.0027	0.0061	
Phosphorus, Total Dissolved	mg/L				0.0071							<0.0020					0.0023	0.0031	
Dissolved Organic Carbon	mg/L				0.91							1.43					0.91	1.8	
Aluminum (Al), total	mg/L	*			0.00473							0.00784					0.0051	0.0129	
Antimony (Sb), total	mg/L	**0.009**			0.00002							<0.000020					<0.000020	<0.000020	
Arsenic (As), total	mg/L	**0.005**			0.000093							0.000148					0.000066	0.000069	
Barium (Ba), total	mg/L				0.156							0.118					0.12	0.124	
Beryllium (Be), total	mg/L				<0.000010							<0.000010					<0.000010	<0.000010	
Bismuth (Bi), total	mg/L				<0.0000050							<0.0000050					<0.0000050	<0.0000050	
Boron (B), total	mg/L	**1.5**			<0.010							<0.010					<0.010	<0.010	
Cadmium (Cd), total	mg/L	*			0.000089							0.000011					0.000012	0.000013	
Calcium (Ca), total	mg/L				79.2							60.2					61.7	57.7	
Chromium (Cr), total	mg/L	**0.001**			0.00018							<0.00010					<0.00010	<0.00010	
Cobalt (Co), total	mg/L				0.00001							0.000014					0.000006	0.000022	
Copper (Cu), total	mg/L	*			0.000203							0.000158					0.000268	0.000494	
Iron (Fe), total	mg/L	**1**			0.0134							0.0084					0.0048	0.0178	
Lead (Pb), total	mg/L	*			0.000014							0.000037					0.000008	0.000057	
Lithium (Li), total	mg/L				0.0013							0.0006					0.00061	<0.00050	
Magnesium (Mg), total	mg/L				10.4							2.23					2.86	2.87	
Manganese (Mn), total	mg/L	*			0.00211							0.000522					0.00015	0.00272	
Mercury (Hg), total	mg/L	**0.000026**			<0.0000020							<0.0000020					<0.0000020	<0.0000020	
Molybdenum (Mo), total	mg/L	**0.073**			0.00151							0.000477					0.000569	0.000545	
Nickel (Ni), total	mg/L	*			0.000117							0.000062					0.000161	0.000216	
Phosphorus (P), total	mg/L				0.0053							0.0048					0.0039	0.0104	
Potassium (K), total	mg/L				1.08							1.17					1.89	1.78	
Selenium (Se), total	mg/L	**0.002**			**0.00308**							0.000734					0.00092	0.000839	

Appendix A KZK Surface Water Quality Data

		Water Quality	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	Seep-3	Seep-3	Seep-3	Seep-3	Seep-3	Seep-3	Seep-3	Seep-4	Seep-4	Seep-4	Seep-4	Seep-4
		Guideline	16-Jun-16	27-Jul-16	27-Aug-16	7-Sep-16	4-Oct-16	24-Jun-15	16-Oct-15	16-Jun-16	27-Jul-16	28-Aug-16	7-Sep-16	4-Oct-16	24-Jun-15	15-Oct-15	16-Jun-16	27-Aug-16	8-Sep-16
Silicon (Si), total	mg/L				3.25							2.24					2.84	2.82	
Silver (Ag), total	mg/L	**0.00025**			<0.0000050							<0.0000050					<0.0000050	<0.0000050	
Sodium (Na), total	mg/L				0.99							0.726					0.676	0.663	
Strontium (Sr), total	mg/L				0.238							0.204					0.229	0.222	
Sulphur (S), total	mg/L				8.5							9.4					13.1	13.4	
Thallium (Tl), total	mg/L	**0.0008**			<0.0000020							<0.0000020					<0.0000020	<0.0000020	
Tin (Sn), total	mg/L				<0.00020							<0.00020					<0.00020	<0.00020	
Titanium (Ti), total	mg/L				<0.00050							<0.00050					<0.00050	<0.00050	
Uranium (U), total	mg/L	**0.015**			0.00272							0.000838					0.00144	0.00125	
Vanadium (V), total	mg/L				<0.00020							<0.00020					<0.00020	<0.00020	
Zinc (Zn), total	mg/L	*			0.00132							0.00056					0.00055	0.00165	
Zirconium (Zr), total	mg/L				<0.00010							<0.00010					<0.00010	<0.00010	
Aluminum (Al), dissolved	mg/L	*		0.00121	0.00107	0.00129	0.0006	0.00261	0.0037		0.00422	0.00217	0.00328	0.00122	0.00126	0.00146	0.00155	0.00234	0.00159
Antimony (Sb), dissolved	mg/L			0.000021	0.000021	0.000027	0.000021	<0.000020	<0.000020		<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Arsenic (As), dissolved	mg/L			0.000085	0.000085	0.000098	0.000077	0.000175	0.000085		0.000096	0.000125	0.000074	0.000149	0.000056	0.000087	0.000062	0.000052	0.000062
Barium (Ba), dissolved	mg/L			0.168	0.161	0.233	0.184	0.13	0.123		0.129	0.12	0.0997	0.119	0.106	0.123	0.115	0.122	0.108
Beryllium (Be), dissolved	mg/L			<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L			<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*		0.00004	0.000055	0.000012	0.000039	0.0000092	0.000014		0.000007	0.000008	0.000012	0.000007	0.0000137	0.000018	0.00001	0.000013	0.000013
Calcium (Ca), dissolved	mg/L			88	78.2	87.5	83.8	65.4	65.9		73.1	61.7	58	65.3	52.9	61.9	58.1	59.1	56.7
Chromium (Cr), dissolved	mg/L			0.00016	0.00015	0.00027	0.00028	<0.00010	0.00017		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00094	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L			<0.0000050	0.000006	<0.0000050	<0.0000050	0.0000099	0.000008		0.000007	0.000007	0.000008	0.000008	0.0000079	0.000006	0.000019	0.00001	0.000008
Copper (Cu), dissolved	mg/L			0.000084	0.000157	0.000112	<0.000050	0.00012	0.000098		0.000167	0.000131	0.000234	0.00008	0.000295	0.000178	0.000352	0.000347	0.000319
Iron (Fe), dissolved	mg/L	**0.35**		<0.0010	0.0027	<0.0010	<0.0010	<0.0010	<0.0010		0.0011	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.007	0.0025	<0.0010
Lead (Pb), dissolved	mg/L			<0.0000050	<0.0000050	0.000007	<0.0000050	<0.0000050	<0.0000050		<0.0000050	<0.0000050	<0.0000050	0.000027	<0.0000050	<0.0000050	<0.0000050	0.000006	<0.0000050
Lithium (Li), dissolved	mg/L			0.00181	0.00171	0.00193	0.00141	<0.00050	<0.00050		0.00063	<0.00050	<0.00050	<0.00050	0.00053	0.00051	0.00061	<0.00050	0.00067
Magnesium (Mg), dissolved	mg/L			9.47	10.4	9.36	11.7	2.27	2.7		2.52	2.14	1.83	2.31	2.37	3.02	2.75	2.81	2.32
Manganese (Mn), dissolved	mg/L			0.000083	0.000533	0.000191	0.000468	0.000138	0.000061		<0.000050	<0.000050	0.000108	0.000146	0.000087	0.000164	0.000175	0.000073	0.000155
Mercury (Hg), dissolved	mg/L			<0.0000020	<0.0000020	<0.0000020	<0.0000020				<0.0000020	0.000002	<0.0000020	0.0000031			<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L			0.00148	0.00157	0.00103	0.00135	0.000594	0.000592		0.000602	0.000506	0.000556	0.000563	0.000493	0.000523	0.000603	0.000537	0.000526
Nickel (Ni), dissolved	mg/L			0.000111	0.000094	0.000087	0.000054	0.000106	0.000105		0.000095	0.000042	0.000112	0.000038	0.000159	0.000187	0.000597	0.000133	0.000146
Phosphorus (P), dissolved	mg/L			<0.0020	<0.0020	<0.0020	<0.0020	0.0027	0.0027		<0.0020	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	0.0048	<0.0020	0.0034
Potassium (K), dissolved	mg/L			0.922	1.08	1.04	1.09	1.44	1.42		1.19	1.25	1.07	1.17	1.78	2.01	1.84	1.79	1.76
Selenium (Se), dissolved	mg/L			0.00237	0.00343	0.00261	0.00362	0.000757	0.000799		0.000732	0.000765	0.000627	0.000798	0.000709	0.00082	0.000833	0.00086	0.000826
Silicon (Si), dissolved	mg/L			3.85	3.46	3.47	3.61	2.69	2.31		3.18	2.43	2.8	2.32	2.72	2.73	2.61	3.01	2.82
Silver (Ag), dissolved	mg/L			<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L			1.04	0.994	1.05	1.2	0.845	0.882		0.875	0.713	0.644	0.787	0.67	0.741	0.663	0.687	0.616
Strontium (Sr), dissolved	mg/L			0.247	0.249	0.253	0.257	0.225	0.211		0.226	0.223	0.195	0.2	0.187	0.225	0.222	0.237	0.202
Sulphur (S), dissolved	mg/L			14.8	9.3	13.7	15.1	8.3	9.9		10.9	9.4	5.2	8.5	10.3	12.9	11.9	14.2	11.3
Thallium (Tl), dissolved	mg/L			<0.0000020	<0.0000020	<0.0000020	0.000002	<0.0000020	<0.0000020		<0.0000020	<0.0000020	<0.0000020	0.000002	<0.0000020	<0.0000020	0.000003	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L			<0.00020	<0.00020	0.00033	<0.00020	<0.00020	<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L			<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L			0.00285	0.00279	0.00208	0.00289	0.00097	0.00118		0.00112	0.000923	0.000702	0.00101	0.000944	0.00137	0.00131	0.00119	0.000879
Vanadium (V), dissolved	mg/L			<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L			<0.00010	0.00115	0.00128	0.00052	0.00023	0.00029		<0.00010	0.00064	0.00043	0.00052	0.00026	0.00015	0.00037	0.00084	0.00014
Zirconium (Zr), dissolved	mg/L			<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Surface Water Quality Data

		Water Quality	Seep-4	Seep-5	Seep-5	Seep-5	Seep-5	Seep-5	Seep-5	Seep-5
		Guideline	3-Oct-16	24-Jun-15	16-Oct-15	16-Jun-16	27-Jul-16	27-Aug-16	7-Sep-16	4-Oct-16
Discharge (Flow)	L/s									
Total Suspended Solids	mg/L					13.1		3.1		
pH (field)	pH units	**6.5-9**	7.49	**5.99**	**5.95**	7.02	7.28	**6.04**	7.85	6.73
pH (lab)	pH units	**6.5-9**	7.67	6.51	6.75	8.06	7.68	7.56	7.32	6.74
Specific Conductance (field)	µS/cm		273.3	563.9	557.5	516.4	234.9	620.4	146.6	447.3
Specific Conductance (lab)	µS/cm		311	521	400	520	222	233	154	424
Temperature (field)	C		2.4	12.6	0.6	11.1	9.1	9.3	6.5	1.2
Dissolved Oxygen (field)	mg/L	**6.5**	8.62	7.06	**3.2**	8.23	6.8	12.7	**6.43**	7.07
Dissolved Oxygen (field)	%		74.5	65.7	26	89.2	69	128	64.2	59.2
ORP (field)	mV		145.1	19.7	99	13.6	-14.2	34.2	-7.3	22.4
Turbidity (internal)	NTU									
Hardness (from total)	mg/L					262		109		
Hardness (from dissolved)	mg/L		152	267	196	255	72.6	110	47.8	220
Colour	TCU			6.8	86.6	16		64.6		
Total Acidity	mg/L		2.21	81.6	54.5	8.22	3.44	6.37	2.74	25.1
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		120	277	198	262	70.7	92.8	65	208
Alkalinity, bicarbonate HCO3	mg/L		146	338	242	319	86.3	113	79.3	254
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**			0.98	11		2.6	2.6	
Fluoride	mg/L	**0.12**			0.089	**0.17**		0.084	0.074	
Sulphate, dissolved	mg/L	*			11.5	8.6		17.7	7.51	
Cyanide, total	mg/L	**0.005**				0.00093		0.00113		
Cyanide, Weak Acid Dissociable	mg/L					0.00123		0.00115		
Ammonia (N)	mg/L	**0.197**				0.03		0.16		
Nitrite (N)	mg/L	*			<0.020	<0.0020		0.003	<0.0020	
Nitrate (N)	mg/L	**3**			<0.020	0.0046		<0.0020	<0.0020	
Nitrite & Nitrate, as N	mg/L				<0.020	0.0046		0.0025	<0.0020	
Phosphorus,total-colourimetric	mg/L					0.0635		0.0223		
Phosphorus, Total Dissolved	mg/L					0.0127		0.0227		
Dissolved Organic Carbon	mg/L					4.17		9.67		
Aluminum (Al), total	mg/L	*				0.0202		**0.0334**		
Antimony (Sb), total	mg/L	**0.009**				0.000064		0.000065		
Arsenic (As), total	mg/L	**0.005**				0.00069		0.000423		
Barium (Ba), total	mg/L					0.163		0.0737		
Beryllium (Be), total	mg/L					0.000017		<0.000010		
Bismuth (Bi), total	mg/L					<0.000020		<0.0000050		
Boron (B), total	mg/L	**1.5**				<0.050		<0.010		
Cadmium (Cd), total	mg/L	*				0.000092		**0.000352**		
Calcium (Ca), total	mg/L					84.2		35.6		
Chromium (Cr), total	mg/L	**0.001**				<0.00050		0.00017		
Cobalt (Co), total	mg/L					0.000466		0.000374		
Copper (Cu), total	mg/L	*				0.00171		0.00298		
Iron (Fe), total	mg/L	**1**				**3.92**		**1.96**		
Lead (Pb), total	mg/L	*				0.000391		0.000238		
Lithium (Li), total	mg/L					0.0177		0.00401		
Magnesium (Mg), total	mg/L					12.6		4.88		
Manganese (Mn), total	mg/L	*				0.444		0.124		
Mercury (Hg), total	mg/L	**0.000026**				<0.0000020		<0.0000020		
Molybdenum (Mo), total	mg/L	**0.073**				0.000106		0.000587		
Nickel (Ni), total	mg/L	*				0.00171		0.00283		
Phosphorus (P), total	mg/L					0.103		0.0223		
Potassium (K), total	mg/L					2.71		0.823		
Selenium (Se), total	mg/L	**0.002**				0.000108		0.000291		

Appendix A KZK Surface Water Quality Data

		Water Quality	Seep-4	Seep-5	Seep-5	Seep-5	Seep-5	Seep-5	Seep-5	Seep-5
		Guideline	3-Oct-16	24-Jun-15	16-Oct-15	16-Jun-16	27-Jul-16	27-Aug-16	7-Sep-16	4-Oct-16
Silicon (Si), total	mg/L					7.05		5.59		
Silver (Ag), total	mg/L	**0.00025**				0.000014		0.000005		
Sodium (Na), total	mg/L					11.8		3.49		
Strontium (Sr), total	mg/L					0.404		0.135		
Sulphur (S), total	mg/L					<15		6.5		
Thallium (Tl), total	mg/L	**0.0008**				0.000002		0.000003		
Tin (Sn), total	mg/L					<0.00020		<0.00020		
Titanium (Ti), total	mg/L					<0.0050		0.00125		
Uranium (U), total	mg/L	**0.015**				0.000295		0.000251		
Vanadium (V), total	mg/L					<0.00050		<0.00020		
Zinc (Zn), total	mg/L	*				0.0231		**0.071**		
Zirconium (Zr), total	mg/L					0.0002		0.00017		
Aluminum (Al), dissolved	mg/L	*	0.00103	0.00257	0.00099	0.00102	0.0147	0.0126	0.0228	0.00097
Antimony (Sb), dissolved	mg/L		<0.000020	<0.000020	<0.000020	0.000022	0.000073	0.000064	0.000069	0.000039
Arsenic (As), dissolved	mg/L		0.000044	0.000264	0.000239	0.000277	0.000676	0.000308	0.000274	0.000292
Barium (Ba), dissolved	mg/L		0.118	0.15	0.111	0.158	0.0674	0.0693	0.0489	0.104
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.000015	0.0000141	0.000035	0.000038	**0.000185**	**0.000345**	**0.000518**	0.00003
Calcium (Ca), dissolved	mg/L		56.7	88.3	64.7	85.2	23.1	36.1	14.4	74
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	0.00017	0.00014	0.00019	<0.00010
Cobalt (Co), dissolved	mg/L		0.000007	0.000552	0.000275	0.000019	0.000034	0.000366	0.000546	0.000263
Copper (Cu), dissolved	mg/L		0.00021	0.000151	0.000157	0.000432	0.00239	0.00235	0.00358	0.000204
Iron (Fe), dissolved	mg/L	**0.35**	<0.0010	0.0333	0.0273	0.0373	**0.681**	**1.11**	**0.513**	0.24
Lead (Pb), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000025	0.000035	0.000034	0.000005
Lithium (Li), dissolved	mg/L		<0.00050	0.0178	0.00851	0.0169	0.0026	0.00359	0.00168	0.00731
Magnesium (Mg), dissolved	mg/L		2.53	11.4	8.28	10.3	3.64	4.81	2.87	8.56
Manganese (Mn), dissolved	mg/L		0.000107	1.1	0.579	0.103	0.0155	0.131	0.0379	0.458
Mercury (Hg), dissolved	mg/L		<0.0000020			<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.000515	<0.000050	<0.000050	0.000078	0.000536	0.000538	0.000799	0.000081
Nickel (Ni), dissolved	mg/L		0.000136	0.00112	0.000926	0.00119	0.00334	0.00275	0.00494	0.00113
Phosphorus (P), dissolved	mg/L		0.0024	<0.0020	0.0033	0.0166	0.0043	0.0086	0.0101	0.0192
Potassium (K), dissolved	mg/L		1.77	1.93	1.19	2.06	0.71	0.83	0.316	1.6
Selenium (Se), dissolved	mg/L		0.000814	0.000043	0.000101	0.000099	0.000183	0.000237	0.000207	0.000363
Silicon (Si), dissolved	mg/L		2.82	11.2	7.47	6.32	6.41	5.42	5.82	6.99
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		0.683	3.26	2.16	9.52	18.4	3.73	13	2.57
Strontium (Sr), dissolved	mg/L		0.205	0.336	0.222	0.33	0.0834	0.139	0.0589	0.244
Sulphur (S), dissolved	mg/L		12.6	<3.0	3.6	3.5	3.2	5.9	<3.0	3.8
Thallium (Tl), dissolved	mg/L		0.000002	<0.0000020	<0.0000020	0.000005	0.000005	0.000003	0.000003	0.000005
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.00106	0.0000684	0.000114	0.000287	0.000069	0.000218	0.000089	0.000666
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.00027	0.00856	0.0121	0.0105	0.0233	0.0681	0.1	0.0139
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	0.00026	0.00016	0.00027	<0.00010

Notes: Blue bold text exceeds water quality guideline. Empty cell entries indicate that paramater was not analyzed.

* Indicates guideline is pH, chloride, or hardness dependent.

Appendix A KZK Field and Trip Blank Data

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

Appendix A KZK Field and Trip Blank Data

		Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank
		30-Apr-15	11-May-15	23-Jun-15	29-Jul-15	22-Aug-15	8-Sep-15	15-Oct-15	20-Nov-15	3-Dec-15	21-Jan-16	8-Feb-16	21-Mar-16	20-Apr-16	3-May-16	19-May-16	14-Jun-16
Tin (Sn), total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00174	0.00074	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000002	0.000002	0.000005	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000009	<0.0000020	<0.0000020	<0.0000020
Vanadium (V), total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00032	0.00054	0.00031	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00028	0.00018	0.00017	<0.00010	0.00013	0.00025	0.00012	0.0002	<0.00010	0.0004	0.00011	0.00012
Zirconium (Zr), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	<0.00050	<0.00050	0.00219	<0.00050	<0.00050	0.00285	<0.00050	<0.00050	<0.00050	0.00087	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Antimony (Sb), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Arsenic (As), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000037	0.000028	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Barium (Ba), dissolved	mg/L	<0.000020	<0.000020	0.000021	<0.000020	<0.000020	0.000025	0.000041	0.000261	<0.000020	<0.000020	<0.000020	0.000026	<0.000020	<0.000020	<0.000020	<0.000020
Beryllium (Be), dissolved	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000005	<0.0000050	<0.0000050	0.000005	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000005	<0.0000050
Calcium (Ca), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe), dissolved	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.002	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lead (Pb), dissolved	mg/L	<0.0000050	<0.0000050	0.0000059	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000007	<0.0000050
Lithium (Li), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium (Mg), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn), dissolved	mg/L	<0.000050	<0.000050	0.000159	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni), dissolved	mg/L	<0.000020	0.000042	<0.000020	<0.000020	0.000203	0.000031	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P), dissolved	mg/L	<0.0020	<0.0020	0.0109	0.0053	<0.0020	<0.0020	0.0025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0043	<0.0020	<0.0020	0.0025
Potassium (K), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se), dissolved	mg/L	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si), dissolved	mg/L	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Silver (Ag), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Strontium (Sr), dissolved	mg/L	<0.000050	<0.000050	0.000094	<0.000050	<0.000050	<0.000050	<0.000050	0.000151	<0.000050	0.000161	<0.000050	<0.000050	0.000134	<0.000050	<0.000050	<0.000050
Sulphur (S), dissolved	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Thallium (Tl), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000002	<0.0000020	0.000005	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000014	<0.0000020	0.000002	<0.0000020
Vanadium (V), dissolved	mg/L	<0.00020	0.00021	<0.00020	<0.00020	<0.00020	0.00074	0.00069	0.00029	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00019	<0.00010	<0.00010	<0.00010	<0.00010
Zirconium (Zr), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A KZK Field and Trip Blank Data

		Field Blank	Field Blank	Field Blank	Field Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
		26-Jul-16	27-Aug-16	8-Sep-16	3-Oct-16	30-Apr-15	14-May-15	24-Jun-15	30-Jul-15	25-Aug-15	14-Sep-15	14-Oct-15	23-Nov-15	3-Dec-15	22-Jan-16	10-Feb-16	22-Mar-16
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
pH (lab)	pH units	5.34	5.71	5.89	5.57	6.04	5.71	6.04	5.97	6.1	5.86	5.78	5.89	6.26	5.33	5	5.68
Specific Conductance (lab)	µS/cm	1.2	1.2	1.1	1.3	1.5	1.6	1.3	1.3	1.2	<1.0	1.5	<1.0	1.3	1.5	1.4	1.4
Hardness (from total)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Hardness (from dissolved)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Colour	TCU		<5.0			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Total Acidity	mg/L	<0.50	<0.50	<0.50	0.62	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L	0.68	<0.50	<0.50	<0.50	<0.50	0.9	0.68	<0.50	0.55	0.88	<0.50	0.98	1.03	0.79	<0.50	<0.50
Alkalinity, bicarbonate HCO3	mg/L	0.83	<0.50	<0.50	<0.50	<0.50	1.1	0.83	<0.50	0.67	1.07	<0.50	1.2	1.26	0.96	<0.50	<0.50
Alkalinity, hydroxide OH	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	<0.50	0.6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride	mg/L	<0.010	0.011	0.015	<0.010	<0.010	0.013	<0.010	0.01	<0.010	<0.010	<0.010	0.012	0.011	<0.010	0.018	<0.010
Sulphate, dissolved	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cyanide, total	mg/L	<0.00050	<0.00050	0.0007	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	<0.00050	<0.00050	0.00077	<0.00050	<0.00050	0.00054	<0.00050	<0.00050	<0.00050	<0.00050	0.00051	<0.00050	<0.00050	0.00052	<0.00050	<0.00050
Ammonia (N)	mg/L	0.006	<0.0050	<0.0050	0.013	<0.0050	0.0067	<0.0050	<0.0050	0.0061	0.0085	<0.0050	<0.0050	<0.0050	<0.0050	0.0051	<0.0050
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	0.0032	<0.0020	<0.0020	<0.0020	0.0023	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrite & Nitrate, as N	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	0.0032	<0.0020	<0.0020	<0.0020	0.0023	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus,total-colourimetric	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus, Total Dissolved	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Dissolved Organic Carbon	mg/L	0.67	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.63	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Aluminum (Al), total	mg/L	0.00067	<0.00050	0.00059	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Antimony (Sb), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Arsenic (As), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Barium (Ba), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Beryllium (Be), total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	<0.010	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe), total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lead (Pb), total	mg/L	<0.0000050	<0.0000050	0.000011	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00053	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium (Mg), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P), total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se), total	mg/L	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Silver (Ag), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Strontium (Sr), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sulphur (S), total	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Thallium (Tl), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020

Appendix A KZK Field and Trip Blank Data

		Field Blank	Field Blank	Field Blank	Field Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
		26-Jul-16	27-Aug-16	8-Sep-16	3-Oct-16	30-Apr-15	14-May-15	24-Jun-15	30-Jul-15	25-Aug-15	14-Sep-15	14-Oct-15	23-Nov-15	3-Dec-15	22-Jan-16	10-Feb-16	22-Mar-16
Tin (Sn), total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000004	<0.0000020	<0.0000020	<0.0000020
Vanadium (V), total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	0.00022	0.00014	0.00023	<0.00010	<0.00010	0.00013	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Zirconium (Zr), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Antimony (Sb), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Arsenic (As), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Barium (Ba), dissolved	mg/L	0.000024	<0.000020	<0.000020	0.000024	<0.000020	0.000035	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Beryllium (Be), dissolved	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L	<0.010	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe), dissolved	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lead (Pb), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00055	<0.00050	<0.00050	<0.00050	0.00053
Magnesium (Mg), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L	0.000078	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P), dissolved	mg/L	<0.0020	<0.0020	<0.0020	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020
Potassium (K), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se), dissolved	mg/L	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Silver (Ag), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Strontium (Sr), dissolved	mg/L	<0.000050	<0.000050	0.000052	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sulphur (S), dissolved	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Thallium (Tl), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Vanadium (V), dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Zirconium (Zr), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A KZK Field and Trip Blank Data

		Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
		21-Apr-16	5-May-16	19-May-16	14-Jun-16	27-Jul-16	28-Aug-16	8-Sep-16	4-Oct-16
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
pH (lab)	pH units	5.85	5.93	5.74	5.34	5.75	5.44	5.75	5.27
Specific Conductance (lab)	µS/cm	1.2	1.1	1.1	<1.0	1	1.2	1.1	1.1
Hardness (from total)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Hardness (from dissolved)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Colour	TCU	<5.0	<5.0	<5.0			<5.0		
Total Acidity	mg/L	<0.50	<0.50	0.83	<0.50	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L	<0.50	0.94	0.5	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, bicarbonate HCO3	mg/L	<0.50	1.15	0.61	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, hydroxide OH	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	0.52	0.51	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride	mg/L	0.014	0.011	0.013	<0.010	<0.010	0.011	0.015	<0.010
Sulphate, dissolved	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cyanide, total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Ammonia (N)	mg/L	0.0083	0.0073	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.009
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	<0.0020	<0.0020	0.0025
Nitrite & Nitrate, as N	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	<0.0020	<0.0020	0.0025
Phosphorus,total-colourimetric	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0024
Phosphorus, Total Dissolved	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Dissolved Organic Carbon	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Aluminum (Al), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Antimony (Sb), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Arsenic (As), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Barium (Ba), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Beryllium (Be), total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe), total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lead (Pb), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00076	<0.00050	<0.00050
Magnesium (Mg), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P), total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se), total	mg/L	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Silver (Ag), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Strontium (Sr), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sulphur (S), total	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Thallium (Tl), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020

Appendix A KZK Field and Trip Blank Data

		Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
		21-Apr-16	5-May-16	19-May-16	14-Jun-16	27-Jul-16	28-Aug-16	8-Sep-16	4-Oct-16
Tin (Sn), total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Vanadium (V), total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00011	<0.00010	<0.00010
Zirconium (Zr), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Antimony (Sb), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Arsenic (As), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Barium (Ba), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Beryllium (Be), dissolved	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe), dissolved	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lead (Pb), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium (Mg), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P), dissolved	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se), dissolved	mg/L	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Silver (Ag), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Strontium (Sr), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sulphur (S), dissolved	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Thallium (Tl), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Vanadium (V), dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Zirconium (Zr), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

APPENDIX B.

2015-16 Surface Water Monitoring Photo log

1. SOUTH CREEK

1.1 KZ-13

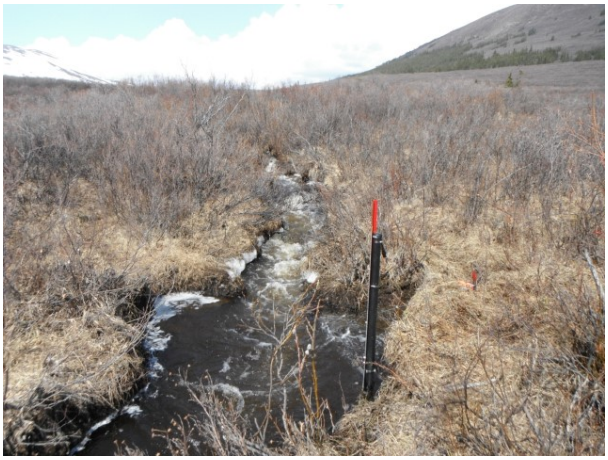


Photo 1: KZ-13 looking upstream, May 2015.

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

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

Photo 4: KZ-13 looking downstream, February 2016.

2. GEONA CREEK

2.1 KZ-6

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

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

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

2.2 KZ-7

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

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

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

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

2.3 KZ-9

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

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

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

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

2.4 KZ-17

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

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

2.5 KZ-18

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

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

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

3. FAULT CREEK

3.1 KZ-2

Photo 21: KZ-2 looking downstream, May 2015.

Photo 22: KZ-2 looking upstream, July 2015.

Photo 23: KZ-2 looking upstream, October 2015.

Photo 24: KZ-2 looking downstream, March 2016.

4. GEONA CREEK SEEPS

Photo 25: KZ-9 West Seep, July 2015.

Photo 26: KZ-9 East Seep, July 2016.

Photo 27: Seep 3, July 2015.

Photo 28: Seep 4, July 2015.

Photo 29: Seep 5, July 2015.

5. FINLAYSON CREEK

5.1 KZ-16

Photo 30: KZ-16 looking downstream, May 2015.

Photo 31: KZ-16 looking downstream, June 2015.

Photo 32: KZ-16 looking downstream, October 2015.

Photo 33: KZ-16 looking downstream, February 2016.

5.2 KZ-15

Photo 34: KZ-15 looking downstream, May 2015.

Photo 35: KZ-15 looking upstream, July 2015.

Photo 36: KZ-15 looking downstream, October 2015.

Photo 37: KZ-15 looking downstream, March 2016.

5.3 KZ-22

Photo 35: KZ-22 looking downstream, May 2015.

Photo 39: KZ-22 looking downstream, July 2015.

Photo 40: KZ-22 looking upstream from hydrometric station, September 2015.

Photo 41: KZ-22 looking downstream, March 2016.

5.4 KZ-26

Photo 42: KZ-26 looking downstream from Robert Campbell Highway, May 2015.

Photo 43: KZ-26 looking upstream from Robert Campbell Highway, July 2015.

Photo 44: KZ-26 looking upstream from hydrometric station, October 2015.

Photo 45: KZ-26 looking downstream approximately 200 meters upstream of Robert Campbell Highway, February 2016.

6. EAST CREEK

6.1 KZ-21

Photo 46: KZ-21 looking upstream, May 2015.

Photo 47: KZ-21 looking downstream August 2015.

Photo 48: KZ-21 looking upstream, October 2015.

Photo 49: KZ-21 looking downstream, January 2016.

APPENDIX C.

Historic and 2015-16 Surface Water Plots

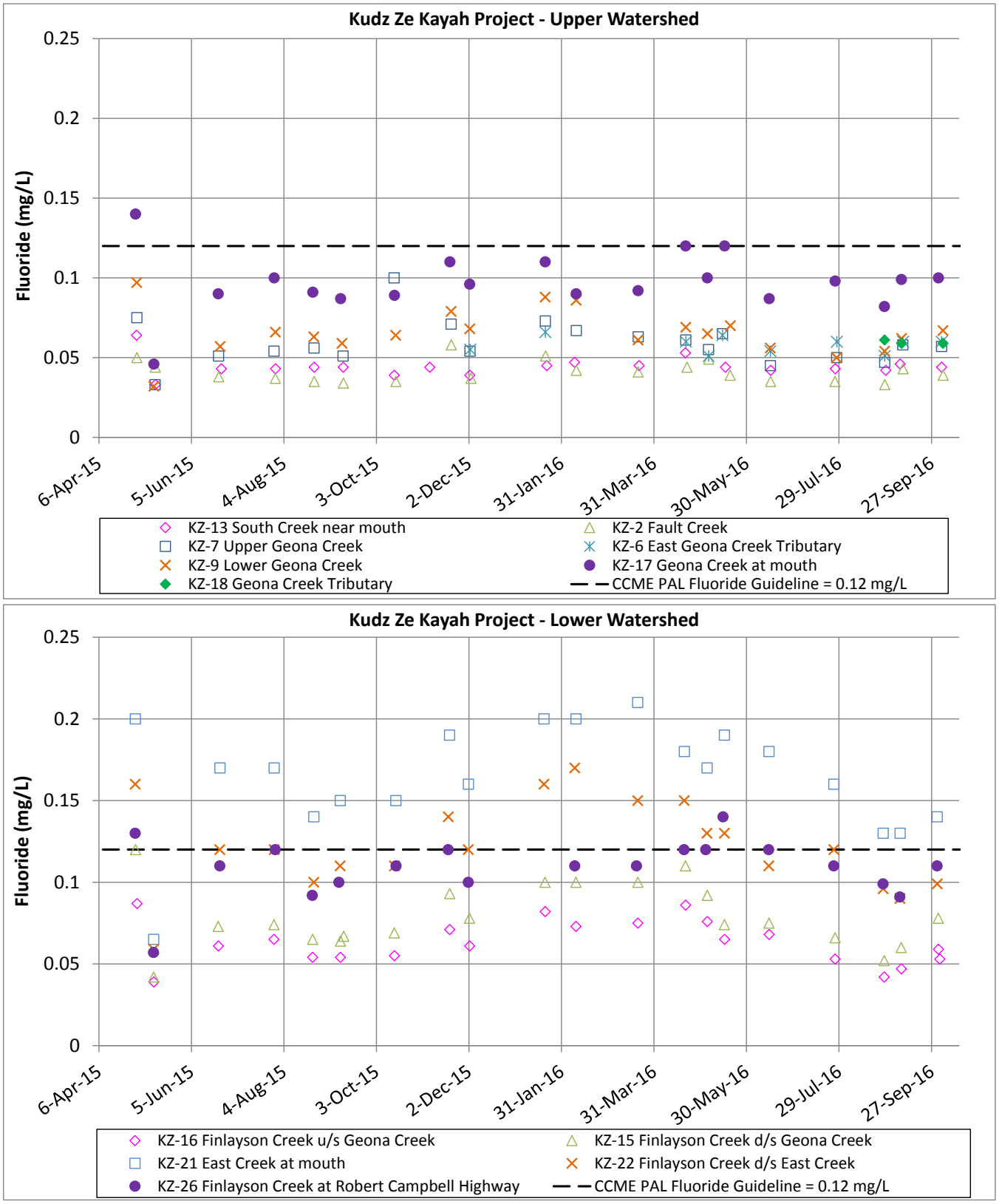
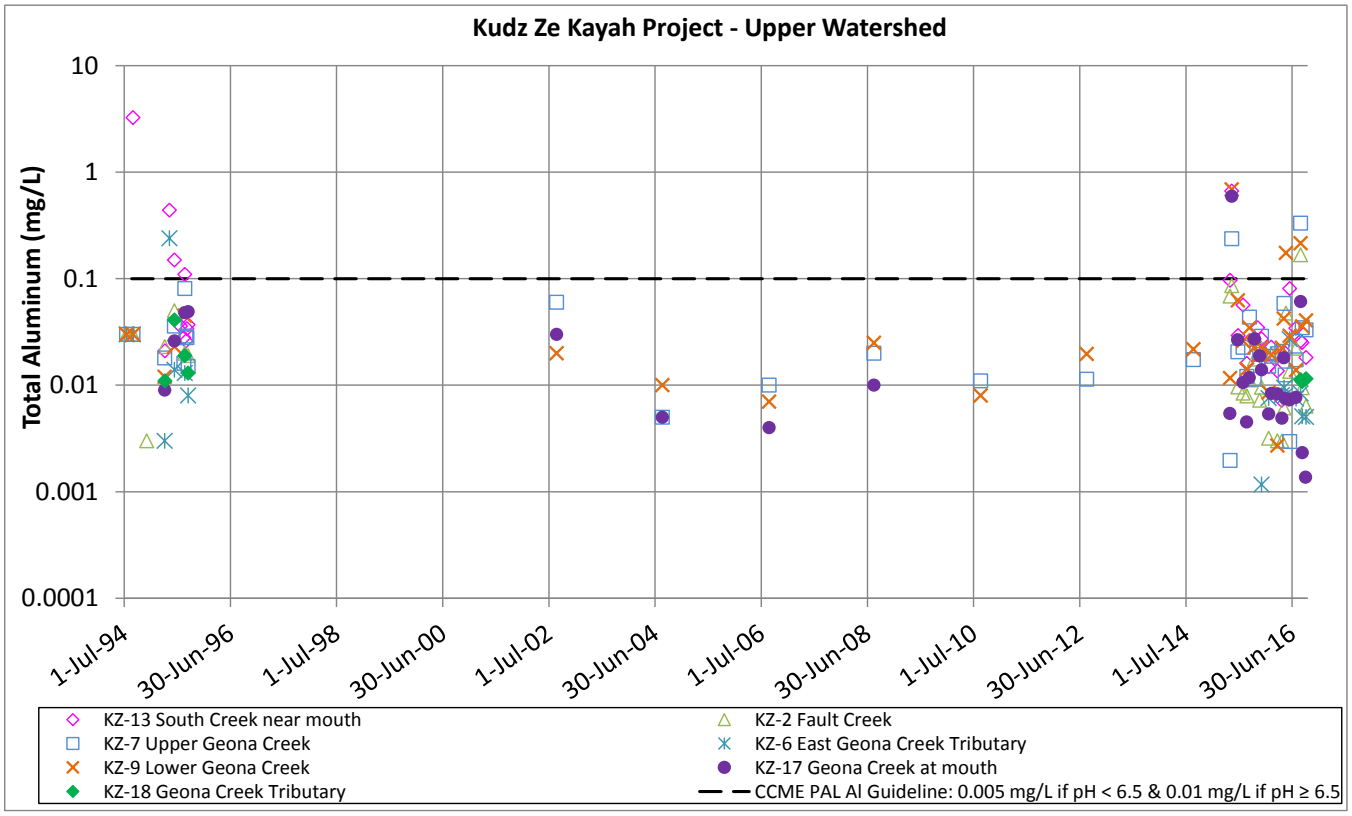


Figure C-1: Temporal Variation in Dissolved Fluoride Concentration in Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project



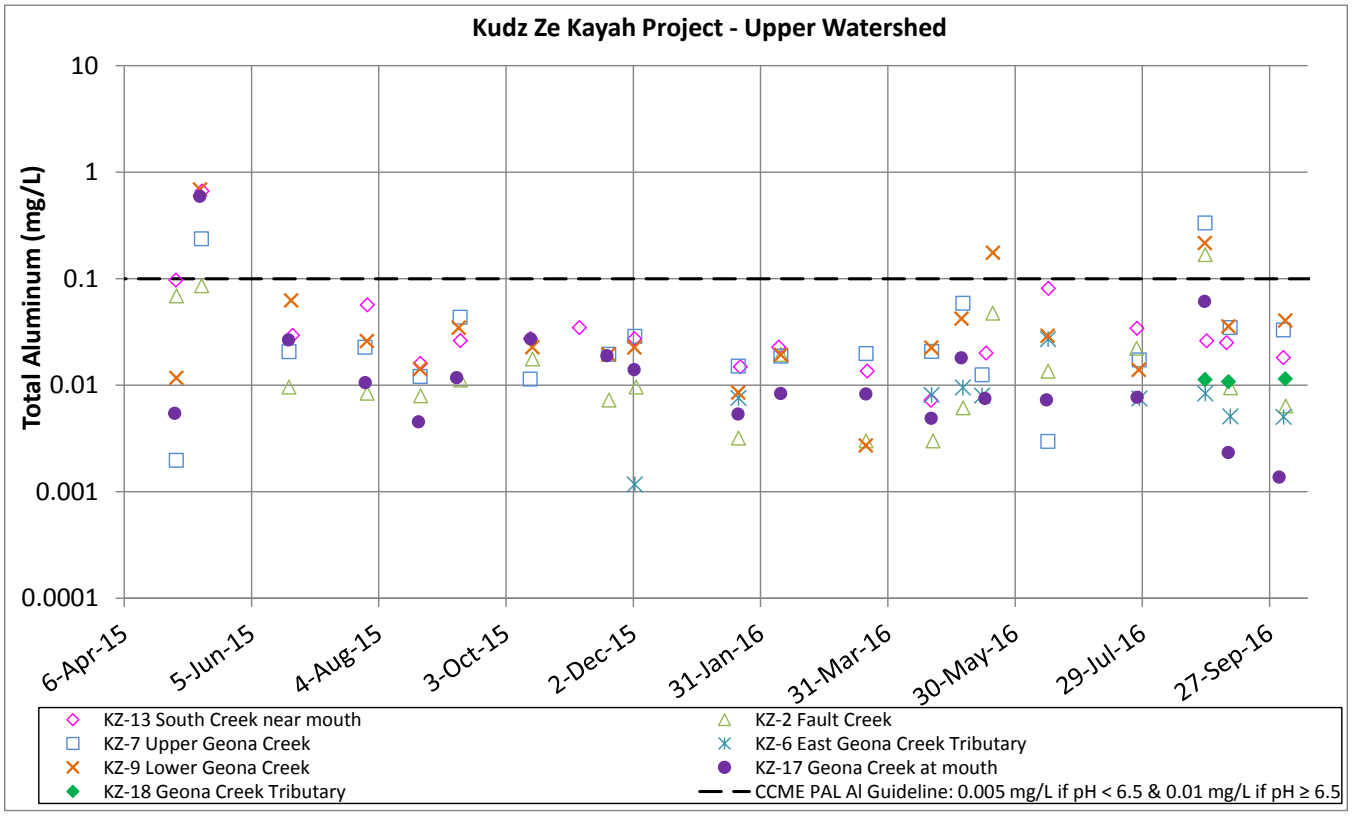
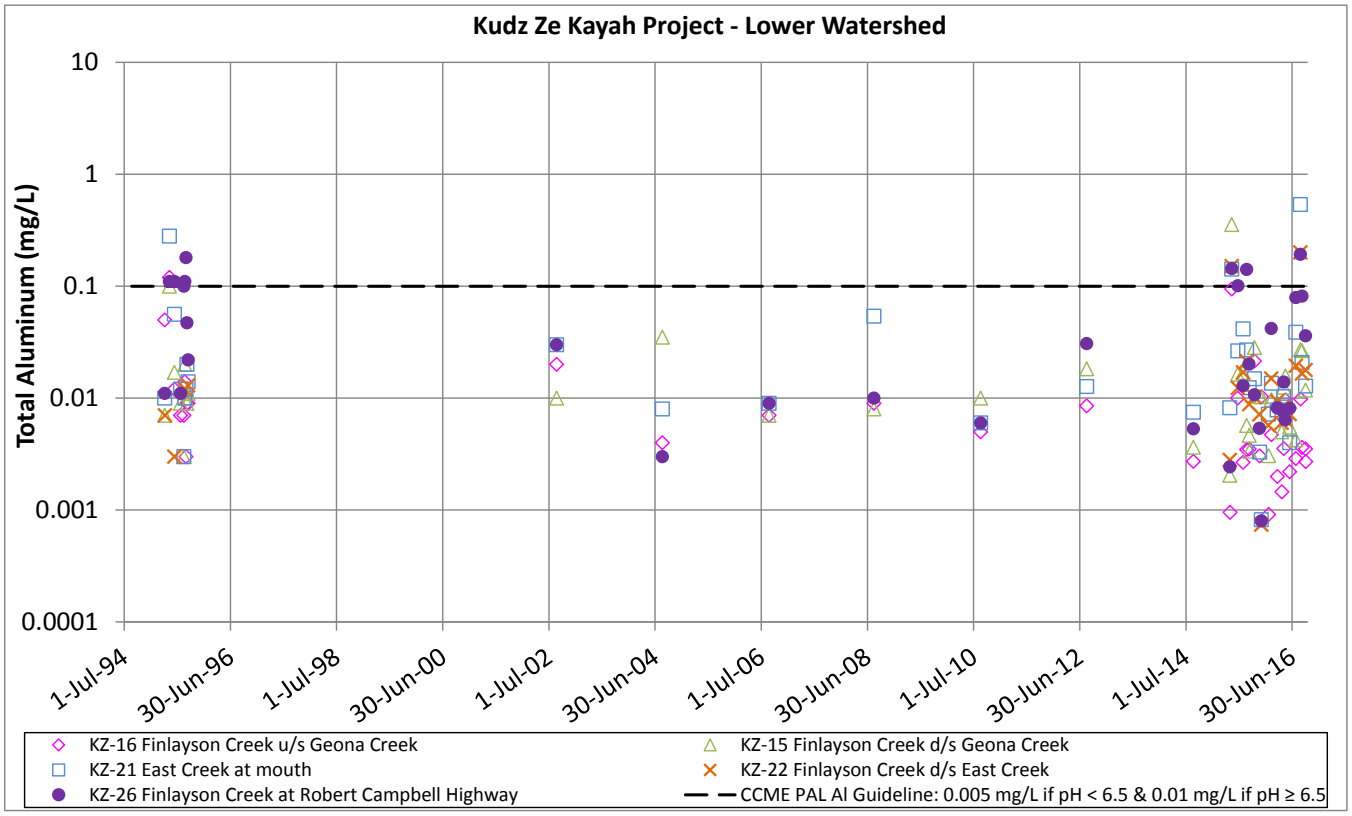


Figure C-2: Temporal Variation in Total Aluminum Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



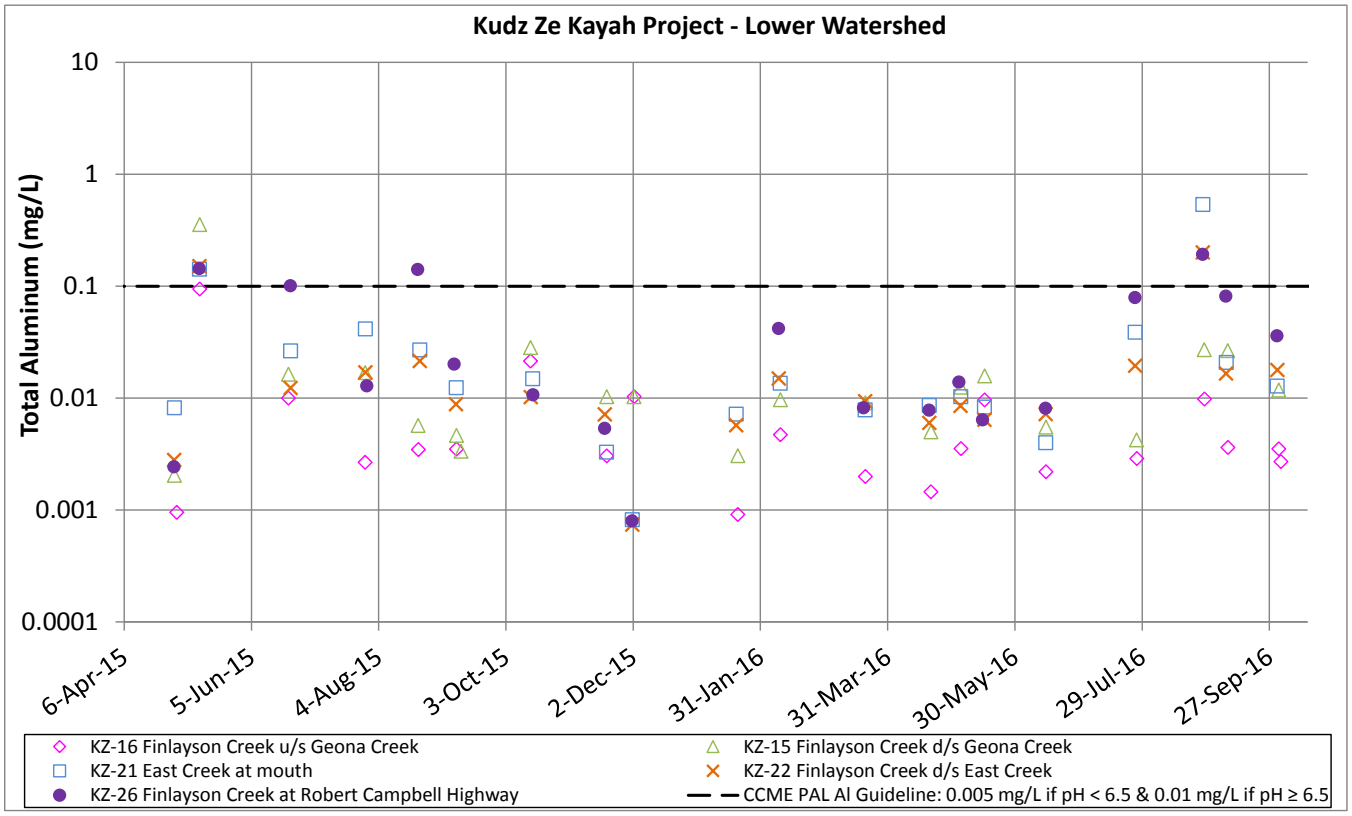
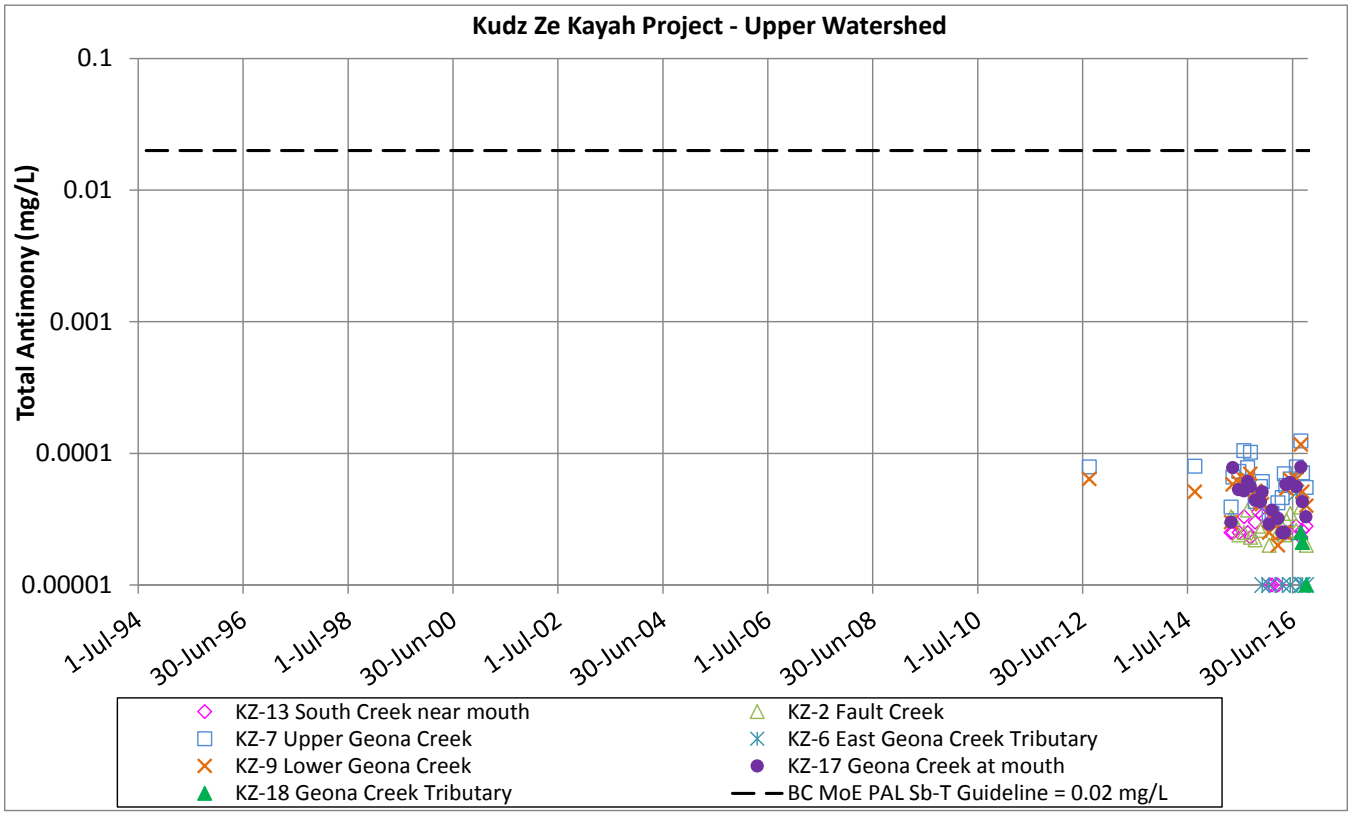


Figure C-3: Temporal Variation in Total Aluminum Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



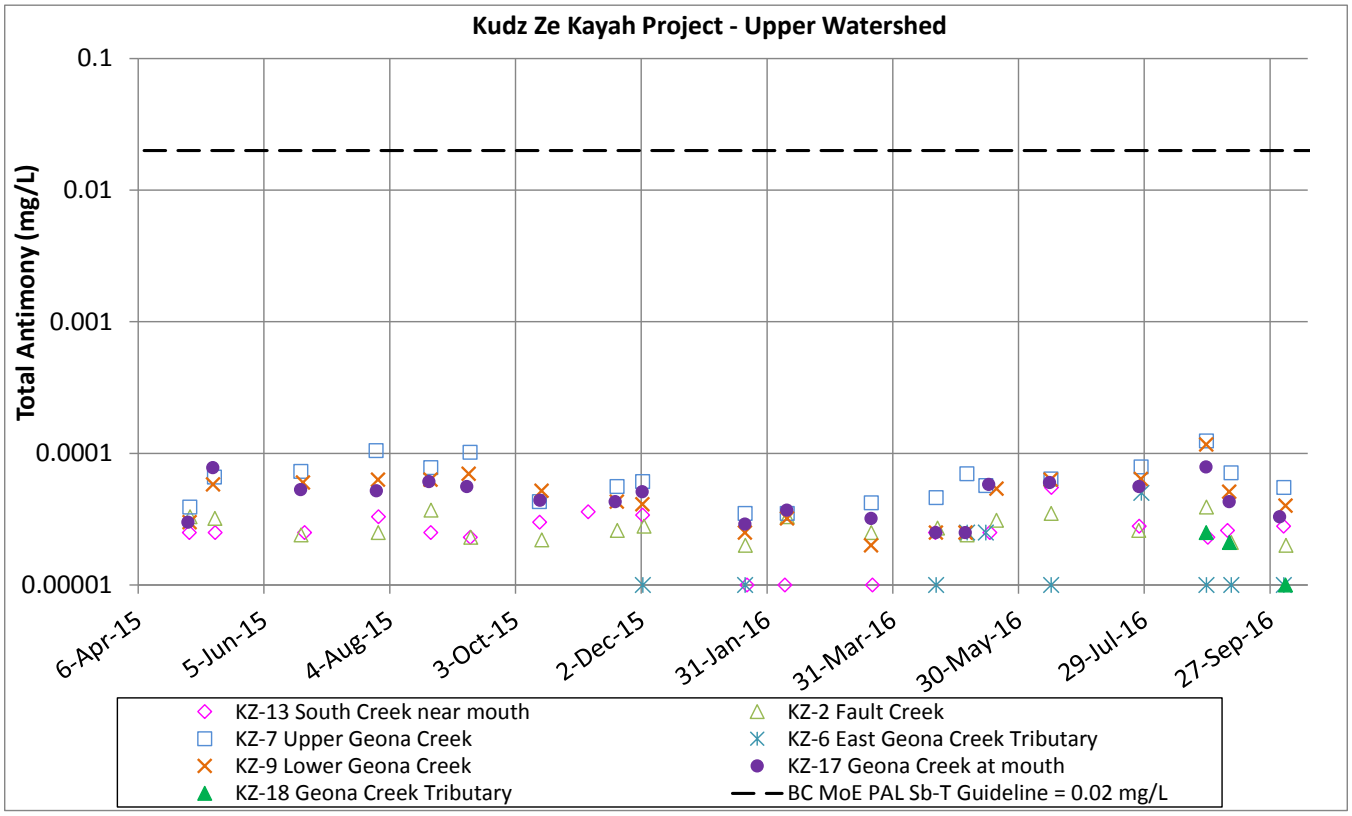
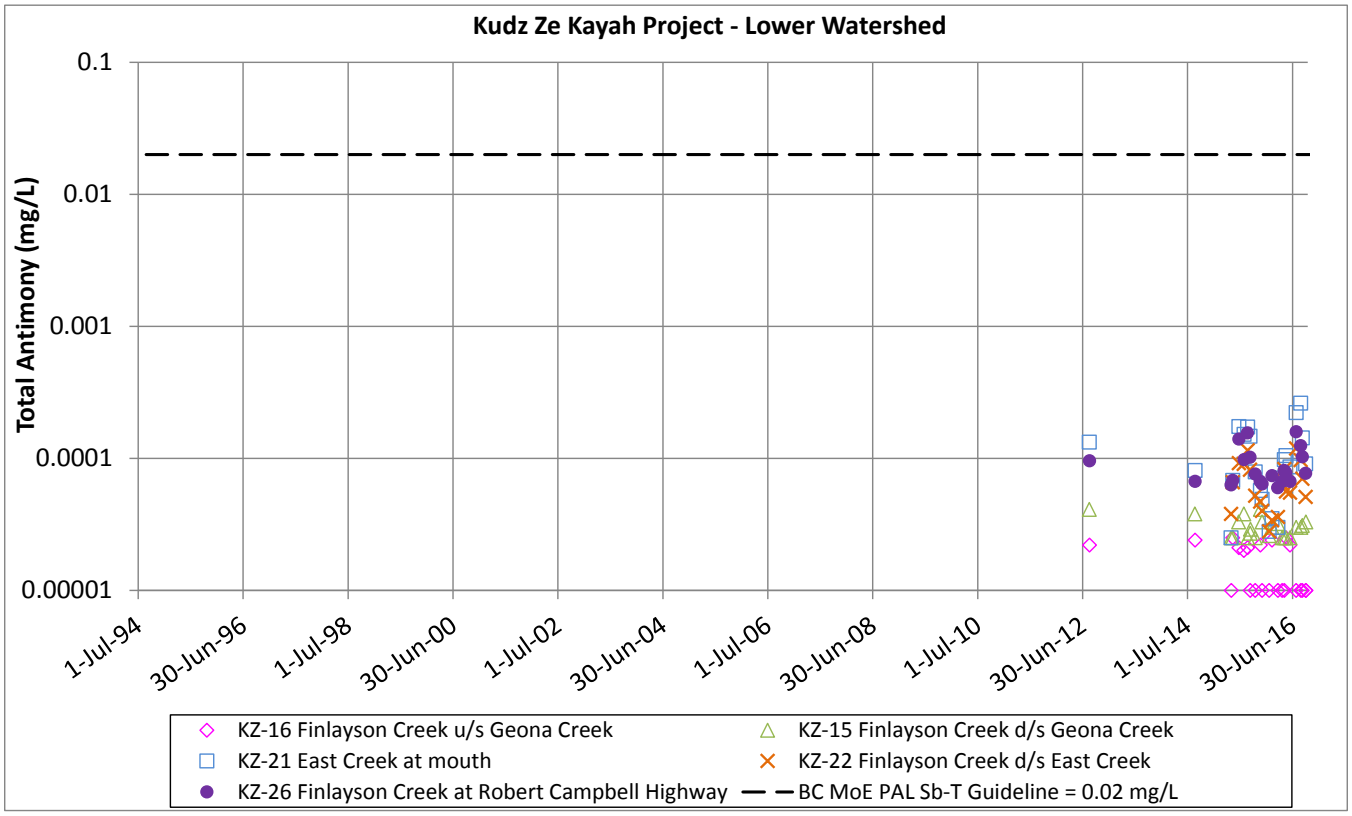


Figure C-4: Temporal Variation in Total Antimony Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



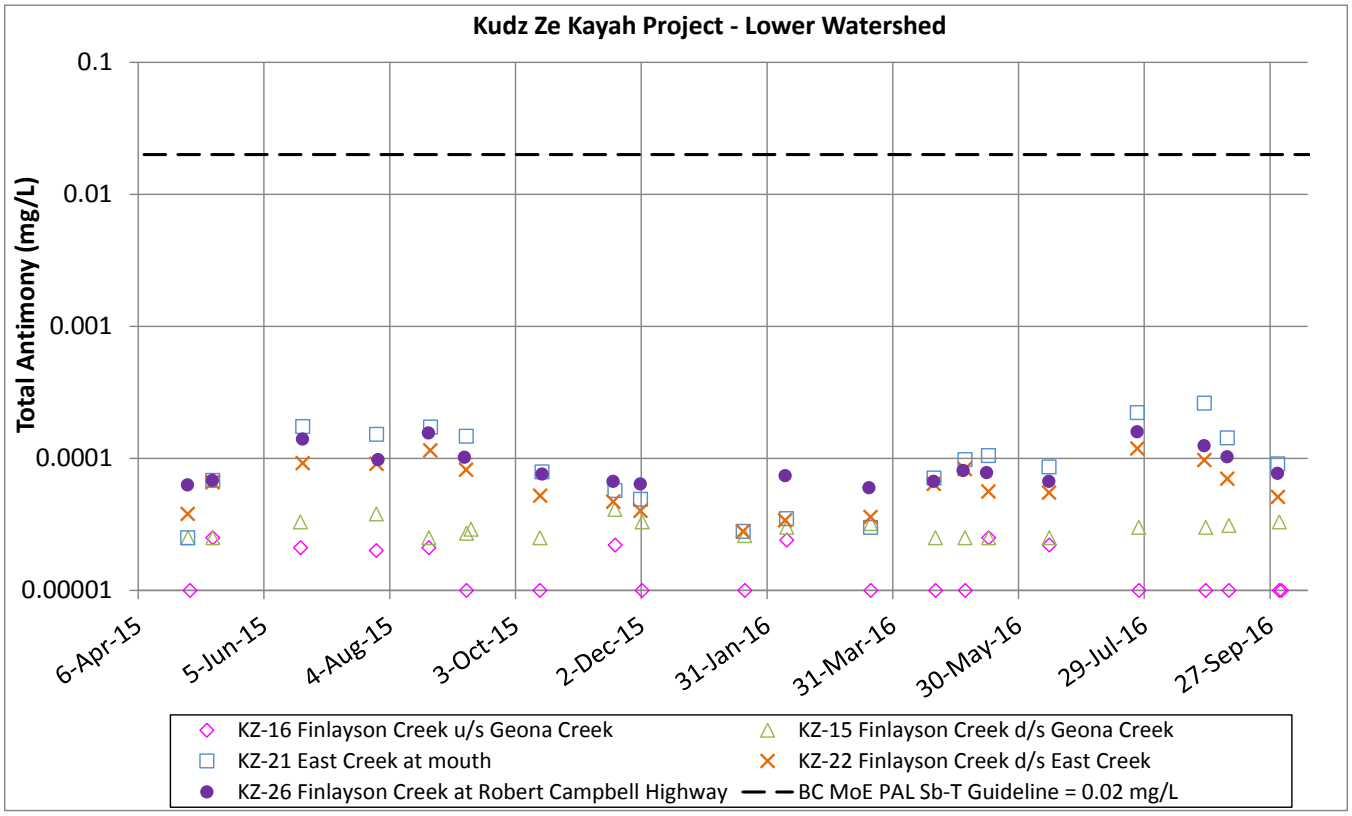
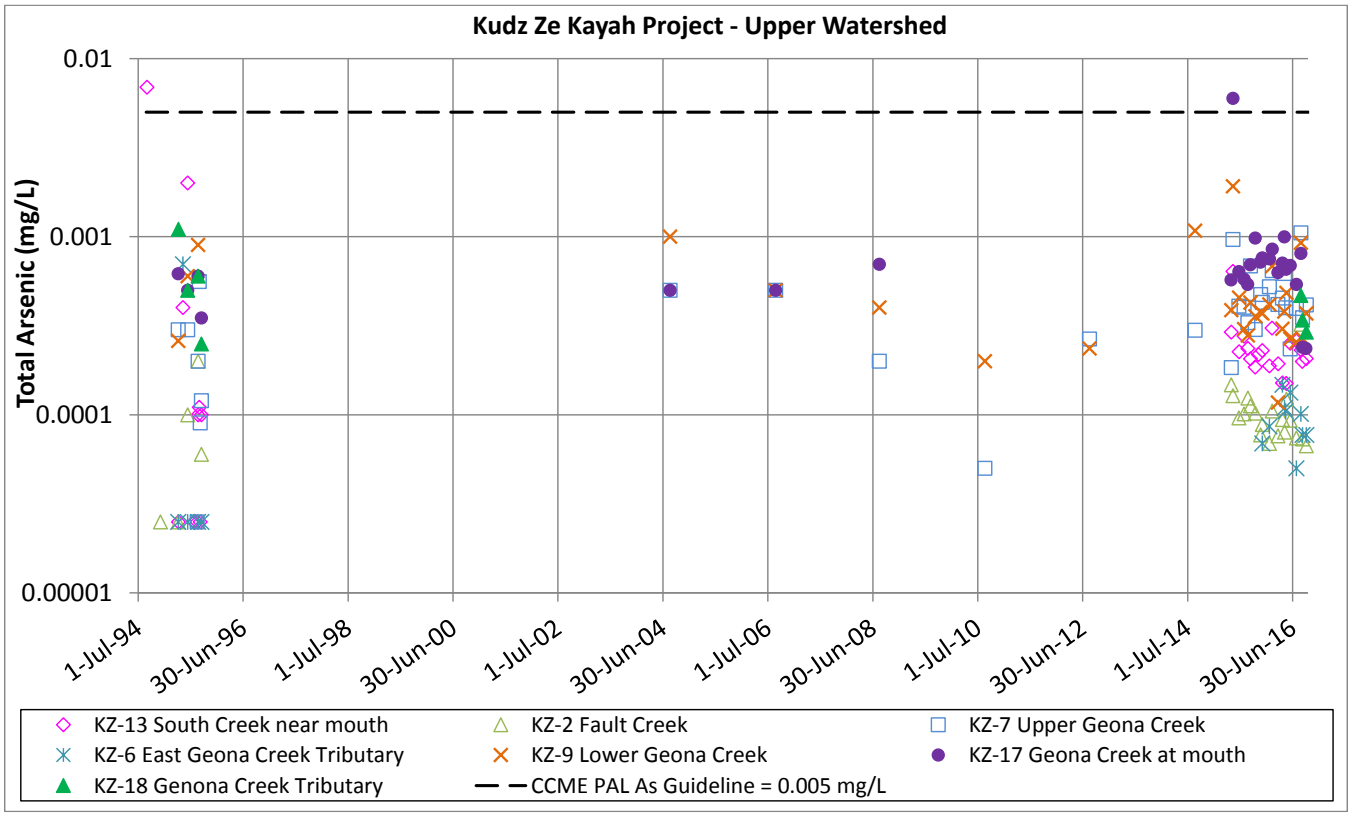


Figure C-5: Temporal Variation in Total Antimony Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



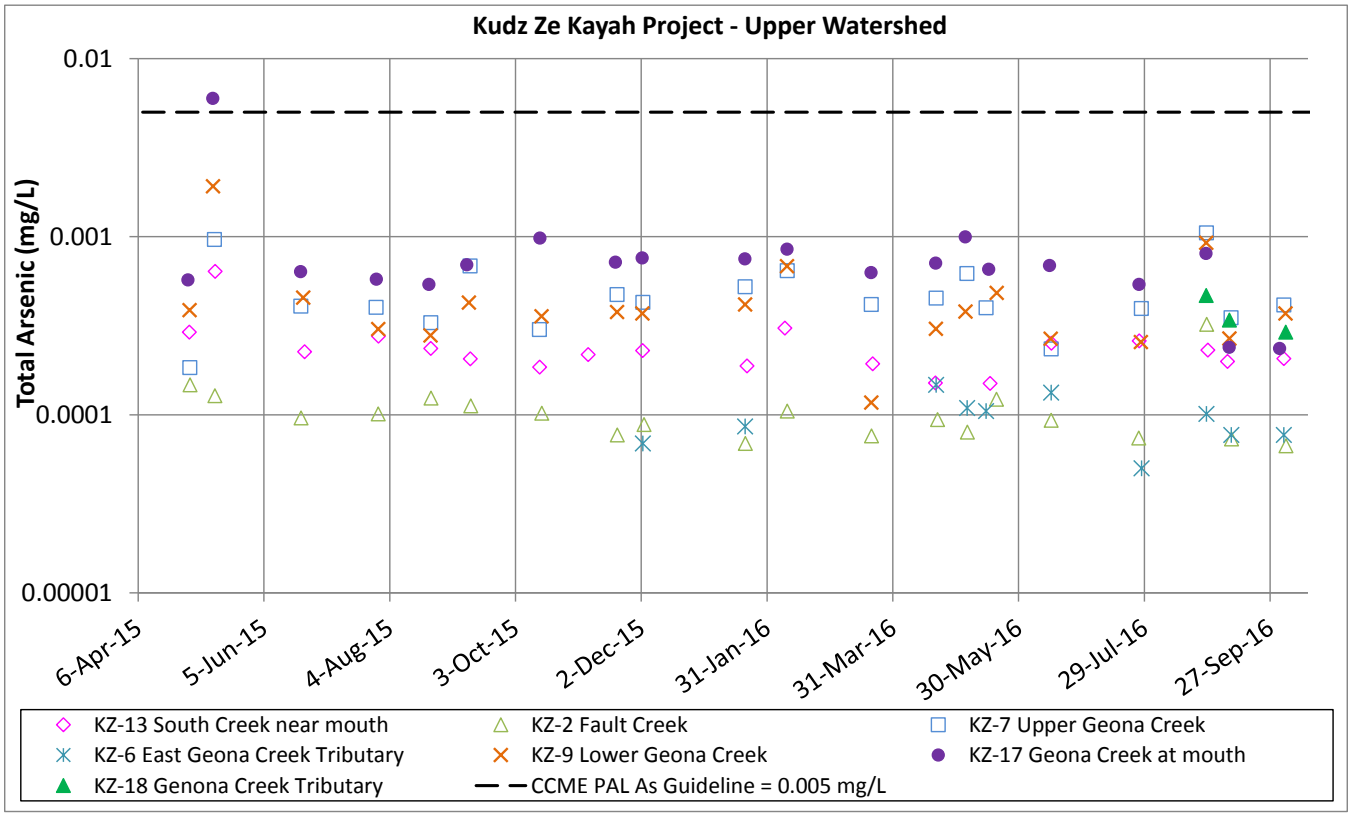


Figure C-6: Temporal Variation in Total Arsenic Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

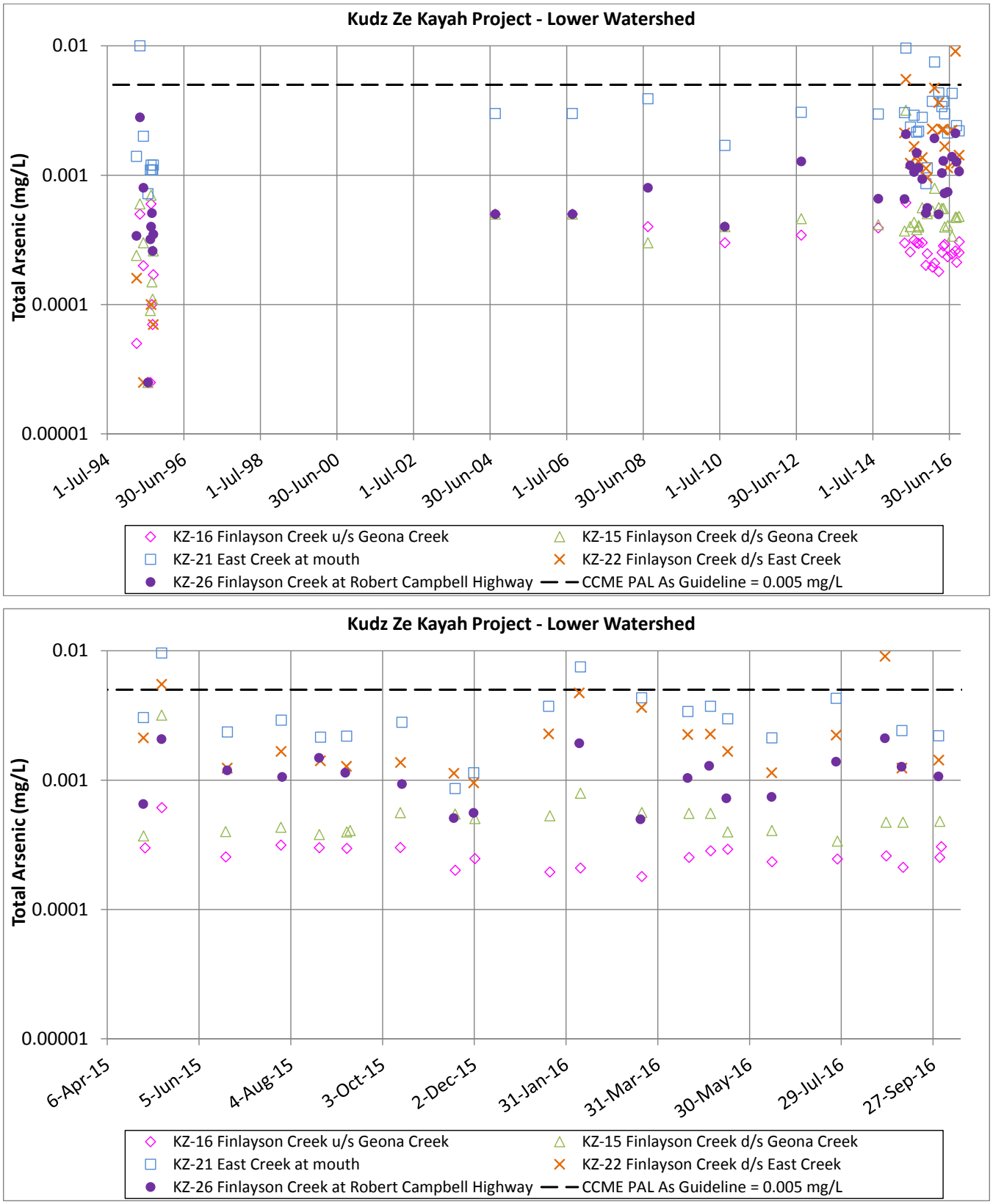
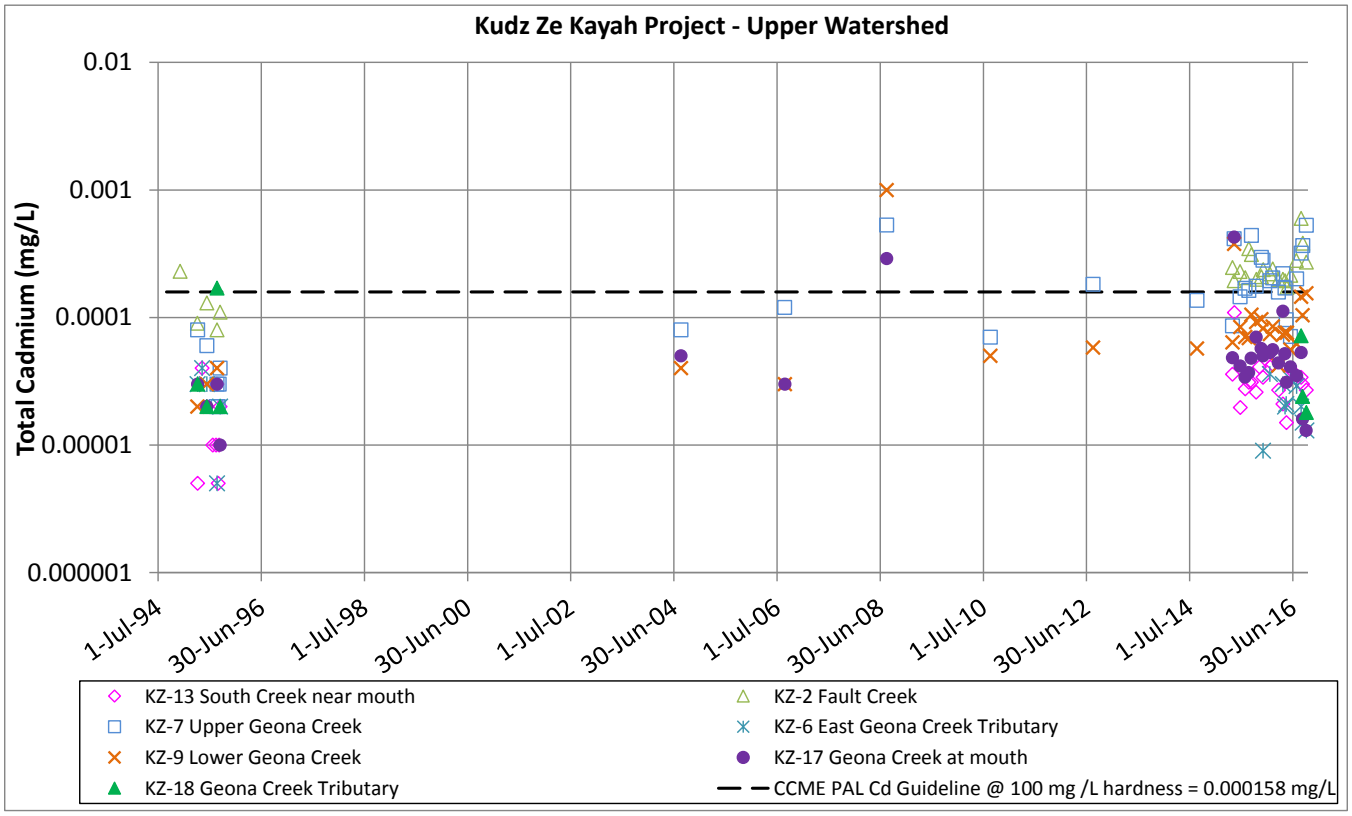


Figure C-7: Temporal Variation in Total Arsenic Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



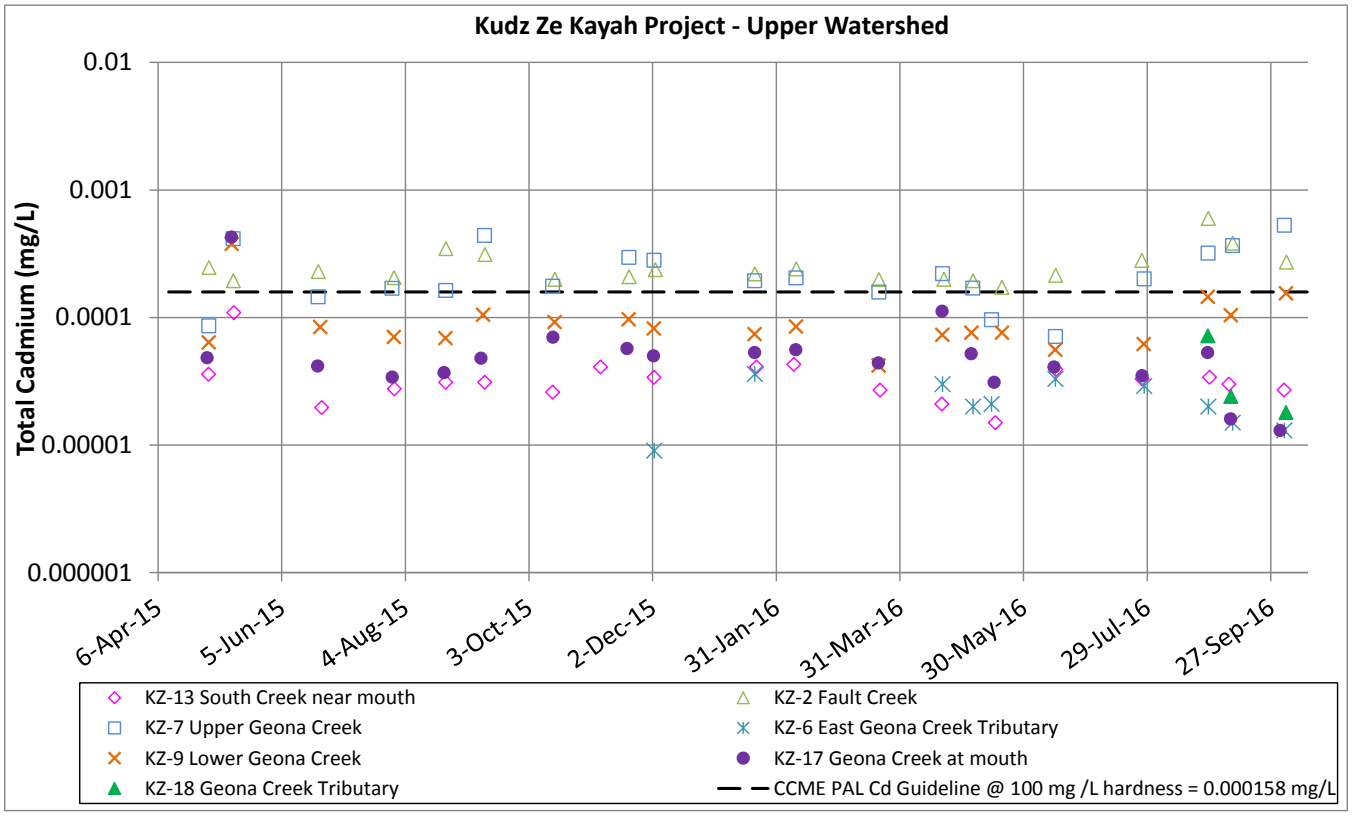
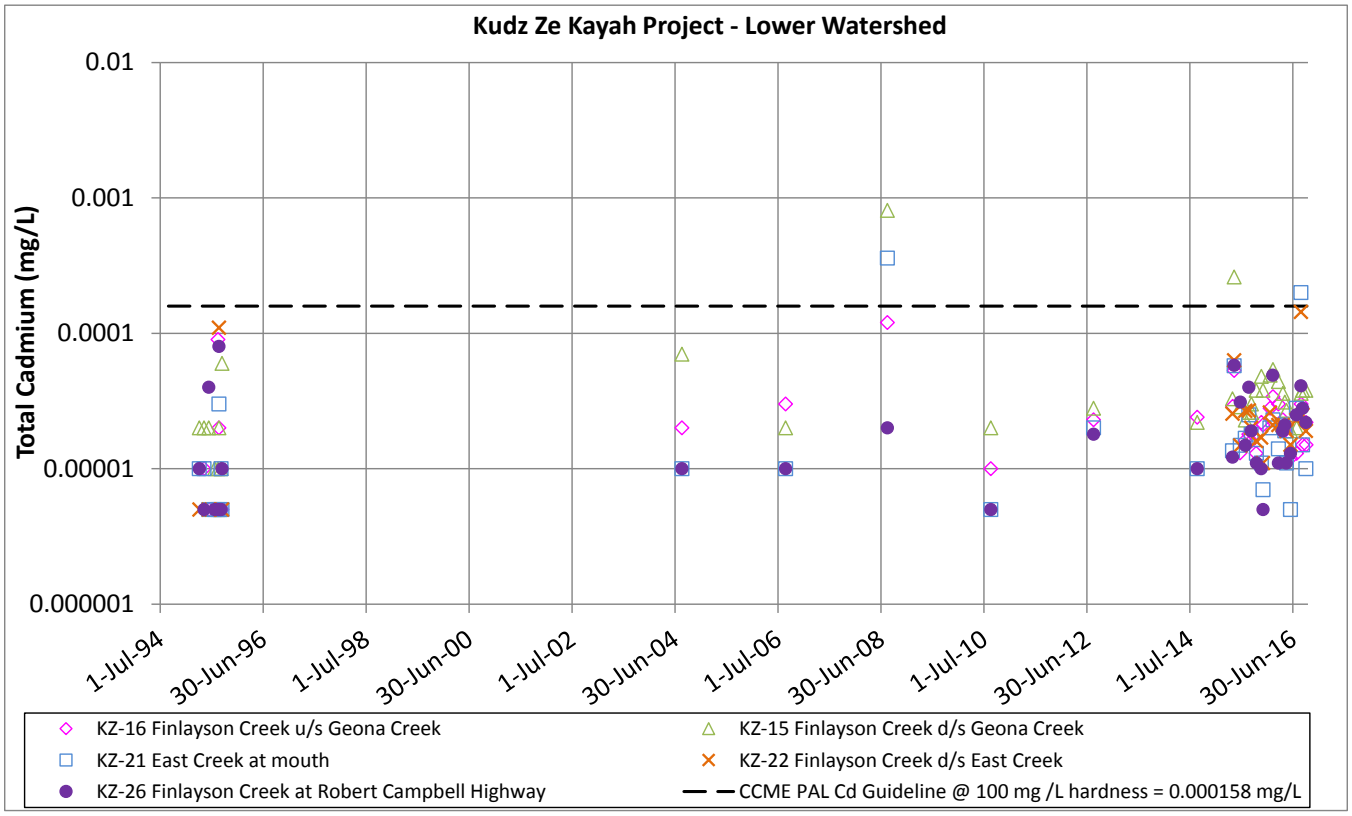


Figure C-8: Temporal Variation in Total Cadmium Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



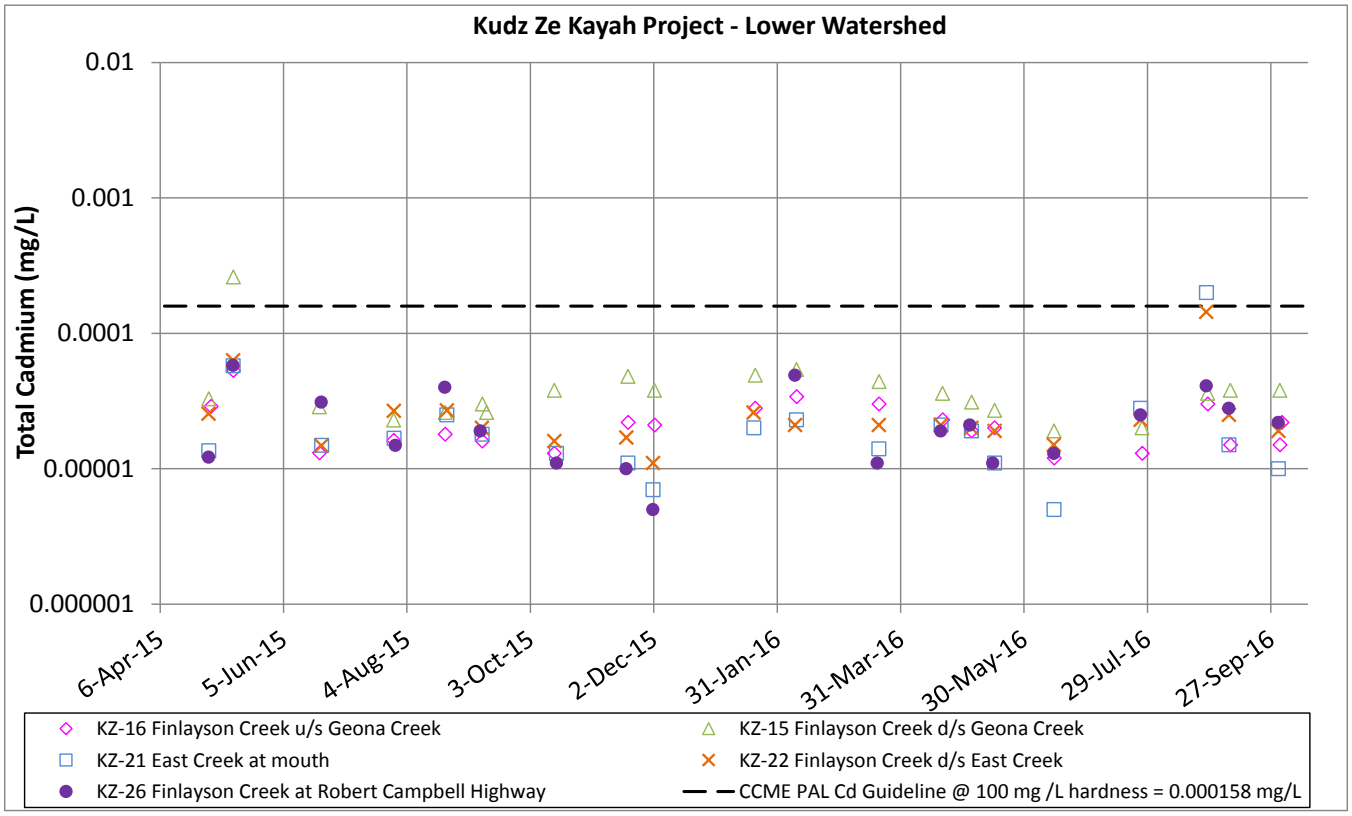
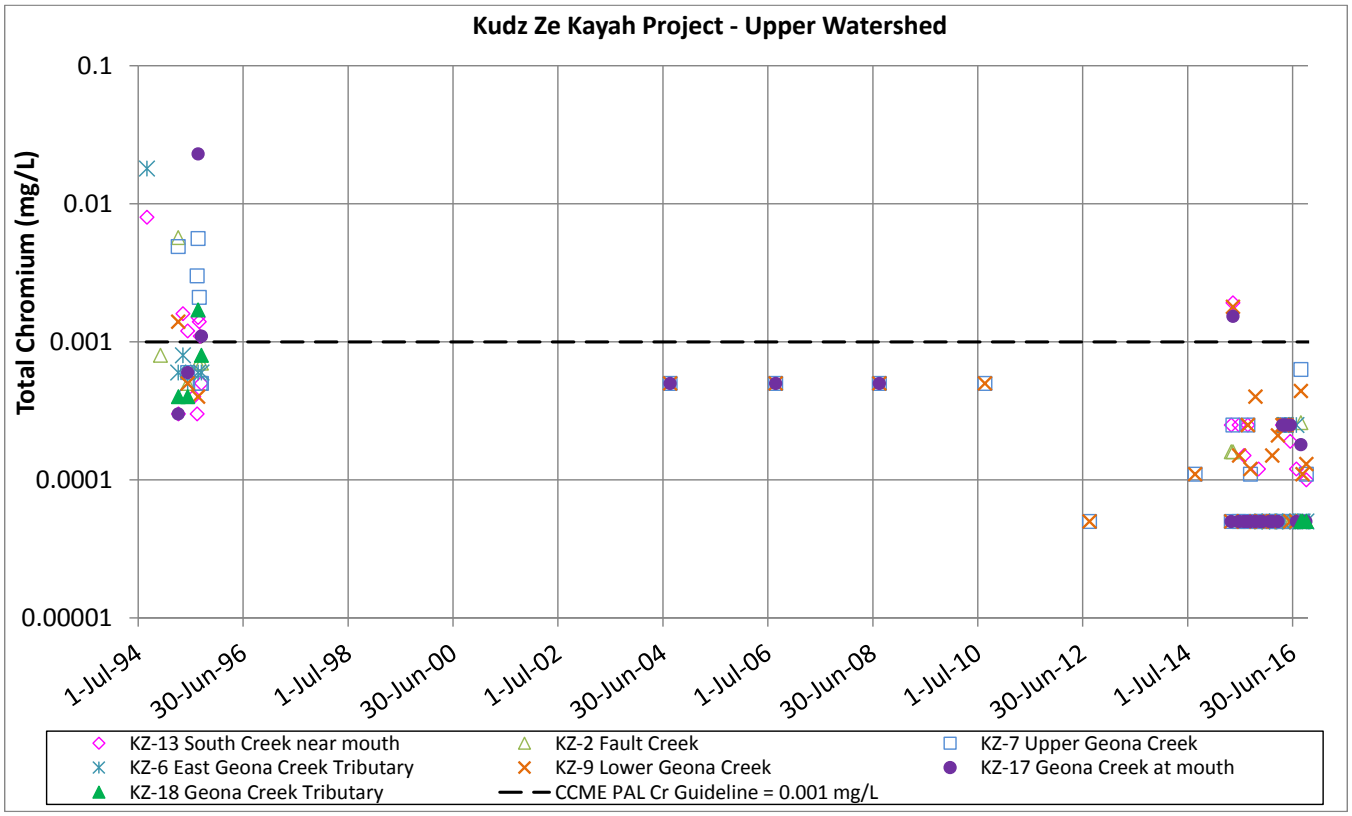


Figure C-9: Temporal Variation in Total Cadmium Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



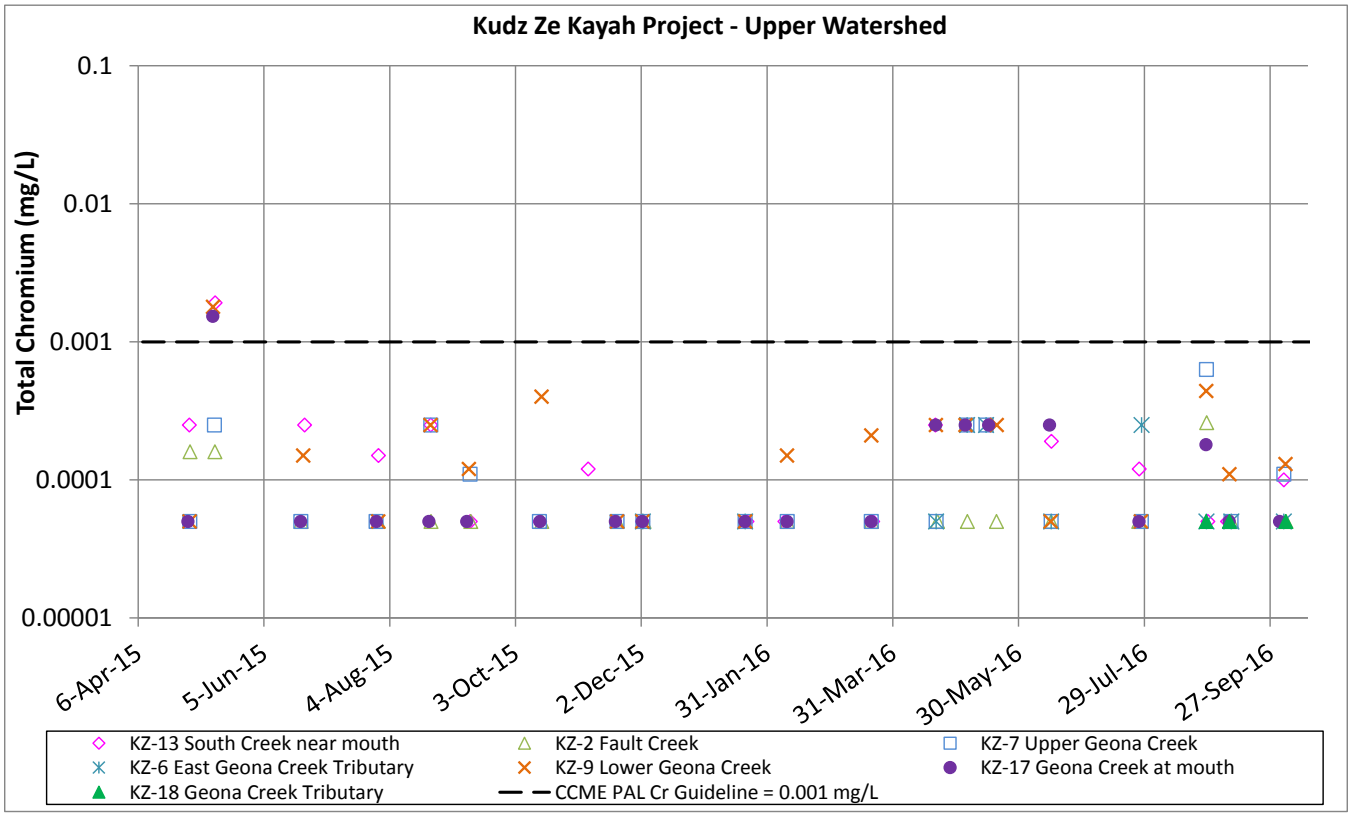
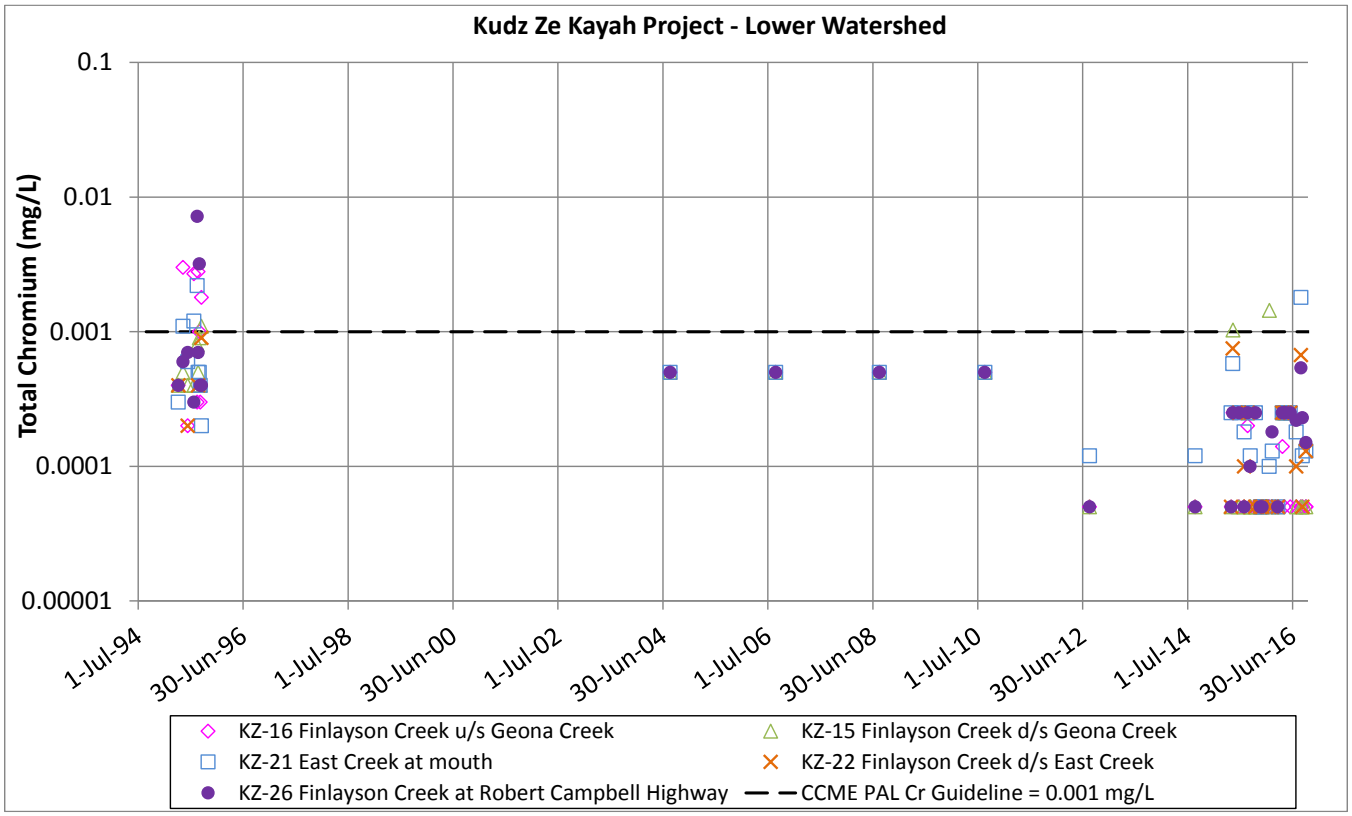


Figure C-10: Temporal Variation in Total Chromium Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



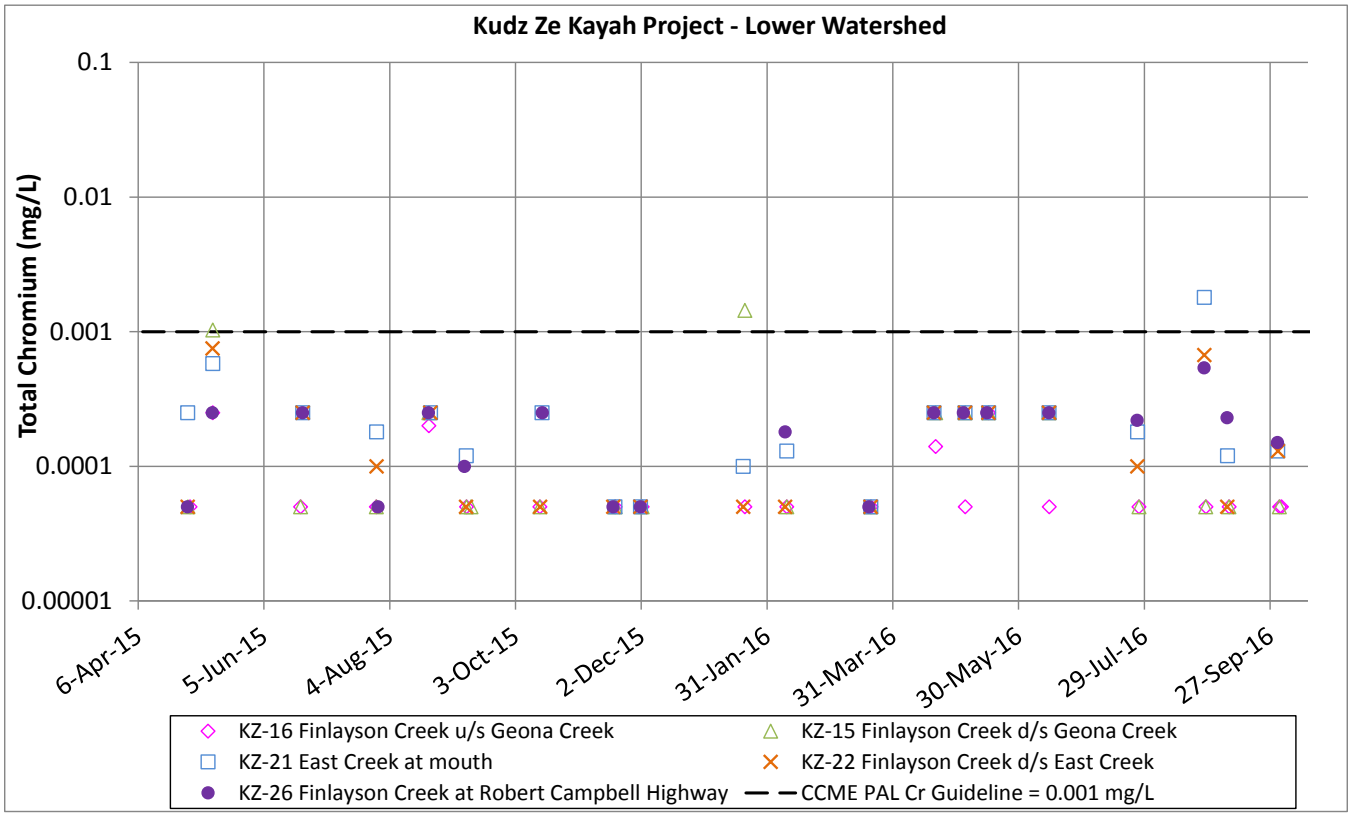


Figure C-11: Temporal Variation in Total Chromium Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

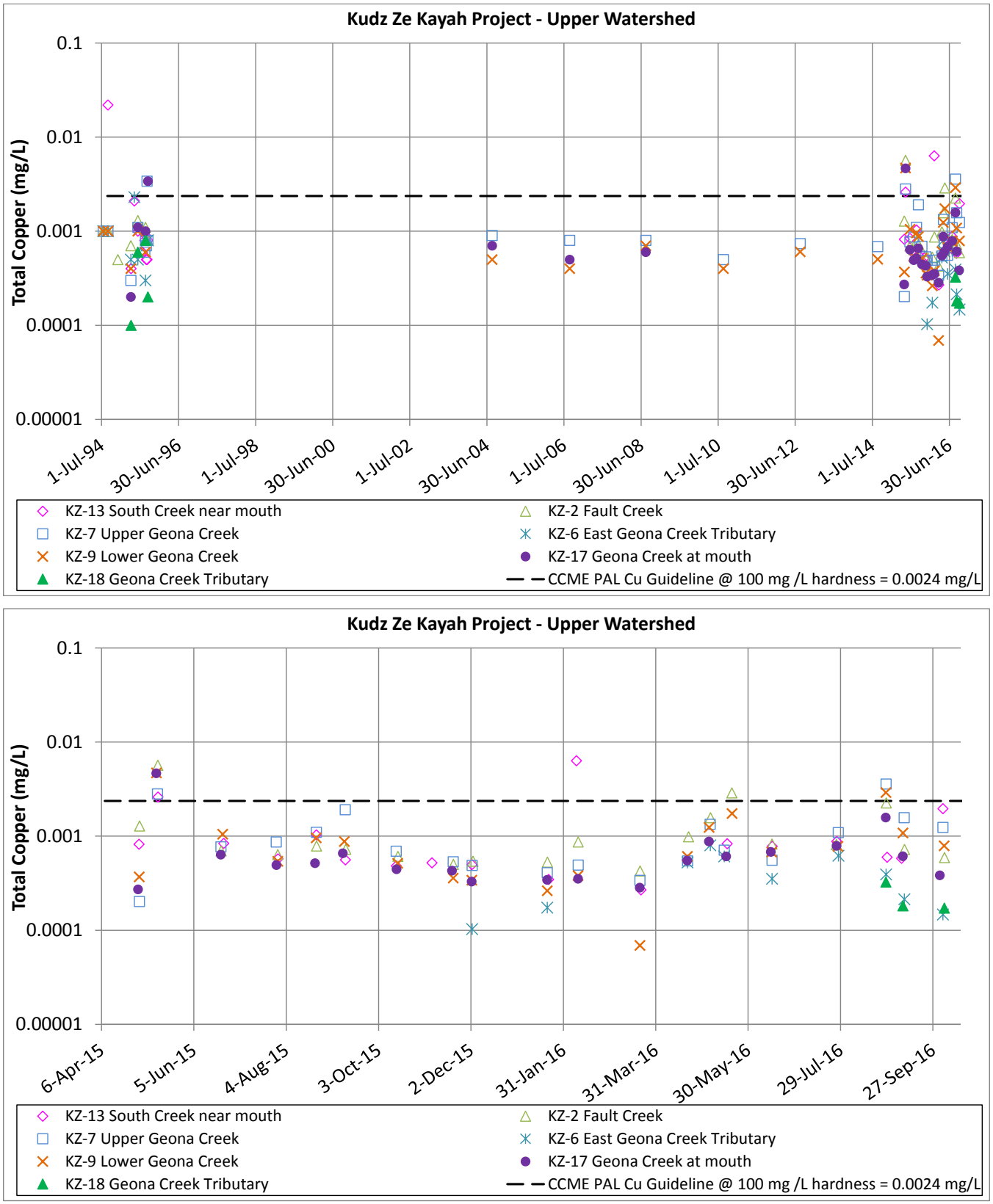


Figure C-12: Temporal Variation in Total Copper Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

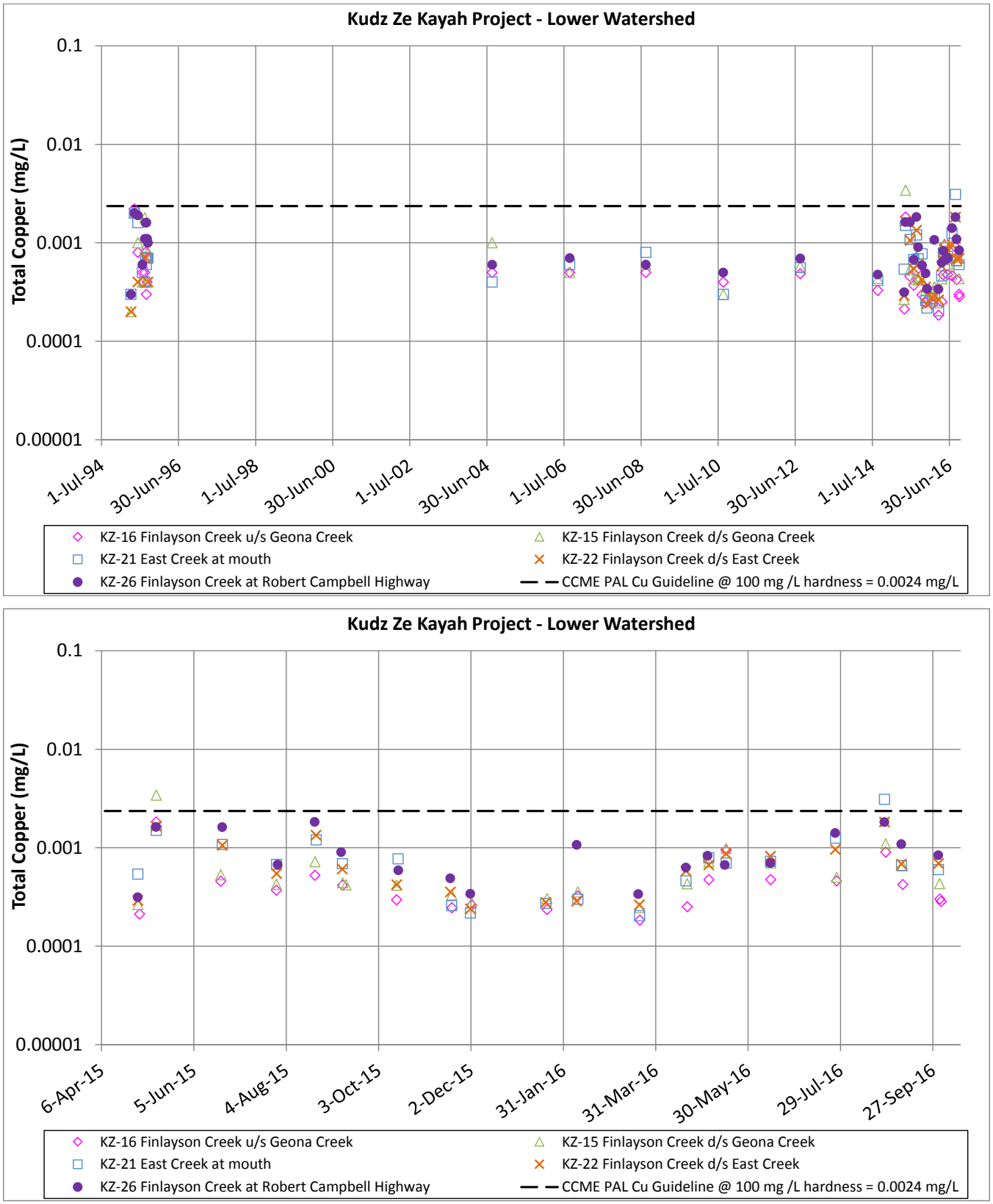
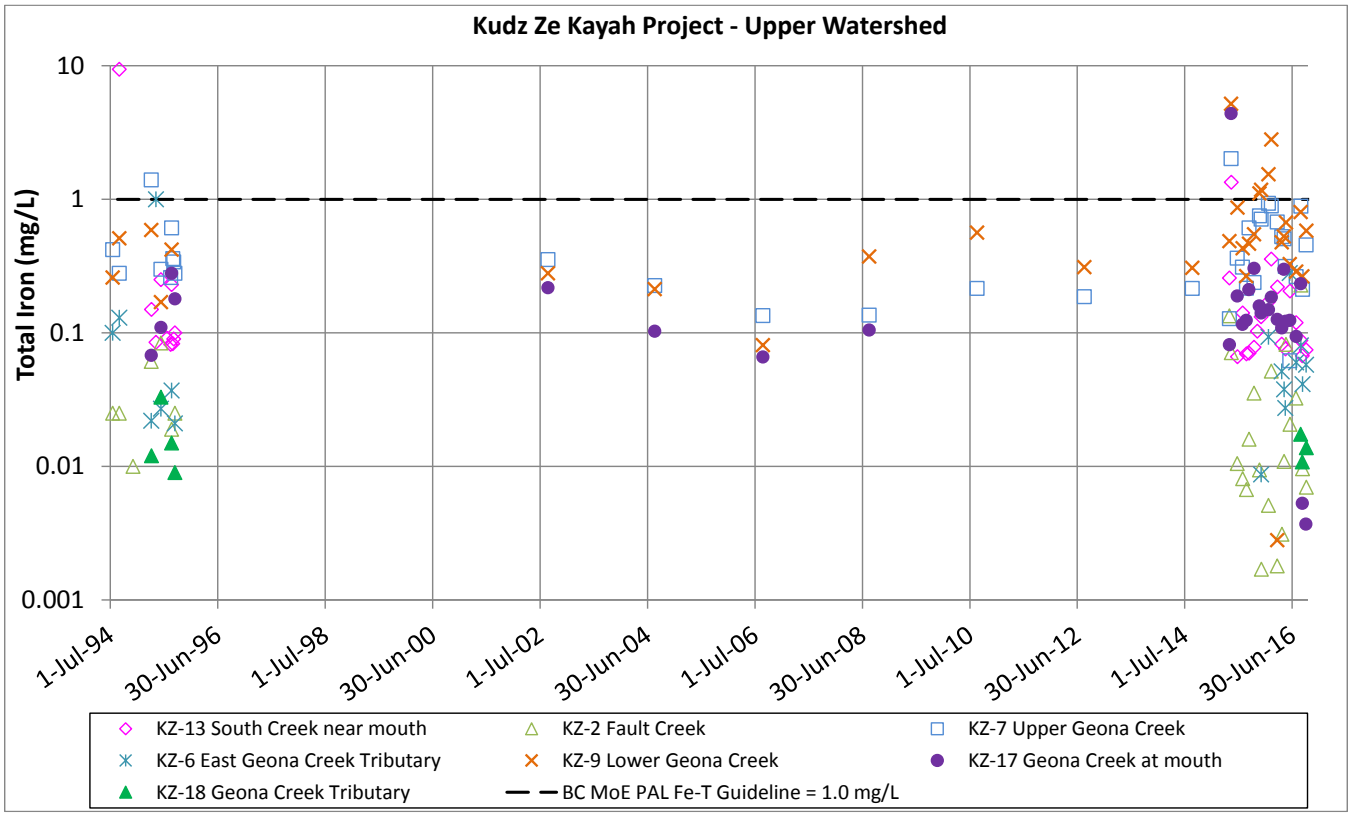


Figure C-13: Temporal Variation in Total Copper Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



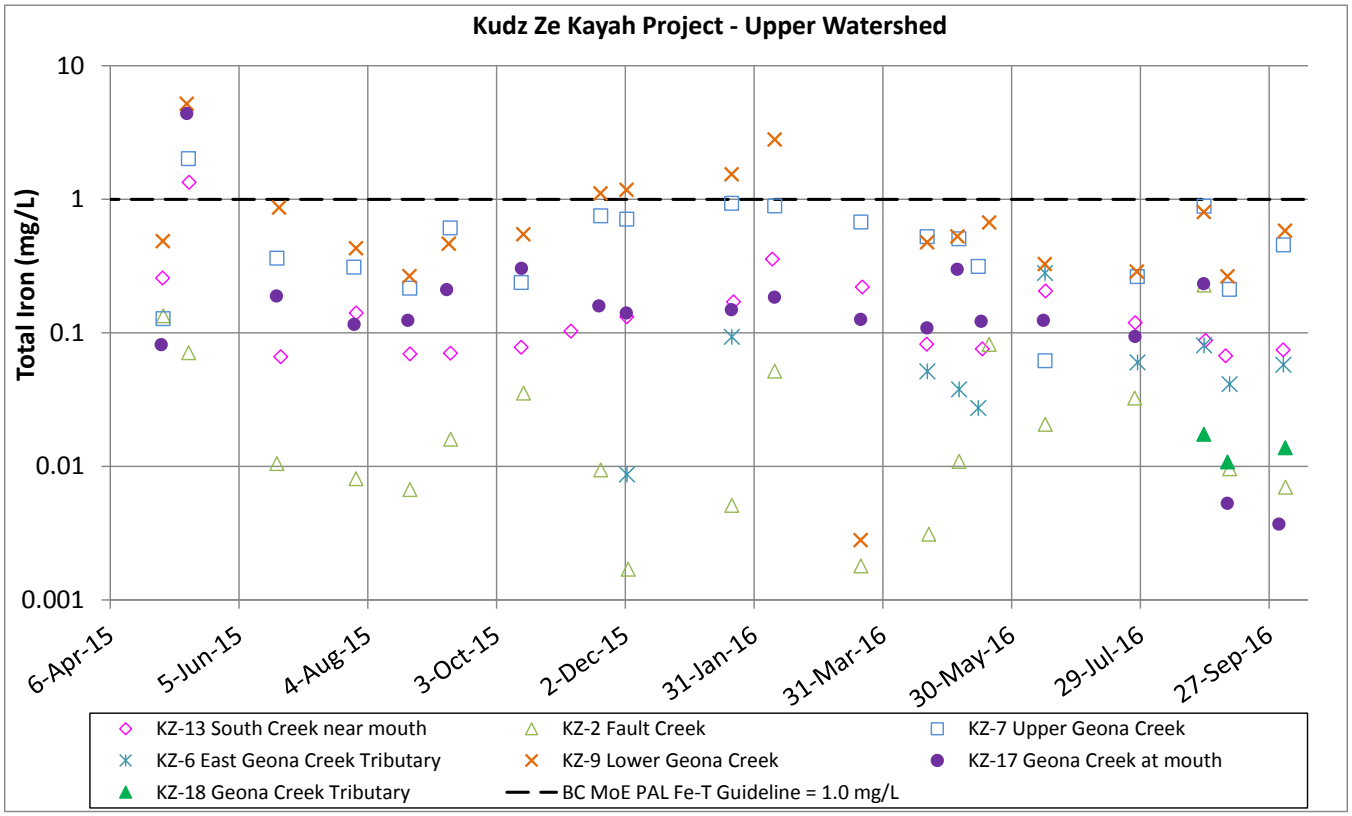
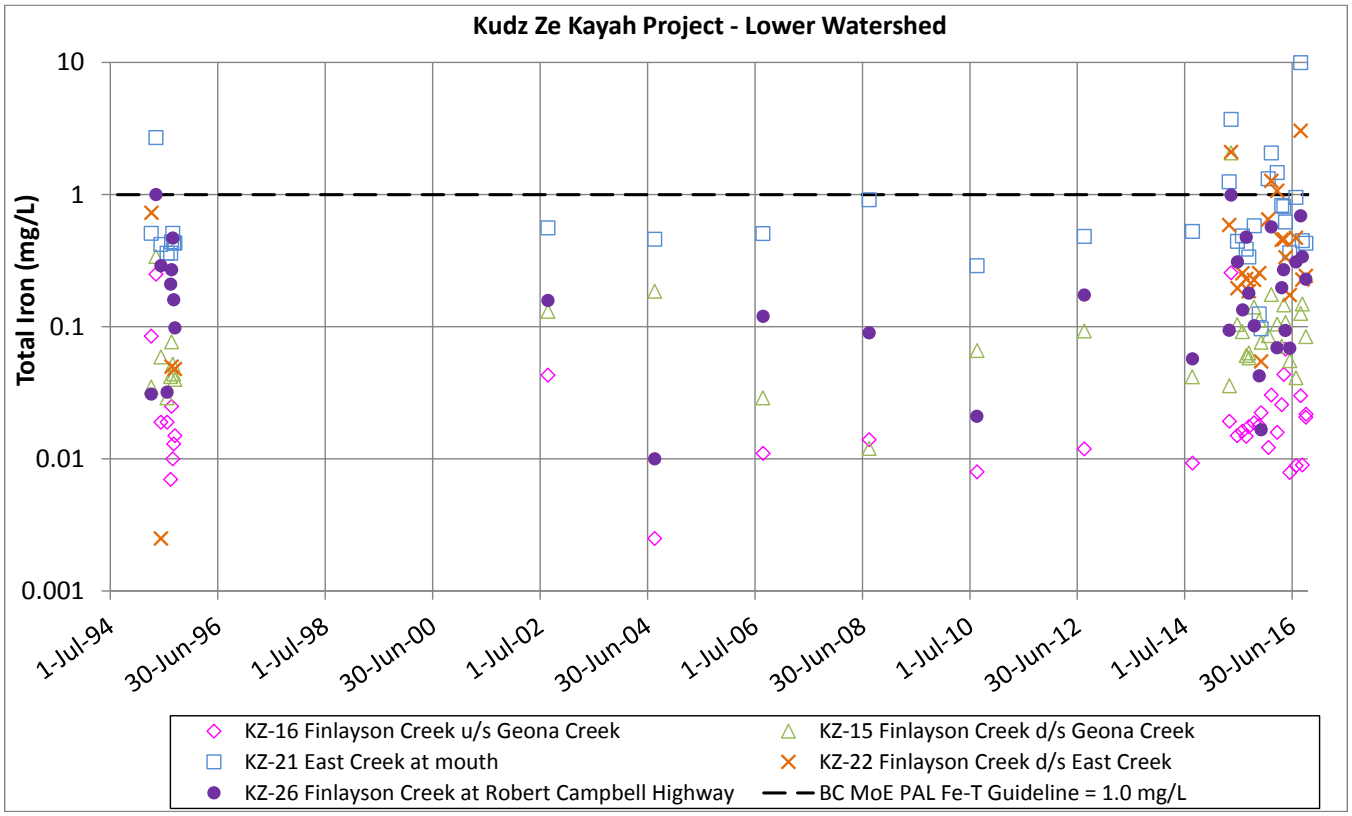


Figure C-14: Temporal Variation in Total Iron Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



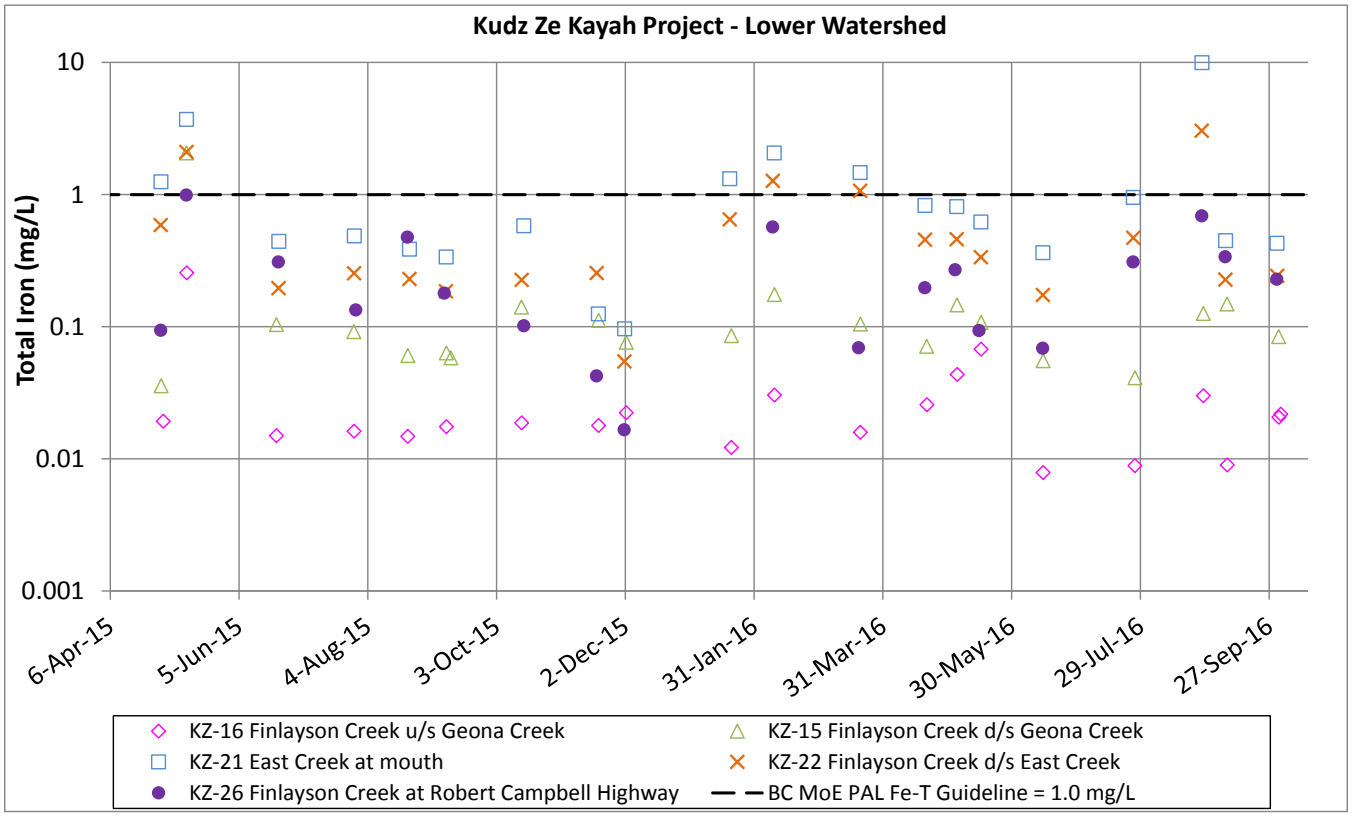
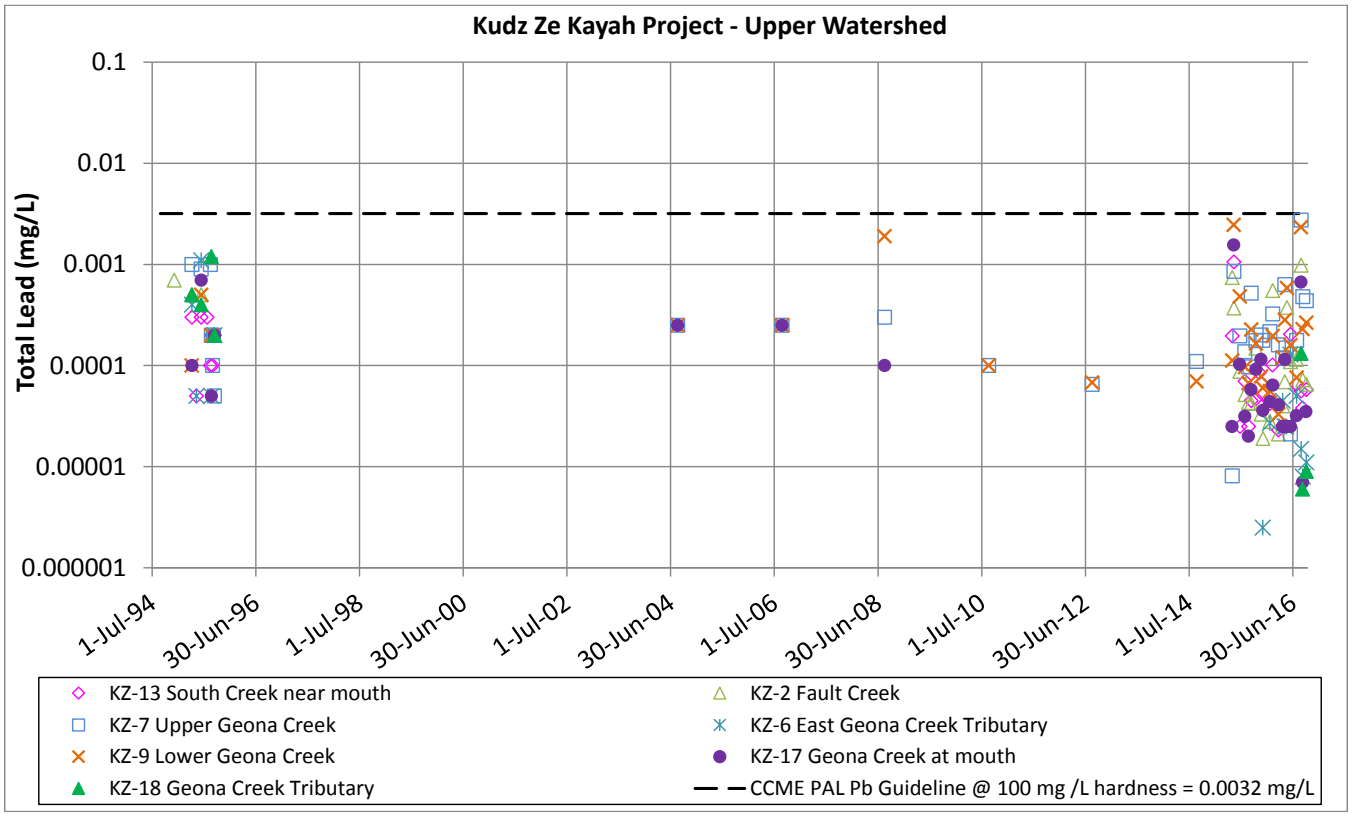


Figure C-15: Temporal Variation in Total Iron Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



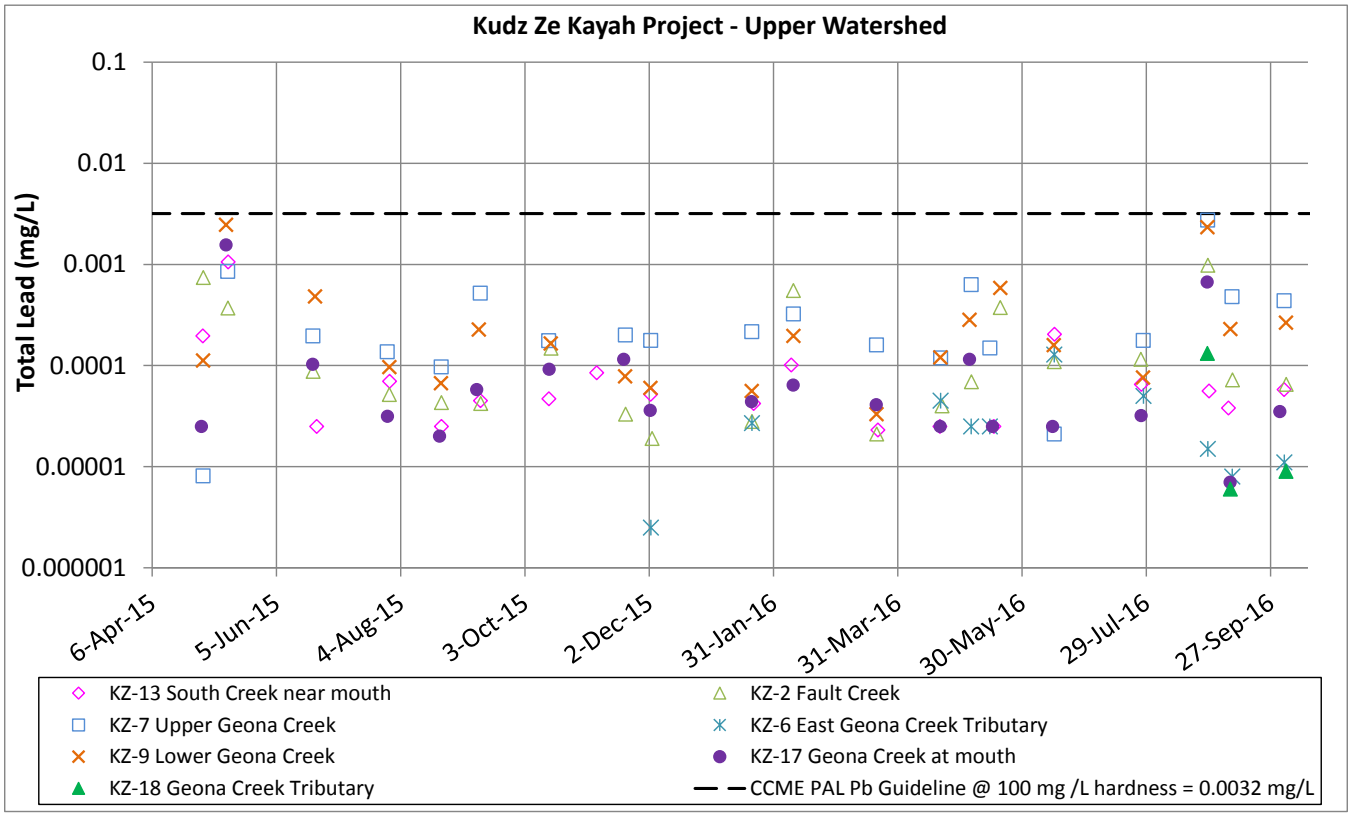
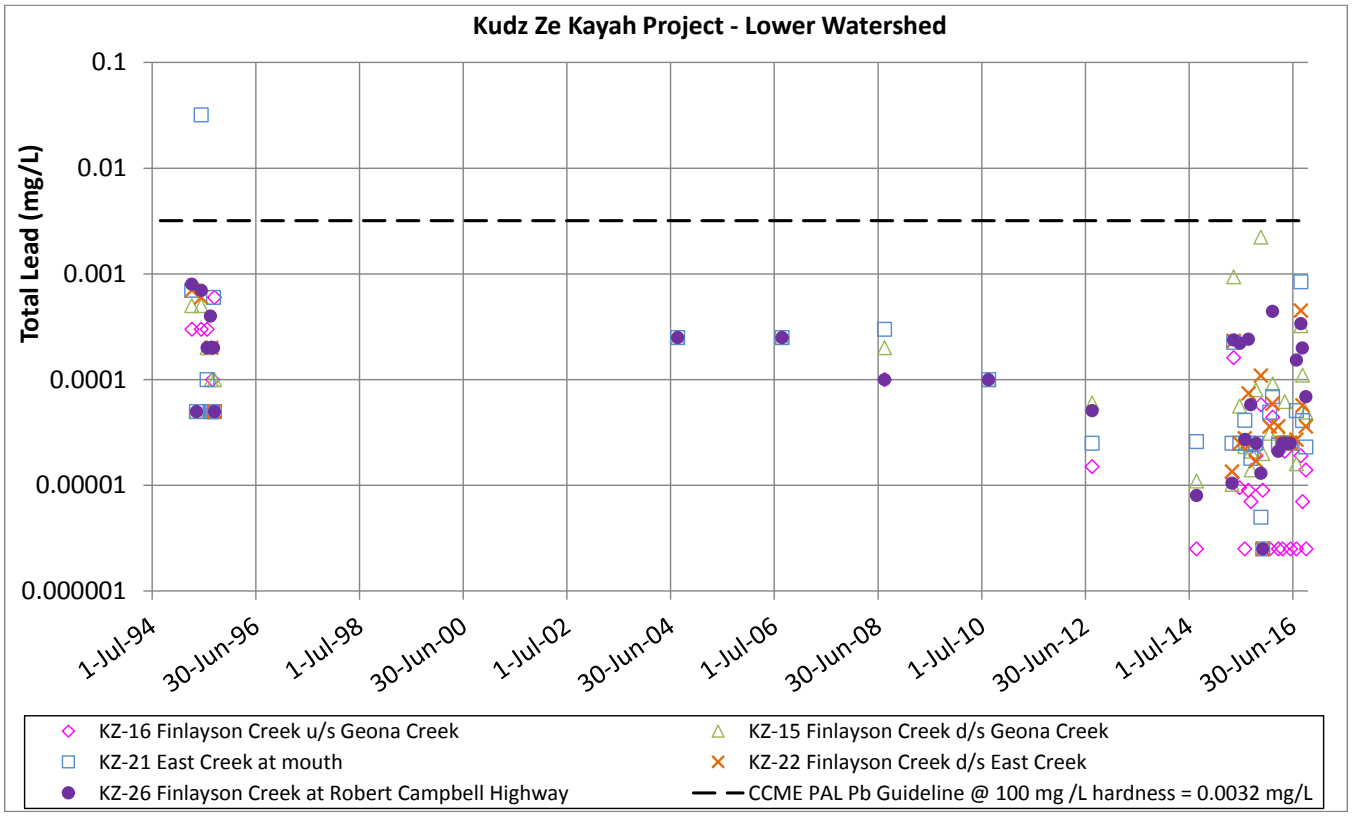


Figure C-16: Temporal Variation in Total Lead Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



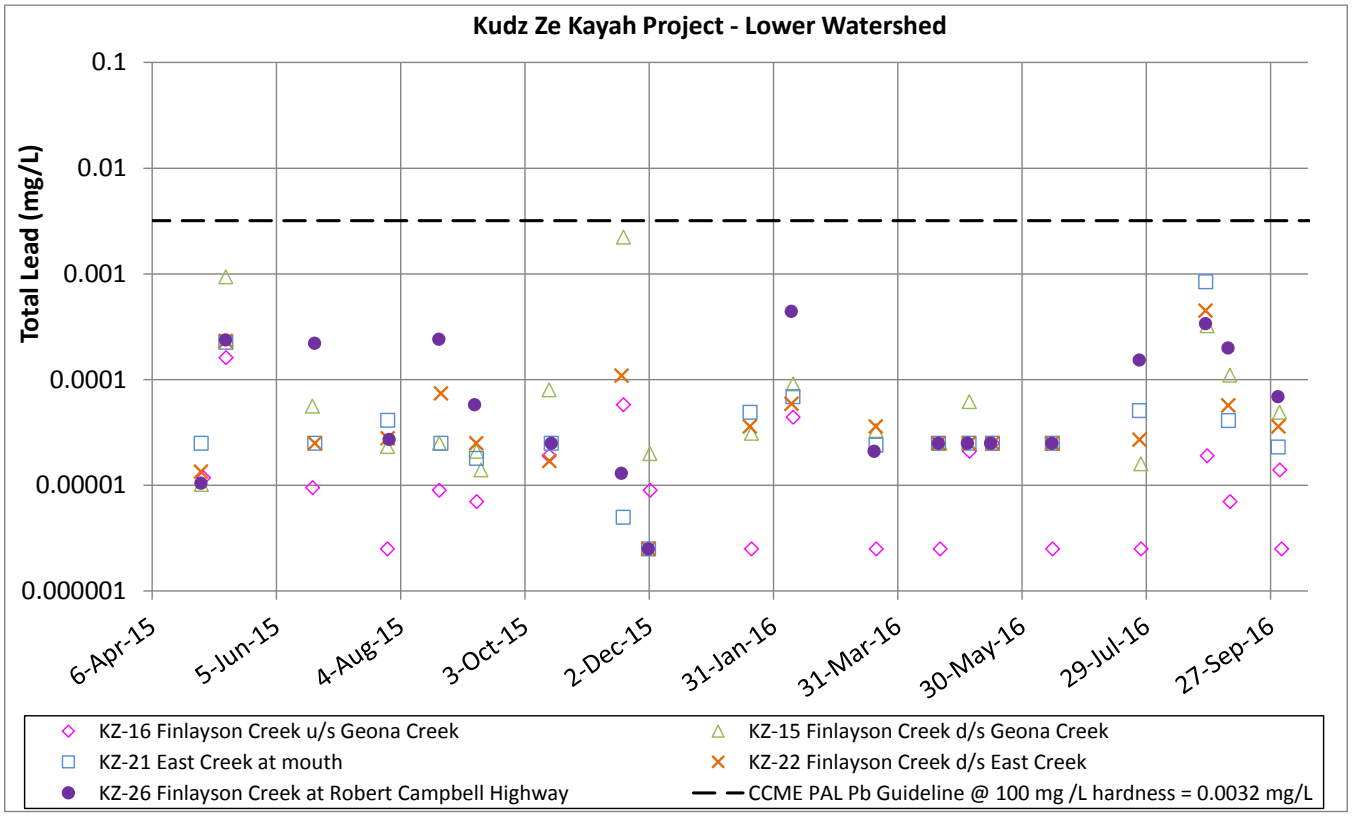


Figure C-17: Temporal Variation in Total Lead Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

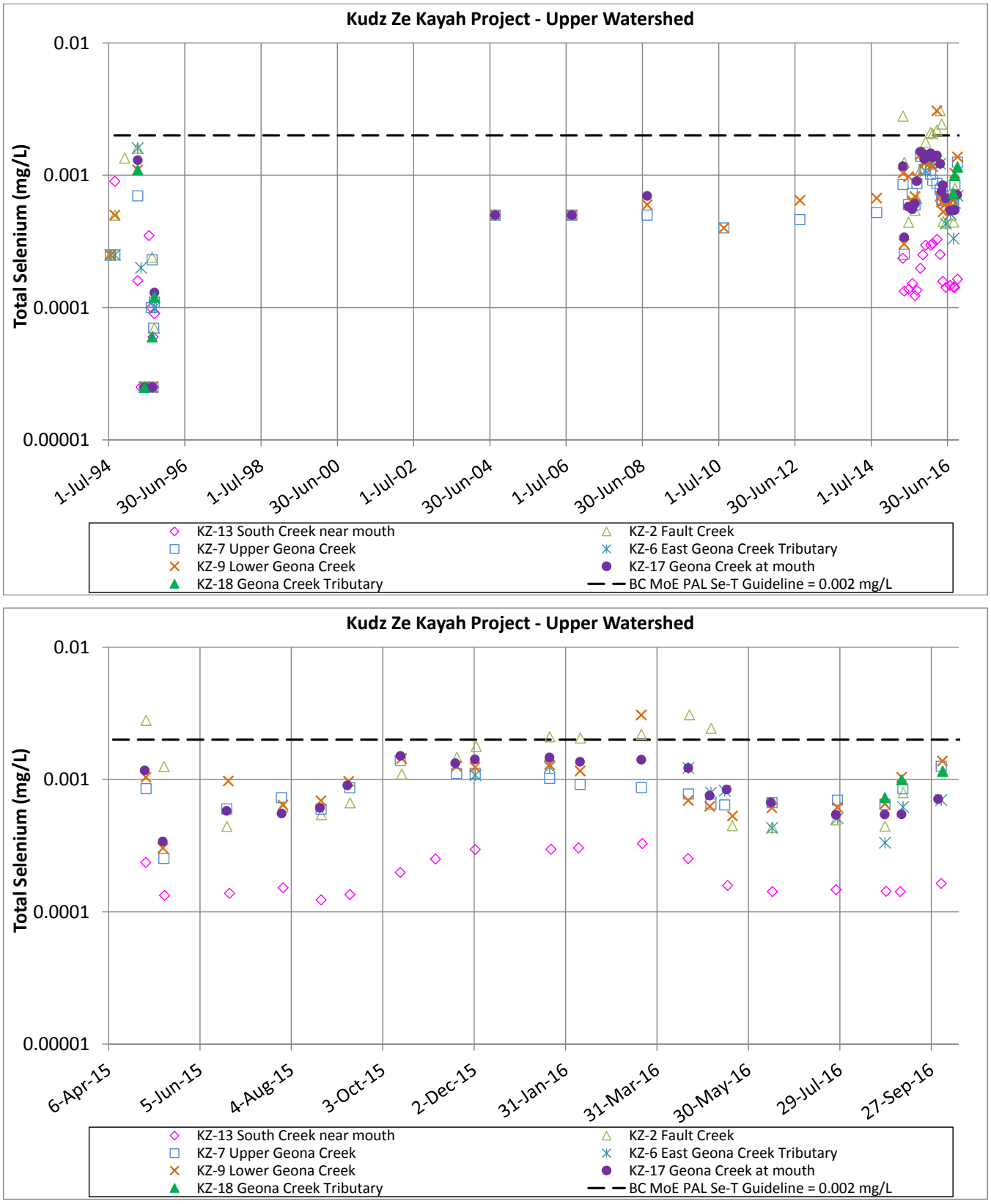
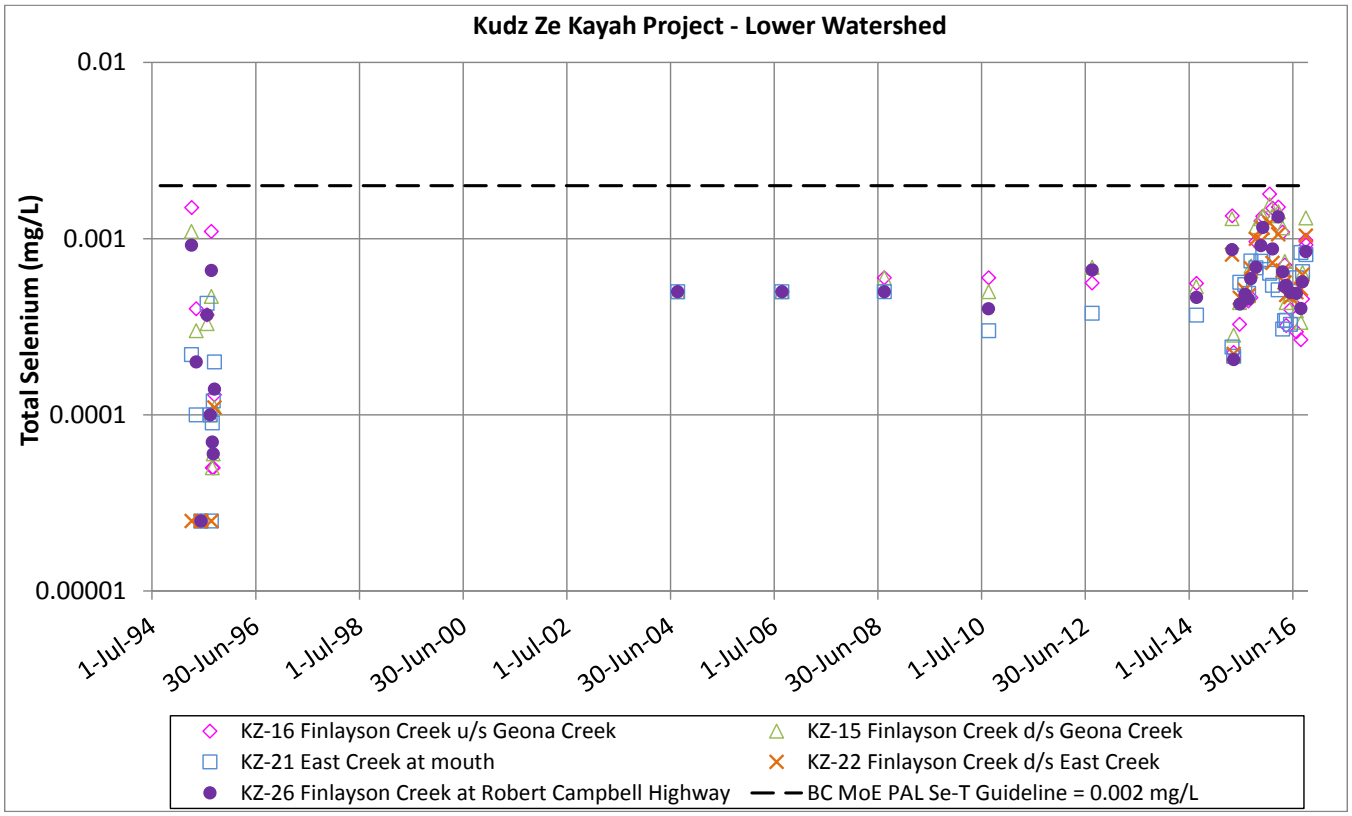


Figure C-18: Temporal Variation in Total Selenium Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



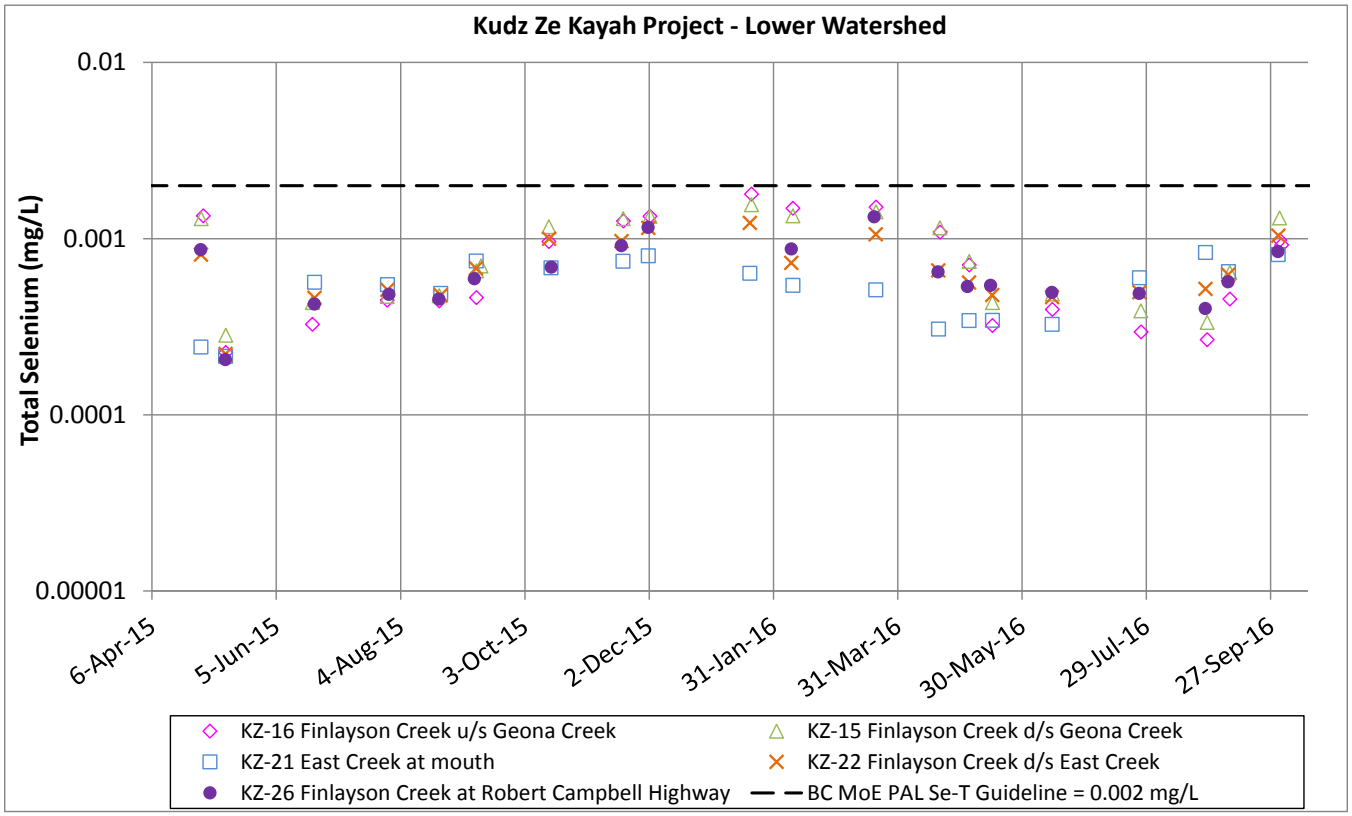


Figure C-19: Temporal Variation in Total Selenium Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

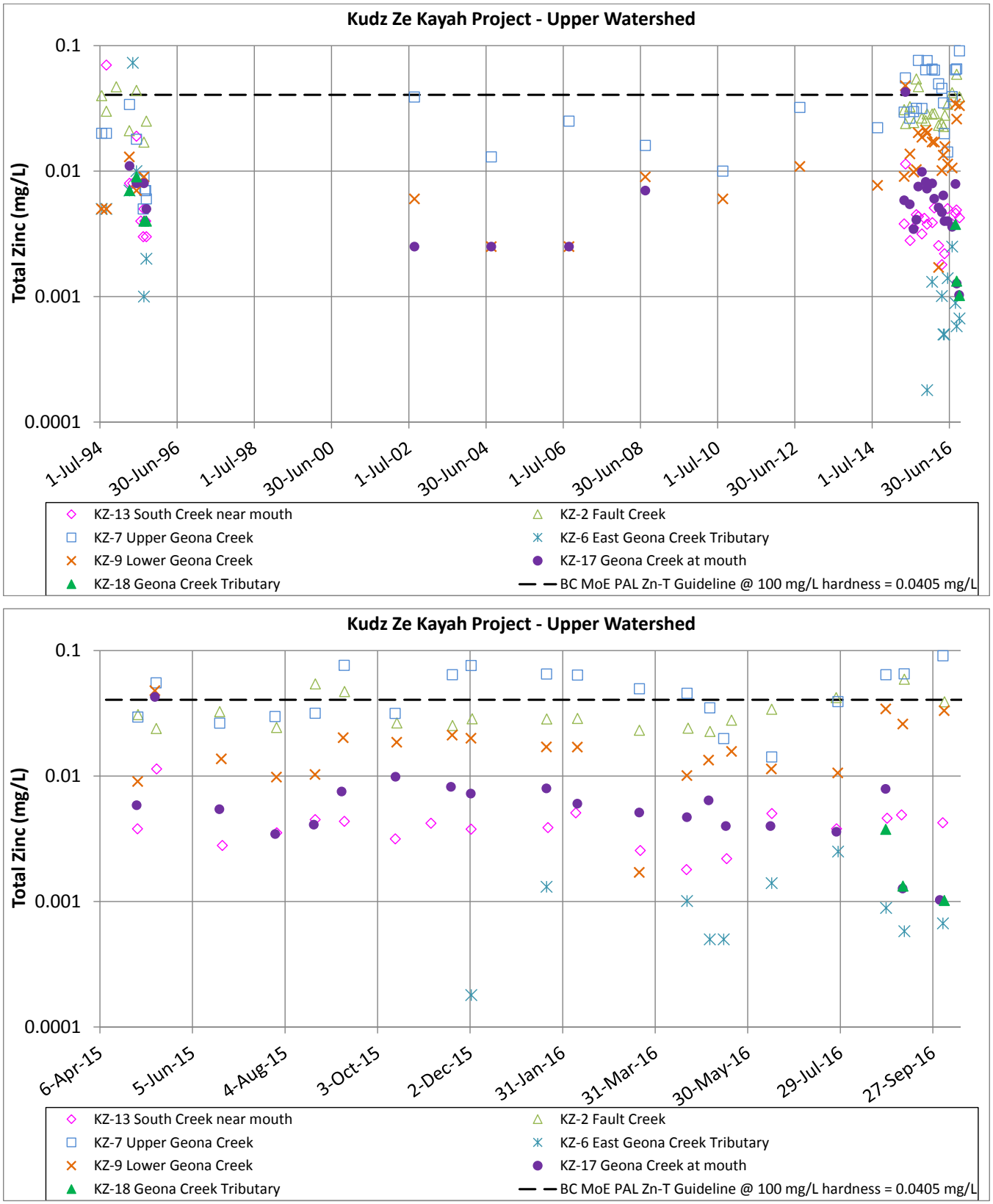
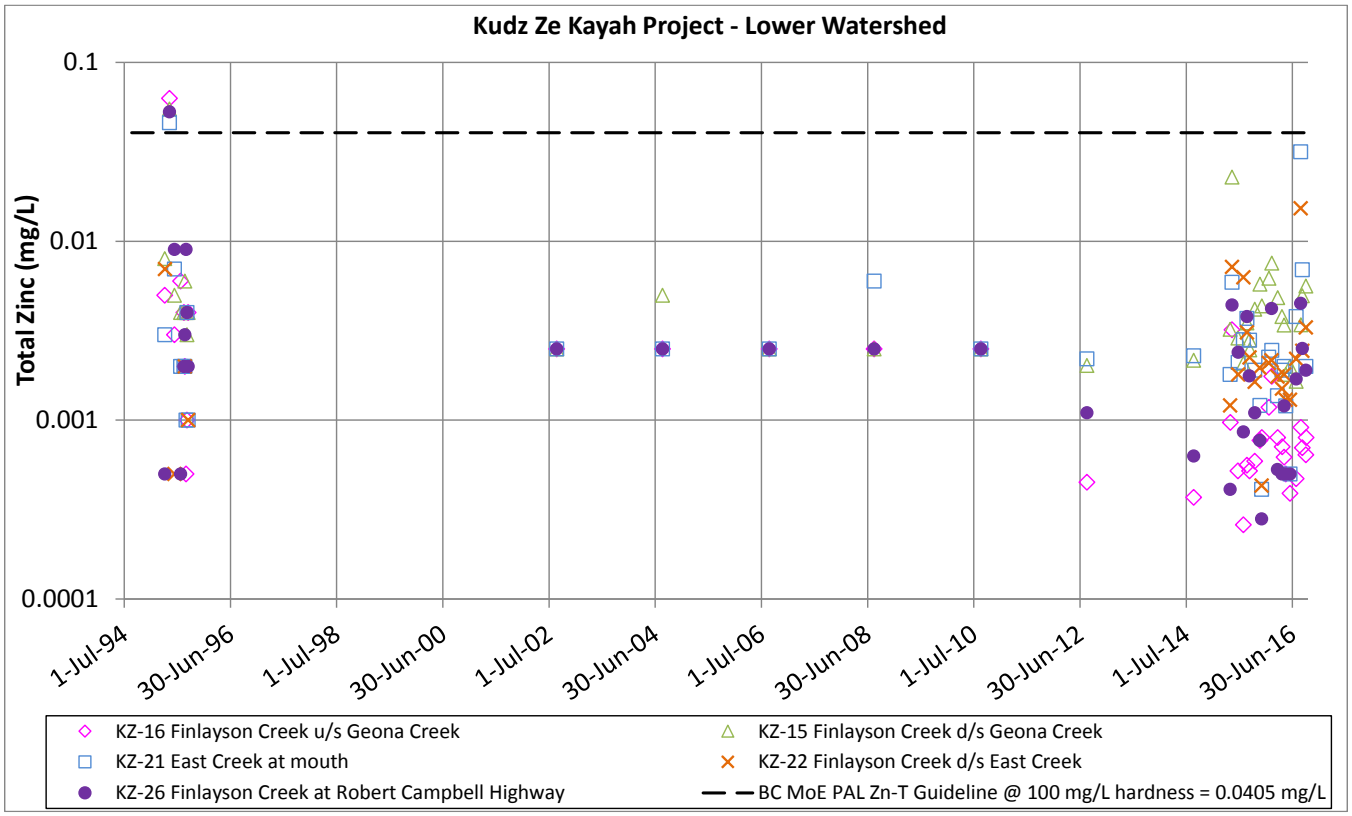


Figure C-20: Temporal Variation in Total Zinc Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



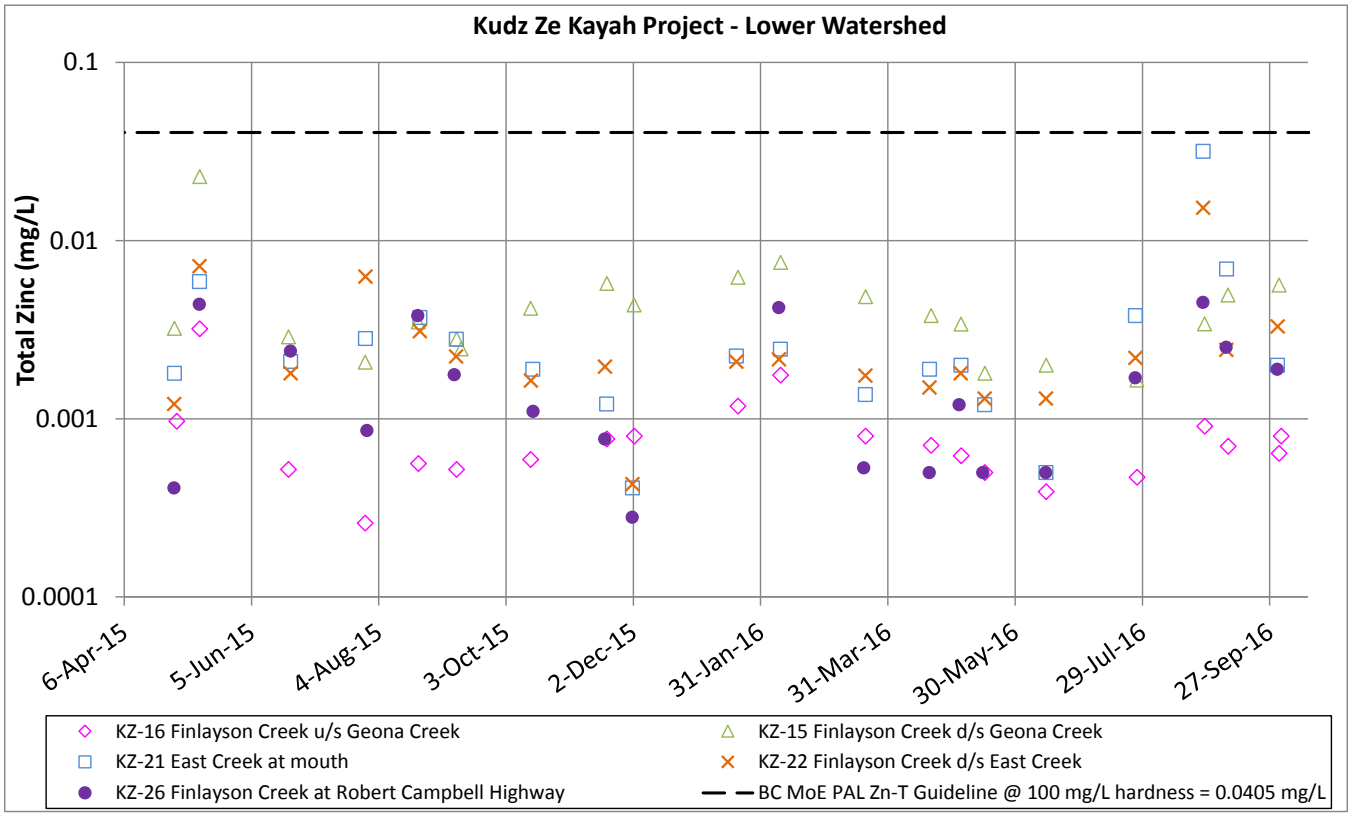
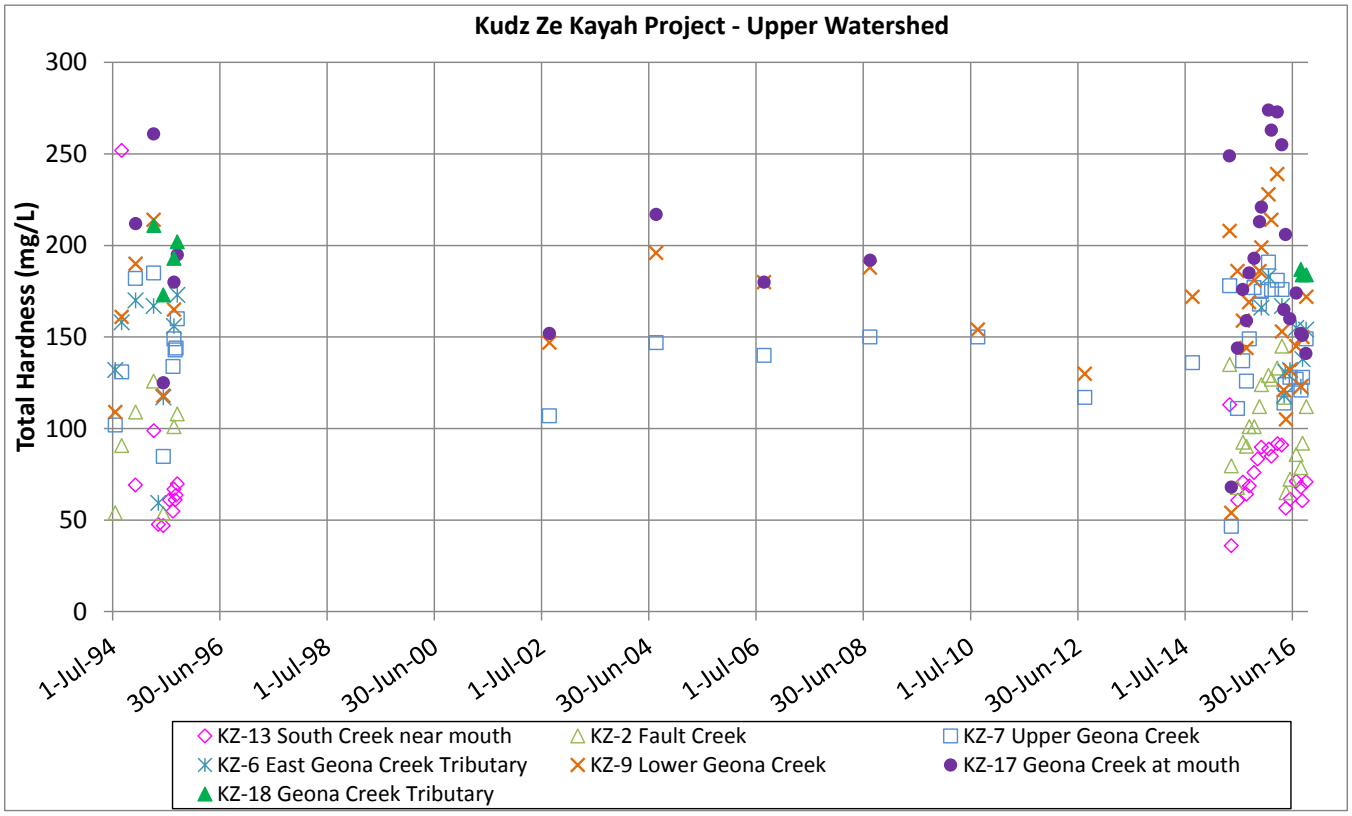


Figure C-21: Temporal Variation in Total Zinc Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



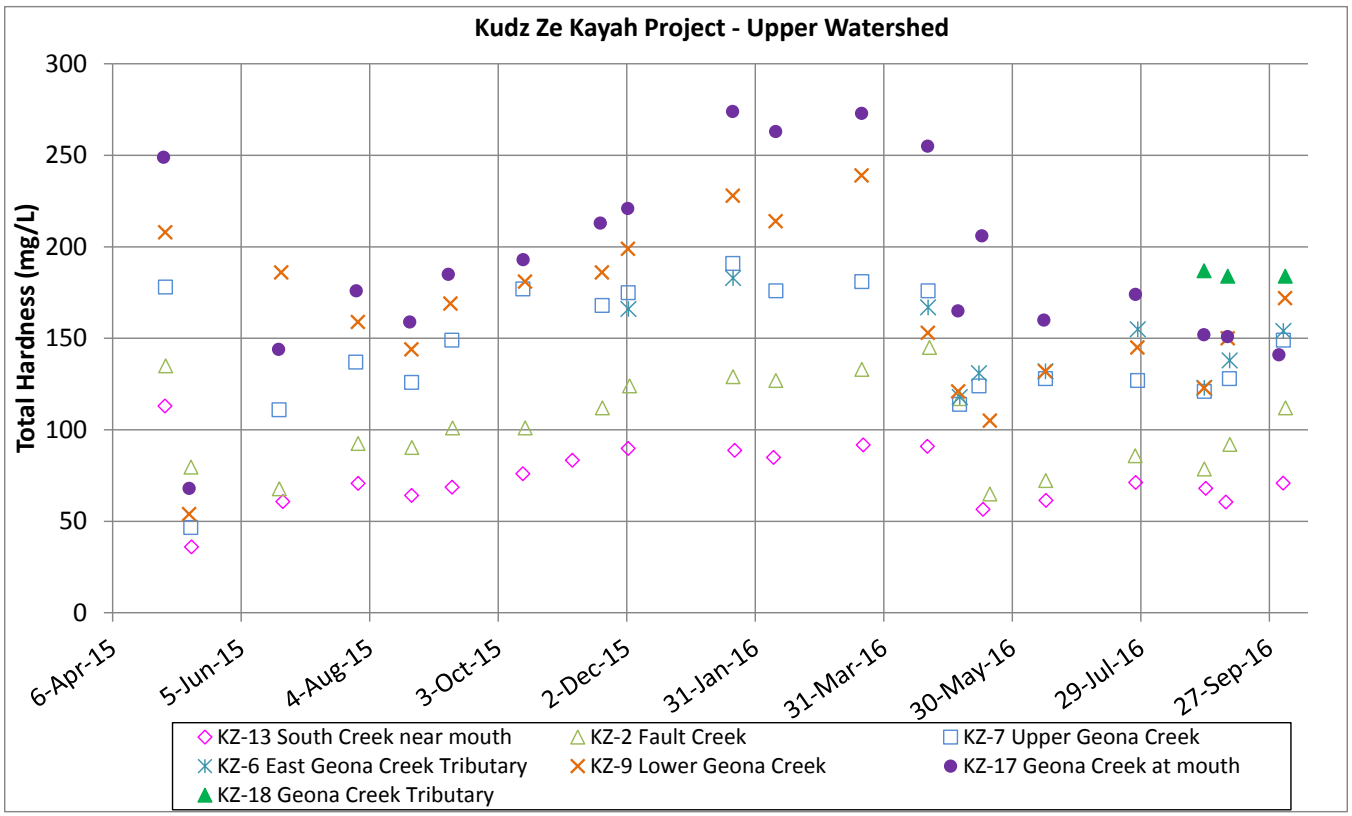
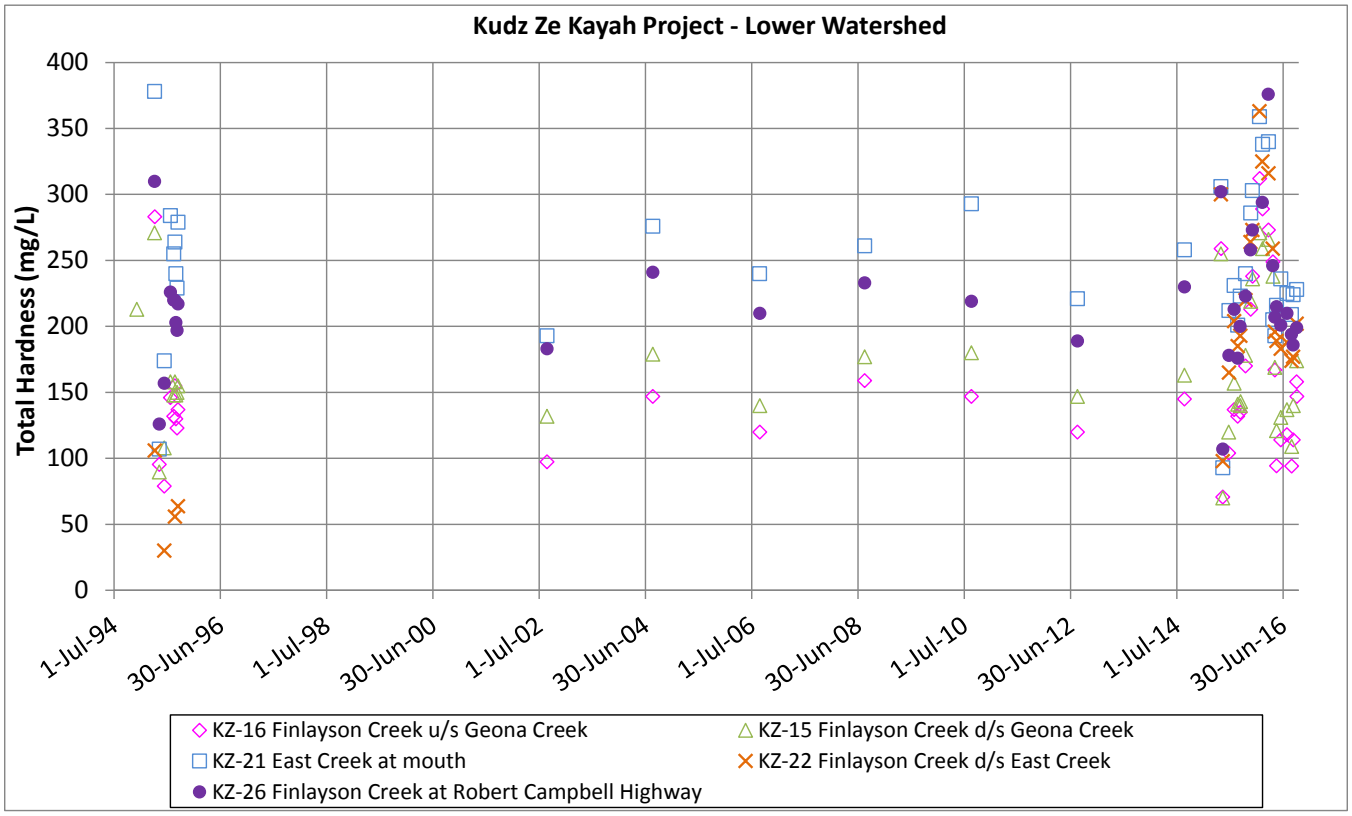


Figure C-22: Temporal Variation in Total Hardness Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



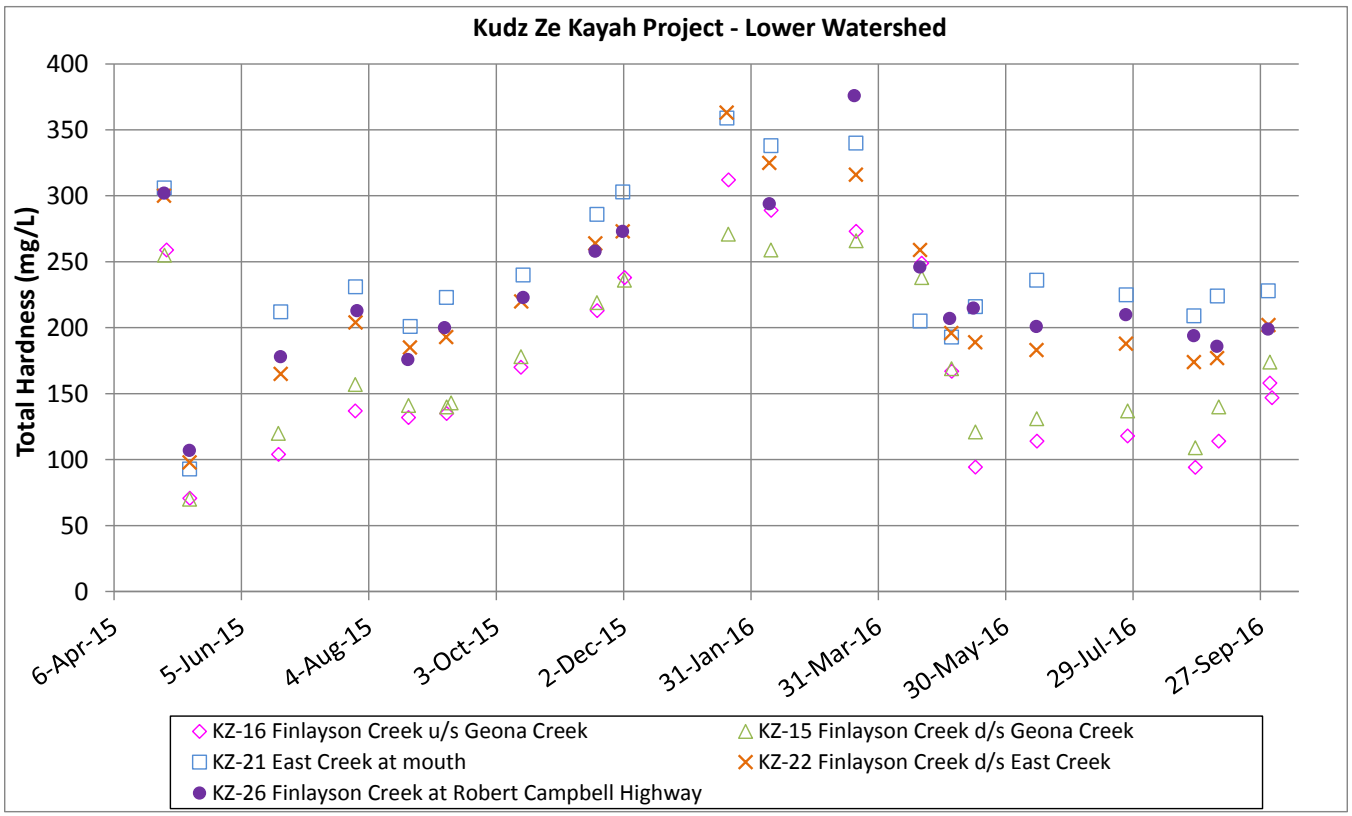
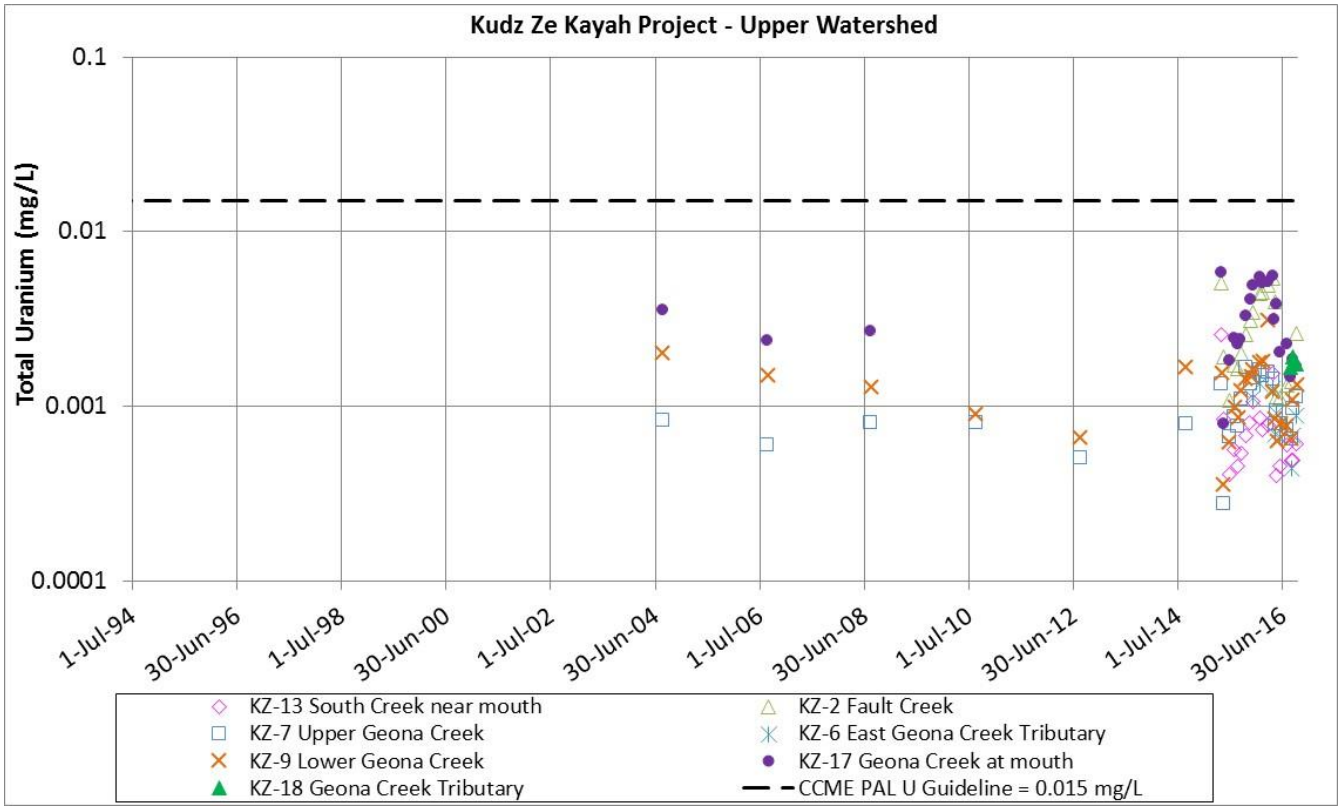


Figure C-23: Temporal Variation in Total Hardness Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



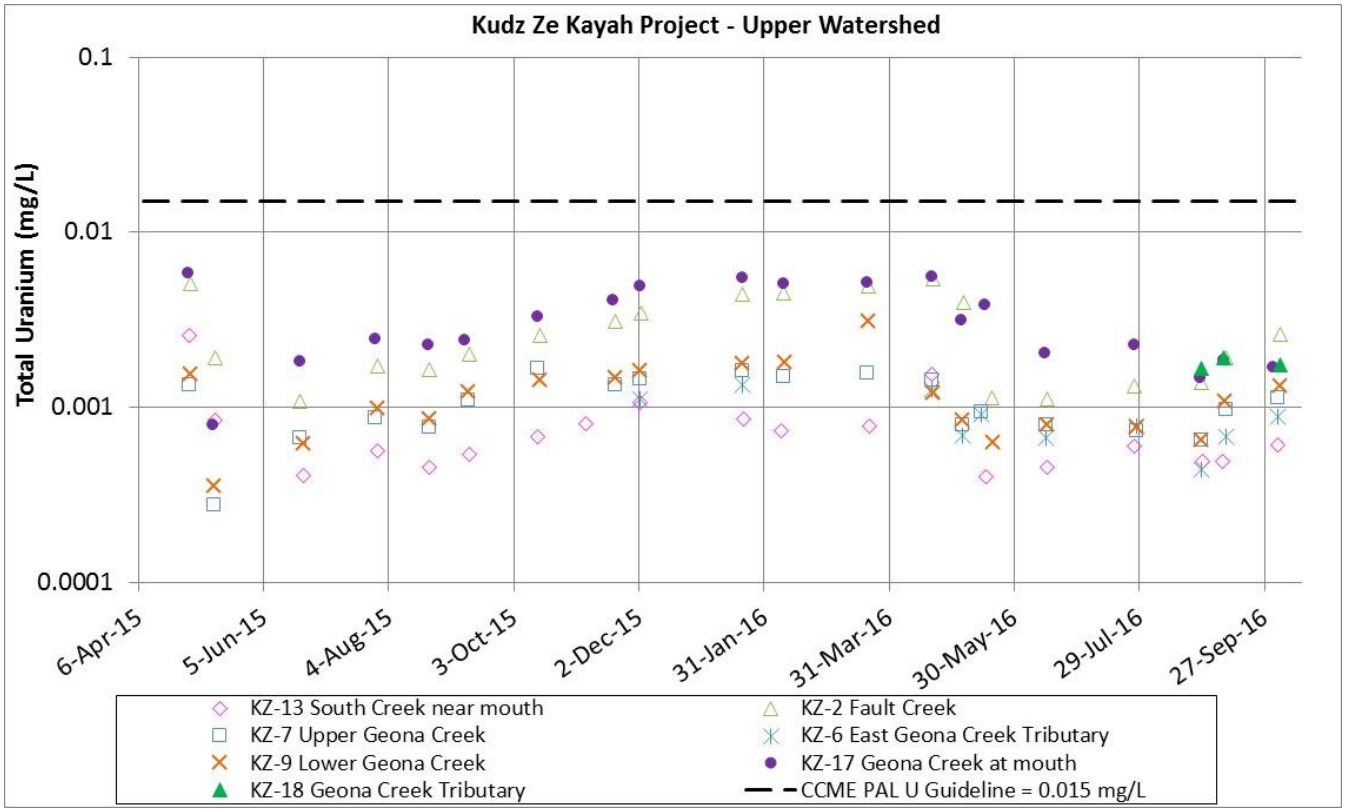
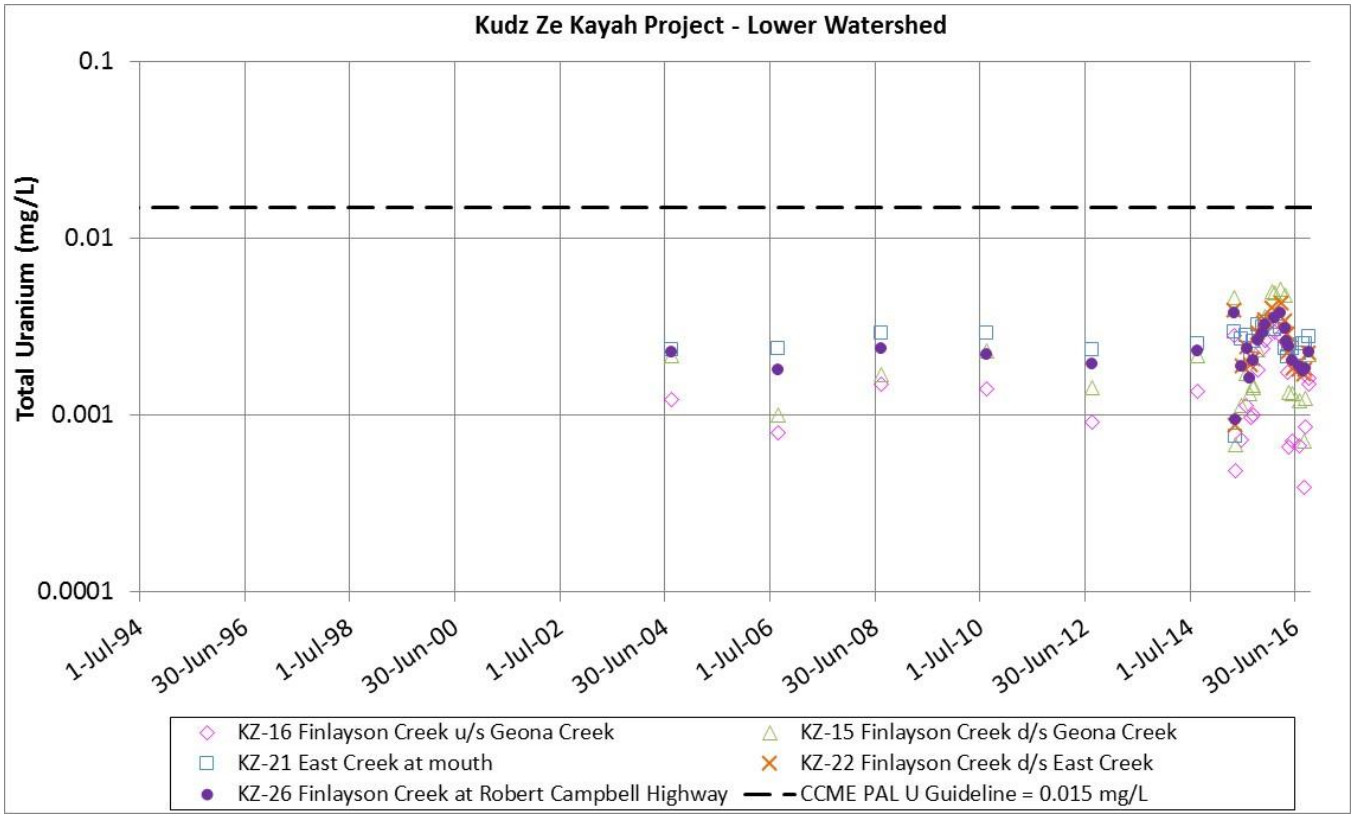


Figure C-24: Temporal Variation in Total Uranium Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



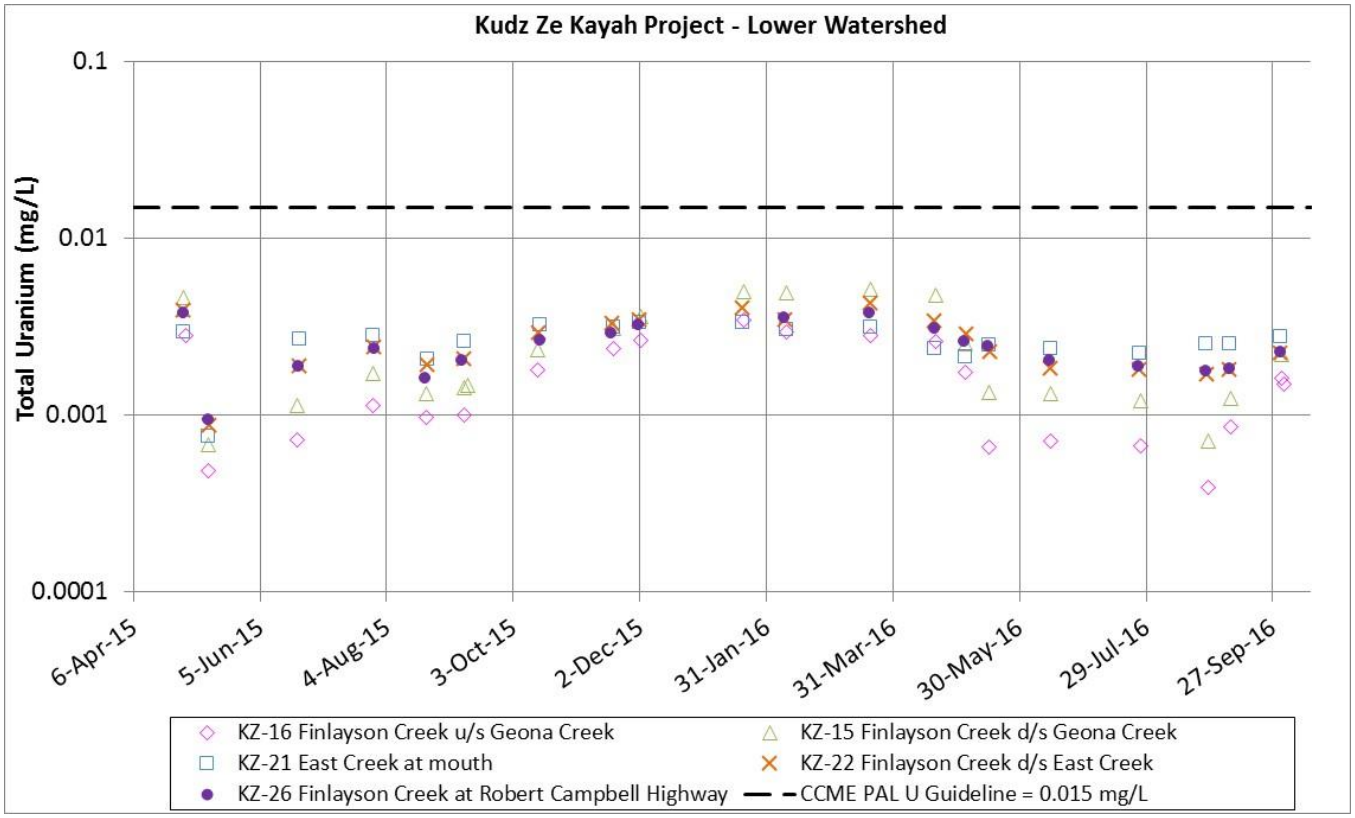
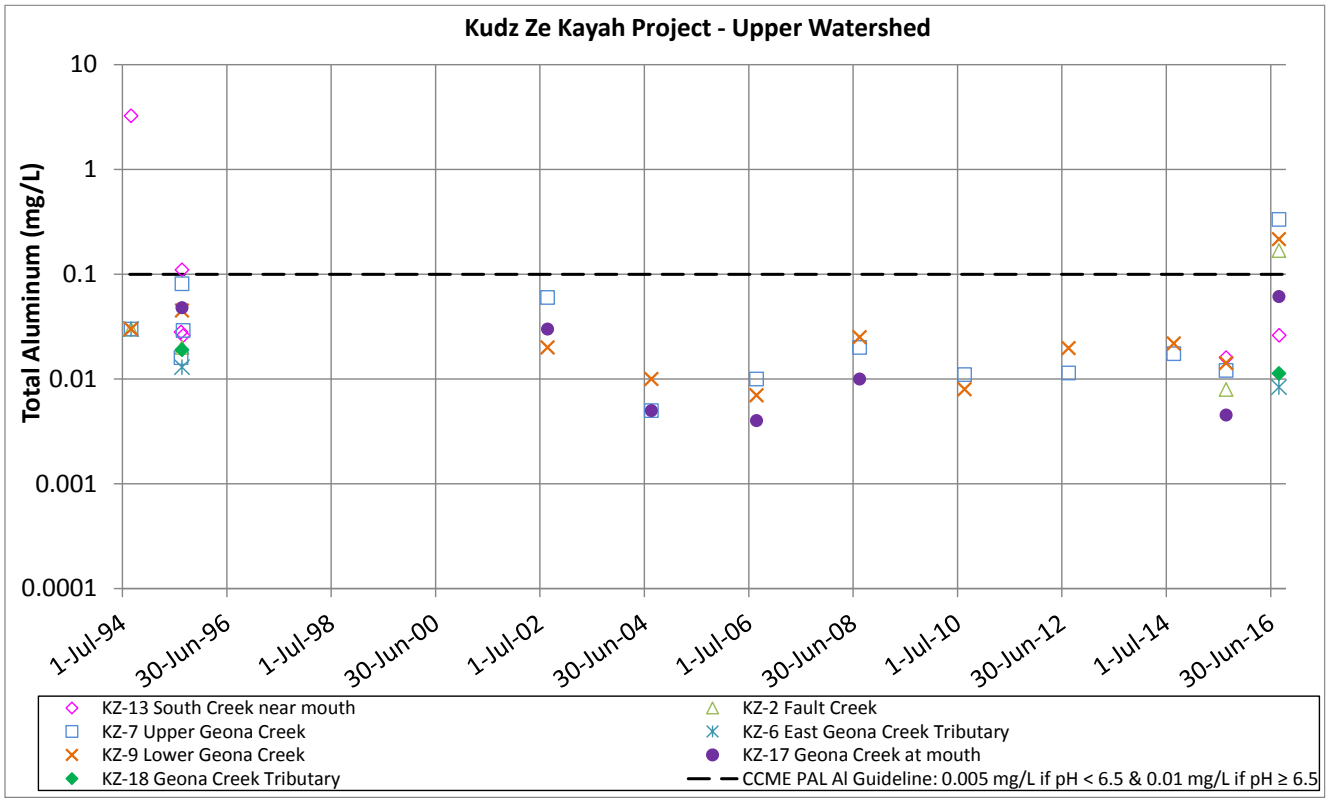


Figure C-25: Temporal Variation in Total Uranium Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

APPENDIX D.

August Historic and 2015-16 Surface Water Plots



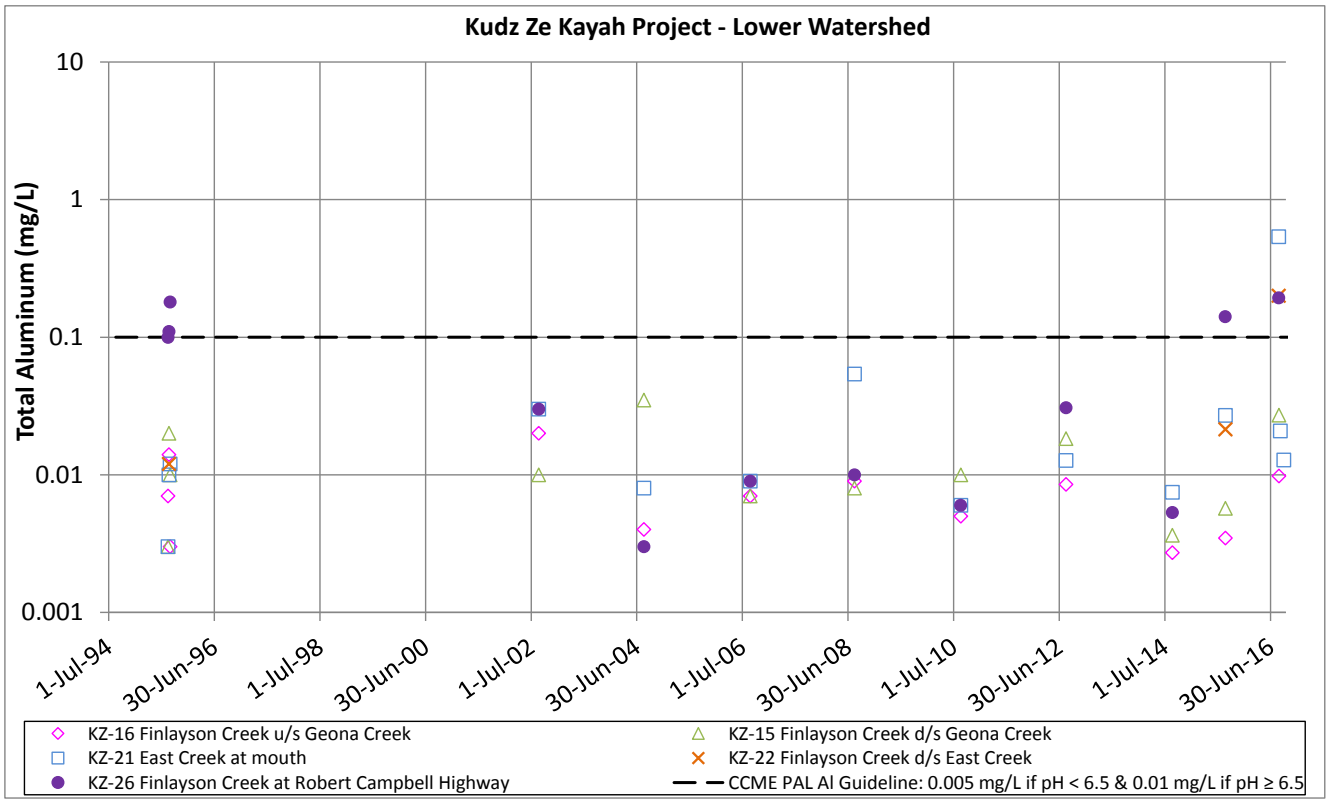


Figure D-1: Variation in Total Aluminum Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

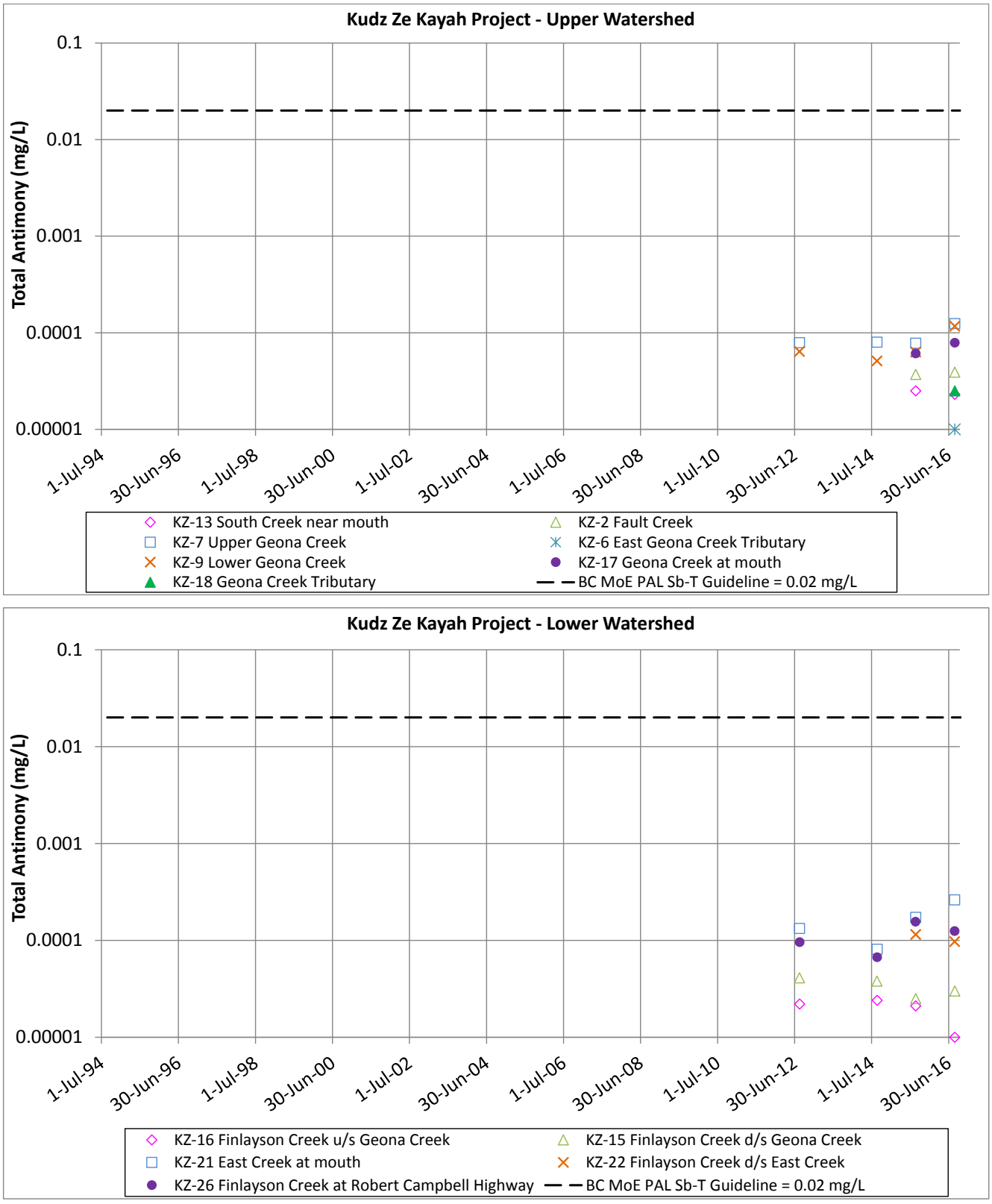


Figure D-2: Variation in Total Antimony Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

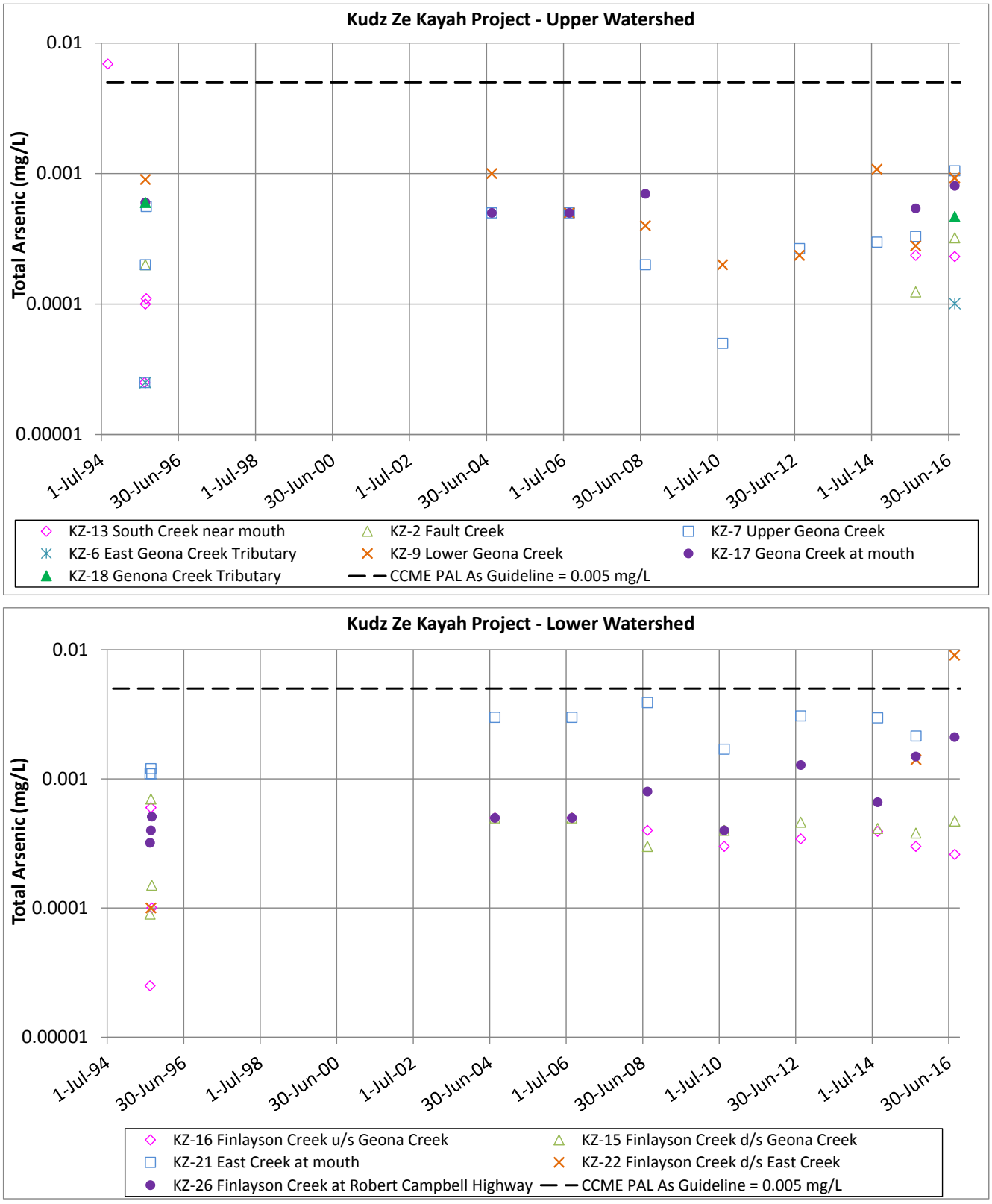


Figure D-3: Variation in Total Arsenic Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

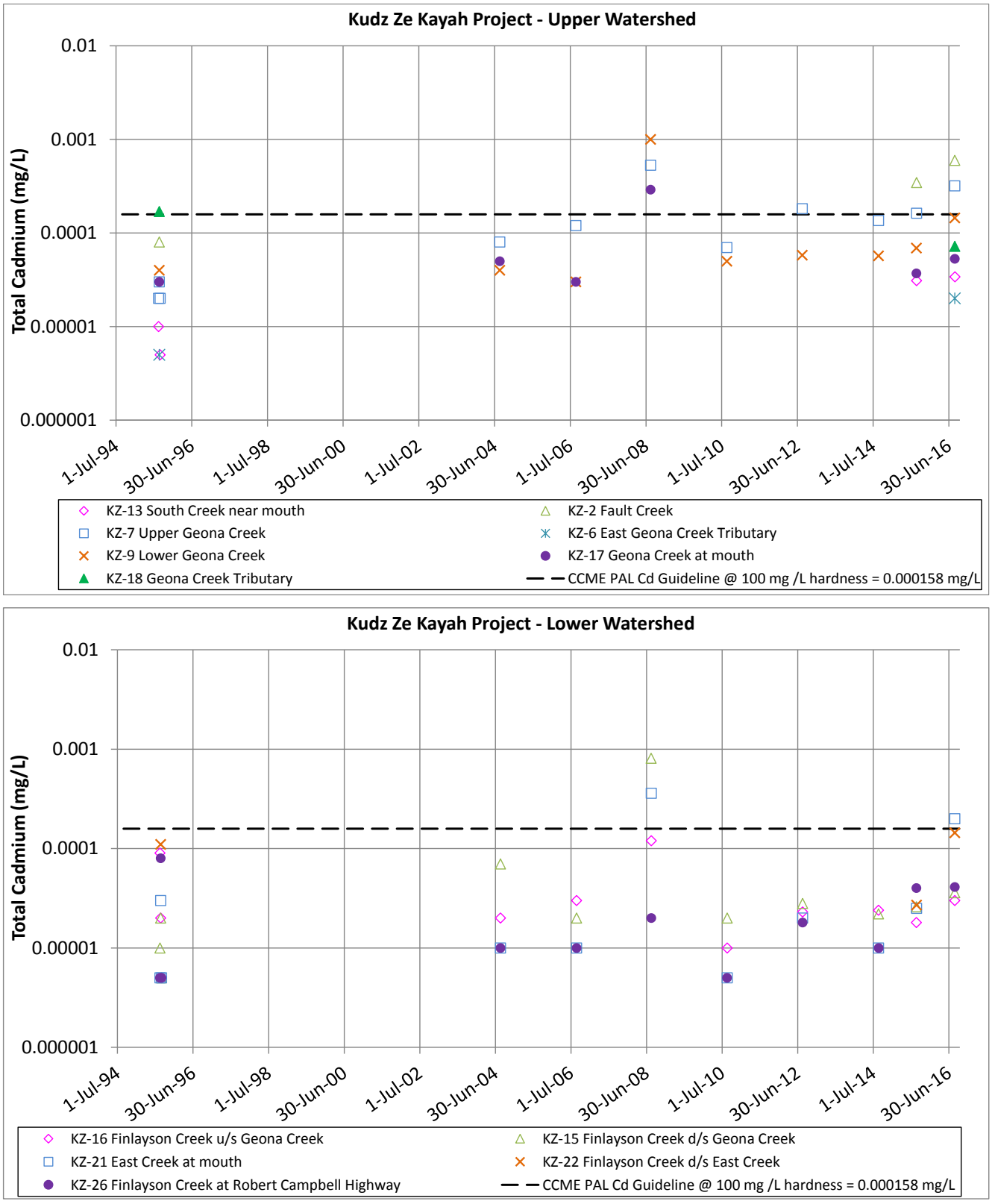


Figure D-4: Variation in Total Cadmium Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

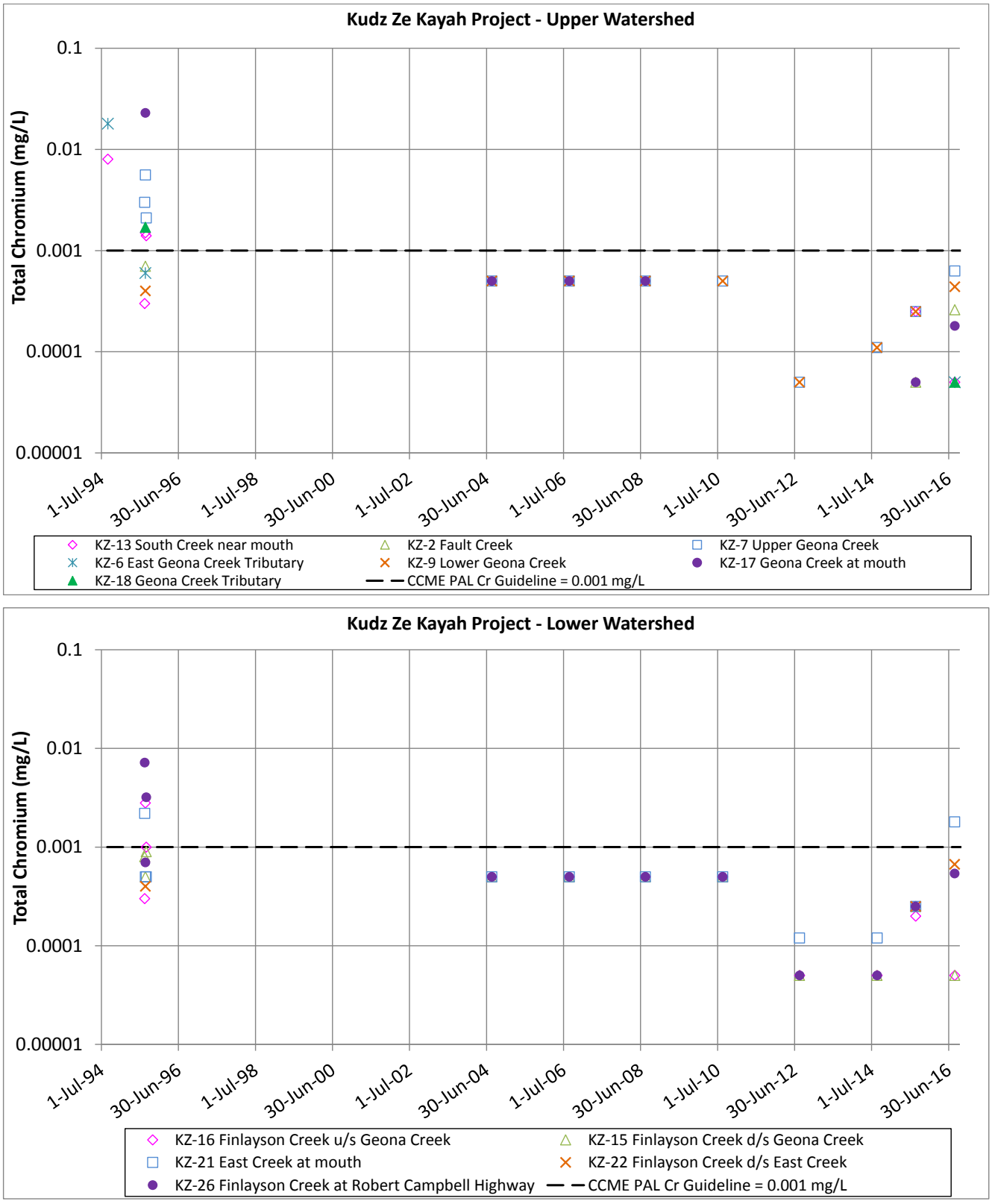


Figure D-5: Variation in Total Chromium Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

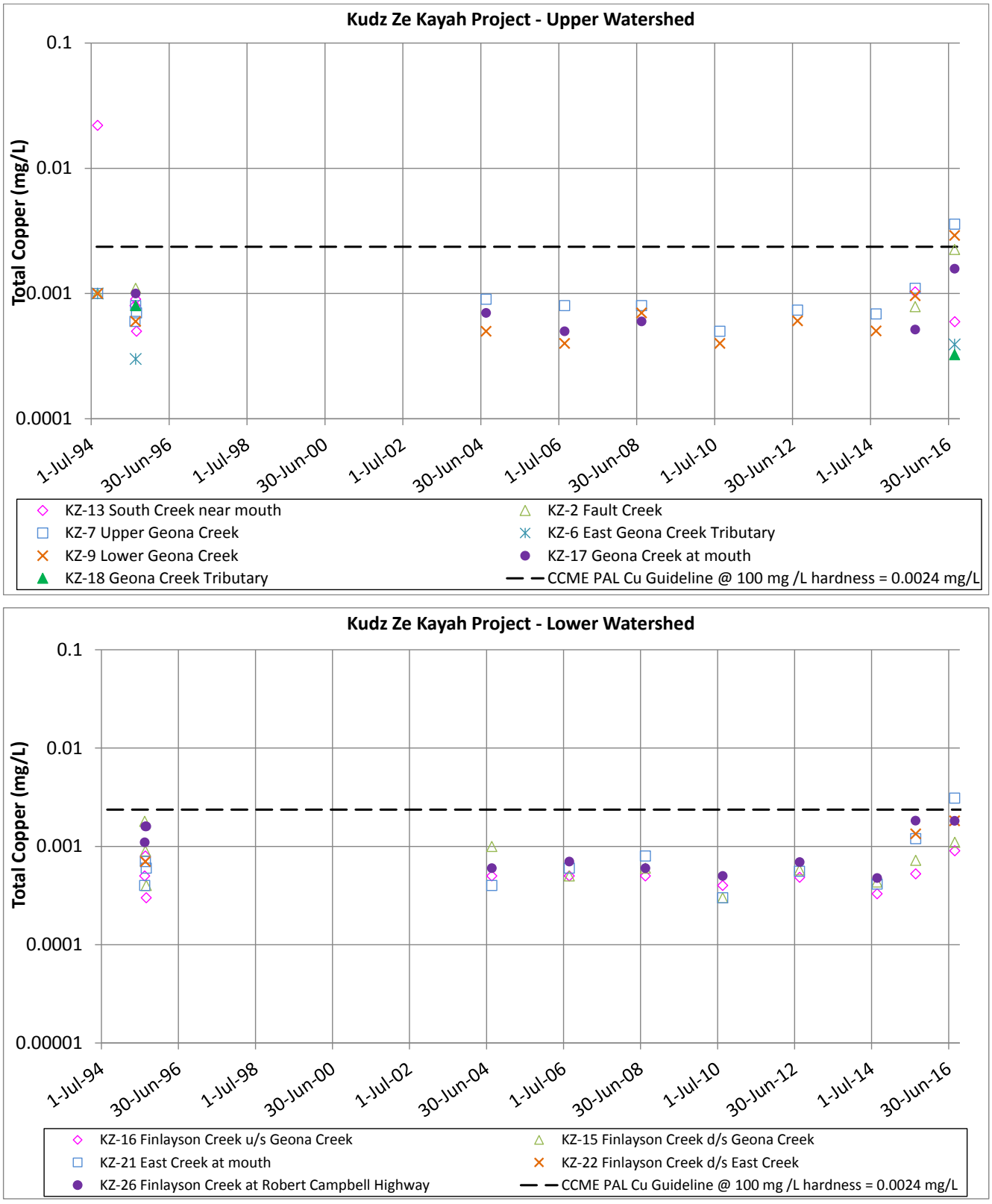


Figure D-6: Variation in Total Copper Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

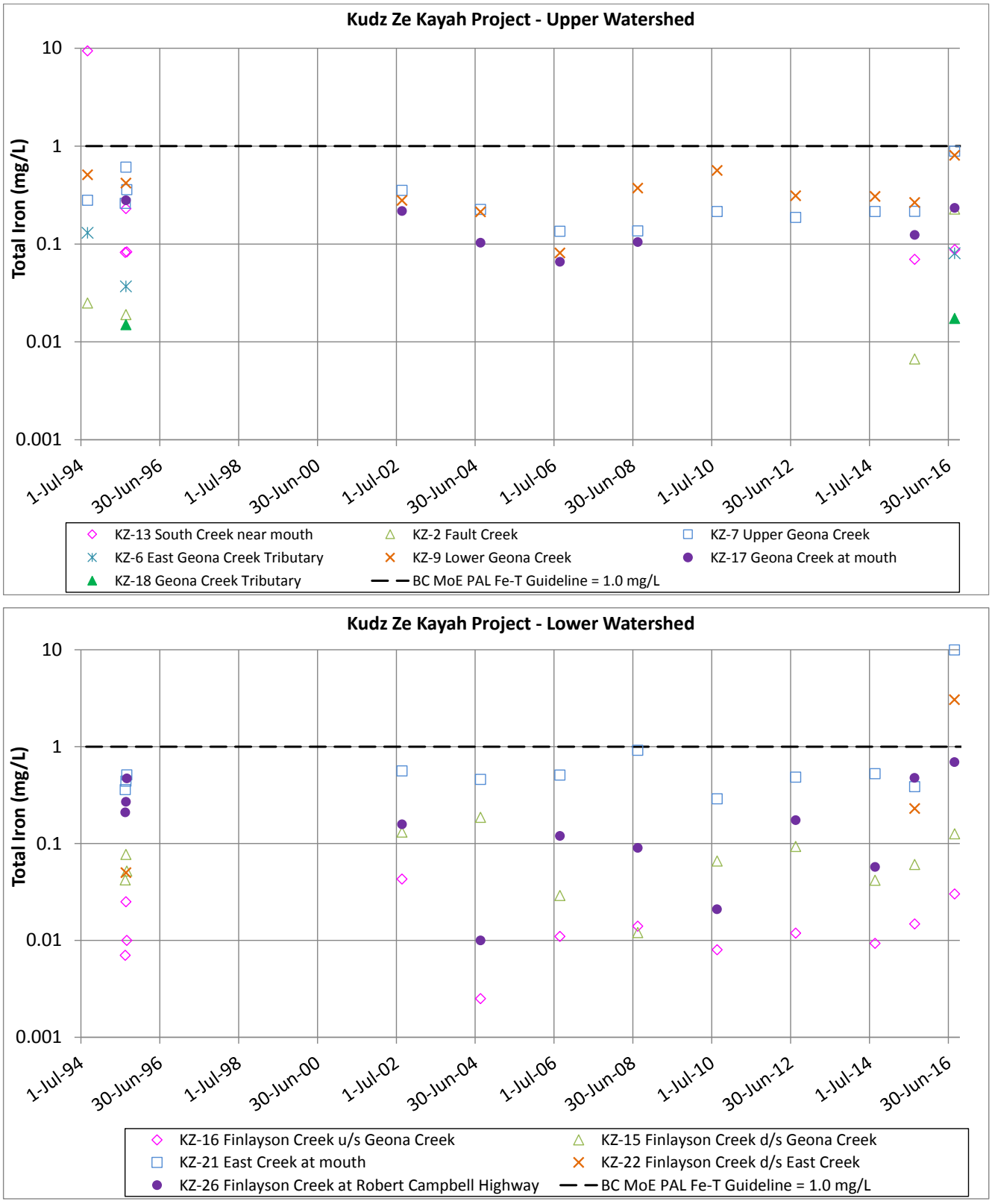


Figure D-7: Variation in Total Iron Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

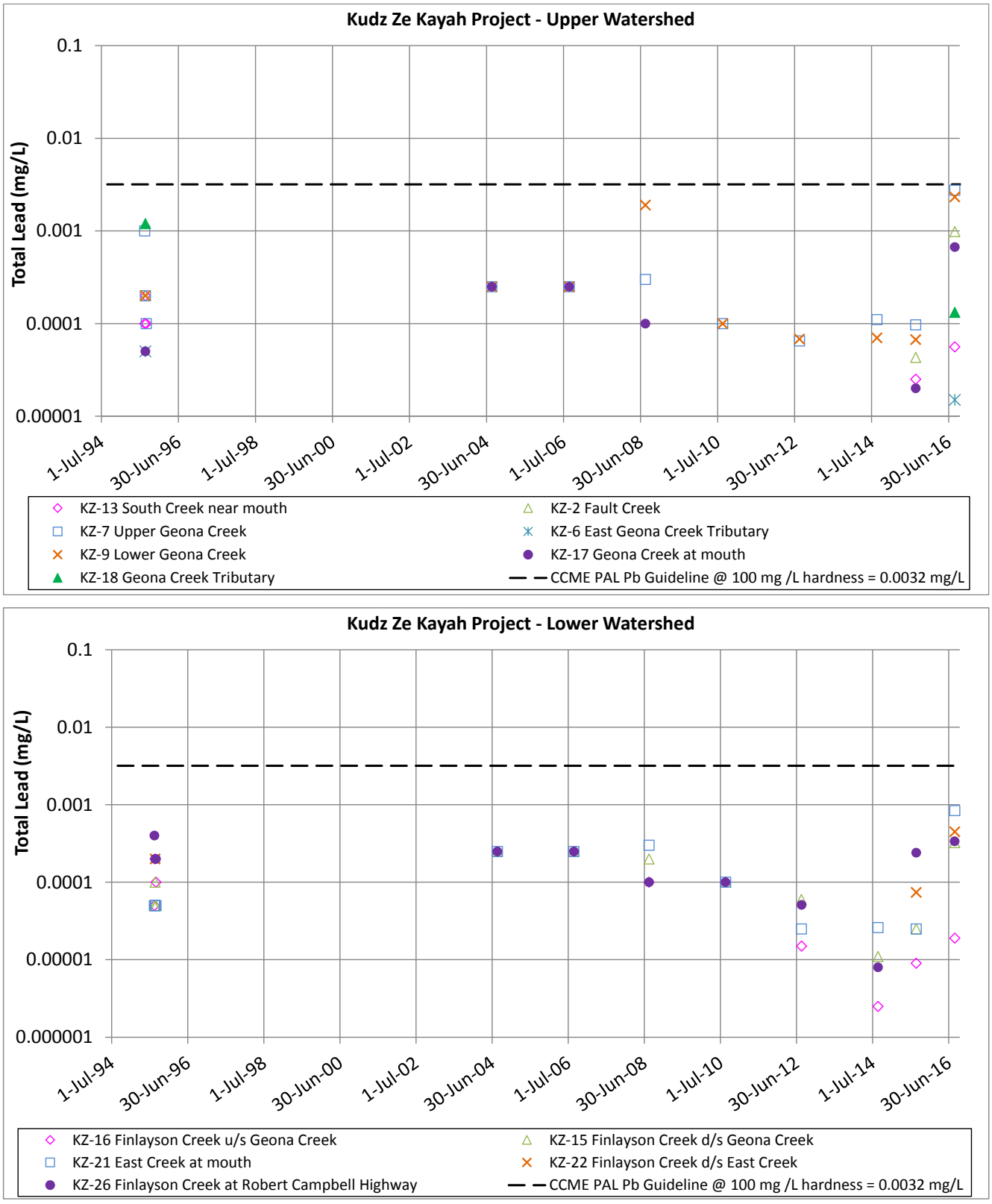


Figure D-8: Variation in Total Lead Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

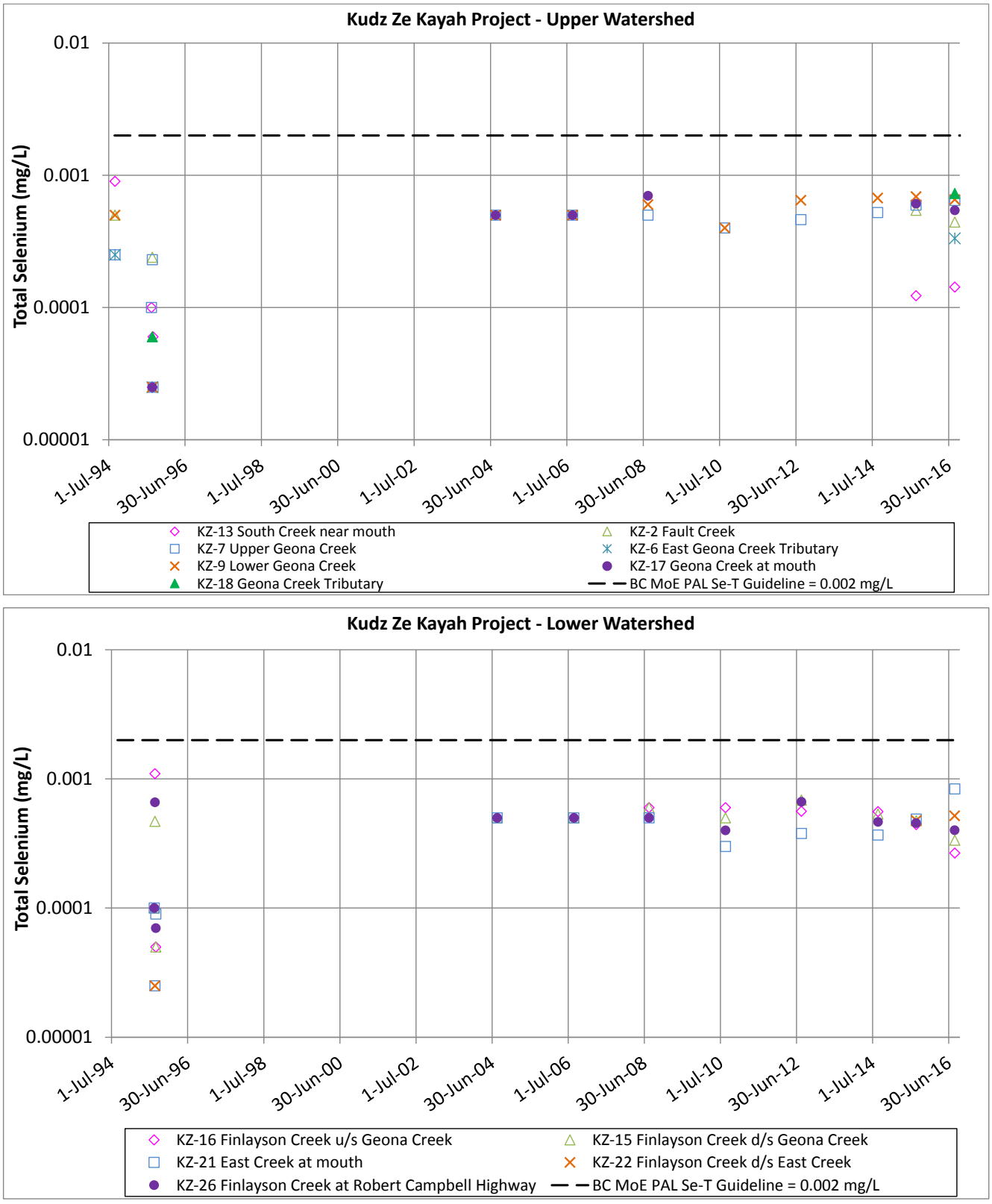


Figure D-9: Variation in Total Selenium Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

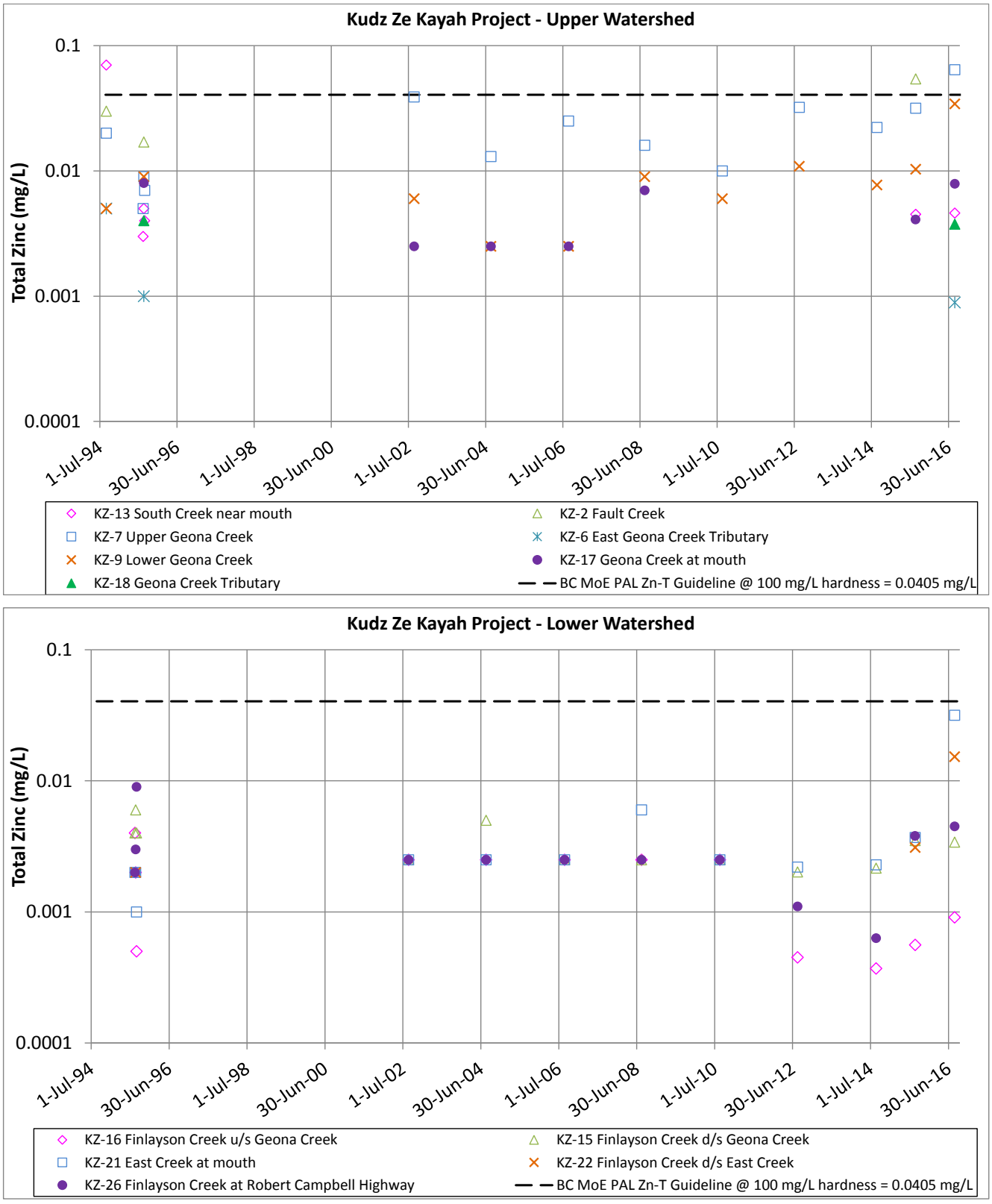


Figure D-10: Variation in Total Zinc Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

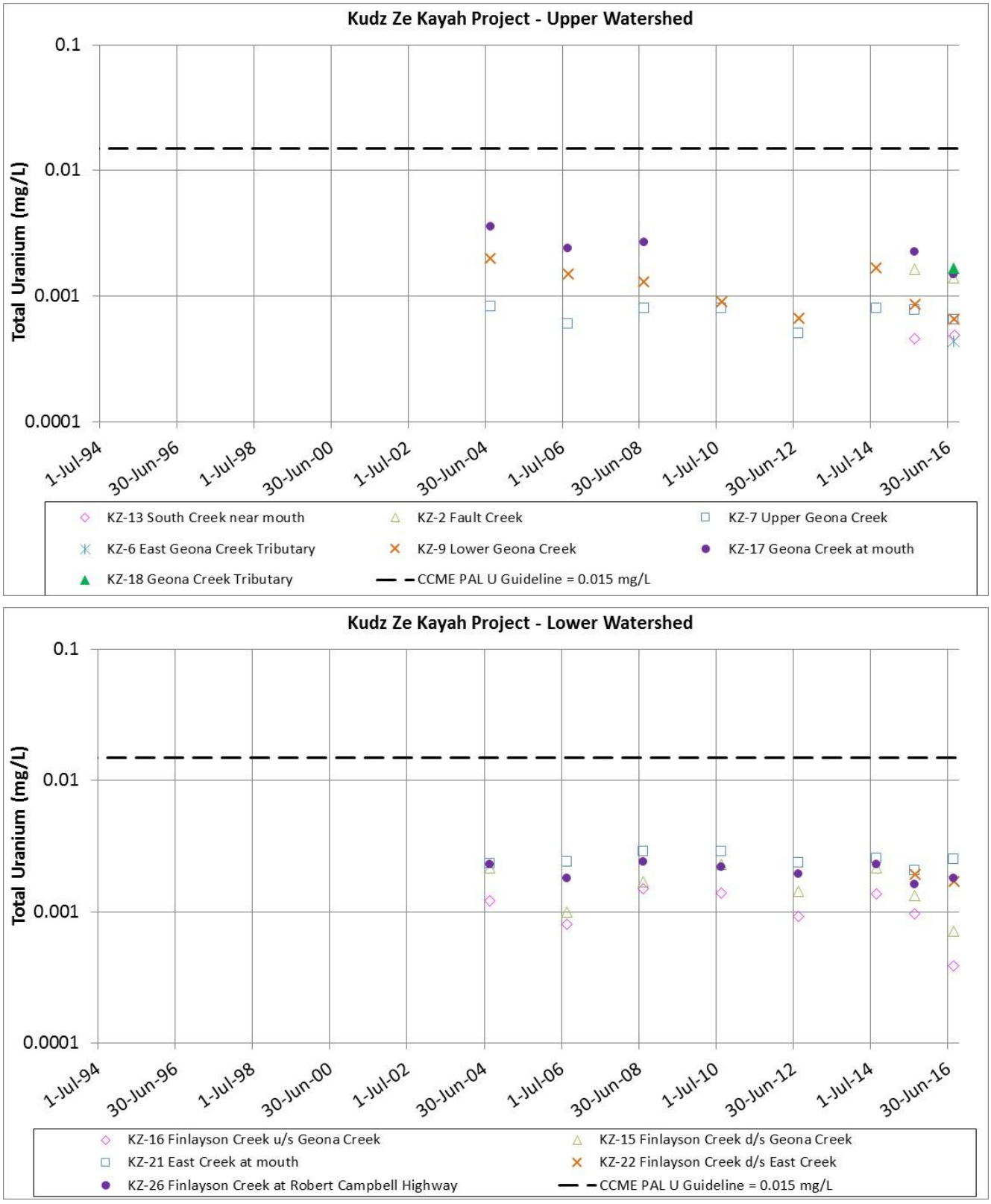


Figure D-11: Variation in Total Uranium Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

APPENDIX E.

2015-16 Maxxam Certificates of Analysis

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

Attention:KAI WOLOSHYN

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

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

CERTIFICATE OF ANALYSIS – REVISED REPORT

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

Sample Matrix: Water
Samples Received: 13

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

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

Attention:KAI WOLOSHYN

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

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

CERTIFICATE OF ANALYSIS – REVISED REPORT

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

Sample Matrix: Water
Samples Received: 13

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

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

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

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

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

Attention:KAI WOLOSHYN

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

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

CERTIFICATE OF ANALYSIS – REVISED REPORT

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

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

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

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

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

RESULTS OF CHEMICAL ANALYSES OF WATER

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

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

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

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

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

RESULTS OF CHEMICAL ANALYSES OF WATER

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

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

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

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

RESULTS OF CHEMICAL ANALYSES OF WATER

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

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

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

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

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

RESULTS OF CHEMICAL ANALYSES OF WATER

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

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

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

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

RESULTS OF CHEMICAL ANALYSES OF WATER

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

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

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

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

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

RESULTS OF CHEMICAL ANALYSES OF WATER

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

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

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

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

RESULTS OF CHEMICAL ANALYSES OF WATER

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

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

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

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

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

RESULTS OF CHEMICAL ANALYSES OF WATER

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

RDL = Reportable Detection Limit
N/A = Not Applicable

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

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

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

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

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

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

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

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

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

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

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

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

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

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

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

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

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

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

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

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

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

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

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

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

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

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

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

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

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

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

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

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

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

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

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

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

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

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

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

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

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

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

RDL = Reportable Detection Limit

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

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

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

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

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

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

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

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

RDL = Reportable Detection Limit

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

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

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

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

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

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

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

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

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

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

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MD8836	MD8837		ME0566		
Sampling Date		2015/04/29 11:45	2015/04/30 10:30		2015/05/01 14:50		
COC Number		08406560	08406560		08406560		
	Units	**KZ26**	**KZ28**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	1.73	<0.050	7888786	<0.050	0.050	7890241
Total Sodium (Na)	mg/L	2.29	<0.050	7888786	<0.050	0.050	7890241
Total Sulphur (S)	mg/L	16.4	<3.0	7888786	<3.0	3.0	7890241
RDL = Reportable Detection Limit							

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

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

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

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MD8817		MD8822		
Sampling Date		2015/04/30 09:55		2015/04/29 14:42		
COC Number		08406559		08406559		
	Units	KZ13	QC Batch	KZ21	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	113	7888622	306	0.50	7889396
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	7891536	<0.0000020	0.0000020	7891536
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.0969	7890803	0.0082	0.0030	7890803
Total Antimony (Sb)	mg/L	<0.000050	7890803	<0.000050	0.000050	7890803
Total Arsenic (As)	mg/L	0.000291	7890803	0.00305	0.000020	7890803
Total Barium (Ba)	mg/L	0.121	7890803	0.0681	0.00010	7890803
Total Beryllium (Be)	mg/L	0.000017	7890803	<0.000010	0.000010	7890803
Total Bismuth (Bi)	mg/L	<0.000020	7890803	<0.000020	0.000020	7890803
Total Boron (B)	mg/L	<0.050	7890803	<0.050	0.050	7890803
Total Cadmium (Cd)	mg/L	0.0000359	7890803	0.0000136	0.0000050	7890803
Total Chromium (Cr)	mg/L	<0.00050	7890803	<0.00050	0.00050	7890803
Total Cobalt (Co)	mg/L	0.000091	7890803	0.000203	0.000010	7890803
Total Copper (Cu)	mg/L	0.00082	7890803	0.00054	0.00020	7890803
Total Iron (Fe)	mg/L	0.258	7890803	1.25	0.0050	7890803
Total Lead (Pb)	mg/L	0.000196	7890803	<0.000050	0.000050	7890803
Total Lithium (Li)	mg/L	0.00236	7890803	0.00729	0.00050	7890803
Total Manganese (Mn)	mg/L	0.0748	7890803	0.190	0.00010	7890803
Total Molybdenum (Mo)	mg/L	0.000953	7890803	0.00148	0.000050	7890803
Total Nickel (Ni)	mg/L	0.00065	7890803	0.00232	0.00010	7890803
Total Phosphorus (P)	mg/L	0.014	7890803	0.033	0.010	7890803
Total Selenium (Se)	mg/L	0.000236	7890803	0.000243	0.000040	7890803
Total Silicon (Si)	mg/L	4.78	7890803	6.07	0.10	7890803
Total Silver (Ag)	mg/L	0.0000128	7890803	0.0000078	0.0000050	7890803
Total Strontium (Sr)	mg/L	0.106	7890803	0.226	0.000050	7890803
Total Thallium (Tl)	mg/L	0.0000051	7890803	0.0000020	0.0000020	7890803
Total Tin (Sn)	mg/L	<0.00020	7890803	<0.00020	0.00020	7890803
Total Titanium (Ti)	mg/L	0.0054	7890803	<0.0050	0.0050	7890803
Total Uranium (U)	mg/L	0.00259	7890803	0.00296	0.0000050	7890803
Total Vanadium (V)	mg/L	0.00094	7890803	<0.00050	0.00050	7890803
Total Zinc (Zn)	mg/L	0.0038	7890803	0.0018	0.0010	7890803
Total Zirconium (Zr)	mg/L	0.00010	7890803	0.00033	0.00010	7890803
Total Calcium (Ca)	mg/L	37.9	7888786	73.9	0.25	7888786
Total Magnesium (Mg)	mg/L	4.47	7888786	29.6	0.25	7888786
RDL = Reportable Detection Limit						

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

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

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

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MD8817		MD8822		
Sampling Date		2015/04/30 09:55		2015/04/29 14:42		
COC Number		08406559		08406559		
	Units	**KZ13**	**QC Batch**	**KZ21**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	2.63	7888786	2.49	0.25	7888786
Total Sodium (Na)	mg/L	1.41	7888786	2.09	0.25	7888786
Total Sulphur (S)	mg/L	<15	7888786	15	15	7888786
RDL = Reportable Detection Limit						

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

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

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

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.7°C
Package 2	7.7°C

Revised Report R2 (2015/05/11): Reporting units have been changed as per client request and report comments have been amended (MM4).

Sample ME0566-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].
Sample MD8814, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MD8814, Na, K, Ca, Mg, S by CRC ICPMS (diss.): Test repeated.
Sample MD8815, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MD8816, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MD8817, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MD8818, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MD8819, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MD8820, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MD8821, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MD8822, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MD8836, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

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

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

QUALITY ASSURANCE REPORT

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7889799	Total Ammonia (N)	2015/05/05	95	80 - 120	99	80 - 120	<0.0050	mg/L	NC	20
7889801	True Colour	2015/05/02			98	80 - 120	<5.0	Col. Unit	1.9	20
7890730	Total Aluminum (Al)	2015/05/05	97	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7890730	Total Antimony (Sb)	2015/05/05	97	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
7890730	Total Arsenic (As)	2015/05/05	101	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
7890730	Total Barium (Ba)	2015/05/05	102	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
7890730	Total Beryllium (Be)	2015/05/05	92	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
7890730	Total Bismuth (Bi)	2015/05/05	97	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
7890730	Total Boron (B)	2015/05/05					<0.010	mg/L	NC	20
7890730	Total Cadmium (Cd)	2015/05/05	96	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
7890730	Total Chromium (Cr)	2015/05/05	96	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
7890730	Total Cobalt (Co)	2015/05/05	96	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
7890730	Total Copper (Cu)	2015/05/05	95	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
7890730	Total Iron (Fe)	2015/05/05	104	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
7890730	Total Lead (Pb)	2015/05/05	96	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
7890730	Total Lithium (Li)	2015/05/05	103	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
7890730	Total Manganese (Mn)	2015/05/05	97	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
7890730	Total Molybdenum (Mo)	2015/05/05	96	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
7890730	Total Nickel (Ni)	2015/05/05	96	80 - 120	98	80 - 120	<0.000020	mg/L	2.9	20
7890730	Total Phosphorus (P)	2015/05/05					<0.0020	mg/L	NC	20
7890730	Total Selenium (Se)	2015/05/05	100	80 - 120	103	80 - 120	<0.000040	mg/L	NC	20
7890730	Total Silicon (Si)	2015/05/05					<0.050	mg/L	NC	20
7890730	Total Silver (Ag)	2015/05/05	82	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
7890730	Total Strontium (Sr)	2015/05/05	96	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
7890730	Total Thallium (Tl)	2015/05/05	96	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
7890730	Total Tin (Sn)	2015/05/05	94	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
7890730	Total Titanium (Ti)	2015/05/05	94	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
7890730	Total Uranium (U)	2015/05/05	99	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
7890730	Total Vanadium (V)	2015/05/05	104	80 - 120	120	80 - 120	0.00025, RDL=0.00020	mg/L	NC	20
7890730	Total Zinc (Zn)	2015/05/05	97	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
7890730	Total Zirconium (Zr)	2015/05/05					<0.00010	mg/L	NC	20

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

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7890771	Dissolved Aluminum (Al)	2015/05/05	104	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
7890771	Dissolved Antimony (Sb)	2015/05/05	102	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
7890771	Dissolved Arsenic (As)	2015/05/05	105	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
7890771	Dissolved Barium (Ba)	2015/05/05	104	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
7890771	Dissolved Beryllium (Be)	2015/05/05	100	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
7890771	Dissolved Bismuth (Bi)	2015/05/05	100	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
7890771	Dissolved Boron (B)	2015/05/05					<0.010	mg/L	NC	20
7890771	Dissolved Cadmium (Cd)	2015/05/05	101	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
7890771	Dissolved Chromium (Cr)	2015/05/05	101	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
7890771	Dissolved Cobalt (Co)	2015/05/05	99	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
7890771	Dissolved Copper (Cu)	2015/05/05	99	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
7890771	Dissolved Iron (Fe)	2015/05/05	106	80 - 120	113	80 - 120	<0.0010	mg/L	NC	20
7890771	Dissolved Lead (Pb)	2015/05/05	99	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
7890771	Dissolved Lithium (Li)	2015/05/05	103	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
7890771	Dissolved Manganese (Mn)	2015/05/05	100	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
7890771	Dissolved Molybdenum (Mo)	2015/05/05	99	80 - 120	95	80 - 120	<0.000050	mg/L	NC	20
7890771	Dissolved Nickel (Ni)	2015/05/05	100	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
7890771	Dissolved Phosphorus (P)	2015/05/05					<0.0020	mg/L	NC	20
7890771	Dissolved Selenium (Se)	2015/05/05	111	80 - 120	100	80 - 120	<0.000040	mg/L	NC	20
7890771	Dissolved Silicon (Si)	2015/05/05					<0.050	mg/L	NC	20
7890771	Dissolved Silver (Ag)	2015/05/05	72 (1)	80 - 120	90	80 - 120	<0.0000050	mg/L	NC	20
7890771	Dissolved Strontium (Sr)	2015/05/05	100	80 - 120	94	80 - 120	<0.000050	mg/L	NC	20
7890771	Dissolved Thallium (Tl)	2015/05/05	99	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
7890771	Dissolved Tin (Sn)	2015/05/05	101	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
7890771	Dissolved Titanium (Ti)	2015/05/05	98	80 - 120	95	80 - 120	<0.00050	mg/L	NC	20
7890771	Dissolved Uranium (U)	2015/05/05	104	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
7890771	Dissolved Vanadium (V)	2015/05/05	103	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
7890771	Dissolved Zinc (Zn)	2015/05/05	107	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
7890771	Dissolved Zirconium (Zr)	2015/05/05					<0.00010	mg/L	NC	20
7890803	Total Aluminum (Al)	2015/05/06	NC	80 - 120	99	80 - 120	<0.0030	mg/L	9.4	20
7890803	Total Antimony (Sb)	2015/05/06	113	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
7890803	Total Arsenic (As)	2015/05/06	NC	80 - 120	98	80 - 120	<0.000020	mg/L	6.9	20

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

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

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7890803	Total Barium (Ba)	2015/05/06	NC	80 - 120	98	80 - 120	<0.00010	mg/L	0.72	20
7890803	Total Beryllium (Be)	2015/05/06	110	80 - 120	97	80 - 120	0.000011, RDL=0.000010	mg/L	7.1	20
7890803	Total Bismuth (Bi)	2015/05/06	112	80 - 120	94	80 - 120	<0.000020	mg/L	NC	20
7890803	Total Boron (B)	2015/05/06					<0.050	mg/L	NC	20
7890803	Total Cadmium (Cd)	2015/05/06	102	80 - 120	93	80 - 120	<0.0000050	mg/L	4.5	20
7890803	Total Chromium (Cr)	2015/05/06	117	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
7890803	Total Cobalt (Co)	2015/05/06	115	80 - 120	97	80 - 120	<0.000010	mg/L	4.4	20
7890803	Total Copper (Cu)	2015/05/06	110	80 - 120	97	80 - 120	0.00032, RDL=0.00020	mg/L	4.9	20
7890803	Total Iron (Fe)	2015/05/06	NC	80 - 120	102	80 - 120	<0.0050	mg/L	6.0	20
7890803	Total Lead (Pb)	2015/05/06	119	80 - 120	95	80 - 120	<0.000050	mg/L	1.1	20
7890803	Total Lithium (Li)	2015/05/06	124 (1)	80 - 120	99	80 - 120	<0.00050	mg/L	0.96	20
7890803	Total Manganese (Mn)	2015/05/06	NC	80 - 120	96	80 - 120	<0.00010	mg/L	4.0	20
7890803	Total Molybdenum (Mo)	2015/05/06	120	80 - 120	93	80 - 120	<0.000050	mg/L	NC	20
7890803	Total Nickel (Ni)	2015/05/06	110	80 - 120	97	80 - 120	<0.00010	mg/L	6.4	20
7890803	Total Phosphorus (P)	2015/05/06					<0.010	mg/L	NC	20
7890803	Total Selenium (Se)	2015/05/06	87	80 - 120	98	80 - 120	<0.000040	mg/L	NC	20
7890803	Total Silicon (Si)	2015/05/06					<0.10	mg/L	7.0	20
7890803	Total Silver (Ag)	2015/05/06	98	80 - 120	90	80 - 120	0.0000051, RDL=0.0000050	mg/L	11	20
7890803	Total Strontium (Sr)	2015/05/06	NC	80 - 120	90	80 - 120	<0.000050	mg/L	5.7	20
7890803	Total Thallium (Tl)	2015/05/06	108	80 - 120	96	80 - 120	<0.0000020	mg/L	8.0	20
7890803	Total Tin (Sn)	2015/05/06	121 (1)	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
7890803	Total Titanium (Ti)	2015/05/06	109	80 - 120	96	80 - 120	<0.0050	mg/L	NC	20
7890803	Total Uranium (U)	2015/05/06	126 (1)	80 - 120	96	80 - 120	<0.0000050	mg/L	0.25	20
7890803	Total Vanadium (V)	2015/05/06	119	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
7890803	Total Zinc (Zn)	2015/05/06	NC	80 - 120	99	80 - 120	0.0012, RDL=0.0010	mg/L	8.4	20
7890803	Total Zirconium (Zr)	2015/05/06					<0.00010	mg/L	12	20
7890953	Total Suspended Solids	2015/05/06			102	80 - 120	<1.0	mg/L		
7890984	Acidity (pH 4.5)	2015/05/04					<0.50	mg/L	NC	20
7890984	Acidity (pH 8.3)	2015/05/04			101	80 - 120	0.66, RDL=0.50	mg/L	NC	20

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

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7890988	Acidity (pH 4.5)	2015/05/04					<0.50	mg/L	1.6	20
7890988	Acidity (pH 8.3)	2015/05/04			102	80 - 120	0.63, RDL=0.50	mg/L	3.7	20
7891043	Alkalinity (PP as CaCO3)	2015/05/05					<0.50	mg/L	15	20
7891043	Alkalinity (Total as CaCO3)	2015/05/05	NC	80 - 120	96	80 - 120	<0.50	mg/L	0.28	20
7891043	Bicarbonate (HCO3)	2015/05/05					<0.50	mg/L	0.34	20
7891043	Carbonate (CO3)	2015/05/05					<0.50	mg/L	15	20
7891043	Hydroxide (OH)	2015/05/05					<0.50	mg/L	NC	20
7891045	pH	2015/05/05			102	97 - 103			0.24	N/A
7891046	Conductivity	2015/05/05			102	80 - 120	1.0, RDL=1.0	uS/cm	0.42	20
7891078	Alkalinity (PP as CaCO3)	2015/05/04					<0.50	mg/L	NC	20
7891078	Alkalinity (Total as CaCO3)	2015/05/04	NC	80 - 120	96	80 - 120	0.72, RDL=0.50	mg/L	0.59	20
7891078	Bicarbonate (HCO3)	2015/05/04					0.88, RDL=0.50	mg/L	0.61	20
7891078	Carbonate (CO3)	2015/05/04					<0.50	mg/L	NC	20
7891078	Hydroxide (OH)	2015/05/04					<0.50	mg/L	NC	20
7891080	pH	2015/05/04							0.64	N/A
7891081	Conductivity	2015/05/04			100	80 - 120	<1.0	uS/cm	1.5	20
7891085	Alkalinity (PP as CaCO3)	2015/05/04					<0.50	mg/L	NC	20
7891085	Alkalinity (Total as CaCO3)	2015/05/04	110	80 - 120	95	80 - 120	<0.50	mg/L	NC	20
7891085	Bicarbonate (HCO3)	2015/05/04					<0.50	mg/L	NC	20
7891085	Carbonate (CO3)	2015/05/04					<0.50	mg/L	NC	20
7891085	Hydroxide (OH)	2015/05/04					<0.50	mg/L	NC	20
7891095	pH	2015/05/04			102	97 - 103			2.5	N/A
7891096	Conductivity	2015/05/04			101	80 - 120	<1.0	uS/cm	NC	20
7891536	Total Mercury (Hg)	2015/05/05	102	80 - 120	105	80 - 120	<0.0000020	mg/L	NC	20
7891581	Dissolved Aluminum (Al)	2015/05/05	101	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7891581	Dissolved Antimony (Sb)	2015/05/05	112	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
7891581	Dissolved Arsenic (As)	2015/05/05	112	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
7891581	Dissolved Barium (Ba)	2015/05/05	111	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
7891581	Dissolved Beryllium (Be)	2015/05/05	98	80 - 120	92	80 - 120	<0.000010	mg/L	NC	20
7891581	Dissolved Bismuth (Bi)	2015/05/05	96	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
7891581	Dissolved Boron (B)	2015/05/05					<0.010	mg/L	NC	20
7891581	Dissolved Cadmium (Cd)	2015/05/05	107	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7891581	Dissolved Chromium (Cr)	2015/05/05	98	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
7891581	Dissolved Cobalt (Co)	2015/05/05	98	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
7891581	Dissolved Copper (Cu)	2015/05/05	95	80 - 120	95	80 - 120	<0.000050	mg/L	NC	20
7891581	Dissolved Iron (Fe)	2015/05/05	108	80 - 120	126 (2)	80 - 120	<0.0010	mg/L	NC	20
7891581	Dissolved Lead (Pb)	2015/05/05	100	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
7891581	Dissolved Lithium (Li)	2015/05/05	111	80 - 120	108	80 - 120	<0.00050	mg/L	NC	20
7891581	Dissolved Manganese (Mn)	2015/05/05	98	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
7891581	Dissolved Molybdenum (Mo)	2015/05/05	101	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
7891581	Dissolved Nickel (Ni)	2015/05/05	97	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
7891581	Dissolved Phosphorus (P)	2015/05/05					<0.0020	mg/L	NC	20
7891581	Dissolved Selenium (Se)	2015/05/05	114	80 - 120	99	80 - 120	<0.000040	mg/L	NC	20
7891581	Dissolved Silicon (Si)	2015/05/05					<0.050	mg/L	NC	20
7891581	Dissolved Silver (Ag)	2015/05/05	91	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
7891581	Dissolved Strontium (Sr)	2015/05/05	105	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
7891581	Dissolved Thallium (Tl)	2015/05/05	97	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
7891581	Dissolved Tin (Sn)	2015/05/05	105	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
7891581	Dissolved Titanium (Ti)	2015/05/05	101	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
7891581	Dissolved Uranium (U)	2015/05/05	102	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
7891581	Dissolved Vanadium (V)	2015/05/05	107	80 - 120	121 (2)	80 - 120	<0.00020	mg/L	NC	20
7891581	Dissolved Zinc (Zn)	2015/05/05	108	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
7891581	Dissolved Zirconium (Zr)	2015/05/05					<0.00010	mg/L	NC	20
7891584	Total Aluminum (Al)	2015/05/05	95	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7891584	Total Antimony (Sb)	2015/05/05	99	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
7891584	Total Arsenic (As)	2015/05/05	106	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
7891584	Total Barium (Ba)	2015/05/05	99	80 - 120	108	80 - 120	<0.000020	mg/L	NC	20
7891584	Total Beryllium (Be)	2015/05/05	91	80 - 120	93	80 - 120	<0.000010	mg/L	NC	20
7891584	Total Bismuth (Bi)	2015/05/05	93	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
7891584	Total Boron (B)	2015/05/05					<0.010	mg/L	NC	20
7891584	Total Cadmium (Cd)	2015/05/05	98	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
7891584	Total Chromium (Cr)	2015/05/05	92	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
7891584	Total Cobalt (Co)	2015/05/05	91	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
7891584	Total Copper (Cu)	2015/05/05	88	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20

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

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

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7891584	Total Iron (Fe)	2015/05/05	106	80 - 120	123 (2)	80 - 120	<0.0010	mg/L	NC	20
7891584	Total Lead (Pb)	2015/05/05	95	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
7891584	Total Lithium (Li)	2015/05/05	92	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
7891584	Total Manganese (Mn)	2015/05/05	92	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
7891584	Total Molybdenum (Mo)	2015/05/05	93	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
7891584	Total Nickel (Ni)	2015/05/05	91	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
7891584	Total Phosphorus (P)	2015/05/05					<0.0020	mg/L	NC	20
7891584	Total Selenium (Se)	2015/05/05	104	80 - 120	100	80 - 120	<0.000040	mg/L	NC	20
7891584	Total Silicon (Si)	2015/05/05					<0.050	mg/L	NC	20
7891584	Total Silver (Ag)	2015/05/05	89	80 - 120	94	80 - 120	<0.0000050	mg/L	NC	20
7891584	Total Strontium (Sr)	2015/05/05	94	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
7891584	Total Thallium (Tl)	2015/05/05	91	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
7891584	Total Tin (Sn)	2015/05/05	95	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
7891584	Total Titanium (Ti)	2015/05/05	90	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
7891584	Total Uranium (U)	2015/05/05	95	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
7891584	Total Vanadium (V)	2015/05/05	107	80 - 120	122 (2)	80 - 120	<0.00020	mg/L	NC	20
7891584	Total Zinc (Zn)	2015/05/05	106	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
7891584	Total Zirconium (Zr)	2015/05/05					<0.00010	mg/L	NC	20
7891883	Dissolved Phosphorus (P)	2015/05/05	115	80 - 120	106	80 - 120	<0.0020	mg/L	NC	20
7891885	Total Phosphorus (P)	2015/05/05	107	80 - 120	106	80 - 120	<0.0020	mg/L	NC	20
7891933	Fluoride (F)	2015/05/04	98	80 - 120	98	80 - 120	<0.010	mg/L	0	20
7892052	Strong Acid Dissoc. Cyanide (CN)	2015/05/05	100	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7892057	Weak Acid Dissoc. Cyanide (CN)	2015/05/05	102	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
7892173	Dissolved Organic Carbon (C)	2015/05/05	98	80 - 120	107	80 - 120	<0.50	mg/L	NC	20
7892178	Dissolved Organic Carbon (C)	2015/05/05	101	80 - 120	103	80 - 120	<0.50	mg/L	NC	20
7892180	Total Ammonia (N)	2015/05/05	96	80 - 120	109	80 - 120	0.0077, RDL=0.0050	mg/L	NC	20
7892181	Total Ammonia (N)	2015/05/05	104	80 - 120	112	80 - 120	<0.0050	mg/L	NC	20
7892298	True Colour	2015/05/05			103	80 - 120	<5.0	Col. Unit	7.0	20
7892316	Fluoride (F)	2015/05/05	97	80 - 120	98	80 - 120	<0.010	mg/L	0	20
7892343	Total Suspended Solids	2015/05/06			102	80 - 120	<1.0	mg/L		
7892412	Nitrate plus Nitrite (N)	2015/05/05	102	80 - 120	105	80 - 120	<0.0020	mg/L	0.62	25

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

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

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7892413	Nitrite (N)	2015/05/05	100	80 - 120	105	80 - 120	<0.0020	mg/L	NC	25
7892414	Nitrate plus Nitrite (N)	2015/05/05	101	80 - 120	105	80 - 120	<0.0020	mg/L	0.66	25
7892415	Nitrite (N)	2015/05/05	100	80 - 120	105	80 - 120	<0.0020	mg/L	NC	25
7892416	Nitrate plus Nitrite (N)	2015/05/05	104	80 - 120	106	80 - 120	<0.0020	mg/L	NC	25
7892417	Nitrite (N)	2015/05/05	102	80 - 120	105	80 - 120	<0.0020	mg/L	NC	25
7892463	Dissolved Chloride (Cl)	2015/05/05			100	80 - 120	<0.50	mg/L		
7892464	Dissolved Sulphate (SO4)	2015/05/05	91	80 - 120	91	80 - 120	<0.50	mg/L	0.16	20
7892465	Dissolved Chloride (Cl)	2015/05/05	96	80 - 120	98	80 - 120	<0.50	mg/L	12	20
7892466	Dissolved Sulphate (SO4)	2015/05/05	87	80 - 120	91	80 - 120	<0.50	mg/L	0.076	20
7892469	Dissolved Chloride (Cl)	2015/05/05	NC	80 - 120	103	80 - 120	0.77, RDL=0.50	mg/L	1.4	20
7892471	Dissolved Sulphate (SO4)	2015/05/05	NC	80 - 120	95	80 - 120	<0.50	mg/L	0.083	20
7892952	Dissolved Mercury (Hg)	2015/05/06	91	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20
7893072	Total Mercury (Hg)	2015/05/06	111	80 - 120	112	80 - 120	<0.0000020	mg/L	NC	20
7893144	Total Mercury (Hg)	2015/05/06	95	80 - 120	90	80 - 120	<0.0000020	mg/L	NC	20
7893837	Total Phosphorus (P)	2015/05/04	NC	80 - 120	98	80 - 120	<0.0020	mg/L	0.43	20
7893866	Dissolved Phosphorus (P)	2015/05/04	NC	80 - 120	101	80 - 120	<0.0020	mg/L	1.5	20
7893957	Dissolved Antimony (Sb)	2015/05/07			100	80 - 120	<0.000020	mg/L		
7893957	Dissolved Selenium (Se)	2015/05/07			100	80 - 120	<0.000040	mg/L		
7893957	Dissolved Thallium (Tl)	2015/05/07			96	80 - 120	<0.0000020	mg/L		
7894302	Dissolved Mercury (Hg)	2015/05/07	111	80 - 120	85	80 - 120	<0.0000020	mg/L	NC	20
7894834	Dissolved Phosphorus (P)	2015/05/04	104	80 - 120	103	80 - 120	<0.0020	mg/L	NC	20
7895018	Dissolved Selenium (Se)	2015/05/08			95	80 - 120	<0.000040	mg/L		

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

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

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7895018	Dissolved Thallium (Tl)	2015/05/08			96	80 - 120	<0.0000020	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) Blank Spike outside acceptance criteria (10% of analytes failure allowed).

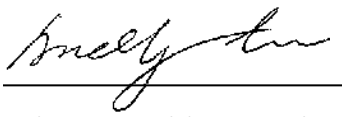
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

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

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

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Andy Lu, Data Validation Coordinator

David Huang, BBY Scientific Specialist

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

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

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

BBY FCD-00077/05

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #:

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[X] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	H.Goulding & A.MacPhail	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

Rush Confirmation #:

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL MERCURY	DISSOLVED LOW LEVEL METALS INCL MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ2	MD8814	2015/04/30	16:05		x	x	x	x	x	x	x	x	x	x	x	x	x				12	
2	KZ7	MD8815	2015/04/30	14:05		x	x	x	x	x	x	x	x	x	x	x	x	x				12	
3	KZ9	MD8816	2015/04/30	12:30		x	x	x	x	x	x	x	x	x	x	x	x	x				12	
4	KZ13	MD8817	2015/04/30	9:55		x	x	x	x	x	x	x	x	x	x	x	x	x				12	
5	KZ15	MD8818	2015/04/29	16:47		x	x	x	x	x	x	x	x	x	x	x	x	x				12	
6	KZ16	MD8819	2015/04/30	17:44		x	x	x	x	x	x	x	x	x	x	x	x	x				12	
7	KZ17	MD8820	2015/04/29	17:52		x	x	x	x	x	x	x	x	x	x	x	x	x				12	
8	KZ19	MD8821	2015/04/29	13:45		x	x	x	x	x	x	x	x	x	x	x	x	x				12	
9	KZ21	MD8822	2015/04/29	14:42		x	x	x	x	x	x	x	x	x	x	x	x	x				12	
10	KZ22	MD8823	2015/04/29	13:15		x	x	x	x	x	x	x	x	x	x	x	x	x				12	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	

COOLING MEDIA PRESENT Y / N

COMMENTS

B535707

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Holly Goulding	2015/05/01	6:00	JOHN CURRIE	2015/05/01	14:50	B535707

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

BBY FCD-00077/05

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #:

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	H.Goulding & A.MacPhail	Date Required:
						Rush Confirmation #:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS [Cl, F, SO4, NO2, NO3]	AMMONIA	CYANIDE [SAD & WAD]	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ26	MD8836	2015-04-29	11:45		x	x	x	x	x	x	x	x	x	x	x	x	x	12		
2	KZ28	MD8837	2015-04-30	10:30		x	x	x	x	x	x	x	x	x	x	x	x	x	12		
3	Trip Blank	ME0566				x	x	x	x	x	x	x	x	x	x	x	x	x	12		**Send separately.
4																					
5																					
6																					
7																					
8																					
9																					
10																					

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	

COOLING MEDIA PRESENT Y / N

B535707

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Holly Goulding	2015/05/01	6:00	JOHN CURRIE	2015/05/01	14:50	B535707

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08407188, 08407189, 08407190

Attention:KAI WOLOSHYN

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

Report Date: 2015/05/22
Report #: R1962980
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B539758
Received: 2015/05/14, 09:40

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	13	N/A	2015/05/15	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	13	2015/05/14	2015/05/14	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	13	N/A	2015/05/15	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	13	N/A	2015/05/19	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	13	N/A	2015/05/19	BBY6SOP-00004	SM 22 4500-CN O
Colour (True)	13	N/A	2015/05/14	BBY6SOP-00021	SM 22 2120 B m
Carbon (DOC) - field filtered/preserved (1)	12	N/A	2015/05/16	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2015/05/16	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	13	N/A	2015/05/14	BBY6SOP-00026	SM 22 2510 B m
Fluoride	13	N/A	2015/05/15	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	13	N/A	2015/05/20	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	13	N/A	2015/05/20	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	13	N/A	2015/05/20	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	13	2015/05/20	2015/05/20	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	13	N/A	2015/05/21	BBY WI-00033	SM 22 1030E
Sum of cations, anions	1	N/A	2015/05/20	Calc	
Sum of cations, anions	12	N/A	2015/05/21	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	12	N/A	2015/05/20	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2015/05/21	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	13	N/A	2015/05/20	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Digested LL (total)	10	2015/05/15	2015/05/20	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	12	N/A	2015/05/20	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2015/05/22	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	3	N/A	2015/05/20	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	13	N/A	2015/05/14	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	13	N/A	2015/05/14	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	13	N/A	2015/05/14	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	13	N/A	2015/05/15	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	12	N/A	2015/05/15	BBY7 WI-00004	BCMOE Reqs 08/14

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

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08407188, 08407189, 08407190

Attention:KAI WOLOSHYN

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

Report Date: 2015/05/22
Report #: R1962980
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B539758
Received: 2015/05/14, 09:40

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
pH Water (2)	13	N/A	2015/05/14	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	13	N/A	2015/05/15	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	5	2015/05/14	2015/05/15	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	7	2015/05/15	2015/05/15	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2015/05/21	2015/05/21	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	12	N/A	2015/05/15	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	1	N/A	2015/05/21	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	13	2015/05/15	2015/05/19	BBY6SOP-00034	SM 22 2540 D

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

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

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

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MF9641		MF9642	MF9643		MF9644		
Sampling Date		2015/05/11 13:50		2015/05/11 14:36	2015/05/11 14:40		2015/05/11 11:40		
COC Number		08407188		08407188	08407188		08407188		
	Units	KZ-15	QC Batch	KZ-16	KZ-17	QC Batch	KZ-22	RDL	QC Batch
Misc. Inorganics									
Acidity (pH 4.5)	mg/L	<0.50	7902715	<0.50	<0.50	7902715	<0.50	0.50	7902715
Acidity (pH 8.3)	mg/L	0.74	7902715	0.89	0.79	7902715	0.57	0.50	7902715
Calculated Parameters									
Anion Sum	meq/L	1.2	7902575	1.2	1.1	7902575	1.8	N/A	7902575
Cation Sum	meq/L	1.5	7902575	1.5	1.5	7902575	2.1	N/A	7902575
Filter and HNO3 Preservation	N/A	LAB	7903794	LAB	LAB	7903794	LAB	N/A	7903794
Ion Balance	N/A	1.3 (1)	7901948	1.2	1.3 (1)	7901948	1.2	0.010	7901948
Nitrate (N)	mg/L	<0.020	7902057	<0.020	<0.020	7902057	<0.020	0.020	7902057
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00146	7905582	0.00122	0.00152	7905582	0.00122	0.00050	7905582
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00137	7905592	0.00107	0.00118	7905592	0.00119	0.00050	7905592
Fluoride (F)	mg/L	0.042	7903662	0.039	0.046	7903662	0.059	0.010	7903662
Dissolved Organic Carbon (C)	mg/L	14.9	7904603	10.8	15.6	7904603	12.4	0.50	7904603
Alkalinity (Total as CaCO3)	mg/L	59.4	7903028	58.6	54.4	7903028	77.8	0.50	7903028
Alkalinity (PP as CaCO3)	mg/L	<0.50	7903028	<0.50	<0.50	7903028	<0.50	0.50	7903028
Bicarbonate (HCO3)	mg/L	72.5	7903028	71.5	66.3	7903028	94.9	0.50	7903028
Carbonate (CO3)	mg/L	<0.50	7903028	<0.50	<0.50	7903028	<0.50	0.50	7903028
Hydroxide (OH)	mg/L	<0.50	7903028	<0.50	<0.50	7903028	<0.50	0.50	7903028
Anions									
Dissolved Sulphate (SO4)	mg/L	<0.50	7904013	1.21	<0.50	7904013	9.12	0.50	7904013
Dissolved Chloride (Cl)	mg/L	0.98	7904008	0.78	1.2	7904008	0.87	0.50	7904008
MISCELLANEOUS									
True Colour	Col. Unit	199	7903942	165	242	7903942	180	25	7903942
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0257 (2)	7902708	0.0184 (2)	0.0369 (2)	7902708	0.0169 (3)	0.0020	7908430
Total Ammonia (N)	mg/L	<0.0050	7902764	0.0098	0.0069	7902764	0.0053	0.0050	7902764
Nitrate plus Nitrite (N)	mg/L	<0.020 (4)	7902808	<0.020 (4)	<0.020 (4)	7902808	<0.020 (4)	0.020	7902808
Nitrite (N)	mg/L	<0.020 (4)	7902809	<0.020 (4)	<0.020 (4)	7902809	<0.020 (4)	0.020	7902809
Total Phosphorus (P)	mg/L	0.0257 (2)	7902716	0.0185 (2)	0.0349 (2)	7902716	0.0508 (3)	0.0020	7908481

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ionic imbalance due to high level of iron which may precipitate out over time and affect the results for alkalinity.
(2) Sample preserved to extend hold time.
(3) Sample was originally analysed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.
(4) RDL raised due to sample matrix interference.

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MF9641		MF9642	MF9643		MF9644		
Sampling Date		2015/05/11 13:50		2015/05/11 14:36	2015/05/11 14:40		2015/05/11 11:40		
COC Number		08407188		08407188	08407188		08407188		
	Units	KZ-15	QC Batch	KZ-16	KZ-17	QC Batch	KZ-22	RDL	QC Batch
Physical Properties									
Conductivity	uS/cm	132	7903027	135	126	7903027	176	1.0	7903027
pH	pH	7.67	7903017	7.68	7.25	7903017	7.81	N/A	7903017
Physical Properties									
Total Suspended Solids	mg/L	40.2	7903170	4.6	79.5	7903230	16.5	1.0	7903230

RDL = Reportable Detection Limit
N/A = Not Applicable

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MF9656		MF9657			MF9658	MF9659		
Sampling Date		2015/05/11 09:05		2015/05/11 09:45			2015/05/11 13:05	2015/05/11 16:55		
COC Number		08407189		08407189			08407189	08407189		
	Units	KZ-26	RDL	KZ-28	RDL	QC Batch	KZ-21	KZ-19	RDL	QC Batch
Misc. Inorganics										
Acidity (pH 4.5)	mg/L	<0.50	0.50	<0.50	0.50	7902715	<0.50	<0.50	0.50	7902715
Acidity (pH 8.3)	mg/L	<0.50	0.50	<0.50	0.50	7902715	0.66	0.86	0.50	7902715
Calculated Parameters										
Anion Sum	meq/L	2.0	N/A	0.020	N/A	7902575	1.8	0.85	N/A	7902575
Cation Sum	meq/L	2.3	N/A	0.0024	N/A	7902575	2.0	1.1	N/A	7902575
Filter and HNO3 Preservation	N/A	LAB	N/A	LAB	N/A	7903794	LAB	LAB	N/A	7903794
Ion Balance	N/A	1.1	0.010	0.12 (1)	0.010	7901948	1.1	1.3 (2)	0.010	7901948
Nitrate (N)	mg/L	<0.020	0.020	<0.0020	0.0020	7902057	<0.020	<0.020	0.020	7902057
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00108	0.00050	<0.00050	0.00050	7905582	0.00117	0.00160	0.00050	7905582
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00114	0.00050	0.00057	0.00050	7905592	0.00121	0.00152	0.00050	7905592
Fluoride (F)	mg/L	0.057	0.010	0.013	0.010	7903662	0.065	0.034	0.010	7903662
Dissolved Organic Carbon (C)	mg/L	13.9	0.50	1.38	0.50	7904603	11.2	14.3	0.50	7904603
Alkalinity (Total as CaCO3)	mg/L	86.1	0.50	0.97	0.50	7903037	75.9	41.4	0.50	7903037
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	<0.50	0.50	7903037	<0.50	<0.50	0.50	7903037
Bicarbonate (HCO3)	mg/L	105	0.50	1.18	0.50	7903037	92.6	50.5	0.50	7903037
Carbonate (CO3)	mg/L	<0.50	0.50	<0.50	0.50	7903037	<0.50	<0.50	0.50	7903037
Hydroxide (OH)	mg/L	<0.50	0.50	<0.50	0.50	7903037	<0.50	<0.50	0.50	7903037
Anions										
Dissolved Sulphate (SO4)	mg/L	13.3	0.50	<0.50	0.50	7904013	9.95	<0.50	0.50	7904013
Dissolved Chloride (Cl)	mg/L	1.0	0.50	<0.50	0.50	7904008	1.3	0.82	0.50	7904008
MISCELLANEOUS										
True Colour	Col. Unit	161	25	<5.0	5.0	7903946	182	233	25	7903946
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0223 (3)	0.0020	<0.0020 (3)	0.0020	7902708	0.0325 (3)	0.0280 (3)	0.0020	7906160
Total Ammonia (N)	mg/L	0.0078	0.0050	0.0086	0.0050	7902764	0.0074	<0.0050	0.0050	7902764
Nitrate plus Nitrite (N)	mg/L	<0.020 (4)	0.020	<0.0020	0.0020	7902808	<0.020 (4)	<0.020 (4)	0.020	7902808
Nitrite (N)	mg/L	<0.020 (4)	0.020	<0.0020	0.0020	7902809	<0.020 (4)	<0.020 (4)	0.020	7902809
Total Phosphorus (P)	mg/L	0.0223 (3)	0.0020	<0.0020 (3)	0.0020	7902716	0.0318 (3)	0.0259 (3)	0.0020	7902716

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).
(2) Ionic imbalance due to high level of iron which may precipitate out over time and affect the results for alkalinity.
(3) Sample preserved to extend hold time.
(4) RDL raised due to sample matrix interference.

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MF9656		MF9657			MF9658	MF9659		
Sampling Date		2015/05/11 09:05		2015/05/11 09:45			2015/05/11 13:05	2015/05/11 16:55		
COC Number		08407189		08407189			08407189	08407189		
	Units	**KZ-26**	**RDL**	**KZ-28**	**RDL**	**QC Batch**	**KZ-21**	**KZ-19**	**RDL**	**QC Batch**
Physical Properties										
Conductivity	uS/cm	196	1.0	1.0	1.0	7903038	173	96.5	1.0	7903038
pH	pH	7.89	N/A	5.74	N/A	7903040	7.78	7.54	N/A	7903040
Physical Properties										
Total Suspended Solids	mg/L	15.8	1.0	<1.0	1.0	7903230	21.3	70.1	1.0	7903230

RDL = Reportable Detection Limit
N/A = Not Applicable

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MF9660			MF9693			MF9694		
Sampling Date		2015/05/11 16:05			2015/05/12 12:40			2015/05/12 09:25		
COC Number		08407189			08407190			08407190		
	Units	KZ-9	RDL	QC Batch	KZ-2	RDL	QC Batch	KZ-7	RDL	QC Batch
Misc. Inorganics										
Acidity (pH 4.5)	mg/L	<0.50	0.50	7902715	<0.50	0.50	7902715	<0.50	0.50	7902715
Acidity (pH 8.3)	mg/L	0.94	0.50	7902715	<0.50	0.50	7902715	1.10	0.50	7902715
Calculated Parameters										
Anion Sum	meq/L	0.88	N/A	7902575	1.5	N/A	7902575	0.75	N/A	7902575
Cation Sum	meq/L	1.1	N/A	7902575	1.7	N/A	7902575	1.1	N/A	7902575
Filter and HNO3 Preservation	N/A	LAB	N/A	7903794	LAB	N/A	7903794	LAB	N/A	7903794
Ion Balance	N/A	1.3 (1)	0.010	7901948	1.1	0.010	7901948	1.4 (1)	0.010	7901948
Nitrate (N)	mg/L	<0.020	0.020	7902057	0.0536	0.0020	7902057	<0.020	0.020	7902057
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00151	0.00050	7905582	0.00084	0.00050	7905582	0.00153	0.00050	7905582
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00146	0.00050	7905592	0.00093	0.00050	7905592	0.00147	0.00050	7905592
Fluoride (F)	mg/L	0.032	0.010	7903662	0.044	0.010	7903666	0.033	0.010	7903666
Dissolved Organic Carbon (C)	mg/L	16.1	0.50	7904603	5.77	0.50	7904603	17.2	0.50	7904603
Alkalinity (Total as CaCO3)	mg/L	42.4	0.50	7903037	49.6	0.50	7903037	35.7	0.50	7903037
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	7903037	<0.50	0.50	7903037	<0.50	0.50	7903037
Bicarbonate (HCO3)	mg/L	51.7	0.50	7903037	60.5	0.50	7903037	43.5	0.50	7903037
Carbonate (CO3)	mg/L	<0.50	0.50	7903037	<0.50	0.50	7903037	<0.50	0.50	7903037
Hydroxide (OH)	mg/L	<0.50	0.50	7903037	<0.50	0.50	7903037	<0.50	0.50	7903037
Anions										
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	7904663	24.6	0.50	7904663	<0.50	0.50	7904663
Dissolved Chloride (Cl)	mg/L	1.0	0.50	7904662	0.66	0.50	7904662	1.3	0.50	7904662
MISCELLANEOUS										
True Colour	Col. Unit	218	25	7903942	66.1	5.0	7903942	230	25	7903946
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0280 (2)	0.0020	7906160	0.0082	0.0020	7906160	0.0282 (2)	0.0020	7906160
Total Ammonia (N)	mg/L	0.0100	0.0050	7902764	0.0087	0.0050	7902764	0.0064	0.0050	7902764
Nitrate plus Nitrite (N)	mg/L	<0.020 (3)	0.020	7902808	0.0536	0.0020	7902808	<0.020 (3)	0.020	7902808
Nitrite (N)	mg/L	<0.020 (3)	0.020	7902809	<0.0020	0.0020	7902809	<0.020 (3)	0.020	7902809
Total Phosphorus (P)	mg/L	0.0272 (2)	0.0020	7904542	0.0063	0.0020	7902716	0.0318	0.0020	7904542
Physical Properties										
Conductivity	uS/cm	96.8	1.0	7903038	160	1.0	7903038	89.6	1.0	7903038

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ionic imbalance due to high level of iron which may precipitate out over time and affect the results for alkalinity.
(2) Sample preserved to extend hold time.
(3) RDL raised due to sample matrix interference.

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MF9660			MF9693			MF9694		
Sampling Date		2015/05/11 16:05			2015/05/12 12:40			2015/05/12 09:25		
COC Number		08407189			08407190			08407190		
	Units	**KZ-9**	**RDL**	**QC Batch**	**KZ-2**	**RDL**	**QC Batch**	**KZ-7**	**RDL**	**QC Batch**
pH	pH	7.52	N/A	7903040	7.70	N/A	7903040	7.45	N/A	7903040
Physical Properties										
Total Suspended Solids	mg/L	66.2	1.0	7903230	<1.0	1.0	7903230	14.4	1.0	7903230

RDL = Reportable Detection Limit
N/A = Not Applicable

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MF9695			MF9696		
Sampling Date		2015/05/14 09:40			2015/05/12 16:50		
COC Number		08407190			08407190		
	Units	TRIP BLANK	RDL	QC Batch	KZ-13	RDL	QC Batch
Misc. Inorganics							
Acidity (pH 4.5)	mg/L	<0.50	0.50	7902715	<0.50	0.50	7902715
Acidity (pH 8.3)	mg/L	<0.50	0.50	7902715	<0.50	0.50	7902715
Calculated Parameters							
Anion Sum	meq/L	0.019	N/A	7902575	0.70	N/A	7902575
Cation Sum	meq/L	0.0024	N/A	7902575	0.80	N/A	7902575
Filter and HNO3 Preservation	N/A		N/A	7903794	LAB	N/A	7903794
Ion Balance	N/A	0.13 (1)	0.010	7901948	1.1	0.010	7901948
Nitrate (N)	mg/L	<0.0020	0.0020	7902057	0.035	0.020	7902057
Misc. Inorganics							
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	7905582	0.00119	0.00050	7905582
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00054	0.00050	7905592	0.00116	0.00050	7905592
Fluoride (F)	mg/L	0.013	0.010	7903662	0.033	0.010	7903662
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	7902597	11.0	0.50	7904603
Alkalinity (Total as CaCO3)	mg/L	0.90	0.50	7903037	33.6	0.50	7903037
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	7903037	<0.50	0.50	7903037
Bicarbonate (HCO3)	mg/L	1.10	0.50	7903037	40.9	0.50	7903037
Carbonate (CO3)	mg/L	<0.50	0.50	7903037	<0.50	0.50	7903037
Hydroxide (OH)	mg/L	<0.50	0.50	7903037	<0.50	0.50	7903037
Anions							
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	7904663	<0.50	0.50	7904663
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	7904662	0.85	0.50	7904662
MISCELLANEOUS							
True Colour	Col. Unit	<5.0	5.0	7903946	122	25	7903942
Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	7906160	0.0197	0.0020	7906160
Total Ammonia (N)	mg/L	0.0067	0.0050	7902764	0.0063	0.0050	7902764
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	7902808	0.035 (2)	0.020	7902808
Nitrite (N)	mg/L	<0.0020	0.0020	7902809	<0.020 (2)	0.020	7902809
Total Phosphorus (P)	mg/L	<0.0020	0.0020	7902716	0.0197	0.0020	7902716
Physical Properties							
Conductivity	uS/cm	1.6	1.0	7903038	71.7	1.0	7903038

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

(2) RDL raised due to sample matrix interference.

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MF9695			MF9696		
Sampling Date		2015/05/14 09:40			2015/05/12 16:50		
COC Number		08407190			08407190		
	Units	**TRIP BLANK**	**RDL**	**QC Batch**	**KZ-13**	**RDL**	**QC Batch**
pH	pH	5.71	N/A	7903040	7.53	N/A	7903040
Physical Properties							
Total Suspended Solids	mg/L	<1.0	1.0	7904465	34.0	1.0	7903230

RDL = Reportable Detection Limit
N/A = Not Applicable

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MF9641	MF9642	MF9643	MF9644	MF9656		
Sampling Date		2015/05/11 13:50	2015/05/11 14:36	2015/05/11 14:40	2015/05/11 11:40	2015/05/11 09:05		
COC Number		08407188	08407188	08407188	08407188	08407189		
	Units	KZ-15	KZ-16	KZ-17	KZ-22	KZ-26	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	72.9	72.0	69.1	102	109	0.50	7901947
Elements								
Dissolved Mercury (Hg)	mg/L	0.0000038	0.0000031	0.0000049	0.0000030	0.0000029	0.0000020	7906749
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0502	0.0444	0.0585	0.0139	0.00908	0.00050	7905503
Dissolved Antimony (Sb)	mg/L	0.000027	<0.000020	0.000034	0.000034	0.000050	0.000020	7905503
Dissolved Arsenic (As)	mg/L	0.000437	0.000353	0.000492	0.000875	0.000775	0.000020	7905503
Dissolved Barium (Ba)	mg/L	0.0366	0.0340	0.0364	0.0336	0.0371	0.000020	7905503
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	7905503
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7905503
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7905503
Dissolved Cadmium (Cd)	mg/L	0.0000584	0.0000356	0.0000643	0.0000216	0.0000228	0.0000050	7905503
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00012	<0.00010	<0.00010	0.00010	7905503
Dissolved Cobalt (Co)	mg/L	0.0000486	0.0000381	0.0000513	0.0000601	0.0000458	0.0000050	7905503
Dissolved Copper (Cu)	mg/L	0.00175	0.00139	0.00184	0.000978	0.000987	0.000050	7905503
Dissolved Iron (Fe)	mg/L	0.145	0.0704	0.213	0.202	0.161	0.0010	7905503
Dissolved Lead (Pb)	mg/L	0.0000173	0.0000196	0.0000230	0.0000108	0.0000087	0.0000050	7905503
Dissolved Lithium (Li)	mg/L	0.00092	0.00101	0.00124	0.00215	0.00217	0.00050	7905503
Dissolved Manganese (Mn)	mg/L	0.0119	0.00312	0.0121	0.0264	0.00733	0.000050	7905503
Dissolved Molybdenum (Mo)	mg/L	0.000432	0.000243	0.000622	0.000582	0.000568	0.000050	7905503
Dissolved Nickel (Ni)	mg/L	0.00146	0.000916	0.00175	0.00188	0.00178	0.000020	7905503
Dissolved Phosphorus (P)	mg/L	0.0126	0.0110	0.0166	0.0127	0.0116	0.0020	7905503
Dissolved Selenium (Se)	mg/L	0.000252	0.000248	0.000273	0.000214	0.000226	0.000040	7905503
Dissolved Silicon (Si)	mg/L	2.00	1.92	2.04	2.53	2.46	0.050	7905503
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7905503
Dissolved Strontium (Sr)	mg/L	0.0701	0.0759	0.0677	0.0845	0.0902	0.000050	7905503
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	7905503
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7905503
Dissolved Titanium (Ti)	mg/L	0.00065	0.00053	0.00069	<0.00050	<0.00050	0.00050	7905503
Dissolved Uranium (U)	mg/L	0.000521	0.000448	0.000573	0.000794	0.000907	0.0000020	7905503
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7905503
Dissolved Zinc (Zn)	mg/L	0.00566	0.00186	0.00749	0.00161	0.00127	0.00010	7905503
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00015	<0.00010	<0.00010	0.00010	7905503
Dissolved Calcium (Ca)	mg/L	22.2	22.2	20.9	27.6	28.7	0.050	7901950

RDL = Reportable Detection Limit

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MF9641	MF9642	MF9643	MF9644	MF9656		
Sampling Date		2015/05/11 13:50	2015/05/11 14:36	2015/05/11 14:40	2015/05/11 11:40	2015/05/11 09:05		
COC Number		08407188	08407188	08407188	08407188	08407189		
	Units	KZ-15	KZ-16	KZ-17	KZ-22	KZ-26	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	4.26	4.03	4.09	7.94	9.10	0.050	7901950
Dissolved Potassium (K)	mg/L	2.07	1.66	2.24	1.98	1.86	0.050	7901950
Dissolved Sodium (Na)	mg/L	0.484	0.476	0.445	0.676	0.820	0.050	7901950
Dissolved Sulphur (S)	mg/L	<3.0	<3.0	<3.0	4.1	4.9	3.0	7901950

RDL = Reportable Detection Limit

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MF9657	MF9658	MF9659	MF9660	MF9693		
Sampling Date		2015/05/11 09:45	2015/05/11 13:05	2015/05/11 16:55	2015/05/11 16:05	2015/05/12 12:40		
COC Number		08407189	08407189	08407189	08407189	08407190		
	Units	KZ-28	KZ-21	KZ-19	KZ-9	KZ-2	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	<0.50	95.3	50.0	50.5	82.7	0.50	7901947
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000021	0.0000033	0.0000034	0.0000033	0.0000020	7906749
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	<0.00050	0.00619	0.0567	0.0556	0.0230	0.00050	7905503
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000048	0.000034	0.000037	0.000036	0.000020	7905503
Dissolved Arsenic (As)	mg/L	<0.000020	0.000990	0.000318	0.000308	0.000122	0.000020	7905503
Dissolved Barium (Ba)	mg/L	<0.000020	0.0302	0.0381	0.0375	0.0513	0.000020	7905503
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000042	0.000010	7905503
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000100	0.0000050	7905503
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7905503
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000130	0.0000709	0.0000685	0.000182	0.0000050	7905503
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00011	<0.00010	0.00010	7905503
Dissolved Cobalt (Co)	mg/L	<0.0000050	0.0000575	0.0000783	0.0000932	0.0000257	0.0000050	7905503
Dissolved Copper (Cu)	mg/L	<0.000050	0.000693	0.00190	0.00171	0.00528	0.000050	7905503
Dissolved Iron (Fe)	mg/L	<0.0010	0.252	0.286	0.289	0.0283	0.0010	7905503
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000068	0.0000635	0.0000565	0.000210	0.0000050	7905503
Dissolved Lithium (Li)	mg/L	<0.00050	0.00182	0.00099	0.00101	0.00124	0.00050	7905503
Dissolved Manganese (Mn)	mg/L	<0.000050	0.0303	0.0319	0.0436	0.00125	0.000050	7905503
Dissolved Molybdenum (Mo)	mg/L	<0.000050	0.000686	0.000335	0.000273	0.000561	0.000050	7905503
Dissolved Nickel (Ni)	mg/L	0.000042	0.00249	0.00104	0.00101	0.000763	0.000020	7905503
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0142	0.0147	0.0138	0.0044	0.0020	7905503
Dissolved Selenium (Se)	mg/L	<0.000040	0.000155	0.000215	0.000218	0.00112	0.000040	7905503
Dissolved Silicon (Si)	mg/L	<0.050	2.58	1.68	1.65	1.91	0.050	7905503
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000075	0.0000050	7905503
Dissolved Strontium (Sr)	mg/L	<0.000050	0.0759	0.0583	0.0559	0.0899	0.000050	7905503
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000094	0.0000020	7905503
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7905503
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00075	0.00068	0.00052	0.00050	7905503
Dissolved Uranium (U)	mg/L	<0.0000020	0.000635	0.000184	0.000185	0.00196	0.0000020	7905503
Dissolved Vanadium (V)	mg/L	0.00021	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7905503
Dissolved Zinc (Zn)	mg/L	<0.00010	0.00213	0.0132	0.0134	0.0206	0.00010	7905503
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00015	0.00014	0.00015	0.00010	7905503
Dissolved Calcium (Ca)	mg/L	<0.050	24.4	16.6	16.8	26.8	0.050	7901950

RDL = Reportable Detection Limit

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MF9657	MF9658	MF9659	MF9660	MF9693		
Sampling Date		2015/05/11 09:45	2015/05/11 13:05	2015/05/11 16:55	2015/05/11 16:05	2015/05/12 12:40		
COC Number		08407189	08407189	08407189	08407189	08407190		
	Units	KZ-28	KZ-21	KZ-19	KZ-9	KZ-2	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	<0.050	8.36	2.05	2.09	3.84	0.050	7901950
Dissolved Potassium (K)	mg/L	<0.050	2.16	2.21	2.22	2.14	0.050	7901950
Dissolved Sodium (Na)	mg/L	<0.050	0.633	0.734	0.353	0.551	0.050	7901950
Dissolved Sulphur (S)	mg/L	<3.0	4.0	<3.0	<3.0	8.1	3.0	7901950
RDL = Reportable Detection Limit								

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MF9694		MF9695	MF9696		
Sampling Date		2015/05/12 09:25		2015/05/14 09:40	2015/05/12 16:50		
COC Number		08407190		08407190	08407190		
	Units	KZ-7	QC Batch	TRIP BLANK	KZ-13	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	46.9	7901947	<0.50	35.6	0.50	7901947
Elements							
Dissolved Mercury (Hg)	mg/L	0.0000045	7906749	<0.0000020	0.0000023	0.0000020	7906749
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.102	7905503	<0.00050	0.0341	0.00050	7905503
Dissolved Antimony (Sb)	mg/L	0.000047	7905503	<0.000020	<0.000020	0.000020	7905503
Dissolved Arsenic (As)	mg/L	0.000327	7905503	<0.000020	0.000253	0.000020	7905503
Dissolved Barium (Ba)	mg/L	0.0343	7905503	0.000035	0.0504	0.000020	7905503
Dissolved Beryllium (Be)	mg/L	<0.000010	7905503	<0.000010	<0.000010	0.000010	7905503
Dissolved Bismuth (Bi)	mg/L	<0.0000050	7905503	<0.0000050	<0.0000050	0.0000050	7905503
Dissolved Boron (B)	mg/L	<0.010	7905503	<0.010	<0.010	0.010	7905503
Dissolved Cadmium (Cd)	mg/L	0.000146	7905503	<0.0000050	0.0000107	0.0000050	7905503
Dissolved Chromium (Cr)	mg/L	0.00012	7905503	<0.00010	<0.00010	0.00010	7905503
Dissolved Cobalt (Co)	mg/L	0.000126	7905503	<0.0000050	0.0000189	0.0000050	7905503
Dissolved Copper (Cu)	mg/L	0.00170	7905503	<0.000050	0.000860	0.000050	7905503
Dissolved Iron (Fe)	mg/L	0.305	7905503	<0.0010	0.0961	0.0010	7905503
Dissolved Lead (Pb)	mg/L	0.0000658	7905503	<0.0000050	0.0000161	0.0000050	7905503
Dissolved Lithium (Li)	mg/L	0.00056	7905503	<0.00050	0.00102	0.00050	7905503
Dissolved Manganese (Mn)	mg/L	0.0507	7905503	<0.000050	0.000376	0.000050	7905503
Dissolved Molybdenum (Mo)	mg/L	0.000265	7905503	<0.000050	0.000403	0.000050	7905503
Dissolved Nickel (Ni)	mg/L	0.00102	7905503	<0.000020	0.000779	0.000020	7905503
Dissolved Phosphorus (P)	mg/L	0.0174	7905503	<0.0020	0.0087	0.0020	7905503
Dissolved Selenium (Se)	mg/L	0.000255	7905503	<0.000040	0.000106	0.000040	7905503
Dissolved Silicon (Si)	mg/L	1.68	7905503	<0.050	2.03	0.050	7905503
Dissolved Silver (Ag)	mg/L	<0.0000050	7905503	<0.0000050	<0.0000050	0.0000050	7905503
Dissolved Strontium (Sr)	mg/L	0.0506	7905503	<0.000050	0.0336	0.000050	7905503
Dissolved Thallium (Tl)	mg/L	0.0000031	7905503	<0.0000020	0.0000023	0.0000020	7905503
Dissolved Tin (Sn)	mg/L	<0.00020	7905503	<0.00020	<0.00020	0.00020	7905503
Dissolved Titanium (Ti)	mg/L	0.00080	7905503	<0.00050	<0.00050	0.00050	7905503
Dissolved Uranium (U)	mg/L	0.000199	7905503	<0.0000020	0.000330	0.0000020	7905503
Dissolved Vanadium (V)	mg/L	<0.00020	7905503	<0.00020	0.00031	0.00020	7905503
Dissolved Zinc (Zn)	mg/L	0.0330	7905503	<0.00010	0.00120	0.00010	7905503
Dissolved Zirconium (Zr)	mg/L	0.00017	7905503	<0.00010	<0.00010	0.00010	7905503
Dissolved Calcium (Ca)	mg/L	15.4	7908167	<0.050	12.0	0.050	7901950

RDL = Reportable Detection Limit

Maxxam Job #: B539758
Report Date: 2015/05/22

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MF9694		MF9695	MF9696		
Sampling Date		2015/05/12 09:25		2015/05/14 09:40	2015/05/12 16:50		
COC Number		08407190		08407190	08407190		
	Units	**KZ-7**	**QC Batch**	**TRIP BLANK**	**KZ-13**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	2.05	7908167	<0.050	1.34	0.050	7901950
Dissolved Potassium (K)	mg/L	2.65	7908167	<0.050	2.51	0.050	7901950
Dissolved Sodium (Na)	mg/L	0.482	7908167	<0.050	0.480	0.050	7901950
Dissolved Sulphur (S)	mg/L	<3.0	7908167	<3.0	<3.0	3.0	7901950
RDL = Reportable Detection Limit							

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MF9657		MF9693	MF9695		
Sampling Date		2015/05/11 09:45		2015/05/12 12:40	2015/05/14 09:40		
COC Number		08407189		08407190	08407190		
	Units	KZ-28	QC Batch	KZ-2	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	<0.50	7901588	79.6	<0.50	0.50	7901588
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	7906731	0.0000045	<0.0000020	0.0000020	7906731
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	<0.00050	7910211	0.0858	<0.00050	0.00050	7901644
Total Antimony (Sb)	mg/L	<0.000020	7901644	0.000032	<0.000020	0.000020	7901644
Total Arsenic (As)	mg/L	<0.000020	7901644	0.000128	<0.000020	0.000020	7901644
Total Barium (Ba)	mg/L	<0.000020	7910211	0.0487	<0.000020	0.000020	7901644
Total Beryllium (Be)	mg/L	<0.000010	7901644	<0.000010	<0.000010	0.000010	7901644
Total Bismuth (Bi)	mg/L	<0.0000050	7901644	0.0000050	<0.0000050	0.0000050	7901644
Total Boron (B)	mg/L	<0.010	7901644	<0.010	<0.010	0.010	7901644
Total Cadmium (Cd)	mg/L	<0.0000050	7901644	0.000194	<0.0000050	0.0000050	7901644
Total Chromium (Cr)	mg/L	<0.00010	7901644	0.00016	<0.00010	0.00010	7901644
Total Cobalt (Co)	mg/L	<0.0000050	7901644	0.0000442	<0.0000050	0.0000050	7901644
Total Copper (Cu)	mg/L	<0.000050	7901644	0.00567	<0.000050	0.000050	7901644
Total Iron (Fe)	mg/L	0.0016	7910211	0.0711	<0.0010	0.0010	7901644
Total Lead (Pb)	mg/L	<0.0000050	7901644	0.000371	<0.0000050	0.0000050	7901644
Total Lithium (Li)	mg/L	<0.00050	7901644	0.00125	<0.00050	0.00050	7901644
Total Manganese (Mn)	mg/L	<0.000050	7901644	0.00210	<0.000050	0.000050	7901644
Total Molybdenum (Mo)	mg/L	<0.000050	7901644	0.000587	<0.000050	0.000050	7901644
Total Nickel (Ni)	mg/L	0.000028	7910211	0.000778	<0.000020	0.000020	7901644
Total Phosphorus (P)	mg/L	<0.0020	7901644	0.0087	<0.0020	0.0020	7901644
Total Selenium (Se)	mg/L	<0.000040	7901644	0.00125	<0.000040	0.000040	7901644
Total Silicon (Si)	mg/L	<0.050	7901644	2.03	<0.050	0.050	7901644
Total Silver (Ag)	mg/L	<0.0000050	7901644	0.0000059	<0.0000050	0.0000050	7901644
Total Strontium (Sr)	mg/L	<0.000050	7910211	0.0882	<0.000050	0.000050	7901644
Total Thallium (Tl)	mg/L	<0.0000020	7901644	0.0000035	<0.0000020	0.0000020	7901644
Total Tin (Sn)	mg/L	<0.00020	7901644	<0.00020	<0.00020	0.00020	7901644
Total Titanium (Ti)	mg/L	<0.00050	7901644	0.00257	<0.00050	0.00050	7901644
Total Uranium (U)	mg/L	<0.0000020	7901644	0.00193	<0.0000020	0.0000020	7901644
Total Vanadium (V)	mg/L	<0.00020	7901644	<0.00020	<0.00020	0.00020	7901644
Total Zinc (Zn)	mg/L	<0.00010	7910211	0.0239	0.00013	0.00010	7901644
Total Zirconium (Zr)	mg/L	<0.00010	7901644	0.00016	<0.00010	0.00010	7901644
Total Calcium (Ca)	mg/L	<0.050	7909956	25.8	<0.050	0.050	7901951

RDL = Reportable Detection Limit

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MF9657		MF9693	MF9695		
Sampling Date		2015/05/11 09:45		2015/05/12 12:40	2015/05/14 09:40		
COC Number		08407189		08407190	08407190		
	Units	**KZ-28**	**QC Batch**	**KZ-2**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Magnesium (Mg)	mg/L	<0.050	7909956	3.70	<0.050	0.050	7901951
Total Potassium (K)	mg/L	<0.050	7909956	2.14	<0.050	0.050	7901951
Total Sodium (Na)	mg/L	<0.050	7909956	0.873	<0.050	0.050	7901951
Total Sulphur (S)	mg/L	<3.0	7909956	8.8	<3.0	3.0	7901951
RDL = Reportable Detection Limit							

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MF9641	MF9642	MF9643	MF9644	MF9656		
Sampling Date		2015/05/11 13:50	2015/05/11 14:36	2015/05/11 14:40	2015/05/11 11:40	2015/05/11 09:05		
COC Number		08407188	08407188	08407188	08407188	08407189		
	Units	KZ-15	KZ-16	KZ-17	KZ-22	KZ-26	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	70.1	70.7	68.0	98.0	107	0.50	7901588
Elements								
Total Mercury (Hg)	mg/L	0.0000044	0.0000037	0.0000035	0.0000025	0.0000030	0.0000020	7906731
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.356	0.0943	0.595	0.151	0.144	0.0030	7903993
Total Antimony (Sb)	mg/L	<0.000050	<0.000050	0.000078	0.000066	0.000068	0.000050	7903993
Total Arsenic (As)	mg/L	0.00318	0.000614	0.00598	0.00551	0.00208	0.000020	7903993
Total Barium (Ba)	mg/L	0.0509	0.0339	0.0680	0.0455	0.0425	0.00010	7903993
Total Beryllium (Be)	mg/L	0.000026	0.000011	0.000042	0.000014	0.000014	0.000010	7903993
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	7903993
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7903993
Total Cadmium (Cd)	mg/L	0.000261	0.0000531	0.000428	0.0000631	0.0000580	0.0000050	7903993
Total Chromium (Cr)	mg/L	0.00103	<0.00050	0.00153	0.00075	<0.00050	0.00050	7903993
Total Cobalt (Co)	mg/L	0.000725	0.000154	0.00131	0.000386	0.000258	0.000010	7903993
Total Copper (Cu)	mg/L	0.00342	0.00182	0.00467	0.00166	0.00163	0.00020	7903993
Total Iron (Fe)	mg/L	2.07	0.256	4.40	2.10	0.994	0.0050	7903993
Total Lead (Pb)	mg/L	0.000939	0.000161	0.00156	0.000233	0.000237	0.000050	7903993
Total Lithium (Li)	mg/L	0.00125	0.00082	0.00173	0.00172	0.00225	0.00050	7903993
Total Manganese (Mn)	mg/L	0.338	0.0323	0.667	0.208	0.0942	0.00010	7903993
Total Molybdenum (Mo)	mg/L	0.000667	0.000345	0.00100	0.000774	0.000651	0.000050	7903993
Total Nickel (Ni)	mg/L	0.00314	0.00101	0.00492	0.00279	0.00239	0.00010	7903993
Total Phosphorus (P)	mg/L	0.103	0.025	0.156	0.067	0.039	0.010	7903993
Total Selenium (Se)	mg/L	0.000283 (1)	0.000226	0.000340	0.000222	0.000206	0.000040	7903993
Total Silicon (Si)	mg/L	2.52	2.01	2.81	2.78	2.66	0.10	7903993
Total Silver (Ag)	mg/L	0.0000238	0.0000181	0.0000272	0.0000179	0.0000112	0.0000050	7903993
Total Strontium (Sr)	mg/L	0.0733	0.0747	0.0653	0.0839	0.0858	0.000050	7903993
Total Thallium (Tl)	mg/L	0.0000085	0.0000021	0.0000111	0.0000023	0.0000022	0.0000020	7903993
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7903993
Total Titanium (Ti)	mg/L	0.0139	<0.0050	0.0242	<0.0050	<0.0050	0.0050	7903993
Total Uranium (U)	mg/L	0.000685	0.000489	0.000794	0.000881	0.000937	0.0000050	7903993
Total Vanadium (V)	mg/L	0.00119	<0.00050	0.00193	0.00057	0.00054	0.00050	7903993
Total Zinc (Zn)	mg/L	0.0229	0.0032	0.0427	0.0072	0.0044	0.0010	7903993
Total Zirconium (Zr)	mg/L	0.00023	0.00010	0.00034	0.00026	0.00016	0.00010	7903993

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

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MF9641	MF9642	MF9643	MF9644	MF9656		
Sampling Date		2015/05/11 13:50	2015/05/11 14:36	2015/05/11 14:40	2015/05/11 11:40	2015/05/11 09:05		
COC Number		08407188	08407188	08407188	08407188	08407189		
	Units	**KZ-15**	**KZ-16**	**KZ-17**	**KZ-22**	**KZ-26**	**RDL**	**QC Batch**
Total Calcium (Ca)	mg/L	21.3	21.8	20.3	26.1	28.6	0.25	7901951
Total Magnesium (Mg)	mg/L	4.13	3.95	4.23	7.99	8.63	0.25	7901951
Total Potassium (K)	mg/L	1.98	1.58	2.45	1.99	1.69	0.25	7901951
Total Sodium (Na)	mg/L	0.74	0.93	0.53	1.07	0.69	0.25	7901951
Total Sulphur (S)	mg/L	<15	<15	<15	<15	<15	15	7901951

RDL = Reportable Detection Limit

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MF9658	MF9659	MF9660	MF9694	MF9696		
Sampling Date		2015/05/11 13:05	2015/05/11 16:55	2015/05/11 16:05	2015/05/12 09:25	2015/05/12 16:50		
COC Number		08407189	08407189	08407189	08407190	08407190		
	Units	KZ-21	KZ-19	KZ-9	KZ-7	KZ-13	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	92.9	55.6	54.0	46.6	36.1	0.50	7901588
Elements								
Total Mercury (Hg)	mg/L	0.0000023	0.0000029	0.0000033	0.0000042	0.0000025	0.0000020	7906731
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.142	0.845	0.689	0.237	0.666	0.0030	7903993
Total Antimony (Sb)	mg/L	0.000068	0.000068	0.000058	0.000066	<0.000050	0.000050	7903993
Total Arsenic (As)	mg/L	0.00961	0.00214	0.00192	0.000966	0.000639	0.000020	7903993
Total Barium (Ba)	mg/L	0.0463	0.0652	0.0606	0.0429	0.0744	0.00010	7903993
Total Beryllium (Be)	mg/L	0.000022	0.000048	0.000043	0.000027	0.000039	0.000010	7903993
Total Bismuth (Bi)	mg/L	<0.000020	0.000020	<0.000020	<0.000020	<0.000020	0.000020	7903993
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7903993
Total Cadmium (Cd)	mg/L	0.0000575	0.000429	0.000378	0.000415	0.000109	0.0000050	7903993
Total Chromium (Cr)	mg/L	0.00058	0.00208	0.00179	<0.00050	0.00192	0.00050	7903993
Total Cobalt (Co)	mg/L	0.000612	0.00103	0.000859	0.000391	0.000562	0.000010	7903993
Total Copper (Cu)	mg/L	0.00150	0.00522	0.00469	0.00281	0.00260	0.00020	7903993
Total Iron (Fe)	mg/L	3.71	5.95	5.20	2.02	1.34	0.0050	7903993
Total Lead (Pb)	mg/L	0.000225	0.00297	0.00247	0.000855	0.00106	0.000050	7903993
Total Lithium (Li)	mg/L	0.00166	0.00198	0.00120	0.00115	0.00185	0.00050	7903993
Total Manganese (Mn)	mg/L	0.378	0.249	0.234	0.199	0.196	0.00010	7903993
Total Molybdenum (Mo)	mg/L	0.000888	0.000434	0.000435	0.000319	0.000545	0.000050	7903993
Total Nickel (Ni)	mg/L	0.00381	0.00309	0.00271	0.00154	0.00223	0.00010	7903993
Total Phosphorus (P)	mg/L	0.102	0.115	0.098	0.042	0.066	0.010	7903993
Total Selenium (Se)	mg/L	0.000215	0.000347	0.000303	0.000253	0.000133	0.000040	7903993
Total Silicon (Si)	mg/L	2.94	2.88	2.69	1.85	3.02	0.10	7903993
Total Silver (Ag)	mg/L	0.0000089	0.0000282	0.0000284	0.0000222	0.0000190	0.0000050	7903993
Total Strontium (Sr)	mg/L	0.0729	0.0587	0.0573	0.0489	0.0349	0.000050	7903993
Total Thallium (Tl)	mg/L	0.0000024	0.0000144	0.0000125	0.0000069	0.0000128	0.0000020	7903993
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7903993
Total Titanium (Ti)	mg/L	0.0060	0.0408	0.0323	0.0077	0.0403	0.0050	7903993
Total Uranium (U)	mg/L	0.000758	0.000388	0.000359	0.000278	0.000844	0.0000050	7903993
Total Vanadium (V)	mg/L	0.00062	0.00272	0.00218	0.00051	0.00220	0.00050	7903993
Total Zinc (Zn)	mg/L	0.0059	0.0521	0.0479	0.0554	0.0114	0.0010	7903993
Total Zirconium (Zr)	mg/L	0.00045	0.00049	0.00050	0.00046	0.00023	0.00010	7903993
Total Calcium (Ca)	mg/L	23.8	18.2	17.8	15.2	11.8	0.25	7901951

RDL = Reportable Detection Limit

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MF9658	MF9659	MF9660	MF9694	MF9696		
Sampling Date		2015/05/11 13:05	2015/05/11 16:55	2015/05/11 16:05	2015/05/12 09:25	2015/05/12 16:50		
COC Number		08407189	08407189	08407189	08407190	08407190		
	Units	KZ-21	KZ-19	KZ-9	KZ-7	KZ-13	RDL	QC Batch
Total Magnesium (Mg)	mg/L	8.13	2.48	2.34	2.07	1.61	0.25	7901951
Total Potassium (K)	mg/L	2.05	2.30	2.21	2.41	2.52	0.25	7901951
Total Sodium (Na)	mg/L	0.77	0.38	0.40	0.33	0.58	0.25	7901951
Total Sulphur (S)	mg/L	<15	<15	<15	<15	<15	15	7901951

RDL = Reportable Detection Limit

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.3°C
Package 2	3.7°C
Package 3	3.0°C

Sample MF9657, Elements by ICPMS Low Level (total): Test repeated.

Results relate only to the items tested.

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

Maxxam Job #: B539758
Report Date: 2015/05/22

QUALITY ASSURANCE REPORT

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7901644	Total Aluminum (Al)	2015/05/20	102	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
7901644	Total Antimony (Sb)	2015/05/20	102	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
7901644	Total Arsenic (As)	2015/05/20	103	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
7901644	Total Barium (Ba)	2015/05/20	103	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
7901644	Total Beryllium (Be)	2015/05/20	98	80 - 120	94	80 - 120	<0.000010	mg/L	NC	20
7901644	Total Bismuth (Bi)	2015/05/20	98	80 - 120	93	80 - 120	<0.0000050	mg/L	NC	20
7901644	Total Boron (B)	2015/05/20					<0.010	mg/L	NC	20
7901644	Total Cadmium (Cd)	2015/05/20	101	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
7901644	Total Chromium (Cr)	2015/05/20	100	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
7901644	Total Cobalt (Co)	2015/05/20	103	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
7901644	Total Copper (Cu)	2015/05/20	100	80 - 120	94	80 - 120	<0.000050	mg/L	NC	20
7901644	Total Iron (Fe)	2015/05/20	106	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20
7901644	Total Lead (Pb)	2015/05/20	102	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
7901644	Total Lithium (Li)	2015/05/20	98	80 - 120	95	80 - 120	<0.00050	mg/L	NC	20
7901644	Total Manganese (Mn)	2015/05/20	101	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
7901644	Total Molybdenum (Mo)	2015/05/20	102	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
7901644	Total Nickel (Ni)	2015/05/20	101	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
7901644	Total Phosphorus (P)	2015/05/20					<0.0020	mg/L		
7901644	Total Selenium (Se)	2015/05/20	99	80 - 120	95	80 - 120	<0.000040	mg/L	NC	20
7901644	Total Silicon (Si)	2015/05/20					<0.050	mg/L	NC	20
7901644	Total Silver (Ag)	2015/05/20	96	80 - 120	82	80 - 120	<0.0000050	mg/L	NC	20
7901644	Total Strontium (Sr)	2015/05/20	99	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
7901644	Total Thallium (Tl)	2015/05/20	102	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
7901644	Total Tin (Sn)	2015/05/20	103	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
7901644	Total Titanium (Ti)	2015/05/20	107	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7901644	Total Uranium (U)	2015/05/20	104	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
7901644	Total Vanadium (V)	2015/05/20	106	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
7901644	Total Zinc (Zn)	2015/05/20	97	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
7901644	Total Zirconium (Zr)	2015/05/20					<0.00010	mg/L	NC	20
7902597	Dissolved Organic Carbon (C)	2015/05/16	114	80 - 120	102	80 - 120	<0.50	mg/L	NC	20
7902708	Dissolved Phosphorus (P)	2015/05/15	NC	80 - 120	110	80 - 120	<0.0020	mg/L		

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

Maxxam Job #: B539758
Report Date: 2015/05/22

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7902715	Acidity (pH 4.5)	2015/05/15					<0.50	mg/L	NC	20
7902715	Acidity (pH 8.3)	2015/05/15			102	80 - 120	<0.50	mg/L	12	20
7902716	Total Phosphorus (P)	2015/05/15			112	80 - 120	<0.0020	mg/L		
7902764	Total Ammonia (N)	2015/05/14	89	80 - 120	116	80 - 120	<0.0050	mg/L	NC	20
7902808	Nitrate plus Nitrite (N)	2015/05/14	108	80 - 120	103	80 - 120	0.0032, RDL=0.0020	mg/L	NC	25
7902809	Nitrite (N)	2015/05/14	106	80 - 120	105	80 - 120	<0.0020	mg/L	NC	25
7903017	pH	2015/05/14			101	97 - 103				
7903027	Conductivity	2015/05/14			100	80 - 120	<1.0	uS/cm		
7903028	Alkalinity (PP as CaCO3)	2015/05/14					<0.50	mg/L		
7903028	Alkalinity (Total as CaCO3)	2015/05/14	96	80 - 120	98	80 - 120	<0.50	mg/L		
7903028	Bicarbonate (HCO3)	2015/05/14					<0.50	mg/L		
7903028	Carbonate (CO3)	2015/05/14					<0.50	mg/L		
7903028	Hydroxide (OH)	2015/05/14					<0.50	mg/L		
7903037	Alkalinity (PP as CaCO3)	2015/05/14					<0.50	mg/L	NC	20
7903037	Alkalinity (Total as CaCO3)	2015/05/14	NC	80 - 120	95	80 - 120	<0.50	mg/L	NC	20
7903037	Bicarbonate (HCO3)	2015/05/14					<0.50	mg/L	NC	20
7903037	Carbonate (CO3)	2015/05/14					<0.50	mg/L	NC	20
7903037	Hydroxide (OH)	2015/05/14					<0.50	mg/L	NC	20
7903038	Conductivity	2015/05/14			101	80 - 120	<1.0	uS/cm	NC	20
7903040	pH	2015/05/14			101	97 - 103			5.1	N/A
7903170	Total Suspended Solids	2015/05/19			102	80 - 120	<1.0	mg/L		
7903230	Total Suspended Solids	2015/05/19			94	80 - 120	<1.0	mg/L		
7903662	Fluoride (F)	2015/05/15	NC	80 - 120	98	80 - 120	<0.010	mg/L	NC	20
7903666	Fluoride (F)	2015/05/15	99	80 - 120	98	80 - 120	0.012, RDL=0.010	mg/L	1.3	20
7903942	True Colour	2015/05/14			106	80 - 120	<5.0	Col. Unit	5.2	20
7903946	True Colour	2015/05/14			115	80 - 120	<5.0	Col. Unit	4.4	20
7903993	Total Aluminum (Al)	2015/05/20	NC	80 - 120	106	80 - 120	<0.0030	mg/L	1.2	20
7903993	Total Antimony (Sb)	2015/05/20	99	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20

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

Maxxam Job #: B539758
Report Date: 2015/05/22

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7903993	Total Arsenic (As)	2015/05/20	90	80 - 120	107	80 - 120	0.000031, RDL=0.000020	mg/L	0.079	20
7903993	Total Barium (Ba)	2015/05/20	NC	80 - 120	105	80 - 120	<0.00010	mg/L	1.4	20
7903993	Total Beryllium (Be)	2015/05/20	94	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
7903993	Total Bismuth (Bi)	2015/05/20	100	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
7903993	Total Boron (B)	2015/05/20					<0.050	mg/L	NC	20
7903993	Total Cadmium (Cd)	2015/05/20	90	80 - 120	100	80 - 120	<0.0000050	mg/L	5.1	20
7903993	Total Chromium (Cr)	2015/05/20	101	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7903993	Total Cobalt (Co)	2015/05/20	103	80 - 120	102	80 - 120	<0.000010	mg/L	1.3	20
7903993	Total Copper (Cu)	2015/05/20	96	80 - 120	100	80 - 120	0.00030, RDL=0.00020	mg/L	3.1	20
7903993	Total Iron (Fe)	2015/05/20	NC	80 - 120	112	80 - 120	<0.0050	mg/L	2.6	20
7903993	Total Lead (Pb)	2015/05/20	108	80 - 120	102	80 - 120	<0.000050	mg/L	1.2	20
7903993	Total Lithium (Li)	2015/05/20	103	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
7903993	Total Manganese (Mn)	2015/05/20	NC	80 - 120	102	80 - 120	<0.00010	mg/L	2.6	20
7903993	Total Molybdenum (Mo)	2015/05/20	NC	80 - 120	101	80 - 120	<0.000050	mg/L	0.93	20
7903993	Total Nickel (Ni)	2015/05/20	100	80 - 120	102	80 - 120	<0.00010	mg/L	1.2	20
7903993	Total Phosphorus (P)	2015/05/20					<0.010	mg/L	5.3	20
7903993	Total Selenium (Se)	2015/05/20	78 (1)	80 - 120	100	80 - 120	<0.000040	mg/L	5.9	20
7903993	Total Silicon (Si)	2015/05/20					<0.10	mg/L	1.1	20
7903993	Total Silver (Ag)	2015/05/20	108	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
7903993	Total Strontium (Sr)	2015/05/20	NC	80 - 120	103	80 - 120	<0.000050	mg/L	1.4	20
7903993	Total Thallium (Tl)	2015/05/20	102	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
7903993	Total Tin (Sn)	2015/05/20	101	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
7903993	Total Titanium (Ti)	2015/05/20	NC	80 - 120	98	80 - 120	<0.0050	mg/L	NC	20
7903993	Total Uranium (U)	2015/05/20	113	80 - 120	103	80 - 120	<0.0000050	mg/L	0.81	20
7903993	Total Vanadium (V)	2015/05/20	106	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
7903993	Total Zinc (Zn)	2015/05/20	NC	80 - 120	102	80 - 120	<0.0010	mg/L	0.85	20
7903993	Total Zirconium (Zr)	2015/05/20					<0.00010	mg/L	NC	20
7904008	Dissolved Chloride (Cl)	2015/05/15	124 (1)	80 - 120	99	80 - 120	<0.50	mg/L	NC	20
7904013	Dissolved Sulphate (SO4)	2015/05/15	NC	80 - 120	91	80 - 120	<0.50	mg/L	NC	20

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

Maxxam Job #: B539758
Report Date: 2015/05/22

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7904465	Total Suspended Solids	2015/05/19			101	80 - 120	<1.0	mg/L		
7904542	Total Phosphorus (P)	2015/05/15	NC	80 - 120	112	80 - 120	<0.0020	mg/L	0.41	20
7904603	Dissolved Organic Carbon (C)	2015/05/16	NC	80 - 120	113	80 - 120	<0.50	mg/L	0.31	20
7904662	Dissolved Chloride (Cl)	2015/05/15	NC	80 - 120	99	80 - 120	<0.50	mg/L	0.65	20
7904663	Dissolved Sulphate (SO4)	2015/05/15	NC	80 - 120	91	80 - 120	<0.50	mg/L	0.067	20
7905503	Dissolved Aluminum (Al)	2015/05/20	99	80 - 120	105	80 - 120	<0.00050	mg/L	2.8	20
7905503	Dissolved Antimony (Sb)	2015/05/20	94	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
7905503	Dissolved Arsenic (As)	2015/05/20	93	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
7905503	Dissolved Barium (Ba)	2015/05/20	NC	80 - 120	106	80 - 120	<0.000020	mg/L	3.6	20
7905503	Dissolved Beryllium (Be)	2015/05/20	88	80 - 120	99	80 - 120	<0.000010	mg/L	NC	20
7905503	Dissolved Bismuth (Bi)	2015/05/20	94	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
7905503	Dissolved Boron (B)	2015/05/20					<0.010	mg/L	NC	20
7905503	Dissolved Cadmium (Cd)	2015/05/20	89	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
7905503	Dissolved Chromium (Cr)	2015/05/20	91	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
7905503	Dissolved Cobalt (Co)	2015/05/20	92	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
7905503	Dissolved Copper (Cu)	2015/05/20	89	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
7905503	Dissolved Iron (Fe)	2015/05/20	105	80 - 120	111	80 - 120	<0.0010	mg/L	NC	20
7905503	Dissolved Lead (Pb)	2015/05/20	96	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
7905503	Dissolved Lithium (Li)	2015/05/20	93	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
7905503	Dissolved Manganese (Mn)	2015/05/20	94	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
7905503	Dissolved Molybdenum (Mo)	2015/05/20	NC	80 - 120	106	80 - 120	<0.000050	mg/L	1.3	20
7905503	Dissolved Nickel (Ni)	2015/05/20	91	80 - 120	102	80 - 120	<0.000020	mg/L	6.2	20
7905503	Dissolved Phosphorus (P)	2015/05/20					<0.0020	mg/L	NC	20
7905503	Dissolved Selenium (Se)	2015/05/20	79 (1)	80 - 120	101	80 - 120	<0.000040	mg/L	NC	20
7905503	Dissolved Silicon (Si)	2015/05/20					<0.050	mg/L	0.26	20
7905503	Dissolved Silver (Ag)	2015/05/20	80	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
7905503	Dissolved Strontium (Sr)	2015/05/20	NC	80 - 120	105	80 - 120	<0.000050	mg/L	2.4	20
7905503	Dissolved Thallium (Tl)	2015/05/20	95	80 - 120	105	80 - 120	<0.0000020	mg/L	NC	20
7905503	Dissolved Tin (Sn)	2015/05/20	97	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
7905503	Dissolved Titanium (Ti)	2015/05/20	94	80 - 120	107	80 - 120	<0.00050	mg/L	NC	20
7905503	Dissolved Uranium (U)	2015/05/20	98	80 - 120	106	80 - 120	<0.0000020	mg/L	NC	20

Maxxam Job #: B539758
Report Date: 2015/05/22

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7905503	Dissolved Vanadium (V)	2015/05/20	92	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
7905503	Dissolved Zinc (Zn)	2015/05/20	91	80 - 120	101	80 - 120	<0.00010	mg/L	0.22	20
7905503	Dissolved Zirconium (Zr)	2015/05/20					<0.00010	mg/L	NC	20
7905582	Strong Acid Dissoc. Cyanide (CN)	2015/05/19	102	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
7905592	Weak Acid Dissoc. Cyanide (CN)	2015/05/19	98	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
7906160	Dissolved Phosphorus (P)	2015/05/15	105	80 - 120	98	80 - 120	<0.0020	mg/L	2.6	20
7906731	Total Mercury (Hg)	2015/05/20	95	80 - 120	93	80 - 120	<0.0000020	mg/L	NC	20
7906749	Dissolved Mercury (Hg)	2015/05/20	92	80 - 120	91	80 - 120	<0.0000020	mg/L	NC	20
7908430	Dissolved Phosphorus (P)	2015/05/21			95	80 - 120	<0.0020	mg/L		
7908481	Total Phosphorus (P)	2015/05/21			94	80 - 120	<0.0020	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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

Maxxam Job #: B539758
Report Date: 2015/05/22

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

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

David Huang, BBY Scientific Specialist

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

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

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY R

COC : 08407188

BBY FCD-00077/05

Page 1 3

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	H.Goulding, A.Bier	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Y / N: Present / Intact

COOLER TEMPERATURES: N/A 5,5,3; N/A 3,4,4; N/A 2,2,5

COOLING MEDIA PRESENT (Y) / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	~~KZ-5~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~12~~		
2	~~KZ-7~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~12~~		
3	~~KZ-9~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~12~~		
4	~~KZ-13~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~12~~		
5	KZ-15	MF9641	2015/05/11	13:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
6	KZ-16	MF9642	2015/05/11	14:36	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
7	KZ-17	MF9643	2015/05/11	14:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
8	~~KZ-19~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~12~~		
9	~~KZ-21~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~12~~		
10	KZ-22	MF9644	2015/05/11	11:40	~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~12~~		

B539758

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Holly Goulding	2015/05/13	8:00	Veronica de Guzman	2015/05/14	09:40	B539758
Holly Goulding						

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RE(

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08407189

BBY FCD-00077/05

Page 2 3

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	H.Goulding A.Bier	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Rush Confirmation #:

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	LABORATORY USE ONLY: CUSTODY SEAL Y / N Present	CUSTODY SEAL Y / N Intact	COOLER TEMPERATURES	COMMENTS
1	KZ-26	MF9656	2015/05/11	9:05	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		NA		5,5,3
2	KZ-28	MF9657	2015/05/11	9:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		NA		3,4,4
3	~~Trip Blank~~		~~2015/05/11~~	~~13:05~~	~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~				~~12~~		NA		2,2,5
4	KZ-21	MF9658	2015/05/11	13:05	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		COOLING MEDIA PRESENT (Y) / N		
5	KZ-19	MF9659	2015/05/11	16:55	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12				
6	KZ-9	MF9660	2015/05/11	16:05	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12				
7																										
8																										
9																										
10																										

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Holly Goulding	2015/05/13	8:00	Veronica de Guzman	2015/05/14	09:40	B539758
Holly Goulding						

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY REC

COC #: 08407190

BBY FCD-00077/05

Page 3 3

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	H. Goulding, A. Bier	Date Required:

Regulatory Criteria		Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil	[ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify)	[ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water	[ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	~~KZ-26~~ KZ-2	MF9693	2015/05/12	12:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
2	~~KZ-28~~ KZ-7	MF9694	2015/05/12	9:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
3	Trip Blank	MF9695			Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
4	KZ-13	MF9696	2015/05/12	16:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
5																					
6																					
7																					
8																					
9																					
10																					

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
N/A		5,5,3
N/A		3,4,4
N/A		2,2,5

COOLING MEDIA PRESENT (Y) / N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Holly Goulding	2015/05/13	8:00	Veronica de Guzman	2015/05/14	09:40	B539758
Holly Goulding						

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08409525

Attention:KAI WOLOSHYN

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

Report Date: 2015/06/30
Report #: R1986607
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B553386
Received: 2015/06/24, 11:07

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	5	N/A	2015/06/24	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	4	2015/06/25	2015/06/25	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	1	2015/06/25	2015/06/26	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	5	N/A	2015/06/25	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	5	N/A	2015/06/24	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	5	N/A	2015/06/24	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	5	N/A	2015/06/25	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	5	N/A	2015/06/25	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	4	N/A	2015/06/25	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	1	N/A	2015/06/26	BBY6SOP-00026	SM 22 2510 B m
Fluoride	5	N/A	2015/06/25	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	5	N/A	2015/06/26	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	5	N/A	2015/06/26	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	1	N/A	2015/06/29	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Dissolved-LowLevel) by CVAF	4	N/A	2015/06/30	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	5	2015/06/30	2015/06/30	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	5	N/A	2015/06/26	BBY WI-00033	SM 22 1030E
Sum of cations, anions	5	N/A	2015/06/26	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	3	N/A	2015/06/26	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	2	N/A	2015/06/30	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	5	N/A	2015/06/25	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	5	N/A	2015/06/26	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	5	N/A	2015/06/26	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	5	N/A	2015/06/25	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	5	N/A	2015/06/25	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	5	N/A	2015/06/25	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	5	N/A	2015/06/26	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	5	N/A	2015/06/24	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	4	N/A	2015/06/25	BBY6SOP-00026	SM 22 4500-H+ B m

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

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08409525

Attention:KAI WOLOSHYN

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

Report Date: 2015/06/30
Report #: R1986607
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B553386
Received: 2015/06/24, 11:07

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
pH Water (2)	1	N/A	2015/06/26	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	5	N/A	2015/06/25	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	5	2015/06/25	2015/06/26	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	5	N/A	2015/06/26	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	5	2015/06/25	2015/06/26	BBY6SOP-00034	SM 22 2540 D

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

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

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

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

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

Maxxam Job #: B553386
Report Date: 2015/06/30

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN1920		MN1921		MN1922		
Sampling Date		2015/06/22 16:51		2015/06/22 14:55		2015/06/22 09:35		
COC Number		08409525		08409525		08409525		
	Units	KZ-2	QC Batch	KZ-7	QC Batch	KZ-15	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	7945430	<0.50	7945430	<0.50	0.50	7945430
Acidity (pH 8.3)	mg/L	1.30	7945430	1.02	7945430	1.10	0.50	7945430
Calculated Parameters								
Anion Sum	meq/L	1.4	7945227	2.2	7945227	2.4	N/A	7945227
Cation Sum	meq/L	1.4	7945227	2.5	7945227	2.9	N/A	7945227
Filter and HNO3 Preservation	N/A	LAB	7944655	LAB	7944655	LAB	N/A	7944655
Ion Balance	N/A	1.0	7944885	1.1	7944885	1.2 (1)	0.010	7944885
Nitrate (N)	mg/L	0.0559	7944499	0.0050	7944499	0.0093	0.0020	7944499
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00058	7945155	0.00068	7945155	0.00064	0.00050	7945155
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00054	7945157	0.00060	7945157	0.00055	0.00050	7945157
Fluoride (F)	mg/L	0.038	7946813	0.051	7946813	0.073	0.010	7946813
Dissolved Organic Carbon (C)	mg/L	1.61	7946629	2.18	7946629	2.26	0.50	7946629
Alkalinity (Total as CaCO3)	mg/L	38.7	7946887	82.0	7946997	102	0.50	7946887
Alkalinity (PP as CaCO3)	mg/L	<0.50	7946887	<0.50	7946997	<0.50	0.50	7946887
Bicarbonate (HCO3)	mg/L	47.2	7946887	100	7946997	124	0.50	7946887
Carbonate (CO3)	mg/L	<0.50	7946887	<0.50	7946997	<0.50	0.50	7946887
Hydroxide (OH)	mg/L	<0.50	7946887	<0.50	7946997	<0.50	0.50	7946887
Anions								
Dissolved Sulphate (SO4)	mg/L	28.0	7946511	27.0	7946511	19.5	0.50	7946511
Dissolved Chloride (Cl)	mg/L	<0.50	7946504	<0.50	7946504	<0.50	0.50	7946504
MISCELLANEOUS								
True Colour	Col. Unit	6.2	7947870	14.9	7947870	11.1	5.0	7947870
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020	7948168	0.0029	7948168	0.0020	0.0020	7948168
Total Ammonia (N)	mg/L	<0.0050	7946198	<0.0050	7946198	<0.0050	0.0050	7946198
Nitrate plus Nitrite (N)	mg/L	0.0559	7946185	0.0050	7946185	0.0093	0.0020	7946185
Nitrite (N)	mg/L	<0.0020	7946187	<0.0020	7946187	<0.0020	0.0020	7946187
Total Phosphorus (P)	mg/L	<0.0020	7948184	0.0032	7948184	0.0032	0.0020	7948184
Physical Properties								
Conductivity	uS/cm	143	7946888	220	7947002	231	1.0	7946888
pH	pH	7.75	7946889	7.83	7947004	8.18	N/A	7946889

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 3 meq/L for both cations and anions).

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

Maxxam Job #: B553386
Report Date: 2015/06/30

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN1920		MN1921		MN1922		
Sampling Date		2015/06/22 16:51		2015/06/22 14:55		2015/06/22 09:35		
COC Number		08409525		08409525		08409525		
	Units	KZ-2	QC Batch	KZ-7	QC Batch	KZ-15	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	7945330	<1.0	7945330	<1.0	1.0	7945330
RDL = Reportable Detection Limit								

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

Maxxam Job #: B553386
Report Date: 2015/06/30

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN1923		MN1924		
Sampling Date		2015/06/22 11:35		2015/06/22 10:00		
COC Number		08409525		08409525		
	Units	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Misc. Inorganics						
Acidity (pH 4.5)	mg/L	<0.50	7945430	<0.50	0.50	7945430
Acidity (pH 8.3)	mg/L	0.95	7945430	1.18	0.50	7945430
Calculated Parameters						
Anion Sum	meq/L	2.1	7945227	2.9	N/A	7945227
Cation Sum	meq/L	2.3	7945227	3.1	N/A	7945227
Filter and HNO3 Preservation	N/A	LAB	7944655	LAB	N/A	7944655
Ion Balance	N/A	1.1	7944885	1.1	0.010	7944885
Nitrate (N)	mg/L	0.0113	7944499	0.0065	0.0020	7944499
Misc. Inorganics						
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00071	7945155	0.00068	0.00050	7945155
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00063	7945157	0.00055	0.00050	7945157
Fluoride (F)	mg/L	0.061	7946813	0.090	0.010	7946813
Dissolved Organic Carbon (C)	mg/L	1.72	7946630	2.91	0.50	7946629
Alkalinity (Total as CaCO3)	mg/L	88.4	7946887	118	0.50	7946887
Alkalinity (PP as CaCO3)	mg/L	<0.50	7946887	<0.50	0.50	7946887
Bicarbonate (HCO3)	mg/L	108	7946887	144	0.50	7946887
Carbonate (CO3)	mg/L	<0.50	7946887	<0.50	0.50	7946887
Hydroxide (OH)	mg/L	<0.50	7946887	<0.50	0.50	7946887
Anions						
Dissolved Sulphate (SO4)	mg/L	15.0	7946511	25.8	0.50	7946511
Dissolved Chloride (Cl)	mg/L	<0.50	7946504	<0.50	0.50	7946504
MISCELLANEOUS						
True Colour	Col. Unit	10.6	7947870	13.6	5.0	7947870
Nutrients						
Dissolved Phosphorus (P)	mg/L	0.0020	7948168	0.0029	0.0020	7948168
Total Ammonia (N)	mg/L	0.0097	7946198	0.0115	0.0050	7946198
Nitrate plus Nitrite (N)	mg/L	0.0113	7946185	0.0065	0.0020	7946185
Nitrite (N)	mg/L	<0.0020	7946187	<0.0020	0.0020	7946187
Total Phosphorus (P)	mg/L	0.0025	7948184	0.0030	0.0020	7948184
Physical Properties						
Conductivity	uS/cm	198	7946888	269	1.0	7946888
pH	pH	8.01	7946889	8.06	N/A	7946889

RDL = Reportable Detection Limit
N/A = Not Applicable

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

Maxxam Job #: B553386
Report Date: 2015/06/30

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN1923		MN1924		
Sampling Date		2015/06/22 11:35		2015/06/22 10:00		
COC Number		08409525		08409525		
	Units	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Physical Properties						
Total Suspended Solids	mg/L	<1.0	7945330	<1.0	1.0	7945330
RDL = Reportable Detection Limit						

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

Maxxam Job #: B553386
Report Date: 2015/06/30

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN1920		MN1921		MN1922		
Sampling Date		2015/06/22 16:51		2015/06/22 14:55		2015/06/22 09:35		
COC Number		08409525		08409525		08409525		
	Units	KZ-2	QC Batch	KZ-7	QC Batch	KZ-15	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	67.3	7944580	121	7944580	141	0.50	7944580
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	7951514	<0.0000020	7951514	<0.0000020	0.0000020	7951514
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00502	7946306	0.00301	7946306	0.00307	0.00050	7946306
Dissolved Antimony (Sb)	mg/L	0.000023	7946306	0.000074	7946306	0.000037	0.000020	7946306
Dissolved Arsenic (As)	mg/L	0.000101	7946306	0.000254	7946306	0.000363	0.000020	7946306
Dissolved Barium (Ba)	mg/L	0.0415	7946306	0.0581	7946306	0.0566	0.000020	7946306
Dissolved Beryllium (Be)	mg/L	<0.000010	7946306	<0.000010	7946306	<0.000010	0.000010	7946306
Dissolved Bismuth (Bi)	mg/L	<0.0000050	7946306	<0.0000050	7946306	<0.0000050	0.0000050	7946306
Dissolved Boron (B)	mg/L	<0.010	7946306	<0.010	7946306	<0.010	0.010	7946306
Dissolved Cadmium (Cd)	mg/L	0.000242	7946306	0.0000838	7946306	0.0000170	0.0000050	7946306
Dissolved Chromium (Cr)	mg/L	<0.00010	7946306	<0.00010	7946306	<0.00010	0.00010	7946306
Dissolved Cobalt (Co)	mg/L	0.0000081	7946306	0.0000135	7946306	0.0000167	0.0000050	7946306
Dissolved Copper (Cu)	mg/L	0.000690	7946306	0.000602	7946306	0.000494	0.000050	7946306
Dissolved Iron (Fe)	mg/L	0.0022	7946306	0.0553	7946306	0.0156	0.0010	7946306
Dissolved Lead (Pb)	mg/L	0.0000241	7946306	0.0000232	7946306	0.0000091	0.0000050	7946306
Dissolved Lithium (Li)	mg/L	0.00076	7946306	0.00150	7946306	0.00155	0.00050	7946306
Dissolved Manganese (Mn)	mg/L	0.000101	7946306	0.00829	7946306	0.00741	0.000050	7946306
Dissolved Molybdenum (Mo)	mg/L	0.000633	7946306	0.000469	7946306	0.000714	0.000050	7946306
Dissolved Nickel (Ni)	mg/L	0.000404	7950580	0.000460	7946306	0.000405	0.000020	7946306
Dissolved Phosphorus (P)	mg/L	<0.0020	7946306	<0.0020	7946306	0.0030	0.0020	7946306
Dissolved Selenium (Se)	mg/L	0.000486	7946306	0.000632	7946306	0.000465	0.000040	7946306
Dissolved Silicon (Si)	mg/L	2.04	7946306	2.27	7946306	2.41	0.050	7946306
Dissolved Silver (Ag)	mg/L	<0.0000050	7946306	<0.0000050	7946306	<0.0000050	0.0000050	7946306
Dissolved Strontium (Sr)	mg/L	0.0822	7946306	0.133	7946306	0.131	0.000050	7950580
Dissolved Thallium (Tl)	mg/L	<0.0000020	7946306	<0.0000020	7946306	<0.0000020	0.0000020	7946306
Dissolved Tin (Sn)	mg/L	<0.00020	7946306	<0.00020	7946306	0.00031	0.00020	7946306
Dissolved Titanium (Ti)	mg/L	<0.00050	7946306	<0.00050	7946306	<0.00050	0.00050	7946306
Dissolved Uranium (U)	mg/L	0.00111	7946306	0.000667	7946306	0.00116	0.0000020	7946306
Dissolved Vanadium (V)	mg/L	<0.00020	7946306	<0.00020	7946306	<0.00020	0.00020	7946306
Dissolved Zinc (Zn)	mg/L	0.0355	7946306	0.0182	7946306	0.00255	0.00010	7946306
Dissolved Zirconium (Zr)	mg/L	<0.00010	7946306	<0.00010	7946306	<0.00010	0.00010	7946306
Dissolved Calcium (Ca)	mg/L	23.2	7944910	40.3	7944910	46.6	0.050	7949980

RDL = Reportable Detection Limit

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

Maxxam Job #: B553386
Report Date: 2015/06/30

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN1920		MN1921		MN1922		
Sampling Date		2015/06/22 16:51		2015/06/22 14:55		2015/06/22 09:35		
COC Number		08409525		08409525		08409525		
	Units	KZ-2	QC Batch	KZ-7	QC Batch	KZ-15	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	2.27	7944910	4.94	7944910	6.10	0.050	7949980
Dissolved Potassium (K)	mg/L	1.37	7944910	1.13	7944910	1.15	0.050	7949980
Dissolved Sodium (Na)	mg/L	0.573	7944910	0.723	7944910	0.841	0.050	7949980
Dissolved Sulphur (S)	mg/L	9.2	7944910	9.0	7944910	6.6	3.0	7949980
RDL = Reportable Detection Limit								

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

Maxxam Job #: B553386
Report Date: 2015/06/30

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN1923		MN1924		
Sampling Date		2015/06/22 11:35		2015/06/22 10:00		
COC Number		08409525		08409525		
	Units	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	113	7944580	149	0.50	7944580
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020	7951514	<0.0000020	0.0000020	7950243
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.00228	7946306	0.00214	0.00050	7946306
Dissolved Antimony (Sb)	mg/L	<0.000020	7946306	0.000055	0.000020	7946306
Dissolved Arsenic (As)	mg/L	0.000260	7946306	0.000455	0.000020	7946306
Dissolved Barium (Ba)	mg/L	0.0493	7946306	0.0644	0.000020	7946306
Dissolved Beryllium (Be)	mg/L	<0.000010	7946306	<0.000010	0.000010	7946306
Dissolved Bismuth (Bi)	mg/L	<0.0000050	7946306	<0.0000050	0.0000050	7946306
Dissolved Boron (B)	mg/L	<0.010	7946306	<0.010	0.010	7946306
Dissolved Cadmium (Cd)	mg/L	0.0000135	7946306	0.0000244	0.0000050	7946306
Dissolved Chromium (Cr)	mg/L	<0.00010	7946306	<0.00010	0.00010	7946306
Dissolved Cobalt (Co)	mg/L	0.0000111	7946306	0.0000197	0.0000050	7946306
Dissolved Copper (Cu)	mg/L	0.000512	7950580	0.000505	0.000050	7946306
Dissolved Iron (Fe)	mg/L	0.0045	7946306	0.0306	0.0010	7946306
Dissolved Lead (Pb)	mg/L	<0.0000050	7946306	0.0000081	0.0000050	7946306
Dissolved Lithium (Li)	mg/L	0.00127	7946306	0.00245	0.00050	7946306
Dissolved Manganese (Mn)	mg/L	0.00185	7946306	0.0158	0.000050	7946306
Dissolved Molybdenum (Mo)	mg/L	0.000423	7946306	0.00108	0.000050	7946306
Dissolved Nickel (Ni)	mg/L	0.000339	7946306	0.000524	0.000020	7946306
Dissolved Phosphorus (P)	mg/L	<0.0020	7946306	<0.0020	0.0020	7946306
Dissolved Selenium (Se)	mg/L	0.000347	7946306	0.000705	0.000040	7946306
Dissolved Silicon (Si)	mg/L	2.28	7946306	2.84	0.050	7946306
Dissolved Silver (Ag)	mg/L	<0.0000050	7946306	<0.0000050	0.0000050	7946306
Dissolved Strontium (Sr)	mg/L	0.123	7946306	0.151	0.000050	7950580
Dissolved Thallium (Tl)	mg/L	<0.0000020	7946306	<0.0000020	0.0000020	7946306
Dissolved Tin (Sn)	mg/L	<0.00020	7946306	<0.00020	0.00020	7946306
Dissolved Titanium (Ti)	mg/L	<0.00050	7946306	<0.00050	0.00050	7946306
Dissolved Uranium (U)	mg/L	0.000669	7946306	0.00178	0.0000020	7946306
Dissolved Vanadium (V)	mg/L	<0.00020	7946306	<0.00020	0.00020	7946306
Dissolved Zinc (Zn)	mg/L	0.00033	7946306	0.00289	0.00010	7946306
Dissolved Zirconium (Zr)	mg/L	<0.00010	7946306	<0.00010	0.00010	7946306
Dissolved Calcium (Ca)	mg/L	36.7	7944910	46.2	0.050	7949980
RDL = Reportable Detection Limit						

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

Maxxam Job #: B553386
Report Date: 2015/06/30

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN1923		MN1924		
Sampling Date		2015/06/22 11:35		2015/06/22 10:00		
COC Number		08409525		08409525		
	Units	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	5.06	7944910	8.20	0.050	7949980
Dissolved Potassium (K)	mg/L	1.09	7944910	1.20	0.050	7949980
Dissolved Sodium (Na)	mg/L	0.801	7944910	0.887	0.050	7949980
Dissolved Sulphur (S)	mg/L	4.5	7944910	8.8	3.0	7949980
RDL = Reportable Detection Limit						

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

Maxxam Job #: B553386
Report Date: 2015/06/30

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MN1920	MN1921	MN1922	MN1923	MN1924		
Sampling Date		2015/06/22 16:51	2015/06/22 14:55	2015/06/22 09:35	2015/06/22 11:35	2015/06/22 10:00		
COC Number		08409525	08409525	08409525	08409525	08409525		
	Units	KZ-2	KZ-7	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	67.8	111	120	104	144	0.50	7944794
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	7951485
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00962	0.0206	0.0163	0.0100	0.0267	0.00050	7945971
Total Antimony (Sb)	mg/L	0.000024	0.000073	0.000033	0.000021	0.000053	0.000020	7945971
Total Arsenic (As)	mg/L	0.000096	0.000407	0.000400	0.000255	0.000637	0.000020	7945971
Total Barium (Ba)	mg/L	0.0386	0.0575	0.0531	0.0497	0.0639	0.000020	7945971
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	7945971
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7945971
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7945971
Total Cadmium (Cd)	mg/L	0.000229	0.000145	0.0000287	0.0000131	0.0000416	0.0000050	7945971
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	7945971
Total Cobalt (Co)	mg/L	0.0000113	0.0000570	0.0000524	0.0000164	0.0000853	0.0000050	7945971
Total Copper (Cu)	mg/L	0.000698	0.000770	0.000531	0.000456	0.000637	0.000050	7945971
Total Iron (Fe)	mg/L	0.0105	0.363	0.104	0.0150	0.189	0.0010	7945971
Total Lead (Pb)	mg/L	0.0000875	0.000196	0.0000561	0.0000095	0.000103	0.0000050	7945971
Total Lithium (Li)	mg/L	0.00066	0.00127	0.00196	0.00149	0.00224	0.00050	7945971
Total Manganese (Mn)	mg/L	0.000479	0.0331	0.0279	0.00349	0.0478	0.000050	7945971
Total Molybdenum (Mo)	mg/L	0.000598	0.000449	0.000677	0.000448	0.00106	0.000050	7945971
Total Nickel (Ni)	mg/L	0.000337	0.000472	0.000440	0.000365	0.000761	0.000020	7945971
Total Phosphorus (P)	mg/L	<0.0020	0.0069	0.0036	<0.0020	0.0074	0.0020	7945971
Total Selenium (Se)	mg/L	0.000442	0.000600	0.000434	0.000327	0.000580	0.000040	7945971
Total Silicon (Si)	mg/L	2.04	2.18	2.30	2.14	2.50	0.050	7945971
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7945971
Total Strontium (Sr)	mg/L	0.0749	0.122	0.126	0.116	0.149	0.000050	7945971
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	7945971
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7945971
Total Titanium (Ti)	mg/L	<0.00050	0.00091	0.00073	<0.00050	0.00124	0.00050	7945971
Total Uranium (U)	mg/L	0.00109	0.000666	0.00114	0.000728	0.00183	0.0000020	7945971
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7945971
Total Zinc (Zn)	mg/L	0.0326	0.0264	0.00288	0.00052	0.00545	0.00010	7945971
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	7945971
Total Calcium (Ca)	mg/L	23.7	36.5	38.4	33.4	44.6	0.050	7944911

RDL = Reportable Detection Limit

Maxxam Job #: B553386
Report Date: 2015/06/30

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MN1920	MN1921	MN1922	MN1923	MN1924		
Sampling Date		2015/06/22 16:51	2015/06/22 14:55	2015/06/22 09:35	2015/06/22 11:35	2015/06/22 10:00		
COC Number		08409525	08409525	08409525	08409525	08409525		
	Units	KZ-2	KZ-7	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Total Magnesium (Mg)	mg/L	2.10	4.78	5.95	5.00	7.95	0.050	7944911
Total Potassium (K)	mg/L	1.24	1.05	1.01	1.05	1.15	0.050	7944911
Total Sodium (Na)	mg/L	0.502	0.674	0.745	0.757	0.845	0.050	7944911
Total Sulphur (S)	mg/L	8.8	9.0	5.9	4.8	8.0	3.0	7944911

RDL = Reportable Detection Limit

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

Maxxam Job #: B553386
Report Date: 2015/06/30

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

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.3°C

Sample MN1920, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MN1922, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MN1923, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MN1924, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

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

Maxxam Job #: B553386
Report Date: 2015/06/30

QUALITY ASSURANCE REPORT

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7945155	Strong Acid Dissoc. Cyanide (CN)	2015/06/24	105	80 - 120	99	80 - 120	0.00051, RDL=0.00050	mg/L	NC	20
7945157	Weak Acid Dissoc. Cyanide (CN)	2015/06/24	107	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
7945330	Total Suspended Solids	2015/06/26			91	80 - 120	<1.0	mg/L		
7945430	Acidity (pH 4.5)	2015/06/24					<0.50	mg/L	NC	20
7945430	Acidity (pH 8.3)	2015/06/24			100	80 - 120	<0.50	mg/L	NC	20
7945971	Total Aluminum (Al)	2015/06/26	100	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
7945971	Total Antimony (Sb)	2015/06/26	98	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
7945971	Total Arsenic (As)	2015/06/26	98	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
7945971	Total Barium (Ba)	2015/06/26	102	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
7945971	Total Beryllium (Be)	2015/06/26	91	80 - 120	93	80 - 120	<0.000010	mg/L	NC	20
7945971	Total Bismuth (Bi)	2015/06/26	98	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
7945971	Total Boron (B)	2015/06/26					<0.010	mg/L	NC	20
7945971	Total Cadmium (Cd)	2015/06/26	96	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
7945971	Total Chromium (Cr)	2015/06/26	97	80 - 120	105	80 - 120	<0.00010	mg/L	NC	20
7945971	Total Cobalt (Co)	2015/06/26	97	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
7945971	Total Copper (Cu)	2015/06/26	96	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
7945971	Total Iron (Fe)	2015/06/26	100	80 - 120	113	80 - 120	<0.0010	mg/L	NC	20
7945971	Total Lead (Pb)	2015/06/26	100	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
7945971	Total Lithium (Li)	2015/06/26	96	80 - 120	94	80 - 120	<0.00050	mg/L	NC	20
7945971	Total Manganese (Mn)	2015/06/26	98	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
7945971	Total Molybdenum (Mo)	2015/06/26	102	80 - 120	107	80 - 120	<0.000050	mg/L	NC	20
7945971	Total Nickel (Ni)	2015/06/26	97	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
7945971	Total Phosphorus (P)	2015/06/26					<0.0020	mg/L		
7945971	Total Selenium (Se)	2015/06/26	91	80 - 120	105	80 - 120	<0.000040	mg/L	NC	20
7945971	Total Silicon (Si)	2015/06/26					<0.050	mg/L	NC	20
7945971	Total Silver (Ag)	2015/06/26	97	80 - 120	88	80 - 120	<0.0000050	mg/L	NC	20
7945971	Total Strontium (Sr)	2015/06/26	99	80 - 120	107	80 - 120	<0.000050	mg/L	NC	20
7945971	Total Thallium (Tl)	2015/06/26	97	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
7945971	Total Tin (Sn)	2015/06/26	96	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
7945971	Total Titanium (Ti)	2015/06/26	96	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20

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

Maxxam Job #: B553386
Report Date: 2015/06/30

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7945971	Total Uranium (U)	2015/06/26	104	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
7945971	Total Vanadium (V)	2015/06/26	97	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
7945971	Total Zinc (Zn)	2015/06/26	97	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
7945971	Total Zirconium (Zr)	2015/06/26					<0.00010	mg/L	NC	20
7946185	Nitrate plus Nitrite (N)	2015/06/25	93	80 - 120	102	80 - 120	<0.0020	mg/L	NC	25
7946187	Nitrite (N)	2015/06/25	97	80 - 120	104	80 - 120	<0.0020	mg/L	NC	25
7946198	Total Ammonia (N)	2015/06/25	84	80 - 120	99	80 - 120	<0.0050	mg/L	NC	20
7946306	Dissolved Aluminum (Al)	2015/06/25	108	80 - 120	113	80 - 120	<0.00050	mg/L	NC	20
7946306	Dissolved Antimony (Sb)	2015/06/25	103	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
7946306	Dissolved Arsenic (As)	2015/06/25	103	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
7946306	Dissolved Barium (Ba)	2015/06/25	105	80 - 120	109	80 - 120	<0.000020	mg/L	NC	20
7946306	Dissolved Beryllium (Be)	2015/06/25	93	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
7946306	Dissolved Bismuth (Bi)	2015/06/25	100	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
7946306	Dissolved Boron (B)	2015/06/25					<0.010	mg/L	NC	20
7946306	Dissolved Cadmium (Cd)	2015/06/25	98	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
7946306	Dissolved Chromium (Cr)	2015/06/25	96	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
7946306	Dissolved Cobalt (Co)	2015/06/25	96	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
7946306	Dissolved Copper (Cu)	2015/06/25	95	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
7946306	Dissolved Iron (Fe)	2015/06/25	100	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
7946306	Dissolved Lead (Pb)	2015/06/25	104	80 - 120	107	80 - 120	0.0000069, RDL=0.0000050	mg/L	NC	20
7946306	Dissolved Lithium (Li)	2015/06/25	98	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
7946306	Dissolved Manganese (Mn)	2015/06/25	96	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
7946306	Dissolved Molybdenum (Mo)	2015/06/25	101	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
7946306	Dissolved Nickel (Ni)	2015/06/25	95	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
7946306	Dissolved Phosphorus (P)	2015/06/25					<0.0020	mg/L	NC	20
7946306	Dissolved Selenium (Se)	2015/06/25	101	80 - 120	98	80 - 120	<0.000040	mg/L	NC	20
7946306	Dissolved Silicon (Si)	2015/06/25					<0.050	mg/L	NC	20
7946306	Dissolved Silver (Ag)	2015/06/25	77 (1)	80 - 120	90	80 - 120	0.0000052, RDL=0.0000050	mg/L	NC	20
7946306	Dissolved Strontium (Sr)	2015/06/25	102	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20

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

Maxxam Job #: B553386
Report Date: 2015/06/30

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7946306	Dissolved Thallium (Tl)	2015/06/25	96	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
7946306	Dissolved Tin (Sn)	2015/06/25	100	80 - 120	110	80 - 120	<0.00020	mg/L	NC	20
7946306	Dissolved Titanium (Ti)	2015/06/25	96	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7946306	Dissolved Uranium (U)	2015/06/25	102	80 - 120	108	80 - 120	<0.0000020	mg/L	NC	20
7946306	Dissolved Vanadium (V)	2015/06/25	94	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
7946306	Dissolved Zinc (Zn)	2015/06/25	104	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
7946306	Dissolved Zirconium (Zr)	2015/06/25					<0.00010	mg/L	NC	20
7946504	Dissolved Chloride (Cl)	2015/06/25	NC	80 - 120	94	80 - 120	<0.50	mg/L	NC	20
7946511	Dissolved Sulphate (SO4)	2015/06/25	NC	80 - 120	91	80 - 120	<0.50	mg/L	0.38	20
7946629	Dissolved Organic Carbon (C)	2015/06/25	97	80 - 120	102	80 - 120	<0.50	mg/L	7.6	20
7946630	Dissolved Organic Carbon (C)	2015/06/25	96	80 - 120	104	80 - 120	<0.50	mg/L	NC	20
7946813	Fluoride (F)	2015/06/25	109	80 - 120	108	80 - 120	<0.010	mg/L	NC	20
7946887	Alkalinity (PP as CaCO3)	2015/06/25					<0.50	mg/L	NC	20
7946887	Alkalinity (Total as CaCO3)	2015/06/25	99	80 - 120	94	80 - 120	0.60, RDL=0.50	mg/L	6.5	20
7946887	Bicarbonate (HCO3)	2015/06/25					0.73, RDL=0.50	mg/L	6.5	20
7946887	Carbonate (CO3)	2015/06/25					<0.50	mg/L	NC	20
7946887	Hydroxide (OH)	2015/06/25					<0.50	mg/L	NC	20
7946888	Conductivity	2015/06/25			98	80 - 120	<1.0	uS/cm	6.3	20
7946889	pH	2015/06/25			101	97 - 103			1.1	N/A
7946997	Alkalinity (PP as CaCO3)	2015/06/26					<0.50	mg/L	NC	20
7946997	Alkalinity (Total as CaCO3)	2015/06/26	116	80 - 120	98	80 - 120	<0.50	mg/L	15	20
7946997	Bicarbonate (HCO3)	2015/06/26					<0.50	mg/L	15	20
7946997	Carbonate (CO3)	2015/06/26					<0.50	mg/L	NC	20
7946997	Hydroxide (OH)	2015/06/26					<0.50	mg/L	NC	20
7947002	Conductivity	2015/06/26			100	80 - 120	1.5, RDL=1.0	uS/cm	0.45	20
7947004	pH	2015/06/26			101	97 - 103			2.6	N/A
7947870	True Colour	2015/06/25			108	80 - 120	<5.0	Col. Unit	NC	20
7948168	Dissolved Phosphorus (P)	2015/06/26	92	80 - 120	89	80 - 120	<0.0020	mg/L	NC	20
7948184	Total Phosphorus (P)	2015/06/26			89	80 - 120	<0.0020	mg/L		
7950243	Dissolved Mercury (Hg)	2015/06/29	89	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
7950580	Dissolved Copper (Cu)	2015/06/29	96	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20

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

Maxxam Job #: B553386
Report Date: 2015/06/30

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7950580	Dissolved Nickel (Ni)	2015/06/29	96	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
7950580	Dissolved Strontium (Sr)	2015/06/29	93	80 - 120	110	80 - 120	<0.000050	mg/L	NC	20
7951485	Total Mercury (Hg)	2015/06/30	107	80 - 120	116	80 - 120	<0.0000020	mg/L	NC	20
7951514	Dissolved Mercury (Hg)	2015/06/30	89	80 - 120	88	80 - 120	<0.0000020	mg/L	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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

Maxxam Job #: B553386
Report Date: 2015/06/30

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

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

David Huang, BBY Scientific Specialist

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

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

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RE[illegible]

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC # 08409525

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		[illegible]nd Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	A. BIER, C. HENRY	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-2	MN1920	2015/06/22	16:51	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
2	KZ-7	MN1921	2015/06/22	14:55	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
3	KZ-9				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
4	KZ-13				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
5	KZ-15	MN 1922	2015/06/22	09:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
6	KZ-16	MN 1923	2015/06/22	11:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
7	KZ-17	MN 1924	2015/06/22	10:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
8	KZ-19				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
9	KZ-21				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
10	KZ-22				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
		4.4.8

COOLING MEDIA PRESENT Y / N

B553386

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
A. BIER	2015/06/22	20:00	Julia Cousins	2015/06/24	09:55	B553386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08409568, 08409569

Attention:KAI WOLOSHYN

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

Report Date: 2015/07/03
Report #: R1989596
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B553960
Received: 2015/06/25, 13:25

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	13	N/A	2015/06/26	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	13	2015/06/26	2015/06/27	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	7	N/A	2015/06/26	BBY6SOP-00011	SM 22 4500-Cl- G m
Chloride by Automated Colourimetry	1	N/A	2015/06/29	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	8	N/A	2015/06/29	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	8	N/A	2015/06/29	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	13	N/A	2015/06/26	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	7	N/A	2015/06/30	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2015/06/30	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	13	N/A	2015/06/27	BBY6SOP-00026	SM 22 2510 B m
Fluoride	8	N/A	2015/06/26	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	3	N/A	2015/06/29	BBY7SOP-00002	EPA 6020a R1 m
Hardness Total (calculated as CaCO3)	5	N/A	2015/06/30	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	13	N/A	2015/06/30	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	8	N/A	2015/06/30	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	8	2015/06/30	2015/06/30	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	8	N/A	2015/06/30	BBY WI-00033	SM 22 1030E
Sum of cations, anions	3	N/A	2015/06/29	Calc	
Sum of cations, anions	5	N/A	2015/06/30	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	13	N/A	2015/06/30	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	13	N/A	2015/06/29	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Digested LL (total)	5	2015/06/29	2015/06/29	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	3	N/A	2015/06/29	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	5	N/A	2015/06/30	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	3	N/A	2015/06/27	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	8	N/A	2015/06/26	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	8	N/A	2015/06/26	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	8	N/A	2015/06/26	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	8	N/A	2015/06/27	BBY6SOP-00010	SM 22 4500-NO3- I m

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08409568, 08409569

Attention:KAI WOLOSHYN

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

Report Date: 2015/07/03
Report #: R1989596
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B553960
Received: 2015/06/25, 13:25

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Filter and HNO3 Preserve for Metals	12	N/A	2015/06/26	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	13	N/A	2015/06/27	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	8	N/A	2015/06/26	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	8	2015/06/27	2015/06/29	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	8	N/A	2015/06/29	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	8	2015/06/27	2015/06/29	BBY6SOP-00034	SM 22 2540 D

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

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

(1) DOC present in the sample should be considered as non-purgeable DOC.

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

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN5100	MN5101		MN5102		MN5103		
Sampling Date		2015/06/23 15:30	2015/06/24 08:57		2015/06/23 17:00		2015/06/23 12:00		
COC Number		08409568	08409568		08409568		08409568		
	Units	KZ-9	KZ-13	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Misc. Inorganics									
Acidity (pH 4.5)	mg/L	<0.50	<0.50	7947430	<0.50	7947430	<0.50	0.50	7947430
Acidity (pH 8.3)	mg/L	<0.50	<0.50	7947430	<0.50	7947430	<0.50	0.50	7947430
Calculated Parameters									
Anion Sum	meq/L	2.6	1.2	7946756	3.3	7946756	3.9	N/A	7946756
Cation Sum	meq/L	2.8	1.3	7946756	2.8	7946756	3.9	N/A	7946756
Filter and HNO3 Preservation	N/A	LAB	LAB	7947373	LAB	7947373	LAB	N/A	7947373
Ion Balance	N/A	1.1	1.1	7945958	0.87	7945958	0.99	0.010	7945958
Nitrate (N)	mg/L	0.0115	0.0175	7945712	0.0101	7945712	<0.0020	0.0020	7945712
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	7950501	<0.00050	7950501	0.00052	0.00050	7950501
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	7950510	<0.00050	7950510	0.00056	0.00050	7950510
Fluoride (F)	mg/L	0.057	0.043	7948458	0.057	7948458	0.170	0.010	7948458
Dissolved Organic Carbon (C)	mg/L	2.63	3.77	7952019	3.20	7952019	7.12	0.50	7952019
Alkalinity (Total as CaCO3)	mg/L	101	49.7	7948358	136	7948358	160	0.50	7948358
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	7948358	<0.50	7948358	<0.50	0.50	7948358
Bicarbonate (HCO3)	mg/L	123	60.7	7948358	166	7948358	195	0.50	7948358
Carbonate (CO3)	mg/L	<0.50	<0.50	7948358	<0.50	7948358	<0.50	0.50	7948358
Hydroxide (OH)	mg/L	<0.50	<0.50	7948358	<0.50	7948358	<0.50	0.50	7948358
Anions									
Dissolved Sulphate (SO4)	mg/L	25.8	10.2	7948093	26.0	7948093	35.5	0.50	7948093
Dissolved Chloride (Cl)	mg/L	0.72	0.73	7948088	<0.50	7951325	<0.50	0.50	7948088
MISCELLANEOUS									
True Colour	Col. Unit	14.0	22.0	7948202	13.4	7948202	60.5	5.0	7948202
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	0.0028 (2)	7950665	<0.0020 (1)	7950665	0.0104 (1)	0.0020	7950665
Total Ammonia (N)	mg/L	0.0085	0.0083	7948360	<0.0050	7948360	<0.0050	0.0050	7948360
Nitrate plus Nitrite (N)	mg/L	0.0115	0.0175	7948241	0.0101	7948241	<0.0020	0.0020	7948241
Nitrite (N)	mg/L	<0.0020	<0.0020	7948242	<0.0020	7948242	<0.0020	0.0020	7948242
Total Phosphorus (P)	mg/L	0.0023 (1)	0.0030 (2)	7950670	<0.0020 (1)	7950670	0.0126 (1)	0.0020	7950670
Physical Properties									
Conductivity	uS/cm	244	124	7948362	247	7948362	369	1.0	7948362
pH	pH	8.10	7.86	7948361	8.08	7948361	8.19	N/A	7948361

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

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN5100	MN5101		MN5102		MN5103		
Sampling Date		2015/06/23 15:30	2015/06/24 08:57		2015/06/23 17:00		2015/06/23 12:00		
COC Number		08409568	08409568		08409568		08409568		
	Units	KZ-9	KZ-13	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	1.3	1.1	7948915	1.5	7948915	1.7	1.0	7948915
RDL = Reportable Detection Limit									

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN5104		MN5139		MN5140		
Sampling Date		2015/06/23 10:30		2015/06/23 08:30		2015/06/23 13:30		
COC Number		08409568		08409569		08409569		
	Units	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	7947430	<0.50	7947430	<0.50	0.50	7947430
Acidity (pH 8.3)	mg/L	<0.50	7947430	1.03	7947430	<0.50	0.50	7947430
Calculated Parameters								
Anion Sum	meq/L	3.4	7946756	3.5	7946756	0.012	N/A	7946756
Cation Sum	meq/L	3.6	7946756	3.7	7946756	0.0010	N/A	7946756
Filter and HNO3 Preservation	N/A	LAB	7947373	LAB	7947373	LAB	N/A	7947373
Ion Balance	N/A	1.1	7945958	1.1	7945958	0.081 (1)	0.010	7945958
Nitrate (N)	mg/L	<0.0020	7945712	0.0057	7945712	<0.0020	0.0020	7945712
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	7950501	<0.00050	7950501	<0.00050	0.00050	7950501
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00056	7950510	<0.00050	7950510	<0.00050	0.00050	7950510
Fluoride (F)	mg/L	0.120	7948458	0.110	7948458	<0.010	0.010	7948459
Dissolved Organic Carbon (C)	mg/L	4.96	7952019	5.64	7952019	0.65	0.50	7952019
Alkalinity (Total as CaCO3)	mg/L	139	7948358	146	7948358	0.62	0.50	7948358
Alkalinity (PP as CaCO3)	mg/L	<0.50	7948358	<0.50	7948358	<0.50	0.50	7948358
Bicarbonate (HCO3)	mg/L	170	7948358	178	7948358	0.76	0.50	7948358
Carbonate (CO3)	mg/L	<0.50	7948358	<0.50	7948358	<0.50	0.50	7948358
Hydroxide (OH)	mg/L	<0.50	7948358	<0.50	7948358	<0.50	0.50	7948358
Anions								
Dissolved Sulphate (SO4)	mg/L	28.4	7948093	27.8	7948093	<0.50	0.50	7948093
Dissolved Chloride (Cl)	mg/L	<0.50	7948088	0.97	7948088	<0.50	0.50	7948088
MISCELLANEOUS								
True Colour	Col. Unit	28.6	7948202	34.1	7948202	<5.0	5.0	7948202
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0060 (2)	7950665	0.0054 (2)	7950665	<0.0020 (2)	0.0020	7950665
Total Ammonia (N)	mg/L	<0.0050	7948360	0.0086	7948360	<0.0050	0.0050	7948360
Nitrate plus Nitrite (N)	mg/L	<0.0020	7948241	0.0057	7948241	<0.0020	0.0020	7948241
Nitrite (N)	mg/L	<0.0020	7948242	<0.0020	7948242	<0.0020	0.0020	7948242
Total Phosphorus (P)	mg/L	0.0052 (2)	7950670	0.0062 (2)	7950668	<0.0020 (2)	0.0020	7950670
Physical Properties								
Conductivity	uS/cm	317	7948362	327	7948362	1.2	1.0	7948362

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

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN5104		MN5139		MN5140		
Sampling Date		2015/06/23 10:30		2015/06/23 08:30		2015/06/23 13:30		
COC Number		08409568		08409569		08409569		
	Units	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
pH	pH	8.24	7948361	7.90	7948361	6.11	N/A	7948361
Physical Properties								
Total Suspended Solids	mg/L	<1.0	7948915	10.6	7948915	<1.0	1.0	7948915

RDL = Reportable Detection Limit
N/A = Not Applicable

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN5141	MN5142	MN5143	MN5144	MN5145		
Sampling Date		2015/06/25 13:25	2015/06/24 10:23	2015/06/24 10:35	2015/06/24 11:36	2015/06/24 12:26		
COC Number		08409569	08409569	08409569	08409569	08409569		
	Units	TRIP BLANK	KZ-9 WEST SEEP	KZ-9 EAST SEEP	SEEP 3	SEEP 4	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7947430
Acidity (pH 8.3)	mg/L	<0.50	<0.50	242	<0.50	1.11	0.50	7947430
Calculated Parameters								
Anion Sum	meq/L	0.014					N/A	7946756
Cation Sum	meq/L	0.00090					N/A	7946756
Filter and HNO3 Preservation	N/A		LAB	LAB	LAB	LAB	N/A	7947373
Ion Balance	N/A	0.066 (1)					0.010	7945958
Nitrate (N)	mg/L	<0.0020					0.0020	7945712
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050					0.00050	7950501
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050					0.00050	7950510
Fluoride (F)	mg/L	<0.010					0.010	7948458
Dissolved Organic Carbon (C)	mg/L	<0.50					0.50	7948394
Alkalinity (Total as CaCO3)	mg/L	0.68	204	889	142	104	0.50	7948358
Alkalinity (PP as CaCO3)	mg/L	<0.50	1.12	<0.50	<0.50	<0.50	0.50	7948358
Bicarbonate (HCO3)	mg/L	0.83	246	1090	173	127	0.50	7948358
Carbonate (CO3)	mg/L	<0.50	1.34	<0.50	<0.50	<0.50	0.50	7948358
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7948358
Anions								
Dissolved Sulphate (SO4)	mg/L	<0.50					0.50	7948093
Dissolved Chloride (Cl)	mg/L	<0.50					0.50	7948088
MISCELLANEOUS								
True Colour	Col. Unit	<5.0	<5.0	7.2	6.1	<5.0	5.0	7948202
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020					0.0020	7950665
Total Ammonia (N)	mg/L	<0.0050					0.0050	7948360
Nitrate plus Nitrite (N)	mg/L	<0.0020					0.0020	7948241
Nitrite (N)	mg/L	<0.0020					0.0020	7948242
Total Phosphorus (P)	mg/L	<0.0020					0.0020	7950670
Physical Properties								
Conductivity	uS/cm	1.3	446	1550	320	269	1.0	7948362
pH	pH	6.04	8.31	6.48	8.06	7.97	N/A	7948361

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 3 meq/L for both cations and anions).

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN5141	MN5142	MN5143	MN5144	MN5145		
Sampling Date		2015/06/25 13:25	2015/06/24 10:23	2015/06/24 10:35	2015/06/24 11:36	2015/06/24 12:26		
COC Number		08409569	08409569	08409569	08409569	08409569		
	Units	TRIP BLANK	KZ-9 WEST SEEP	KZ-9 EAST SEEP	SEEP 3	SEEP 4	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0					1.0	7948915
RDL = Reportable Detection Limit								

Maxxam ID		MN5146		
Sampling Date		2015/06/24 12:40		
COC Number		08409569		
	Units	SEEP 5	RDL	QC Batch
Misc. Inorganics				
Acidity (pH 4.5)	mg/L	<0.50	0.50	7947430
Acidity (pH 8.3)	mg/L	81.6	0.50	7947430
Calculated Parameters				
Filter and HNO3 Preservation	N/A	LAB	N/A	7947373
Misc. Inorganics				
Alkalinity (Total as CaCO3)	mg/L	277	0.50	7948358
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	7948358
Bicarbonate (HCO3)	mg/L	338	0.50	7948358
Carbonate (CO3)	mg/L	<0.50	0.50	7948358
Hydroxide (OH)	mg/L	<0.50	0.50	7948358
MISCELLANEOUS				
True Colour	Col. Unit	6.8	5.0	7948202
Physical Properties				
Conductivity	uS/cm	521	1.0	7948362
pH	pH	6.51	N/A	7948361
RDL = Reportable Detection Limit N/A = Not Applicable				

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN5100	MN5101		MN5102		
Sampling Date		2015/06/23 15:30	2015/06/24 08:57		2015/06/23 17:00		
COC Number		08409568	08409568		08409568		
	Units	KZ-9	KZ-13	QC Batch	KZ-19	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	134	61.4	7946718	137	0.50	7946718
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	7951514	<0.0000020	0.0000020	7951514
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00228	0.00784	7950580	0.00593	0.00050	7950580
Dissolved Antimony (Sb)	mg/L	0.000063	0.000027	7950580	0.000061	0.000020	7950580
Dissolved Arsenic (As)	mg/L	0.000208	0.000193	7950580	0.000214	0.000020	7950580
Dissolved Barium (Ba)	mg/L	0.0658	0.0843	7950580	0.0678	0.000020	7950580
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	7950580	<0.000010	0.000010	7950580
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	7950580	<0.0000050	0.0000050	7950580
Dissolved Boron (B)	mg/L	<0.010	<0.010	7950580	<0.010	0.010	7950580
Dissolved Cadmium (Cd)	mg/L	0.0000341	0.0000121	7950580	0.0000346	0.0000050	7950580
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	7950580	<0.00010	0.00010	7950580
Dissolved Cobalt (Co)	mg/L	0.0000263	0.0000160	7950580	0.0000259	0.0000050	7950580
Dissolved Copper (Cu)	mg/L	0.000660	0.000775	7950580	0.000681	0.000050	7950580
Dissolved Iron (Fe)	mg/L	0.0646	0.0247	7950580	0.0957	0.0010	7950580
Dissolved Lead (Pb)	mg/L	0.0000067	0.0000060	7950580	0.0000126	0.0000050	7950580
Dissolved Lithium (Li)	mg/L	0.00156	0.00101	7950580	0.00147	0.00050	7950580
Dissolved Manganese (Mn)	mg/L	0.0183	0.00601	7950580	0.0170	0.000050	7950580
Dissolved Molybdenum (Mo)	mg/L	0.000511	0.000527	7950580	0.000514	0.000050	7950580
Dissolved Nickel (Ni)	mg/L	0.000355	0.000466	7950580	0.000423	0.000020	7950580
Dissolved Phosphorus (P)	mg/L	0.0026	0.0034	7950580	0.0502 (1)	0.0020	7953116
Dissolved Selenium (Se)	mg/L	0.000576	0.000124	7950580	0.000573	0.000040	7950580
Dissolved Silicon (Si)	mg/L	2.50	2.57	7950580	2.51	0.050	7950580
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	7950580	<0.0000050	0.0000050	7950580
Dissolved Strontium (Sr)	mg/L	0.150	0.0625	7950580	0.155	0.000050	7950580
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	7950580	<0.0000020	0.0000020	7950580
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	7950580	<0.00020	0.00020	7950580
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	7950580	<0.00050	0.00050	7950580
Dissolved Uranium (U)	mg/L	0.000707	0.000396	7950580	0.000678	0.0000020	7950580
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	7950580	<0.00020	0.00020	7950580
Dissolved Zinc (Zn)	mg/L	0.00561	0.00158	7950580	0.00597	0.00010	7950580
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	7950580	<0.00010	0.00010	7950580

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

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN5100	MN5101		MN5102		
Sampling Date		2015/06/23 15:30	2015/06/24 08:57		2015/06/23 17:00		
COC Number		08409568	08409568		08409568		
	Units	**KZ-9**	**KZ-13**	**QC Batch**	**KZ-19**	**RDL**	**QC Batch**
Dissolved Calcium (Ca)	mg/L	45.4	20.9	7945959	46.3	0.050	7945959
Dissolved Magnesium (Mg)	mg/L	5.04	2.26	7945959	5.20	0.050	7945959
Dissolved Potassium (K)	mg/L	1.38	1.40	7945959	1.46	0.050	7945959
Dissolved Sodium (Na)	mg/L	0.877	0.937	7945959	0.993	0.050	7945959
Dissolved Sulphur (S)	mg/L	8.8	3.6	7945959	8.8	3.0	7945959
RDL = Reportable Detection Limit							

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN5103		MN5104		MN5139		
Sampling Date		2015/06/23 12:00		2015/06/23 10:30		2015/06/23 08:30		
COC Number		08409568		08409568		08409569		
	Units	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	191	7946718	177	7946718	182	0.50	7946718
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	7951514	<0.0000020	7951514	<0.0000020	0.0000020	7951514
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00591	7950580	0.00413	7950580	0.00352	0.00050	7950580
Dissolved Antimony (Sb)	mg/L	0.000174	7950580	0.000090	7950580	0.000101	0.000020	7950580
Dissolved Arsenic (As)	mg/L	0.00172	7950580	0.00108	7950580	0.000799	0.000020	7950580
Dissolved Barium (Ba)	mg/L	0.0564	7950580	0.0578	7950580	0.0617	0.000020	7950580
Dissolved Beryllium (Be)	mg/L	<0.000010	7950580	<0.000010	7950580	<0.000010	0.000010	7950580
Dissolved Bismuth (Bi)	mg/L	<0.0000050	7950580	<0.0000050	7950580	<0.0000050	0.0000050	7950580
Dissolved Boron (B)	mg/L	<0.010	7950580	<0.010	7950580	<0.010	0.010	7950580
Dissolved Cadmium (Cd)	mg/L	0.0000082	7950580	0.0000098	7950580	0.0000118	0.0000050	7950580
Dissolved Chromium (Cr)	mg/L	<0.00010	7950580	<0.00010	7950580	<0.00010	0.00010	7950580
Dissolved Cobalt (Co)	mg/L	0.0000546	7950580	0.0000379	7950580	0.0000271	0.0000050	7950580
Dissolved Copper (Cu)	mg/L	0.000607	7950580	0.000575	7950580	0.000845	0.000050	7950580
Dissolved Iron (Fe)	mg/L	0.182	7950580	0.0899	7950580	0.0405	0.0010	7950580
Dissolved Lead (Pb)	mg/L	0.0000054	7950580	0.0000066	7950580	0.0000112	0.0000050	7950580
Dissolved Lithium (Li)	mg/L	0.00355 (1)	7953116	0.00218	7950580	0.00358	0.00050	7950580
Dissolved Manganese (Mn)	mg/L	0.0177	7950580	0.00822	7950580	0.00212	0.000050	7950580
Dissolved Molybdenum (Mo)	mg/L	0.00187	7950580	0.00120	7950580	0.00110	0.000050	7950580
Dissolved Nickel (Ni)	mg/L	0.00267	7950580	0.00143	7950580	0.00123	0.000020	7950580
Dissolved Phosphorus (P)	mg/L	0.0100	7950580	0.0191 (1)	7953116	0.0053	0.0020	7950580
Dissolved Selenium (Se)	mg/L	0.000575	7950580	0.000493	7950580	0.000449	0.000040	7950580
Dissolved Silicon (Si)	mg/L	3.87 (1)	7953116	3.15	7950580	3.65	0.050	7950580
Dissolved Silver (Ag)	mg/L	<0.0000050	7950580	<0.0000050	7950580	<0.0000050	0.0000050	7950580
Dissolved Strontium (Sr)	mg/L	0.155	7950580	0.166	7950580	0.170	0.000050	7950580
Dissolved Thallium (Tl)	mg/L	<0.0000020	7950580	<0.0000020	7950580	<0.0000020	0.0000020	7950580
Dissolved Tin (Sn)	mg/L	<0.00020	7950580	<0.00020	7950580	<0.00020	0.00020	7950580
Dissolved Titanium (Ti)	mg/L	<0.00050	7950580	<0.00050	7950580	<0.00050	0.00050	7950580
Dissolved Uranium (U)	mg/L	0.00275	7950580	0.00197	7950580	0.00182	0.0000020	7950580
Dissolved Vanadium (V)	mg/L	<0.00020	7950580	<0.00020	7950580	<0.00020	0.00020	7950580
Dissolved Zinc (Zn)	mg/L	0.00090	7950580	0.00071	7950580	0.00031	0.00010	7950580
Dissolved Zirconium (Zr)	mg/L	<0.00010	7950580	<0.00010	7950580	<0.00010	0.00010	7950580

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

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN5103		MN5104		MN5139		
Sampling Date		2015/06/23 12:00		2015/06/23 10:30		2015/06/23 08:30		
COC Number		08409568		08409568		08409569		
	Units	**KZ-21**	**QC Batch**	**KZ-22**	**QC Batch**	**KZ-26**	**RDL**	**QC Batch**
Dissolved Calcium (Ca)	mg/L	48.4	7945959	48.6	7945959	49.8	0.050	7945959
Dissolved Magnesium (Mg)	mg/L	17.1	7945959	13.5	7945959	13.9	0.050	7945959
Dissolved Potassium (K)	mg/L	1.22	7945959	1.37	7945959	1.37	0.050	7945959
Dissolved Sodium (Na)	mg/L	1.09	7945959	1.13	7945959	1.30	0.050	7945959
Dissolved Sulphur (S)	mg/L	11.9	7945959	10.1	7945959	9.3	3.0	7945959
RDL = Reportable Detection Limit								

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN5140		MN5141	MN5142	MN5143		
Sampling Date		2015/06/23 13:30		2015/06/25 13:25	2015/06/24 10:23	2015/06/24 10:35		
COC Number		08409569		08409569	08409569	08409569		
	Units	KZ-28	QC Batch	TRIP BLANK	KZ-9 WEST SEEP	KZ-9 EAST SEEP	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	<0.50	7946718	<0.50	260	993	0.50	7946718
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	7951514	<0.0000020			0.0000020	7951514
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00219	7950580	<0.00050	0.00091	0.0585	0.00050	7950580
Dissolved Antimony (Sb)	mg/L	<0.000020	7950580	<0.000020	0.000025	<0.000020	0.000020	7950580
Dissolved Arsenic (As)	mg/L	<0.000020	7950580	<0.000020	0.000131	0.00188	0.000020	7950580
Dissolved Barium (Ba)	mg/L	0.000021	7950580	<0.000020	0.180	0.171	0.000020	7950580
Dissolved Beryllium (Be)	mg/L	<0.000010	7950580	<0.000010	<0.000010	0.000283	0.000010	7950580
Dissolved Bismuth (Bi)	mg/L	<0.0000050	7950580	<0.0000050	<0.0000050	<0.0000050	0.0000050	7950580
Dissolved Boron (B)	mg/L	<0.010	7950580	<0.010	<0.010	<0.010	0.010	7950580
Dissolved Cadmium (Cd)	mg/L	<0.0000050	7950580	<0.0000050	0.0000386	0.0000505	0.0000050	7950580
Dissolved Chromium (Cr)	mg/L	<0.00010	7950580	<0.00010	0.00020	<0.00010	0.00010	7950580
Dissolved Cobalt (Co)	mg/L	<0.0000050	7950580	<0.0000050	0.0000059	0.00267	0.0000050	7950580
Dissolved Copper (Cu)	mg/L	<0.000050	7950580	<0.000050	0.000115	<0.000050	0.000050	7950580
Dissolved Iron (Fe)	mg/L	<0.0010	7950580	<0.0010	<0.0010	3.89	0.0010	7950580
Dissolved Lead (Pb)	mg/L	0.0000059	7950580	<0.0000050	<0.0000050	<0.0000050	0.0000050	7950580
Dissolved Lithium (Li)	mg/L	<0.00050	7950580	<0.00050	0.00197	0.0758	0.00050	7950580
Dissolved Manganese (Mn)	mg/L	0.000159	7950580	<0.000050	0.000096	2.16	0.000050	7950580
Dissolved Molybdenum (Mo)	mg/L	<0.000050	7950580	<0.000050	0.00153	0.000443	0.000050	7950580
Dissolved Nickel (Ni)	mg/L	<0.000020	7950580	<0.000020	0.000144	0.00789	0.000020	7950580
Dissolved Phosphorus (P)	mg/L	0.0109 (1)	7953116	<0.0020	0.0026	0.0045	0.0020	7950580
Dissolved Selenium (Se)	mg/L	<0.000040	7950580	<0.000040	0.00247	<0.000040	0.000040	7950580
Dissolved Silicon (Si)	mg/L	<0.050	7950580	<0.050	3.67	11.9	0.050	7950580
Dissolved Silver (Ag)	mg/L	<0.0000050	7950580	<0.0000050	<0.0000050	<0.0000050	0.0000050	7950580
Dissolved Strontium (Sr)	mg/L	0.000094	7950580	<0.000050	0.269	1.33	0.000050	7950580
Dissolved Thallium (Tl)	mg/L	<0.0000020	7950580	<0.0000020	<0.0000020	<0.0000020	0.0000020	7950580
Dissolved Tin (Sn)	mg/L	<0.00020	7950580	<0.00020	<0.00020	<0.00020	0.00020	7950580
Dissolved Titanium (Ti)	mg/L	<0.00050	7950580	<0.00050	<0.00050	<0.00050	0.00050	7950580
Dissolved Uranium (U)	mg/L	<0.0000020	7950580	<0.0000020	0.00301	0.00190	0.0000020	7950580
Dissolved Vanadium (V)	mg/L	<0.00020	7950580	<0.00020	<0.00020	<0.00020	0.00020	7950580
Dissolved Zinc (Zn)	mg/L	<0.00010	7950580	<0.00010	0.00029	0.0302	0.00010	7950580
Dissolved Zirconium (Zr)	mg/L	<0.00010	7950580	<0.00010	<0.00010	0.00033	0.00010	7950580

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

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN5140		MN5141	MN5142	MN5143		
Sampling Date		2015/06/23 13:30		2015/06/25 13:25	2015/06/24 10:23	2015/06/24 10:35		
COC Number		08409569		08409569	08409569	08409569		
	Units	**KZ-28**	**QC Batch**	**TRIP BLANK**	**KZ-9 WEST SEEP**	**KZ-9 EAST SEEP**	**RDL**	**QC Batch**
Dissolved Calcium (Ca)	mg/L	<0.050	7945959	<0.050	88.1	339	0.050	7945959
Dissolved Magnesium (Mg)	mg/L	<0.050	7945959	<0.050	9.73	35.8	0.050	7945959
Dissolved Potassium (K)	mg/L	<0.050	7945959	<0.050	1.17	6.13	0.050	7945959
Dissolved Sodium (Na)	mg/L	<0.050	7945959	<0.050	1.09	9.88	0.050	7945959
Dissolved Sulphur (S)	mg/L	<3.0	7945959	<3.0	13.1	7.5	3.0	7945959
RDL = Reportable Detection Limit								

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN5144	MN5145	MN5146		
Sampling Date		2015/06/24 11:36	2015/06/24 12:26	2015/06/24 12:40		
COC Number		08409569	08409569	08409569		
	Units	SEEP 3	SEEP 4	SEEP 5	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	173	142	267	0.50	7946718
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.00261	0.00126	0.00257	0.00050	7950580
Dissolved Antimony (Sb)	mg/L	<0.000020	<0.000020	<0.000020	0.000020	7950580
Dissolved Arsenic (As)	mg/L	0.000175	0.000056	0.000264	0.000020	7950580
Dissolved Barium (Ba)	mg/L	0.130	0.106	0.150	0.000020	7950580
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	7950580
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	7950580
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	7950580
Dissolved Cadmium (Cd)	mg/L	0.0000092	0.0000137	0.0000141	0.0000050	7950580
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	7950580
Dissolved Cobalt (Co)	mg/L	0.0000099	0.0000079	0.000552	0.0000050	7950580
Dissolved Copper (Cu)	mg/L	0.000120	0.000295	0.000151	0.000050	7950580
Dissolved Iron (Fe)	mg/L	<0.0010	<0.0010	0.0333	0.0010	7950580
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	7950580
Dissolved Lithium (Li)	mg/L	<0.00050	0.00053	0.0178	0.00050	7950580
Dissolved Manganese (Mn)	mg/L	0.000138	0.000087	1.10	0.000050	7950580
Dissolved Molybdenum (Mo)	mg/L	0.000594	0.000493	<0.000050	0.000050	7950580
Dissolved Nickel (Ni)	mg/L	0.000106	0.000159	0.00112	0.000020	7950580
Dissolved Phosphorus (P)	mg/L	0.0027	<0.0020	<0.0020	0.0020	7950580
Dissolved Selenium (Se)	mg/L	0.000757	0.000709	0.000043	0.000040	7950580
Dissolved Silicon (Si)	mg/L	2.69	2.72	11.2	0.050	7950580
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	7950580
Dissolved Strontium (Sr)	mg/L	0.225	0.187	0.336	0.000050	7950580
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	7950580
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	7950580
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	7950580
Dissolved Uranium (U)	mg/L	0.000970	0.000944	0.0000684	0.0000020	7950580
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	7950580
Dissolved Zinc (Zn)	mg/L	0.00023	0.00026	0.00856	0.00010	7950580
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	7950580
Dissolved Calcium (Ca)	mg/L	65.4	52.9	88.3	0.050	7945959
Dissolved Magnesium (Mg)	mg/L	2.27	2.37	11.4	0.050	7945959

RDL = Reportable Detection Limit

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN5144	MN5145	MN5146		
Sampling Date		2015/06/24 11:36	2015/06/24 12:26	2015/06/24 12:40		
COC Number		08409569	08409569	08409569		
	Units	**SEEP 3**	**SEEP 4**	**SEEP 5**	**RDL**	**QC Batch**
Dissolved Potassium (K)	mg/L	1.44	1.78	1.93	0.050	7945959
Dissolved Sodium (Na)	mg/L	0.845	0.670	3.26	0.050	7945959
Dissolved Sulphur (S)	mg/L	8.3	10.3	<3.0	3.0	7945959
RDL = Reportable Detection Limit						

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MN5100	MN5140	MN5141		
Sampling Date		2015/06/23 15:30	2015/06/23 13:30	2015/06/25 13:25		
COC Number		08409568	08409569	08409569		
	Units	KZ-9	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	186	<0.50	<0.50	0.50	7945871
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	7951485
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.0626	<0.00050	<0.00050	0.00050	7947498
Total Antimony (Sb)	mg/L	0.000060	<0.000020	<0.000020	0.000020	7947498
Total Arsenic (As)	mg/L	0.000455	<0.000020	<0.000020	0.000020	7947498
Total Barium (Ba)	mg/L	0.0609	<0.000020	<0.000020	0.000020	7947498
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	7947498
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	7947498
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	7947498
Total Cadmium (Cd)	mg/L	0.0000840	<0.0000050	<0.0000050	0.0000050	7947498
Total Chromium (Cr)	mg/L	0.00015	<0.00010	<0.00010	0.00010	7947498
Total Cobalt (Co)	mg/L	0.000147	<0.0000050	<0.0000050	0.0000050	7947498
Total Copper (Cu)	mg/L	0.00105	<0.000050	<0.000050	0.000050	7947498
Total Iron (Fe)	mg/L	0.866	<0.0010	<0.0010	0.0010	7947498
Total Lead (Pb)	mg/L	0.000482	<0.0000050	<0.0000050	0.0000050	7947498
Total Lithium (Li)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	7947498
Total Manganese (Mn)	mg/L	0.0434	<0.000050	<0.000050	0.000050	7947498
Total Molybdenum (Mo)	mg/L	0.000471	<0.000050	<0.000050	0.000050	7947498
Total Nickel (Ni)	mg/L	0.000481	0.000129	<0.000020	0.000020	7947498
Total Phosphorus (P)	mg/L	0.0116	<0.0020	<0.0020	0.0020	7947498
Total Selenium (Se)	mg/L	0.000973	<0.000040	<0.000040	0.000040	7947498
Total Silicon (Si)	mg/L	2.38	<0.050	<0.050	0.050	7947498
Total Silver (Ag)	mg/L	0.0000107	0.0000083	<0.0000050	0.0000050	7947498
Total Strontium (Sr)	mg/L	0.139	<0.000050	<0.000050	0.000050	7947498
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	7947498
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	7947498
Total Titanium (Ti)	mg/L	0.00442	<0.00050	<0.00050	0.00050	7947498
Total Uranium (U)	mg/L	0.000624	<0.0000020	<0.0000020	0.0000020	7947498
Total Vanadium (V)	mg/L	0.00032	<0.00020	<0.00020	0.00020	7947498
Total Zinc (Zn)	mg/L	0.0137	<0.00010	<0.00010	0.00010	7947498
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	7947498
Total Calcium (Ca)	mg/L	66.6	<0.050	<0.050	0.050	7945960
Total Magnesium (Mg)	mg/L	4.75	<0.050	<0.050	0.050	7945960
RDL = Reportable Detection Limit						

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MN5100	MN5140	MN5141		
Sampling Date		2015/06/23 15:30	2015/06/23 13:30	2015/06/25 13:25		
COC Number		08409568	08409569	08409569		
	Units	**KZ-9**	**KZ-28**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	1.19	<0.050	<0.050	0.050	7945960
Total Sodium (Na)	mg/L	0.748	<0.050	<0.050	0.050	7945960
Total Sulphur (S)	mg/L	8.7	<3.0	<3.0	3.0	7945960
RDL = Reportable Detection Limit						

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MN5101	MN5102	MN5103	MN5104	MN5139		
Sampling Date		2015/06/24 08:57	2015/06/23 17:00	2015/06/23 12:00	2015/06/23 10:30	2015/06/23 08:30		
COC Number		08409568	08409568	08409568	08409568	08409569		
	Units	**KZ-13**	**KZ-19**	**KZ-21**	**KZ-22**	**KZ-26**	**RDL**	**QC Batch**
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	60.8	135	212	165	178	0.50	7945871
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	7951485
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0293	0.0219	0.0264	0.0123	0.101	0.0030	7950238
Total Antimony (Sb)	mg/L	<0.000050	0.000071	0.000174	0.000092	0.000140	0.000050	7950238
Total Arsenic (As)	mg/L	0.000226	0.000263	0.00236	0.00124	0.00119	0.000020	7950238
Total Barium (Ba)	mg/L	0.0864	0.0644	0.0551	0.0564	0.0667	0.00010	7950238
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000013	0.000010	7950238
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	7950238
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7950238
Total Cadmium (Cd)	mg/L	0.0000197	0.0000488	0.0000149	0.0000148	0.0000310	0.0000050	7950238
Total Chromium (Cr)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	7950238
Total Cobalt (Co)	mg/L	0.000030	0.000048	0.000093	0.000054	0.000141	0.000010	7950238
Total Copper (Cu)	mg/L	0.00084	0.00078	0.00108	0.00106	0.00162	0.00020	7950238
Total Iron (Fe)	mg/L	0.0664	0.243	0.443	0.196	0.309	0.0050	7950238
Total Lead (Pb)	mg/L	<0.000050	0.000084	<0.000050	<0.000050	0.000221	0.000050	7950238
Total Lithium (Li)	mg/L	0.00087	0.00170	0.00262	0.00229	0.00350	0.00050	7950238
Total Manganese (Mn)	mg/L	0.0160	0.0238	0.0418	0.0202	0.0174	0.00010	7950238
Total Molybdenum (Mo)	mg/L	0.000548	0.000517	0.00184	0.00121	0.00115	0.000050	7950238
Total Nickel (Ni)	mg/L	0.00063	0.00044	0.00312	0.00162	0.00183	0.00010	7950238
Total Phosphorus (P)	mg/L	<0.010	0.017	0.026	0.011	0.030	0.010	7950238
Total Selenium (Se)	mg/L	0.000138	0.000569	0.000566	0.000462	0.000426	0.000040	7950238
Total Silicon (Si)	mg/L	2.54	2.22	3.05	2.81	3.21	0.10	7950238
Total Silver (Ag)	mg/L	0.0000258	0.0000285	0.0000180	0.0000155	0.0000133	0.0000050	7950238
Total Strontium (Sr)	mg/L	0.0609	0.134	0.156	0.152	0.159	0.000050	7950238
Total Thallium (Tl)	mg/L	0.0000049	0.0000042	0.0000035	0.0000026	0.0000043	0.0000020	7950238
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7950238
Total Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7950238
Total Uranium (U)	mg/L	0.000410	0.000707	0.00268	0.00191	0.00188	0.0000050	7950238
Total Vanadium (V)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00056	0.00050	7950238
Total Zinc (Zn)	mg/L	0.0028	0.0080	0.0021	0.0018	0.0024	0.0010	7950238
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00012	<0.00010	0.00020	0.00010	7950238
Total Calcium (Ca)	mg/L	20.5	45.9	54.3	45.0	47.5	0.25	7945960
Total Magnesium (Mg)	mg/L	2.32	5.01	18.6	12.9	14.3	0.25	7945960

RDL = Reportable Detection Limit

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MN5101	MN5102	MN5103	MN5104	MN5139		
Sampling Date		2015/06/24 08:57	2015/06/23 17:00	2015/06/23 12:00	2015/06/23 10:30	2015/06/23 08:30		
COC Number		08409568	08409568	08409568	08409568	08409569		
	Units	KZ-13	KZ-19	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Total Potassium (K)	mg/L	1.43	1.20	1.18	1.17	1.19	0.25	7945960
Total Sodium (Na)	mg/L	0.90	0.84	1.12	1.08	1.29	0.25	7945960
Total Sulphur (S)	mg/L	<15	<15	<15	<15	<15	15	7945960
RDL = Reportable Detection Limit								

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	7.7°C
Package 2	8.7°C

Sample MN5102, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MN5103, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MN5104, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MN5140, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

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

Maxxam Job #: B553960
Report Date: 2015/07/03

QUALITY ASSURANCE REPORT

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7947430	Acidity (pH 4.5)	2015/06/26					<0.50	mg/L	NC	20
7947430	Acidity (pH 8.3)	2015/06/26			95	80 - 120	<0.50	mg/L	NC	20
7947498	Total Aluminum (Al)	2015/06/27	102	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
7947498	Total Antimony (Sb)	2015/06/27	97	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
7947498	Total Arsenic (As)	2015/06/27	96	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
7947498	Total Barium (Ba)	2015/06/27	105	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
7947498	Total Beryllium (Be)	2015/06/27	102	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
7947498	Total Bismuth (Bi)	2015/06/27	93	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
7947498	Total Boron (B)	2015/06/27					<0.010	mg/L	NC	20
7947498	Total Cadmium (Cd)	2015/06/27	85	80 - 120	94	80 - 120	<0.0000050	mg/L	NC	20
7947498	Total Chromium (Cr)	2015/06/27	95	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
7947498	Total Cobalt (Co)	2015/06/27	96	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
7947498	Total Copper (Cu)	2015/06/27	96	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
7947498	Total Iron (Fe)	2015/06/27	108	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
7947498	Total Lead (Pb)	2015/06/27	97	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
7947498	Total Lithium (Li)	2015/06/27	89	80 - 120	82	80 - 120	<0.00050	mg/L	NC	20
7947498	Total Manganese (Mn)	2015/06/27	95	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
7947498	Total Molybdenum (Mo)	2015/06/27	97	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
7947498	Total Nickel (Ni)	2015/06/27	95	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
7947498	Total Phosphorus (P)	2015/06/27					<0.0020	mg/L	NC	20
7947498	Total Selenium (Se)	2015/06/27	98	80 - 120	96	80 - 120	<0.000040	mg/L	NC	20
7947498	Total Silicon (Si)	2015/06/27					<0.050	mg/L	NC	20
7947498	Total Silver (Ag)	2015/06/27	84	80 - 120	78 (1)	80 - 120	<0.0000050	mg/L	NC	20
7947498	Total Strontium (Sr)	2015/06/27	92	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
7947498	Total Thallium (Tl)	2015/06/27	91	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
7947498	Total Tin (Sn)	2015/06/27	98	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
7947498	Total Titanium (Ti)	2015/06/27	98	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7947498	Total Uranium (U)	2015/06/27	98	80 - 120	111	80 - 120	<0.0000020	mg/L	NC	20
7947498	Total Vanadium (V)	2015/06/27	97	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
7947498	Total Zinc (Zn)	2015/06/27	95	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
7947498	Total Zirconium (Zr)	2015/06/27					<0.00010	mg/L	NC	20

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

Maxxam Job #: B553960
Report Date: 2015/07/03

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7948088	Dissolved Chloride (Cl)	2015/06/26	97	80 - 120	98	80 - 120	<0.50	mg/L	NC	20
7948093	Dissolved Sulphate (SO4)	2015/06/26	89	80 - 120	91	80 - 120	<0.50	mg/L	NC	20
7948202	True Colour	2015/06/26			109	80 - 120	<5.0	Col. Unit	3.5	20
7948241	Nitrate plus Nitrite (N)	2015/06/26	99	80 - 120	99	80 - 120	<0.0020	mg/L	NC	25
7948242	Nitrite (N)	2015/06/26	98	80 - 120	104	80 - 120	<0.0020	mg/L	NC	25
7948358	Alkalinity (PP as CaCO3)	2015/06/27					<0.50	mg/L	NC	20
7948358	Alkalinity (Total as CaCO3)	2015/06/27	94	80 - 120	102	80 - 120	<0.50	mg/L	0.82	20
7948358	Bicarbonate (HCO3)	2015/06/27					<0.50	mg/L	0.87	20
7948358	Carbonate (CO3)	2015/06/27					<0.50	mg/L	NC	20
7948358	Hydroxide (OH)	2015/06/27					<0.50	mg/L	NC	20
7948360	Total Ammonia (N)	2015/06/26	98	80 - 120	97	80 - 120	<0.0050	mg/L	NC	20
7948361	pH	2015/06/27			102	97 - 103			1.8	N/A
7948362	Conductivity	2015/06/27			101	80 - 120	1.1, RDL=1.0	uS/cm	1.3	20
7948394	Dissolved Organic Carbon (C)	2015/06/30	100	80 - 120	105	80 - 120	<0.50	mg/L	NC	20
7948458	Fluoride (F)	2015/06/26			106	80 - 120	<0.010	mg/L		
7948459	Fluoride (F)	2015/06/26	106	80 - 120	104	80 - 120	<0.010	mg/L	NC	20
7948915	Total Suspended Solids	2015/06/29			107	80 - 120	<1.0	mg/L		
7950238	Total Aluminum (Al)	2015/06/29	107	80 - 120	108	80 - 120	<0.0030	mg/L	8.5	20
7950238	Total Antimony (Sb)	2015/06/29	105	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
7950238	Total Arsenic (As)	2015/06/29	101	80 - 120	101	80 - 120	<0.000020	mg/L	1.5	20
7950238	Total Barium (Ba)	2015/06/29	NC	80 - 120	105	80 - 120	<0.00010	mg/L	3.0	20
7950238	Total Beryllium (Be)	2015/06/29	109	80 - 120	106	80 - 120	0.000010, RDL=0.000010	mg/L	NC	20
7950238	Total Bismuth (Bi)	2015/06/29	104	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
7950238	Total Boron (B)	2015/06/29					<0.050	mg/L	NC	20
7950238	Total Cadmium (Cd)	2015/06/29	100	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
7950238	Total Chromium (Cr)	2015/06/29	102	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7950238	Total Cobalt (Co)	2015/06/29	100	80 - 120	99	80 - 120	<0.000010	mg/L	NC	20
7950238	Total Copper (Cu)	2015/06/29	104	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
7950238	Total Iron (Fe)	2015/06/29	NC	80 - 120	109	80 - 120	<0.0050	mg/L	1.2	20
7950238	Total Lead (Pb)	2015/06/29	104	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7950238	Total Lithium (Li)	2015/06/29	102	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7950238	Total Manganese (Mn)	2015/06/29	NC	80 - 120	102	80 - 120	<0.00010	mg/L	0.62	20
7950238	Total Molybdenum (Mo)	2015/06/29	NC	80 - 120	104	80 - 120	<0.000050	mg/L	1.1	20
7950238	Total Nickel (Ni)	2015/06/29	102	80 - 120	102	80 - 120	<0.00010	mg/L	2.1	20
7950238	Total Phosphorus (P)	2015/06/29					<0.010	mg/L	NC	20
7950238	Total Selenium (Se)	2015/06/29	94	80 - 120	91	80 - 120	<0.000040	mg/L	NC	20
7950238	Total Silicon (Si)	2015/06/29					<0.10	mg/L	4.8	20
7950238	Total Silver (Ag)	2015/06/29	117	80 - 120	94	80 - 120	0.0000057, RDL=0.0000050	mg/L	NC	20
7950238	Total Strontium (Sr)	2015/06/29	NC	80 - 120	96	80 - 120	<0.000050	mg/L	0.16	20
7950238	Total Thallium (Tl)	2015/06/29	93	80 - 120	93	80 - 120	<0.0000020	mg/L	NC	20
7950238	Total Tin (Sn)	2015/06/29	105	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
7950238	Total Titanium (Ti)	2015/06/29	101	80 - 120	100	80 - 120	<0.0050	mg/L	NC	20
7950238	Total Uranium (U)	2015/06/29	115	80 - 120	108	80 - 120	<0.0000050	mg/L	3.1	20
7950238	Total Vanadium (V)	2015/06/29	106	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
7950238	Total Zinc (Zn)	2015/06/29	96	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
7950238	Total Zirconium (Zr)	2015/06/29					<0.00010	mg/L	NC	20
7950501	Strong Acid Dissoc. Cyanide (CN)	2015/06/29	104	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
7950510	Weak Acid Dissoc. Cyanide (CN)	2015/06/29	103	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
7950580	Dissolved Aluminum (Al)	2015/06/29	100	80 - 120	110	80 - 120	<0.00050	mg/L	NC	20
7950580	Dissolved Antimony (Sb)	2015/06/29	99	80 - 120	111	80 - 120	<0.000020	mg/L	NC	20
7950580	Dissolved Arsenic (As)	2015/06/29	99	80 - 120	108	80 - 120	<0.000020	mg/L	NC	20
7950580	Dissolved Barium (Ba)	2015/06/29	104	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
7950580	Dissolved Beryllium (Be)	2015/06/29	100	80 - 120	110	80 - 120	<0.000010	mg/L	NC	20
7950580	Dissolved Bismuth (Bi)	2015/06/29	97	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
7950580	Dissolved Boron (B)	2015/06/29					<0.010	mg/L	NC	20
7950580	Dissolved Cadmium (Cd)	2015/06/29	98	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
7950580	Dissolved Chromium (Cr)	2015/06/29	96	80 - 120	107	80 - 120	<0.00010	mg/L	NC	20
7950580	Dissolved Cobalt (Co)	2015/06/29	98	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
7950580	Dissolved Copper (Cu)	2015/06/29	96	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20
7950580	Dissolved Iron (Fe)	2015/06/29	106	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20

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

Maxxam Job #: B553960
Report Date: 2015/07/03

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7950580	Dissolved Lead (Pb)	2015/06/29	99	80 - 120	109	80 - 120	<0.0000050	mg/L	NC	20
7950580	Dissolved Lithium (Li)	2015/06/29	100	80 - 120	109	80 - 120	<0.00050	mg/L	NC	20
7950580	Dissolved Manganese (Mn)	2015/06/29	94	80 - 120	106	80 - 120	<0.000050	mg/L	NC	20
7950580	Dissolved Molybdenum (Mo)	2015/06/29	96	80 - 120	109	80 - 120	<0.000050	mg/L	NC	20
7950580	Dissolved Nickel (Ni)	2015/06/29	96	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
7950580	Dissolved Phosphorus (P)	2015/06/29					0.0025, RDL=0.0020	mg/L		
7950580	Dissolved Selenium (Se)	2015/06/29	97	80 - 120	107	80 - 120	<0.000040	mg/L	NC	20
7950580	Dissolved Silicon (Si)	2015/06/29					<0.050	mg/L	NC	20
7950580	Dissolved Silver (Ag)	2015/06/29	93	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
7950580	Dissolved Strontium (Sr)	2015/06/29	93	80 - 120	110	80 - 120	<0.000050	mg/L	NC	20
7950580	Dissolved Thallium (Tl)	2015/06/29	95	80 - 120	105	80 - 120	<0.0000020	mg/L	NC	20
7950580	Dissolved Tin (Sn)	2015/06/29	99	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
7950580	Dissolved Titanium (Ti)	2015/06/29	95	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
7950580	Dissolved Uranium (U)	2015/06/29	104	80 - 120	105	80 - 120	<0.0000020	mg/L	NC	20
7950580	Dissolved Vanadium (V)	2015/06/29	98	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
7950580	Dissolved Zinc (Zn)	2015/06/29	102	80 - 120	106	80 - 120	<0.00010	mg/L	NC	20
7950580	Dissolved Zirconium (Zr)	2015/06/29					<0.00010	mg/L	NC	20
7950665	Dissolved Phosphorus (P)	2015/06/29	NC	80 - 120	94	80 - 120	<0.0020	mg/L	0.51	20
7950668	Total Phosphorus (P)	2015/06/29			95	80 - 120	<0.0020	mg/L		
7950670	Total Phosphorus (P)	2015/06/29	96	80 - 120	95	80 - 120	<0.0020	mg/L	0.32	20
7951325	Dissolved Chloride (Cl)	2015/06/29	100	80 - 120	104	80 - 120	<0.50	mg/L		
7951485	Total Mercury (Hg)	2015/06/30	107	80 - 120	116	80 - 120	<0.0000020	mg/L	NC	20
7951514	Dissolved Mercury (Hg)	2015/06/30	89	80 - 120	88	80 - 120	<0.0000020	mg/L	NC	20
7952019	Dissolved Organic Carbon (C)	2015/06/30	98	80 - 120	105	80 - 120	<0.50	mg/L	4.6	20
7953116	Dissolved Lithium (Li)	2015/07/02			102	80 - 120	<0.00050	mg/L		
7953116	Dissolved Phosphorus (P)	2015/07/02					<0.0020	mg/L		

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

Maxxam Job #: B553960
Report Date: 2015/07/03

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7953116	Dissolved Silicon (Si)	2015/07/02					<0.050	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Blank Spike outside acceptance criteria (10% of analytes failure allowed).

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

Maxxam Job #: B553960
Report Date: 2015/07/03

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

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

David Huang, BBY Scientific Specialist

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

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

Maxxam
A Bureau Veritas Group Company

Burnab 65-8566

CHAIN OF CUSTODY RECORD

08409568

BBY FCD-00077/05

Page 1 2

B553960

Invoice Information		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name: BMC MINERALS LTD.	Company Name: ALEXCO ENVIRONMENTAL	Quotation #: B50743		x Regular TAT 5 days (Most analyses)
Contact Name:	Contact Name: KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 530-1130 WEST PENDER ST	Address: UNIT 3 151 INDUCSTRIAL RD	Project #: BMC-15-01		Rush TAT (Surcharges will be applied)
Vancouver, BC PC: V6E 4A4	Whitehorse, YK PC: V1A 2V3	Site Location: Kudz Ze Kayah		Same Day / 2 Days / 1 Day / 3 Days
Phone:	Phone: (867) 668-6463	Site #:		
Email:	Email: kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
BC CSR Soil / BC CSR Water / CCME (Specify) / Other (Specify) / Drinking Water / BC Water Quality	Return Cooler / Ship Sample Bottles (Please Specify) / USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	~~KZ-8~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
2	~~KZ-8~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
3	KZ-9	MN5100	2015/06/23	15:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
4	KZ-13	MN5101	2015/06/24	8:57	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
5	~~KZ-15~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
6	~~KZ-16~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
7	~~KZ-18~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
8	KZ-19	MN5102	2015/06/23	17:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
9	KZ-21	MN5103	2015/06/23	12:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
10	KZ-22	MN5104	2015/06/23	10:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA	NA	9.9.8
NA	NA	7.9.7

COOLING MEDIA PRESENT Y / N

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Catherine Hemy	2015/06/24		Laurel Berthier	2015/06/25	13:25	B553960

Maxxam
A Bureau Veritas Group Company

Burnaby: 460 66

CHAIN OF CUSTODY RECORD

08409569

BBY FCD-00077/05

B553960

Invoice Information		Project Information		Turnaround Time (TAT) Required
Company Name: BMC MINERALS LTD.	Company Name: ALEXCO ENVIRONMENTAL	Quotation #: B50743		[x] Regular TAT 5 days (Most analyses)
Contact Name:	Contact Name: KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 530-1130 WEST PENDER ST	Address: UNIT 3 151 INDUCSTRIAL RD	Project #: BMC-15-01		Rush TAT (Surcharges will be applied)
Vancouver, BC PC: V6E 4A4	Whitehorse, YK PC: V1A 2V3	Site Location: Kudz Ze Kayah		[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:	Phone: (867) 668-6463	Site #:		Date Required:
Email:	Email: kwoloshyn@alexcoresource.com	Sampled By:		Rush Confirmation #:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-26	MN5134	2015/06/23	8:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
2	KZ-28	MN5140	2015/06/23	13:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
3	Trip Blank	MN5141	—	—	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
4	KZ-9 west seep	MN5142	2015/06/24	10:23	water		x					x	x	x	x							3		analyses included
5	KZ-9 east seep	MN5143	2015/06/24	10:35	water		x					x	x	x	x							3		under "general"
6	seep 3	MN5144	2015/06/24	11:36	water		x					x	x	x	x							3		
7	seep 4	MN5145	2015/06/24	12:26	water		x					x	x	x	v							3		
8	seep 5	MN5146	2015/06/24	12:40	water		x					x	x	x	x							3		
9																								
10																								

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA	NA	9.8
NA	NA	7.7

COOLING MEDIA PRESENT (Y) N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Catherine Henry	2015/06/24		Laurel Beattie	2015/06/25	13:25	B553960

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08412400, 08412401

Attention:KAI WOLOSHYN

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

Report Date: 2015/08/13
Report #: R2023357
Version: 2 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B565281
Received: 2015/07/30, 14:15

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	11	N/A	2015/07/31	BBY6SOP-00037	SM 22 2310 B m
Acidity pH 4.5 & pH 8.3 (as CaCO3)	4	N/A	2015/08/01	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	12	2015/07/31	2015/07/31	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	1	2015/07/31	2015/08/01	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	2	2015/08/01	2015/08/01	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	15	N/A	2015/08/04	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	13	N/A	2015/08/04	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	13	N/A	2015/08/11	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	15	N/A	2015/08/01	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	12	N/A	2015/08/05	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2015/08/05	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	12	N/A	2015/07/31	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	3	N/A	2015/08/01	BBY6SOP-00026	SM 22 2510 B m
Fluoride	14	N/A	2015/08/04	BBY6SOP-00048	SM 22 4500-F C m
Fluoride	1	N/A	2015/08/05	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	13	N/A	2015/08/05	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	14	N/A	2015/08/05	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	1	N/A	2015/08/06	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	13	N/A	2015/08/05	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	12	2015/08/04	2015/08/04	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	1	2015/08/05	2015/08/05	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	13	N/A	2015/08/05	BBY WI-00033	SM 22 1030E
Ion Balance	2	N/A	2015/08/06	BBY WI-00033	SM 22 1030E
Sum of cations, anions	15	N/A	2015/08/05	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	14	N/A	2015/08/05	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2015/08/06	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	15	N/A	2015/08/04	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	13	N/A	2015/08/05	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	13	N/A	2015/08/04	BBY7SOP-00002	EPA 6020A R1 m

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

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08412400, 08412401

Attention:KAI WOLOSHYN

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

Report Date: 2015/08/13
Report #: R2023357
Version: 2 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B565281
Received: 2015/07/30, 14:15

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Ammonia-N (Unpreserved)	12	N/A	2015/08/04	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Unpreserved)	1	N/A	2015/08/06	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	2	N/A	2015/07/31	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrate+Nitrite (N) (low level)	13	N/A	2015/08/01	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	2	N/A	2015/07/31	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	13	N/A	2015/08/01	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	2	N/A	2015/07/31	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	13	N/A	2015/08/05	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	14	N/A	2015/07/31	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	12	N/A	2015/07/31	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	3	N/A	2015/08/01	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	15	N/A	2015/08/04	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	13	2015/08/01	2015/08/01	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	13	N/A	2015/08/01	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	13	2015/08/05	2015/08/05	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0670		MU0671		MU0672		
Sampling Date		2015/07/29 12:10		2015/07/28 11:50		2015/07/29 10:30		
COC Number		08412400		08412400		08412400		
	Units	KZ-2	QC Batch	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	7988724	<0.50	7988725	<0.50	0.50	7988724
Acidity (pH 8.3)	mg/L	<0.50	7988724	<0.50	7988725	<0.50	0.50	7988724
Calculated Parameters								
Anion Sum	meq/L	1.8	7987551	2.6	7987551	3.1	N/A	7987551
Cation Sum	meq/L	1.9	7987551	2.8	7987551	3.2	N/A	7987551
Filter and HNO3 Preservation	N/A	LAB	7987125	LAB	7987125	LAB	N/A	7987125
Ion Balance	N/A	1.0	7987550	1.1	7987550	1.0	0.010	7987550
Nitrate (N)	mg/L	0.0636	7987554	0.0112	7987554	0.0340	0.0020	7987554
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	7989913	<0.00050	7989913	<0.00050	0.00050	7989913
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	7998702	<0.00050	7998702	0.00068 (1)	0.00050	7998702
Fluoride (F)	mg/L	0.037	7992222	0.054	7992222	0.066	0.010	7992222
Dissolved Organic Carbon (C)	mg/L	<0.50	7991672	1.83	7991672	0.56	0.50	7991672
Alkalinity (Total as CaCO3)	mg/L	53.3	7988005	99.4	7988005	124	0.50	7988005
Alkalinity (PP as CaCO3)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7988005
Bicarbonate (HCO3)	mg/L	65.0	7988005	121	7988005	151	0.50	7988005
Carbonate (CO3)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7988005
Hydroxide (OH)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7988005
Anions								
Dissolved Sulphate (SO4)	mg/L	36.5	7990425	31.6	7990425	28.2	0.50	7990425
Dissolved Chloride (Cl)	mg/L	<0.50	7990423	<0.50	7990423	<0.50	0.50	7990423
MISCELLANEOUS								
True Colour	Col. Unit	5.3	7988701	12.3 (2)	7988701	11.0	5.0	7988701
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0022	7988713	0.0036 (2)	7988713	0.0027	0.0020	7988713
Total Ammonia (N)	mg/L	0.0122 (3)	7990718	0.0062 (3)	7990718	0.0100 (3)	0.0050	7990718
Nitrate plus Nitrite (N)	mg/L	0.0636	7988755	0.0112 (2)	7988755	0.0340	0.0020	7988755
Nitrite (N)	mg/L	<0.0020	7988756	<0.0020 (2)	7988756	<0.0020	0.0020	7988756
Total Phosphorus (P)	mg/L	0.0036	7988709	0.0034 (2)	7988709	<0.0020	0.0020	7988711
Physical Properties								
Conductivity	uS/cm	184	7987998	256	7987998	289	1.0	7987998

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Weak Acid Dissociable CN > Strong Acid Dissociable CN. Results are within limits of uncertainty(MU).
(2) Sample analysed past recommended hold time.
(3) Sample preserved to extend hold time.

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0670		MU0671		MU0672		
Sampling Date		2015/07/29 12:10		2015/07/28 11:50		2015/07/29 10:30		
COC Number		08412400		08412400		08412400		
	Units	**KZ-2**	**QC Batch**	**KZ-7**	**QC Batch**	**KZ-9**	**RDL**	**QC Batch**
pH	pH	7.75	7987996	8.01	7987996	7.90	N/A	7987996
Physical Properties								
Total Suspended Solids	mg/L	<1.0	7990678	<1.0 (1)	7990000	1.2	1.0	7990678

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

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0673		MU0674		MU0675		
Sampling Date		2015/07/29 14:35		2015/07/28 13:05		2015/07/28 14:00		
COC Number		08412400		08412400		08412400		
	Units	KZ-13	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	7988724	<0.50	7988724	<0.50	0.50	7988725
Acidity (pH 8.3)	mg/L	<0.50	7988724	<0.50	7988724	<0.50	0.50	7988725
Calculated Parameters								
Anion Sum	meq/L	1.4	7987551	3.0	7987551	2.7	N/A	7987551
Cation Sum	meq/L	1.5	7987551	3.2	7987551	2.9	N/A	7987551
Filter and HNO3 Preservation	N/A	LAB	7987125	LAB	7987125	LAB	N/A	7987125
Ion Balance	N/A	1.0	7987550	1.1	7987550	1.1	0.010	7987550
Nitrate (N)	mg/L	0.0198	7987554	0.0153	7987554	0.0178	0.0020	7987554
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00061	7989913	0.00050	7989913	<0.00050	0.00050	7989913
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00070 (1)	7998702	0.00069 (1)	7998702	0.00085	0.00050	7998702
Fluoride (F)	mg/L	0.043	7992222	0.074	7992283	0.065	0.010	7992222
Dissolved Organic Carbon (C)	mg/L	1.80	7991672	0.93	7991672	<0.50	0.50	7991672
Alkalinity (Total as CaCO3)	mg/L	51.7	7988005	125	7988005	115	0.50	7987981
Alkalinity (PP as CaCO3)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7987981
Bicarbonate (HCO3)	mg/L	63.1	7988005	153	7988005	140	0.50	7987981
Carbonate (CO3)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7987981
Hydroxide (OH)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7987981
Anions								
Dissolved Sulphate (SO4)	mg/L	11.6	7990425	23.1	7990425	19.2	0.50	7990425
Dissolved Chloride (Cl)	mg/L	<0.50	7990423	<0.50	7990423	<0.50	0.50	7990423
MISCELLANEOUS								
True Colour	Col. Unit	18.7	7988701	8.7 (2)	7988701	8.3 (2)	5.0	7988702
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0045	7988713	0.0025 (2)	7988713	<0.0020 (2)	0.0020	7988713
Total Ammonia (N)	mg/L	0.0102 (3)	7990718	<0.0050 (3)	7990722	0.0114 (3)	0.0050	7990722
Nitrate plus Nitrite (N)	mg/L	0.0198	7988755	0.0153 (2)	7988755	0.0178 (2)	0.0020	7988755
Nitrite (N)	mg/L	<0.0020	7988756	<0.0020 (2)	7988756	<0.0020 (2)	0.0020	7988756
Total Phosphorus (P)	mg/L	0.0038	7988709	0.0028 (2)	7988711	<0.0020 (2)	0.0020	7988711
Physical Properties								
Conductivity	uS/cm	142	7987998	282	7987998	257	1.0	7987991

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Weak Acid Dissociable CN > Strong Acid Dissociable CN. Results are within limits of uncertainty(MU).
(2) Sample analysed past recommended hold time.
(3) Sample preserved to extend hold time.

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0673		MU0674		MU0675		
Sampling Date		2015/07/29 14:35		2015/07/28 13:05		2015/07/28 14:00		
COC Number		08412400		08412400		08412400		
	Units	**KZ-13**	**QC Batch**	**KZ-15**	**QC Batch**	**KZ-16**	**RDL**	**QC Batch**
pH	pH	7.78	7987996	8.08	7987996	8.04	N/A	7987992
Physical Properties								
Total Suspended Solids	mg/L	1.0	7990678	<1.0 (1)	7990000	<1.0 (1)	1.0	7990000

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

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0676		MU0677		MU0678		
Sampling Date		2015/07/28 15:00		2015/07/29 12:45		2015/07/28 17:00		
COC Number		08412400		08412400		08412400		
	Units	KZ-17	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	7988724	<0.50	7988724	<0.50	0.50	7988729
Acidity (pH 8.3)	mg/L	<0.50	7988724	<0.50	7988724	<0.50	0.50	7988729
Calculated Parameters								
Anion Sum	meq/L	3.4	7987551	0.0000	7987551	4.5	N/A	7987551
Cation Sum	meq/L	3.8	7987551	0.0041	7987551	4.8	N/A	7987551
Filter and HNO3 Preservation	N/A	LAB	7987125	LAB	7987125	LAB	N/A	7987125
Ion Balance	N/A	1.1	7987550	NC	7987550	1.1	0.010	7987550
Nitrate (N)	mg/L	0.0269	7987554	<0.0020	7987554	0.0025	0.0020	7987554
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	7989913	<0.00050	7989913	0.00105	0.00050	7989913
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00065 (1)	7998702	<0.00050	7998702	0.00126 (1)	0.00050	7998702
Fluoride (F)	mg/L	0.100	7992222	<0.010	7992222	0.170	0.010	7992222
Dissolved Organic Carbon (C)	mg/L	1.82	7991672	0.85	7991672	7.20	0.50	7991672
Alkalinity (Total as CaCO3)	mg/L	143	7988005	<0.50	7988005	183	0.50	7988005
Alkalinity (PP as CaCO3)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7988005
Bicarbonate (HCO3)	mg/L	174	7988005	<0.50	7988005	223	0.50	7988005
Carbonate (CO3)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7988005
Hydroxide (OH)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7988005
Anions								
Dissolved Sulphate (SO4)	mg/L	26.7	7990425	<0.50	7990425	37.7	0.50	7990425
Dissolved Chloride (Cl)	mg/L	<0.50	7990423	<0.50	7990423	0.76	0.50	7990423
MISCELLANEOUS								
True Colour	Col. Unit	8.6 (2)	7988701	<5.0	7988701	57.7 (2)	5.0	7988701
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0030 (2)	7988713	0.0022	7988713	0.0124 (2)	0.0020	7988713
Total Ammonia (N)	mg/L	<0.0050 (3)	7990718	0.0104 (3)	7990722	0.0053 (3)	0.0050	7990722
Nitrate plus Nitrite (N)	mg/L	0.0269 (2)	7988755	<0.0020	7988755	0.0025 (2)	0.0020	7988755
Nitrite (N)	mg/L	<0.0020 (2)	7988756	<0.0020	7988756	<0.0020 (2)	0.0020	7988756
Total Phosphorus (P)	mg/L	0.0030 (2)	7988711	<0.0020	7988711	0.0116 (2)	0.0020	7988709
Physical Properties								
Conductivity	uS/cm	323	7987998	<1.0	7987998	407	1.0	7987998

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Weak Acid Dissociable CN > Strong Acid Dissociable CN. Results are within limits of uncertainty(MU).
(2) Sample analysed past recommended hold time.
(3) Sample preserved to extend hold time.

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0676		MU0677		MU0678		
Sampling Date		2015/07/28 15:00		2015/07/29 12:45		2015/07/28 17:00		
COC Number		08412400		08412400		08412400		
	Units	**KZ-17**	**QC Batch**	**KZ-19**	**QC Batch**	**KZ-21**	**RDL**	**QC Batch**
pH	pH	8.06	7987996	5.47	7987996	8.21	N/A	7987996
Physical Properties								
Total Suspended Solids	mg/L	1.0 (1)	7990000	<1.0	7990678	2.0 (1)	1.0	7990000

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

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0679		MU0691		MU0692		
Sampling Date		2015/07/28 15:50		2015/07/29 09:00		2015/07/28		
COC Number		08412400		08412401		08412401		
	Units	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	7988725	<0.50	7988724	<0.50	0.50	7988724
Acidity (pH 8.3)	mg/L	<0.50	7988725	<0.50	7988724	<0.50	0.50	7988724
Calculated Parameters								
Anion Sum	meq/L	4.0	7987551	4.2	7987551	3.4	N/A	7987551
Cation Sum	meq/L	4.3	7987551	4.5	7987551	3.8	N/A	7987551
Filter and HNO3 Preservation	N/A	LAB	7987125	LAB	7987125	LAB	N/A	7987125
Ion Balance	N/A	1.1	7987550	1.1	7987550	1.1	0.010	7987550
Nitrate (N)	mg/L	0.0033	7987554	0.0079	7987554	0.0284	0.0020	7987554
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00085	7989913	0.00060	7989913	0.00055	0.00050	7989913
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00091 (1)	7998702	0.00067 (1)	7998702	0.00061 (1)	0.00050	7998702
Fluoride (F)	mg/L	0.120	7992222	0.120	7992222	0.100	0.010	7992222
Dissolved Organic Carbon (C)	mg/L	3.04	7991672	3.32	7991672	1.65	0.50	7991672
Alkalinity (Total as CaCO3)	mg/L	165	7988005	176	7988005	144	0.50	7988005
Alkalinity (PP as CaCO3)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7988005
Bicarbonate (HCO3)	mg/L	201	7988005	214	7988005	176	0.50	7988005
Carbonate (CO3)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7988005
Hydroxide (OH)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7988005
Anions								
Dissolved Sulphate (SO4)	mg/L	32.7	7990425	32.3	7990425	26.8	0.50	7990425
Dissolved Chloride (Cl)	mg/L	0.50	7990423	0.55	7990423	<0.50	0.50	7990423
MISCELLANEOUS								
True Colour	Col. Unit	32.2 (2)	7988701	27.7	7988701	8.1 (2)	5.0	7988701
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0090 (2)	7988713	0.0052	7988713	0.0030 (2)	0.0020	7988713
Total Ammonia (N)	mg/L	<0.0050 (3)	7990718	0.0130 (3)	7990722	<0.0050 (3)	0.0050	7990718
Nitrate plus Nitrite (N)	mg/L	0.0033 (2)	7988755	0.0079	7988755	0.0284 (2)	0.0020	7988753
Nitrite (N)	mg/L	<0.0020 (2)	7988756	<0.0020	7988756	<0.0020 (2)	0.0020	7988754
Total Phosphorus (P)	mg/L	0.0058 (2)	7988711	0.0036	7988711	0.0030 (2)	0.0020	7988711
Physical Properties								
Conductivity	uS/cm	362	7987998	383	7987998	321	1.0	7987998

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Weak Acid Dissociable CN > Strong Acid Dissociable CN. Results are within limits of uncertainty(MU).
(2) Sample analysed past recommended hold time.
(3) Sample preserved to extend hold time.

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0679		MU0691		MU0692		
Sampling Date		2015/07/28 15:50		2015/07/29 09:00		2015/07/28		
COC Number		08412400		08412401		08412401		
	Units	**KZ-22**	**QC Batch**	**KZ-26**	**QC Batch**	**KZ-28**	**RDL**	**QC Batch**
pH	pH	8.19	7987996	8.24	7987996	7.98	N/A	7987996
Physical Properties								
Total Suspended Solids	mg/L	1.4 (1)	7990000	1.6	7990678	<1.0 (1)	1.0	7990000

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

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0693		MU0694	MU0695		
Sampling Date		2015/07/30 14:15		2015/07/29 11:30	2015/07/29 11:20		
COC Number		08412401		08412401	08412401		
	Units	TRIP BLANK	QC Batch	KZ-9 EAST SEEP	KZ-9 WEST SEEP	RDL	QC Batch
Misc. Inorganics							
Acidity (pH 4.5)	mg/L	<0.50	7988725	<0.50	<0.50	0.50	7988729
Acidity (pH 8.3)	mg/L	<0.50	7988725	188	<0.50	0.50	7988729
Calculated Parameters							
Anion Sum	meq/L	0.00050	7987551	19	5.2	N/A	7987551
Cation Sum	meq/L	0.0011	7987551	21	5.4	N/A	7987551
Filter and HNO3 Preservation	N/A			LAB	LAB	N/A	7987125
Ion Balance	N/A	NC	7987550	1.1	1.1	0.010	7987550
Nitrate (N)	mg/L	<0.0020	7987554	0.0142	0.384	0.0020	7987554
Misc. Inorganics							
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	7989913			0.00050	
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	7998702			0.00050	
Fluoride (F)	mg/L	0.010	7992222	0.860	0.061	0.010	7992243
Dissolved Organic Carbon (C)	mg/L	0.63 (1)	7988816			0.50	
Alkalinity (Total as CaCO3)	mg/L	<0.50	7988005	951	218	0.50	7988779
Alkalinity (PP as CaCO3)	mg/L	<0.50	7988005	<0.50	<0.50	0.50	7988779
Bicarbonate (HCO3)	mg/L	<0.50	7988005	1160	266	0.50	7988779
Carbonate (CO3)	mg/L	<0.50	7988005	<0.50	<0.50	0.50	7988779
Hydroxide (OH)	mg/L	<0.50	7988005	<0.50	<0.50	0.50	7988779
Anions							
Dissolved Sulphate (SO4)	mg/L	<0.50	7990425	18.8	37.6	0.50	7990402
Dissolved Chloride (Cl)	mg/L	<0.50	7990423	1.5	<0.50	0.50	7990401
MISCELLANEOUS							
True Colour	Col. Unit	<5.0	7988701	44.8	<5.0	5.0	7988701
Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0020	7988713			0.0020	
Total Ammonia (N)	mg/L	<0.0050	7993707			0.0050	
Nitrate plus Nitrite (N)	mg/L	<0.0020	7988755	0.0142	0.384	0.0020	7988160
Nitrite (N)	mg/L	<0.0020	7988756	<0.0020	<0.0020	0.0020	7988161
Total Phosphorus (P)	mg/L	<0.0020	7988711			0.0020	
Physical Properties							
Conductivity	uS/cm	1.3	7987998	1560	470	1.0	7988782
pH	pH	5.97	7987996	6.71	8.12	N/A	7988781

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0693		MU0694	MU0695		
Sampling Date		2015/07/30 14:15		2015/07/29 11:30	2015/07/29 11:20		
COC Number		08412401		08412401	08412401		
	Units	**TRIP BLANK**	**QC Batch**	**KZ-9 EAST SEEP**	**KZ-9 WEST SEEP**	**RDL**	**QC Batch**
Physical Properties							
Total Suspended Solids	mg/L	<1.0	7990678			1.0	
RDL = Reportable Detection Limit							

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MU0670		MU0671		MU0672		
Sampling Date		2015/07/29 12:10		2015/07/28 11:50		2015/07/29 10:30		
COC Number		08412400		08412400		08412400		
	Units	KZ-2	QC Batch	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	90.7	7987220	137	7987220	156	0.50	7987220
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	7991944	<0.0000020	7991944	<0.0000020	0.0000020	7991954
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00416	7989823	0.00186	7989823	0.00165	0.00050	7989823
Dissolved Antimony (Sb)	mg/L	0.000028	7989823	0.000099	7989823	0.000066	0.000020	7989823
Dissolved Arsenic (As)	mg/L	0.000104	7989823	0.000252	7989823	0.000212	0.000020	7989823
Dissolved Barium (Ba)	mg/L	0.0566	7989823	0.0735	7989823	0.0794	0.000020	7989823
Dissolved Beryllium (Be)	mg/L	<0.000010	7989823	<0.000010	7989823	<0.000010	0.000010	7989823
Dissolved Bismuth (Bi)	mg/L	<0.0000050	7989823	<0.0000050	7989823	<0.0000050	0.0000050	7989823
Dissolved Boron (B)	mg/L	<0.010	7989823	<0.010	7989823	<0.010	0.010	7989823
Dissolved Cadmium (Cd)	mg/L	0.000204	7989823	0.0000977	7989823	0.0000399	0.0000050	7989823
Dissolved Chromium (Cr)	mg/L	<0.00010	7989823	<0.00010	7989823	<0.00010	0.00010	7989823
Dissolved Cobalt (Co)	mg/L	0.0000082	7989823	0.0000143	7989823	0.0000459	0.0000050	7989823
Dissolved Copper (Cu)	mg/L	0.000623	7989823	0.000558	7989823	0.000382	0.000050	7989823
Dissolved Iron (Fe)	mg/L	0.0019	7989823	0.0570	7989823	0.0855	0.0010	7989823
Dissolved Lead (Pb)	mg/L	0.0000929 (1)	7993398	0.0000137	7989823	<0.0000050	0.0000050	7989823
Dissolved Lithium (Li)	mg/L	0.00101	7989823	0.00150	7989823	0.00219	0.00050	7989823
Dissolved Manganese (Mn)	mg/L	0.000123	7989823	0.0131	7989823	0.0409	0.000050	7989823
Dissolved Molybdenum (Mo)	mg/L	0.000617	7989823	0.000486	7989823	0.000589	0.000050	7989823
Dissolved Nickel (Ni)	mg/L	0.000332	7989823	0.000433	7989823	0.000332	0.000020	7989823
Dissolved Phosphorus (P)	mg/L	0.0082	7989823	<0.0020	7989823	<0.0020	0.0020	7989823
Dissolved Selenium (Se)	mg/L	0.000600	7989823	0.000718	7989823	0.000625	0.000040	7989823
Dissolved Silicon (Si)	mg/L	2.25	7989823	2.53	7989823	2.82	0.050	7989823
Dissolved Silver (Ag)	mg/L	<0.0000050	7989823	<0.0000050	7989823	<0.0000050	0.0000050	7989823
Dissolved Strontium (Sr)	mg/L	0.0998	7989823	0.152	7989823	0.178	0.000050	7989823
Dissolved Thallium (Tl)	mg/L	0.0000035	7989823	0.0000027	7989823	<0.0000020	0.0000020	7989823
Dissolved Tin (Sn)	mg/L	<0.00020	7989823	<0.00020	7989823	<0.00020	0.00020	7989823
Dissolved Titanium (Ti)	mg/L	<0.00050	7989823	<0.00050	7989823	<0.00050	0.00050	7989823
Dissolved Uranium (U)	mg/L	0.00173	7989823	0.000865	7989823	0.000964	0.0000020	7989823
Dissolved Vanadium (V)	mg/L	<0.00020	7989823	<0.00020	7989823	<0.00020	0.00020	7989823
Dissolved Zinc (Zn)	mg/L	0.0242	7989823	0.0196	7989823	0.00646	0.00010	7989823
Dissolved Zirconium (Zr)	mg/L	<0.00010	7989823	<0.00010	7989823	<0.00010	0.00010	7989823

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

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MU0670		MU0671		MU0672		
Sampling Date		2015/07/29 12:10		2015/07/28 11:50		2015/07/29 10:30		
COC Number		08412400		08412400		08412400		
	Units	**KZ-2**	**QC Batch**	**KZ-7**	**QC Batch**	**KZ-9**	**RDL**	**QC Batch**
Dissolved Calcium (Ca)	mg/L	31.0	7987221	45.2	7987221	52.2	0.050	7987221
Dissolved Magnesium (Mg)	mg/L	3.22	7987221	5.78	7987221	6.32	0.050	7987221
Dissolved Potassium (K)	mg/L	1.81	7987221	1.55	7987221	1.49	0.050	7987221
Dissolved Sodium (Na)	mg/L	0.686	7987221	0.931	7987221	1.07	0.050	7987221
Dissolved Sulphur (S)	mg/L	12.7	7987221	10.9	7987221	10.3	3.0	7987221
RDL = Reportable Detection Limit								

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MU0673		MU0674	MU0675	MU0676		
Sampling Date		2015/07/29 14:35		2015/07/28 13:05	2015/07/28 14:00	2015/07/28 15:00		
COC Number		08412400		08412400	08412400	08412400		
	Units	KZ-13	QC Batch	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	70.5	7992800	156	141	184	0.50	7987220
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	7991954	<0.0000020	<0.0000020	<0.0000020	0.0000020	7991954
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00715	7989823	0.00168	0.00158	0.00127	0.00050	7989823
Dissolved Antimony (Sb)	mg/L	0.000028	7989823	0.000033	0.000021	0.000055	0.000020	7989823
Dissolved Arsenic (As)	mg/L	0.000249	7989823	0.000386	0.000317	0.000423	0.000020	7989823
Dissolved Barium (Ba)	mg/L	0.109	7989823	0.0667	0.0606	0.0732	0.000020	7989823
Dissolved Beryllium (Be)	mg/L	<0.000010	7989823	<0.000010	<0.000010	<0.000010	0.000010	7989823
Dissolved Bismuth (Bi)	mg/L	<0.0000050	7989823	<0.0000050	<0.0000050	<0.0000050	0.0000050	7989823
Dissolved Boron (B)	mg/L	<0.010	7989823	<0.010	<0.010	<0.010	0.010	7989823
Dissolved Cadmium (Cd)	mg/L	0.0000175	7989823	0.0000209	0.0000150	0.0000233	0.0000050	7989823
Dissolved Chromium (Cr)	mg/L	<0.00010	7989823	<0.00010	<0.00010	<0.00010	0.00010	7989823
Dissolved Cobalt (Co)	mg/L	0.0000219	7989823	0.0000186	0.0000133	0.0000143	0.0000050	7989823
Dissolved Copper (Cu)	mg/L	0.000435	7989823	0.000353	0.000338	0.000406	0.000050	7989823
Dissolved Iron (Fe)	mg/L	0.0311	7989823	0.0127	0.0045	0.0198	0.0010	7989823
Dissolved Lead (Pb)	mg/L	<0.0000050	7989823	<0.0000050	<0.0000050	<0.0000050	0.0000050	7989823
Dissolved Lithium (Li)	mg/L	0.00127	7989823	0.00187	0.00138	0.00280	0.00050	7989823
Dissolved Manganese (Mn)	mg/L	0.0168	7989823	0.0119	0.00284	0.0168	0.000050	7989823
Dissolved Molybdenum (Mo)	mg/L	0.000566	7989823	0.000839	0.000527	0.00138	0.000050	7989823
Dissolved Nickel (Ni)	mg/L	0.000492	7989823	0.000424	0.000359	0.000639	0.000020	7989823
Dissolved Phosphorus (P)	mg/L	0.0049	7989823	<0.0020	<0.0020	<0.0020	0.0020	7989823
Dissolved Selenium (Se)	mg/L	0.000138	7989823	0.000481	0.000431	0.000526	0.000040	7989823
Dissolved Silicon (Si)	mg/L	2.47	7989823	2.88	2.75	3.13	0.050	7989823
Dissolved Silver (Ag)	mg/L	<0.0000050	7989823	<0.0000050	<0.0000050	<0.0000050	0.0000050	7989823
Dissolved Strontium (Sr)	mg/L	0.0758	7989823	0.162	0.152	0.189	0.000050	7989823
Dissolved Thallium (Tl)	mg/L	0.0000024	7989823	<0.0000020	<0.0000020	<0.0000020	0.0000020	7989823
Dissolved Tin (Sn)	mg/L	<0.00020	7989823	<0.00020	<0.00020	<0.00020	0.00020	7989823
Dissolved Titanium (Ti)	mg/L	<0.00050	7989823	<0.00050	<0.00050	<0.00050	0.00050	7989823
Dissolved Uranium (U)	mg/L	0.000565	7989823	0.00174	0.00114	0.00260	0.0000020	7989823
Dissolved Vanadium (V)	mg/L	<0.00020	7989823	<0.00020	<0.00020	<0.00020	0.00020	7989823
Dissolved Zinc (Zn)	mg/L	0.00179	7989823	0.00125	0.00026	0.00218	0.00010	7989823
Dissolved Zirconium (Zr)	mg/L	<0.00010	7989823	<0.00010	<0.00010	<0.00010	0.00010	7989823
Dissolved Calcium (Ca)	mg/L	23.7	7993010	48.3	44.7	55.4	0.050	7987221

RDL = Reportable Detection Limit

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MU0673		MU0674	MU0675	MU0676		
Sampling Date		2015/07/29 14:35		2015/07/28 13:05	2015/07/28 14:00	2015/07/28 15:00		
COC Number		08412400		08412400	08412400	08412400		
	Units	**KZ-13**	**QC Batch**	**KZ-15**	**KZ-16**	**KZ-17**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	2.77	7993010	8.65	7.22	11.0	0.050	7987221
Dissolved Potassium (K)	mg/L	1.48	7993010	1.31	1.26	1.51	0.050	7987221
Dissolved Sodium (Na)	mg/L	0.989	7993010	1.06	1.03	1.20	0.050	7987221
Dissolved Sulphur (S)	mg/L	4.9	7993010	8.1	6.9	9.4	3.0	7987221
RDL = Reportable Detection Limit								

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MU0677	MU0678	MU0679	MU0691	MU0692		
Sampling Date		2015/07/29 12:45	2015/07/28 17:00	2015/07/28 15:50	2015/07/29 09:00	2015/07/28		
COC Number		08412400	08412400	08412400	08412401	08412401		
	Units	KZ-19	KZ-21	KZ-22	KZ-26	KZ-28	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	<0.50	237	210	222	184	0.50	7987220
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	7991954
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	<0.00050	0.00537	0.00456	0.00196	0.00199	0.00050	7989823
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000139	0.000086	0.000094	0.000056	0.000020	7989823
Dissolved Arsenic (As)	mg/L	<0.000020	0.00191	0.00126	0.000836	0.000441	0.000020	7989823
Dissolved Barium (Ba)	mg/L	<0.000020	0.0617	0.0673	0.0715	0.0755	0.000020	7989823
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	7989823
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7989823
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7989823
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000085	0.0000114	0.0000085	0.0000268	0.0000050	7989823
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00012	<0.00010	<0.00010	<0.00010	0.00010	7989823
Dissolved Cobalt (Co)	mg/L	<0.0000050	0.0000539	0.0000346	0.0000180	0.0000166	0.0000050	7989823
Dissolved Copper (Cu)	mg/L	<0.000050	0.000564	0.000490	0.000565	0.000413	0.000050	7989823
Dissolved Iron (Fe)	mg/L	<0.0010	0.157	0.0869	0.0357	0.0228	0.0010	7989823
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7989823
Dissolved Lithium (Li)	mg/L	<0.00050	0.00392	0.00316	0.00446	0.00294	0.00050	7989823
Dissolved Manganese (Mn)	mg/L	<0.000050	0.0166	0.00916	0.00285	0.0183	0.000050	7989823
Dissolved Molybdenum (Mo)	mg/L	<0.000050	0.00171	0.00130	0.00120	0.00136	0.000050	7989823
Dissolved Nickel (Ni)	mg/L	<0.000020	0.00302	0.00168	0.00135	0.000633	0.000020	7989823
Dissolved Phosphorus (P)	mg/L	0.0053	0.0057	0.0241	0.0025	<0.0020	0.0020	7989823
Dissolved Selenium (Se)	mg/L	<0.000040	0.000525	0.000553	0.000511	0.000548	0.000040	7989823
Dissolved Silicon (Si)	mg/L	<0.050	4.17	3.68	3.92	3.16	0.050	7989823
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7989823
Dissolved Strontium (Sr)	mg/L	<0.000050	0.186	0.187	0.203	0.186	0.000050	7989823
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	7989823
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7989823
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	7989823
Dissolved Uranium (U)	mg/L	<0.0000020	0.00299	0.00238	0.00233	0.00256	0.0000020	7989823
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7989823
Dissolved Zinc (Zn)	mg/L	<0.00010	0.00094	0.00111	0.00035	0.00239	0.00010	7989823
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	7989823
Dissolved Calcium (Ca)	mg/L	<0.050	58.9	56.1	58.9	55.5	0.050	7987221

RDL = Reportable Detection Limit

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MU0677	MU0678	MU0679	MU0691	MU0692		
Sampling Date		2015/07/29 12:45	2015/07/28 17:00	2015/07/28 15:50	2015/07/29 09:00	2015/07/28		
COC Number		08412400	08412400	08412400	08412401	08412401		
	Units	**KZ-19**	**KZ-21**	**KZ-22**	**KZ-26**	**KZ-28**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	<0.050	21.9	16.8	18.2	10.9	0.050	7987221
Dissolved Potassium (K)	mg/L	<0.050	1.36	1.36	1.41	1.50	0.050	7987221
Dissolved Sodium (Na)	mg/L	<0.050	1.42	1.39	1.49	1.19	0.050	7987221
Dissolved Sulphur (S)	mg/L	<3.0	13.3	11.7	11.3	9.5	3.0	7987221
RDL = Reportable Detection Limit								

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MU0693	MU0694	MU0695		
Sampling Date		2015/07/30 14:15	2015/07/29 11:30	2015/07/29 11:20		
COC Number		08412401	08412401	08412401		
	Units	TRIP BLANK	KZ-9 EAST SEEP	KZ-9 WEST SEEP	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	<0.50	982	268	0.50	7987220
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020			0.0000020	7991944
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	<0.00050	0.126	0.00120	0.00050	7989823
Dissolved Antimony (Sb)	mg/L	<0.000020	<0.000020	0.000023	0.000020	7989823
Dissolved Arsenic (As)	mg/L	<0.000020	0.00275	0.000121	0.000020	7989823
Dissolved Barium (Ba)	mg/L	<0.000020	0.166	0.204	0.000020	7989823
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000333	<0.000010	0.000010	7989823
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	7989823
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	7989823
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000752	0.0000324	0.0000050	7989823
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00021	0.00010	7989823
Dissolved Cobalt (Co)	mg/L	<0.0000050	0.00274	0.0000056	0.0000050	7989823
Dissolved Copper (Cu)	mg/L	<0.000050	<0.000050	<0.000050	0.000050	7989823
Dissolved Iron (Fe)	mg/L	<0.0010	13.0	0.0011	0.0010	7989823
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	7989823
Dissolved Lithium (Li)	mg/L	<0.00050	0.0824	0.00191	0.00050	7989823
Dissolved Manganese (Mn)	mg/L	<0.000050	2.17	0.000216	0.000050	7989823
Dissolved Molybdenum (Mo)	mg/L	<0.000050	0.000511	0.00133	0.000050	7989823
Dissolved Nickel (Ni)	mg/L	<0.000020	0.00836	0.000103	0.000020	7989823
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0030	<0.0020	0.0020	7989823
Dissolved Selenium (Se)	mg/L	<0.000040	<0.000040	0.00308	0.000040	7989823
Dissolved Silicon (Si)	mg/L	<0.050	18.3	3.43	0.050	7989823
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	7989823
Dissolved Strontium (Sr)	mg/L	<0.000050	1.16	0.284	0.000050	7989823
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	7989823
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	7989823
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	7989823
Dissolved Uranium (U)	mg/L	<0.0000020	0.00189	0.00303	0.0000020	7989823
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	7989823
Dissolved Zinc (Zn)	mg/L	<0.00010	0.0337	0.00053	0.00010	7989823
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00063	<0.00010	0.00010	7989823
Dissolved Calcium (Ca)	mg/L	<0.050	333	90.3	0.050	7987221

RDL = Reportable Detection Limit

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MU0693	MU0694	MU0695		
Sampling Date		2015/07/30 14:15	2015/07/29 11:30	2015/07/29 11:20		
COC Number		08412401	08412401	08412401		
	Units	**TRIP BLANK**	**KZ-9 EAST SEEP**	**KZ-9 WEST SEEP**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	<0.050	36.4	10.3	0.050	7987221
Dissolved Potassium (K)	mg/L	<0.050	5.68	1.28	0.050	7987221
Dissolved Sodium (Na)	mg/L	<0.050	9.46	1.21	0.050	7987221
Dissolved Sulphur (S)	mg/L	<3.0	6.9	13.6	3.0	7987221
RDL = Reportable Detection Limit						

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MU0670	MU0671	MU0672	MU0673	MU0674		
Sampling Date		2015/07/29 12:10	2015/07/28 11:50	2015/07/29 10:30	2015/07/29 14:35	2015/07/28 13:05		
COC Number		08412400	08412400	08412400	08412400	08412400		
	Units	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	92.5	137	159	70.8	157	0.50	7987284
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	7989982
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00841	0.0227	0.0260	0.0567	0.0169	0.00050	7990297
Total Antimony (Sb)	mg/L	0.000025	0.000105	0.000063	0.000033	0.000038	0.000020	7990297
Total Arsenic (As)	mg/L	0.000101	0.000401	0.000303	0.000276	0.000433	0.000020	7990297
Total Barium (Ba)	mg/L	0.0547	0.0754	0.0815	0.105	0.0670	0.000020	7990297
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	7990297
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7990297
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7990297
Total Cadmium (Cd)	mg/L	0.000205	0.000169	0.0000703	0.0000275	0.0000229	0.0000050	7990297
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00015	<0.00010	0.00010	7990297
Total Cobalt (Co)	mg/L	0.0000092	0.0000499	0.0000864	0.0000634	0.0000374	0.0000050	7990297
Total Copper (Cu)	mg/L	0.000637	0.000866	0.000542	0.000575	0.000425	0.000050	7990297
Total Iron (Fe)	mg/L	0.0081	0.311	0.431	0.141	0.0917	0.0010	7990297
Total Lead (Pb)	mg/L	0.0000518	0.000137	0.0000966	0.0000698	0.0000233	0.0000050	7990297
Total Lithium (Li)	mg/L	0.00096	0.00129	0.00233	0.00122	0.00208	0.00050	7990297
Total Manganese (Mn)	mg/L	0.000203	0.0374	0.0549	0.0455	0.0230	0.000050	7990297
Total Molybdenum (Mo)	mg/L	0.000651	0.000508	0.000563	0.000595	0.000854	0.000050	7990297
Total Nickel (Ni)	mg/L	0.000302	0.000429	0.000475	0.000600	0.000483	0.000020	7990297
Total Phosphorus (P)	mg/L	0.0023	0.0073	0.0046	0.0239	0.0228	0.0020	7990297
Total Selenium (Se)	mg/L	0.000621	0.000729	0.000640	0.000152	0.000470	0.000040	7990297
Total Silicon (Si)	mg/L	2.27	2.55	2.92	2.54	2.90	0.050	7990297
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7990297
Total Strontium (Sr)	mg/L	0.0997	0.148	0.171	0.0751	0.160	0.000050	7990297
Total Thallium (Tl)	mg/L	0.0000041	0.0000027	<0.0000020	0.0000023	<0.0000020	0.0000020	7990297
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7990297
Total Titanium (Ti)	mg/L	<0.00050	0.00077	0.00173	0.00238	0.00051	0.00050	7990297
Total Uranium (U)	mg/L	0.00171	0.000872	0.000989	0.000568	0.00171	0.0000020	7990297
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00026	<0.00020	0.00020	7990297
Total Zinc (Zn)	mg/L	0.0244	0.0298	0.00980	0.00353	0.00208	0.00010	7990297
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	7990297
Total Calcium (Ca)	mg/L	31.7	45.3	53.0	23.7	48.6	0.050	7987552
Total Magnesium (Mg)	mg/L	3.26	5.77	6.38	2.80	8.67	0.050	7987552

RDL = Reportable Detection Limit

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MU0670	MU0671	MU0672	MU0673	MU0674		
Sampling Date		2015/07/29 12:10	2015/07/28 11:50	2015/07/29 10:30	2015/07/29 14:35	2015/07/28 13:05		
COC Number		08412400	08412400	08412400	08412400	08412400		
	Units	**KZ-2**	**KZ-7**	**KZ-9**	**KZ-13**	**KZ-15**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	1.76	1.56	1.53	1.74	1.34	0.050	7987552
Total Sodium (Na)	mg/L	0.659	0.933	1.06	1.09	1.08	0.050	7987552
Total Sulphur (S)	mg/L	13.1	11.3	10.3	4.7	8.0	3.0	7987552
RDL = Reportable Detection Limit								

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MU0675	MU0676	MU0677	MU0678	MU0679		
Sampling Date		2015/07/28 14:00	2015/07/28 15:00	2015/07/29 12:45	2015/07/28 17:00	2015/07/28 15:50		
COC Number		08412400	08412400	08412400	08412400	08412400		
	Units	KZ-16	KZ-17	KZ-19	KZ-21	KZ-22	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	137	176	<0.50	231	204	0.50	7987284
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	7989982
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00267	0.0106	0.00065	0.0415	0.0170	0.00050	7990297
Total Antimony (Sb)	mg/L	0.000020	0.000052	<0.000020	0.000152	0.000091	0.000020	7990297
Total Arsenic (As)	mg/L	0.000315	0.000578	<0.000020	0.00291	0.00167	0.000020	7990297
Total Barium (Ba)	mg/L	0.0594	0.0732	<0.000020	0.0612	0.0666	0.000020	7990297
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	7990297
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7990297
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7990297
Total Cadmium (Cd)	mg/L	0.0000162	0.0000341	<0.0000050	0.0000168	0.0000268	0.0000050	7990297
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00018	0.00010	0.00010	7990297
Total Cobalt (Co)	mg/L	0.0000208	0.0000457	<0.0000050	0.000109	0.0000681	0.0000050	7990297
Total Copper (Cu)	mg/L	0.000370	0.000493	<0.000050	0.000678	0.000547	0.000050	7990297
Total Iron (Fe)	mg/L	0.0162	0.116	<0.0010	0.488	0.254	0.0010	7990297
Total Lead (Pb)	mg/L	<0.0000050	0.0000315	<0.0000050	0.0000412	0.0000279	0.0000050	7990297
Total Lithium (Li)	mg/L	0.00161	0.00301	<0.00050	0.00385	0.00359	0.00050	7990297
Total Manganese (Mn)	mg/L	0.00506	0.0372	<0.000050	0.0510	0.0279	0.000050	7990297
Total Molybdenum (Mo)	mg/L	0.000504	0.00135	<0.000050	0.00177	0.00131	0.000050	7990297
Total Nickel (Ni)	mg/L	0.000343	0.000664	0.000079	0.00318	0.00189	0.000020	7990297
Total Phosphorus (P)	mg/L	0.0022	0.0132	<0.0020	0.0389	0.0222	0.0020	7990297
Total Selenium (Se)	mg/L	0.000447	0.000555	<0.000040	0.000549	0.000512	0.000040	7990297
Total Silicon (Si)	mg/L	2.78	3.14	<0.050	4.20	3.71	0.050	7990297
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7990297
Total Strontium (Sr)	mg/L	0.143	0.179	<0.000050	0.182	0.190	0.000050	7990297
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	7990297
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7990297
Total Titanium (Ti)	mg/L	<0.00050	0.00051	<0.00050	0.00113	0.00059	0.00050	7990297
Total Uranium (U)	mg/L	0.00113	0.00245	<0.0000020	0.00283	0.00243	0.0000020	7990297
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00025	<0.00020	0.00020	7990297
Total Zinc (Zn)	mg/L	0.00026	0.00345	<0.00010	0.00282	0.00629	0.00010	7990297
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00013	<0.00010	0.00010	7990297
Total Calcium (Ca)	mg/L	42.6	52.8	<0.050	56.4	54.3	0.050	7987552
Total Magnesium (Mg)	mg/L	7.33	10.8	<0.050	22.0	16.7	0.050	7987552
RDL = Reportable Detection Limit								

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MU0675	MU0676	MU0677	MU0678	MU0679		
Sampling Date		2015/07/28 14:00	2015/07/28 15:00	2015/07/29 12:45	2015/07/28 17:00	2015/07/28 15:50		
COC Number		08412400	08412400	08412400	08412400	08412400		
	Units	**KZ-16**	**KZ-17**	**KZ-19**	**KZ-21**	**KZ-22**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	1.22	1.45	<0.050	1.33	1.32	0.050	7987552
Total Sodium (Na)	mg/L	1.01	1.13	<0.050	1.46	1.34	0.050	7987552
Total Sulphur (S)	mg/L	7.2	9.7	<3.0	14.4	12.4	3.0	7987552
RDL = Reportable Detection Limit								

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MU0691	MU0692		MU0693		
Sampling Date		2015/07/29 09:00	2015/07/28		2015/07/30 14:15		
COC Number		08412401	08412401		08412401		
	Units	KZ-26	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	213	177	7987284	<0.50	0.50	7987284
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	7989982	<0.0000020	0.0000020	7991960
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0129	0.0172	7990297	<0.00050	0.00050	7990297
Total Antimony (Sb)	mg/L	0.000098	0.000058	7990297	<0.000020	0.000020	7990297
Total Arsenic (As)	mg/L	0.00106	0.000612	7990297	<0.000020	0.000020	7990297
Total Barium (Ba)	mg/L	0.0683	0.0777	7990297	<0.000020	0.000020	7990297
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	7990297	<0.000010	0.000010	7990297
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	7990297	<0.0000050	0.0000050	7990297
Total Boron (B)	mg/L	<0.010	<0.010	7990297	<0.010	0.010	7990297
Total Cadmium (Cd)	mg/L	0.0000149	0.0000393	7990297	<0.0000050	0.0000050	7990297
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	7990297	<0.00010	0.00010	7990297
Total Cobalt (Co)	mg/L	0.0000460	0.0000563	7990297	<0.0000050	0.0000050	7990297
Total Copper (Cu)	mg/L	0.000675	0.000520	7990297	<0.000050	0.000050	7990297
Total Iron (Fe)	mg/L	0.134	0.150	7990297	<0.0010	0.0010	7990297
Total Lead (Pb)	mg/L	0.0000272	0.0000534	7990297	<0.0000050	0.0000050	7990297
Total Lithium (Li)	mg/L	0.00376	0.00291	7990297	<0.00050	0.00050	7990297
Total Manganese (Mn)	mg/L	0.0104	0.0352	7990297	<0.000050	0.000050	7990297
Total Molybdenum (Mo)	mg/L	0.00121	0.00141	7990297	<0.000050	0.000050	7990297
Total Nickel (Ni)	mg/L	0.00146	0.000709	7990297	<0.000020	0.000020	7990297
Total Phosphorus (P)	mg/L	0.0124	0.0048	7990297	<0.0020	0.0020	7990297
Total Selenium (Se)	mg/L	0.000484	0.000537	7990297	<0.000040	0.000040	7990297
Total Silicon (Si)	mg/L	3.86	3.31	7990297	<0.050	0.050	7990297
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	7990297	<0.0000050	0.0000050	7990297
Total Strontium (Sr)	mg/L	0.198	0.179	7990297	<0.000050	0.000050	7990297
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	7990297	<0.0000020	0.0000020	7990297
Total Tin (Sn)	mg/L	<0.00020	<0.00020	7990297	<0.00020	0.00020	7990297
Total Titanium (Ti)	mg/L	<0.00050	0.00112	7990297	<0.00050	0.00050	7990297
Total Uranium (U)	mg/L	0.00237	0.00256	7990297	<0.0000020	0.0000020	7990297
Total Vanadium (V)	mg/L	<0.00020	<0.00020	7990297	<0.00020	0.00020	7990297
Total Zinc (Zn)	mg/L	0.00086	0.00354	7990297	<0.00010	0.00010	7990297
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	7990297	<0.00010	0.00010	7990297
Total Calcium (Ca)	mg/L	56.5	53.1	7987552	<0.050	0.050	7987552
Total Magnesium (Mg)	mg/L	17.6	10.7	7987552	<0.050	0.050	7987552

RDL = Reportable Detection Limit

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MU0691	MU0692		MU0693		
Sampling Date		2015/07/29 09:00	2015/07/28		2015/07/30 14:15		
COC Number		08412401	08412401		08412401		
	Units	**KZ-26**	**KZ-28**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	1.34	1.45	7987552	<0.050	0.050	7987552
Total Sodium (Na)	mg/L	1.49	1.14	7987552	<0.050	0.050	7987552
Total Sulphur (S)	mg/L	12.3	9.7	7987552	<3.0	3.0	7987552
RDL = Reportable Detection Limit							

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

Maxxam Job #: B565281
Report Date: 2015/08/13

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

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	7.3°C
Package 2	9.7°C
Package 3	9.3°C

In order to provide the lowest possible reporting limits, the analytical techniques for cyanide have been pushed to their absolute limit. At low levels, it is sometimes observed that WAD cyanide values are > SAD values. In general, the difference is due to the statistical variability of the analysis.

There is an analytical uncertainty (Mu) associated with every measurement. The uncertainty is expressed as a 95% confidence interval. (If a measurement is repeated 20 times, 19 of the results would fall within the interval). At levels near the detection limit, the uncertainty for SAD cyanide is ± 0.0008 mg/L and 0.0007 mg/L for WAD cyanide. The combined uncertainty for the 2 measurements is ± 0.001 mg/L. For clarity, if a sample containing 0.001 mg/L WAD cyanide was analyzed 20 times, 19 of the results would be normally distributed between 0.0017 and 0.0003 mg/L.

If the true SAD and WAD values are the same, there is a 50% probability the measured WAD value will be greater than the SAD value and statistically, by chance alone, by as much as 0.001 mg/L. Thus, in this data set, in cases where WAD > SAD, the difference is not statistically significant.

Sample MU0677-01 : Effective October 1, 2013, the BC MOE SAMPLE PRESERVATION & HOLDING TIME REQUIREMENTS states that Mercury in water requires a glass or PTFE container with Hydrochloric Acid (HCl) preservation. Sample container and preservation received was not in compliance. Maxxam added HCl to stabilize Mercury in this sample prior to analysis. Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample MU0693-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample MU0670, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

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

Maxxam Job #: B565281
Report Date: 2015/08/13

QUALITY ASSURANCE REPORT

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7987981	Alkalinity (PP as CaCO3)	2015/07/31					<0.50	mg/L	NC	20
7987981	Alkalinity (Total as CaCO3)	2015/07/31	NC	80 - 120	98	80 - 120	0.51, RDL=0.50	mg/L	0.48	20
7987981	Bicarbonate (HCO3)	2015/07/31					0.62, RDL=0.50	mg/L	0.48	20
7987981	Carbonate (CO3)	2015/07/31					<0.50	mg/L	NC	20
7987981	Hydroxide (OH)	2015/07/31					<0.50	mg/L	NC	20
7987991	Conductivity	2015/07/31			101	80 - 120	<1.0	uS/cm	0.86	20
7987992	pH	2015/07/31			101	97 - 103			0.38	N/A
7987996	pH	2015/07/31			101	97 - 103			0.68	N/A
7987998	Conductivity	2015/07/31			102	80 - 120	1.0, RDL=1.0	uS/cm	NC	20
7988005	Alkalinity (PP as CaCO3)	2015/07/31					<0.50	mg/L	NC	20
7988005	Alkalinity (Total as CaCO3)	2015/07/31	96	80 - 120	99	80 - 120	<0.50	mg/L	7.6	20
7988005	Bicarbonate (HCO3)	2015/07/31					<0.50	mg/L	7.6	20
7988005	Carbonate (CO3)	2015/07/31					<0.50	mg/L	NC	20
7988005	Hydroxide (OH)	2015/07/31					<0.50	mg/L	NC	20
7988160	Nitrate plus Nitrite (N)	2015/07/31	104	80 - 120	107	80 - 120	<0.0020	mg/L	NC	25
7988161	Nitrite (N)	2015/07/31	105	80 - 120	104	80 - 120	<0.0020	mg/L	NC	25
7988701	True Colour	2015/08/01			100	80 - 120	<5.0	Col. Unit	NC	20
7988702	True Colour	2015/08/01			105	80 - 120	<5.0	Col. Unit	NC	20
7988709	Total Phosphorus (P)	2015/08/01	NC	80 - 120	102	80 - 120	<0.0020	mg/L	1.1	20
7988711	Total Phosphorus (P)	2015/08/01	94	80 - 120	107	80 - 120	<0.0020	mg/L	NC	20
7988713	Dissolved Phosphorus (P)	2015/08/01	95	80 - 120	94	80 - 120	<0.0020	mg/L	5.4	20
7988724	Acidity (pH 4.5)	2015/07/31					<0.50	mg/L	NC	20
7988724	Acidity (pH 8.3)	2015/07/31			98	80 - 120	<0.50	mg/L	NC	20
7988725	Acidity (pH 4.5)	2015/08/01					<0.50	mg/L	NC	20
7988725	Acidity (pH 8.3)	2015/08/01			99	80 - 120	<0.50	mg/L	NC	20
7988729	Acidity (pH 4.5)	2015/08/01					<0.50	mg/L		
7988729	Acidity (pH 8.3)	2015/08/01			102	80 - 120	<0.50	mg/L		
7988753	Nitrate plus Nitrite (N)	2015/08/01	97	80 - 120	104	80 - 120	<0.0020	mg/L	1.8	25
7988754	Nitrite (N)	2015/08/01	96	80 - 120	102	80 - 120	<0.0020	mg/L	NC	25
7988755	Nitrate plus Nitrite (N)	2015/08/01			104	80 - 120	<0.0020	mg/L		
7988756	Nitrite (N)	2015/08/01			104	80 - 120	<0.0020	mg/L		

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

Maxxam Job #: B565281
Report Date: 2015/08/13

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7988779	Alkalinity (PP as CaCO3)	2015/08/01					<0.50	mg/L	NC	20
7988779	Alkalinity (Total as CaCO3)	2015/08/01	N/C	80 - 120	104	80 - 120	<0.50	mg/L	NC	20
7988779	Bicarbonate (HCO3)	2015/08/01					<0.50	mg/L	NC	20
7988779	Carbonate (CO3)	2015/08/01					<0.50	mg/L	NC	20
7988779	Hydroxide (OH)	2015/08/01					<0.50	mg/L	NC	20
7988781	pH	2015/08/01			101	97 - 103			0.33 (1)	N/A
7988782	Conductivity	2015/08/01			99	80 - 120	<1.0	uS/cm	1.2	20
7988816	Dissolved Organic Carbon (C)	2015/08/05	107	80 - 120	106	80 - 120	<0.50	mg/L	NC	20
7989823	Dissolved Aluminum (Al)	2015/08/04	101	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
7989823	Dissolved Antimony (Sb)	2015/08/04	107	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
7989823	Dissolved Arsenic (As)	2015/08/04	103	80 - 120	101	80 - 120	<0.000020	mg/L	1.9	20
7989823	Dissolved Barium (Ba)	2015/08/04	NC	80 - 120	109	80 - 120	<0.000020	mg/L	1.7	20
7989823	Dissolved Beryllium (Be)	2015/08/04	98	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
7989823	Dissolved Bismuth (Bi)	2015/08/04	101	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
7989823	Dissolved Boron (B)	2015/08/04					<0.010	mg/L	NC	20
7989823	Dissolved Cadmium (Cd)	2015/08/04	100	80 - 120	101	80 - 120	<0.0000050	mg/L	4.2	20
7989823	Dissolved Chromium (Cr)	2015/08/04	103	80 - 120	105	80 - 120	<0.00010	mg/L	NC	20
7989823	Dissolved Cobalt (Co)	2015/08/04	102	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
7989823	Dissolved Copper (Cu)	2015/08/04	100	80 - 120	109	80 - 120	<0.000050	mg/L	3.2	20
7989823	Dissolved Iron (Fe)	2015/08/04	103	80 - 120	114	80 - 120	<0.0010	mg/L	0.044	20
7989823	Dissolved Lead (Pb)	2015/08/04	103	80 - 120	109	80 - 120	<0.0000050	mg/L	NC	20
7989823	Dissolved Lithium (Li)	2015/08/04	96	80 - 120	100	80 - 120	<0.00050	mg/L	6.0	20
7989823	Dissolved Manganese (Mn)	2015/08/04	NC	80 - 120	106	80 - 120	<0.000050	mg/L	0.19	20
7989823	Dissolved Molybdenum (Mo)	2015/08/04	NC	80 - 120	101	80 - 120	<0.000050	mg/L	2.0	20
7989823	Dissolved Nickel (Ni)	2015/08/04	99	80 - 120	107	80 - 120	<0.000020	mg/L	2.0	20
7989823	Dissolved Phosphorus (P)	2015/08/04					<0.0020	mg/L	NC	20
7989823	Dissolved Selenium (Se)	2015/08/04	102	80 - 120	99	80 - 120	<0.000040	mg/L	2.2	20
7989823	Dissolved Silicon (Si)	2015/08/04					<0.050	mg/L	3.6	20
7989823	Dissolved Silver (Ag)	2015/08/04	105	80 - 120	87	80 - 120	<0.0000050	mg/L	NC	20
7989823	Dissolved Strontium (Sr)	2015/08/04	NC	80 - 120	100	80 - 120	<0.000050	mg/L	0.80	20
7989823	Dissolved Thallium (Tl)	2015/08/04	98	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20

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

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7989823	Dissolved Tin (Sn)	2015/08/04	117	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
7989823	Dissolved Titanium (Ti)	2015/08/04	101	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
7989823	Dissolved Uranium (U)	2015/08/04	108	80 - 120	112	80 - 120	<0.0000020	mg/L	1.2	20
7989823	Dissolved Vanadium (V)	2015/08/04	103	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
7989823	Dissolved Zinc (Zn)	2015/08/04	100	80 - 120	108	80 - 120	<0.00010	mg/L	1.7	20
7989823	Dissolved Zirconium (Zr)	2015/08/04					<0.00010	mg/L	NC	20
7989913	Strong Acid Dissoc. Cyanide (CN)	2015/08/04	105	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
7989982	Total Mercury (Hg)	2015/08/04	96	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
7990000	Total Suspended Solids	2015/08/05			92	80 - 120	<1.0	mg/L		
7990297	Total Aluminum (Al)	2015/08/04	NC	80 - 120	104	80 - 120	<0.00050	mg/L	5.7	20
7990297	Total Antimony (Sb)	2015/08/04	98	80 - 120	102	80 - 120	<0.000020	mg/L	6.2	20
7990297	Total Arsenic (As)	2015/08/04	108	80 - 120	101	80 - 120	<0.000020	mg/L	18	20
7990297	Total Barium (Ba)	2015/08/04	NC	80 - 120	106	80 - 120	<0.000020	mg/L	6.7	20
7990297	Total Beryllium (Be)	2015/08/04	98	80 - 120	97	80 - 120	<0.000010	mg/L	NC	20
7990297	Total Bismuth (Bi)	2015/08/04	102	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
7990297	Total Boron (B)	2015/08/04					<0.010	mg/L	NC	20
7990297	Total Cadmium (Cd)	2015/08/04	98	80 - 120	105	80 - 120	<0.0000050	mg/L	1.8	20
7990297	Total Chromium (Cr)	2015/08/04	101	80 - 120	104	80 - 120	<0.00010	mg/L	2.6	20
7990297	Total Cobalt (Co)	2015/08/04	NC	80 - 120	107	80 - 120	<0.0000050	mg/L	4.8	20
7990297	Total Copper (Cu)	2015/08/04	NC	80 - 120	107	80 - 120	<0.000050	mg/L	5.2	20
7990297	Total Iron (Fe)	2015/08/04	NC	80 - 120	107	80 - 120	<0.0010	mg/L	5.0	20
7990297	Total Lead (Pb)	2015/08/04	105	80 - 120	104	80 - 120	<0.0000050	mg/L	0.85	20
7990297	Total Lithium (Li)	2015/08/04	94	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
7990297	Total Manganese (Mn)	2015/08/04	NC	80 - 120	105	80 - 120	<0.000050	mg/L	4.4	20
7990297	Total Molybdenum (Mo)	2015/08/04	NC	80 - 120	97	80 - 120	<0.000050	mg/L	0.45	20
7990297	Total Nickel (Ni)	2015/08/04	NC	80 - 120	107	80 - 120	<0.000020	mg/L	3.0	20
7990297	Total Phosphorus (P)	2015/08/04					<0.0020	mg/L	4.2	20
7990297	Total Selenium (Se)	2015/08/04	102	80 - 120	97	80 - 120	<0.000040	mg/L	NC	20
7990297	Total Silicon (Si)	2015/08/04					<0.050	mg/L	5.1	20
7990297	Total Silver (Ag)	2015/08/04	110	80 - 120	84	80 - 120	<0.0000050	mg/L	NC	20
7990297	Total Strontium (Sr)	2015/08/04	NC	80 - 120	100	80 - 120	<0.000050	mg/L	5.0	20

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

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7990297	Total Thallium (Tl)	2015/08/04	103	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
7990297	Total Tin (Sn)	2015/08/04	NC	80 - 120	100	80 - 120	<0.00020	mg/L	2.0	20
7990297	Total Titanium (Ti)	2015/08/04	93	80 - 120	106	80 - 120	<0.00050	mg/L	0.22	20
7990297	Total Uranium (U)	2015/08/04	115	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
7990297	Total Vanadium (V)	2015/08/04	NC	80 - 120	105	80 - 120	<0.00020	mg/L	5.5	20
7990297	Total Zinc (Zn)	2015/08/04	NC	80 - 120	107	80 - 120	<0.00010	mg/L	3.5	20
7990297	Total Zirconium (Zr)	2015/08/04					<0.00010	mg/L	NC	20
7990401	Dissolved Chloride (Cl)	2015/08/04			99	80 - 120	<0.50	mg/L		
7990402	Dissolved Sulphate (SO4)	2015/08/04			91	80 - 120	<0.50	mg/L		
7990423	Dissolved Chloride (Cl)	2015/08/04	98	80 - 120	95	80 - 120	<0.50	mg/L	NC	20
7990425	Dissolved Sulphate (SO4)	2015/08/04	90	80 - 120	91	80 - 120	<0.50	mg/L	NC	20
7990678	Total Suspended Solids	2015/08/05			101	80 - 120	<1.0	mg/L		
7990718	Total Ammonia (N)	2015/08/04	100	80 - 120	104	80 - 120	<0.0050	mg/L	NC	20
7990722	Total Ammonia (N)	2015/08/04	100	80 - 120	101	80 - 120	<0.0050	mg/L	6.4	20
7991672	Dissolved Organic Carbon (C)	2015/08/05	91	80 - 120	108	80 - 120	0.70, RDL=0.50	mg/L	NC	20
7991944	Dissolved Mercury (Hg)	2015/08/05	109	80 - 120	108	80 - 120	<0.0000020	mg/L	NC	20
7991954	Dissolved Mercury (Hg)	2015/08/05	101	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
7991960	Total Mercury (Hg)	2015/08/05	86	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20
7992222	Fluoride (F)	2015/08/04	102	80 - 120	98	80 - 120	<0.010	mg/L	0	20
7992243	Fluoride (F)	2015/08/04			96	80 - 120	<0.010	mg/L		
7992283	Fluoride (F)	2015/08/05			96	80 - 120	0.011, RDL=0.010	mg/L	1.3	20
7993398	Dissolved Lead (Pb)	2015/08/06			100	80 - 120	<0.0000050	mg/L		
7993707	Total Ammonia (N)	2015/08/06	107	80 - 120	102	80 - 120	<0.0050	mg/L		

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

Maxxam Job #: B565281
Report Date: 2015/08/13

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7998702	Weak Acid Dissoc. Cyanide (CN)	2015/08/11	96	80 - 120	99	80 - 120	0.00058, RDL=0.00050	mg/L	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) pH result is less than the lowest calibration standard of pH 4.00

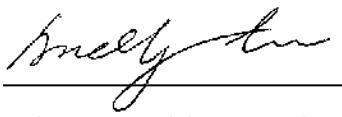
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

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

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Andy Lu, Data Validation Coordinator

David Huang, BBY Scientific Specialist

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

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

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTOD

08412400

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-2	MU0670	2015/07/29	12:10	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		D.Hg was field filtered
2	KZ-7	MU0671	2015/07/28	11:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
3	KZ-9	MU0672	2015/07/29	10:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
4	KZ-13	MU0673	2015/07/29	14:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
5	KZ-15	MU0674	2015/07/28	13:05	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
6	KZ-16	MU0675	2015/07/28	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
7	KZ-17	MU0676	2015/07/28	15:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
8	KZ-19	MU0677	2015/07/29	12:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
9	KZ-21	MU0678	2015/07/28	17:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
10	KZ-22	MU0679	2015/07/28	15:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		

LABORATORY USE ONLY

CUSTODY SEAL Y / (N)		COOLER TEMPERATURES
Present	Intact	
	N/A	7.8.7
	N/A	10.10.9
	N/A	10.8.10

COOLING MEDIA PRESENT (Y) / N

B565281

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
C.Henry	2015/07/29	19:00	[illegible]	2015/07/30	14:15	B565281

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTO[illegible]

08412401

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria		Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil	[ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify)	[ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water	[ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-26	MU0691	2015/07/29	9:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		D. Hg was field filtered
2	KZ-28	MU0692	2015/07/28		Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		↓
3	Trip Blank	MU0693			Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
4	KZ-9 East Seep	MU0694	2015/07/29	11:30	"		x		x			x	x	x	x							4		General package, anions & D. metals (excl. Hg)
5	KZ-9 West Seep	MU0695	2015/07/29	11:20	"		x		x			x	x	x	x							4		"
6																								
7																								
8																								
9																								
10																								

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
	N/A	7.8.7
	N/A	10.10.9
	N/A	10.8.10

COOLING MEDIA PRESENT (Y) / N

B565281

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
C. Henry	2015/07/29	19:00	SARANBIR TAKHAR	2015/07/30	14:15	B565281

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08413030, 08413031

Attention:KAI WOLOSHYN

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

Report Date: 2015/09/02
Report #: R2034525
Version: 4 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B573429
Received: 2015/08/25, 14:05

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	13	N/A	2015/08/26	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	8	2015/08/26	2015/08/26	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	5	2015/08/26	2015/08/27	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	13	N/A	2015/08/26	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	13	N/A	2015/08/27	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	13	N/A	2015/08/26	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	13	N/A	2015/08/26	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) -Lab Filtered (1, 2)	1	N/A	2015/08/31	EENVSOP-00060	MMCW 119 1996 m
Carbon (DOC) (1, 2)	12	N/A	2015/09/01	EENVSOP-00060	MMCW 119 1996 m
Conductance - water	8	N/A	2015/08/26	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	5	N/A	2015/08/27	BBY6SOP-00026	SM 22 2510 B m
Fluoride	13	N/A	2015/08/26	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	6	N/A	2015/08/31	BBY7SOP-00002	EPA 6020a R1 m
Hardness Total (calculated as CaCO3)	7	N/A	2015/09/01	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	13	N/A	2015/09/01	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	13	N/A	2015/08/31	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	11	2015/08/30	2015/08/31	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	2	2015/08/31	2015/08/31	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	13	N/A	2015/09/01	BBY WI-00033	SM 22 1030E
Sum of cations, anions	13	N/A	2015/09/01	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	13	N/A	2015/09/01	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	13	N/A	2015/08/31	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Digested LL (total)	7	2015/08/28	2015/09/01	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	6	N/A	2015/08/31	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	7	N/A	2015/09/01	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	1	N/A	2015/08/29	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	5	N/A	2015/08/31	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	13	N/A	2015/08/26	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	13	N/A	2015/08/26	BBY6SOP-00010	SM 22 4500-NO3- I m

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

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08413030, 08413031

Attention:KAI WOLOSHYN

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

Report Date: 2015/09/02
Report #: R2034525
Version: 4 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B573429
Received: 2015/08/25, 14:05

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrite (N) (low level)	13	N/A	2015/08/26	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	13	N/A	2015/08/26	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	13	N/A	2015/08/26	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (3)	8	N/A	2015/08/26	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (3)	5	N/A	2015/08/27	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	12	N/A	2015/08/26	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	1	N/A	2015/08/27	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	13	2015/08/26	2015/08/27	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	13	N/A	2015/08/27	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	12	2015/08/28	2015/08/29	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	1	2015/08/31	2015/09/01	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Maxxam Edmonton Environmental
(2) DOC present in the sample should be considered as non-purgeable DOC.
(3) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0030		MZ0031		MZ0032		
Sampling Date		2015/08/23 16:15		2015/08/23 12:40		2015/08/23 11:00		
COC Number		08413030		08413030		08413030		
	UNITS	KZ-2	QC Batch	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	8016251	<0.50	8016251	<0.50	0.50	8016251
Acidity (pH 8.3)	mg/L	<0.50	8016251	<0.50	8016251	0.80	0.50	8016251
Calculated Parameters								
Anion Sum	meq/L	1.8	8015350	2.5	8015350	2.9	N/A	8015350
Cation Sum	meq/L	1.9	8015350	2.6	8015350	3.0	N/A	8015350
Filter and HNO3 Preservation	N/A	LAB	8015900	LAB	8015900	LAB	N/A	8015900
Ion Balance	N/A	1.0	8015349	1.0	8015349	1.0	0.010	8015349
Nitrate (N)	mg/L	0.105	8014148	0.0107	8014148	0.0387	0.0020	8014148
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8016701	<0.00050	8016701	<0.00050	0.00050	8016701
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00088	8016938	<0.00050	8016938	<0.00050	0.00050	8016938
Fluoride (F)	mg/L	0.035	8016544	0.056	8016543	0.063	0.010	8016544
Dissolved Organic Carbon (C)	mg/L	0.68	8023893	1.8	8023893	1.7	0.50	8023893
Alkalinity (Total as CaCO3)	mg/L	48.3	8016771	92.5	8016747	114	0.50	8016747
Alkalinity (PP as CaCO3)	mg/L	<0.50	8016771	<0.50	8016747	<0.50	0.50	8016747
Bicarbonate (HCO3)	mg/L	59.0	8016771	113	8016747	139	0.50	8016747
Carbonate (CO3)	mg/L	<0.50	8016771	<0.50	8016747	<0.50	0.50	8016747
Hydroxide (OH)	mg/L	<0.50	8016771	<0.50	8016747	<0.50	0.50	8016747
Anions								
Dissolved Sulphate (SO4)	mg/L	38.3	8017443	32.4	8017490	31.0	0.50	8017490
Dissolved Chloride (Cl)	mg/L	<0.50	8017438	<0.50	8017479	<0.50	0.50	8017479
MISCELLANEOUS								
True Colour	Col. Unit	6.4	8017042	13.0	8017042	13.3	5.0	8017042
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0037	8018688	0.0029	8018688	0.0024	0.0020	8018688
Total Ammonia (N)	mg/L	<0.0050	8016958	<0.0050	8016958	<0.0050	0.0050	8016958
Nitrate plus Nitrite (N)	mg/L	0.105	8016929	0.0107	8016876	0.0407	0.0020	8016929
Nitrite (N)	mg/L	<0.0020	8016931	<0.0020	8016878	0.0020	0.0020	8016931
Total Phosphorus (P)	mg/L	0.0041	8018685	0.0035	8018685	0.0059	0.0020	8018685
Physical Properties								
Conductivity	uS/cm	183	8016772	250	8016750	283	1.0	8016750
pH	pH	7.77	8016773	7.92	8016751	7.95	N/A	8016751

RDL = Reportable Detection Limit
N/A = Not Applicable

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0030		MZ0031		MZ0032		
Sampling Date		2015/08/23 16:15		2015/08/23 12:40		2015/08/23 11:00		
COC Number		08413030		08413030		08413030		
	UNITS	KZ-2	QC Batch	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8019521	1.2	8019521	1.9	1.0	8019521
RDL = Reportable Detection Limit								

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0033		MZ0034		MZ0035		
Sampling Date		2015/08/23 14:00		2015/08/22 15:00		2015/08/22 15:50		
COC Number		08413030		08413030		08413030		
	UNITS	KZ-13	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	8016251	<0.50	8016251	<0.50	0.50	8016251
Acidity (pH 8.3)	mg/L	<0.50	8016251	<0.50	8016251	<0.50	0.50	8016251
Calculated Parameters								
Anion Sum	meq/L	1.4	8015350	2.8	8015350	2.5	N/A	8015350
Cation Sum	meq/L	1.4	8015350	2.9	8015350	2.6	N/A	8015350
Filter and HNO3 Preservation	N/A	LAB	8015900	LAB	8015900	LAB	N/A	8015900
Ion Balance	N/A	1.0	8015349	1.0	8015349	1.1	0.010	8015349
Nitrate (N)	mg/L	0.0378	8014148	0.0229	8014148	0.0271	0.0020	8014148
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8016701	<0.00050	8016701	<0.00050	0.00050	8016701
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00056	8016938	<0.00050	8016938	0.00051	0.00050	8016938
Fluoride (F)	mg/L	0.044	8016544	0.065	8016543	0.054	0.010	8016544
Dissolved Organic Carbon (C)	mg/L	2.7	8023893	1.4	8023893	1.3	0.50	8023893
Alkalinity (Total as CaCO3)	mg/L	53.8	8016771	115	8016771	101	0.50	8016771
Alkalinity (PP as CaCO3)	mg/L	<0.50	8016771	<0.50	8016771	<0.50	0.50	8016771
Bicarbonate (HCO3)	mg/L	65.6	8016771	141	8016771	123	0.50	8016771
Carbonate (CO3)	mg/L	<0.50	8016771	<0.50	8016771	<0.50	0.50	8016771
Hydroxide (OH)	mg/L	<0.50	8016771	<0.50	8016771	<0.50	0.50	8016771
Anions								
Dissolved Sulphate (SO4)	mg/L	14.2	8017490	24.4	8017490	21.6	0.50	8017490
Dissolved Chloride (Cl)	mg/L	<0.50	8017479	<0.50	8017479	<0.50	0.50	8017479
MISCELLANEOUS								
True Colour	Col. Unit	18.1	8017042	11.1 (1)	8017042	9.4 (1)	5.0	8017042
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0031	8018688	0.0022 (1)	8018688	<0.0020 (1)	0.0020	8018688
Total Ammonia (N)	mg/L	<0.0050	8016958	0.0059 (1)	8016958	0.0080 (1)	0.0050	8016958
Nitrate plus Nitrite (N)	mg/L	0.0378	8016929	0.0229 (1)	8016876	0.0271 (1)	0.0020	8016929
Nitrite (N)	mg/L	<0.0020	8016931	<0.0020 (1)	8016878	<0.0020 (1)	0.0020	8016931
Total Phosphorus (P)	mg/L	0.0030	8018685	0.0022 (1)	8018684	0.0026 (1)	0.0020	8018685
Physical Properties								
Conductivity	uS/cm	137	8016772	269	8016772	238	1.0	8016772
pH	pH	7.83	8016773	8.05	8016773	8.00	N/A	8016773

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0033		MZ0034		MZ0035		
Sampling Date		2015/08/23 14:00		2015/08/22 15:00		2015/08/22 15:50		
COC Number		08413030		08413030		08413030		
	UNITS	KZ-13	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	1.3	8019521	<1.0	8019493	<1.0	1.0	8019493
RDL = Reportable Detection Limit								

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0036		MZ0037		MZ0038		
Sampling Date		2015/08/22 16:35		2015/08/23 13:30		2015/08/23 10:00		
COC Number		08413030		08413030		08413030		
	UNITS	KZ-17	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	8016251	<0.50	8016251	<0.50	0.50	8016251
Acidity (pH 8.3)	mg/L	<0.50	8016251	<0.50	8016251	<0.50	0.50	8016251
Calculated Parameters								
Anion Sum	meq/L	3.4	8015350	2.6	8015350	4.0	N/A	8015350
Cation Sum	meq/L	3.5	8015350	2.7	8015350	4.2	N/A	8015350
Filter and HNO3 Preservation	N/A	LAB	8015900	LAB	8015900	LAB	N/A	8015900
Ion Balance	N/A	1.0	8015349	1.1	8015349	1.1	0.010	8015349
Nitrate (N)	mg/L	0.0209	8014148	0.0125	8014148	<0.0020	0.0020	8014148
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8016701	<0.00050	8016701	<0.00050	0.00050	8016701
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8016938	<0.00050	8016938	<0.00050	0.00050	8016938
Fluoride (F)	mg/L	0.091	8016544	0.052	8016544	0.140	0.010	8016544
Dissolved Organic Carbon (C)	mg/L	1.7	8023893	1.3	8023893	10	0.50	8023893
Alkalinity (Total as CaCO3)	mg/L	137	8016747	92.3	8016771	160	0.50	8016747
Alkalinity (PP as CaCO3)	mg/L	<0.50	8016747	<0.50	8016771	<0.50	0.50	8016747
Bicarbonate (HCO3)	mg/L	168	8016747	113	8016771	196	0.50	8016747
Carbonate (CO3)	mg/L	<0.50	8016747	<0.50	8016771	<0.50	0.50	8016747
Hydroxide (OH)	mg/L	<0.50	8016747	<0.50	8016771	<0.50	0.50	8016747
Anions								
Dissolved Sulphate (SO4)	mg/L	31.2	8019592	33.9	8017443	35.7	0.50	8017490
Dissolved Chloride (Cl)	mg/L	<0.50	8017479	<0.50	8017438	<0.50	0.50	8017479
MISCELLANEOUS								
True Colour	Col. Unit	12.8 (1)	8017042	14.4	8017042	82.6	5.0	8017042
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0032 (1)	8018688	0.0025	8018688	0.0115	0.0020	8018688
Total Ammonia (N)	mg/L	<0.0050 (1)	8016958	<0.0050	8016958	0.0060	0.0050	8016958
Nitrate plus Nitrite (N)	mg/L	0.0233 (1)	8016929	0.0125	8016929	0.0036	0.0020	8016929
Nitrite (N)	mg/L	0.0024 (1)	8016931	<0.0020	8016931	0.0025	0.0020	8016931
Total Phosphorus (P)	mg/L	0.0037 (1)	8018685	0.0029	8018685	0.0128	0.0020	8018685
Physical Properties								
Conductivity	uS/cm	321	8016750	253	8016772	368	1.0	8016750
pH	pH	8.04	8016751	7.97	8016773	8.04	N/A	8016751

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0036		MZ0037		MZ0038		
Sampling Date		2015/08/22 16:35		2015/08/23 13:30		2015/08/23 10:00		
COC Number		08413030		08413030		08413030		
	UNITS	KZ-17	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	1.0	8019493	1.0	8019521	2.4	1.0	8019521
RDL = Reportable Detection Limit								

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0039		MZ0055		MZ0056		
Sampling Date		2015/08/23 09:00		2015/08/22 09:25		2015/08/22 12:00		
COC Number		08413030		08413031		08413031		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	8016251	<0.50	8016251	<0.50	0.50	8016251
Acidity (pH 8.3)	mg/L	<0.50	8016251	<0.50	8016251	<0.50	0.50	8016251
Calculated Parameters								
Anion Sum	meq/L	3.6	8015350	3.5	8015350	0.014	N/A	8015350
Cation Sum	meq/L	3.8	8015350	3.7	8015350	0.0012	N/A	8015350
Filter and HNO3 Preservation	N/A	LAB	8015900	LAB	8015900	LAB	N/A	8015900
Ion Balance	N/A	1.0	8015349	1.0	8015349	0.086	0.010	8015349
Nitrate (N)	mg/L	0.0179	8014148	0.0168	8014148	<0.0020	0.0020	8014148
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8016701	<0.00050	8016701	<0.00050	0.00050	8016701
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8016938	<0.00050	8016938	<0.00050	0.00050	8016938
Fluoride (F)	mg/L	0.100	8016544	0.092	8016544	<0.010	0.010	8016543
Dissolved Organic Carbon (C)	mg/L	6.2	8023893	9.1	8023893	<0.50	0.50	8023893
Alkalinity (Total as CaCO3)	mg/L	148	8016747	145	8016747	0.69	0.50	8016747
Alkalinity (PP as CaCO3)	mg/L	<0.50	8016747	<0.50	8016747	<0.50	0.50	8016747
Bicarbonate (HCO3)	mg/L	180	8016747	177	8016747	0.84	0.50	8016747
Carbonate (CO3)	mg/L	<0.50	8016747	<0.50	8016747	<0.50	0.50	8016747
Hydroxide (OH)	mg/L	<0.50	8016747	<0.50	8016747	<0.50	0.50	8016747
Anions								
Dissolved Sulphate (SO4)	mg/L	32.3	8017443	29.9	8017443	<0.50	0.50	8017490
Dissolved Chloride (Cl)	mg/L	<0.50	8017438	<0.50	8017438	<0.50	0.50	8017479
MISCELLANEOUS								
True Colour	Col. Unit	47.9	8017042	73.5 (1)	8017042	<5.0 (1)	5.0	8017042
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0071	8018688	0.0068 (1)	8018688	<0.0020 (1)	0.0020	8018688
Total Ammonia (N)	mg/L	0.0092	8016958	0.0054 (1)	8016958	0.0066 (1)	0.0050	8016958
Nitrate plus Nitrite (N)	mg/L	0.0179	8016929	0.0194 (1)	8016929	0.0032 (1)	0.0020	8016876
Nitrite (N)	mg/L	<0.0020	8016931	0.0026 (1)	8016931	0.0027 (1)	0.0020	8016878
Total Phosphorus (P)	mg/L	0.0072	8018685	0.0090 (1)	8018685	<0.0020 (1)	0.0020	8018685
Physical Properties								
Conductivity	uS/cm	338	8016750	322	8016750	1.2	1.0	8016750
pH	pH	8.10	8016751	8.11	8016751	6.14	N/A	8016751

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0039		MZ0055		MZ0056		
Sampling Date		2015/08/23 09:00		2015/08/22 09:25		2015/08/22 12:00		
COC Number		08413030		08413031		08413031		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	3.5	8019521	13.9	8019493	<1.0	1.0	8019493
RDL = Reportable Detection Limit								

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0057		
Sampling Date		2015/08/25 14:05		
COC Number		08413031		
	UNITS	TRIP BLANK	RDL	QC Batch
Misc. Inorganics				
Acidity (pH 4.5)	mg/L	<0.50	0.50	8016251
Acidity (pH 8.3)	mg/L	<0.50	0.50	8016251
Calculated Parameters				
Anion Sum	meq/L	0.011	N/A	8015350
Cation Sum	meq/L	0.0012	N/A	8015350
Filter and HNO3 Preservation	N/A	LAB	N/A	8015900
Ion Balance	N/A	0.11	0.010	8015349
Nitrate (N)	mg/L	0.0023	0.0020	8014148
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8016701
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8016938
Fluoride (F)	mg/L	<0.010	0.010	8016544
Alkalinity (Total as CaCO3)	mg/L	0.55	0.50	8016747
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8016747
Bicarbonate (HCO3)	mg/L	0.67	0.50	8016747
Carbonate (CO3)	mg/L	<0.50	0.50	8016747
Hydroxide (OH)	mg/L	<0.50	0.50	8016747
Lab Filtered Inorganics				
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8021903
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8017443
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8017438
MISCELLANEOUS				
True Colour	Col. Unit	<5.0	5.0	8017042
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8018688
Total Ammonia (N)	mg/L	0.0061	0.0050	8016958
Nitrate plus Nitrite (N)	mg/L	0.0023	0.0020	8016929
Nitrite (N)	mg/L	<0.0020	0.0020	8016931
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8018685
Physical Properties				
Conductivity	uS/cm	1.2	1.0	8016750
pH	pH	6.10	N/A	8016751

RDL = Reportable Detection Limit
N/A = Not Applicable

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0057		
Sampling Date		2015/08/25 14:05		
COC Number		08413031		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8021827
RDL = Reportable Detection Limit				

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MZ0030	MZ0031		MZ0032		
Sampling Date		2015/08/23 16:15	2015/08/23 12:40		2015/08/23 11:00		
COC Number		08413030	08413030		08413030		
	UNITS	KZ-2	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	89.8	126	8015205	146	0.50	8015205
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8021349	<0.0000020	0.0000020	8021349
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00479	0.00201	8019311	0.00178	0.00050	8019311
Dissolved Antimony (Sb)	mg/L	0.000026	0.000078	8019311	0.000057	0.000020	8019311
Dissolved Arsenic (As)	mg/L	0.000096	0.000233	8019311	0.000210	0.000020	8019311
Dissolved Barium (Ba)	mg/L	0.0491	0.0643	8019311	0.0695	0.000020	8019311
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	8019311	<0.000010	0.000010	8019311
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8019311	<0.0000050	0.0000050	8019311
Dissolved Boron (B)	mg/L	<0.010	<0.010	8019311	<0.010	0.010	8019311
Dissolved Cadmium (Cd)	mg/L	0.000306	0.000102	8019311	0.0000430	0.0000050	8019311
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	8019311	<0.00010	0.00010	8019311
Dissolved Cobalt (Co)	mg/L	0.0000100	0.0000140	8019311	0.0000440	0.0000050	8019311
Dissolved Copper (Cu)	mg/L	0.000774	0.000656	8019311	0.000574	0.000050	8019311
Dissolved Iron (Fe)	mg/L	0.0012	0.0472	8019311	0.101	0.0010	8019311
Dissolved Lead (Pb)	mg/L	0.0000100	0.0000160	8019311	0.0000070	0.0000050	8019311
Dissolved Lithium (Li)	mg/L	0.00058	0.00133	8019311	0.00174	0.00050	8019311
Dissolved Manganese (Mn)	mg/L	0.000116	0.00924	8019311	0.0337	0.000050	8019311
Dissolved Molybdenum (Mo)	mg/L	0.000682	0.000498	8019311	0.000568	0.000050	8019311
Dissolved Nickel (Ni)	mg/L	0.000450	0.000392	8019311	0.000514	0.000020	8025346
Dissolved Phosphorus (P)	mg/L	0.0022	<0.0020	8019311	<0.0020	0.0020	8019311
Dissolved Selenium (Se)	mg/L	0.000552	0.000677	8019311	0.000686	0.000040	8019311
Dissolved Silicon (Si)	mg/L	2.12	2.55	8019311	2.72	0.050	8019311
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8019311	<0.0000050	0.0000050	8019311
Dissolved Strontium (Sr)	mg/L	0.0882	0.135	8019311	0.156	0.000050	8019311
Dissolved Thallium (Tl)	mg/L	0.0000040	0.0000020	8019311	<0.0000020	0.0000020	8019311
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8019311	<0.00020	0.00020	8019311
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8019311	<0.00050	0.00050	8019311
Dissolved Uranium (U)	mg/L	0.00157	0.000831	8019311	0.000908	0.0000020	8019311
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8019311	<0.00020	0.00020	8019311
Dissolved Zinc (Zn)	mg/L	0.0468	0.0250	8019311	0.00705	0.00010	8019311
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	8019311	<0.00010	0.00010	8019311
Dissolved Calcium (Ca)	mg/L	31.4	42.1	8014246	48.7	0.050	8015351
Dissolved Magnesium (Mg)	mg/L	2.74	5.18	8014246	5.80	0.050	8015351
RDL = Reportable Detection Limit							

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MZ0030	MZ0031		MZ0032		
Sampling Date		2015/08/23 16:15	2015/08/23 12:40		2015/08/23 11:00		
COC Number		08413030	08413030		08413030		
	UNITS	**KZ-2**	**KZ-7**	**QC Batch**	**KZ-9**	**RDL**	**QC Batch**
Dissolved Potassium (K)	mg/L	1.41	1.43	8014246	1.39	0.050	8015351
Dissolved Sodium (Na)	mg/L	0.608	0.858	8014246	0.976	0.050	8015351
Dissolved Sulphur (S)	mg/L	13.1	11.6	8014246	10.8	3.0	8015351
RDL = Reportable Detection Limit							

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MZ0033	MZ0034	MZ0035		MZ0036		
Sampling Date		2015/08/23 14:00	2015/08/22 15:00	2015/08/22 15:50		2015/08/22 16:35		
COC Number		08413030	08413030	08413030		08413030		
	UNITS	KZ-13	KZ-15	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	64.7	140	125	8015205	169	0.50	8015205
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8021349	<0.0000020	0.0000020	8021349
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00683	0.00175	0.00183	8019311	0.00188	0.00050	8019311
Dissolved Antimony (Sb)	mg/L	0.000024	0.000031	<0.000020	8019311	0.000056	0.000020	8019311
Dissolved Arsenic (As)	mg/L	0.000193	0.000349	0.000287	8019311	0.000485	0.000020	8019311
Dissolved Barium (Ba)	mg/L	0.0935	0.0580	0.0509	8019311	0.0700	0.000020	8019311
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8019311	<0.000010	0.000010	8019311
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8019311	<0.0000050	0.0000050	8019311
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8019311	<0.010	0.010	8019311
Dissolved Cadmium (Cd)	mg/L	0.0000140	0.0000180	0.0000110	8019311	0.0000250	0.0000050	8019311
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8019311	<0.00010	0.00010	8019311
Dissolved Cobalt (Co)	mg/L	0.0000160	0.0000200	0.0000160	8019311	0.0000250	0.0000050	8019311
Dissolved Copper (Cu)	mg/L	0.000474	0.000469	0.000470	8019311	0.000574	0.000050	8019311
Dissolved Iron (Fe)	mg/L	0.0198	0.0174	0.0044	8019311	0.0390	0.0010	8019311
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	8019311	<0.0000050	0.0000050	8019311
Dissolved Lithium (Li)	mg/L	0.00083	0.00144	0.00101	8019311	0.00210	0.00050	8019311
Dissolved Manganese (Mn)	mg/L	0.00842	0.0117	0.00287	8019311	0.0273	0.000050	8019311
Dissolved Molybdenum (Mo)	mg/L	0.000491	0.000758	0.000463	8019311	0.00134	0.000050	8019311
Dissolved Nickel (Ni)	mg/L	0.000392	0.000524 (1)	0.000477	8019311	0.000772	0.000020	8025346
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020	<0.0020	8019311	<0.0020	0.0020	8019311
Dissolved Selenium (Se)	mg/L	0.000138	0.000507	0.000447	8019311	0.000668	0.000040	8019311
Dissolved Silicon (Si)	mg/L	2.44	2.69	2.66	8019311	3.09	0.050	8019311
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8019311	<0.0000050	0.0000050	8019311
Dissolved Strontium (Sr)	mg/L	0.0668	0.140	0.127	8019311	0.167	0.000050	8019311
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8019311	<0.0000020	0.0000020	8019311
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8019311	<0.00020	0.00020	8019311
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8019311	<0.00050	0.00050	8019311
Dissolved Uranium (U)	mg/L	0.000403	0.00138	0.000896	8019311	0.00233	0.0000020	8019311
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8019311	<0.00020	0.00020	8019311
Dissolved Zinc (Zn)	mg/L	0.00233	0.00129	0.00037	8019311	0.00280	0.00010	8019311
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8019311	<0.00010	0.00010	8019311
Dissolved Calcium (Ca)	mg/L	21.8	43.5	39.7	8015351	51.1	0.050	8015351

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

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MZ0033	MZ0034	MZ0035		MZ0036		
Sampling Date		2015/08/23 14:00	2015/08/22 15:00	2015/08/22 15:50		2015/08/22 16:35		
COC Number		08413030	08413030	08413030		08413030		
	UNITS	**KZ-13**	**KZ-15**	**KZ-16**	**QC Batch**	**KZ-17**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	2.50	7.64	6.24	8015351	10.0	0.050	8015351
Dissolved Potassium (K)	mg/L	1.39	1.15	1.07	8015351	1.32	0.050	8015351
Dissolved Sodium (Na)	mg/L	0.961	0.945	0.912	8015351	1.06	0.050	8015351
Dissolved Sulphur (S)	mg/L	4.3	8.1	7.2	8015351	10.3	3.0	8015351
RDL = Reportable Detection Limit								

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MZ0037	MZ0038	MZ0039		MZ0055		
Sampling Date		2015/08/23 13:30	2015/08/23 10:00	2015/08/23 09:00		2015/08/22 09:25		
COC Number		08413030	08413030	08413030		08413031		
	UNITS	KZ-19	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	131	208	187	8015205	179	0.50	8015205
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8021349	<0.0000020	0.0000020	8021822
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00204	0.00868	0.00526	8019311	0.00764	0.00050	8019311
Dissolved Antimony (Sb)	mg/L	0.000080	0.000179	0.000113	8019311	0.000138	0.000020	8019311
Dissolved Arsenic (As)	mg/L	0.000214	0.00173	0.00115	8019311	0.000952	0.000020	8019311
Dissolved Barium (Ba)	mg/L	0.0665	0.0497	0.0568	8019311	0.0609	0.000020	8019311
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8019311	<0.000010	0.000010	8019311
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8019311	<0.0000050	0.0000050	8019311
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8019311	<0.010	0.010	8019311
Dissolved Cadmium (Cd)	mg/L	0.0000960	0.0000120	0.0000120	8019311	0.0000120	0.0000050	8019311
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00012	<0.00010	8019311	0.00010	0.00010	8019311
Dissolved Cobalt (Co)	mg/L	0.0000140	0.0000690	0.0000570	8019311	0.0000490	0.0000050	8019311
Dissolved Copper (Cu)	mg/L	0.000632	0.000896	0.000774	8019311	0.00109	0.000050	8019311
Dissolved Iron (Fe)	mg/L	0.0440	0.167	0.0835	8019311	0.0657	0.0010	8019311
Dissolved Lead (Pb)	mg/L	0.0000120	<0.0000050	0.0000110	8019311	0.0000080	0.0000050	8019311
Dissolved Lithium (Li)	mg/L	0.00104	0.00264	0.00263	8019311	0.00291	0.00050	8019311
Dissolved Manganese (Mn)	mg/L	0.00874	0.0232	0.0149	8019311	0.00811	0.000050	8019311
Dissolved Molybdenum (Mo)	mg/L	0.000513	0.00138	0.00107	8019311	0.000958	0.000050	8019311
Dissolved Nickel (Ni)	mg/L	0.000576 (1)	0.00327	0.00190	8019311	0.00184	0.000020	8019311
Dissolved Phosphorus (P)	mg/L	0.0025	0.0069	0.0038	8019311	0.0037	0.0020	8019311
Dissolved Selenium (Se)	mg/L	0.000658	0.000557	0.000517	8019311	0.000470	0.000040	8019311
Dissolved Silicon (Si)	mg/L	2.63	4.59	3.78	8019311	4.36	0.050	8019311
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8019311	<0.0000050	0.0000050	8019311
Dissolved Strontium (Sr)	mg/L	0.135	0.152	0.156	8019311	0.144	0.000050	8019311
Dissolved Thallium (Tl)	mg/L	0.0000020	<0.0000020	<0.0000020	8019311	<0.0000020	0.0000020	8019311
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8019311	<0.00020	0.00020	8019311
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8019311	<0.00050	0.00050	8019311
Dissolved Uranium (U)	mg/L	0.000846	0.00217	0.00198	8019311	0.00171	0.0000020	8019311
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8019311	<0.00020	0.00020	8019311
Dissolved Zinc (Zn)	mg/L	0.0237	0.00195	0.00131	8019311	0.00074	0.00010	8019311
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00013	<0.00010	8019311	0.00011	0.00010	8019311
Dissolved Calcium (Ca)	mg/L	44.0	51.2	49.8	8015351	47.7	0.050	8015351

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

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MZ0037	MZ0038	MZ0039		MZ0055		
Sampling Date		2015/08/23 13:30	2015/08/23 10:00	2015/08/23 09:00		2015/08/22 09:25		
COC Number		08413030	08413030	08413030		08413031		
	UNITS	**KZ-19**	**KZ-21**	**KZ-22**	**QC Batch**	**KZ-26**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	5.25	19.4	15.1	8015351	14.5	0.050	8015351
Dissolved Potassium (K)	mg/L	1.45	1.00	1.10	8015351	0.942	0.050	8015351
Dissolved Sodium (Na)	mg/L	0.876	1.22	1.19	8015351	1.20	0.050	8015351
Dissolved Sulphur (S)	mg/L	11.8	11.9	10.6	8015351	8.8	3.0	8015351
RDL = Reportable Detection Limit								

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MZ0056	MZ0057		
Sampling Date		2015/08/22 12:00	2015/08/25 14:05		
COC Number		08413031	08413031		
	UNITS	KZ-28	TRIP BLANK	RDL	QC Batch
Misc. Inorganics					
Dissolved Hardness (CaCO3)	mg/L	<0.50	<0.50	0.50	8015205
Elements					
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8021822
Dissolved Metals by ICPMS					
Dissolved Aluminum (Al)	mg/L	<0.00050	<0.00050	0.00050	8019311
Dissolved Antimony (Sb)	mg/L	<0.000020	<0.000020	0.000020	8019311
Dissolved Arsenic (As)	mg/L	<0.000020	<0.000020	0.000020	8019311
Dissolved Barium (Ba)	mg/L	<0.000020	<0.000020	0.000020	8019311
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8019311
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000050	8019311
Dissolved Boron (B)	mg/L	<0.010	<0.010	0.010	8019311
Dissolved Cadmium (Cd)	mg/L	<0.0000050	<0.0000050	0.0000050	8019311
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00010	8019311
Dissolved Cobalt (Co)	mg/L	<0.0000050	<0.0000050	0.0000050	8019311
Dissolved Copper (Cu)	mg/L	<0.000050	<0.000050	0.000050	8019311
Dissolved Iron (Fe)	mg/L	<0.0010	<0.0010	0.0010	8019311
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000050	8019311
Dissolved Lithium (Li)	mg/L	<0.00050	<0.00050	0.00050	8019311
Dissolved Manganese (Mn)	mg/L	<0.000050	<0.000050	0.000050	8019311
Dissolved Molybdenum (Mo)	mg/L	<0.000050	<0.000050	0.000050	8019311
Dissolved Nickel (Ni)	mg/L	0.000203 (1)	<0.000020	0.000020	8019311
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020	0.0020	8019311
Dissolved Selenium (Se)	mg/L	<0.000040	<0.000040	0.000040	8019311
Dissolved Silicon (Si)	mg/L	<0.050	<0.050	0.050	8019311
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000050	8019311
Dissolved Strontium (Sr)	mg/L	<0.000050	<0.000050	0.000050	8019311
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	8019311
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8019311
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00050	8019311
Dissolved Uranium (U)	mg/L	<0.0000020	<0.0000020	0.0000020	8019311
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	8019311
Dissolved Zinc (Zn)	mg/L	<0.00010	<0.00010	0.00010	8019311
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8019311
Dissolved Calcium (Ca)	mg/L	<0.050	<0.050	0.050	8015351

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

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MZ0056	MZ0057		
Sampling Date		2015/08/22 12:00	2015/08/25 14:05		
COC Number		08413031	08413031		
	UNITS	**KZ-28**	**TRIP BLANK**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	<0.050	<0.050	0.050	8015351
Dissolved Potassium (K)	mg/L	<0.050	<0.050	0.050	8015351
Dissolved Sodium (Na)	mg/L	<0.050	<0.050	0.050	8015351
Dissolved Sulphur (S)	mg/L	<3.0	<3.0	3.0	8015351
RDL = Reportable Detection Limit					

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MZ0030	MZ0035	MZ0036	MZ0037		
Sampling Date		2015/08/23 16:15	2015/08/22 15:50	2015/08/22 16:35	2015/08/23 13:30		
COC Number		08413030	08413030	08413030	08413030		
	UNITS	KZ-2	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	90.3	132	159	134	0.50	8014146
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8021353
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00793	0.00347	0.00452	0.00705	0.00050	8019258
Total Antimony (Sb)	mg/L	0.000037	0.000021	0.000061	0.000083	0.000020	8019258
Total Arsenic (As)	mg/L	0.000124	0.000300	0.000540	0.000327	0.000020	8019258
Total Barium (Ba)	mg/L	0.0545	0.0548	0.0689	0.0685	0.000020	8019258
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8019258
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8019258
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8019258
Total Cadmium (Cd)	mg/L	0.000346	0.0000180	0.0000370	0.000156	0.0000050	8019258
Total Chromium (Cr)	mg/L	<0.00010	0.00020	<0.00010	<0.00010	0.00010	8019258
Total Cobalt (Co)	mg/L	0.0000130	0.0000230	0.0000410	0.0000280	0.0000050	8019258
Total Copper (Cu)	mg/L	0.000785	0.000525	0.000516	0.000785	0.000050	8019258
Total Iron (Fe)	mg/L	0.0067	0.0148	0.124	0.186	0.0010	8019258
Total Lead (Pb)	mg/L	0.0000430	0.0000090	0.0000200	0.0000790	0.0000050	8019258
Total Lithium (Li)	mg/L	0.00083	0.00155	0.00180	0.00142	0.00050	8019258
Total Manganese (Mn)	mg/L	0.000264	0.00470	0.0411	0.0201	0.000050	8019258
Total Molybdenum (Mo)	mg/L	0.000677	0.000475	0.00120	0.000484	0.000050	8019258
Total Nickel (Ni)	mg/L	0.000462	0.000395	0.000644	0.000406	0.000020	8019258
Total Phosphorus (P)	mg/L	0.0022	0.0021	0.0022	0.0026	0.0020	8019258
Total Selenium (Se)	mg/L	0.000543	0.000443	0.000610	0.000671	0.000040	8019258
Total Silicon (Si)	mg/L	2.53	2.97	3.06	3.00	0.050	8019258
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8019258
Total Strontium (Sr)	mg/L	0.102	0.136	0.154	0.145	0.000050	8019258
Total Thallium (Tl)	mg/L	0.0000040	<0.0000020	<0.0000020	0.0000030	0.0000020	8019258
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8019258
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8019258
Total Uranium (U)	mg/L	0.00165	0.000971	0.00226	0.000845	0.0000020	8019258
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8019258
Total Zinc (Zn)	mg/L	0.0542	0.00056	0.00410	0.0328	0.00010	8019258
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8019258
Total Calcium (Ca)	mg/L	31.5	42.4	48.1	45.0	0.050	8014147
Total Magnesium (Mg)	mg/L	2.82	6.31	9.38	5.20	0.050	8014147

RDL = Reportable Detection Limit

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MZ0030	MZ0035	MZ0036	MZ0037		
Sampling Date		2015/08/23 16:15	2015/08/22 15:50	2015/08/22 16:35	2015/08/23 13:30		
COC Number		08413030	08413030	08413030	08413030		
	UNITS	**KZ-2**	**KZ-16**	**KZ-17**	**KZ-19**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	1.50	1.13	1.26	1.50	0.050	8014147
Total Sodium (Na)	mg/L	0.605	0.881	0.966	0.836	0.050	8014147
Total Sulphur (S)	mg/L	14.1	7.5	9.8	12.0	3.0	8014147
RDL = Reportable Detection Limit							

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MZ0056		MZ0057		
Sampling Date		2015/08/22 12:00		2015/08/25 14:05		
COC Number		08413031		08413031		
	UNITS	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	<0.50	8015348	<0.50	0.50	8015348
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	8021353	<0.0000020	0.0000020	8021803
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.00055	8019258	<0.00050	0.00050	8019258
Total Antimony (Sb)	mg/L	<0.000020	8019258	<0.000020	0.000020	8019258
Total Arsenic (As)	mg/L	<0.000020	8019258	<0.000020	0.000020	8019258
Total Barium (Ba)	mg/L	0.000025	8019258	<0.000020	0.000020	8019258
Total Beryllium (Be)	mg/L	<0.000010	8019258	<0.000010	0.000010	8019258
Total Bismuth (Bi)	mg/L	<0.0000050	8019258	<0.0000050	0.0000050	8019258
Total Boron (B)	mg/L	<0.010	8019258	<0.010	0.010	8019258
Total Cadmium (Cd)	mg/L	<0.0000050	8019258	<0.0000050	0.0000050	8019258
Total Chromium (Cr)	mg/L	<0.00010	8019258	<0.00010	0.00010	8019258
Total Cobalt (Co)	mg/L	<0.0000050	8019258	<0.0000050	0.0000050	8019258
Total Copper (Cu)	mg/L	<0.000050	8019258	<0.000050	0.000050	8019258
Total Iron (Fe)	mg/L	<0.0010	8019258	<0.0010	0.0010	8019258
Total Lead (Pb)	mg/L	0.0000060	8019258	<0.0000050	0.0000050	8019258
Total Lithium (Li)	mg/L	<0.00050	8019258	<0.00050	0.00050	8019258
Total Manganese (Mn)	mg/L	<0.000050	8019258	<0.000050	0.000050	8019258
Total Molybdenum (Mo)	mg/L	<0.000050	8019258	<0.000050	0.000050	8019258
Total Nickel (Ni)	mg/L	<0.000020	8019258	<0.000020	0.000020	8019258
Total Phosphorus (P)	mg/L	<0.0020	8019258	<0.0020	0.0020	8019258
Total Selenium (Se)	mg/L	<0.000040	8019258	<0.000040	0.000040	8019258
Total Silicon (Si)	mg/L	<0.050	8019258	<0.050	0.050	8019258
Total Silver (Ag)	mg/L	<0.0000050	8019258	<0.0000050	0.0000050	8019258
Total Strontium (Sr)	mg/L	<0.000050	8019258	<0.000050	0.000050	8019258
Total Thallium (Tl)	mg/L	<0.0000020	8019258	<0.0000020	0.0000020	8019258
Total Tin (Sn)	mg/L	<0.00020	8019258	<0.00020	0.00020	8019258
Total Titanium (Ti)	mg/L	<0.00050	8019258	<0.00050	0.00050	8019258
Total Uranium (U)	mg/L	<0.0000020	8019258	<0.0000020	0.0000020	8019258
Total Vanadium (V)	mg/L	<0.00020	8019258	<0.00020	0.00020	8019258
Total Zinc (Zn)	mg/L	0.00028	8019258	<0.00010	0.00010	8019258
Total Zirconium (Zr)	mg/L	<0.00010	8019258	<0.00010	0.00010	8019258
Total Calcium (Ca)	mg/L	<0.050	8014147	<0.050	0.050	8014147
Total Magnesium (Mg)	mg/L	<0.050	8014147	<0.050	0.050	8014147
RDL = Reportable Detection Limit						

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MZ0056		MZ0057		
Sampling Date		2015/08/22 12:00		2015/08/25 14:05		
COC Number		08413031		08413031		
	UNITS	**KZ-28**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	<0.050	8014147	<0.050	0.050	8014147
Total Sodium (Na)	mg/L	<0.050	8014147	<0.050	0.050	8014147
Total Sulphur (S)	mg/L	<3.0	8014147	<3.0	3.0	8014147
RDL = Reportable Detection Limit						

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MZ0031		MZ0032		MZ0033		
Sampling Date		2015/08/23 12:40		2015/08/23 11:00		2015/08/23 14:00		
COC Number		08413030		08413030		08413030		
	UNITS	KZ-7	QC Batch	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	126	8014146	144	8014146	64.1	0.50	8014146
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	8021353	<0.0000020	8021803	<0.0000020	0.0000020	8021353
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0121	8019337	0.0142	8019337	0.0160	0.0030	8019337
Total Antimony (Sb)	mg/L	0.000078	8019337	0.000063	8019337	<0.000050	0.000050	8019337
Total Arsenic (As)	mg/L	0.000329	8019337	0.000279	8019337	0.000236	0.000020	8019337
Total Barium (Ba)	mg/L	0.0614	8019337	0.0685	8019337	0.0907	0.00010	8019337
Total Beryllium (Be)	mg/L	<0.000010	8019337	<0.000010	8019337	<0.000010	0.000010	8019337
Total Bismuth (Bi)	mg/L	<0.000020	8019337	<0.000020	8019337	0.000029	0.000020	8019337
Total Boron (B)	mg/L	<0.050	8019337	<0.050	8019337	<0.050	0.050	8019337
Total Cadmium (Cd)	mg/L	0.000163	8019337	0.0000690	8019337	0.0000310	0.0000050	8019337
Total Chromium (Cr)	mg/L	<0.00050	8019337	<0.00050	8019337	<0.00050	0.00050	8019337
Total Cobalt (Co)	mg/L	0.000035	8019337	0.000061	8019337	0.000032	0.000010	8019337
Total Copper (Cu)	mg/L	0.00110	8019337	0.00096	8019337	0.00103	0.00020	8019337
Total Iron (Fe)	mg/L	0.216	8019337	0.266	8019337	0.0697	0.0050	8019337
Total Lead (Pb)	mg/L	0.000097	8019337	0.000067	8019337	<0.000050	0.000050	8019337
Total Lithium (Li)	mg/L	0.00131	8019337	0.00193	8019337	0.00108	0.00050	8019337
Total Manganese (Mn)	mg/L	0.0231	8019337	0.0405	8019337	0.0197	0.00010	8019337
Total Molybdenum (Mo)	mg/L	0.000511	8019337	0.000576	8019337	0.000496	0.000050	8019337
Total Nickel (Ni)	mg/L	0.00039	8019337	0.00036	8019337	0.00042	0.00010	8019337
Total Phosphorus (P)	mg/L	<0.010	8019337	0.026	8019337	<0.010	0.010	8019337
Total Selenium (Se)	mg/L	0.000596	8019337	0.000690	8019337	0.000123	0.000040	8019337
Total Silicon (Si)	mg/L	2.58	8019337	2.64	8019337	2.34	0.10	8019337
Total Silver (Ag)	mg/L	<0.0000050	8019337	<0.0000050	8019337	<0.0000050	0.0000050	8019337
Total Strontium (Sr)	mg/L	0.129	8019337	0.152	8019337	0.0677	0.000050	8019337
Total Thallium (Tl)	mg/L	0.0000040	8019337	0.0000020	8019337	0.0000020	0.0000020	8019337
Total Tin (Sn)	mg/L	<0.00020	8019337	<0.00020	8019337	<0.00020	0.00020	8019337
Total Titanium (Ti)	mg/L	<0.0050	8019337	<0.0050	8019337	<0.0050	0.0050	8019337
Total Uranium (U)	mg/L	0.000770	8019337	0.000861	8019337	0.000456	0.0000050	8019337
Total Vanadium (V)	mg/L	<0.00050	8019337	<0.00050	8019337	<0.00050	0.00050	8019337
Total Zinc (Zn)	mg/L	0.0317	8019337	0.0103	8019337	0.0045	0.0010	8019337
Total Zirconium (Zr)	mg/L	<0.00010	8019337	<0.00010	8019337	<0.00010	0.00010	8019337
Total Calcium (Ca)	mg/L	42.3	8014147	48.0	8014147	21.7	0.25	8014147
Total Magnesium (Mg)	mg/L	4.88	8014147	5.76	8014147	2.43	0.25	8014147
RDL = Reportable Detection Limit								

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MZ0031		MZ0032		MZ0033		
Sampling Date		2015/08/23 12:40		2015/08/23 11:00		2015/08/23 14:00		
COC Number		08413030		08413030		08413030		
	UNITS	KZ-7	QC Batch	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Total Potassium (K)	mg/L	1.26	8014147	1.30	8014147	1.28	0.25	8014147
Total Sodium (Na)	mg/L	0.83	8014147	0.97	8014147	0.96	0.25	8014147
Total Sulphur (S)	mg/L	<15	8014147	<15	8014147	<15	15	8014147
RDL = Reportable Detection Limit								

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MZ0034	MZ0038	MZ0039		MZ0055		
Sampling Date		2015/08/22 15:00	2015/08/23 10:00	2015/08/23 09:00		2015/08/22 09:25		
COC Number		08413030	08413030	08413030		08413031		
	UNITS	KZ-15	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	141	201	185	8014146	176	0.50	8015348
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8021353	<0.0000020	0.0000020	8021353
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0057	0.0270	0.0214	8019337	0.141	0.0030	8019337
Total Antimony (Sb)	mg/L	<0.000050	0.000173	0.000115	8019337	0.000156	0.000050	8019337
Total Arsenic (As)	mg/L	0.000380	0.00215	0.00141	8019337	0.00149	0.000020	8019337
Total Barium (Ba)	mg/L	0.0533	0.0482	0.0541	8019337	0.0576	0.00010	8019337
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8019337	0.000012	0.000010	8019337
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	8019337	<0.000020	0.000020	8019337
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	8019337	<0.050	0.050	8019337
Total Cadmium (Cd)	mg/L	0.0000260	0.0000250	0.0000270	8019337	0.0000400	0.0000050	8019337
Total Chromium (Cr)	mg/L	<0.00050	<0.00050	<0.00050	8019337	<0.00050	0.00050	8019337
Total Cobalt (Co)	mg/L	0.000026	0.000118	0.000093	8019337	0.000203	0.000010	8019337
Total Copper (Cu)	mg/L	0.00072	0.00120	0.00134	8019337	0.00183	0.00020	8019337
Total Iron (Fe)	mg/L	0.0607	0.386	0.230	8019337	0.477	0.0050	8019337
Total Lead (Pb)	mg/L	<0.000050	<0.000050	0.000074	8019337	0.000241	0.000050	8019337
Total Lithium (Li)	mg/L	0.00165	0.00325	0.00264	8019337	0.00371	0.00050	8019337
Total Manganese (Mn)	mg/L	0.0177	0.0562	0.0294	8019337	0.0394	0.00010	8019337
Total Molybdenum (Mo)	mg/L	0.000698	0.00140	0.00114	8019337	0.000947	0.000050	8019337
Total Nickel (Ni)	mg/L	0.00043	0.00338	0.00200	8019337	0.00249	0.00010	8019337
Total Phosphorus (P)	mg/L	<0.010	0.020	0.012	8019337	0.023	0.010	8019337
Total Selenium (Se)	mg/L	0.000474	0.000489	0.000477	8019337	0.000455	0.000040	8019337
Total Silicon (Si)	mg/L	2.54	4.07	3.51	8019337	4.02	0.10	8019337
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8019337	<0.0000050	0.0000050	8019337
Total Strontium (Sr)	mg/L	0.142	0.153	0.158	8019337	0.144	0.000050	8019337
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8019337	0.0000030	0.0000020	8019337
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8019337	<0.00020	0.00020	8019337
Total Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	8019337	<0.0050	0.0050	8019337
Total Uranium (U)	mg/L	0.00132	0.00208	0.00194	8019337	0.00163	0.0000050	8019337
Total Vanadium (V)	mg/L	<0.00050	<0.00050	<0.00050	8019337	0.00055	0.00050	8019337
Total Zinc (Zn)	mg/L	0.0035	0.0037	0.0031	8019337	0.0038	0.0010	8019337
Total Zirconium (Zr)	mg/L	<0.00010	0.00015	<0.00010	8019337	0.00021	0.00010	8019337
Total Calcium (Ca)	mg/L	43.5	48.6	48.6	8014147	46.3	0.25	8014147
Total Magnesium (Mg)	mg/L	7.80	19.4	15.4	8014147	14.8	0.25	8014147

RDL = Reportable Detection Limit

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MZ0034	MZ0038	MZ0039		MZ0055		
Sampling Date		2015/08/22 15:00	2015/08/23 10:00	2015/08/23 09:00		2015/08/22 09:25		
COC Number		08413030	08413030	08413030		08413031		
	UNITS	**KZ-15**	**KZ-21**	**KZ-22**	**QC Batch**	**KZ-26**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	1.00	0.86	0.97	8014147	0.86	0.25	8014147
Total Sodium (Na)	mg/L	0.90	1.17	1.15	8014147	1.21	0.25	8014147
Total Sulphur (S)	mg/L	<15	<15	<15	8014147	<15	15	8014147
RDL = Reportable Detection Limit								

Maxxam Job #: B573429
Report Date: 2015/09/02

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

TEST SUMMARY

Maxxam ID: MZ0030
Sample ID: KZ-2
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8016771	2015/08/26	2015/08/27	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8017438	N/A	2015/08/26	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	Sukhraj Sidhu
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	Marissa Richard
Conductance - water	AT/ALK	8016772	N/A	2015/08/27	Maria Maclean
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/08/31	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	Edwin Lamigo
Ion Balance	CALC	8015349	N/A	2015/09/01	Andy Lu
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8014246	N/A	2015/09/01	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	Greg Sparrow
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/08/31	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8019258	N/A	2015/08/31	Greg Sparrow
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	Lucy Luo
pH Water	AT/ALK	8016773	N/A	2015/08/27	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8017443	N/A	2015/08/26	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	Sukhraj Sidhu
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	Sukhraj Sidhu
Total Suspended Solids-Low Level	BAL/BAL	8019521	2015/08/28	2015/08/29	Liilia Iankovska

Maxxam ID: MZ0030 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8017438	N/A	2015/08/26	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	Tatyana Serzhanova
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	Marissa Richard
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	Edwin Lamigo
Sulphate by Automated Colourimetry	KONE/COL	8017443	N/A	2015/08/26	Balwinder Bassi

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

TEST SUMMARY

Maxxam ID: MZ0031
Sample ID: KZ-7
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8016747	2015/08/26	2015/08/26	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8017479	N/A	2015/08/26	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	Sukhraj Sidhu
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	Marissa Richard
Conductance - water	AT/ALK	8016750	N/A	2015/08/26	Maria Maclean
Fluoride	ISE/ISE	8016543	N/A	2015/08/26	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/09/01	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	Edwin Lamigo
Ion Balance	CALC	8015349	N/A	2015/09/01	Automated Statchk
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8014246	N/A	2015/09/01	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	Greg Sparrow
Elements by ICPMS Digested LL (total)	ICP/CRCM	8019337	2015/08/28	2015/09/01	Adnan Dzebic
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/09/01	Automated Statchk
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016876	N/A	2015/08/26	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8016878	N/A	2015/08/26	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	Lucy Luo
pH Water	AT/ALK	8016751	N/A	2015/08/26	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8017490	N/A	2015/08/26	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	Sukhraj Sidhu
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	Sukhraj Sidhu
Total Suspended Solids-Low Level	BAL/BAL	8019521	2015/08/28	2015/08/29	Liilia Iankovska

Maxxam ID: MZ0031 Dup
Sample ID: KZ-7
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016876	N/A	2015/08/26	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8016878	N/A	2015/08/26	Isaac Wang

Maxxam ID: MZ0032
Sample ID: KZ-9
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8016747	2015/08/26	2015/08/26	Maria Maclean

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

TEST SUMMARY

Maxxam ID: MZ0032
Sample ID: KZ-9
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8017479	N/A	2015/08/26	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	Sukhraj Sidhu
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	Marissa Richard
Conductance - water	AT/ALK	8016750	N/A	2015/08/26	Maria Maclean
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/09/01	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8021803	2015/08/31	2015/08/31	Edwin Lamigo
Ion Balance	CALC	8015349	N/A	2015/09/01	Automated Statchk
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	Greg Sparrow
Elements by ICPMS Digested LL (total)	ICP/CRCM	8019337	2015/08/28	2015/09/01	Adnan Dzebic
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/09/01	Automated Statchk
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	Lucy Luo
pH Water	AT/ALK	8016751	N/A	2015/08/26	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8017490	N/A	2015/08/26	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	Sukhraj Sidhu
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	Sukhraj Sidhu
Total Suspended Solids-Low Level	BAL/BAL	8019521	2015/08/28	2015/08/29	Liilia Iankovska

Maxxam ID: MZ0033
Sample ID: KZ-13
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8016771	2015/08/26	2015/08/27	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8017479	N/A	2015/08/26	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	Sukhraj Sidhu
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	Marissa Richard
Conductance - water	AT/ALK	8016772	N/A	2015/08/27	Maria Maclean
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/09/01	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	Edwin Lamigo

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

TEST SUMMARY

Maxxam ID: MZ0033
Sample ID: KZ-13
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	Edwin Lamigo
Ion Balance	CALC	8015349	N/A	2015/09/01	Automated Statchk
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	Greg Sparrow
Elements by ICPMS Digested LL (total)	ICP/CRCM	8019337	2015/08/28	2015/09/01	Adnan Dzebic
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/09/01	Automated Statchk
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	Lucy Luo
pH Water	AT/ALK	8016773	N/A	2015/08/27	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8017490	N/A	2015/08/26	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	Sukhraj Sidhu
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	Sukhraj Sidhu
Total Suspended Solids-Low Level	BAL/BAL	8019521	2015/08/28	2015/08/29	Liilia Iankovska

Maxxam ID: MZ0034
Sample ID: KZ-15
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8016771	2015/08/26	2015/08/27	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8017479	N/A	2015/08/26	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	Sukhraj Sidhu
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	Marissa Richard
Conductance - water	AT/ALK	8016772	N/A	2015/08/27	Maria Maclean
Fluoride	ISE/ISE	8016543	N/A	2015/08/26	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/09/01	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	Edwin Lamigo
Ion Balance	CALC	8015349	N/A	2015/09/01	Automated Statchk
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	Greg Sparrow
Elements by ICPMS Digested LL (total)	ICP/CRCM	8019337	2015/08/28	2015/09/01	Adnan Dzebic
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/09/01	Automated Statchk
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016876	N/A	2015/08/26	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8016878	N/A	2015/08/26	Isaac Wang

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

TEST SUMMARY

Maxxam ID: MZ0034
Sample ID: KZ-15
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	Lucy Luo
pH Water	AT/ALK	8016773	N/A	2015/08/27	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8017490	N/A	2015/08/26	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	Sukhraj Sidhu
Total Phosphorus - unpreserved	KONE/COL	8018684	N/A	2015/08/27	Sukhraj Sidhu
Total Suspended Solids-Low Level	BAL/BAL	8019493	2015/08/28	2015/08/29	Liilia Iankovska

Maxxam ID: MZ0034 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	Sukhraj Sidhu
Total Phosphorus - unpreserved	KONE/COL	8018684	N/A	2015/08/27	Sukhraj Sidhu

Maxxam ID: MZ0035
Sample ID: KZ-16
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8016771	2015/08/26	2015/08/27	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8017479	N/A	2015/08/26	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	Sukhraj Sidhu
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	Marissa Richard
Conductance - water	AT/ALK	8016772	N/A	2015/08/27	Maria Maclean
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/08/31	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	Edwin Lamigo
Ion Balance	CALC	8015349	N/A	2015/09/01	Automated Statchk
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	Greg Sparrow
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/08/31	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8019258	N/A	2015/08/31	Greg Sparrow
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	Lucy Luo

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

TEST SUMMARY

Maxxam ID: MZ0035
Sample ID: KZ-16
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH Water	AT/ALK	8016773	N/A	2015/08/27	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8017490	N/A	2015/08/26	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	Sukhraj Sidhu
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	Sukhraj Sidhu
Total Suspended Solids-Low Level	BAL/BAL	8019493	2015/08/28	2015/08/29	Liilia Iankovska

Maxxam ID: MZ0035 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	Simon Chan

Maxxam ID: MZ0036
Sample ID: KZ-17
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8016747	2015/08/26	2015/08/26	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8017479	N/A	2015/08/26	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	Sukhraj Sidhu
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	Marissa Richard
Conductance - water	AT/ALK	8016750	N/A	2015/08/26	Maria Maclean
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/08/31	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	Edwin Lamigo
Ion Balance	CALC	8015349	N/A	2015/09/01	Automated Statchk
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	Greg Sparrow
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/08/31	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8019258	N/A	2015/08/29	Greg Sparrow
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	Lucy Luo
pH Water	AT/ALK	8016751	N/A	2015/08/26	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8019592	N/A	2015/08/27	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	Sukhraj Sidhu

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

TEST SUMMARY

Maxxam ID: MZ0036
Sample ID: KZ-17
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	Sukhraj Sidhu
Total Suspended Solids-Low Level	BAL/BAL	8019493	2015/08/28	2015/08/29	Liilia Iankovska

Maxxam ID: MZ0037
Sample ID: KZ-19
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8016771	2015/08/26	2015/08/27	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8017438	N/A	2015/08/26	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	Sukhraj Sidhu
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	Marissa Richard
Conductance - water	AT/ALK	8016772	N/A	2015/08/27	Maria Maclean
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/08/31	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	Edwin Lamigo
Ion Balance	CALC	8015349	N/A	2015/09/01	Automated Statchk
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	Greg Sparrow
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/08/31	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8019258	N/A	2015/08/31	Greg Sparrow
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	Lucy Luo
pH Water	AT/ALK	8016773	N/A	2015/08/27	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8017443	N/A	2015/08/26	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	Sukhraj Sidhu
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	Sukhraj Sidhu
Total Suspended Solids-Low Level	BAL/BAL	8019521	2015/08/28	2015/08/29	Liilia Iankovska

Maxxam ID: MZ0038
Sample ID: KZ-21
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8016747	2015/08/26	2015/08/26	Maria Maclean

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

TEST SUMMARY

Maxxam ID: MZ0038
Sample ID: KZ-21
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8017479	N/A	2015/08/26	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	Sukhraj Sidhu
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	Marissa Richard
Conductance - water	AT/ALK	8016750	N/A	2015/08/26	Maria Maclean
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/09/01	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	Edwin Lamigo
Ion Balance	CALC	8015349	N/A	2015/09/01	Automated Statchk
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	Greg Sparrow
Elements by ICPMS Digested LL (total)	ICP/CRCM	8019337	2015/08/28	2015/09/01	Adnan Dzebic
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/09/01	Automated Statchk
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	Lucy Luo
pH Water	AT/ALK	8016751	N/A	2015/08/26	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8017490	N/A	2015/08/26	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	Sukhraj Sidhu
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	Sukhraj Sidhu
Total Suspended Solids-Low Level	BAL/BAL	8019521	2015/08/28	2015/08/29	Liilia Iankovska

Maxxam ID: MZ0038 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Wilson Au Yueng
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	Sukhraj Sidhu
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	Sherryl Flores

Maxxam ID: MZ0039
Sample ID: KZ-22
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8016747	2015/08/26	2015/08/26	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8017438	N/A	2015/08/26	Balwinder Bassi

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

TEST SUMMARY

Maxxam ID: MZ0039
Sample ID: KZ-22
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	Sukhraj Sidhu
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	Marissa Richard
Conductance - water	AT/ALK	8016750	N/A	2015/08/26	Maria Maclean
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/09/01	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	Edwin Lamigo
Ion Balance	CALC	8015349	N/A	2015/09/01	Automated Statchk
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	Greg Sparrow
Elements by ICPMS Digested LL (total)	ICP/CRCM	8019337	2015/08/28	2015/09/01	Adnan Dzebic
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/09/01	Automated Statchk
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	Lucy Luo
pH Water	AT/ALK	8016751	N/A	2015/08/26	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8017443	N/A	2015/08/26	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	Sukhraj Sidhu
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	Sukhraj Sidhu
Total Suspended Solids-Low Level	BAL/BAL	8019521	2015/08/28	2015/08/29	Liilia Iankovska

Maxxam ID: MZ0055
Sample ID: KZ-26
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8016747	2015/08/26	2015/08/26	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8017438	N/A	2015/08/26	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	Sukhraj Sidhu
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	Marissa Richard
Conductance - water	AT/ALK	8016750	N/A	2015/08/26	Maria Maclean
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8015348	N/A	2015/09/01	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021822	N/A	2015/08/31	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	Edwin Lamigo

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

TEST SUMMARY

Maxxam ID: MZ0055
Sample ID: KZ-26
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance	CALC	8015349	N/A	2015/09/01	Automated Statchk
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	Greg Sparrow
Elements by ICPMS Digested LL (total)	ICP/CRCM	8019337	2015/08/28	2015/09/01	Adnan Dzebic
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/09/01	Automated Statchk
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	Lucy Luo
pH Water	AT/ALK	8016751	N/A	2015/08/26	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8017443	N/A	2015/08/26	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	Sukhraj Sidhu
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	Sukhraj Sidhu
Total Suspended Solids-Low Level	BAL/BAL	8019493	2015/08/28	2015/08/29	Liilia Iankovska

Maxxam ID: MZ0056
Sample ID: KZ-28
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8016747	2015/08/26	2015/08/26	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8017479	N/A	2015/08/26	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	Sukhraj Sidhu
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	Marissa Richard
Conductance - water	AT/ALK	8016750	N/A	2015/08/26	Maria Maclean
Fluoride	ISE/ISE	8016543	N/A	2015/08/26	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8015348	N/A	2015/08/31	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021822	N/A	2015/08/31	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	Edwin Lamigo
Ion Balance	CALC	8015349	N/A	2015/09/01	Automated Statchk
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	Greg Sparrow
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/08/31	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8019258	N/A	2015/08/31	Greg Sparrow
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016876	N/A	2015/08/26	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8016878	N/A	2015/08/26	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	Automated Statchk

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

TEST SUMMARY

Maxxam ID: MZ0056
Sample ID: KZ-28
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	Lucy Luo
pH Water	AT/ALK	8016751	N/A	2015/08/26	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8017490	N/A	2015/08/26	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	Sukhraj Sidhu
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	Sukhraj Sidhu
Total Suspended Solids-Low Level	BAL/BAL	8019493	2015/08/28	2015/08/29	Liilia Iankovska

Maxxam ID: MZ0057
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/08/25
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8016747	2015/08/26	2015/08/26	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8017438	N/A	2015/08/26	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	Sukhraj Sidhu
Carbon (DOC) -Lab Filtered	TECH	8021903	N/A	2015/08/31	Marissa Richard
Conductance - water	AT/ALK	8016750	N/A	2015/08/26	Maria Maclean
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8015348	N/A	2015/08/31	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021822	N/A	2015/08/31	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8021803	2015/08/31	2015/08/31	Edwin Lamigo
Ion Balance	CALC	8015349	N/A	2015/09/01	Andy Lu
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	Greg Sparrow
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/08/31	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8019258	N/A	2015/08/31	Greg Sparrow
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	Lucy Luo
pH Water	AT/ALK	8016751	N/A	2015/08/26	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8017443	N/A	2015/08/26	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	Sukhraj Sidhu
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	Sukhraj Sidhu
Total Suspended Solids-Low Level	BAL/BAL	8021827	2015/08/31	2015/09/01	Liilia Iankovska

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

TEST SUMMARY

Maxxam ID: MZ0057 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/08/25
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8021803	2015/08/31	2015/08/31	Edwin Lamigo
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	Isaac Wang

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

Maxxam Job #: B573429
Report Date: 2015/09/02

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

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.0°C
Package 2	5.3°C
Package 3	5.7°C

Sample MZ0031-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample MZ0032-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample MZ0033-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample MZ0034-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample MZ0038-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample MZ0039-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample MZ0055-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample MZ0032, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MZ0036, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

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

Maxxam Job #: B573429
Report Date: 2015/09/02

QUALITY ASSURANCE REPORT

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8016251	Acidity (pH 4.5)	2015/08/26					<0.50	mg/L	NC	20
8016251	Acidity (pH 8.3)	2015/08/26			102	80 - 120	<0.50	mg/L	NC	20
8016543	Fluoride (F)	2015/08/26	NC	80 - 120	100	80 - 120	<0.010	mg/L	0	20
8016544	Fluoride (F)	2015/08/26	104	80 - 120	100	80 - 120	<0.010	mg/L	1.8	20
8016701	Strong Acid Dissoc. Cyanide (CN)	2015/08/27	104	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8016747	Alkalinity (PP as CaCO3)	2015/08/26					<0.50	mg/L	NC	20
8016747	Alkalinity (Total as CaCO3)	2015/08/26	NC	80 - 120	97	80 - 120	0.53, RDL=0.50	mg/L	7.6	20
8016747	Bicarbonate (HCO3)	2015/08/26					0.65, RDL=0.50	mg/L	7.6	20
8016747	Carbonate (CO3)	2015/08/26					<0.50	mg/L	NC	20
8016747	Hydroxide (OH)	2015/08/26					<0.50	mg/L	NC	20
8016750	Conductivity	2015/08/26			100	80 - 120	1.1, RDL=1.0	uS/cm	0.54	20
8016751	pH	2015/08/26			102	97 - 103			0.40	N/A
8016771	Alkalinity (PP as CaCO3)	2015/08/26					<0.50	mg/L	NC	20
8016771	Alkalinity (Total as CaCO3)	2015/08/26	NC	80 - 120	99	80 - 120	<0.50	mg/L	0.21	20
8016771	Bicarbonate (HCO3)	2015/08/26					<0.50	mg/L	0.21	20
8016771	Carbonate (CO3)	2015/08/26					<0.50	mg/L	NC	20
8016771	Hydroxide (OH)	2015/08/26					<0.50	mg/L	NC	20
8016772	Conductivity	2015/08/26			102	80 - 120	1.3, RDL=1.0	uS/cm	0.77	20
8016773	pH	2015/08/26			102	97 - 103			0.25	N/A
8016876	Nitrate plus Nitrite (N)	2015/08/26	107	80 - 120	109	80 - 120	<0.0020	mg/L	3.8	25
8016878	Nitrite (N)	2015/08/26	100	80 - 120	103	80 - 120	<0.0020	mg/L	NC	25
8016929	Nitrate plus Nitrite (N)	2015/08/26	106	80 - 120	106	80 - 120	<0.0020	mg/L	NC	25
8016931	Nitrite (N)	2015/08/26	103	80 - 120	103	80 - 120	<0.0020	mg/L	NC	25
8016938	Weak Acid Dissoc. Cyanide (CN)	2015/08/26	104	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8016958	Total Ammonia (N)	2015/08/26	96	80 - 120	103	80 - 120	0.0056, RDL=0.0050	mg/L	NC	20
8017042	True Colour	2015/08/26			99	80 - 120	<5.0	Col. Unit	0.41	20
8017438	Dissolved Chloride (Cl)	2015/08/26	94	80 - 120	98	80 - 120	<0.50	mg/L	NC	20
8017443	Dissolved Sulphate (SO4)	2015/08/26	NC	80 - 120	95	80 - 120	<0.50	mg/L	0.49	20
8017479	Dissolved Chloride (Cl)	2015/08/26			98	80 - 120	<0.50	mg/L		
8017490	Dissolved Sulphate (SO4)	2015/08/26			94	80 - 120	<0.50	mg/L		

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

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8018684	Total Phosphorus (P)	2015/08/27	97	80 - 120	100	80 - 120	<0.0020	mg/L	NC	20
8018685	Total Phosphorus (P)	2015/08/27			101	80 - 120	<0.0020	mg/L		
8018688	Dissolved Phosphorus (P)	2015/08/27	95	80 - 120	99	80 - 120	<0.0020	mg/L	NC	20
8019258	Total Aluminum (Al)	2015/08/31	98	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8019258	Total Antimony (Sb)	2015/08/31	94	80 - 120	109	80 - 120	<0.000020	mg/L	NC	20
8019258	Total Arsenic (As)	2015/08/31	96	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8019258	Total Barium (Ba)	2015/08/31	98	80 - 120	108	80 - 120	<0.000020	mg/L	NC	20
8019258	Total Beryllium (Be)	2015/08/31	99	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8019258	Total Bismuth (Bi)	2015/08/31	97	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8019258	Total Boron (B)	2015/08/31					<0.010	mg/L	NC	20
8019258	Total Cadmium (Cd)	2015/08/31	96	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8019258	Total Chromium (Cr)	2015/08/31	102	80 - 120	107	80 - 120	<0.00010	mg/L	NC	20
8019258	Total Cobalt (Co)	2015/08/31	103	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8019258	Total Copper (Cu)	2015/08/31	103	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20
8019258	Total Iron (Fe)	2015/08/31	103	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
8019258	Total Lead (Pb)	2015/08/31	101	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8019258	Total Lithium (Li)	2015/08/31	98	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8019258	Total Manganese (Mn)	2015/08/31	99	80 - 120	105	80 - 120	<0.000050	mg/L	NC	20
8019258	Total Molybdenum (Mo)	2015/08/31	92	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8019258	Total Nickel (Ni)	2015/08/31	101	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
8019258	Total Phosphorus (P)	2015/08/31					<0.0020	mg/L		
8019258	Total Selenium (Se)	2015/08/31	96	80 - 120	101	80 - 120	<0.000040	mg/L	NC	20
8019258	Total Silicon (Si)	2015/08/31					<0.050	mg/L	NC	20
8019258	Total Silver (Ag)	2015/08/31	96	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8019258	Total Strontium (Sr)	2015/08/31	92	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8019258	Total Thallium (Tl)	2015/08/31	98	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8019258	Total Tin (Sn)	2015/08/31	91	80 - 120	107	80 - 120	<0.00020	mg/L	NC	20
8019258	Total Titanium (Ti)	2015/08/31	96	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8019258	Total Uranium (U)	2015/08/31	99	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8019258	Total Vanadium (V)	2015/08/31	101	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20

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

Maxxam Job #: B573429
Report Date: 2015/09/02

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8019258	Total Zinc (Zn)	2015/08/31	106	80 - 120	107	80 - 120	0.00012, RDL=0.00010	mg/L	NC	20
8019258	Total Zirconium (Zr)	2015/08/31					<0.00010	mg/L	NC	20
8019311	Dissolved Aluminum (Al)	2015/08/31	102	80 - 120	112	80 - 120	<0.00050	mg/L	NC	20
8019311	Dissolved Antimony (Sb)	2015/08/31	103	80 - 120	114	80 - 120	<0.000020	mg/L	NC	20
8019311	Dissolved Arsenic (As)	2015/08/31	97	80 - 120	111	80 - 120	<0.000020	mg/L	NC	20
8019311	Dissolved Barium (Ba)	2015/08/31	102	80 - 120	116	80 - 120	<0.000020	mg/L	1.2	20
8019311	Dissolved Beryllium (Be)	2015/08/31	98	80 - 120	106	80 - 120	<0.000010	mg/L	NC	20
8019311	Dissolved Bismuth (Bi)	2015/08/31	103	80 - 120	117	80 - 120	<0.0000050	mg/L	NC	20
8019311	Dissolved Boron (B)	2015/08/31					<0.010	mg/L	NC	20
8019311	Dissolved Cadmium (Cd)	2015/08/31	97	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8019311	Dissolved Chromium (Cr)	2015/08/31	102	80 - 120	112	80 - 120	<0.00010	mg/L	NC	20
8019311	Dissolved Cobalt (Co)	2015/08/31	104	80 - 120	113	80 - 120	<0.0000050	mg/L	NC	20
8019311	Dissolved Copper (Cu)	2015/08/31	105	80 - 120	115	80 - 120	<0.000050	mg/L	NC	20
8019311	Dissolved Iron (Fe)	2015/08/31	106	80 - 120	113	80 - 120	<0.0010	mg/L	NC	20
8019311	Dissolved Lead (Pb)	2015/08/31	106	80 - 120	118	80 - 120	<0.0000050	mg/L	3.5	20
8019311	Dissolved Lithium (Li)	2015/08/31	97	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8019311	Dissolved Manganese (Mn)	2015/08/31	101	80 - 120	112	80 - 120	<0.000050	mg/L	NC	20
8019311	Dissolved Molybdenum (Mo)	2015/08/31	101	80 - 120	107	80 - 120	<0.000050	mg/L	NC	20
8019311	Dissolved Nickel (Ni)	2015/08/31	103	80 - 120	113	80 - 120	<0.000020	mg/L	NC	20
8019311	Dissolved Phosphorus (P)	2015/08/31					<0.0020	mg/L		
8019311	Dissolved Selenium (Se)	2015/08/31	97	80 - 120	106	80 - 120	<0.000040	mg/L	NC	20
8019311	Dissolved Silicon (Si)	2015/08/31					<0.050	mg/L	NC	20
8019311	Dissolved Silver (Ag)	2015/08/31	105	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8019311	Dissolved Strontium (Sr)	2015/08/31	94	80 - 120	108	80 - 120	<0.000050	mg/L	7.2	20
8019311	Dissolved Thallium (Tl)	2015/08/31	105	80 - 120	115	80 - 120	<0.0000020	mg/L	NC	20
8019311	Dissolved Tin (Sn)	2015/08/31	100	80 - 120	111	80 - 120	<0.00020	mg/L	NC	20
8019311	Dissolved Titanium (Ti)	2015/08/31	98	80 - 120	111	80 - 120	<0.00050	mg/L	NC	20
8019311	Dissolved Uranium (U)	2015/08/31	103	80 - 120	117	80 - 120	<0.0000020	mg/L	NC	20
8019311	Dissolved Vanadium (V)	2015/08/31	102	80 - 120	110	80 - 120	<0.00020	mg/L	NC	20
8019311	Dissolved Zinc (Zn)	2015/08/31	103	80 - 120	112	80 - 120	<0.00010	mg/L	7.0	20

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

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8019311	Dissolved Zirconium (Zr)	2015/08/31					<0.00010	mg/L	NC	20
8019337	Total Aluminum (Al)	2015/09/01	NC	80 - 120	109	80 - 120	<0.0030	mg/L	7.4	20
8019337	Total Antimony (Sb)	2015/09/01	107	80 - 120	105	80 - 120	<0.000050	mg/L	NC	20
8019337	Total Arsenic (As)	2015/09/01	97	80 - 120	99	80 - 120	<0.000020	mg/L	1.2	20
8019337	Total Barium (Ba)	2015/09/01	NC	80 - 120	98	80 - 120	<0.00010	mg/L	2.9	20
8019337	Total Beryllium (Be)	2015/09/01	98	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8019337	Total Bismuth (Bi)	2015/09/01	106	80 - 120	109	80 - 120	<0.000020	mg/L	NC	20
8019337	Total Boron (B)	2015/09/01					<0.050	mg/L	NC	20
8019337	Total Cadmium (Cd)	2015/09/01	102	80 - 120	101	80 - 120	0.0000090, RDL=0.0000050	mg/L	NC	20
8019337	Total Chromium (Cr)	2015/09/01	102	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8019337	Total Cobalt (Co)	2015/09/01	101	80 - 120	102	80 - 120	<0.000010	mg/L	2.5	20
8019337	Total Copper (Cu)	2015/09/01	98	80 - 120	105	80 - 120	0.00038, RDL=0.00020	mg/L	9.2	20
8019337	Total Iron (Fe)	2015/09/01	NC	80 - 120	111	80 - 120	<0.0050	mg/L	5.2	20
8019337	Total Lead (Pb)	2015/09/01	104	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8019337	Total Lithium (Li)	2015/09/01	99	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8019337	Total Manganese (Mn)	2015/09/01	NC	80 - 120	102	80 - 120	<0.00010	mg/L	1.1	20
8019337	Total Molybdenum (Mo)	2015/09/01	101	80 - 120	106	80 - 120	<0.000050	mg/L	NC	20
8019337	Total Nickel (Ni)	2015/09/01	101	80 - 120	100	80 - 120	<0.00010	mg/L	1.4	20
8019337	Total Phosphorus (P)	2015/09/01					<0.010	mg/L	NC	20
8019337	Total Selenium (Se)	2015/09/01	96	80 - 120	100	80 - 120	<0.000040	mg/L	NC	20
8019337	Total Silicon (Si)	2015/09/01					<0.10	mg/L	4.2	20
8019337	Total Silver (Ag)	2015/09/01	104	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8019337	Total Strontium (Sr)	2015/09/01	NC	80 - 120	105	80 - 120	<0.000050	mg/L	0.99	20
8019337	Total Thallium (Tl)	2015/09/01	106	80 - 120	101	80 - 120	0.0000020, RDL=0.0000020	mg/L	NC	20
8019337	Total Tin (Sn)	2015/09/01	103	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8019337	Total Titanium (Ti)	2015/09/01	NC	80 - 120	111	80 - 120	<0.0050	mg/L	NC	20
8019337	Total Uranium (U)	2015/09/01	111	80 - 120	103	80 - 120	<0.0000050	mg/L	2.1	20
8019337	Total Vanadium (V)	2015/09/01	98	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8019337	Total Zinc (Zn)	2015/09/01	99	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20

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

Maxxam Job #: B573429
Report Date: 2015/09/02

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8019337	Total Zirconium (Zr)	2015/09/01					<0.00010	mg/L	16	20
8019493	Total Suspended Solids	2015/08/29			100	80 - 120	<1.0	mg/L		
8019521	Total Suspended Solids	2015/08/29			99	80 - 120	<1.0	mg/L		
8019592	Dissolved Sulphate (SO4)	2015/08/27	116	80 - 120	98	80 - 120	<0.50	mg/L		
8021349	Dissolved Mercury (Hg)	2015/08/31	106	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8021353	Total Mercury (Hg)	2015/08/31	94	80 - 120	105	80 - 120	<0.0000020	mg/L	NC	20
8021803	Total Mercury (Hg)	2015/08/31	103	80 - 120	85	80 - 120	<0.0000020	mg/L	NC	20
8021822	Dissolved Mercury (Hg)	2015/08/31	97	80 - 120	109	80 - 120	<0.0000020	mg/L	NC	20
8021827	Total Suspended Solids	2015/09/01			102	80 - 120	<1.0	mg/L		
8021903	Dissolved Organic Carbon (C)	2015/08/31	NC	80 - 120	101	80 - 120	<0.50	mg/L	4.5	20
8023893	Dissolved Organic Carbon (C)	2015/09/01	105	80 - 120	98	80 - 120	<0.50	mg/L	NC	20
8025346	Dissolved Nickel (Ni)	2015/09/02			105	80 - 120	<0.000020	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

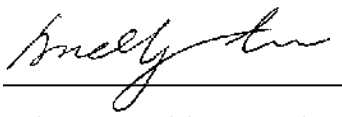
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

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

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Andy Lu, Data Validation Coordinator

Kelly Gip, B.Sc., Senior Analyst

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

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

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

08413031

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Y / (N) Present	Intact	COOLER TEMPERATURES
NA		5,7,6

COOLING MEDIA PRESENT (Y) / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-26	MZ0055	2015/08/22	9:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
2	KZ-28	MZ0056	2015/08/22	12:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
3	Trip Blank	MZ0057	—	—	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
4																								
5																								
6																								
7																								
8																								
9																								
10																								

B573429

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Catherine Henry	2015/08/24	9:30	[signature] Laurel Berthier	2015/08/25	14:05	B573429

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

08413030

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2	MZ0030	2015/08/23	16:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
2	KZ-7	MZ0031	2015/08/23	12:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
3	KZ-9	MZ0032	2015/08/23	11:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
4	KZ-13	MZ0033	2015/08/23	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
5	KZ-15	MZ0034	2015/08/22	15:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
6	KZ-16	MZ0035	2015/08/22	15:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
7	KZ-17	MZ0036	2015/08/22	16:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
8	KZ-19	MZ0037	2015/08/23	13:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
9	KZ-21	MZ0038	2015/08/23	10:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
10	KZ-22	MZ0039	2015/08/23	9:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	

LABORATORY USE ONLY

CUSTODY SEAL Y / (N)		COOLER TEMPERATURES
Present	Intact	
NA		5°C
		11°C
		2015/08/25

COOLING MEDIA PRESENT (Y) / ~~N~~ ~~NA~~

COMMENTS

B573429

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Catherine Henry	2015/08/24	9:30	Laurel Bethier	2015/08/25	14:05	B573429

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08411728, 08411735

Attention:KAI WOLOSHYN

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

Report Date: 2015/09/22
Report #: R2045907
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B579823
Received: 2015/09/14, 10:25

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	14	N/A	2015/09/15	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	14	2015/09/15	2015/09/15	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	14	N/A	2015/09/16	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	14	N/A	2015/09/17	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	14	N/A	2015/09/17	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	14	N/A	2015/09/16	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) (1, 2)	14	N/A	2015/09/18	CAL SOP-00077	MMCW 119 1996 m
Conductance - water	14	N/A	2015/09/15	BBY6SOP-00026	SM 22 2510 B m
Fluoride	14	N/A	2015/09/17	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	4	N/A	2015/09/18	BBY7SOP-00002	EPA 6020a R1 m
Hardness Total (calculated as CaCO3)	10	N/A	2015/09/21	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	7	N/A	2015/09/18	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	6	N/A	2015/09/21	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	1	N/A	2015/09/22	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	14	N/A	2015/09/18	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	8	2015/09/18	2015/09/18	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	6	2015/09/21	2015/09/21	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	7	N/A	2015/09/18	BBY WI-00033	SM 22 1030E
Ion Balance	7	N/A	2015/09/21	BBY WI-00033	SM 22 1030E
Sum of cations, anions	10	N/A	2015/09/18	Calc	
Sum of cations, anions	4	N/A	2015/09/21	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	7	N/A	2015/09/18	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	6	N/A	2015/09/21	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2015/09/22	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	14	N/A	2015/09/18	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	4	N/A	2015/09/18	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	10	N/A	2015/09/21	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	4	N/A	2015/09/17	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	10	N/A	2015/09/18	BBY7SOP-00002	EPA 6020A R1 m

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08411728, 08411735

Attention:KAI WOLOSHYN

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

Report Date: 2015/09/22
Report #: R2045907
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B579823
Received: 2015/09/14, 10:25

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Ammonia-N (Unpreserved)	14	N/A	2015/09/15	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	14	N/A	2015/09/15	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	14	N/A	2015/09/15	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	14	N/A	2015/09/16	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	14	N/A	2015/09/15	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (3)	14	N/A	2015/09/15	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	14	N/A	2015/09/16	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	14	2015/09/15	2015/09/15	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	14	N/A	2015/09/15	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	14	2015/09/15	2015/09/16	BBY6SOP-00034	SM 22 2540 D

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

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

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

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NC8377		NC8378	NC8379		NC8380		
Sampling Date		2015/09/11 14:35		2015/09/11 08:20	2015/09/10 16:45		2015/09/11 11:25		
COC Number		08411728		08411728	08411728		08411728		
	UNITS	KZ-2	QC Batch	KZ-7	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Misc. Inorganics									
Acidity (pH 4.5)	mg/L	<0.50	8038217	<0.50	<0.50	8038217	<0.50	0.50	8038318
Acidity (pH 8.3)	mg/L	<0.50	8038217	<0.50	<0.50	8038217	<0.50	0.50	8038318
Calculated Parameters									
Anion Sum	meq/L	1.8	8037624	2.8	3.1	8037624	1.4	N/A	8037624
Cation Sum	meq/L	1.9	8037624	2.9	3.4	8037624	1.5	N/A	8037624
Filter and HNO3 Preservation	N/A	LAB	8037935	LAB	LAB	8037935	LAB	N/A	8037935
Ion Balance	N/A	1.1	8036928	1.0	1.1	8036928	1.1	0.010	8036928
Nitrate (N)	mg/L	0.0796	8037518	0.0116	0.0453	8037518	0.0246	0.0020	8037518
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00066	8041430	0.00072	0.00071	8041430	0.00080	0.00050	8041430
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00060	8041503	0.00072	0.00077	8041503	0.00059	0.00050	8041503
Fluoride (F)	mg/L	0.034	8041939	0.051	0.059	8041939	0.044	0.010	8041939
Dissolved Organic Carbon (C)	mg/L	0.81	8042082	1.8	1.6	8042082	3.0	0.50	8042082
Alkalinity (Total as CaCO3)	mg/L	48.9	8038493	97.9	120	8038513	56.3	0.50	8038513
Alkalinity (PP as CaCO3)	mg/L	<0.50	8038493	<0.50	<0.50	8038513	<0.50	0.50	8038513
Bicarbonate (HCO3)	mg/L	59.7	8038493	119	146	8038513	68.7	0.50	8038513
Carbonate (CO3)	mg/L	<0.50	8038493	<0.50	<0.50	8038513	<0.50	0.50	8038513
Hydroxide (OH)	mg/L	<0.50	8038493	<0.50	<0.50	8038513	<0.50	0.50	8038513
Anions									
Dissolved Sulphate (SO4)	mg/L	40.2	8040315	38.4	33.8	8040318	12.4	0.50	8040315
Dissolved Chloride (Cl)	mg/L	<0.50	8040314	0.74	<0.50	8040317	<0.50	0.50	8040314
MISCELLANEOUS									
True Colour	Col. Unit	7.0 (1)	8038979	12.7 (1)	12.6 (2)	8040936	19.0 (1)	5.0	8040936
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	8038989	0.0024 (1)	0.0023 (2)	8038989	0.0030 (1)	0.0020	8038989
Total Ammonia (N)	mg/L	0.0051 (1)	8039022	<0.0050 (1)	<0.0050 (2)	8039022	<0.0050 (1)	0.0050	8039022
Nitrate plus Nitrite (N)	mg/L	0.0796 (1)	8039053	0.0116 (1)	0.0453 (3)	8039053	0.0246 (1)	0.0020	8039053
Nitrite (N)	mg/L	<0.0020 (1)	8039054	<0.0020 (1)	<0.0020 (3)	8039054	<0.0020 (1)	0.0020	8039054
Total Phosphorus (P)	mg/L	<0.0020 (1)	8038987	0.0028 (1)	0.0022 (2)	8038987	0.0029 (1)	0.0020	8038987

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.
(2) Sample arrived to laboratory past recommended hold time.
(3) Sample analysed past recommended hold time.

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NC8377		NC8378	NC8379		NC8380		
Sampling Date		2015/09/11 14:35		2015/09/11 08:20	2015/09/10 16:45		2015/09/11 11:25		
COC Number		08411728		08411728	08411728		08411728		
	UNITS	KZ-2	QC Batch	KZ-7	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Physical Properties									
Conductivity	uS/cm	188	8038495	266	298	8038515	134	1.0	8038515
pH	pH	7.86	8038496	8.14	8.13	8038516	8.02	N/A	8038516
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8038171	1.9	1.5	8038171	1.7	1.0	8038171

RDL = Reportable Detection Limit
N/A = Not Applicable

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NC8381		NC8382	NC8383		NC8384		
Sampling Date		2015/09/09 14:50		2015/09/09 16:00	2015/09/09 17:08		2015/09/08 14:45		
COC Number		08411728		08411728	08411728		08411728		
	UNITS	KZ-15	QC Batch	KZ-16	KZ-17	QC Batch	KZ-19	RDL	QC Batch
Misc. Inorganics									
Acidity (pH 4.5)	mg/L	<0.50	8038318	<0.50	<0.50	8038217	<0.50	0.50	8038318
Acidity (pH 8.3)	mg/L	<0.50	8038318	<0.50	<0.50	8038217	<0.50	0.50	8038318
Calculated Parameters									
Anion Sum	meq/L	2.8	8037624	2.5	3.4	8037624	0.017	N/A	8037624
Cation Sum	meq/L	3.0	8037624	2.5	3.3	8037624	0.0010	N/A	8037624
Filter and HNO3 Preservation	N/A	LAB	8037935	LAB	LAB	8037935	LAB	N/A	8037935
Ion Balance	N/A	1.1	8036928	1.0	0.97	8036928	0.060 (1)	0.010	8036928
Nitrate (N)	mg/L	0.0429	8037518	0.0492	0.0193	8037518	<0.0020	0.0020	8037518
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00074	8041430	0.00078	0.00078	8041430	0.00065	0.00050	8041430
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00062	8041503	0.00062	0.00068	8041503	0.00062	0.00050	8041503
Fluoride (F)	mg/L	0.064	8041939	0.054	0.087	8041939	<0.010	0.010	8041939
Dissolved Organic Carbon (C)	mg/L	1.7	8042082	1.5	2.2	8042082	<0.50	0.50	8042082
Alkalinity (Total as CaCO3)	mg/L	114	8038513	102	136	8038500	0.84	0.50	8038513
Alkalinity (PP as CaCO3)	mg/L	<0.50	8038513	<0.50	<0.50	8038500	<0.50	0.50	8038513
Bicarbonate (HCO3)	mg/L	139	8038513	125	166	8038500	1.02	0.50	8038513
Carbonate (CO3)	mg/L	<0.50	8038513	<0.50	<0.50	8038500	<0.50	0.50	8038513
Hydroxide (OH)	mg/L	<0.50	8038513	<0.50	<0.50	8038500	<0.50	0.50	8038513
Anions									
Dissolved Sulphate (SO4)	mg/L	23.9	8040318	20.0	31.4	8040315	<0.50	0.50	8040318
Dissolved Chloride (Cl)	mg/L	<0.50	8040317	<0.50	0.61	8040314	<0.50	0.50	8040317
MISCELLANEOUS									
True Colour	Col. Unit	9.5 (2)	8040936	8.4 (2)	11.7 (2)	8038979	<5.0 (2)	5.0	8040936
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020 (2)	8038989	<0.0020 (2)	0.0026 (2)	8038989	<0.0020 (2)	0.0020	8038989
Total Ammonia (N)	mg/L	<0.0050 (2)	8039022	0.0086 (2)	0.0067 (2)	8039022	<0.0050 (2)	0.0050	8039022
Nitrate plus Nitrite (N)	mg/L	0.0429 (2)	8039053	0.0492 (2)	0.0193 (2)	8039053	<0.0020 (2)	0.0020	8039053
Nitrite (N)	mg/L	<0.0020 (2)	8039054	<0.0020 (2)	<0.0020 (2)	8039054	<0.0020 (2)	0.0020	8039054
Total Phosphorus (P)	mg/L	0.0029 (2)	8038987	<0.0020 (2)	0.0029 (2)	8038987	<0.0020 (2)	0.0020	8038987
Physical Properties									
Conductivity	uS/cm	267	8038515	237	319	8038504	1.2	1.0	8038515

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

(2) Sample arrived to laboratory past recommended hold time.

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NC8381		NC8382	NC8383		NC8384		
Sampling Date		2015/09/09 14:50		2015/09/09 16:00	2015/09/09 17:08		2015/09/08 14:45		
COC Number		08411728		08411728	08411728		08411728		
	UNITS	KZ-15	QC Batch	KZ-16	KZ-17	QC Batch	KZ-19	RDL	QC Batch
pH	pH	8.17	8038516	8.17	8.25	8038505	6.20	N/A	8038516
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8038171	<1.0	<1.0	8038171	<1.0	1.0	8038158

RDL = Reportable Detection Limit
N/A = Not Applicable

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NC8385		NC8386		NC8411		
Sampling Date		2015/09/09 12:30		2015/09/09 09:40		2015/09/08 14:00		
COC Number		08411728		08411728		08411735		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	8038217	<0.50	8038318	<0.50	0.50	8038217
Acidity (pH 8.3)	mg/L	<0.50	8038217	<0.50	8038318	<0.50	0.50	8038217
Calculated Parameters								
Anion Sum	meq/L	4.4	8037624	3.8	8037624	3.8	N/A	8037624
Cation Sum	meq/L	4.5	8037624	3.9	8037624	4.0	N/A	8037624
Filter and HNO3 Preservation	N/A	LAB	8037935	LAB	8037935	LAB	N/A	8037935
Ion Balance	N/A	1.0	8036928	1.0	8036928	1.0	0.010	8036928
Nitrate (N)	mg/L	<0.0020	8037518	0.0192	8037518	0.0090	0.0020	8037518
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00098	8041430	0.00091	8041430	0.00099	0.00050	8041430
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00090	8041503	0.00087	8041503	0.00095	0.00050	8041503
Fluoride (F)	mg/L	0.150	8041939	0.110	8041939	0.100	0.010	8041939
Dissolved Organic Carbon (C)	mg/L	6.9	8042082	4.5	8042082	5.6	0.50	8042082
Alkalinity (Total as CaCO3)	mg/L	177	8038500	153	8038513	158	0.50	8038513
Alkalinity (PP as CaCO3)	mg/L	<0.50	8038500	<0.50	8038513	0.57	0.50	8038513
Bicarbonate (HCO3)	mg/L	216	8038500	187	8038513	191	0.50	8038513
Carbonate (CO3)	mg/L	<0.50	8038500	<0.50	8038513	0.68	0.50	8038513
Hydroxide (OH)	mg/L	<0.50	8038500	<0.50	8038513	<0.50	0.50	8038513
Anions								
Dissolved Sulphate (SO4)	mg/L	38.0	8040315	32.8	8040315	31.1	0.50	8040315
Dissolved Chloride (Cl)	mg/L	0.77	8040314	0.62	8040314	0.88	0.50	8040314
MISCELLANEOUS								
True Colour	Col. Unit	52.9 (1)	8038979	30.0 (1)	8040936	36.3 (1)	5.0	8040936
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0086 (1)	8038989	0.0046 (1)	8038989	0.0034 (1)	0.0020	8038989
Total Ammonia (N)	mg/L	0.0087 (1)	8039022	<0.0050 (1)	8039022	<0.0050 (1)	0.0050	8039022
Nitrate plus Nitrite (N)	mg/L	<0.0020 (1)	8039053	0.0192 (1)	8039053	0.0090 (1)	0.0020	8039053
Nitrite (N)	mg/L	<0.0020 (1)	8039054	<0.0020 (1)	8039054	<0.0020 (1)	0.0020	8039054
Total Phosphorus (P)	mg/L	0.0085 (1)	8038987	0.0048 (1)	8038987	0.0037 (1)	0.0020	8038987
Physical Properties								
Conductivity	uS/cm	405	8038504	343	8038515	348	1.0	8038515
pH	pH	8.25	8038505	8.25	8038516	8.31	N/A	8038516

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

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NC8385		NC8386		NC8411		
Sampling Date		2015/09/09 12:30		2015/09/09 09:40		2015/09/08 14:00		
COC Number		08411728		08411728		08411735		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	1.3	8038171	1.3	8038171	2.2	1.0	8038158
RDL = Reportable Detection Limit								

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NC8412		NC8413	NC8414		
Sampling Date		2015/09/09 10:45		2015/09/14 10:25	2015/09/11 17:45		
COC Number		08411735		08411735	08411735		
	UNITS	KZ-28	QC Batch	TRIP BLANK	KZ-15	RDL	QC Batch
Misc. Inorganics							
Acidity (pH 4.5)	mg/L	<0.50	8038217	<0.50	<0.50	0.50	8038217
Acidity (pH 8.3)	mg/L	<0.50	8038217	<0.50	<0.50	0.50	8038217
Calculated Parameters							
Anion Sum	meq/L	3.8	8037624	0.018	2.8	N/A	8037624
Cation Sum	meq/L	3.9	8037624	0.0020	3.0	N/A	8037624
Filter and HNO3 Preservation	N/A	LAB	8037935	LAB	LAB	N/A	8037935
Ion Balance	N/A	1.0	8036928	0.11 (1)	1.1	0.010	8036928
Nitrate (N)	mg/L	0.0197	8037518	<0.0020	0.0299	0.0020	8037518
Misc. Inorganics							
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00094	8041430	<0.00050	0.00074	0.00050	8041475
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00079	8041503	<0.00050	0.00074	0.00050	8041503
Fluoride (F)	mg/L	0.110	8041939	<0.010	0.067	0.010	8041939
Dissolved Organic Carbon (C)	mg/L	4.5	8042082	<0.50	1.8	0.50	8042082
Alkalinity (Total as CaCO3)	mg/L	154	8038513	0.88	112	0.50	8038513
Alkalinity (PP as CaCO3)	mg/L	<0.50	8038513	<0.50	<0.50	0.50	8038513
Bicarbonate (HCO3)	mg/L	187	8038513	1.07	137	0.50	8038513
Carbonate (CO3)	mg/L	<0.50	8038513	<0.50	<0.50	0.50	8038513
Hydroxide (OH)	mg/L	<0.50	8038513	<0.50	<0.50	0.50	8038513
Anions							
Dissolved Sulphate (SO4)	mg/L	32.6	8040315	<0.50	25.3	0.50	8040315
Dissolved Chloride (Cl)	mg/L	<0.50	8040314	<0.50	1.7	0.50	8040314
MISCELLANEOUS							
True Colour	Col. Unit	29.0 (2)	8040936	<5.0	9.2 (3)	5.0	8040936
Nutrients							
Dissolved Phosphorus (P)	mg/L	0.0049 (2)	8038989	<0.0020	0.0025 (2)	0.0020	8038989
Total Ammonia (N)	mg/L	0.0051 (2)	8039022	0.0085	0.0093 (3)	0.0050	8039022
Nitrate plus Nitrite (N)	mg/L	0.0197 (2)	8039053	<0.0020	0.0299 (3)	0.0020	8039053
Nitrite (N)	mg/L	<0.0020 (2)	8039054	<0.0020	<0.0020 (3)	0.0020	8039054
Total Phosphorus (P)	mg/L	0.0049 (2)	8038987	<0.0020	<0.0020 (2)	0.0020	8038987

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

(2) Sample arrived to laboratory past recommended hold time.

(3) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NC8412		NC8413	NC8414		
Sampling Date		2015/09/09 10:45		2015/09/14 10:25	2015/09/11 17:45		
COC Number		08411735		08411735	08411735		
	UNITS	KZ-28	QC Batch	TRIP BLANK	KZ-15	RDL	QC Batch
Physical Properties							
Conductivity	uS/cm	342	8038515	<1.0	262	1.0	8038515
pH	pH	8.27	8038516	5.86	8.07	N/A	8038516
Physical Properties							
Total Suspended Solids	mg/L	1.2	8038171	<1.0	<1.0	1.0	8038171

RDL = Reportable Detection Limit
N/A = Not Applicable

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NC8377	NC8378	NC8379		NC8380		
Sampling Date		2015/09/11 14:35	2015/09/11 08:20	2015/09/10 16:45		2015/09/11 11:25		
COC Number		08411728	08411728	08411728		08411728		
	UNITS	KZ-2	KZ-7	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	93.3	139	167	8036746	70.9	0.50	8036746
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8042926	<0.0000020	0.0000020	8042926
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00484	0.00376	0.00452	8039492	0.00873	0.00050	8039492
Dissolved Antimony (Sb)	mg/L	0.000022	0.000094	0.000061	8039492	0.000029	0.000020	8039492
Dissolved Arsenic (As)	mg/L	0.000103	0.000318	0.000218	8039492	0.000196	0.000020	8039492
Dissolved Barium (Ba)	mg/L	0.0530	0.0693	0.0773	8039492	0.0932	0.000020	8039492
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8039492	<0.000010	0.000010	8039492
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8039492	<0.0000050	0.0000050	8039492
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8039492	<0.010	0.010	8039492
Dissolved Cadmium (Cd)	mg/L	0.000275	0.000170	0.0000710	8039492	0.0000240	0.0000050	8039492
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8039492	<0.00010	0.00010	8039492
Dissolved Cobalt (Co)	mg/L	0.0000100	0.0000280	0.0000350	8039492	0.0000180	0.0000050	8039492
Dissolved Copper (Cu)	mg/L	0.000652	0.000716	0.000574	8039492	0.000484	0.000050	8039492
Dissolved Iron (Fe)	mg/L	0.0011	0.0528	0.101	8039492	0.0187	0.0010	8039492
Dissolved Lead (Pb)	mg/L	0.0000100	0.0000450	0.0000170	8039492	0.0000060	0.0000050	8039492
Dissolved Lithium (Li)	mg/L	0.00111	0.00174	0.00216	8039492	0.00175	0.00050	8039492
Dissolved Manganese (Mn)	mg/L	0.000119	0.0175	0.0264	8039492	0.00609	0.000050	8039492
Dissolved Molybdenum (Mo)	mg/L	0.000589	0.000448	0.000527	8039492	0.000485	0.000050	8039492
Dissolved Nickel (Ni)	mg/L	0.000408	0.000537	0.000350	8039492	0.000412	0.000020	8039492
Dissolved Phosphorus (P)	mg/L	0.0038	0.0053	0.0029	8039492	0.0030	0.0020	8039492
Dissolved Selenium (Se)	mg/L	0.000635	0.000750	0.000876	8039492	0.000153	0.000040	8039492
Dissolved Silicon (Si)	mg/L	2.28	2.72	2.97	8039492	2.69	0.050	8046091
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8039492	<0.0000050	0.0000050	8039492
Dissolved Strontium (Sr)	mg/L	0.105	0.170	0.173	8039492	0.0695	0.000050	8039492
Dissolved Thallium (Tl)	mg/L	0.0000030	0.0000030	<0.0000020	8039492	<0.0000020	0.0000020	8039492
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8039492	<0.00020	0.00020	8039492
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8039492	<0.00050	0.00050	8039492
Dissolved Uranium (U)	mg/L	0.00182	0.00108	0.00118	8039492	0.000521	0.0000020	8039492
Dissolved Vanadium (V)	mg/L	0.00022	<0.00020	<0.00020	8039492	0.00023	0.00020	8039492
Dissolved Zinc (Zn)	mg/L	0.0405	0.0475	0.0129	8039492	0.00297	0.00010	8039492
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8039492	<0.00010	0.00010	8039492
Dissolved Calcium (Ca)	mg/L	32.3	44.6	56.2	8036747	24.2	0.050	8036747

RDL = Reportable Detection Limit

Maxxam Job #: B579823
Report Date: 2015/09/22

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NC8377	NC8378	NC8379		NC8380		
Sampling Date		2015/09/11 14:35	2015/09/11 08:20	2015/09/10 16:45		2015/09/11 11:25		
COC Number		08411728	08411728	08411728		08411728		
	UNITS	KZ-2	KZ-7	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	3.07	6.75	6.40	8036747	2.57	0.050	8036747
Dissolved Potassium (K)	mg/L	1.67	1.87	1.58	8036747	1.42	0.050	8036747
Dissolved Sodium (Na)	mg/L	0.677	0.977	0.976	8036747	0.936	0.050	8036747
Dissolved Sulphur (S)	mg/L	14.0	14.5	11.3	8036747	4.4	3.0	8036747
RDL = Reportable Detection Limit								

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NC8381	NC8382		NC8383	NC8384		
Sampling Date		2015/09/09 14:50	2015/09/09 16:00		2015/09/09 17:08	2015/09/08 14:45		
COC Number		08411728	08411728		08411728	08411728		
	UNITS	KZ-15	KZ-16	QC Batch	KZ-17	KZ-19	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	146	124	8036746	161	<0.50	0.50	8036746
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8042926	<0.0000020	<0.0000020	0.0000020	8042926
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00806 (1)	0.00546 (1)	8046091	0.00334	0.00285	0.00050	8040034
Dissolved Antimony (Sb)	mg/L	0.000028	<0.000020	8039492	0.000054	<0.000020	0.000020	8040034
Dissolved Arsenic (As)	mg/L	0.000359	0.000274	8039492	0.000439	0.000037	0.000020	8040034
Dissolved Barium (Ba)	mg/L	0.0592	0.0566	8039492	0.0696	0.000025	0.000020	8040034
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	8039492	<0.000010	<0.000010	0.000010	8040034
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8039492	<0.0000050	<0.0000050	0.0000050	8040034
Dissolved Boron (B)	mg/L	<0.010	<0.010	8039492	<0.010	<0.010	0.010	8040034
Dissolved Cadmium (Cd)	mg/L	0.0000220	0.0000140	8039492	0.0000280	<0.0000050	0.0000050	8040034
Dissolved Chromium (Cr)	mg/L	0.00013	<0.00010	8039492	<0.00010	<0.00010	0.00010	8040034
Dissolved Cobalt (Co)	mg/L	0.0000190	0.0000150	8039492	0.0000240	<0.0000050	0.0000050	8040034
Dissolved Copper (Cu)	mg/L	0.000536	0.000402	8039492	0.000426	<0.000050	0.000050	8040034
Dissolved Iron (Fe)	mg/L	0.0201	0.0045	8039492	0.0486	0.0020	0.0010	8040034
Dissolved Lead (Pb)	mg/L	0.0000050	<0.0000050	8039492	0.0000090	<0.0000050	0.0000050	8040034
Dissolved Lithium (Li)	mg/L	0.00221	0.00191	8039492	0.00227	<0.00050	0.00050	8040034
Dissolved Manganese (Mn)	mg/L	0.0120	0.00291	8039492	0.0258	<0.000050	0.000050	8040034
Dissolved Molybdenum (Mo)	mg/L	0.000672	0.000410	8039492	0.00116	<0.000050	0.000050	8040034
Dissolved Nickel (Ni)	mg/L	0.000447	0.000299	8039492	0.000507	0.000031	0.000020	8040034
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0025	8039492	<0.0020	<0.0020	0.0020	8040034
Dissolved Selenium (Se)	mg/L	0.000602	0.000449	8039492	0.000826	<0.000040	0.000040	8040034
Dissolved Silicon (Si)	mg/L	2.83	2.62	8039492	2.97	<0.050	0.050	8040034
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8039492	<0.0000050	<0.0000050	0.0000050	8040034
Dissolved Strontium (Sr)	mg/L	0.148	0.127	8039492	0.158	<0.000050	0.000050	8040034
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8039492	<0.0000020	<0.0000020	0.0000020	8040034
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8039492	<0.00020	<0.00020	0.00020	8040034
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8039492	<0.00050	<0.00050	0.00050	8040034
Dissolved Uranium (U)	mg/L	0.00142	0.000974	8039492	0.00223	0.0000020	0.0000020	8040034
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8039492	<0.00020	0.00074	0.00020	8040034
Dissolved Zinc (Zn)	mg/L	0.00227	0.00059	8039492	0.00426	<0.00010	0.00010	8040034
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	8039492	<0.00010	<0.00010	0.00010	8040034

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NC8381	NC8382		NC8383	NC8384		
Sampling Date		2015/09/09 14:50	2015/09/09 16:00		2015/09/09 17:08	2015/09/08 14:45		
COC Number		08411728	08411728		08411728	08411728		
	UNITS	KZ-15	KZ-16	QC Batch	KZ-17	KZ-19	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	46.0	39.7	8036747	50.2	<0.050	0.050	8036747
Dissolved Magnesium (Mg)	mg/L	7.44	6.04	8036747	8.76	<0.050	0.050	8036747
Dissolved Potassium (K)	mg/L	1.25	1.15	8036747	1.23	<0.050	0.050	8036747
Dissolved Sodium (Na)	mg/L	0.918	0.875	8036747	0.878	<0.050	0.050	8036747
Dissolved Sulphur (S)	mg/L	8.1	6.8	8036747	9.0	<3.0	3.0	8036747
RDL = Reportable Detection Limit								

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NC8385	NC8386	NC8411		NC8412		
Sampling Date		2015/09/09 12:30	2015/09/09 09:40	2015/09/08 14:00		2015/09/09 10:45		
COC Number		08411728	08411728	08411735		08411735		
	UNITS	KZ-21	KZ-22	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	222	192	196	8036746	192	0.50	8044908
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8042926	<0.0000020	0.0000020	8042926
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0105	0.00431	0.00583	8040034	0.00819	0.00050	8040034
Dissolved Antimony (Sb)	mg/L	0.000132	0.000077	0.000102	8040034	0.000079	0.000020	8040034
Dissolved Arsenic (As)	mg/L	0.00170	0.000976	0.000840	8040034	0.00113	0.000020	8040034
Dissolved Barium (Ba)	mg/L	0.0534	0.0584	0.0601	8040034	0.0567	0.000020	8040034
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8040034	<0.000010	0.000010	8040034
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8040034	<0.0000050	0.0000050	8040034
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8040034	<0.010	0.010	8040034
Dissolved Cadmium (Cd)	mg/L	0.0000110	0.0000140	0.0000110	8040034	0.0000130	0.0000050	8040034
Dissolved Chromium (Cr)	mg/L	0.00016	<0.00010	<0.00010	8040034	0.00017	0.00010	8040034
Dissolved Cobalt (Co)	mg/L	0.0000810	0.0000510	0.0000340	8040034	0.0000530	0.0000050	8040034
Dissolved Copper (Cu)	mg/L	0.000627	0.000540	0.000771	8040034	0.000632	0.000050	8040034
Dissolved Iron (Fe)	mg/L	0.164	0.0818	0.0538	8040034	0.0856	0.0010	8040034
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000060	8040034	<0.0000050	0.0000050	8040034
Dissolved Lithium (Li)	mg/L	0.00335	0.00288	0.00328	8040034	0.00280	0.00050	8040034
Dissolved Manganese (Mn)	mg/L	0.0423	0.0206	0.00985	8040034	0.0241	0.000050	8040034
Dissolved Molybdenum (Mo)	mg/L	0.00144	0.000991	0.000913	8040034	0.000988	0.000050	8040034
Dissolved Nickel (Ni)	mg/L	0.00296	0.00149	0.00141	8040034	0.00172	0.000020	8040034
Dissolved Phosphorus (P)	mg/L	0.0057	0.0030	0.0022	8040034	0.0043	0.0020	8040034
Dissolved Selenium (Se)	mg/L	0.000624	0.000620	0.000547	8040034	0.000631	0.000040	8040034
Dissolved Silicon (Si)	mg/L	4.68	3.52	3.80	8040034	3.55	0.050	8040034
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8040034	<0.0000050	0.0000050	8040034
Dissolved Strontium (Sr)	mg/L	0.177	0.163	0.167	8040034	0.177	0.000050	8040034
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8040034	<0.0000020	0.0000020	8040034
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8040034	<0.00020	0.00020	8040034
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8040034	<0.00050	0.00050	8040034
Dissolved Uranium (U)	mg/L	0.00272	0.00211	0.00202	8040034	0.00211	0.0000020	8040034
Dissolved Vanadium (V)	mg/L	0.00037	0.00032	0.00027	8040034	0.00039	0.00020	8040034
Dissolved Zinc (Zn)	mg/L	0.00208	0.00140	0.00081	8040034	0.00179	0.00010	8040034
Dissolved Zirconium (Zr)	mg/L	0.00011	<0.00010	<0.00010	8040034	<0.00010	0.00010	8040034
Dissolved Calcium (Ca)	mg/L	53.1	51.3	52.9	8036747	51.4	0.050	8044993

RDL = Reportable Detection Limit

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NC8385	NC8386	NC8411		NC8412		
Sampling Date		2015/09/09 12:30	2015/09/09 09:40	2015/09/08 14:00		2015/09/09 10:45		
COC Number		08411728	08411728	08411735		08411735		
	UNITS	KZ-21	KZ-22	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	21.8	15.4	15.6	8036747	15.5	0.050	8044993
Dissolved Potassium (K)	mg/L	1.27	1.26	1.18	8036747	1.20	0.050	8044993
Dissolved Sodium (Na)	mg/L	1.27	1.16	1.22	8036747	1.16	0.050	8044993
Dissolved Sulphur (S)	mg/L	13.1	10.5	9.9	8036747	11.3	3.0	8044993
RDL = Reportable Detection Limit								

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NC8413		NC8414		
Sampling Date		2015/09/14 10:25		2015/09/11 17:45		
COC Number		08411735		08411735		
	UNITS	TRIP BLANK	QC Batch	KZ-15	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	<0.50	8036746	148	0.50	8036746
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020	8042926	<0.0000020	0.0000020	8042641
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	<0.00050	8040034	0.00354	0.00050	8039490
Dissolved Antimony (Sb)	mg/L	<0.000020	8040034	0.000032	0.000020	8039490
Dissolved Arsenic (As)	mg/L	<0.000020	8040034	0.000350	0.000020	8039490
Dissolved Barium (Ba)	mg/L	<0.000020	8040034	0.0626	0.000020	8039490
Dissolved Beryllium (Be)	mg/L	<0.000010	8040034	<0.000010	0.000010	8039490
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8040034	<0.0000050	0.0000050	8039490
Dissolved Boron (B)	mg/L	<0.010	8040034	<0.010	0.010	8039490
Dissolved Cadmium (Cd)	mg/L	<0.0000050	8040034	0.0000210	0.0000050	8039490
Dissolved Chromium (Cr)	mg/L	<0.00010	8040034	<0.00010	0.00010	8039490
Dissolved Cobalt (Co)	mg/L	<0.0000050	8040034	0.0000160	0.0000050	8039490
Dissolved Copper (Cu)	mg/L	<0.000050	8040034	0.000540 (1)	0.000050	8045272
Dissolved Iron (Fe)	mg/L	<0.0010	8040034	0.0110	0.0010	8039490
Dissolved Lead (Pb)	mg/L	<0.0000050	8040034	0.0000090	0.0000050	8039490
Dissolved Lithium (Li)	mg/L	<0.00050	8040034	0.00211	0.00050	8039490
Dissolved Manganese (Mn)	mg/L	<0.000050	8040034	0.0103	0.000050	8039490
Dissolved Molybdenum (Mo)	mg/L	<0.000050	8040034	0.000697	0.000050	8039490
Dissolved Nickel (Ni)	mg/L	<0.000020	8040034	0.000403	0.000020	8039490
Dissolved Phosphorus (P)	mg/L	<0.0020	8040034	<0.0020	0.0020	8039490
Dissolved Selenium (Se)	mg/L	<0.000040	8040034	0.000598	0.000040	8039490
Dissolved Silicon (Si)	mg/L	<0.050	8040034	2.89	0.050	8039490
Dissolved Silver (Ag)	mg/L	<0.0000050	8040034	<0.0000050	0.0000050	8039490
Dissolved Strontium (Sr)	mg/L	<0.000050	8040034	0.149	0.000050	8039490
Dissolved Thallium (Tl)	mg/L	<0.0000020	8040034	<0.0000020	0.0000020	8039490
Dissolved Tin (Sn)	mg/L	<0.00020	8040034	<0.00020	0.00020	8039490
Dissolved Titanium (Ti)	mg/L	<0.00050	8040034	<0.00050	0.00050	8039490
Dissolved Uranium (U)	mg/L	<0.0000020	8040034	0.00144	0.0000020	8039490
Dissolved Vanadium (V)	mg/L	<0.00020	8040034	<0.00020	0.00020	8039490
Dissolved Zinc (Zn)	mg/L	<0.00010	8040034	0.00199	0.00010	8039490
Dissolved Zirconium (Zr)	mg/L	<0.00010	8040034	<0.00010	0.00010	8039490

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

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NC8413		NC8414		
Sampling Date		2015/09/14 10:25		2015/09/11 17:45		
COC Number		08411735		08411735		
	UNITS	**TRIP BLANK**	**QC Batch**	**KZ-15**	**RDL**	**QC Batch**
Dissolved Calcium (Ca)	mg/L	<0.050	8036747	46.7	0.050	8036747
Dissolved Magnesium (Mg)	mg/L	<0.050	8036747	7.52	0.050	8036747
Dissolved Potassium (K)	mg/L	<0.050	8036747	1.32	0.050	8036747
Dissolved Sodium (Na)	mg/L	<0.050	8036747	0.954	0.050	8036747
Dissolved Sulphur (S)	mg/L	<3.0	8036747	8.3	3.0	8036747
RDL = Reportable Detection Limit						

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NC8377	NC8378	NC8379	NC8380	NC8381		
Sampling Date		2015/09/11 14:35	2015/09/11 08:20	2015/09/10 16:45	2015/09/11 11:25	2015/09/09 14:50		
COC Number		08411728	08411728	08411728	08411728	08411728		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	101	149	169	68.7	140	0.50	8037020
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8042635
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0112	0.0435	0.0346	0.0262	0.00465	0.00050	8039488
Total Antimony (Sb)	mg/L	0.000023	0.000102	0.000070	0.000023	0.000027	0.000020	8039488
Total Arsenic (As)	mg/L	0.000112	0.000685	0.000427	0.000206	0.000398	0.000020	8039488
Total Barium (Ba)	mg/L	0.0619	0.0761	0.0830	0.0935	0.0588	0.000020	8039488
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8039488
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8039488
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8039488
Total Cadmium (Cd)	mg/L	0.000311	0.000440	0.000105	0.0000310	0.0000300	0.0000050	8039488
Total Chromium (Cr)	mg/L	<0.00010	0.00011	0.00012	<0.00010	<0.00010	0.00010	8039488
Total Cobalt (Co)	mg/L	0.0000140	0.000116	0.000112	0.0000330	0.0000310	0.0000050	8039488
Total Copper (Cu)	mg/L	0.000726	0.00191	0.000879	0.000561	0.000440	0.000050	8039488
Total Iron (Fe)	mg/L	0.0160	0.610	0.466	0.0704	0.0633	0.0010	8039488
Total Lead (Pb)	mg/L	0.0000420	0.000521	0.000227	0.0000450	0.0000210	0.0000050	8039488
Total Lithium (Li)	mg/L	0.00088	0.00115	0.00174	0.00113	0.00164	0.00050	8039488
Total Manganese (Mn)	mg/L	0.000503	0.0572	0.0431	0.0158	0.0193	0.000050	8039488
Total Molybdenum (Mo)	mg/L	0.000611	0.000439	0.000540	0.000488	0.000683	0.000050	8039488
Total Nickel (Ni)	mg/L	0.000427	0.000624	0.00132	0.000423	0.000385	0.000020	8039488
Total Phosphorus (P)	mg/L	<0.0020	0.0046	0.0077	0.0023	<0.0020	0.0020	8039488
Total Selenium (Se)	mg/L	0.000667	0.000866	0.000967	0.000135	0.000657	0.000040	8039488
Total Silicon (Si)	mg/L	2.26	2.79	2.96	2.59	2.73	0.050	8039488
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8039488
Total Strontium (Sr)	mg/L	0.108	0.151	0.173	0.0665	0.136	0.000050	8039488
Total Thallium (Tl)	mg/L	0.0000040	0.0000040	0.0000020	<0.0000020	<0.0000020	0.0000020	8039488
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8039488
Total Titanium (Ti)	mg/L	0.00062	0.00215	0.00235	0.00114	<0.00050	0.00050	8039488
Total Uranium (U)	mg/L	0.00202	0.00110	0.00123	0.000540	0.00144	0.0000020	8039488
Total Vanadium (V)	mg/L	0.00033	0.00034	0.00026	0.00039	<0.00020	0.00020	8039488
Total Zinc (Zn)	mg/L	0.0472	0.0764	0.0202	0.00436	0.00281	0.00010	8039488
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8039488
Total Calcium (Ca)	mg/L	35.0	49.4	56.5	23.2	44.0	0.050	8037516

RDL = Reportable Detection Limit

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NC8377	NC8378	NC8379	NC8380	NC8381		
Sampling Date		2015/09/11 14:35	2015/09/11 08:20	2015/09/10 16:45	2015/09/11 11:25	2015/09/09 14:50		
COC Number		08411728	08411728	08411728	08411728	08411728		
	UNITS	**KZ-2**	**KZ-7**	**KZ-9**	**KZ-13**	**KZ-15**	**RDL**	**QC Batch**
Total Magnesium (Mg)	mg/L	3.30	6.20	6.83	2.59	7.26	0.050	8037516
Total Potassium (K)	mg/L	1.74	1.62	1.60	1.39	1.16	0.050	8037516
Total Sodium (Na)	mg/L	0.738	0.893	1.00	0.929	0.889	0.050	8037516
Total Sulphur (S)	mg/L	12.9	11.8	10.8	4.2	8.5	3.0	8037516

RDL = Reportable Detection Limit

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NC8382	NC8383	NC8384		NC8385		
Sampling Date		2015/09/09 16:00	2015/09/09 17:08	2015/09/08 14:45		2015/09/09 12:30		
COC Number		08411728	08411728	08411728		08411728		
	UNITS	KZ-16	KZ-17	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	135	185	<0.50	8037020	223	0.50	8037020
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8042635	<0.0000020	0.0000020	8045118
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00350	0.0118	0.00391	8039488	0.0124	0.00050	8039488
Total Antimony (Sb)	mg/L	<0.000020	0.000056	<0.000020	8039488	0.000147	0.000020	8039488
Total Arsenic (As)	mg/L	0.000297	0.000695	0.000049	8039488	0.00219	0.000020	8039488
Total Barium (Ba)	mg/L	0.0594	0.0761	0.000300	8039488	0.0552	0.000020	8039488
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8039488	<0.000010	0.000010	8039488
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8039488	<0.0000050	0.0000050	8039488
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	8039488	<0.010	0.010	8039488
Total Cadmium (Cd)	mg/L	0.0000160	0.0000480	<0.0000050	8039488	0.0000180	0.0000050	8039488
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8039488	0.00012	0.00010	8039488
Total Cobalt (Co)	mg/L	0.0000260	0.0000740	0.0000050	8039488	0.000106	0.0000050	8039488
Total Copper (Cu)	mg/L	0.000416	0.000659	<0.000050	8039488	0.000688	0.000050	8039488
Total Iron (Fe)	mg/L	0.0175	0.211	0.0205	8039488	0.338	0.0010	8039488
Total Lead (Pb)	mg/L	0.0000070	0.0000580	0.0000420	8039488	0.0000180	0.0000050	8039488
Total Lithium (Li)	mg/L	0.00128	0.00222	<0.00050	8039488	0.00338	0.00050	8039488
Total Manganese (Mn)	mg/L	0.00578	0.0601	0.000184	8039488	0.0572	0.000050	8039488
Total Molybdenum (Mo)	mg/L	0.000401	0.00119	<0.000050	8039488	0.00144	0.000050	8039488
Total Nickel (Ni)	mg/L	0.000270	0.000675	<0.000020	8039488	0.00294	0.000020	8039488
Total Phosphorus (P)	mg/L	<0.0020	0.0048	0.0041	8039488	0.0103	0.0020	8039488
Total Selenium (Se)	mg/L	0.000463	0.000903	<0.000040	8039488	0.000747	0.000040	8039488
Total Silicon (Si)	mg/L	2.53	3.04	<0.050	8039488	4.35	0.050	8039488
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8039488	<0.0000050	0.0000050	8039488
Total Strontium (Sr)	mg/L	0.139	0.179	0.000067	8039488	0.164	0.000050	8039488
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8039488	<0.0000020	0.0000020	8039488
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8039488	<0.00020	0.00020	8039488
Total Titanium (Ti)	mg/L	<0.00050	0.00085	<0.00050	8039488	0.00053	0.00050	8039488
Total Uranium (U)	mg/L	0.00100	0.00241	0.0000020	8039488	0.00262	0.0000020	8039488
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00032	8039488	0.00036	0.00020	8039488
Total Zinc (Zn)	mg/L	0.00052	0.00754	0.00018	8039488	0.00280	0.00010	8039488
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8039488	0.00014	0.00010	8039488
Total Calcium (Ca)	mg/L	43.1	56.2	<0.050	8037516	54.4	0.050	8037516
RDL = Reportable Detection Limit								

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NC8382	NC8383	NC8384		NC8385		
Sampling Date		2015/09/09 16:00	2015/09/09 17:08	2015/09/08 14:45		2015/09/09 12:30		
COC Number		08411728	08411728	08411728		08411728		
	UNITS	KZ-16	KZ-17	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Total Magnesium (Mg)	mg/L	6.60	10.8	<0.050	8037516	21.1	0.050	8037516
Total Potassium (K)	mg/L	1.21	1.47	<0.050	8037516	1.19	0.050	8037516
Total Sodium (Na)	mg/L	0.946	1.08	<0.050	8037516	1.23	0.050	8037516
Total Sulphur (S)	mg/L	6.2	9.9	<3.0	8037516	13.7	3.0	8037516
RDL = Reportable Detection Limit								

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NC8386		NC8411	NC8412	NC8413		
Sampling Date		2015/09/09 09:40		2015/09/08 14:00	2015/09/09 10:45	2015/09/14 10:25		
COC Number		08411728		08411735	08411735	08411735		
	UNITS	KZ-22	QC Batch	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	193	8037020	200	189	<0.50	0.50	8037020
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	8045118	<0.0000020	<0.0000020	<0.0000020	0.0000020	8045118
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00880	8039488	0.0201	0.00799	<0.00050	0.00050	8040540
Total Antimony (Sb)	mg/L	0.000082	8039488	0.000102	0.000085	<0.000020	0.000020	8040540
Total Arsenic (As)	mg/L	0.00128	8039488	0.00114	0.00124	<0.000020	0.000020	8040540
Total Barium (Ba)	mg/L	0.0592	8039488	0.0641	0.0590	<0.000020	0.000020	8040540
Total Beryllium (Be)	mg/L	<0.000010	8039488	<0.000010	<0.000010	<0.000010	0.000010	8040540
Total Bismuth (Bi)	mg/L	<0.0000050	8039488	<0.0000050	<0.0000050	<0.0000050	0.0000050	8040540
Total Boron (B)	mg/L	<0.010	8039488	<0.010	<0.010	<0.010	0.010	8040540
Total Cadmium (Cd)	mg/L	0.0000200	8039488	0.0000190	0.0000180	<0.0000050	0.0000050	8040540
Total Chromium (Cr)	mg/L	<0.00010	8039488	0.00010	<0.00010	<0.00010	0.00010	8040540
Total Cobalt (Co)	mg/L	0.0000680	8039488	0.0000800	0.0000660	<0.0000050	0.0000050	8040540
Total Copper (Cu)	mg/L	0.000607	8039488	0.000902	0.000653	<0.000050	0.000050	8040540
Total Iron (Fe)	mg/L	0.186	8039488	0.180	0.172	<0.0010	0.0010	8040540
Total Lead (Pb)	mg/L	0.0000250	8039488	0.0000580	0.0000180	<0.0000050	0.0000050	8040540
Total Lithium (Li)	mg/L	0.00281	8039488	0.00393	0.00363	<0.00050	0.00050	8040540
Total Manganese (Mn)	mg/L	0.0327	8039488	0.0245	0.0321	<0.000050	0.000050	8040540
Total Molybdenum (Mo)	mg/L	0.000996	8039488	0.000912	0.000992	<0.000050	0.000050	8040540
Total Nickel (Ni)	mg/L	0.00155	8039488	0.00165	0.00154	<0.000020	0.000020	8040540
Total Phosphorus (P)	mg/L	0.0054	8039488	0.0079	0.0046	<0.0020	0.0020	8040540
Total Selenium (Se)	mg/L	0.000679	8039488	0.000593	0.000677	<0.000040	0.000040	8040540
Total Silicon (Si)	mg/L	3.65	8039488	3.91	3.56	<0.050	0.050	8040540
Total Silver (Ag)	mg/L	<0.0000050	8039488	<0.0000050	<0.0000050	<0.0000050	0.0000050	8040540
Total Strontium (Sr)	mg/L	0.159	8039488	0.171	0.158	<0.000050	0.000050	8040540
Total Thallium (Tl)	mg/L	<0.0000020	8039488	<0.0000020	<0.0000020	<0.0000020	0.0000020	8040540
Total Tin (Sn)	mg/L	<0.00020	8039488	<0.00020	<0.00020	<0.00020	0.00020	8040540
Total Titanium (Ti)	mg/L	<0.00050	8039488	0.00077	<0.00050	<0.00050	0.00050	8040540
Total Uranium (U)	mg/L	0.00209	8039488	0.00204	0.00215	<0.0000020	0.0000020	8040540
Total Vanadium (V)	mg/L	0.00027	8039488	0.00028	<0.00020	<0.00020	0.00020	8040540
Total Zinc (Zn)	mg/L	0.00224	8039488	0.00177	0.00229	<0.00010	0.00010	8040540
Total Zirconium (Zr)	mg/L	<0.00010	8039488	0.00012	<0.00010	<0.00010	0.00010	8040540
Total Calcium (Ca)	mg/L	52.0	8037516	52.9	50.3	<0.050	0.050	8037516
RDL = Reportable Detection Limit								

Maxxam Job #: B579823
Report Date: 2015/09/22

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NC8386		NC8411	NC8412	NC8413		
Sampling Date		2015/09/09 09:40		2015/09/08 14:00	2015/09/09 10:45	2015/09/14 10:25		
COC Number		08411728		08411735	08411735	08411735		
	UNITS	**KZ-22**	**QC Batch**	**KZ-26**	**KZ-28**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Magnesium (Mg)	mg/L	15.4	8037516	16.4	15.3	<0.050	0.050	8037516
Total Potassium (K)	mg/L	1.18	8037516	1.16	1.14	<0.050	0.050	8037516
Total Sodium (Na)	mg/L	1.13	8037516	1.28	1.14	<0.050	0.050	8037516
Total Sulphur (S)	mg/L	11.6	8037516	10.4	11.4	<3.0	3.0	8037516
RDL = Reportable Detection Limit								

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NC8414		
Sampling Date		2015/09/11 17:45		
COC Number		08411735		
	UNITS	KZ-15	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	143	0.50	8037020
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8045118
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.00335	0.00050	8040540
Total Antimony (Sb)	mg/L	0.000029	0.000020	8040540
Total Arsenic (As)	mg/L	0.000408	0.000020	8040540
Total Barium (Ba)	mg/L	0.0598	0.000020	8040540
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8040540
Total Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8040540
Total Boron (B)	mg/L	<0.010	0.010	8040540
Total Cadmium (Cd)	mg/L	0.0000260	0.0000050	8040540
Total Chromium (Cr)	mg/L	<0.00010	0.00010	8040540
Total Cobalt (Co)	mg/L	0.0000260	0.0000050	8040540
Total Copper (Cu)	mg/L	0.000420	0.000050	8040540
Total Iron (Fe)	mg/L	0.0581	0.0010	8040540
Total Lead (Pb)	mg/L	0.0000140	0.0000050	8040540
Total Lithium (Li)	mg/L	0.00226	0.00050	8040540
Total Manganese (Mn)	mg/L	0.0153	0.000050	8040540
Total Molybdenum (Mo)	mg/L	0.000691	0.000050	8040540
Total Nickel (Ni)	mg/L	0.000401	0.000020	8040540
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8040540
Total Selenium (Se)	mg/L	0.000701	0.000040	8040540
Total Silicon (Si)	mg/L	2.65	0.050	8040540
Total Silver (Ag)	mg/L	<0.0000050	0.0000050	8040540
Total Strontium (Sr)	mg/L	0.142	0.000050	8040540
Total Thallium (Tl)	mg/L	<0.0000020	0.0000020	8040540
Total Tin (Sn)	mg/L	<0.00020	0.00020	8040540
Total Titanium (Ti)	mg/L	<0.00050	0.00050	8040540
Total Uranium (U)	mg/L	0.00148	0.0000020	8040540
Total Vanadium (V)	mg/L	<0.00020	0.00020	8040540
Total Zinc (Zn)	mg/L	0.00247	0.00010	8040540
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8040540
Total Calcium (Ca)	mg/L	44.7	0.050	8037516
RDL = Reportable Detection Limit				

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NC8414		
Sampling Date		2015/09/11 17:45		
COC Number		08411735		
	UNITS	**KZ-15**	**RDL**	**QC Batch**
Total Magnesium (Mg)	mg/L	7.66	0.050	8037516
Total Potassium (K)	mg/L	1.20	0.050	8037516
Total Sodium (Na)	mg/L	0.909	0.050	8037516
Total Sulphur (S)	mg/L	8.9	3.0	8037516
RDL = Reportable Detection Limit				

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

TEST SUMMARY

Maxxam ID: NC8377
Sample ID: KZ-2
Matrix: Water

Collected: 2015/09/11
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8038493	2015/09/15	2015/09/15	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8038979	N/A	2015/09/16	Isabel Choi
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	Coralynn Topping
Conductance - water	AT/ALK	8038495	N/A	2015/09/15	Maria Maclean
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	Tim Matsushita
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	Lili Zhou
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/18	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8042635	2015/09/18	2015/09/18	Edwin Lamigo
Ion Balance	CALC	8036928	N/A	2015/09/18	Andy Lu
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/18	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8039492	N/A	2015/09/18	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	Lili Zhou
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	Lucy Luo
pH Water	AT/ALK	8038496	N/A	2015/09/15	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	Liilia Iankovska

Maxxam ID: NC8377 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2015/09/11
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8038493	2015/09/15	2015/09/15	Maria Maclean
Colour (True) by Kone Lab	KONE	8038979	N/A	2015/09/16	Isabel Choi
Conductance - water	AT/ALK	8038495	N/A	2015/09/15	Maria Maclean
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	Sherryl Flores
pH Water	AT/ALK	8038496	N/A	2015/09/15	Maria Maclean

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

TEST SUMMARY

Maxxam ID: NC8378
Sample ID: KZ-7
Matrix: Water

Collected: 2015/09/11
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8040317	N/A	2015/09/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	Isabel Choi
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	Coralynn Topping
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	Maria Maclean
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	Tim Matsushita
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	Lili Zhou
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/18	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8042635	2015/09/18	2015/09/18	Edwin Lamigo
Ion Balance	CALC	8036928	N/A	2015/09/18	Andy Lu
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/18	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8039492	N/A	2015/09/18	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	Lili Zhou
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	Lucy Luo
pH Water	AT/ALK	8038516	N/A	2015/09/15	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8040318	N/A	2015/09/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	Liilia Iankovska

Maxxam ID: NC8379
Sample ID: KZ-9
Matrix: Water

Collected: 2015/09/10
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8040317	N/A	2015/09/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	Isabel Choi
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	Coralynn Topping
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	Maria Maclean
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	Tim Matsushita

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

TEST SUMMARY

Maxxam ID: NC8379
Sample ID: KZ-9
Matrix: Water

Collected: 2015/09/10
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	Lili Zhou
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/18	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8042635	2015/09/18	2015/09/18	Edwin Lamigo
Ion Balance	CALC	8036928	N/A	2015/09/18	Andy Lu
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/18	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8039492	N/A	2015/09/18	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	Lili Zhou
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	Lucy Luo
pH Water	AT/ALK	8038516	N/A	2015/09/15	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8040318	N/A	2015/09/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	Liilia Iankovska

Maxxam ID: NC8380
Sample ID: KZ-13
Matrix: Water

Collected: 2015/09/11
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038318	N/A	2015/09/15	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	Isabel Choi
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	Coralynn Topping
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	Maria Maclean
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	Tim Matsushita
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	Lili Zhou
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/18	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8042635	2015/09/18	2015/09/18	Edwin Lamigo
Ion Balance	CALC	8036928	N/A	2015/09/18	Andy Lu
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/18	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8039492	N/A	2015/09/18	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	Lili Zhou

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

TEST SUMMARY

Maxxam ID: NC8380
Sample ID: KZ-13
Matrix: Water

Collected: 2015/09/11
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	Lucy Luo
pH Water	AT/ALK	8038516	N/A	2015/09/15	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	Liilia Iankovska

Maxxam ID: NC8381
Sample ID: KZ-15
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038318	N/A	2015/09/15	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8040317	N/A	2015/09/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	Isabel Choi
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	Coralynn Topping
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	Maria Maclean
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	Tim Matsushita
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	Lili Zhou
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/18	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8042635	2015/09/18	2015/09/18	Edwin Lamigo
Ion Balance	CALC	8036928	N/A	2015/09/18	Rob Reinert
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/18	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8046091	N/A	2015/09/22	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	Lili Zhou
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	Lucy Luo
pH Water	AT/ALK	8038516	N/A	2015/09/15	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8040318	N/A	2015/09/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	Isabel Choi

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

TEST SUMMARY

Maxxam ID: NC8381 **Collected:** 2015/09/09
Sample ID: KZ-15 **Shipped:**
Matrix: Water **Received:** 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	Liilia Iankovska

Maxxam ID: NC8382 **Collected:** 2015/09/09
Sample ID: KZ-16 **Shipped:**
Matrix: Water **Received:** 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8038500	2015/09/15	2015/09/15	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8038979	N/A	2015/09/16	Isabel Choi
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	Coralynn Topping
Conductance - water	AT/ALK	8038504	N/A	2015/09/15	Maria Maclean
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	Tim Matsushita
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	Lili Zhou
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/18	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8042635	2015/09/18	2015/09/18	Edwin Lamigo
Ion Balance	CALC	8036928	N/A	2015/09/18	Andy Lu
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/18	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8046091	N/A	2015/09/22	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	Lili Zhou
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	Lucy Luo
pH Water	AT/ALK	8038505	N/A	2015/09/15	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	Liilia Iankovska

Maxxam ID: NC8383 **Collected:** 2015/09/09
Sample ID: KZ-17 **Shipped:**
Matrix: Water **Received:** 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Wilson Au Yueng

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

TEST SUMMARY

Maxxam ID: NC8383
Sample ID: KZ-17
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8038500	2015/09/15	2015/09/15	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8038979	N/A	2015/09/16	Isabel Choi
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	Coralynn Topping
Conductance - water	AT/ALK	8038504	N/A	2015/09/15	Maria Maclean
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	Tim Matsushita
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	Lili Zhou
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/21	Lili Zhou
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8042635	2015/09/18	2015/09/18	Edwin Lamigo
Ion Balance	CALC	8036928	N/A	2015/09/21	Andy Lu
Sum of cations, anions	CALC	8037624	N/A	2015/09/21	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/21	Lili Zhou
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8040034	N/A	2015/09/18	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	Lili Zhou
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	Lucy Luo
pH Water	AT/ALK	8038505	N/A	2015/09/15	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	Liilia Iankovska

Maxxam ID: NC8383 Dup
Sample ID: KZ-17
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8040034	N/A	2015/09/18	Andrew An

Maxxam ID: NC8384
Sample ID: KZ-19
Matrix: Water

Collected: 2015/09/08
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038318	N/A	2015/09/15	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8040317	N/A	2015/09/16	Balwinder Bassi

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

TEST SUMMARY

Maxxam ID: NC8384
Sample ID: KZ-19
Matrix: Water

Collected: 2015/09/08
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	Isabel Choi
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	Coralynn Topping
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	Maria Maclean
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	Tim Matsushita
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/21	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8042635	2015/09/18	2015/09/18	Edwin Lamigo
Ion Balance	CALC	8036928	N/A	2015/09/21	Automated Statchk
Sum of cations, anions	CALC	8037624	N/A	2015/09/21	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/21	Lili Zhou
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8040034	N/A	2015/09/18	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	Lili Zhou
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	Lucy Luo
pH Water	AT/ALK	8038516	N/A	2015/09/15	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8040318	N/A	2015/09/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8038158	2015/09/15	2015/09/16	Liilia Iankovska

Maxxam ID: NC8385
Sample ID: KZ-21
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8038500	2015/09/15	2015/09/15	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8038979	N/A	2015/09/16	Isabel Choi
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	Coralynn Topping
Conductance - water	AT/ALK	8038504	N/A	2015/09/15	Maria Maclean
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	Tim Matsushita
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	Lili Zhou
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/21	Lili Zhou
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	Edwin Lamigo

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

TEST SUMMARY

Maxxam ID: NC8385
Sample ID: KZ-21
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8045118	2015/09/21	2015/09/21	Edwin Lamigo
Ion Balance	CALC	8036928	N/A	2015/09/21	Automated Statchk
Sum of cations, anions	CALC	8037624	N/A	2015/09/21	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/21	Lili Zhou
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8040034	N/A	2015/09/18	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	Lili Zhou
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	Lucy Luo
pH Water	AT/ALK	8038505	N/A	2015/09/15	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	Liilia Iankovska

Maxxam ID: NC8385 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	Isabel Choi

Maxxam ID: NC8386
Sample ID: KZ-22
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038318	N/A	2015/09/15	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	Isabel Choi
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	Coralynn Topping
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	Maria Maclean
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	Tim Matsushita
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	Lili Zhou
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/21	Lili Zhou
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8045118	2015/09/21	2015/09/21	Edwin Lamigo

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

TEST SUMMARY

Maxxam ID: NC8386
Sample ID: KZ-22
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance	CALC	8036928	N/A	2015/09/21	Automated Statchk
Sum of cations, anions	CALC	8037624	N/A	2015/09/21	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/21	Lili Zhou
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8040034	N/A	2015/09/18	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	Lili Zhou
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	Lucy Luo
pH Water	AT/ALK	8038516	N/A	2015/09/15	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	Liilia Iankovska

Maxxam ID: NC8411
Sample ID: KZ-26
Matrix: Water

Collected: 2015/09/08
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	Isabel Choi
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	Coralynn Topping
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	Maria Maclean
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	Tim Matsushita
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/18	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/21	Lili Zhou
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8045118	2015/09/21	2015/09/21	Edwin Lamigo
Ion Balance	CALC	8036928	N/A	2015/09/21	Automated Statchk
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/21	Lili Zhou
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8040034	N/A	2015/09/18	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/18	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8040540	N/A	2015/09/17	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	Isaac Wang

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

TEST SUMMARY

Maxxam ID: NC8411
Sample ID: KZ-26
Matrix: Water

Collected: 2015/09/08
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	Lucy Luo
pH Water	AT/ALK	8038516	N/A	2015/09/15	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8038158	2015/09/15	2015/09/16	Liilia Iankovska

Maxxam ID: NC8412
Sample ID: KZ-28
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	Isabel Choi
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	Coralynn Topping
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	Maria Maclean
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	Tim Matsushita
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/18	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8044908	N/A	2015/09/22	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8045118	2015/09/21	2015/09/21	Edwin Lamigo
Ion Balance	CALC	8036928	N/A	2015/09/21	Andy Lu
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8044993	N/A	2015/09/22	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8040034	N/A	2015/09/18	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/18	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8040540	N/A	2015/09/17	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	Lucy Luo
pH Water	AT/ALK	8038516	N/A	2015/09/15	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	Liilia Iankovska

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

TEST SUMMARY

Maxxam ID: NC8413
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/09/14
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8041475	N/A	2015/09/17	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	Isabel Choi
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	Coralynn Topping
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	Maria Maclean
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	Tim Matsushita
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/18	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/21	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8045118	2015/09/21	2015/09/21	Edwin Lamigo
Ion Balance	CALC	8036928	N/A	2015/09/21	Automated Statchk
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/21	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8040034	N/A	2015/09/18	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/18	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8040540	N/A	2015/09/17	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	Lucy Luo
pH Water	AT/ALK	8038516	N/A	2015/09/15	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	Liilia Iankovska

Maxxam ID: NC8413 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/09/14
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8045118	2015/09/21	2015/09/21	Edwin Lamigo

Maxxam ID: NC8414
Sample ID: KZ-15
Matrix: Water

Collected: 2015/09/11
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	Maria Maclean

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

TEST SUMMARY

Maxxam ID: NC8414
Sample ID: KZ-15
Matrix: Water

Collected: 2015/09/11
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8041475	N/A	2015/09/17	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	Isabel Choi
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	Coralynn Topping
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	Maria Maclean
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	Tim Matsushita
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/18	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/18	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042641	N/A	2015/09/18	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8045118	2015/09/21	2015/09/21	Edwin Lamigo
Ion Balance	CALC	8036928	N/A	2015/09/18	Automated Statchk
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/18	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8039490	N/A	2015/09/18	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/18	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8040540	N/A	2015/09/17	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	Lucy Luo
pH Water	AT/ALK	8038516	N/A	2015/09/15	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	Liilia Iankovska

Maxxam ID: NC8414 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2015/09/11
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8041475	N/A	2015/09/17	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	Tatyana Serzhanova

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

Maxxam Job #: B579823
Report Date: 2015/09/22

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

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	2.3°C
Package 2	5.0°C
Package 3	4.3°C

Sample NC8380, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NC8381, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NC8382, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NC8414, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

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

Maxxam Job #: B579823
Report Date: 2015/09/22

QUALITY ASSURANCE REPORT

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8038158	Total Suspended Solids	2015/09/16			103	80 - 120	<1.0	mg/L		
8038171	Total Suspended Solids	2015/09/16			102	80 - 120	<1.0	mg/L		
8038217	Acidity (pH 4.5)	2015/09/15					<0.50	mg/L	NC	20
8038217	Acidity (pH 8.3)	2015/09/15			97	80 - 120	<0.50	mg/L	NC	20
8038318	Acidity (pH 4.5)	2015/09/15					<0.50	mg/L		
8038318	Acidity (pH 8.3)	2015/09/15			97	80 - 120	<0.50	mg/L		
8038493	Alkalinity (PP as CaCO3)	2015/09/15					<0.50	mg/L	NC	20
8038493	Alkalinity (Total as CaCO3)	2015/09/15	98	80 - 120	95	80 - 120	<0.50	mg/L	0.49	20
8038493	Bicarbonate (HCO3)	2015/09/15					<0.50	mg/L	0.49	20
8038493	Carbonate (CO3)	2015/09/15					<0.50	mg/L	NC	20
8038493	Hydroxide (OH)	2015/09/15					<0.50	mg/L	NC	20
8038495	Conductivity	2015/09/15			99	80 - 120	<1.0	uS/cm	2.5	20
8038496	pH	2015/09/15			102	97 - 103			0.51	N/A
8038500	Alkalinity (PP as CaCO3)	2015/09/15					<0.50	mg/L	NC	20
8038500	Alkalinity (Total as CaCO3)	2015/09/15	NC	80 - 120	96	80 - 120	0.61, RDL=0.50	mg/L	0.84	20
8038500	Bicarbonate (HCO3)	2015/09/15					0.74, RDL=0.50	mg/L	0.84	20
8038500	Carbonate (CO3)	2015/09/15					<0.50	mg/L	NC	20
8038500	Hydroxide (OH)	2015/09/15					<0.50	mg/L	NC	20
8038504	Conductivity	2015/09/15			101	80 - 120	<1.0	uS/cm	0.36	20
8038505	pH	2015/09/15			102	97 - 103			0.37	N/A
8038513	Alkalinity (PP as CaCO3)	2015/09/15					<0.50	mg/L	NC	20
8038513	Alkalinity (Total as CaCO3)	2015/09/15			97	80 - 120	0.67, RDL=0.50	mg/L	NC	20
8038513	Bicarbonate (HCO3)	2015/09/15					0.82, RDL=0.50	mg/L	NC	20
8038513	Carbonate (CO3)	2015/09/15					<0.50	mg/L	NC	20
8038513	Hydroxide (OH)	2015/09/15					<0.50	mg/L	NC	20
8038515	Conductivity	2015/09/15			101	80 - 120	<1.0	uS/cm	NC	20
8038516	pH	2015/09/15			102	97 - 103			0.84	N/A
8038979	True Colour	2015/09/16			103	80 - 120	<5.0	Col. Unit	NC	20
8038987	Total Phosphorus (P)	2015/09/15	98	80 - 120	102	80 - 120	<0.0020	mg/L	NC	20
8038989	Dissolved Phosphorus (P)	2015/09/15	98	80 - 120	96	80 - 120	<0.0020	mg/L	NC	20
8039022	Total Ammonia (N)	2015/09/15	99	80 - 120	98	80 - 120	<0.0050	mg/L	NC	20

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

Maxxam Job #: B579823
Report Date: 2015/09/22

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8039053	Nitrate plus Nitrite (N)	2015/09/15	98	80 - 120	103	80 - 120	<0.0020	mg/L	NC	25
8039054	Nitrite (N)	2015/09/15	97	80 - 120	104	80 - 120	<0.0020	mg/L	NC	25
8039488	Total Aluminum (Al)	2015/09/18	108	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8039488	Total Antimony (Sb)	2015/09/18	106	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8039488	Total Arsenic (As)	2015/09/18	101	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8039488	Total Barium (Ba)	2015/09/18	108	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
8039488	Total Beryllium (Be)	2015/09/18	101	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8039488	Total Bismuth (Bi)	2015/09/18	99	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8039488	Total Boron (B)	2015/09/18					<0.010	mg/L	NC	20
8039488	Total Cadmium (Cd)	2015/09/18	100	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8039488	Total Chromium (Cr)	2015/09/18	106	80 - 120	107	80 - 120	<0.00010	mg/L	NC	20
8039488	Total Cobalt (Co)	2015/09/18	107	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8039488	Total Copper (Cu)	2015/09/18	107	80 - 120	106	80 - 120	<0.000050	mg/L	NC	20
8039488	Total Iron (Fe)	2015/09/18	108	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
8039488	Total Lead (Pb)	2015/09/18	103	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8039488	Total Lithium (Li)	2015/09/18	99	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8039488	Total Manganese (Mn)	2015/09/18	105	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8039488	Total Molybdenum (Mo)	2015/09/18	100	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8039488	Total Nickel (Ni)	2015/09/18	104	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8039488	Total Phosphorus (P)	2015/09/18					<0.0020	mg/L		
8039488	Total Selenium (Se)	2015/09/18	95	80 - 120	98	80 - 120	<0.000040	mg/L	NC	20
8039488	Total Silicon (Si)	2015/09/18					<0.050	mg/L	NC	20
8039488	Total Silver (Ag)	2015/09/18	103	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8039488	Total Strontium (Sr)	2015/09/18	101	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8039488	Total Thallium (Tl)	2015/09/18	99	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8039488	Total Tin (Sn)	2015/09/18	105	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
8039488	Total Titanium (Ti)	2015/09/18	99	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8039488	Total Uranium (U)	2015/09/18	103	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8039488	Total Vanadium (V)	2015/09/18	104	80 - 120	106	80 - 120	0.00023, RDL=0.00020	mg/L	NC	20
8039488	Total Zinc (Zn)	2015/09/18	107	80 - 120	104	80 - 120	<0.00010	mg/L	9.0	20

Maxxam Job #: B579823
Report Date: 2015/09/22

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8039488	Total Zirconium (Zr)	2015/09/18					<0.00010	mg/L	NC	20
8039490	Dissolved Aluminum (Al)	2015/09/18	99	80 - 120	99	80 - 120	<0.00050	mg/L	1.7	20
8039490	Dissolved Antimony (Sb)	2015/09/18	95	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8039490	Dissolved Arsenic (As)	2015/09/18	98	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8039490	Dissolved Barium (Ba)	2015/09/18	101	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8039490	Dissolved Beryllium (Be)	2015/09/18	100	80 - 120	99	80 - 120	<0.000010	mg/L	NC	20
8039490	Dissolved Bismuth (Bi)	2015/09/18	102	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8039490	Dissolved Boron (B)	2015/09/18					<0.010	mg/L	NC	20
8039490	Dissolved Cadmium (Cd)	2015/09/18	97	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8039490	Dissolved Chromium (Cr)	2015/09/18	98	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8039490	Dissolved Cobalt (Co)	2015/09/18	101	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8039490	Dissolved Iron (Fe)	2015/09/18	107	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
8039490	Dissolved Lead (Pb)	2015/09/18	101	80 - 120	102	80 - 120	0.0000060, RDL=0.0000050	mg/L	NC	20
8039490	Dissolved Lithium (Li)	2015/09/18	101	80 - 120	106	80 - 120	0.00067, RDL=0.00050	mg/L	NC	20
8039490	Dissolved Manganese (Mn)	2015/09/18	99	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8039490	Dissolved Molybdenum (Mo)	2015/09/18	96	80 - 120	94	80 - 120	<0.000050	mg/L	NC	20
8039490	Dissolved Nickel (Ni)	2015/09/18	98	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8039490	Dissolved Phosphorus (P)	2015/09/18					<0.0020	mg/L		
8039490	Dissolved Selenium (Se)	2015/09/18	94	80 - 120	96	80 - 120	<0.000040	mg/L	NC	20
8039490	Dissolved Silicon (Si)	2015/09/18					<0.050	mg/L	NC	20
8039490	Dissolved Silver (Ag)	2015/09/18	93	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8039490	Dissolved Strontium (Sr)	2015/09/18	96	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8039490	Dissolved Thallium (Tl)	2015/09/18	100	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8039490	Dissolved Tin (Sn)	2015/09/18	93	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8039490	Dissolved Titanium (Ti)	2015/09/18	97	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8039490	Dissolved Uranium (U)	2015/09/18	101	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8039490	Dissolved Vanadium (V)	2015/09/18	99	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8039490	Dissolved Zinc (Zn)	2015/09/18	116	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
8039490	Dissolved Zirconium (Zr)	2015/09/18					<0.00010	mg/L	NC	20

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

Maxxam Job #: B579823
Report Date: 2015/09/22

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8039492	Dissolved Aluminum (Al)	2015/09/18	100	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8039492	Dissolved Antimony (Sb)	2015/09/18	99	80 - 120	96	80 - 120	<0.000020	mg/L	NC	20
8039492	Dissolved Arsenic (As)	2015/09/18	99	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8039492	Dissolved Barium (Ba)	2015/09/18	104	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8039492	Dissolved Beryllium (Be)	2015/09/18	97	80 - 120	97	80 - 120	<0.000010	mg/L	NC	20
8039492	Dissolved Bismuth (Bi)	2015/09/18	102	80 - 120	101	80 - 120	0.0000050, RDL=0.0000050	mg/L	NC	20
8039492	Dissolved Boron (B)	2015/09/18					<0.010	mg/L	NC	20
8039492	Dissolved Cadmium (Cd)	2015/09/18	100	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8039492	Dissolved Chromium (Cr)	2015/09/18	99	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
8039492	Dissolved Cobalt (Co)	2015/09/18	103	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8039492	Dissolved Copper (Cu)	2015/09/18	103	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8039492	Dissolved Iron (Fe)	2015/09/18	106	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
8039492	Dissolved Lead (Pb)	2015/09/18	101	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8039492	Dissolved Lithium (Li)	2015/09/18	96	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8039492	Dissolved Manganese (Mn)	2015/09/18	101	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8039492	Dissolved Molybdenum (Mo)	2015/09/18	96	80 - 120	92	80 - 120	<0.000050	mg/L	NC	20
8039492	Dissolved Nickel (Ni)	2015/09/18	99	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8039492	Dissolved Phosphorus (P)	2015/09/18					<0.0020	mg/L		
8039492	Dissolved Selenium (Se)	2015/09/18	96	80 - 120	93	80 - 120	<0.000040	mg/L	NC	20
8039492	Dissolved Silicon (Si)	2015/09/18					<0.050	mg/L	NC	20
8039492	Dissolved Silver (Ag)	2015/09/18	99	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
8039492	Dissolved Strontium (Sr)	2015/09/18	97	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8039492	Dissolved Thallium (Tl)	2015/09/18	100	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8039492	Dissolved Tin (Sn)	2015/09/18	99	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8039492	Dissolved Titanium (Ti)	2015/09/18	100	80 - 120	92	80 - 120	<0.00050	mg/L	NC	20
8039492	Dissolved Uranium (U)	2015/09/18	100	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8039492	Dissolved Vanadium (V)	2015/09/18	104	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8039492	Dissolved Zinc (Zn)	2015/09/18	99	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
8039492	Dissolved Zirconium (Zr)	2015/09/18					<0.00010	mg/L	NC	20
8040034	Dissolved Aluminum (Al)	2015/09/18	107	80 - 120	105	80 - 120	<0.00050	mg/L	6.7	20

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

Maxxam Job #: B579823
Report Date: 2015/09/22

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8040034	Dissolved Antimony (Sb)	2015/09/18	107	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8040034	Dissolved Arsenic (As)	2015/09/18	107	80 - 120	102	80 - 120	<0.000020	mg/L	15	20
8040034	Dissolved Barium (Ba)	2015/09/18	NC	80 - 120	107	80 - 120	<0.000020	mg/L	0.55	20
8040034	Dissolved Beryllium (Be)	2015/09/18	104	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8040034	Dissolved Bismuth (Bi)	2015/09/18	107	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8040034	Dissolved Boron (B)	2015/09/18					<0.010	mg/L	NC	20
8040034	Dissolved Cadmium (Cd)	2015/09/18	101	80 - 120	103	80 - 120	<0.0000050	mg/L	10	20
8040034	Dissolved Chromium (Cr)	2015/09/18	106	80 - 120	108	80 - 120	<0.00010	mg/L	NC	20
8040034	Dissolved Cobalt (Co)	2015/09/18	102	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8040034	Dissolved Copper (Cu)	2015/09/18	100	80 - 120	106	80 - 120	<0.000050	mg/L	15	20
8040034	Dissolved Iron (Fe)	2015/09/18	97	80 - 120	110	80 - 120	<0.0010	mg/L	4.9	20
8040034	Dissolved Lead (Pb)	2015/09/18	109	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8040034	Dissolved Lithium (Li)	2015/09/18	102	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8040034	Dissolved Manganese (Mn)	2015/09/18	NC	80 - 120	104	80 - 120	<0.000050	mg/L	9.9	20
8040034	Dissolved Molybdenum (Mo)	2015/09/18	NC	80 - 120	98	80 - 120	<0.000050	mg/L	3.5	20
8040034	Dissolved Nickel (Ni)	2015/09/18	100	80 - 120	104	80 - 120	<0.000020	mg/L	12	20
8040034	Dissolved Phosphorus (P)	2015/09/18					<0.0020	mg/L	NC	20
8040034	Dissolved Selenium (Se)	2015/09/18	103	80 - 120	97	80 - 120	<0.000040	mg/L	8.9	20
8040034	Dissolved Silicon (Si)	2015/09/18					<0.050	mg/L	1.7	20
8040034	Dissolved Silver (Ag)	2015/09/18	102	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8040034	Dissolved Strontium (Sr)	2015/09/18	NC	80 - 120	100	80 - 120	<0.000050	mg/L	9.4	20
8040034	Dissolved Thallium (Tl)	2015/09/18	106	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8040034	Dissolved Tin (Sn)	2015/09/18	104	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
8040034	Dissolved Titanium (Ti)	2015/09/18	104	80 - 120	95	80 - 120	<0.00050	mg/L	NC	20
8040034	Dissolved Uranium (U)	2015/09/18	110	80 - 120	105	80 - 120	<0.0000020	mg/L	2.6	20
8040034	Dissolved Vanadium (V)	2015/09/18	105	80 - 120	109	80 - 120	<0.00020	mg/L	NC	20
8040034	Dissolved Zinc (Zn)	2015/09/18	98	80 - 120	101	80 - 120	<0.00010	mg/L	8.8	20
8040034	Dissolved Zirconium (Zr)	2015/09/18					<0.00010	mg/L	NC	20
8040314	Dissolved Chloride (Cl)	2015/09/16	104	80 - 120	101	80 - 120	<0.50	mg/L	NC	20
8040315	Dissolved Sulphate (SO4)	2015/09/16	101	80 - 120	96	80 - 120	<0.50	mg/L	NC	20
8040317	Dissolved Chloride (Cl)	2015/09/16	NC	80 - 120	103	80 - 120	<0.50	mg/L	1.9	20

Maxxam Job #: B579823
Report Date: 2015/09/22

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8040318	Dissolved Sulphate (SO4)	2015/09/16	NC	80 - 120	99	80 - 120	<0.50	mg/L	0.65	20
8040540	Total Aluminum (Al)	2015/09/17	NC	80 - 120	109	80 - 120	<0.00050	mg/L	8.4	20
8040540	Total Antimony (Sb)	2015/09/17	99	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8040540	Total Arsenic (As)	2015/09/17	97	80 - 120	102	80 - 120	<0.000020	mg/L	0.42	20
8040540	Total Barium (Ba)	2015/09/17	100	80 - 120	108	80 - 120	<0.000020	mg/L	0.69	20
8040540	Total Beryllium (Be)	2015/09/17	96	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8040540	Total Bismuth (Bi)	2015/09/17	96	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8040540	Total Boron (B)	2015/09/17					<0.010	mg/L	NC	20
8040540	Total Cadmium (Cd)	2015/09/17	90	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8040540	Total Chromium (Cr)	2015/09/17	98	80 - 120	106	80 - 120	<0.00010	mg/L	NC	20
8040540	Total Cobalt (Co)	2015/09/17	101	80 - 120	110	80 - 120	<0.0000050	mg/L	2.6	20
8040540	Total Copper (Cu)	2015/09/17	100	80 - 120	110	80 - 120	<0.000050	mg/L	0.43	20
8040540	Total Iron (Fe)	2015/09/17	NC	80 - 120	111	80 - 120	<0.0010	mg/L	5.8	20
8040540	Total Lead (Pb)	2015/09/17	98	80 - 120	109	80 - 120	<0.0000050	mg/L	4.3	20
8040540	Total Lithium (Li)	2015/09/17	93	80 - 120	107	80 - 120	<0.00050	mg/L	NC	20
8040540	Total Manganese (Mn)	2015/09/17	NC	80 - 120	106	80 - 120	<0.000050	mg/L	0.51	20
8040540	Total Molybdenum (Mo)	2015/09/17	94	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8040540	Total Nickel (Ni)	2015/09/17	96	80 - 120	105	80 - 120	<0.000020	mg/L	0.41	20
8040540	Total Phosphorus (P)	2015/09/17					<0.0020	mg/L		
8040540	Total Selenium (Se)	2015/09/17	92	80 - 120	97	80 - 120	<0.000040	mg/L	NC	20
8040540	Total Silicon (Si)	2015/09/17					<0.050	mg/L	2.6	20
8040540	Total Silver (Ag)	2015/09/17	100	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8040540	Total Strontium (Sr)	2015/09/17	NC	80 - 120	99	80 - 120	<0.000050	mg/L	2.0	20
8040540	Total Thallium (Tl)	2015/09/17	93	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8040540	Total Tin (Sn)	2015/09/17	94	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8040540	Total Titanium (Ti)	2015/09/17	72 (1)	80 - 120	99	80 - 120	<0.00050	mg/L	8.5	20
8040540	Total Uranium (U)	2015/09/17	101	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8040540	Total Vanadium (V)	2015/09/17	103	80 - 120	111	80 - 120	<0.00020	mg/L	NC	20
8040540	Total Zinc (Zn)	2015/09/17	94	80 - 120	105	80 - 120	<0.00010	mg/L	0.88	20
8040540	Total Zirconium (Zr)	2015/09/17					<0.00010	mg/L	NC	20
8040936	True Colour	2015/09/16			106	80 - 120	<5.0	Col. Unit	2.2	20

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

Maxxam Job #: B579823
Report Date: 2015/09/22

QUALITY ASSURANCE REPORT(CONT'D)

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

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8041430	Strong Acid Dissoc. Cyanide (CN)	2015/09/17	106	80 - 120	100	80 - 120	<0.00050	mg/L	3.6	20
8041475	Strong Acid Dissoc. Cyanide (CN)	2015/09/17	102	80 - 120	103	80 - 120	0.00068, RDL=0.00050	mg/L	NC	20
8041503	Weak Acid Dissoc. Cyanide (CN)	2015/09/17	106	80 - 120	105	80 - 120	0.00079, RDL=0.00050	mg/L	NC	20
8041939	Fluoride (F)	2015/09/17	108	80 - 120	96	80 - 120	0.011, RDL=0.010	mg/L	NC	20
8042082	Dissolved Organic Carbon (C)	2015/09/18	111	80 - 120	96	80 - 120	<0.50	mg/L	2.2	20
8042635	Total Mercury (Hg)	2015/09/18	105	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8042641	Dissolved Mercury (Hg)	2015/09/18	103	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8042926	Dissolved Mercury (Hg)	2015/09/18	95	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8045118	Total Mercury (Hg)	2015/09/21	94	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8045272	Dissolved Copper (Cu)	2015/09/21			98	80 - 120	<0.000050	mg/L		
8046091	Dissolved Aluminum (Al)	2015/09/22			102	80 - 120	<0.00050	mg/L		
8046091	Dissolved Silicon (Si)	2015/09/22					<0.050	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

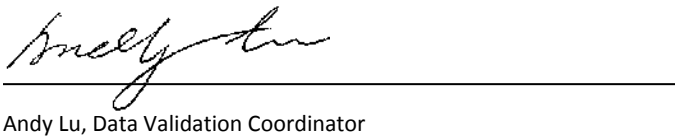
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

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

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Andy Lu, Data Validation Coordinator

Lili Zhou, Senior analyst, Inorganic department.

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

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

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08411728

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where a...)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	A. Bier, A. MacPhail	Date Required:

Regulatory Criteria		Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil	[ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify)	[ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water	[ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2	NC8377	2015/09/11	14:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
2	KZ-7	NC 8378	2015/09/11	08:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
3	KZ-9	NC8379	2015/09/10	16:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
4	KZ-13	NC8380	2015/09/11	11:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
5	KZ-15	NC8381	2015/09/09	14:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
6	KZ-16	NC8382	2015/09/09	16:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
7	KZ-17	NC8383	2015/09/09	17:08	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
8	KZ-19	NC8384	2015/09/08	14:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
9	KZ-21	NC8385	2015/09/09	12:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
10	KZ-22	NC8386	2015/09/09	09:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
		4, 2, 1
		5, 4, 6
		5, 3, 5

COOLING MEDIA PRESENT Y / N

COMMENTS

B579823

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
A Bier / A. Bier	2015/09/12	15:00	KEVIN CHONG	2015/09/14	10:25	

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CU ... RECORD

08411735

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where app...	
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:	
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah
Phone:		Phone:	(867) 668-6463	Site #:	
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	A. Bier, A. MacPhail

Turnaround Time (TAT) Required

[x] Regular TAT 5 days (Most analyses)

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Rush TAT (Surcharges will be applied)

[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days

Date Required:

Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water
[ ] CCME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)
USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-26	NC 8411	2015/09/08	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
2	KZ-28	NC 8412	2015/09/09	10:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
3	Trip Blank	NC 8413	N/A	N/A	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
4	KZ-15	NC 8414	2015/09/11	17:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Cyanide preserved 2015/09/12 ~14:45, DOC Filtered & pres. same time.
5																					
6																					
7																					
8																					
9																					
10																					

B579823

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
		4, 2, 1
		5, 4, 6
		5, 3, 5

COOLING MEDIA PRESENT Y / N

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
A Bier / A. Bier	2015/09/12	15:00	KEVIN CHONG	2015/09/14	10:25	

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5, Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC #: 08411728

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where a...		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT # 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	A. Bier, A. Mac[illegible]	Date Required:

Regulatory Criteria		Special Instructions	Analysis Requested	Rush Confirmation #:
[ ] BC CSR Soil	[ ] BC CSR Water	[ ] Return Cooler		
[ ] CCME (Specify)	[ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)		
[ ] Drinking Water	[ ] BC Water Quality	USE SCENARIO # 12485		

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

LABORATORY USE ONLY

CUSTODY SEAL Y/N		COOLER TEMPERATURES
Present	Intact	
		4, 2, 1
		5, 4, 6
		5, 3, 5

COOLING MEDIA PRESENT Y / N

COMMENTS

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (CL F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		2015/09/11	14:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
2	KZ-7		2015/09/11	08:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
3	KZ-9		2015/09/10	16:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
4	KZ-13		2015/09/11	11:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
5	KZ-15		2015/09/09	14:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
6	KZ-16		2015/09/09	16:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
7	KZ-17		2015/09/09	17:08	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
8	KZ-19		2015/09/08	14:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
9	KZ-21		2015/09/09	12:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
10	KZ-22		2015/09/09	09:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	

B579823

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
A Bier / A. Bier	2015/09/12	15:00	[signature] KEVIN CHONG	2015/09/14	10:25	

maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CU[illegible] RECORD

08411735

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where ap[illegible])	
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:	
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah
Phone:		Phone:	(867) 668-6463	Site #:	
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	A. Bier, A. MacPherl

Turnaround Time (TAT) Required

[X] Regular TAT 5 days (Most analyses)

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Rush TAT (Surcharges will be applied)

[ ] Same Day [ ] 2 Days
[ ] 1 Day [ ] 3 Days

Date Required:

Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water
[ ] COME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-26		2015/09/08	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
2	KZ-28		2015/09/07	10:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
3	Trip Blank		N/A	N/A	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
4	KZ-15		2015/09/11	17:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		Cyanide preserved 2015/09/12 ~14:45, DOC filtered & pres. same time.
5																								
6																								
7																								
8																								
9																								
10																								

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
		4, 2, 1
		5, 4, 6
		5, 3, 5

COOLING MEDIA PRESENT Y / N

B579823

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
A Bier / A. Bier	2015/09/12	15:00	KEVIN CHONG	2015/09/14	10:25	

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC #: 08411728

BBY FCD-00077/05

Page 1 2

Invoice Information	Report Information (if differs from Invoice)	Project Information (where a...)	Turnaround Time (TAT) Required
Company Name: BABC MINERALS LTD.	Company Name: ALEXCO ENVIRONMENTAL	Quotation #: B50743	[X] Regular TAT 5 days (Most analyses)
Contact Name:	Contact Name: KAI WOLOSHYN	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 330-1130 WEST PENDER ST	Address: UNIT 3 151 INDUSTRIAL RD	Project #: BMC-15-01	Rush TAT (Surcharges will be applied)
Vancouver, BC PC: V6E 4A4	Whitehorse, YK PC: V1A 2Y3	Site Location: Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:	Phone: (867) 668-6463	Site #:	
Email:	Email: kwoloshyn@alexcoresource.com	Sampled By: A. Bier, A. Hudson	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Strip Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL T-SS	ANIONS (CL, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2	NC8377	2015/09/11	14:35	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	
2	KZ-7	NC8378	2015/09/11	08:20	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	
3	KZ-9	NC8379	2015/09/10	16:45	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	
4	KZ-13	NC8380	2015/09/11	11:25	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	
5	KZ-15	NC8381	2015/09/09	14:50	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	
6	KZ-16	NC8382	2015/09/09	16:00	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	
7	KZ-17	NC8383	2015/09/09	17:08	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	
8	KZ-19	NC8384	2015/09/08	10:45	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	
9	KZ-21	NC8385	2015/09/09	12:30	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	
10	KZ-22	NC8386	2015/09/09	09:40	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
		4, 2, 1
		5, 4, 6
		5, 3, 5

COOLING MEDIA PRESENT: Y / N

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
A. Bier / A. Bier	2015/09/12	15:00	KEVIN CHAN	2015/09/14	10:25	B579823

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CU ... RECORD

08411735

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where ...)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	X Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	550-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kutz Ze Kayah	Same Day / 2 Days / 1 Day / 3 Days
Phone:		Phone:	(867) 668-6403	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	A. Blair, A. MacPhail	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
☐ BC CSR Soil ☐ BC CSR Water	☐ Return Cooler	
☐ CCME (Specify) ☐ Other (Specify)	☐ Ship Sample Bottles (Please Specify)	
☐ Drinking Water ☐ BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-26	NC 8411	2015/09/09	14:00	Water	X	X	X	X	X	X	X	X	X	X	X	X	X	12		
2	KZ-28	NC 8412	2015/09/09	10:45	Water	X	X	X	X	X	X	X	X	X	X	X	X	X	12		
3	Trip Blank	NC 8413	N/A	N/A	Water	X	X	X	X	X	X	X	X	X	X	X	X	X	12		
4	KZ-15	NC 8414	2015/09/11	17:15	Water	X	X	X	X	X	X	X	X	X	X	X	X	X	12		Cyanide preserved 2015/09/12 @ 9:15, DOC filtered & pres.
5																					save time.
6																					
7																					
8																					
9																					
10																					

B579823

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
A. Blair / A. Blair	2015/09/12	15:00	KEVIN CHONG	2015/09/14	10:25	

LABORATORY USE ONLY		
CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
		4, 2, 1
		5, 4, 6
		5, 3, 5

COOLING MEDIA PRESENT Y / N

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08411757

Attention:KAI WOLOSHYN

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

Report Date: 2015/09/17
Report #: R2043350
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B580250
Received: 2015/09/15, 10:10

Sample Matrix: Water
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Chlorophyll A (water)(sin)	10	2015/09/16	2015/09/17	BBY6SOP-00002	SM 22 10200 H m

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034
==========
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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

Maxxam Job #: B580250
Report Date: 2015/09/17

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		ND1071	ND1072	ND1073	ND1074	ND1075	ND1076	ND1077		
Sampling Date		2015/09/11 14:35	2015/09/11 08:20	2015/09/10 16:45	2015/09/11 11:25	2015/09/09 14:50	2015/09/10 16:00	2015/09/09 17:08		
COC Number		08411757	08411757	08411757	08411757	08411757	08411757	08411757		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Parameter										
Chlorophyll a	ug/L	0.59	1.14	0.81	1.11	0.67	<0.50	1.86	0.50	8038919
RDL = Reportable Detection Limit										

Maxxam ID		ND1078	ND1079	ND1080		
Sampling Date		2015/09/11 18:00	2015/09/09 12:30	2015/09/09 09:40		
COC Number		08411757	08411757	08411757		
	UNITS	KZ-26	KZ-21	KZ-22	RDL	QC Batch
Parameter						
Chlorophyll a	ug/L	1.17	1.33	1.76	0.50	8038919
RDL = Reportable Detection Limit						

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

Maxxam Job #: B580250
Report Date: 2015/09/17

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

TEST SUMMARY

Maxxam ID: ND1071 **Collected:** 2015/09/11
Sample ID: KZ-2 **Shipped:**
Matrix: Water **Received:** 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Prabhleen Sodhi

Maxxam ID: ND1072 **Collected:** 2015/09/11
Sample ID: KZ-7 **Shipped:**
Matrix: Water **Received:** 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Prabhleen Sodhi

Maxxam ID: ND1073 **Collected:** 2015/09/10
Sample ID: KZ-9 **Shipped:**
Matrix: Water **Received:** 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Prabhleen Sodhi

Maxxam ID: ND1074 **Collected:** 2015/09/11
Sample ID: KZ-13 **Shipped:**
Matrix: Water **Received:** 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Prabhleen Sodhi

Maxxam ID: ND1075 **Collected:** 2015/09/09
Sample ID: KZ-15 **Shipped:**
Matrix: Water **Received:** 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Prabhleen Sodhi

Maxxam ID: ND1076 **Collected:** 2015/09/10
Sample ID: KZ-16 **Shipped:**
Matrix: Water **Received:** 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Prabhleen Sodhi

Maxxam ID: ND1077 **Collected:** 2015/09/09
Sample ID: KZ-17 **Shipped:**
Matrix: Water **Received:** 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Prabhleen Sodhi

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

Maxxam Job #: B580250
Report Date: 2015/09/17

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

TEST SUMMARY

Maxxam ID: ND1078
Sample ID: KZ-26
Matrix: Water

Collected: 2015/09/11
Shipped:
Received: 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Prabhleen Sodhi

Maxxam ID: ND1079
Sample ID: KZ-21
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Prabhleen Sodhi

Maxxam ID: ND1080
Sample ID: KZ-22
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Prabhleen Sodhi

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

Maxxam Job #: B580250
Report Date: 2015/09/17

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

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.3°C

Results relate only to the items tested.

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

Maxxam Job #: B580250
Report Date: 2015/09/17

QUALITY ASSURANCE REPORT

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

			Spiked Blank		Method Blank	
QC Batch	**Parameter**	**Date**	**% Recovery**	**QC Limits**	**Value**	**UNITS**
8038919	Chlorophyll a	2015/09/17	108	80 - 120	<0.50	ug/L

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

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

Maxxam Job #: B580250
Report Date: 2015/09/17

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

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Rob Reinert, Data Validation Coordinator

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

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

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CU[illegible]

08411757

BBY FCD-00077/05

Page ____ of ____

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC Minerals	Company Name:	Alexco Environmental	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	Kai Woloshyn	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	Unit 3 151 Industrial Road	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: Y1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	867-668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	A. Bier, A. MacPhail	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Y / (N) — Present: NA — Intact:

COOLER TEMPERATURES: 4.3 / 1.1

COOLING MEDIA PRESENT (Y) / N

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	Chlorophyll-a analysis	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-2	ND1071	11/09/2015	14:35	Chlorophyll-a	x	1		Frozen, two samples in each bag
2	KZ-7	ND1072	11/09/2015	8:20	Chlorophyll-a	x	1		Frozen, two samples in each bag
3	KZ-9	ND1073	10/09/2015	16:45	Chlorophyll-a	x	1		Frozen, two samples in each bag
4	KZ-13	ND1074	11/09/2015	11:25	Chlorophyll-a	x	1		Frozen, two samples in each bag
5	KZ-15	ND1075	09/09/2015	14:50	Chlorophyll-a	x	1		Frozen, two samples in each bag
6	KZ-16	ND1076	10/09/2015	16:00	Chlorophyll-a	x	1		Frozen, two samples in each bag
7	KZ-17	ND1077	09/09/2015	17:08	Chlorophyll-a	x	1		Frozen, two samples in each bag
	KZ-26	ND1078	11/09/2015	18:00	Chlorophyll-a	x	1		Frozen, two samples in each bag
9	KZ-21	ND1079	09/09/2015	12:30	Chlorophyll-a	x	1		Frozen, two samples in each bag
10	KZ-22	ND1080	09/09/2015	9:40	Chlorophyll-a	x	1		Frozen, two samples in each bag

B580250

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
A. MacPhail	14/09/2015		Laurel Berthier	2015/09/15	10:10	B580250

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08412767, 08412768

Attention:KAI WOLOSHYN

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

Report Date: 2015/10/26
Report #: R2065002
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B591947
Received: 2015/10/17, 08:40

Sample Matrix: Water
Samples Received: 18

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	18	N/A	2015/10/20	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	10	2015/10/20	2015/10/20	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	8	2015/10/20	2015/10/21	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	17	N/A	2015/10/19	BBY6SOP-00011	SM 22 4500-Cl- G m
Chloride by Automated Colourimetry	1	N/A	2015/10/20	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	13	N/A	2015/10/21	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	13	N/A	2015/10/21	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	18	N/A	2015/10/17	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	12	N/A	2015/10/19	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2015/10/19	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	10	N/A	2015/10/20	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	8	N/A	2015/10/21	BBY6SOP-00026	SM 22 2510 B m
Fluoride	18	N/A	2015/10/19	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	10	N/A	2015/10/20	BBY7SOP-00002	EPA 6020a R1 m
Hardness Total (calculated as CaCO3)	3	N/A	2015/10/21	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	18	N/A	2015/10/21	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	13	N/A	2015/10/22	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	13	2015/10/22	2015/10/22	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	18	N/A	2015/10/21	BBY WI-00033	SM 22 1030E
Sum of cations, anions	10	N/A	2015/10/20	Calc	
Sum of cations, anions	8	N/A	2015/10/21	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	18	N/A	2015/10/21	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	4	N/A	2015/10/20	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	14	N/A	2015/10/21	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Digested LL (total)	3	2015/10/19	2015/10/20	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	10	N/A	2015/10/20	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	3	N/A	2015/10/21	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	10	N/A	2015/10/19	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	13	N/A	2015/10/19	BBY6SOP-00009	SM 22 4500-NH3- G m

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

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08412767, 08412768

Attention:KAI WOLOSHYN

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

Report Date: 2015/10/26
Report #: R2065002
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B591947
Received: 2015/10/17, 08:40

Sample Matrix: Water
Samples Received: 18

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrate+Nitrite (N) (low level)	18	N/A	2015/10/17	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	18	N/A	2015/10/17	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	18	N/A	2015/10/17	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	17	N/A	2015/10/19	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	10	N/A	2015/10/20	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	8	N/A	2015/10/21	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	17	N/A	2015/10/19	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	1	N/A	2015/10/20	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - FF/FP	12	2015/10/19	2015/10/20	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2015/10/19	2015/10/20	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	13	N/A	2015/10/20	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	8	2015/10/20	2015/10/21	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	5	2015/10/21	2015/10/21	BBY6SOP-00034	SM 22 2540 D

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

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

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

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NK2704		NK2705		NK2706		
Sampling Date		2015/10/15 12:50		2015/10/14 10:20		2015/10/15 10:15		
COC Number		08412767		08412767		08412767		
	UNITS	KZ-2	QC Batch	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	8081225	<0.50	8081302	<0.50	0.50	8081225
Acidity (pH 8.3)	mg/L	<0.50	8081225	<0.50	8081302	<0.50	0.50	8081225
Calculated Parameters								
Anion Sum	meq/L	2.1	8078300	3.5	8078300	3.5	N/A	8078300
Cation Sum	meq/L	2.1	8078300	3.6	8078300	3.6	N/A	8078300
Filter and HNO3 Preservation	N/A	LAB	8079293	LAB	8079293	LAB	N/A	8079293
Ion Balance	N/A	1.0	8078299	1.0	8078299	1.0	0.010	8078299
Nitrate (N)	mg/L	0.125	8077902	0.101	8077902	0.139	0.0020	8077902
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8082911	0.00054	8082911	<0.00050	0.00050	8082911
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8082961	0.00058	8082961	0.00053	0.00050	8082961
Fluoride (F)	mg/L	0.035	8081096	0.100	8081096	0.064	0.010	8081096
Dissolved Organic Carbon (C)	mg/L	1.15	8079601	2.41	8079598	1.59	0.50	8079601
Alkalinity (Total as CaCO3)	mg/L	56.6	8080916	141	8080938	139	0.50	8080938
Alkalinity (PP as CaCO3)	mg/L	<0.50	8080916	<0.50	8080938	<0.50	0.50	8080938
Bicarbonate (HCO3)	mg/L	69.1	8080916	172	8080938	170	0.50	8080938
Carbonate (CO3)	mg/L	<0.50	8080916	<0.50	8080938	<0.50	0.50	8080938
Hydroxide (OH)	mg/L	<0.50	8080916	<0.50	8080938	<0.50	0.50	8080938
Anions								
Dissolved Sulphate (SO4)	mg/L	43.7	8079926	32.4	8079926	32.2	0.50	8079926
Dissolved Chloride (Cl)	mg/L	<0.50	8079924	0.54	8079924	0.56	0.50	8079924
MISCELLANEOUS								
True Colour	Col. Unit	<5.0	8078359	10.6	8078359	8.6	5.0	8078359
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020	8079870	<0.0020	8079870	0.0026	0.0020	8079870
Total Ammonia (N)	mg/L	0.0054 (1)	8078363	0.0091 (1)	8078363	0.0185 (1)	0.0050	8078363
Nitrate plus Nitrite (N)	mg/L	0.125	8078342	0.101	8078342	0.139	0.0020	8078342
Nitrite (N)	mg/L	<0.0020	8078343	<0.0020	8078343	<0.0020	0.0020	8078343
Total Phosphorus (P)	mg/L	0.0022 (1)	8079874	0.0064 (1)	8079874	0.0038 (1)	0.0020	8079874
Physical Properties								
Conductivity	uS/cm	220	8080922	339	8080935	337	1.0	8080935
pH	pH	7.87	8080924	8.15	8080929	8.05	N/A	8080929

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NK2704		NK2705		NK2706		
Sampling Date		2015/10/15 12:50		2015/10/14 10:20		2015/10/15 10:15		
COC Number		08412767		08412767		08412767		
	UNITS	KZ-2	QC Batch	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8082414	<1.0	8080854	1.5	1.0	8082414
RDL = Reportable Detection Limit								

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NK2707	NK2708		NK2709		NK2710		
Sampling Date		2015/10/14 12:30	2015/10/14 14:20		2015/10/14 15:20		2015/10/14 15:00		
COC Number		08412767	08412767		08412767		08412767		
	UNITS	KZ-13	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Misc. Inorganics									
Acidity (pH 4.5)	mg/L	<0.50	<0.50	8081302	<0.50	8081225	<0.50	0.50	8081302
Acidity (pH 8.3)	mg/L	<0.50	<0.50	8081302	<0.50	8081225	<0.50	0.50	8081302
Calculated Parameters									
Anion Sum	meq/L	1.6	3.6	8078300	3.3	8078300	3.9	N/A	8078300
Cation Sum	meq/L	1.6	3.6	8078300	3.4	8078300	3.9	N/A	8078300
Filter and HNO3 Preservation	N/A	LAB	LAB	8079293	LAB	8079293	LAB	N/A	8079293
Ion Balance	N/A	0.99	1.0	8078299	1.0	8078299	1.0	0.010	8078299
Nitrate (N)	mg/L	0.0581	0.135	8077902	0.151	8077902	0.0963	0.0020	8077902
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	8082911	0.00056	8082911	<0.00050	0.00050	8082911
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	8082961	<0.00050	8082961	<0.00050	0.00050	8082961
Fluoride (F)	mg/L	0.039	0.069	8081096	0.055	8081096	0.089	0.010	8081096
Dissolved Organic Carbon (C)	mg/L	3.16	1.06	8079598	1.38	8079598	1.34	0.50	8079601
Alkalinity (Total as CaCO3)	mg/L	63.3	146	8080938	137	8080916	161	0.50	8080938
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	8080938	<0.50	8080916	<0.50	0.50	8080938
Bicarbonate (HCO3)	mg/L	77.3	178	8080938	167	8080916	197	0.50	8080938
Carbonate (CO3)	mg/L	<0.50	<0.50	8080938	<0.50	8080916	<0.50	0.50	8080938
Hydroxide (OH)	mg/L	<0.50	<0.50	8080938	<0.50	8080916	<0.50	0.50	8080938
Anions									
Dissolved Sulphate (SO4)	mg/L	13.6	29.3	8079926	26.8	8079926	31.7	0.50	8079926
Dissolved Chloride (Cl)	mg/L	0.53	0.55	8079924	<0.50	8079924	0.60	0.50	8079924
MISCELLANEOUS									
True Colour	Col. Unit	15.5	<5.0	8078359	<5.0	8078359	6.5	5.0	8078359
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0038	8079870	<0.0020	8079870	0.0026	0.0020	8079870
Total Ammonia (N)	mg/L	0.0134 (1)	0.0101 (1)	8078363	0.0111 (1)	8078363	0.0210 (1)	0.0050	8078363
Nitrate plus Nitrite (N)	mg/L	0.0581	0.135	8078342	0.151	8078342	0.0963	0.0020	8078342
Nitrite (N)	mg/L	<0.0020	<0.0020	8078343	<0.0020	8078343	<0.0020	0.0020	8078343
Total Phosphorus (P)	mg/L	0.0026 (1)	0.0076 (1)	8079874	<0.0020 (1)	8079874	0.0047 (1)	0.0020	8079874
Physical Properties									
Conductivity	uS/cm	156	335	8080935	319	8080922	364	1.0	8080935
pH	pH	7.89	8.21	8080929	8.09	8080924	8.25	N/A	8080929

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NK2707	NK2708		NK2709		NK2710		
Sampling Date		2015/10/14 12:30	2015/10/14 14:20		2015/10/14 15:20		2015/10/14 15:00		
COC Number		08412767	08412767		08412767		08412767		
	UNITS	KZ-13	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	1.0	<1.0	8080854	<1.0	8080854	<1.0	1.0	8080854
RDL = Reportable Detection Limit									

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NK2711	NK2712		NK2713		NK2724		
Sampling Date		2015/10/15 13:00	2015/10/15 15:20		2015/10/14 16:45		2015/10/15 16:45		
COC Number		08412767	08412767		08412767		08412768		
	UNITS	KZ-19	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Misc. Inorganics									
Acidity (pH 4.5)	mg/L	<0.50	<0.50	8081225	<0.50	8081225	<0.50	0.50	8081225
Acidity (pH 8.3)	mg/L	<0.50	<0.50	8081225	<0.50	8081225	<0.50	0.50	8081225
Calculated Parameters									
Anion Sum	meq/L	0.022	5.0	8078300	4.4	8078300	4.7	N/A	8078300
Cation Sum	meq/L	0.0012	5.2	8078300	4.5	8078300	4.6	N/A	8078300
Filter and HNO3 Preservation	N/A	LAB	LAB	8079293	LAB	8079293	LAB	N/A	8079293
Ion Balance	N/A	0.054	1.0	8078299	1.0	8078299	0.98	0.010	8078299
Nitrate (N)	mg/L	0.0023	0.0253	8077902	0.0772	8077902	0.0565	0.0020	8077902
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	8082911	<0.00050	8082911	<0.00050	0.00050	8082940
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	8082961	<0.00050	8082961	<0.00050	0.00050	8082961
Fluoride (F)	mg/L	<0.010	0.150	8081096	0.110	8081096	0.110	0.010	8081096
Dissolved Organic Carbon (C)	mg/L	<0.50	4.74	8079598	2.88	8079598	4.12	0.50	8079598
Alkalinity (Total as CaCO3)	mg/L	1.11	207	8080916	182	8080916	195	0.50	8080916
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	8080916	1.66	8080916	1.43	0.50	8080916
Bicarbonate (HCO3)	mg/L	1.35	253	8080916	218	8080916	234	0.50	8080916
Carbonate (CO3)	mg/L	<0.50	<0.50	8080916	1.99	8080916	1.72	0.50	8080916
Hydroxide (OH)	mg/L	<0.50	<0.50	8080916	<0.50	8080916	<0.50	0.50	8080916
Anions									
Dissolved Sulphate (SO4)	mg/L	<0.50	41.9	8079926	35.6	8079926	36.9	0.50	8079926
Dissolved Chloride (Cl)	mg/L	<0.50	0.70	8079924	0.67	8079924	0.73	0.50	8079924
MISCELLANEOUS									
True Colour	Col. Unit	<5.0	23.4	8078359	13.7	8078359	12.6	5.0	8078359
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0049	8079870	0.0030	8079870	<0.0020	0.0020	8079870
Total Ammonia (N)	mg/L	0.0057 (1)	0.0191 (1)	8078363	0.0095 (1)	8078363	0.0114 (1)	0.0050	8078363
Nitrate plus Nitrite (N)	mg/L	0.0023	0.0253	8078342	0.0772	8078342	0.0565	0.0020	8078342
Nitrite (N)	mg/L	<0.0020	<0.0020	8078343	<0.0020	8078343	<0.0020	0.0020	8078343
Total Phosphorus (P)	mg/L	<0.0020 (1)	0.0133 (1)	8079874	0.0049 (1)	8079874	0.0041 (1)	0.0020	8079874
Physical Properties									
Conductivity	uS/cm	1.3	462	8080922	409	8080922	434	1.0	8080922
pH	pH	6.10	8.29	8080924	8.32	8080924	8.33	N/A	8080924

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NK2711	NK2712		NK2713		NK2724		
Sampling Date		2015/10/15 13:00	2015/10/15 15:20		2015/10/14 16:45		2015/10/15 16:45		
COC Number		08412767	08412767		08412767		08412768		
	UNITS	KZ-19	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	<1.0	3.3	8082414	1.0	8080854	1.6	1.0	8082414
RDL = Reportable Detection Limit									

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NK2725		NK2726		NK2727	NK2728		
Sampling Date		2015/10/14 13:00		2015/10/14		2015/10/15 09:40	2015/10/15 09:50		
COC Number		08412768		08412768		08412768	08412768		
	UNITS	KZ-28	QC Batch	TRIP BLANK	QC Batch	KZ-9 WEST SEEP	KZ-9 EAST SEEP	RDL	QC Batch
Misc. Inorganics									
Acidity (pH 4.5)	mg/L	<0.50	8081225	<0.50	8081308	<0.50	<0.50	0.50	8081225
Acidity (pH 8.3)	mg/L	<0.50	8081225	<0.50	8081308	<0.50	237	0.50	8081225
Calculated Parameters									
Anion Sum	meq/L	1.6	8078300	0.0000	8078300	5.0	19	N/A	8078300
Cation Sum	meq/L	1.5	8078300	0.0017	8078300	5.1	20	N/A	8078300
Filter and HNO3 Preservation	N/A	LAB	8079293			LAB	LAB	N/A	8079293
Ion Balance	N/A	0.98	8078299	NC	8078299	1.0	1.1	0.010	8078299
Nitrate (N)	mg/L	0.0607	8077902	<0.0020	8077902	0.590	0.0074	0.0020	8077902
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8082940	<0.00050	8082940			0.00050	
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8082961	0.00051	8082961			0.00050	
Fluoride (F)	mg/L	0.039	8081096	<0.010	8081096	0.056	0.910	0.010	8081096
Dissolved Organic Carbon (C)	mg/L	3.30	8079598	<0.50 (1)	8078364			0.50	
Alkalinity (Total as CaCO3)	mg/L	62.9	8080916	<0.50	8080916	201	924	0.50	8080916
Alkalinity (PP as CaCO3)	mg/L	<0.50	8080916	<0.50	8080916	<0.50	<0.50	0.50	8080916
Bicarbonate (HCO3)	mg/L	76.8	8080916	<0.50	8080916	245	1130	0.50	8080916
Carbonate (CO3)	mg/L	<0.50	8080916	<0.50	8080916	<0.50	<0.50	0.50	8080916
Hydroxide (OH)	mg/L	<0.50	8080916	<0.50	8080916	<0.50	<0.50	0.50	8080916
Anions									
Dissolved Sulphate (SO4)	mg/L	13.9	8079926	<0.50	8079926	45.8	11.8	0.50	8079926
Dissolved Chloride (Cl)	mg/L	0.60	8079924	<0.50	8079924	0.67	2.3	0.50	8079924
MISCELLANEOUS									
True Colour	Col. Unit	15.7	8078359	<5.0	8078359	<5.0	29.4	5.0	8078359
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0021	8079870	<0.0020	8079873			0.0020	
Total Ammonia (N)	mg/L	0.0121 (1)	8078363	<0.0050 (1)	8078363			0.0050	
Nitrate plus Nitrite (N)	mg/L	0.0607	8078342	<0.0020	8078342	0.590	0.0074	0.0020	8078342
Nitrite (N)	mg/L	<0.0020	8078343	<0.0020	8078343	<0.0020	<0.0020	0.0020	8078343
Total Phosphorus (P)	mg/L	<0.0020 (1)	8079874	<0.0020 (1)	8079874			0.0020	
Physical Properties									
Conductivity	uS/cm	155	8080922	1.5	8080922	465	1600	1.0	8080922
pH	pH	7.89	8080924	5.78	8080924	8.27	6.63	N/A	8080924

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NK2725		NK2726		NK2727	NK2728		
Sampling Date		2015/10/14 13:00		2015/10/14		2015/10/15 09:40	2015/10/15 09:50		
COC Number		08412768		08412768		08412768	08412768		
	UNITS	**KZ-28**	**QC Batch**	**TRIP BLANK**	**QC Batch**	**KZ-9 WEST SEEP**	**KZ-9 EAST SEEP**	**RDL**	**QC Batch**
Physical Properties									
Total Suspended Solids	mg/L	1.3	8080854	<1.0	8080854			1.0	
RDL = Reportable Detection Limit									

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NK2729	NK2730			NK2731		
Sampling Date		2015/10/15 13:50	2015/10/16 09:05			2015/10/16 08:35		
COC Number		08412768	08412768			08412768		
	UNITS	SEEP 4	SEEP 3	RDL	QC Batch	SEEP 5	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	<0.50	0.50	8081225	<0.50	0.50	8081225
Acidity (pH 8.3)	mg/L	<0.50	<0.50	0.50	8081225	54.5	0.50	8081225
Calculated Parameters								
Anion Sum	meq/L	3.2	3.5	N/A	8078300	4.2	N/A	8078300
Cation Sum	meq/L	3.4	3.6	N/A	8078300	4.1	N/A	8078300
Filter and HNO3 Preservation	N/A	LAB	LAB	N/A	8079293	LAB	N/A	8079293
Ion Balance	N/A	1.1	1.0	0.010	8078299	0.96	0.010	8078299
Nitrate (N)	mg/L	0.269	0.566	0.0020	8077902	<0.020	0.020	8077902
Misc. Inorganics								
Fluoride (F)	mg/L	0.033	0.036	0.010	8081096	0.089	0.010	8081066
Alkalinity (Total as CaCO3)	mg/L	120	142	0.50	8080916	198	0.50	8080916
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	0.50	8080916	<0.50	0.50	8080916
Bicarbonate (HCO3)	mg/L	146	173	0.50	8080916	242	0.50	8080916
Carbonate (CO3)	mg/L	<0.50	<0.50	0.50	8080916	<0.50	0.50	8080916
Hydroxide (OH)	mg/L	<0.50	<0.50	0.50	8080916	<0.50	0.50	8080916
Anions								
Dissolved Sulphate (SO4)	mg/L	39.3	31.1	0.50	8079926	11.5	0.50	8082224
Dissolved Chloride (Cl)	mg/L	<0.50	0.70	0.50	8079924	0.98	0.50	8082220
MISCELLANEOUS								
True Colour	Col. Unit	<5.0	5.5	5.0	8078359	86.6	5.0	8078359
Nutrients								
Nitrate plus Nitrite (N)	mg/L	0.269	0.566	0.0020	8078342	<0.020 (1)	0.020	8078342
Nitrite (N)	mg/L	<0.0020	<0.0020	0.0020	8078343	<0.020 (1)	0.020	8078343
Physical Properties								
Conductivity	uS/cm	322	342	1.0	8080922	400	1.0	8080922
pH	pH	8.06	8.05	N/A	8080924	6.75	N/A	8080924

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) RDL raised due to sample matrix interference.

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NK2704	NK2705	NK2706	NK2707	NK2708		
Sampling Date		2015/10/15 12:50	2015/10/14 10:20	2015/10/15 10:15	2015/10/14 12:30	2015/10/14 14:20		
COC Number		08412767	08412767	08412767	08412767	08412767		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	100	174	176	73.4	175	0.50	8078122
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8083974
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00276	0.00307	0.00121	0.00592	0.00128	0.00050	8080489
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000037	0.000044	0.000021	0.000030	0.000020	8080489
Dissolved Arsenic (As)	mg/L	0.000076	0.000148	0.000185	0.000162	0.000367	0.000020	8080489
Dissolved Barium (Ba)	mg/L	0.0594	0.0555	0.0819	0.0947	0.0632	0.000020	8080489
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8080489
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8080489
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8080489
Dissolved Cadmium (Cd)	mg/L	0.000185	0.0000940	0.0000710	0.0000150	0.0000220	0.0000050	8080489
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8080489
Dissolved Cobalt (Co)	mg/L	0.0000070	0.0000150	0.0000510	0.0000150	0.0000200	0.0000050	8080489
Dissolved Copper (Cu)	mg/L	0.000478	0.000421	0.000308	0.000436	0.000255	0.000050	8080489
Dissolved Iron (Fe)	mg/L	<0.0010	0.0299	0.0735	0.0186	0.0092	0.0010	8080489
Dissolved Lead (Pb)	mg/L	0.0000060	0.0000110	0.0000060	<0.0000050	<0.0000050	0.0000050	8080489
Dissolved Lithium (Li)	mg/L	0.00081	0.00142	0.00216	0.00113	0.00162	0.00050	8080489
Dissolved Manganese (Mn)	mg/L	0.000052	0.0104	0.0471	0.00972	0.0129	0.000050	8080489
Dissolved Molybdenum (Mo)	mg/L	0.000605	0.000721	0.000641	0.000566	0.000836	0.000050	8080489
Dissolved Nickel (Ni)	mg/L	0.000273	0.000313	0.000309	0.000341	0.000378	0.000020	8080489
Dissolved Phosphorus (P)	mg/L	0.0031	<0.0020	<0.0020	0.0024	0.0041	0.0020	8080489
Dissolved Selenium (Se)	mg/L	0.000945	0.00124	0.00126	0.000176	0.000984	0.000040	8080489
Dissolved Silicon (Si)	mg/L	2.18	3.00	3.12	2.87	2.91	0.050	8080489
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8080489
Dissolved Strontium (Sr)	mg/L	0.109	0.193	0.184	0.0718	0.167	0.000050	8080489
Dissolved Thallium (Tl)	mg/L	0.0000030	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8080489
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8080489
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8080489
Dissolved Uranium (U)	mg/L	0.00243	0.00168	0.00138	0.000649	0.00229	0.0000020	8080489
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8080489
Dissolved Zinc (Zn)	mg/L	0.0232	0.0194	0.0139	0.00203	0.00193	0.00010	8080489
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8080489
Dissolved Calcium (Ca)	mg/L	33.9	59.6	59.5	25.0	54.1	0.050	8078123

RDL = Reportable Detection Limit

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NK2704	NK2705	NK2706	NK2707	NK2708		
Sampling Date		2015/10/15 12:50	2015/10/14 10:20	2015/10/15 10:15	2015/10/14 12:30	2015/10/14 14:20		
COC Number		08412767	08412767	08412767	08412767	08412767		
	UNITS	**KZ-2**	**KZ-7**	**KZ-9**	**KZ-13**	**KZ-15**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	3.73	6.05	6.76	2.68	9.66	0.050	8078123
Dissolved Potassium (K)	mg/L	1.76	1.49	1.50	1.59	1.15	0.050	8078123
Dissolved Sodium (Na)	mg/L	0.715	1.20	1.05	0.942	0.995	0.050	8078123
Dissolved Sulphur (S)	mg/L	14.6	10.7	11.2	4.6	9.2	3.0	8078123
RDL = Reportable Detection Limit								

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NK2709	NK2710	NK2711	NK2712		
Sampling Date		2015/10/14 15:20	2015/10/14 15:00	2015/10/15 13:00	2015/10/15 15:20		
COC Number		08412767	08412767	08412767	08412767		
	UNITS	KZ-16	KZ-17	KZ-19	KZ-21	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	167	193	<0.50	253	0.50	8078122
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8083974
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00104	0.00141	<0.00050	0.00179	0.00050	8080489
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000047	<0.000020	0.000084	0.000020	8080489
Dissolved Arsenic (As)	mg/L	0.000262	0.000564	0.000028	0.00141	0.000020	8080489
Dissolved Barium (Ba)	mg/L	0.0605	0.0709	0.000041	0.0608	0.000020	8080489
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8080489
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8080489
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8080489
Dissolved Cadmium (Cd)	mg/L	0.0000130	0.0000340	<0.0000050	0.0000070	0.0000050	8080489
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8080489
Dissolved Cobalt (Co)	mg/L	0.0000200	0.0000310	<0.0000050	0.0000800	0.0000050	8080489
Dissolved Copper (Cu)	mg/L	0.000217	0.000240	<0.000050	0.000265	0.000050	8080489
Dissolved Iron (Fe)	mg/L	0.0026	0.0219	<0.0010	0.0784	0.0010	8080489
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8080489
Dissolved Lithium (Li)	mg/L	0.00183	0.00223	<0.00050	0.00447	0.00050	8080489
Dissolved Manganese (Mn)	mg/L	0.00451	0.0362	<0.000050	0.0658	0.000050	8080489
Dissolved Molybdenum (Mo)	mg/L	0.000487	0.00146	<0.000050	0.00167	0.000050	8080489
Dissolved Nickel (Ni)	mg/L	0.000294	0.000563	<0.000020	0.00185	0.000020	8080489
Dissolved Phosphorus (P)	mg/L	0.0030	0.0031	0.0025	0.0047	0.0020	8080489
Dissolved Selenium (Se)	mg/L	0.000861	0.00137	<0.000040	0.000716	0.000040	8080489
Dissolved Silicon (Si)	mg/L	2.76	3.20	<0.050	4.44	0.050	8080489
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8080489
Dissolved Strontium (Sr)	mg/L	0.167	0.177	<0.000050	0.194	0.000050	8080489
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8080489
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8080489
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8080489
Dissolved Uranium (U)	mg/L	0.00178	0.00307	<0.0000020	0.00330	0.0000020	8080489
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	0.00069	<0.00020	0.00020	8080489
Dissolved Zinc (Zn)	mg/L	0.00036	0.00450	<0.00010	0.00050	0.00010	8080489
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8080489
Dissolved Calcium (Ca)	mg/L	52.3	58.4	<0.050	62.8	0.050	8078123

RDL = Reportable Detection Limit

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NK2709	NK2710	NK2711	NK2712		
Sampling Date		2015/10/14 15:20	2015/10/14 15:00	2015/10/15 13:00	2015/10/15 15:20		
COC Number		08412767	08412767	08412767	08412767		
	UNITS	**KZ-16**	**KZ-17**	**KZ-19**	**KZ-21**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	8.75	11.4	<0.050	23.2	0.050	8078123
Dissolved Potassium (K)	mg/L	1.13	1.23	<0.050	1.65	0.050	8078123
Dissolved Sodium (Na)	mg/L	1.00	1.01	<0.050	1.49	0.050	8078123
Dissolved Sulphur (S)	mg/L	8.9	9.8	<3.0	14.2	3.0	8078123
RDL = Reportable Detection Limit							

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NK2713	NK2724	NK2725	NK2726	NK2727		
Sampling Date		2015/10/14 16:45	2015/10/15 16:45	2015/10/14 13:00	2015/10/14	2015/10/15 09:40		
COC Number		08412767	08412768	08412768	08412768	08412768		
	UNITS	KZ-22	KZ-26	KZ-28	TRIP BLANK	KZ-9 WEST SEEP	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	218	226	73.0	<0.50	250	0.50	8078122
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020		0.0000020	8083974
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00127	0.00109	0.00586	<0.00050	0.00059	0.00050	8081353
Dissolved Antimony (Sb)	mg/L	0.000050	0.000070	0.000026	<0.000020	0.000025	0.000020	8081353
Dissolved Arsenic (As)	mg/L	0.000927	0.000725	0.000171	<0.000020	0.000122	0.000020	8081353
Dissolved Barium (Ba)	mg/L	0.0628	0.0653	0.0953	<0.000020	0.226	0.000020	8081353
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8081353
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8081353
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8081353
Dissolved Cadmium (Cd)	mg/L	0.0000110	0.0000110	0.0000150	<0.0000050	0.0000160	0.0000050	8081353
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00046	0.00010	8081353
Dissolved Cobalt (Co)	mg/L	0.0000440	0.0000220	0.0000170	<0.0000050	0.0000080	0.0000050	8081353
Dissolved Copper (Cu)	mg/L	0.000278	0.000423	0.000417	<0.000050	0.000103	0.000050	8081353
Dissolved Iron (Fe)	mg/L	0.0382	0.0241	0.0190	<0.0010	<0.0010	0.0010	8081353
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000060	<0.0000050	<0.0000050	0.0000070	0.0000050	8081353
Dissolved Lithium (Li)	mg/L	0.00355	0.00435	0.00101	<0.00050	0.00181	0.00050	8081353
Dissolved Manganese (Mn)	mg/L	0.0270	0.00552	0.00997	<0.000050	0.00140	0.000050	8081353
Dissolved Molybdenum (Mo)	mg/L	0.00113	0.00105	0.000587	<0.000050	0.000881	0.000050	8081353
Dissolved Nickel (Ni)	mg/L	0.000985	0.000909	0.000332	<0.000020	0.000123	0.000020	8081353
Dissolved Phosphorus (P)	mg/L	0.0033	0.0034	0.0043	<0.0020	0.0025	0.0020	8081353
Dissolved Selenium (Se)	mg/L	0.000906	0.000806	0.000163	<0.000040	0.00197	0.000040	8081353
Dissolved Silicon (Si)	mg/L	3.53	3.77	2.92	<0.050	3.46	0.050	8081353
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8081353
Dissolved Strontium (Sr)	mg/L	0.184	0.188	0.0708	<0.000050	0.253	0.000050	8081353
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8081353
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8081353
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8081353
Dissolved Uranium (U)	mg/L	0.00286	0.00267	0.000656	<0.0000020	0.00210	0.0000020	8081353
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8081353
Dissolved Zinc (Zn)	mg/L	0.00068	0.00035	0.00198	<0.00010	0.00056	0.00010	8081353
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8081353
Dissolved Calcium (Ca)	mg/L	59.7	59.3	24.7	<0.050	84.2	0.050	8078123

RDL = Reportable Detection Limit

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NK2713	NK2724	NK2725	NK2726	NK2727		
Sampling Date		2015/10/14 16:45	2015/10/15 16:45	2015/10/14 13:00	2015/10/14	2015/10/15 09:40		
COC Number		08412767	08412768	08412768	08412768	08412768		
	UNITS	KZ-22	KZ-26	KZ-28	TRIP BLANK	KZ-9 WEST SEEP	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	16.8	18.8	2.72	<0.050	9.74	0.050	8078123
Dissolved Potassium (K)	mg/L	1.36	1.35	1.60	<0.050	1.17	0.050	8078123
Dissolved Sodium (Na)	mg/L	1.30	1.47	0.953	<0.050	1.76	0.050	8078123
Dissolved Sulphur (S)	mg/L	12.0	12.3	4.5	<3.0	14.9	3.0	8078123

RDL = Reportable Detection Limit

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NK2728	NK2729	NK2730	NK2731		
Sampling Date		2015/10/15 09:50	2015/10/15 13:50	2015/10/16 09:05	2015/10/16 08:35		
COC Number		08412768	08412768	08412768	08412768		
	UNITS	KZ-9 EAST SEEP	SEEP 4	SEEP 3	SEEP 5	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	970	167	176	196	0.50	8078122
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.0917	0.00146	0.00370	0.00099	0.00050	8081353
Dissolved Antimony (Sb)	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	8081353
Dissolved Arsenic (As)	mg/L	0.00180	0.000087	0.000085	0.000239	0.000020	8081353
Dissolved Barium (Ba)	mg/L	0.148	0.123	0.123	0.111	0.000020	8081353
Dissolved Beryllium (Be)	mg/L	0.000337	<0.000010	<0.000010	<0.000010	0.000010	8081353
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8081353
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8081353
Dissolved Cadmium (Cd)	mg/L	0.0000690	0.0000180	0.0000140	0.0000350	0.0000050	8081353
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00017	<0.00010	0.00010	8081353
Dissolved Cobalt (Co)	mg/L	0.00283	0.0000060	0.0000080	0.000275	0.0000050	8081353
Dissolved Copper (Cu)	mg/L	<0.000050	0.000178	0.000098	0.000157	0.000050	8081353
Dissolved Iron (Fe)	mg/L	9.02	<0.0010	<0.0010	0.0273	0.0010	8081353
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8081353
Dissolved Lithium (Li)	mg/L	0.0803	0.00051	<0.00050	0.00851	0.00050	8081353
Dissolved Manganese (Mn)	mg/L	2.09	0.000164	0.000061	0.579	0.000050	8081353
Dissolved Molybdenum (Mo)	mg/L	0.000452	0.000523	0.000592	<0.000050	0.000050	8081353
Dissolved Nickel (Ni)	mg/L	0.00832	0.000187	0.000105	0.000926	0.000020	8081353
Dissolved Phosphorus (P)	mg/L	0.0052	<0.0020	0.0027	0.0033	0.0020	8081353
Dissolved Selenium (Se)	mg/L	<0.000040	0.000820	0.000799	0.000101	0.000040	8081353
Dissolved Silicon (Si)	mg/L	16.8	2.73	2.31	7.47	0.050	8081353
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8081353
Dissolved Strontium (Sr)	mg/L	1.08	0.225	0.211	0.222	0.000050	8081353
Dissolved Thallium (Tl)	mg/L	0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8081353
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8081353
Dissolved Titanium (Ti)	mg/L	0.00143	<0.00050	<0.00050	<0.00050	0.00050	8081353
Dissolved Uranium (U)	mg/L	0.00178	0.00137	0.00118	0.000114	0.0000020	8081353
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8081353
Dissolved Zinc (Zn)	mg/L	0.0321	0.00015	0.00029	0.0121	0.00010	8081353
Dissolved Zirconium (Zr)	mg/L	0.00043	<0.00010	<0.00010	<0.00010	0.00010	8081353
Dissolved Calcium (Ca)	mg/L	333	61.9	65.9	64.7	0.050	8078123
Dissolved Magnesium (Mg)	mg/L	33.5	3.02	2.70	8.28	0.050	8078123

RDL = Reportable Detection Limit

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NK2728	NK2729	NK2730	NK2731		
Sampling Date		2015/10/15 09:50	2015/10/15 13:50	2015/10/16 09:05	2015/10/16 08:35		
COC Number		08412768	08412768	08412768	08412768		
	UNITS	**KZ-9 EAST SEEP**	**SEEP 4**	**SEEP 3**	**SEEP 5**	**RDL**	**QC Batch**
Dissolved Potassium (K)	mg/L	5.32	2.01	1.42	1.19	0.050	8078123
Dissolved Sodium (Na)	mg/L	8.74	0.741	0.882	2.16	0.050	8078123
Dissolved Sulphur (S)	mg/L	6.9	12.9	9.9	3.6	3.0	8078123
RDL = Reportable Detection Limit							

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NK2704	NK2705	NK2706	NK2707	NK2708		
Sampling Date		2015/10/15 12:50	2015/10/14 10:20	2015/10/15 10:15	2015/10/14 12:30	2015/10/14 14:20		
COC Number		08412767	08412767	08412767	08412767	08412767		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	101	177	181	76.0	178	0.50	8078088
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8084187
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0176	0.0114	0.0227	0.0273	0.0283	0.00050	8079606
Total Antimony (Sb)	mg/L	0.000022	0.000043	0.000052	0.000030	0.000025	0.000020	8079606
Total Arsenic (As)	mg/L	0.000102	0.000301	0.000357	0.000185	0.000561	0.000020	8079606
Total Barium (Ba)	mg/L	0.0590	0.0574	0.0814	0.0951	0.0649	0.000020	8079606
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8079606
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8079606
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8079606
Total Cadmium (Cd)	mg/L	0.000199	0.000176	0.0000920	0.0000260	0.0000380	0.0000050	8079606
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00040	<0.00010	<0.00010	0.00010	8079606
Total Cobalt (Co)	mg/L	0.0000260	0.0000420	0.000110	0.0000350	0.0000560	0.0000050	8079606
Total Copper (Cu)	mg/L	0.000609	0.000693	0.000514	0.000483	0.000417	0.000050	8079606
Total Iron (Fe)	mg/L	0.0354	0.238	0.548	0.0779	0.141	0.0010	8079606
Total Lead (Pb)	mg/L	0.000148	0.000176	0.000165	0.0000470	0.0000800	0.0000050	8079606
Total Lithium (Li)	mg/L	0.00093	0.00139	0.00200	0.00107	0.00160	0.00050	8079606
Total Manganese (Mn)	mg/L	0.00139	0.0298	0.0609	0.0233	0.0335	0.000050	8079606
Total Molybdenum (Mo)	mg/L	0.000604	0.000716	0.000661	0.000611	0.000851	0.000050	8079606
Total Nickel (Ni)	mg/L	0.000327	0.000376	0.000656	0.000395	0.000474	0.000020	8079606
Total Phosphorus (P)	mg/L	0.0030	0.0035	0.0052	0.0049	0.0184	0.0020	8079606
Total Selenium (Se)	mg/L	0.00110	0.00139	0.00144	0.000198	0.00117	0.000040	8079606
Total Silicon (Si)	mg/L	2.31	3.02	3.32	3.00	2.99	0.050	8079606
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8079606
Total Strontium (Sr)	mg/L	0.114	0.190	0.187	0.0730	0.172	0.000050	8079606
Total Thallium (Tl)	mg/L	0.0000020	0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8079606
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8079606
Total Titanium (Ti)	mg/L	0.00123	<0.00050	0.00122	0.00072	<0.00050	0.00050	8079606
Total Uranium (U)	mg/L	0.00258	0.00167	0.00144	0.000676	0.00234	0.0000020	8079606
Total Vanadium (V)	mg/L	0.00020	<0.00020	<0.00020	0.00031	<0.00020	0.00020	8079606
Total Zinc (Zn)	mg/L	0.0265	0.0316	0.0186	0.00316	0.00417	0.00010	8079606
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8079606
Total Calcium (Ca)	mg/L	34.4	60.9	60.9	25.8	54.9	0.050	8078124
Total Magnesium (Mg)	mg/L	3.76	6.02	6.98	2.81	10.0	0.050	8078124

RDL = Reportable Detection Limit

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NK2704	NK2705	NK2706	NK2707	NK2708		
Sampling Date		2015/10/15 12:50	2015/10/14 10:20	2015/10/15 10:15	2015/10/14 12:30	2015/10/14 14:20		
COC Number		08412767	08412767	08412767	08412767	08412767		
	UNITS	**KZ-2**	**KZ-7**	**KZ-9**	**KZ-13**	**KZ-15**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	1.75	1.49	1.52	1.62	1.19	0.050	8078124
Total Sodium (Na)	mg/L	0.732	1.17	1.08	0.976	1.03	0.050	8078124
Total Sulphur (S)	mg/L	15.6	11.6	11.9	4.9	10.0	3.0	8078124
RDL = Reportable Detection Limit								

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NK2709	NK2710	NK2711	NK2713	NK2726		
Sampling Date		2015/10/14 15:20	2015/10/14 15:00	2015/10/15 13:00	2015/10/14 16:45	2015/10/14		
COC Number		08412767	08412767	08412767	08412767	08412768		
	UNITS	KZ-16	KZ-17	KZ-19	KZ-22	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	170	193	<0.50	220	<0.50	0.50	8078088
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8084187
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0214	0.0272	0.0174	0.0102	<0.00050	0.00050	8079606
Total Antimony (Sb)	mg/L	<0.000020	0.000044	<0.000020	0.000052	<0.000020	0.000020	8079606
Total Arsenic (As)	mg/L	0.000301	0.000982	0.000023	0.00137	<0.000020	0.000020	8079606
Total Barium (Ba)	mg/L	0.0618	0.0704	0.000087	0.0625	<0.000020	0.000020	8079606
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8079606
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8079606
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8079606
Total Cadmium (Cd)	mg/L	0.0000130	0.0000700	<0.0000050	0.0000160	<0.0000050	0.0000050	8079606
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8079606
Total Cobalt (Co)	mg/L	0.0000270	0.0000810	<0.0000050	0.0000630	<0.0000050	0.0000050	8079606
Total Copper (Cu)	mg/L	0.000296	0.000446	<0.000050	0.000422	<0.000050	0.000050	8079606
Total Iron (Fe)	mg/L	0.0187	0.305	<0.0010	0.226	<0.0010	0.0010	8079606
Total Lead (Pb)	mg/L	0.0000190	0.0000920	0.0000110	0.0000170	<0.0000050	0.0000050	8079606
Total Lithium (Li)	mg/L	0.00151	0.00203	<0.00050	0.00351	<0.00050	0.00050	8079606
Total Manganese (Mn)	mg/L	0.00652	0.0816	<0.000050	0.0400	<0.000050	0.000050	8079606
Total Molybdenum (Mo)	mg/L	0.000484	0.00141	<0.000050	0.00118	<0.000050	0.000050	8079606
Total Nickel (Ni)	mg/L	0.000331	0.000726	<0.000020	0.00111	<0.000020	0.000020	8079606
Total Phosphorus (P)	mg/L	0.0029	0.0088	<0.0020	0.0058	<0.0020	0.0020	8079606
Total Selenium (Se)	mg/L	0.000963	0.00151	<0.000040	0.00100	<0.000040	0.000040	8079606
Total Silicon (Si)	mg/L	2.88	3.29	<0.050	3.90	<0.050	0.050	8079606
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8079606
Total Strontium (Sr)	mg/L	0.162	0.188	0.000239	0.191	<0.000050	0.000050	8079606
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8079606
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8079606
Total Titanium (Ti)	mg/L	<0.00050	0.00052	0.00174	<0.00050	<0.00050	0.00050	8079606
Total Uranium (U)	mg/L	0.00181	0.00330	0.0000020	0.00294	<0.0000020	0.0000020	8079606
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00054	<0.00020	<0.00020	0.00020	8079606
Total Zinc (Zn)	mg/L	0.00059	0.00989	0.00017	0.00164	<0.00010	0.00010	8079606
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8079606
Total Calcium (Ca)	mg/L	53.4	57.4	0.057	59.7	<0.050	0.050	8078124
Total Magnesium (Mg)	mg/L	8.97	12.1	<0.050	17.3	<0.050	0.050	8078124

RDL = Reportable Detection Limit

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NK2709	NK2710	NK2711	NK2713	NK2726		
Sampling Date		2015/10/14 15:20	2015/10/14 15:00	2015/10/15 13:00	2015/10/14 16:45	2015/10/14		
COC Number		08412767	08412767	08412767	08412767	08412768		
	UNITS	**KZ-16**	**KZ-17**	**KZ-19**	**KZ-22**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	1.14	1.28	<0.050	1.38	<0.050	0.050	8078124
Total Sodium (Na)	mg/L	1.05	1.07	<0.050	1.31	<0.050	0.050	8078124
Total Sulphur (S)	mg/L	9.6	11.1	<3.0	13.0	<3.0	3.0	8078124
RDL = Reportable Detection Limit								

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		NK2712	NK2724	NK2725		
Sampling Date		2015/10/15 15:20	2015/10/15 16:45	2015/10/14 13:00		
COC Number		08412767	08412768	08412768		
	UNITS	KZ-21	KZ-26	KZ-28	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	240	223	73.5	0.50	8078088
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8084187
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.0149	0.0107	0.0252	0.0030	8080110
Total Antimony (Sb)	mg/L	0.000079	0.000076	<0.000050	0.000050	8080110
Total Arsenic (As)	mg/L	0.00280	0.000932	0.000291	0.000020	8080110
Total Barium (Ba)	mg/L	0.0603	0.0638	0.0957	0.00010	8080110
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8080110
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	0.000020	8080110
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	0.050	8080110
Total Cadmium (Cd)	mg/L	0.0000130	0.0000110	0.0000220	0.0000050	8080110
Total Chromium (Cr)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8080110
Total Cobalt (Co)	mg/L	0.000116	0.000026	0.000027	0.000010	8080110
Total Copper (Cu)	mg/L	0.00077	0.00059	0.00067	0.00020	8080110
Total Iron (Fe)	mg/L	0.581	0.102	0.0599	0.0050	8080110
Total Lead (Pb)	mg/L	<0.000050	<0.000050	<0.000050	0.000050	8080110
Total Lithium (Li)	mg/L	0.00444	0.00422	0.00097	0.00050	8080110
Total Manganese (Mn)	mg/L	0.0906	0.00764	0.0177	0.00010	8080110
Total Molybdenum (Mo)	mg/L	0.00156	0.00109	0.000617	0.000050	8080110
Total Nickel (Ni)	mg/L	0.00204	0.00094	0.00043	0.00010	8080110
Total Phosphorus (P)	mg/L	0.018	<0.010	<0.010	0.010	8080110
Total Selenium (Se)	mg/L	0.000683	0.000689	0.000170	0.000040	8080110
Total Silicon (Si)	mg/L	4.33	3.71	2.89	0.10	8080110
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8080110
Total Strontium (Sr)	mg/L	0.183	0.187	0.0714	0.000050	8080110
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8080110
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8080110
Total Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	0.0050	8080110
Total Uranium (U)	mg/L	0.00323	0.00267	0.000678	0.0000050	8080110
Total Vanadium (V)	mg/L	0.00095	0.00070	0.00108	0.00050	8080110
Total Zinc (Zn)	mg/L	0.0019	0.0011	0.0033	0.0010	8080110
Total Zirconium (Zr)	mg/L	0.00015	<0.00010	<0.00010	0.00010	8080110
Total Calcium (Ca)	mg/L	58.7	58.9	24.9	0.25	8078124
Total Magnesium (Mg)	mg/L	22.7	18.5	2.76	0.25	8078124
RDL = Reportable Detection Limit						

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

Maxxam Job #: B591947
Report Date: 2015/10/26

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

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		NK2712	NK2724	NK2725		
Sampling Date		2015/10/15 15:20	2015/10/15 16:45	2015/10/14 13:00		
COC Number		08412767	08412768	08412768		
	UNITS	KZ-21	KZ-26	KZ-28	RDL	QC Batch
Total Potassium (K)	mg/L	1.55	1.32	1.56	0.25	8078124
Total Sodium (Na)	mg/L	1.51	1.50	0.95	0.25	8078124
Total Sulphur (S)	mg/L	<15	<15	<15	15	8078124
RDL = Reportable Detection Limit						

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

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2704
Sample ID: KZ-2
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079601	N/A	2015/10/19	Isabel Choi
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	Maria Maclean
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	Edwin Lamigo
Ion Balance	CALC	8078299	N/A	2015/10/21	Andy Lu
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8080489	N/A	2015/10/21	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	Lucy Luo
pH Water	AT/ALK	8080924	N/A	2015/10/20	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	Tim Matsushita
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	Tim Matsushita
Total Suspended Solids-Low Level	BAL/BAL	8082414	2015/10/21	2015/10/21	Maxwell Forrester Mogg

Maxxam ID: NK2704 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	Tatyana Serzhanova
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	Edwin Lamigo

Maxxam ID: NK2705
Sample ID: KZ-7
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081302	N/A	2015/10/20	Wilson Au Yueng

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2705
Sample ID: KZ-7
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8080938	2015/10/20	2015/10/21	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	Isabel Choi
Conductance - water	AT/ALK	8080935	N/A	2015/10/21	Maria Maclean
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	Edwin Lamigo
Ion Balance	CALC	8078299	N/A	2015/10/21	Automated Statchk
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8080489	N/A	2015/10/21	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	Lucy Luo
pH Water	AT/ALK	8080929	N/A	2015/10/21	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	Tim Matsushita
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	Tim Matsushita
Total Suspended Solids-Low Level	BAL/BAL	8080854	2015/10/20	2015/10/21	Maxwell Forrester Mogg

Maxxam ID: NK2705 Dup
Sample ID: KZ-7
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8080938	2015/10/20	2015/10/21	Maria Maclean
Conductance - water	AT/ALK	8080935	N/A	2015/10/21	Maria Maclean
pH Water	AT/ALK	8080929	N/A	2015/10/21	Maria Maclean

Maxxam ID: NK2706
Sample ID: KZ-9
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8080938	2015/10/20	2015/10/21	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2706
Sample ID: KZ-9
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079601	N/A	2015/10/19	Isabel Choi
Conductance - water	AT/ALK	8080935	N/A	2015/10/21	Maria Maclean
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	Edwin Lamigo
Ion Balance	CALC	8078299	N/A	2015/10/21	Andy Lu
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8080489	N/A	2015/10/21	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	Lucy Luo
pH Water	AT/ALK	8080929	N/A	2015/10/21	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	Tim Matsushita
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	Tim Matsushita
Total Suspended Solids-Low Level	BAL/BAL	8082414	2015/10/21	2015/10/21	Maxwell Forrester Mogg

Maxxam ID: NK2706 Dup
Sample ID: KZ-9
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079601	N/A	2015/10/19	Isabel Choi

Maxxam ID: NK2707
Sample ID: KZ-13
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081302	N/A	2015/10/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8080938	2015/10/20	2015/10/21	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	Tatyana Serzhanova

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2707
Sample ID: KZ-13
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	Isabel Choi
Conductance - water	AT/ALK	8080935	N/A	2015/10/21	Maria Maclean
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	Edwin Lamigo
Ion Balance	CALC	8078299	N/A	2015/10/21	Automated Statchk
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8080489	N/A	2015/10/21	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	Lucy Luo
pH Water	AT/ALK	8080929	N/A	2015/10/21	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	Tim Matsushita
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	Tim Matsushita
Total Suspended Solids-Low Level	BAL/BAL	8080854	2015/10/20	2015/10/21	Maxwell Forrester Mogg

Maxxam ID: NK2708
Sample ID: KZ-15
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081302	N/A	2015/10/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8080938	2015/10/20	2015/10/21	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	Isabel Choi
Conductance - water	AT/ALK	8080935	N/A	2015/10/21	Maria Maclean
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	Edwin Lamigo
Ion Balance	CALC	8078299	N/A	2015/10/21	Automated Statchk
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	Andy Lu

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2708
Sample ID: KZ-15
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8080489	N/A	2015/10/21	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	Lucy Luo
pH Water	AT/ALK	8080929	N/A	2015/10/21	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	Tim Matsushita
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	Tim Matsushita
Total Suspended Solids-Low Level	BAL/BAL	8080854	2015/10/20	2015/10/21	Maxwell Forrester Mogg

Maxxam ID: NK2708 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	Isabel Choi
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/20	2015/10/20	Tim Matsushita

Maxxam ID: NK2709
Sample ID: KZ-16
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	Isabel Choi
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	Maria Maclean
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	Edwin Lamigo
Ion Balance	CALC	8078299	N/A	2015/10/21	Automated Statchk
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8080489	N/A	2015/10/21	Andrew An

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2709
Sample ID: KZ-16
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	Lucy Luo
pH Water	AT/ALK	8080924	N/A	2015/10/20	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	Tim Matsushita
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	Tim Matsushita
Total Suspended Solids-Low Level	BAL/BAL	8080854	2015/10/20	2015/10/21	Maxwell Forrester Mogg

Maxxam ID: NK2710
Sample ID: KZ-17
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081302	N/A	2015/10/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8080938	2015/10/20	2015/10/21	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079601	N/A	2015/10/19	Isabel Choi
Conductance - water	AT/ALK	8080935	N/A	2015/10/21	Maria Maclean
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	Edwin Lamigo
Ion Balance	CALC	8078299	N/A	2015/10/21	Automated Statchk
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8080489	N/A	2015/10/21	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	Lucy Luo
pH Water	AT/ALK	8080929	N/A	2015/10/21	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	Tim Matsushita

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2710
Sample ID: KZ-17
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	Tim Matsushita
Total Suspended Solids-Low Level	BAL/BAL	8080854	2015/10/20	2015/10/21	Maxwell Forrester Mogg

Maxxam ID: NK2711
Sample ID: KZ-19
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	Isabel Choi
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	Maria Maclean
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	Edwin Lamigo
Ion Balance	CALC	8078299	N/A	2015/10/21	Andy Lu
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8080489	N/A	2015/10/21	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	Lucy Luo
pH Water	AT/ALK	8080924	N/A	2015/10/20	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	Tim Matsushita
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	Tim Matsushita
Total Suspended Solids-Low Level	BAL/BAL	8082414	2015/10/21	2015/10/21	Maxwell Forrester Mogg

Maxxam ID: NK2712
Sample ID: KZ-21
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2712
Sample ID: KZ-21
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	Isabel Choi
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	Maria Maclean
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/21	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	Edwin Lamigo
Ion Balance	CALC	8078299	N/A	2015/10/21	Andy Lu
Sum of cations, anions	CALC	8078300	N/A	2015/10/21	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8080489	N/A	2015/10/21	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8080110	2015/10/19	2015/10/20	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/21	Automated Statchk
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	Lucy Luo
pH Water	AT/ALK	8080924	N/A	2015/10/20	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	Tim Matsushita
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	Tim Matsushita
Total Suspended Solids-Low Level	BAL/BAL	8082414	2015/10/21	2015/10/21	Maxwell Forrester Mogg

Maxxam ID: NK2712 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	Sherryl Flores

Maxxam ID: NK2713
Sample ID: KZ-22
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	Tatyana Serzhanova

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2713
Sample ID: KZ-22
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	Isabel Choi
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	Maria Maclean
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	Edwin Lamigo
Ion Balance	CALC	8078299	N/A	2015/10/21	Automated Statchk
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/20	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	Lucy Luo
pH Water	AT/ALK	8080924	N/A	2015/10/20	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	Tim Matsushita
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	Tim Matsushita
Total Suspended Solids-Low Level	BAL/BAL	8080854	2015/10/20	2015/10/21	Maxwell Forrester Mogg

Maxxam ID: NK2724
Sample ID: KZ-26
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8082940	N/A	2015/10/21	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	Isabel Choi
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	Maria Maclean
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/21	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	Edwin Lamigo
Ion Balance	CALC	8078299	N/A	2015/10/21	Andy Lu
Sum of cations, anions	CALC	8078300	N/A	2015/10/21	Andy Lu

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2724
Sample ID: KZ-26
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/20	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8080110	2015/10/19	2015/10/20	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/21	Automated Statchk
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	Lucy Luo
pH Water	AT/ALK	8080924	N/A	2015/10/20	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	Tim Matsushita
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	Tim Matsushita
Total Suspended Solids-Low Level	BAL/BAL	8082414	2015/10/21	2015/10/21	Maxwell Forrester Mogg

Maxxam ID: NK2725
Sample ID: KZ-28
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8082940	N/A	2015/10/21	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	Isabel Choi
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	Maria Maclean
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/21	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	Edwin Lamigo
Ion Balance	CALC	8078299	N/A	2015/10/21	Andy Lu
Sum of cations, anions	CALC	8078300	N/A	2015/10/21	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/20	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8080110	2015/10/19	2015/10/20	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/21	Automated Statchk
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	Lucy Luo
pH Water	AT/ALK	8080924	N/A	2015/10/20	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2725
Sample ID: KZ-28
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	Tim Matsushita
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	Tim Matsushita
Total Suspended Solids-Low Level	BAL/BAL	8080854	2015/10/20	2015/10/21	Maxwell Forrester Mogg

Maxxam ID: NK2725 Dup
Sample ID: KZ-28
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/20	Andrew An

Maxxam ID: NK2726
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081308	N/A	2015/10/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/21	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8082940	N/A	2015/10/21	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Tessa Millsap
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8078364	N/A	2015/10/19	Isabel Choi
Conductance - water	AT/ALK	8080922	N/A	2015/10/21	Maria Maclean
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	Edwin Lamigo
Ion Balance	CALC	8078299	N/A	2015/10/21	Andy Lu
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/20	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Automated Statchk
pH Water	AT/ALK	8080924	N/A	2015/10/21	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8079873	2015/10/19	2015/10/20	Tim Matsushita
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	Tim Matsushita
Total Suspended Solids-Low Level	BAL/BAL	8080854	2015/10/20	2015/10/21	Maxwell Forrester Mogg

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2726 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Balwinder Bassi
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	Edwin Lamigo
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Balwinder Bassi

Maxxam ID: NK2727
Sample ID: KZ-9 WEST SEEP
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Balwinder Bassi
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Tessa Millsap
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	Maria Maclean
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Simon Chan
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	Andy Lu
Ion Balance	CALC	8078299	N/A	2015/10/21	Andy Lu
Sum of cations, anions	CALC	8078300	N/A	2015/10/21	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/21	Andrew An
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	Lucy Luo
pH Water	AT/ALK	8080924	N/A	2015/10/20	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Balwinder Bassi

Maxxam ID: NK2728
Sample ID: KZ-9 EAST SEEP
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/21	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Balwinder Bassi
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Tessa Millsap
Conductance - water	AT/ALK	8080922	N/A	2015/10/21	Maria Maclean
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Simon Chan
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	Andy Lu
Ion Balance	CALC	8078299	N/A	2015/10/21	Andy Lu
Sum of cations, anions	CALC	8078300	N/A	2015/10/21	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/21	Andrew An
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2728
Sample ID: KZ-9 EAST SEEP
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	Lucy Luo
pH Water	AT/ALK	8080924	N/A	2015/10/21	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Balwinder Bassi

Maxxam ID: NK2729
Sample ID: SEEP 4
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/21	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Balwinder Bassi
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Tessa Millsap
Conductance - water	AT/ALK	8080922	N/A	2015/10/21	Maria Maclean
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Simon Chan
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	Andy Lu
Ion Balance	CALC	8078299	N/A	2015/10/21	Andy Lu
Sum of cations, anions	CALC	8078300	N/A	2015/10/21	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/21	Andrew An
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	Lucy Luo
pH Water	AT/ALK	8080924	N/A	2015/10/21	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Balwinder Bassi

Maxxam ID: NK2730
Sample ID: SEEP 3
Matrix: Water

Collected: 2015/10/16
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Balwinder Bassi
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Tessa Millsap
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	Maria Maclean
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Simon Chan
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	Andy Lu
Ion Balance	CALC	8078299	N/A	2015/10/21	Andy Lu
Sum of cations, anions	CALC	8078300	N/A	2015/10/21	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/21	Andrew An
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2730
Sample ID: SEEP 3
Matrix: Water

Collected: 2015/10/16
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	Lucy Luo
pH Water	AT/ALK	8080924	N/A	2015/10/20	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Balwinder Bassi

Maxxam ID: NK2730 Dup
Sample ID: SEEP 3
Matrix: Water

Collected: 2015/10/16
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Simon Chan

Maxxam ID: NK2731
Sample ID: SEEP 5
Matrix: Water

Collected: 2015/10/16
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8082220	N/A	2015/10/20	Balwinder Bassi
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Tessa Millsap
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	Maria Maclean
Fluoride	ISE/ISE	8081066	N/A	2015/10/19	Simon Chan
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	Andy Lu
Ion Balance	CALC	8078299	N/A	2015/10/21	Andy Lu
Sum of cations, anions	CALC	8078300	N/A	2015/10/21	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/21	Andrew An
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	Lucy Luo
pH Water	AT/ALK	8080924	N/A	2015/10/20	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8082224	N/A	2015/10/20	Balwinder Bassi

Maxxam ID: NK2731 Dup
Sample ID: SEEP 5
Matrix: Water

Collected: 2015/10/16
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	Maria Maclean
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	Maria Maclean
pH Water	AT/ALK	8080924	N/A	2015/10/20	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	2.7°C
Package 2	3.3°C
Package 3	3.3°C
Package 4	4.0°C

Sample NK2712-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample NK2724-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample NK2725-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample NK2726-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8078342	Nitrate plus Nitrite (N)	2015/10/17	NC	80 - 120	97	80 - 120	<0.0020	mg/L	1.8	25
8078343	Nitrite (N)	2015/10/17	98	80 - 120	92	80 - 120	<0.0020	mg/L	NC	25
8078359	True Colour	2015/10/17			106	80 - 120	<5.0	Col. Unit	NC	20
8078363	Total Ammonia (N)	2015/10/19	107	80 - 120	104	80 - 120	<0.0050	mg/L	NC	20
8078364	Dissolved Organic Carbon (C)	2015/10/19	100	80 - 120	104	80 - 120	<0.50	mg/L	NC	20
8079598	Dissolved Organic Carbon (C)	2015/10/19	100	80 - 120	104	80 - 120	<0.50	mg/L	NC	20
8079601	Dissolved Organic Carbon (C)	2015/10/19	110	80 - 120	110	80 - 120	<0.50	mg/L	NC	20
8079606	Total Aluminum (Al)	2015/10/19	84	80 - 120	101	80 - 120	<0.00050	mg/L	4.8	20
8079606	Total Antimony (Sb)	2015/10/19	98	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
8079606	Total Arsenic (As)	2015/10/19	96	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8079606	Total Barium (Ba)	2015/10/19	101	80 - 120	109	80 - 120	<0.000020	mg/L	0.90	20
8079606	Total Beryllium (Be)	2015/10/19	96	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8079606	Total Bismuth (Bi)	2015/10/19	98	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8079606	Total Boron (B)	2015/10/19					<0.010	mg/L	NC	20
8079606	Total Cadmium (Cd)	2015/10/19	98	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8079606	Total Chromium (Cr)	2015/10/19	97	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8079606	Total Cobalt (Co)	2015/10/19	101	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8079606	Total Copper (Cu)	2015/10/19	99	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8079606	Total Iron (Fe)	2015/10/19	103	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
8079606	Total Lead (Pb)	2015/10/19	102	80 - 120	108	80 - 120	<0.0000050	mg/L	0	20
8079606	Total Lithium (Li)	2015/10/19	96	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8079606	Total Manganese (Mn)	2015/10/19	98	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8079606	Total Molybdenum (Mo)	2015/10/19	92	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8079606	Total Nickel (Ni)	2015/10/19	98	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8079606	Total Phosphorus (P)	2015/10/19					<0.0020	mg/L		
8079606	Total Selenium (Se)	2015/10/19	94	80 - 120	99	80 - 120	<0.000040	mg/L	NC	20
8079606	Total Silicon (Si)	2015/10/19					<0.050	mg/L	NC	20
8079606	Total Silver (Ag)	2015/10/19	100	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8079606	Total Strontium (Sr)	2015/10/19	94	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8079606	Total Thallium (Tl)	2015/10/19	100	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8079606	Total Tin (Sn)	2015/10/19	96	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8079606	Total Titanium (Ti)	2015/10/19	96	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8079606	Total Uranium (U)	2015/10/19	99	80 - 120	106	80 - 120	<0.0000020	mg/L	NC	20
8079606	Total Vanadium (V)	2015/10/19	101	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
8079606	Total Zinc (Zn)	2015/10/19	102	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
8079606	Total Zirconium (Zr)	2015/10/19					<0.00010	mg/L	NC	20
8079870	Dissolved Phosphorus (P)	2015/10/20	94	80 - 120	101	80 - 120	<0.0020	mg/L	NC	20
8079873	Dissolved Phosphorus (P)	2015/10/20	91	80 - 120	97	80 - 120	<0.0020	mg/L		
8079874	Total Phosphorus (P)	2015/10/20	95	80 - 120	100	80 - 120	<0.0020	mg/L	NC	20
8079924	Dissolved Chloride (Cl)	2015/10/19	106	80 - 120	95	80 - 120	<0.50	mg/L	NC	20
8079926	Dissolved Sulphate (SO4)	2015/10/19	102	80 - 120	99	80 - 120	0.56, RDL=0.50	mg/L	NC	20
8080110	Total Aluminum (Al)	2015/10/20	NC	80 - 120	103	80 - 120	0.0034, RDL=0.0030	mg/L		
8080110	Total Antimony (Sb)	2015/10/20	98	80 - 120	102	80 - 120	<0.000050	mg/L		
8080110	Total Arsenic (As)	2015/10/20	110	80 - 120	99	80 - 120	<0.000020	mg/L		
8080110	Total Barium (Ba)	2015/10/20	NC	80 - 120	104	80 - 120	<0.00010	mg/L		
8080110	Total Beryllium (Be)	2015/10/20	110	80 - 120	108	80 - 120	<0.000010	mg/L		
8080110	Total Bismuth (Bi)	2015/10/20	99	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8080110	Total Boron (B)	2015/10/20					<0.050	mg/L		
8080110	Total Cadmium (Cd)	2015/10/20	97	80 - 120	97	80 - 120	<0.0000050	mg/L		
8080110	Total Chromium (Cr)	2015/10/20	NC	80 - 120	101	80 - 120	<0.00050	mg/L		
8080110	Total Cobalt (Co)	2015/10/20	103	80 - 120	105	80 - 120	<0.000010	mg/L		
8080110	Total Copper (Cu)	2015/10/20	97	80 - 120	107	80 - 120	<0.00020	mg/L		
8080110	Total Iron (Fe)	2015/10/20	NC	80 - 120	104	80 - 120	<0.0050	mg/L		
8080110	Total Lead (Pb)	2015/10/20	103	80 - 120	103	80 - 120	<0.000050	mg/L		
8080110	Total Lithium (Li)	2015/10/20	NC	80 - 120	98	80 - 120	<0.00050	mg/L		
8080110	Total Manganese (Mn)	2015/10/20	NC	80 - 120	99	80 - 120	<0.00010	mg/L		
8080110	Total Molybdenum (Mo)	2015/10/20	NC	80 - 120	97	80 - 120	<0.000050	mg/L		
8080110	Total Nickel (Ni)	2015/10/20	NC	80 - 120	103	80 - 120	<0.00010	mg/L		
8080110	Total Phosphorus (P)	2015/10/20					<0.010	mg/L		
8080110	Total Selenium (Se)	2015/10/20	NC	80 - 120	95	80 - 120	<0.000040	mg/L		
8080110	Total Silicon (Si)	2015/10/20					<0.10	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8080110	Total Silver (Ag)	2015/10/20	98	80 - 120	101	80 - 120	<0.0000050	mg/L		
8080110	Total Strontium (Sr)	2015/10/20	NC	80 - 120	93	80 - 120	<0.000050	mg/L		
8080110	Total Thallium (Tl)	2015/10/20	97	80 - 120	98	80 - 120	<0.0000020	mg/L		
8080110	Total Tin (Sn)	2015/10/20	91	80 - 120	98	80 - 120	<0.00020	mg/L		
8080110	Total Titanium (Ti)	2015/10/20	112	80 - 120	95	80 - 120	<0.0050	mg/L		
8080110	Total Uranium (U)	2015/10/20	NC	80 - 120	102	80 - 120	<0.0000050	mg/L		
8080110	Total Vanadium (V)	2015/10/20	NC	80 - 120	111	80 - 120	0.00084, RDL=0.00050	mg/L		
8080110	Total Zinc (Zn)	2015/10/20	97	80 - 120	103	80 - 120	<0.0010	mg/L		
8080110	Total Zirconium (Zr)	2015/10/20					<0.00010	mg/L		
8080489	Dissolved Aluminum (Al)	2015/10/21	109	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8080489	Dissolved Antimony (Sb)	2015/10/21	106	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8080489	Dissolved Arsenic (As)	2015/10/21	101	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8080489	Dissolved Barium (Ba)	2015/10/21	107	80 - 120	103	80 - 120	<0.000020	mg/L	2.1	20
8080489	Dissolved Beryllium (Be)	2015/10/21	102	80 - 120	99	80 - 120	<0.000010	mg/L	NC	20
8080489	Dissolved Bismuth (Bi)	2015/10/21	101	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8080489	Dissolved Boron (B)	2015/10/21					<0.010	mg/L	NC	20
8080489	Dissolved Cadmium (Cd)	2015/10/21	99	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8080489	Dissolved Chromium (Cr)	2015/10/21	103	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8080489	Dissolved Cobalt (Co)	2015/10/21	105	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8080489	Dissolved Copper (Cu)	2015/10/21	104	80 - 120	101	80 - 120	<0.000050	mg/L	2.9	20
8080489	Dissolved Iron (Fe)	2015/10/21	107	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20
8080489	Dissolved Lead (Pb)	2015/10/21	105	80 - 120	99	80 - 120	<0.0000050	mg/L	2.3	20
8080489	Dissolved Lithium (Li)	2015/10/21	96	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8080489	Dissolved Manganese (Mn)	2015/10/21	102	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8080489	Dissolved Molybdenum (Mo)	2015/10/21	98	80 - 120	95	80 - 120	<0.000050	mg/L	NC	20
8080489	Dissolved Nickel (Ni)	2015/10/21	102	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8080489	Dissolved Phosphorus (P)	2015/10/21					<0.0020	mg/L		
8080489	Dissolved Selenium (Se)	2015/10/21	97	80 - 120	94	80 - 120	<0.000040	mg/L	NC	20
8080489	Dissolved Silicon (Si)	2015/10/21					<0.050	mg/L	NC	20
8080489	Dissolved Silver (Ag)	2015/10/21	105	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8080489	Dissolved Strontium (Sr)	2015/10/21	98	80 - 120	94	80 - 120	<0.000050	mg/L	1.6	20
8080489	Dissolved Thallium (Tl)	2015/10/21	103	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8080489	Dissolved Tin (Sn)	2015/10/21	100	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
8080489	Dissolved Titanium (Ti)	2015/10/21	102	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20
8080489	Dissolved Uranium (U)	2015/10/21	103	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8080489	Dissolved Vanadium (V)	2015/10/21	103	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8080489	Dissolved Zinc (Zn)	2015/10/21	104	80 - 120	99	80 - 120	<0.00010	mg/L	11	20
8080489	Dissolved Zirconium (Zr)	2015/10/21					<0.00010	mg/L	NC	20
8080854	Total Suspended Solids	2015/10/21			98	80 - 120	<1.0	mg/L		
8080916	Alkalinity (PP as CaCO3)	2015/10/20					<0.50	mg/L	NC	20
8080916	Alkalinity (Total as CaCO3)	2015/10/20	NC	80 - 120	96	80 - 120	<0.50	mg/L	0.75	20
8080916	Bicarbonate (HCO3)	2015/10/20					<0.50	mg/L	0.75	20
8080916	Carbonate (CO3)	2015/10/20					<0.50	mg/L	NC	20
8080916	Hydroxide (OH)	2015/10/20					<0.50	mg/L	NC	20
8080922	Conductivity	2015/10/20			101	80 - 120	<1.0	uS/cm	0.25	20
8080924	pH	2015/10/20			101	97 - 103			0.30	N/A
8080929	pH	2015/10/21			101	97 - 103			0.25	N/A
8080935	Conductivity	2015/10/21			101	80 - 120	<1.0	uS/cm	0	20
8080938	Alkalinity (PP as CaCO3)	2015/10/21					<0.50	mg/L	NC	20
8080938	Alkalinity (Total as CaCO3)	2015/10/21	NC	80 - 120	97	80 - 120	<0.50	mg/L	1.3	20
8080938	Bicarbonate (HCO3)	2015/10/21					<0.50	mg/L	1.3	20
8080938	Carbonate (CO3)	2015/10/21					<0.50	mg/L	NC	20
8080938	Hydroxide (OH)	2015/10/21					<0.50	mg/L	NC	20
8081066	Fluoride (F)	2015/10/19	95	80 - 120	98	80 - 120	0.010, RDL=0.010	mg/L	NC	20
8081096	Fluoride (F)	2015/10/19	100	80 - 120	96	80 - 120	<0.010	mg/L	NC	20
8081225	Acidity (pH 4.5)	2015/10/20					<0.50	mg/L	NC	20
8081225	Acidity (pH 8.3)	2015/10/20			103	80 - 120	<0.50	mg/L	17	20
8081302	Acidity (pH 4.5)	2015/10/20					<0.50	mg/L	NC	20
8081302	Acidity (pH 8.3)	2015/10/20			102	80 - 120	<0.50	mg/L	1.9	20
8081308	Acidity (pH 4.5)	2015/10/20					<0.50	mg/L	3.4	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8081308	Acidity (pH 8.3)	2015/10/20			102	80 - 120	<0.50	mg/L	1.6	20
8081353	Dissolved Aluminum (Al)	2015/10/20	100	80 - 120	96	80 - 120	<0.00050	mg/L	0.66	20
8081353	Dissolved Antimony (Sb)	2015/10/20	103	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8081353	Dissolved Arsenic (As)	2015/10/20	101	80 - 120	97	80 - 120	<0.000020	mg/L	0.59	20
8081353	Dissolved Barium (Ba)	2015/10/20	NC	80 - 120	103	80 - 120	<0.000020	mg/L	2.1	20
8081353	Dissolved Beryllium (Be)	2015/10/20	106	80 - 120	95	80 - 120	<0.000010	mg/L	NC	20
8081353	Dissolved Bismuth (Bi)	2015/10/20	98	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8081353	Dissolved Boron (B)	2015/10/20					<0.010	mg/L	NC	20
8081353	Dissolved Cadmium (Cd)	2015/10/20	98	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
8081353	Dissolved Chromium (Cr)	2015/10/20	97	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8081353	Dissolved Cobalt (Co)	2015/10/20	101	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8081353	Dissolved Copper (Cu)	2015/10/20	100	80 - 120	102	80 - 120	<0.000050	mg/L	1.4	20
8081353	Dissolved Iron (Fe)	2015/10/20	105	80 - 120	106	80 - 120	<0.0010	mg/L	1.3	20
8081353	Dissolved Lead (Pb)	2015/10/20	100	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8081353	Dissolved Lithium (Li)	2015/10/20	103	80 - 120	87	80 - 120	<0.00050	mg/L	NC	20
8081353	Dissolved Manganese (Mn)	2015/10/20	NC	80 - 120	98	80 - 120	<0.000050	mg/L	0.81	20
8081353	Dissolved Molybdenum (Mo)	2015/10/20	NC	80 - 120	90	80 - 120	<0.000050	mg/L	1.0	20
8081353	Dissolved Nickel (Ni)	2015/10/20	98	80 - 120	99	80 - 120	<0.000020	mg/L	5.6	20
8081353	Dissolved Phosphorus (P)	2015/10/20					<0.0020	mg/L	NC	20
8081353	Dissolved Selenium (Se)	2015/10/20	96	80 - 120	95	80 - 120	<0.000040	mg/L	NC	20
8081353	Dissolved Silicon (Si)	2015/10/20					<0.050	mg/L	0.059	20
8081353	Dissolved Silver (Ag)	2015/10/20	101	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
8081353	Dissolved Strontium (Sr)	2015/10/20	NC	80 - 120	94	80 - 120	<0.000050	mg/L	2.2	20
8081353	Dissolved Thallium (Tl)	2015/10/20	93	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8081353	Dissolved Tin (Sn)	2015/10/20	96	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8081353	Dissolved Titanium (Ti)	2015/10/20	93	80 - 120	94	80 - 120	<0.00050	mg/L	NC	20
8081353	Dissolved Uranium (U)	2015/10/20	101	80 - 120	101	80 - 120	<0.0000020	mg/L	1.2	20
8081353	Dissolved Vanadium (V)	2015/10/20	103	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
8081353	Dissolved Zinc (Zn)	2015/10/20	100	80 - 120	99	80 - 120	<0.00010	mg/L	2.2	20
8081353	Dissolved Zirconium (Zr)	2015/10/20					<0.00010	mg/L	NC	20
8082220	Dissolved Chloride (Cl)	2015/10/20			100	80 - 120	0.63, RDL=0.50	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8082224	Dissolved Sulphate (SO4)	2015/10/20	120	80 - 120	94	80 - 120	0.60, RDL=0.50	mg/L	30 (1)	20
8082414	Total Suspended Solids	2015/10/21			98	80 - 120	<1.0	mg/L		
8082911	Strong Acid Dissoc. Cyanide (CN)	2015/10/21	97	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8082940	Strong Acid Dissoc. Cyanide (CN)	2015/10/21	101	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8082961	Weak Acid Dissoc. Cyanide (CN)	2015/10/21	98	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8083974	Dissolved Mercury (Hg)	2015/10/22	96	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8084187	Total Mercury (Hg)	2015/10/22	103	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

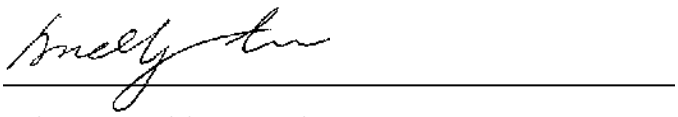
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Andy Lu, Data Validation Coordinator

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

B591947

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5 Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC # 08412767

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria		Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil	[ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify)	[ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water	[ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-2	NK2704	2015/10/15	12:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
2	KZ-7	NK2705	2015/10/14	10:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
3	KZ-9	NK2706	2015/10/15	10:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
4	KZ-13	NK2707	2015/10/14	12:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
5	KZ-15	NK2708	2015/10/14	14:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
6	KZ-16	NK2709	2015/10/14	15:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
7	KZ-17	NK2710	2015/10/14	15:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
8	KZ-19	NK2711	2015/10/15	13:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
9	KZ-21	NK2712	2015/10/15	15:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
10	KZ-22	NK2713	2015/10/14	16:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
N/A	N/A	3, 2, 3
N/A	N/A	3, 3, 4
N/A	N/A	4, 3, 3 / 3, 5, 4

COOLING MEDIA PRESENT Y / N

B591947

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Catherine Henry	2015/10/16	14:00	KEVIN QUONG	2015/10/17	08:40	B591947

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC # 08412768

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria		Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil	[ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify)	[ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water	[ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-26	NK2724	2015/10/15	16:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
2	KZ-28	NK2725	2015/10/14	13:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
3	Trip Blank	NK2726	—	—	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
4	KZ-9 west seep	NK2727	2015/10/15	9:40	"		x		x			x	x	x	x							4		General package, Anions, Dmetals (excl. Hg)
5	KZ-9 east seep	NK2728	2015/10/15	9:50	"		x		x			x	x	x	x							4		"
6	seep 4	NK2729	2015/10/15	13:50	"		x		x			x	x	x	x							4		"
7	seep 3	NK2730	2015/10/16	9:05	"		x		x			x	x	x	x							4		"
8	seep 5	NK2731	2015/10/16	8:35	"		x		x			x	x	x	x							4		"
9																								
10																								

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
N/A	N/A	3, 2, 3
N/A	N/A	3, 3, 4
N/A	N/A	4, 3, 3 / 3, 5, 4

COOLING MEDIA PRESENT (Y) / N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Catherine Henry	2015/10/16	14:00	KEVIN CHONG	2015/10/17	08:40	B591947

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08413453

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/11/18
Report #: R2081233
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B5A0442
Received: 2015/11/10, 09:20

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	1	N/A	2015/11/13	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	1	2015/11/10	2015/11/10	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	1	N/A	2015/11/12	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	1	N/A	2015/11/16	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	1	N/A	2015/11/16	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	1	N/A	2015/11/12	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	1	N/A	2015/11/13	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	1	N/A	2015/11/10	BBY6SOP-00026	SM 22 2510 B m
Fluoride	1	N/A	2015/11/12	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	1	N/A	2015/11/13	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	1	N/A	2015/11/12	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	1	N/A	2015/11/13	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	1	2015/11/13	2015/11/13	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2015/11/12	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	1	N/A	2015/11/12	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2015/11/13	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	1	N/A	2015/11/12	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	1	N/A	2015/11/10	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	1	N/A	2015/11/10	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	1	N/A	2015/11/10	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	1	N/A	2015/11/12	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	1	N/A	2015/11/10	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	1	N/A	2015/11/10	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	1	N/A	2015/11/12	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - FF/FP	1	2015/11/12	2015/11/12	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	1	N/A	2015/11/12	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	1	2015/11/12	2015/11/13	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08413453

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/11/18
Report #: R2081233
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B5A0442
Received: 2015/11/10, 09:20

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B5A0442
Report Date: 2015/11/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NP5779		
Sampling Date		2015/11/06 15:00		
COC Number		08413453		
	UNITS	KZ-13	RDL	QC Batch
Misc. Inorganics				
Acidity (pH 4.5)	mg/L	<0.50	0.50	8112180
Acidity (pH 8.3)	mg/L	0.56	0.50	8112180
Calculated Parameters				
Filter and HNO3 Preservation	N/A	LAB	N/A	8108330
Nitrate (N)	mg/L	0.0793	0.0020	8108185
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00057	0.00050	8114366
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8114401
Fluoride (F)	mg/L	0.044	0.010	8111038
Dissolved Organic Carbon (C)	mg/L	3.71	0.50	8112477
Alkalinity (Total as CaCO3)	mg/L	66.3	0.50	8109230
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8109230
Bicarbonate (HCO3)	mg/L	80.9	0.50	8109230
Carbonate (CO3)	mg/L	<0.50	0.50	8109230
Hydroxide (OH)	mg/L	<0.50	0.50	8109230
Anions				
Dissolved Sulphate (SO4)	mg/L	16.0	0.50	8110898
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8110892
MISCELLANEOUS				
True Colour	Col. Unit	13.6	5.0	8111481
Nutrients				
Dissolved Phosphorus (P)	mg/L	0.0044	0.0020	8111493
Total Ammonia (N)	mg/L	<0.0050 (1)	0.0050	8108999
Nitrate plus Nitrite (N)	mg/L	0.0793 (1)	0.0020	8109063
Nitrite (N)	mg/L	<0.0020 (1)	0.0020	8109073
Total Phosphorus (P)	mg/L	0.0029 (1)	0.0020	8111489
Physical Properties				
Conductivity	uS/cm	166	1.0	8109234
pH	pH	8.07	N/A	8109233
Physical Properties				
Total Suspended Solids	mg/L	1.3	1.0	8110940

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NP5779		
Sampling Date		2015/11/06 15:00		
COC Number		08413453		
	UNITS	KZ-13	RDL	QC Batch
Misc. Inorganics				
Dissolved Hardness (CaCO3)	mg/L	78.4	0.50	8108384
Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000020	8112092
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	0.0220	0.00050	8110655
Dissolved Antimony (Sb)	mg/L	0.000030	0.000020	8110655
Dissolved Arsenic (As)	mg/L	0.000172	0.000020	8110655
Dissolved Barium (Ba)	mg/L	0.103	0.000020	8110655
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000010	8110655
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8110655
Dissolved Boron (B)	mg/L	<0.010	0.010	8110655
Dissolved Cadmium (Cd)	mg/L	0.0000220	0.0000050	8110655
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00010	8110655
Dissolved Cobalt (Co)	mg/L	0.0000240	0.0000050	8110655
Dissolved Copper (Cu)	mg/L	0.000571	0.000050	8110655
Dissolved Iron (Fe)	mg/L	0.0291	0.0010	8110655
Dissolved Lead (Pb)	mg/L	0.0000460	0.0000050	8110655
Dissolved Lithium (Li)	mg/L	0.00080	0.00050	8110655
Dissolved Manganese (Mn)	mg/L	0.0226	0.000050	8110655
Dissolved Molybdenum (Mo)	mg/L	0.000714	0.000050	8110655
Dissolved Nickel (Ni)	mg/L	0.000358	0.000020	8110655
Dissolved Phosphorus (P)	mg/L	0.0124	0.0020	8110655
Dissolved Selenium (Se)	mg/L	0.000248	0.000040	8110655
Dissolved Silicon (Si)	mg/L	3.05	0.050	8110655
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	8110655
Dissolved Strontium (Sr)	mg/L	0.0757	0.000050	8110655
Dissolved Thallium (Tl)	mg/L	0.0000020	0.0000020	8110655
Dissolved Tin (Sn)	mg/L	<0.00020	0.00020	8110655
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00050	8110655
Dissolved Uranium (U)	mg/L	0.000781	0.0000020	8110655
Dissolved Vanadium (V)	mg/L	<0.00020	0.00020	8110655
Dissolved Zinc (Zn)	mg/L	0.00261	0.00010	8110655
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00010	8110655
Dissolved Calcium (Ca)	mg/L	26.5	0.050	8108485
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NP5779		
Sampling Date		2015/11/06 15:00		
COC Number		08413453		
	UNITS	**KZ-13**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	2.97	0.050	8108485
Dissolved Potassium (K)	mg/L	1.65	0.050	8108485
Dissolved Sodium (Na)	mg/L	1.20	0.050	8108485
Dissolved Sulphur (S)	mg/L	4.9	3.0	8108485
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NP5779		
Sampling Date		2015/11/06 15:00		
COC Number		08413453		
	UNITS	KZ-13	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	83.4	0.50	8108183
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8112135
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.0347	0.00050	8110793
Total Antimony (Sb)	mg/L	0.000036	0.000020	8110793
Total Arsenic (As)	mg/L	0.000218	0.000020	8110793
Total Barium (Ba)	mg/L	0.108	0.000020	8110793
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8110793
Total Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8110793
Total Boron (B)	mg/L	<0.010	0.010	8110793
Total Cadmium (Cd)	mg/L	0.0000410	0.0000050	8110793
Total Chromium (Cr)	mg/L	0.00012	0.00010	8110793
Total Cobalt (Co)	mg/L	0.0000490	0.0000050	8110793
Total Copper (Cu)	mg/L	0.000521	0.000050	8110793
Total Iron (Fe)	mg/L	0.103	0.0010	8110793
Total Lead (Pb)	mg/L	0.0000850	0.0000050	8110793
Total Lithium (Li)	mg/L	0.00104	0.00050	8110793
Total Manganese (Mn)	mg/L	0.0376	0.000050	8110793
Total Molybdenum (Mo)	mg/L	0.000676	0.000050	8110793
Total Nickel (Ni)	mg/L	0.000430	0.000020	8110793
Total Phosphorus (P)	mg/L	0.0116	0.0020	8110793
Total Selenium (Se)	mg/L	0.000251	0.000040	8110793
Total Silicon (Si)	mg/L	3.50	0.050	8110793
Total Silver (Ag)	mg/L	<0.0000050	0.0000050	8110793
Total Strontium (Sr)	mg/L	0.0852	0.000050	8110793
Total Thallium (Tl)	mg/L	<0.0000020	0.0000020	8110793
Total Tin (Sn)	mg/L	<0.00020	0.00020	8110793
Total Titanium (Ti)	mg/L	0.00169	0.00050	8110793
Total Uranium (U)	mg/L	0.000804	0.0000020	8110793
Total Vanadium (V)	mg/L	<0.00020	0.00020	8110793
Total Zinc (Zn)	mg/L	0.00421	0.00010	8110793
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8110793
Total Calcium (Ca)	mg/L	28.3	0.050	8108486
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NP5779		
Sampling Date		2015/11/06 15:00		
COC Number		08413453		
	UNITS	**KZ-13**	**RDL**	**QC Batch**
Total Magnesium (Mg)	mg/L	3.10	0.050	8108486
Total Potassium (K)	mg/L	1.81	0.050	8108486
Total Sodium (Na)	mg/L	1.11	0.050	8108486
Total Sulphur (S)	mg/L	4.7	3.0	8108486
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

TEST SUMMARY

Maxxam ID: NP5779
Sample ID: KZ-13
Matrix: Water

Collected: 2015/11/06
Shipped:
Received: 2015/11/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8112180	N/A	2015/11/13	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8109230	2015/11/10	2015/11/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8110892	N/A	2015/11/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8114366	N/A	2015/11/16	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8114401	N/A	2015/11/16	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8111481	N/A	2015/11/12	Vanessa Tso
Carbon (DOC) - field filtered/preserved	TRAA/COL	8112477	N/A	2015/11/13	Isabel Choi
Conductance - water	AT/ALK	8109234	N/A	2015/11/10	Maria Maclean
Fluoride	ISE/ISE	8111038	N/A	2015/11/12	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8108183	N/A	2015/11/13	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8108384	N/A	2015/11/12	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8112092	N/A	2015/11/13	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8112135	2015/11/13	2015/11/13	Edwin Lamigo
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8108485	N/A	2015/11/12	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8110655	N/A	2015/11/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8108486	N/A	2015/11/13	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8110793	N/A	2015/11/12	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8108999	N/A	2015/11/10	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8109063	N/A	2015/11/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8109073	N/A	2015/11/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8108185	N/A	2015/11/12	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8108330	N/A	2015/11/10	Lucy Luo
pH Water	AT/ALK	8109233	N/A	2015/11/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8110898	N/A	2015/11/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8111493	2015/11/12	2015/11/12	Vanessa Tso
Total Phosphorus - unpreserved	KONE/COL	8111489	N/A	2015/11/12	Vanessa Tso
Total Suspended Solids-Low Level	BAL/BAL	8110940	2015/11/12	2015/11/13	Maxwell Forrester Mogg

Maxxam ID: NP5779 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2015/11/06
Shipped:
Received: 2015/11/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8109230	2015/11/10	2015/11/10	Maria Maclean
Cyanide SAD (strong acid dissociable)	TECH/COL	8114366	N/A	2015/11/16	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8114401	N/A	2015/11/16	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8111481	N/A	2015/11/12	Vanessa Tso
Conductance - water	AT/ALK	8109234	N/A	2015/11/10	Maria Maclean
pH Water	AT/ALK	8109233	N/A	2015/11/10	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.0°C

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8108999	Total Ammonia (N)	2015/11/10	110	80 - 120	105	80 - 120	<0.0050	mg/L	NC	20
8109063	Nitrate plus Nitrite (N)	2015/11/10	NC	80 - 120	97	80 - 120	<0.0020	mg/L	0.62	25
8109073	Nitrite (N)	2015/11/10	103	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25
8109230	Alkalinity (PP as CaCO3)	2015/11/10					<0.50	mg/L	NC	20
8109230	Alkalinity (Total as CaCO3)	2015/11/10	NC	80 - 120	94	80 - 120	0.82, RDL=0.50	mg/L	0.15	20
8109230	Bicarbonate (HCO3)	2015/11/10					1.00, RDL=0.50	mg/L	0.15	20
8109230	Carbonate (CO3)	2015/11/10					<0.50	mg/L	NC	20
8109230	Hydroxide (OH)	2015/11/10					<0.50	mg/L	NC	20
8109233	pH	2015/11/10			102	97 - 103			0.50	N/A
8109234	Conductivity	2015/11/10			102	80 - 120	1.1, RDL=1.0	uS/cm	0.18	20
8110655	Dissolved Aluminum (Al)	2015/11/12	97	80 - 120	105	80 - 120	<0.00050	mg/L	0.90	20
8110655	Dissolved Antimony (Sb)	2015/11/12	97	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8110655	Dissolved Arsenic (As)	2015/11/12	93	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8110655	Dissolved Barium (Ba)	2015/11/12	104	80 - 120	108	80 - 120	<0.000020	mg/L	NC	20
8110655	Dissolved Beryllium (Be)	2015/11/12	92	80 - 120	101	80 - 120	<0.000010	mg/L	NC	20
8110655	Dissolved Bismuth (Bi)	2015/11/12	96	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8110655	Dissolved Boron (B)	2015/11/12					<0.010	mg/L	NC	20
8110655	Dissolved Cadmium (Cd)	2015/11/12	85	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8110655	Dissolved Chromium (Cr)	2015/11/12	95	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
8110655	Dissolved Cobalt (Co)	2015/11/12	95	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8110655	Dissolved Copper (Cu)	2015/11/12	96	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8110655	Dissolved Iron (Fe)	2015/11/12	96	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
8110655	Dissolved Lead (Pb)	2015/11/12	101	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8110655	Dissolved Lithium (Li)	2015/11/12	94	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8110655	Dissolved Manganese (Mn)	2015/11/12	96	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8110655	Dissolved Molybdenum (Mo)	2015/11/12	93	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20
8110655	Dissolved Nickel (Ni)	2015/11/12	94	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8110655	Dissolved Phosphorus (P)	2015/11/12					<0.0020	mg/L	NC	20
8110655	Dissolved Selenium (Se)	2015/11/12	90	80 - 120	98	80 - 120	<0.000040	mg/L	NC	20
8110655	Dissolved Silicon (Si)	2015/11/12					<0.050	mg/L	NC	20
8110655	Dissolved Silver (Ag)	2015/11/12	93	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8110655	Dissolved Strontium (Sr)	2015/11/12	95	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8110655	Dissolved Thallium (Tl)	2015/11/12	96	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8110655	Dissolved Tin (Sn)	2015/11/12	98	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
8110655	Dissolved Titanium (Ti)	2015/11/12	98	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8110655	Dissolved Uranium (U)	2015/11/12	102	80 - 120	108	80 - 120	<0.0000020	mg/L	NC	20
8110655	Dissolved Vanadium (V)	2015/11/12	92	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8110655	Dissolved Zinc (Zn)	2015/11/12	97	80 - 120	109	80 - 120	<0.00010	mg/L	NC	20
8110655	Dissolved Zirconium (Zr)	2015/11/12					<0.00010	mg/L	NC	20
8110793	Total Aluminum (Al)	2015/11/12	NC	80 - 120	102	80 - 120	<0.00050	mg/L	19	20
8110793	Total Antimony (Sb)	2015/11/12	97	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8110793	Total Arsenic (As)	2015/11/12	97	80 - 120	101	80 - 120	<0.000020	mg/L	6.4	20
8110793	Total Barium (Ba)	2015/11/12	NC	80 - 120	110	80 - 120	<0.000020	mg/L	1.9	20
8110793	Total Beryllium (Be)	2015/11/12	93	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8110793	Total Bismuth (Bi)	2015/11/12	90	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8110793	Total Boron (B)	2015/11/12					<0.010	mg/L	NC	20
8110793	Total Cadmium (Cd)	2015/11/12	91	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8110793	Total Chromium (Cr)	2015/11/12	93	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
8110793	Total Cobalt (Co)	2015/11/12	92	80 - 120	105	80 - 120	<0.0000050	mg/L	7.2	20
8110793	Total Copper (Cu)	2015/11/12	89	80 - 120	103	80 - 120	<0.000050	mg/L	3.9	20
8110793	Total Iron (Fe)	2015/11/12	NC	80 - 120	111	80 - 120	<0.0010	mg/L	2.8	20
8110793	Total Lead (Pb)	2015/11/12	97	80 - 120	108	80 - 120	<0.0000050	mg/L	1.1	20
8110793	Total Lithium (Li)	2015/11/12	NC	80 - 120	94	80 - 120	<0.00050	mg/L	8.6	20
8110793	Total Manganese (Mn)	2015/11/12	NC	80 - 120	104	80 - 120	<0.000050	mg/L	0.23	20
8110793	Total Molybdenum (Mo)	2015/11/12	NC	80 - 120	98	80 - 120	<0.000050	mg/L	0.92	20
8110793	Total Nickel (Ni)	2015/11/12	90	80 - 120	103	80 - 120	<0.000020	mg/L	2.9	20
8110793	Total Phosphorus (P)	2015/11/12					<0.0020	mg/L		
8110793	Total Selenium (Se)	2015/11/12	96	80 - 120	98	80 - 120	<0.000040	mg/L	NC	20
8110793	Total Silicon (Si)	2015/11/12					<0.050	mg/L	18	20
8110793	Total Silver (Ag)	2015/11/12	92	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8110793	Total Strontium (Sr)	2015/11/12	NC	80 - 120	105	80 - 120	<0.000050	mg/L	2.3	20
8110793	Total Thallium (Tl)	2015/11/12	91	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8110793	Total Tin (Sn)	2015/11/12	96	80 - 120	107	80 - 120	<0.00020	mg/L	NC	20
8110793	Total Titanium (Ti)	2015/11/12	90	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8110793	Total Uranium (U)	2015/11/12	101	80 - 120	109	80 - 120	<0.0000020	mg/L	1.5	20
8110793	Total Vanadium (V)	2015/11/12	93	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8110793	Total Zinc (Zn)	2015/11/12	117	80 - 120	107	80 - 120	0.00016, RDL=0.00010	mg/L	6.7	20
8110793	Total Zirconium (Zr)	2015/11/12					<0.00010	mg/L	NC	20
8110892	Dissolved Chloride (Cl)	2015/11/12	94	80 - 120	103	80 - 120	<0.50	mg/L	NC	20
8110898	Dissolved Sulphate (SO4)	2015/11/12			98	80 - 120	<0.50	mg/L		
8110940	Total Suspended Solids	2015/11/13			109	80 - 120	<1.0	mg/L		
8111038	Fluoride (F)	2015/11/12	NC	80 - 120	100	80 - 120	0.014, RDL=0.010	mg/L	0	20
8111481	True Colour	2015/11/12			108	80 - 120	<5.0	Col. Unit	NC	20
8111489	Total Phosphorus (P)	2015/11/12	91	80 - 120	92	80 - 120	<0.0020	mg/L	NC	20
8111493	Dissolved Phosphorus (P)	2015/11/12	91	80 - 120	102	80 - 120	<0.0020	mg/L	1.4	20
8112092	Dissolved Mercury (Hg)	2015/11/13	97	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8112135	Total Mercury (Hg)	2015/11/13	99	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
8112180	Acidity (pH 4.5)	2015/11/13					<0.50	mg/L	NC	20
8112180	Acidity (pH 8.3)	2015/11/13			101	80 - 120	<0.50	mg/L	NC	20
8112477	Dissolved Organic Carbon (C)	2015/11/13	NC	80 - 120	102	80 - 120	<0.50	mg/L	3.5	20
8114366	Strong Acid Dissoc. Cyanide (CN)	2015/11/16	98	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8114401	Weak Acid Dissoc. Cyanide (CN)	2015/11/16	100	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

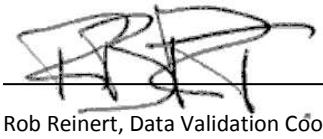
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Rob Reinert, Data Validation Coordinator

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

08413453

BBY FCD-00077/05

Page 2 2

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Eliane Roy	Date Required:

Regulatory Criteria		Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil	[ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify)	[ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water	[ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-13	WP5779	6-Nov	3pm	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		1 1

COOLING MEDIA PRESENT: Y / N

B5A0442_COC

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
	NOV 9	7pm	Laurie Bertrand	2015/11/10	09:20	B5A0442

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08413843, 08413844

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/11/30
Report #: R2087284
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B5A4311
Received: 2015/11/23, 09:32

Sample Matrix: Water
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	12	N/A	2015/11/24	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	12	2015/11/25	2015/11/25	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	10	N/A	2015/11/24	BBY6SOP-00011	SM 22 4500-Cl- G m
Chloride by Automated Colourimetry	2	N/A	2015/11/25	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	12	N/A	2015/11/25	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	12	N/A	2015/11/25	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	12	N/A	2015/11/24	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	11	N/A	2015/11/25	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2015/11/25	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	12	N/A	2015/11/25	BBY6SOP-00026	SM 22 2510 B m
Fluoride	12	N/A	2015/11/24	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	12	N/A	2015/11/25	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	12	N/A	2015/11/25	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	12	N/A	2015/11/24	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	12	2015/11/24	2015/11/24	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	12	N/A	2015/11/26	BBY WI-00033	SM 22 1030E
Sum of cations, anions	12	N/A	2015/11/25	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	12	N/A	2015/11/25	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	12	N/A	2015/11/24	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	12	N/A	2015/11/25	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	8	N/A	2015/11/24	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	4	N/A	2015/11/25	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	12	N/A	2015/11/25	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	12	N/A	2015/11/24	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	12	N/A	2015/11/24	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	12	N/A	2015/11/24	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	11	N/A	2015/11/23	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	12	N/A	2015/11/25	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	12	N/A	2015/11/24	BBY6SOP-00017	SM 22 4500-SO42- E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08413843, 08413844

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/11/30
Report #: R2087284
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B5A4311
Received: 2015/11/23, 09:32

Sample Matrix: Water
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Phosphorus-P (LL Tot, dissolved) - UF/UP	11	2015/11/25	2015/11/25	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2015/11/28	2015/11/28	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	11	N/A	2015/11/25	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	1	N/A	2015/11/28	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	12	2015/11/24	2015/11/25	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NR8577		NR8578		NR8579		
Sampling Date		2015/11/20 13:17		2015/11/20 11:15		2015/11/20 09:04		
COC Number		08413843		08413843		08413843		
	UNITS	KZ-2	QC Batch	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	8123319	<0.50	8123319	<0.50	0.50	8123319
Acidity (pH 8.3)	mg/L	<0.50	8123319	<0.50	8123319	<0.50	0.50	8123319
Calculated Parameters								
Anion Sum	meq/L	2.4	8122395	3.4	8122395	3.8	N/A	8122395
Cation Sum	meq/L	2.4	8122395	3.9	8122395	3.9	N/A	8122395
Filter and HNO3 Preservation	N/A	LAB	8121710	LAB	8121710	LAB	N/A	8121710
Ion Balance	N/A	0.97	8121740	1.1	8121740	1.0	0.010	8121740
Nitrate (N)	mg/L	0.134	8122397	0.0952	8122397	0.171	0.0020	8122397
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8125043	<0.00050	8125043	<0.00050	0.00050	8125043
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8125057	<0.00050	8125057	<0.00050	0.00050	8125057
Fluoride (F)	mg/L	0.058	8123943	0.071	8123943	0.079	0.010	8123943
Dissolved Organic Carbon (C)	mg/L	0.54	8124783	0.99	8124783	1.88	0.50	8124783
Alkalinity (Total as CaCO3)	mg/L	63.1	8124292	128	8124292	153	0.50	8124292
Alkalinity (PP as CaCO3)	mg/L	<0.50	8124292	<0.50	8124292	<0.50	0.50	8124292
Bicarbonate (HCO3)	mg/L	76.9	8124292	156	8124292	187	0.50	8124292
Carbonate (CO3)	mg/L	<0.50	8124292	<0.50	8124292	<0.50	0.50	8124292
Hydroxide (OH)	mg/L	<0.50	8124292	<0.50	8124292	<0.50	0.50	8124292
Anions								
Dissolved Sulphate (SO4)	mg/L	48.2	8123424	38.0	8123424	34.2	0.50	8123432
Dissolved Chloride (Cl)	mg/L	5.4	8124897	<0.50	8124897	0.52	0.50	8123428
MISCELLANEOUS								
True Colour	Col. Unit	<5.0 (1)	8124958	8.5 (1)	8124958	6.9 (1)	5.0	8124958
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	8125098	0.0024 (1)	8128660	<0.0020 (1)	0.0020	8125098
Total Ammonia (N)	mg/L	<0.0050 (1)	8125099	0.0131 (1)	8125099	0.0194 (1)	0.0050	8125099
Nitrate plus Nitrite (N)	mg/L	0.136 (1)	8123764	0.0972 (1)	8123764	0.171 (1)	0.0020	8123764
Nitrite (N)	mg/L	0.0021 (1)	8123768	0.0020 (1)	8123768	<0.0020 (1)	0.0020	8123768
Total Phosphorus (P)	mg/L	<0.0020 (1)	8125101	0.0030 (1)	8128662	0.0030 (1)	0.0020	8125101
Physical Properties								
Conductivity	uS/cm	239	8124293	329	8124293	362	1.0	8124293
pH	pH	7.73	8124296	8.16	8124296	8.15	N/A	8124296

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NR8577		NR8578		NR8579		
Sampling Date		2015/11/20 13:17		2015/11/20 11:15		2015/11/20 09:04		
COC Number		08413843		08413843		08413843		
	UNITS	**KZ-2**	**QC Batch**	**KZ-7**	**QC Batch**	**KZ-9**	**RDL**	**QC Batch**
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8122942	1.1	8122942	1.1	1.0	8122942
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NR8580	NR8581	NR8582	NR8583		
Sampling Date		2015/11/19 11:30	2015/11/19 12:44	2015/11/19 14:15	2015/11/20 15:00		
COC Number		08413843	08413843	08413843	08413843		
	UNITS	KZ-15	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Misc. Inorganics							
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50	0.50	8123319
Acidity (pH 8.3)	mg/L	<0.50	1.37	<0.50	<0.50	0.50	8123319
Calculated Parameters							
Anion Sum	meq/L	4.3	4.3	4.3	0.020	N/A	8122395
Cation Sum	meq/L	4.3	4.5	4.3	0.0020	N/A	8122395
Filter and HNO3 Preservation	N/A	LAB	LAB	LAB	LAB	N/A	8121710
Ion Balance	N/A	1.0	1.0	1.0	0.10	0.010	8121740
Nitrate (N)	mg/L	0.188	0.223	0.156	<0.0020	0.0020	8122397
Misc. Inorganics							
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8125043
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8125057
Fluoride (F)	mg/L	0.093	0.071	0.110	0.012	0.010	8123943
Dissolved Organic Carbon (C)	mg/L	1.22	<0.50	1.58	0.82	0.50	8124783
Alkalinity (Total as CaCO3)	mg/L	181	178	177	0.97	0.50	8124292
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	<0.50	0.50	8124292
Bicarbonate (HCO3)	mg/L	221	217	216	1.18	0.50	8124292
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	<0.50	0.50	8124292
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	<0.50	0.50	8124292
Anions							
Dissolved Sulphate (SO4)	mg/L	33.1	32.8	34.7	<0.50	0.50	8123432
Dissolved Chloride (Cl)	mg/L	<0.50	1.1	0.66	<0.50	0.50	8123428
MISCELLANEOUS							
True Colour	Col. Unit	5.8 (1)	5.0 (1)	5.1 (1)	<5.0 (2)	5.0	8124958
Nutrients							
Dissolved Phosphorus (P)	mg/L	0.0027 (1)	<0.0020 (1)	0.0028 (1)	<0.0020 (2)	0.0020	8125098
Total Ammonia (N)	mg/L	0.0089 (1)	<0.0050 (1)	<0.0050 (1)	0.0063 (2)	0.0050	8125099
Nitrate plus Nitrite (N)	mg/L	0.188 (1)	0.223 (1)	0.156 (1)	<0.0020 (2)	0.0020	8123764
Nitrite (N)	mg/L	<0.0020 (1)	<0.0020 (1)	<0.0020 (1)	<0.0020 (2)	0.0020	8123768
Total Phosphorus (P)	mg/L	<0.0020 (1)	<0.0020 (1)	0.0030 (1)	<0.0020 (2)	0.0020	8125108
Physical Properties							
Conductivity	uS/cm	406	403	399	2.5	1.0	8124293
pH	pH	8.42	8.10	8.26	5.82	N/A	8124296

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.
(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NR8580	NR8581	NR8582	NR8583		
Sampling Date		2015/11/19 11:30	2015/11/19 12:44	2015/11/19 14:15	2015/11/20 15:00		
COC Number		08413843	08413843	08413843	08413843		
	UNITS	**KZ-15**	**KZ-16**	**KZ-17**	**KZ-19**	**RDL**	**QC Batch**
Physical Properties							
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	<1.0	1.0	8122942
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NR8584		NR8585	NR8643		NR8644		
Sampling Date		2015/11/19 09:37		2015/11/18 15:22	2015/11/18 12:45		2015/11/18 13:15		
COC Number		08413843		08413843	08413844		08413844		
	UNITS	KZ-21	QC Batch	KZ-22	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Misc. Inorganics									
Acidity (pH 4.5)	mg/L	<0.50	8123319	<0.50	<0.50	8123319	<0.50	0.50	8123319
Acidity (pH 8.3)	mg/L	<0.50	8123319	<0.50	<0.50	8123319	<0.50	0.50	8123319
Calculated Parameters									
Anion Sum	meq/L	5.8	8122395	5.3	5.1	8122395	5.1	N/A	8122395
Cation Sum	meq/L	6.1	8122395	5.4	5.5	8122395	5.3	N/A	8122395
Filter and HNO3 Preservation	N/A	LAB	8121710	LAB	LAB	8121710	LAB	N/A	8121710
Ion Balance	N/A	1.0	8121740	1.0	1.1	8121740	1.0	0.010	8121740
Nitrate (N)	mg/L	0.0855	8122397	0.103	0.101	8122397	0.101	0.0020	8122397
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8125043	<0.00050	<0.00050	8125043	<0.00050	0.00050	8125043
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8125057	<0.00050	<0.00050	8125057	<0.00050	0.00050	8125057
Fluoride (F)	mg/L	0.190	8123943	0.140	0.120	8123943	0.120	0.010	8123943
Dissolved Organic Carbon (C)	mg/L	2.90	8124783	2.20	2.30	8124783	2.28	0.50	8124783
Alkalinity (Total as CaCO3)	mg/L	243	8124292	223	213	8124292	213	0.50	8124292
Alkalinity (PP as CaCO3)	mg/L	5.52	8124292	4.53	2.78	8124292	3.19	0.50	8124292
Bicarbonate (HCO3)	mg/L	283	8124292	261	254	8124292	253	0.50	8124292
Carbonate (CO3)	mg/L	6.62	8124292	5.44	3.34	8124292	3.83	0.50	8124292
Hydroxide (OH)	mg/L	<0.50	8124292	<0.50	<0.50	8124292	<0.50	0.50	8124292
Anions									
Dissolved Sulphate (SO4)	mg/L	42.8	8123432	40.4	40.9	8123432	40.7	0.50	8123432
Dissolved Chloride (Cl)	mg/L	0.67	8123428	0.63	<0.50	8123428	0.64	0.50	8123428
MISCELLANEOUS									
True Colour	Col. Unit	14.2 (1)	8124958	9.7 (1)	8.7 (1)	8124958	8.0 (1)	5.0	8124958
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0043 (1)	8125098	0.0035 (1)	<0.0020 (1)	8125098	<0.0020 (1)	0.0020	8125098
Total Ammonia (N)	mg/L	0.0585 (1)	8125099	0.0338 (1)	<0.0050 (1)	8125099	<0.0050 (1)	0.0050	8125099
Nitrate plus Nitrite (N)	mg/L	0.0881 (1)	8123764	0.103 (1)	0.101 (1)	8123764	0.101 (1)	0.0020	8123764
Nitrite (N)	mg/L	0.0026 (1)	8123768	<0.0020 (1)	<0.0020 (1)	8123768	<0.0020 (1)	0.0020	8123768
Total Phosphorus (P)	mg/L	0.0064 (1)	8125101	0.0026 (1)	0.0023 (1)	8125108	0.0024 (1)	0.0020	8125101
Physical Properties									
Conductivity	uS/cm	534	8124293	492	470	8124293	474	1.0	8124293
pH	pH	8.43	8124296	8.41	8.32	8124296	8.36	N/A	8124296

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NR8584		NR8585	NR8643		NR8644		
Sampling Date		2015/11/19 09:37		2015/11/18 15:22	2015/11/18 12:45		2015/11/18 13:15		
COC Number		08413843		08413843	08413844		08413844		
	UNITS	**KZ-21**	**QC Batch**	**KZ-22**	**KZ-26**	**QC Batch**	**KZ-28**	**RDL**	**QC Batch**
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8122942	<1.0	<1.0	8122942	<1.0	1.0	8122942
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NR8645		
Sampling Date		2015/11/23 09:32		
COC Number		08413844		
	UNITS	TRIP BLANK	RDL	QC Batch
Misc. Inorganics				
Acidity (pH 4.5)	mg/L	<0.50	0.50	8123319
Acidity (pH 8.3)	mg/L	<0.50	0.50	8123319
Calculated Parameters				
Anion Sum	meq/L	0.020	N/A	8122395
Cation Sum	meq/L	0.0014	N/A	8122395
Ion Balance	N/A	0.069	0.010	8121740
Nitrate (N)	mg/L	<0.0020	0.0020	8122397
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8125043
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8125057
Fluoride (F)	mg/L	0.012	0.010	8123943
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8124784
Alkalinity (Total as CaCO3)	mg/L	0.98	0.50	8124292
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8124292
Bicarbonate (HCO3)	mg/L	1.20	0.50	8124292
Carbonate (CO3)	mg/L	<0.50	0.50	8124292
Hydroxide (OH)	mg/L	<0.50	0.50	8124292
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8123432
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8123428
MISCELLANEOUS				
True Colour	Col. Unit	<5.0	5.0	8124958
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8125098
Total Ammonia (N)	mg/L	<0.0050	0.0050	8125099
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8123764
Nitrite (N)	mg/L	<0.0020	0.0020	8123768
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8125101
Physical Properties				
Conductivity	uS/cm	<1.0	1.0	8124293
pH	pH	5.89	N/A	8124296
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8122942

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NR8577		NR8578		NR8579		
Sampling Date		2015/11/20 13:17		2015/11/20 11:15		2015/11/20 09:04		
COC Number		08413843		08413843		08413843		
	UNITS	KZ-2	QC Batch	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	114	8121658	188	8121658	192	0.50	8121658
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8123122	<0.0000020	8123122	<0.0000020	0.0000020	8123122
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00662	8123054	0.00691	8127531	0.00286	0.00050	8123054
Dissolved Antimony (Sb)	mg/L	0.000021	8123054	0.000052	8123054	0.000039	0.000020	8123054
Dissolved Arsenic (As)	mg/L	0.000078	8123054	0.000170	8123054	0.000158	0.000020	8123054
Dissolved Barium (Ba)	mg/L	0.0671	8123054	0.0911	8123054	0.0949	0.000020	8123054
Dissolved Beryllium (Be)	mg/L	<0.000010	8123054	<0.000010	8123054	<0.000010	0.000010	8123054
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8123054	<0.0000050	8123054	<0.0000050	0.0000050	8123054
Dissolved Boron (B)	mg/L	<0.010	8123054	<0.010	8123054	<0.010	0.010	8123054
Dissolved Cadmium (Cd)	mg/L	0.000198	8123054	0.0000710	8123054	0.0000610	0.0000050	8123054
Dissolved Chromium (Cr)	mg/L	<0.00010	8123054	<0.00010	8123054	<0.00010	0.00010	8123054
Dissolved Cobalt (Co)	mg/L	0.0000080	8123054	0.000100	8123054	0.000105	0.0000050	8123054
Dissolved Copper (Cu)	mg/L	0.000568	8123054	0.000303	8123054	0.000241	0.000050	8123054
Dissolved Iron (Fe)	mg/L	0.0012	8123054	0.0587	8123054	0.0672	0.0010	8123054
Dissolved Lead (Pb)	mg/L	0.0000150	8123054	0.0000080	8123054	<0.0000050	0.0000050	8123054
Dissolved Lithium (Li)	mg/L	0.00123	8123054	0.00263	8123054	0.00330	0.00050	8123054
Dissolved Manganese (Mn)	mg/L	<0.000050	8123054	0.130	8123054	0.0839	0.000050	8123054
Dissolved Molybdenum (Mo)	mg/L	0.000652	8123054	0.000617	8123054	0.000620	0.000050	8123054
Dissolved Nickel (Ni)	mg/L	0.000333 (1)	8123054	0.000492	8123054	0.000364	0.000020	8123054
Dissolved Phosphorus (P)	mg/L	0.0032	8123054	0.0026	8123054	<0.0020	0.0020	8123054
Dissolved Selenium (Se)	mg/L	0.00143	8123054	0.00111	8123054	0.00119	0.000040	8123054
Dissolved Silicon (Si)	mg/L	2.33	8123054	3.49	8123054	3.63	0.050	8123054
Dissolved Silver (Ag)	mg/L	<0.0000050	8123054	<0.0000050	8123054	<0.0000050	0.0000050	8123054
Dissolved Strontium (Sr)	mg/L	0.128	8123054	0.196	8123054	0.217	0.000050	8123054
Dissolved Thallium (Tl)	mg/L	0.0000020	8123054	0.0000020	8123054	<0.0000020	0.0000020	8123054
Dissolved Tin (Sn)	mg/L	<0.00020	8123054	<0.00020	8123054	<0.00020	0.00020	8123054
Dissolved Titanium (Ti)	mg/L	<0.00050	8123054	<0.00050	8123054	<0.00050	0.00050	8123054
Dissolved Uranium (U)	mg/L	0.00315	8123054	0.00136	8123054	0.00152	0.0000020	8123054
Dissolved Vanadium (V)	mg/L	<0.00020	8123054	<0.00020	8123054	<0.00020	0.00020	8123054
Dissolved Zinc (Zn)	mg/L	0.0270	8123054	0.0478	8123054	0.0182	0.00010	8123054
Dissolved Zirconium (Zr)	mg/L	<0.00010	8123054	<0.00010	8123054	<0.00010	0.00010	8123054
Dissolved Calcium (Ca)	mg/L	37.3	8121659	63.2	8126403	64.0	0.050	8121659

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NR8577		NR8578		NR8579		
Sampling Date		2015/11/20 13:17		2015/11/20 11:15		2015/11/20 09:04		
COC Number		08413843		08413843		08413843		
	UNITS	**KZ-2**	**QC Batch**	**KZ-7**	**QC Batch**	**KZ-9**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	4.94	8121659	7.28	8121659	7.76	0.050	8121659
Dissolved Potassium (K)	mg/L	2.19	8121659	1.72	8121659	1.72	0.050	8121659
Dissolved Sodium (Na)	mg/L	0.884	8121659	1.24	8121659	1.31	0.050	8121659
Dissolved Sulphur (S)	mg/L	16.1	8121659	12.4	8121659	11.5	3.0	8121659
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NR8580	NR8581	NR8582	NR8583	NR8584		
Sampling Date		2015/11/19 11:30	2015/11/19 12:44	2015/11/19 14:15	2015/11/20 15:00	2015/11/19 09:37		
COC Number		08413843	08413843	08413843	08413843	08413843		
	UNITS	KZ-15	KZ-16	KZ-17	KZ-19	KZ-21	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	212	219	212	<0.50	295	0.50	8121658
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8123122
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00411	0.00186	0.00182	<0.00050	0.00144	0.00050	8123054
Dissolved Antimony (Sb)	mg/L	0.000032	<0.000020	0.000039	<0.000020	0.000058	0.000020	8123054
Dissolved Arsenic (As)	mg/L	0.000344	0.000224	0.000447	<0.000020	0.000595	0.000020	8123054
Dissolved Barium (Ba)	mg/L	0.0817	0.0794	0.0778	0.000261	0.0711	0.000020	8123054
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8123054
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8123054
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8123054
Dissolved Cadmium (Cd)	mg/L	0.0000290	0.0000220	0.0000360	<0.0000050	0.0000120	0.0000050	8123054
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8123054
Dissolved Cobalt (Co)	mg/L	0.0000230	0.0000280	0.0000220	<0.0000050	0.0000610	0.0000050	8123054
Dissolved Copper (Cu)	mg/L	0.000253	0.000249	0.000278	<0.000050	0.000326 (1)	0.000050	8123054
Dissolved Iron (Fe)	mg/L	0.0076	0.0046	0.0094	<0.0010	0.0278	0.0010	8123054
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000240	<0.0000050	<0.0000050	0.0000180	0.0000050	8123054
Dissolved Lithium (Li)	mg/L	0.00301	0.00288	0.00311	<0.00050	0.00695	0.00050	8123054
Dissolved Manganese (Mn)	mg/L	0.0221	0.00829	0.0317	<0.000050	0.0737	0.000050	8123054
Dissolved Molybdenum (Mo)	mg/L	0.00104	0.000445	0.00165	<0.000050	0.00149	0.000050	8123054
Dissolved Nickel (Ni)	mg/L	0.000589	0.000511	0.000702	<0.000020	0.00183	0.000020	8123054
Dissolved Phosphorus (P)	mg/L	0.0029	0.0042	0.0033	<0.0020	0.0035	0.0020	8123054
Dissolved Selenium (Se)	mg/L	0.00122	0.00123	0.00134	<0.000040	0.000700	0.000040	8123054
Dissolved Silicon (Si)	mg/L	3.49	3.45	3.52	<0.050	6.17	0.050	8123054
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8123054
Dissolved Strontium (Sr)	mg/L	0.218	0.230	0.217	0.000151	0.248	0.000050	8123054
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8123054
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8123054
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8123054
Dissolved Uranium (U)	mg/L	0.00321	0.00226	0.00410	0.0000050	0.00330	0.0000020	8123054
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00029	<0.00020	0.00020	8123054
Dissolved Zinc (Zn)	mg/L	0.00390	0.00085	0.00606	<0.00010	0.00148	0.00010	8123054
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00013	0.00010	8123054
Dissolved Calcium (Ca)	mg/L	62.9	65.9	62.2	<0.050	71.2	0.050	8121659

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NR8580	NR8581	NR8582	NR8583	NR8584		
Sampling Date		2015/11/19 11:30	2015/11/19 12:44	2015/11/19 14:15	2015/11/20 15:00	2015/11/19 09:37		
COC Number		08413843	08413843	08413843	08413843	08413843		
	UNITS	**KZ-15**	**KZ-16**	**KZ-17**	**KZ-19**	**KZ-21**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	13.3	13.1	13.8	<0.050	28.6	0.050	8121659
Dissolved Potassium (K)	mg/L	1.37	1.38	1.40	<0.050	2.19	0.050	8121659
Dissolved Sodium (Na)	mg/L	1.23	1.31	1.23	<0.050	2.02	0.050	8121659
Dissolved Sulphur (S)	mg/L	10.7	11.3	11.1	<3.0	15.7	3.0	8121659
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NR8585		NR8643		NR8644		
Sampling Date		2015/11/18 15:22		2015/11/18 12:45		2015/11/18 13:15		
COC Number		08413843		08413844		08413844		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	265	8121658	268	8121658	261	0.50	8121658
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8123122	<0.0000020	8123122	<0.0000020	0.0000020	8123122
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00168	8123054	0.00677 (1)	8124806	0.00662	0.00050	8123054
Dissolved Antimony (Sb)	mg/L	0.000047	8123054	0.000073	8123054	0.000079	0.000020	8123054
Dissolved Arsenic (As)	mg/L	0.000505	8123054	0.000413	8123054	0.000418	0.000020	8123054
Dissolved Barium (Ba)	mg/L	0.0758	8123054	0.0799	8123054	0.0849	0.000020	8123054
Dissolved Beryllium (Be)	mg/L	<0.000010	8123054	<0.000010	8123054	<0.000010	0.000010	8123054
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8123054	<0.0000050	8123054	<0.0000050	0.0000050	8123054
Dissolved Boron (B)	mg/L	<0.010	8123054	<0.010	8123054	<0.010	0.010	8123054
Dissolved Cadmium (Cd)	mg/L	0.0000130	8123054	0.0000080	8123054	0.0000090	0.0000050	8123054
Dissolved Chromium (Cr)	mg/L	<0.00010	8123054	<0.00010	8123054	<0.00010	0.00010	8123054
Dissolved Cobalt (Co)	mg/L	0.0000500	8123054	0.0000130	8123054	0.0000120	0.0000050	8123054
Dissolved Copper (Cu)	mg/L	0.000322	8123054	0.000442	8123054	0.000419	0.000050	8123054
Dissolved Iron (Fe)	mg/L	0.0281	8123054	0.0068	8123054	0.0069	0.0010	8123054
Dissolved Lead (Pb)	mg/L	0.0000240	8123054	0.0000140	8123054	0.0000100	0.0000050	8123054
Dissolved Lithium (Li)	mg/L	0.00598	8123054	0.00577	8123054	0.00608	0.00050	8123054
Dissolved Manganese (Mn)	mg/L	0.0369	8123054	0.00152	8123054	0.00144	0.000050	8123054
Dissolved Molybdenum (Mo)	mg/L	0.00116	8123054	0.000968	8123054	0.00104	0.000050	8123054
Dissolved Nickel (Ni)	mg/L	0.00113	8123054	0.000792	8123054	0.000761	0.000020	8123054
Dissolved Phosphorus (P)	mg/L	0.0058	8123054	0.0030	8123054	<0.0020	0.0020	8123054
Dissolved Selenium (Se)	mg/L	0.000957	8123054	0.000919	8123054	0.000925	0.000040	8123054
Dissolved Silicon (Si)	mg/L	4.67	8123054	4.40	8123054	4.83	0.050	8123054
Dissolved Silver (Ag)	mg/L	<0.0000050	8123054	<0.0000050	8123054	<0.0000050	0.0000050	8123054
Dissolved Strontium (Sr)	mg/L	0.231	8123054	0.244	8123054	0.238	0.000050	8123054
Dissolved Thallium (Tl)	mg/L	<0.0000020	8123054	<0.0000020	8123054	<0.0000020	0.0000020	8123054
Dissolved Tin (Sn)	mg/L	<0.00020	8123054	<0.00020	8123054	<0.00020	0.00020	8123054
Dissolved Titanium (Ti)	mg/L	<0.00050	8123054	<0.00050	8123054	<0.00050	0.00050	8123054
Dissolved Uranium (U)	mg/L	0.00333	8123054	0.00303	8123054	0.00316	0.0000020	8123054
Dissolved Vanadium (V)	mg/L	<0.00020	8123054	<0.00020	8123054	<0.00020	0.00020	8123054
Dissolved Zinc (Zn)	mg/L	0.00131	8123054	0.00060	8123054	0.00062	0.00010	8123054
Dissolved Zirconium (Zr)	mg/L	0.00011	8123054	<0.00010	8123054	<0.00010	0.00010	8123054
Dissolved Calcium (Ca)	mg/L	70.4	8121659	71.4	8121659	70.1	0.050	8121659

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NR8585		NR8643		NR8644		
Sampling Date		2015/11/18 15:22		2015/11/18 12:45		2015/11/18 13:15		
COC Number		08413843		08413844		08413844		
	UNITS	**KZ-22**	**QC Batch**	**KZ-26**	**QC Batch**	**KZ-28**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	21.7	8121659	21.7	8121659	21.0	0.050	8121659
Dissolved Potassium (K)	mg/L	1.73	8121659	1.63	8121659	1.55	0.050	8121659
Dissolved Sodium (Na)	mg/L	1.71	8121659	1.78	8121659	1.71	0.050	8121659
Dissolved Sulphur (S)	mg/L	13.4	8121659	13.4	8121659	13.4	3.0	8121659
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NR8645		
Sampling Date		2015/11/23 09:32		
COC Number		08413844		
	UNITS	TRIP BLANK	RDL	QC Batch
Misc. Inorganics				
Dissolved Hardness (CaCO3)	mg/L	<0.50	0.50	8121658
Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000020	8123122
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	<0.00050	0.00050	8123054
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000020	8123054
Dissolved Arsenic (As)	mg/L	<0.000020	0.000020	8123054
Dissolved Barium (Ba)	mg/L	<0.000020	0.000020	8123054
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000010	8123054
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8123054
Dissolved Boron (B)	mg/L	<0.010	0.010	8123054
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000050	8123054
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00010	8123054
Dissolved Cobalt (Co)	mg/L	<0.0000050	0.0000050	8123054
Dissolved Copper (Cu)	mg/L	<0.000050	0.000050	8123054
Dissolved Iron (Fe)	mg/L	<0.0010	0.0010	8123054
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000050	8123054
Dissolved Lithium (Li)	mg/L	0.00055	0.00050	8123054
Dissolved Manganese (Mn)	mg/L	<0.000050	0.000050	8123054
Dissolved Molybdenum (Mo)	mg/L	<0.000050	0.000050	8123054
Dissolved Nickel (Ni)	mg/L	<0.000020	0.000020	8123054
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8123054
Dissolved Selenium (Se)	mg/L	<0.000040	0.000040	8123054
Dissolved Silicon (Si)	mg/L	<0.050	0.050	8123054
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	8123054
Dissolved Strontium (Sr)	mg/L	<0.000050	0.000050	8123054
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000020	8123054
Dissolved Tin (Sn)	mg/L	<0.00020	0.00020	8123054
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00050	8123054
Dissolved Uranium (U)	mg/L	<0.0000020	0.0000020	8123054
Dissolved Vanadium (V)	mg/L	<0.00020	0.00020	8123054
Dissolved Zinc (Zn)	mg/L	<0.00010	0.00010	8123054
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00010	8123054
Dissolved Calcium (Ca)	mg/L	<0.050	0.050	8121659
Dissolved Magnesium (Mg)	mg/L	<0.050	0.050	8121659
RDL = Reportable Detection Limit				

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NR8645		
Sampling Date		2015/11/23 09:32		
COC Number		08413844		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Dissolved Potassium (K)	mg/L	<0.050	0.050	8121659
Dissolved Sodium (Na)	mg/L	<0.050	0.050	8121659
Dissolved Sulphur (S)	mg/L	<3.0	3.0	8121659
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NR8577	NR8578	NR8579	NR8580	NR8581		
Sampling Date		2015/11/20 13:17	2015/11/20 11:15	2015/11/20 09:04	2015/11/19 11:30	2015/11/19 12:44		
COC Number		08413843	08413843	08413843	08413843	08413843		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-15	KZ-16	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	112	168	186	219	213	0.50	8122111
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8123140
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00724	0.0195	0.0194	0.0103	0.00304	0.00050	8123042
Total Antimony (Sb)	mg/L	0.000026	0.000056	0.000043	0.000041	0.000022	0.000020	8123042
Total Arsenic (As)	mg/L	0.000077	0.000473	0.000377	0.000547	0.000201	0.000020	8123042
Total Barium (Ba)	mg/L	0.0685	0.0916	0.0949	0.0792	0.0858	0.000020	8123042
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8123042
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8123042
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8123042
Total Cadmium (Cd)	mg/L	0.000209	0.000296	0.0000970	0.0000480	0.0000220	0.0000050	8123042
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8123042
Total Cobalt (Co)	mg/L	0.0000090	0.000150	0.000127	0.0000610	0.0000260	0.0000050	8123042
Total Copper (Cu)	mg/L	0.000501	0.000534	0.000359	0.000331	0.000246	0.000050	8123042
Total Iron (Fe)	mg/L	0.0094	0.751	1.11	0.112	0.0179	0.0010	8123042
Total Lead (Pb)	mg/L	0.0000330	0.000201	0.0000780	0.00223	0.0000580	0.0000050	8123042
Total Lithium (Li)	mg/L	0.00145	0.00262	0.00341	0.00328	0.00302	0.00050	8123042
Total Manganese (Mn)	mg/L	0.000183	0.159	0.0888	0.0473	0.00916	0.000050	8123042
Total Molybdenum (Mo)	mg/L	0.000670	0.000571	0.000623	0.000998	0.000482	0.000050	8123042
Total Nickel (Ni)	mg/L	0.000267	0.000527	0.000414	0.000640	0.000461	0.000020	8123042
Total Phosphorus (P)	mg/L	<0.0020	0.0039	0.0086	0.0062	0.0029	0.0020	8123042
Total Selenium (Se)	mg/L	0.00147	0.00111	0.00126	0.00130	0.00126	0.000040	8123042
Total Silicon (Si)	mg/L	2.47	3.54	3.73	3.30	3.55	0.050	8123042
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000210	<0.0000050	0.0000050	8123042
Total Strontium (Sr)	mg/L	0.127	0.193	0.218	0.219	0.223	0.000050	8123042
Total Thallium (Tl)	mg/L	0.0000020	0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8123042
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8123042
Total Titanium (Ti)	mg/L	<0.00050	0.00080	0.00096	<0.00050	<0.00050	0.00050	8123042
Total Uranium (U)	mg/L	0.00311	0.00134	0.00148	0.00312	0.00240	0.0000020	8123042
Total Vanadium (V)	mg/L	<0.00020	0.00023	<0.00020	<0.00020	<0.00020	0.00020	8123042
Total Zinc (Zn)	mg/L	0.0253	0.0643	0.0212	0.00576	0.00077	0.00010	8123042
Total Zirconium (Zr)	mg/L	<0.00010	0.00011	<0.00010	<0.00010	<0.00010	0.00010	8123042
Total Calcium (Ca)	mg/L	36.9	55.5	61.8	65.9	64.1	0.050	8122396
Total Magnesium (Mg)	mg/L	4.76	7.12	7.70	13.1	12.8	0.050	8122396

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NR8577	NR8578	NR8579	NR8580	NR8581		
Sampling Date		2015/11/20 13:17	2015/11/20 11:15	2015/11/20 09:04	2015/11/19 11:30	2015/11/19 12:44		
COC Number		08413843	08413843	08413843	08413843	08413843		
	UNITS	**KZ-2**	**KZ-7**	**KZ-9**	**KZ-15**	**KZ-16**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	2.05	1.64	1.69	1.33	1.28	0.050	8122396
Total Sodium (Na)	mg/L	0.821	1.20	1.31	1.21	1.20	0.050	8122396
Total Sulphur (S)	mg/L	16.3	13.0	11.5	10.9	11.0	3.0	8122396
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NR8582	NR8583	NR8584		NR8585		
Sampling Date		2015/11/19 14:15	2015/11/20 15:00	2015/11/19 09:37		2015/11/18 15:22		
COC Number		08413843	08413843	08413843		08413843		
	UNITS	KZ-17	KZ-19	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	213	<0.50	286	8122111	264	0.50	8122111
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8123140	<0.0000020	0.0000020	8123140
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0189	0.00144	0.00329	8123042	0.00714	0.00050	8123275
Total Antimony (Sb)	mg/L	0.000043	<0.000020	0.000057	8123042	0.000047	0.000020	8123275
Total Arsenic (As)	mg/L	0.000719	<0.000020	0.000860	8123042	0.00113	0.000020	8123275
Total Barium (Ba)	mg/L	0.0770	0.000232	0.0697	8123042	0.0735	0.000020	8123275
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8123042	<0.000010	0.000010	8123275
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8123042	<0.0000050	0.0000050	8123275
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	8123042	<0.010	0.010	8123275
Total Cadmium (Cd)	mg/L	0.0000570	<0.0000050	0.0000110	8123042	0.0000170	0.0000050	8123275
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8123042	<0.00010	0.00010	8123275
Total Cobalt (Co)	mg/L	0.0000750	<0.0000050	0.0000710	8123042	0.0000870	0.0000050	8123275
Total Copper (Cu)	mg/L	0.000430	<0.000050	0.000258	8123042	0.000355	0.000050	8123275
Total Iron (Fe)	mg/L	0.159	<0.0010	0.125	8123042	0.255	0.0010	8123275
Total Lead (Pb)	mg/L	0.000115	<0.0000050	0.0000050	8123042	0.000109	0.0000050	8123275
Total Lithium (Li)	mg/L	0.00327	<0.00050	0.00714	8123042	0.00684	0.00050	8123275
Total Manganese (Mn)	mg/L	0.0690	<0.000050	0.0757	8123042	0.0553	0.000050	8123275
Total Molybdenum (Mo)	mg/L	0.00149	<0.000050	0.00147	8123042	0.00116	0.000050	8123275
Total Nickel (Ni)	mg/L	0.000788	<0.000020	0.00170	8123042	0.00115	0.000020	8123275
Total Phosphorus (P)	mg/L	0.0099	<0.0020	0.0084	8123042	0.0074	0.0020	8123275
Total Selenium (Se)	mg/L	0.00133	<0.000040	0.000744	8123042	0.000968	0.000040	8123275
Total Silicon (Si)	mg/L	3.67	<0.050	5.85	8123042	4.80	0.050	8123275
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8123042	<0.0000050	0.0000050	8123275
Total Strontium (Sr)	mg/L	0.216	0.000153	0.233	8123042	0.230	0.000050	8123275
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8123042	<0.0000020	0.0000020	8123275
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8123042	<0.00020	0.00020	8123275
Total Titanium (Ti)	mg/L	0.00096	0.00074	<0.00050	8123042	<0.00050	0.00050	8123275
Total Uranium (U)	mg/L	0.00412	0.0000050	0.00315	8123042	0.00331	0.0000020	8123275
Total Vanadium (V)	mg/L	<0.00020	0.00031	<0.00020	8123042	<0.00020	0.00020	8123275
Total Zinc (Zn)	mg/L	0.00820	<0.00010	0.00121	8123042	0.00196	0.00010	8123275
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00014	8123042	0.00014	0.00010	8123275
Total Calcium (Ca)	mg/L	62.2	<0.050	70.4	8122396	70.2	0.050	8122396
Total Magnesium (Mg)	mg/L	14.0	<0.050	26.7	8122396	21.6	0.050	8122396

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NR8582	NR8583	NR8584		NR8585		
Sampling Date		2015/11/19 14:15	2015/11/20 15:00	2015/11/19 09:37		2015/11/18 15:22		
COC Number		08413843	08413843	08413843		08413843		
	UNITS	**KZ-17**	**KZ-19**	**KZ-21**	**QC Batch**	**KZ-22**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	1.40	<0.050	2.04	8122396	1.72	0.050	8122396
Total Sodium (Na)	mg/L	1.23	<0.050	1.94	8122396	1.74	0.050	8122396
Total Sulphur (S)	mg/L	11.1	<3.0	15.2	8122396	13.3	3.0	8122396
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NR8643	NR8644	NR8645		
Sampling Date		2015/11/18 12:45	2015/11/18 13:15	2015/11/23 09:32		
COC Number		08413844	08413844	08413844		
	UNITS	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	258	259	<0.50	0.50	8122111
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8123140
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.00537	0.00981	<0.00050	0.00050	8123275
Total Antimony (Sb)	mg/L	0.000067	0.000071	<0.000020	0.000020	8123275
Total Arsenic (As)	mg/L	0.000509	0.000530	<0.000020	0.000020	8123275
Total Barium (Ba)	mg/L	0.0752	0.0772	<0.000020	0.000020	8123275
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8123275
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8123275
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8123275
Total Cadmium (Cd)	mg/L	0.0000100	0.0000130	<0.0000050	0.0000050	8123275
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8123275
Total Cobalt (Co)	mg/L	0.0000220	0.0000330	<0.0000050	0.0000050	8123275
Total Copper (Cu)	mg/L	0.000490	0.000505	<0.000050	0.000050	8123275
Total Iron (Fe)	mg/L	0.0425	0.0634	<0.0010	0.0010	8123275
Total Lead (Pb)	mg/L	0.0000130	0.0000550	<0.0000050	0.0000050	8123275
Total Lithium (Li)	mg/L	0.00584	0.00644	0.00053	0.00050	8123275
Total Manganese (Mn)	mg/L	0.00487	0.00498	<0.000050	0.000050	8123275
Total Molybdenum (Mo)	mg/L	0.000944	0.000945	<0.000050	0.000050	8123275
Total Nickel (Ni)	mg/L	0.000744	0.000803	<0.000020	0.000020	8123275
Total Phosphorus (P)	mg/L	0.0055	0.0049	<0.0020	0.0020	8123275
Total Selenium (Se)	mg/L	0.000912	0.000908	<0.000040	0.000040	8123275
Total Silicon (Si)	mg/L	4.45	4.45	<0.050	0.050	8123275
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8123275
Total Strontium (Sr)	mg/L	0.236	0.236	<0.000050	0.000050	8123275
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8123275
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8123275
Total Titanium (Ti)	mg/L	<0.00050	0.00062	<0.00050	0.00050	8123275
Total Uranium (U)	mg/L	0.00289	0.00309	<0.0000020	0.0000020	8123275
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8123275
Total Zinc (Zn)	mg/L	0.00077	0.00096	<0.00010	0.00010	8123275
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8123275
Total Calcium (Ca)	mg/L	67.7	69.1	<0.050	0.050	8122396
Total Magnesium (Mg)	mg/L	21.7	20.9	<0.050	0.050	8122396
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NR8643	NR8644	NR8645		
Sampling Date		2015/11/18 12:45	2015/11/18 13:15	2015/11/23 09:32		
COC Number		08413844	08413844	08413844		
	UNITS	**KZ-26**	**KZ-28**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	1.59	1.55	<0.050	0.050	8122396
Total Sodium (Na)	mg/L	1.70	1.75	<0.050	0.050	8122396
Total Sulphur (S)	mg/L	13.7	13.8	<3.0	3.0	8122396
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8577
Sample ID: KZ-2
Matrix: Water

Collected: 2015/11/20
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8124897	N/A	2015/11/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	Tim Matsushita
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	Isabel Choi
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	Maria Maclean
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	Andy Lu
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	Edwin Lamigo
Ion Balance	CALC	8121740	N/A	2015/11/26	Automated Statchk
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8123042	N/A	2015/11/24	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	Lucy Luo
pH Water	AT/ALK	8124296	N/A	2015/11/25	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8123424	N/A	2015/11/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8125101	N/A	2015/11/25	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	Maxwell Forrester Mogg

Maxxam ID: NR8577 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2015/11/20
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	Isabel Choi
Elements by ICPMS Low Level (total)	ICP/CRCM	8123042	N/A	2015/11/24	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8578
Sample ID: KZ-7
Matrix: Water

Collected: 2015/11/20
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8124897	N/A	2015/11/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	Tim Matsushita
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	Isabel Choi
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	Maria Maclean
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	Andy Lu
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	Edwin Lamigo
Ion Balance	CALC	8121740	N/A	2015/11/26	Andy Lu
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8127531	N/A	2015/11/27	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8123042	N/A	2015/11/24	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	Lucy Luo
pH Water	AT/ALK	8124296	N/A	2015/11/25	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8123424	N/A	2015/11/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8128660	2015/11/28	2015/11/28	Tessa Millsap
Total Phosphorus - unpreserved	KONE/COL	8128662	N/A	2015/11/28	Tessa Millsap
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	Maxwell Forrester Mogg

Maxxam ID: NR8578 Dup
Sample ID: KZ-7
Matrix: Water

Collected: 2015/11/20
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	Simon Chan

Maxxam ID: NR8579
Sample ID: KZ-9
Matrix: Water

Collected: 2015/11/20
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8579
Sample ID: KZ-9
Matrix: Water

Collected: 2015/11/20
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	Tim Matsushita
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	Isabel Choi
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	Maria Maclean
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	Andy Lu
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	Edwin Lamigo
Ion Balance	CALC	8121740	N/A	2015/11/26	Automated Statchk
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8123042	N/A	2015/11/24	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	Lucy Luo
pH Water	AT/ALK	8124296	N/A	2015/11/25	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8125101	N/A	2015/11/25	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	Maxwell Forrester Mogg

Maxxam ID: NR8580
Sample ID: KZ-15
Matrix: Water

Collected: 2015/11/19
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	Tim Matsushita
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	Isabel Choi
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	Maria Maclean
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	Andy Lu
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	Edwin Lamigo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8580
Sample ID: KZ-15
Matrix: Water

Collected: 2015/11/19
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance	CALC	8121740	N/A	2015/11/26	Automated Statchk
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8123042	N/A	2015/11/24	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	Lucy Luo
pH Water	AT/ALK	8124296	N/A	2015/11/25	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8125108	N/A	2015/11/25	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	Maxwell Forrester Mogg

Maxxam ID: NR8581
Sample ID: KZ-16
Matrix: Water

Collected: 2015/11/19
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	Tim Matsushita
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	Isabel Choi
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	Maria Maclean
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	Andy Lu
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	Edwin Lamigo
Ion Balance	CALC	8121740	N/A	2015/11/26	Automated Statchk
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8123042	N/A	2015/11/24	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8581
Sample ID: KZ-16
Matrix: Water

Collected: 2015/11/19
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	Lucy Luo
pH Water	AT/ALK	8124296	N/A	2015/11/25	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8125108	N/A	2015/11/25	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	Maxwell Forrester Mogg

Maxxam ID: NR8581 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2015/11/19
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	Balwinder Bassi
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	Balwinder Bassi

Maxxam ID: NR8582
Sample ID: KZ-17
Matrix: Water

Collected: 2015/11/19
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	Tim Matsushita
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	Isabel Choi
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	Maria Maclean
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	Andy Lu
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	Edwin Lamigo
Ion Balance	CALC	8121740	N/A	2015/11/26	Automated Statchk
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8123042	N/A	2015/11/24	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	Lucy Luo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8582
Sample ID: KZ-17
Matrix: Water

Collected: 2015/11/19
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH Water	AT/ALK	8124296	N/A	2015/11/25	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8125108	N/A	2015/11/25	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	Maxwell Forrester Mogg

Maxxam ID: NR8583
Sample ID: KZ-19
Matrix: Water

Collected: 2015/11/20
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	Tim Matsushita
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	Isabel Choi
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	Maria Maclean
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	Edwin Lamigo
Ion Balance	CALC	8121740	N/A	2015/11/26	Automated Statchk
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8123042	N/A	2015/11/24	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	Lucy Luo
pH Water	AT/ALK	8124296	N/A	2015/11/25	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8125108	N/A	2015/11/25	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	Maxwell Forrester Mogg

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8583 Dup
Sample ID: KZ-19
Matrix: Water

Collected: 2015/11/20
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8125108	N/A	2015/11/25	Diana Cruz

Maxxam ID: NR8584
Sample ID: KZ-21
Matrix: Water

Collected: 2015/11/19
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	Tim Matsushita
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	Isabel Choi
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	Maria Maclean
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	Andy Lu
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	Edwin Lamigo
Ion Balance	CALC	8121740	N/A	2015/11/26	Automated Statchk
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8123042	N/A	2015/11/24	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	Lucy Luo
pH Water	AT/ALK	8124296	N/A	2015/11/25	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8125101	N/A	2015/11/25	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	Maxwell Forrester Mogg

Maxxam ID: NR8585
Sample ID: KZ-22
Matrix: Water

Collected: 2015/11/18
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8585
Sample ID: KZ-22
Matrix: Water

Collected: 2015/11/18
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	Tim Matsushita
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	Isabel Choi
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	Maria Maclean
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	Andy Lu
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	Edwin Lamigo
Ion Balance	CALC	8121740	N/A	2015/11/26	Automated Statchk
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8123275	N/A	2015/11/25	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	Lucy Luo
pH Water	AT/ALK	8124296	N/A	2015/11/25	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8125108	N/A	2015/11/25	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	Maxwell Forrester Mogg

Maxxam ID: NR8585 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2015/11/18
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8123275	N/A	2015/11/25	Andrew An

Maxxam ID: NR8643
Sample ID: KZ-26
Matrix: Water

Collected: 2015/11/18
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	Tatyana Serzhanova

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8643
Sample ID: KZ-26
Matrix: Water

Collected: 2015/11/18
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	Tim Matsushita
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	Isabel Choi
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	Maria Maclean
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	Andy Lu
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	Edwin Lamigo
Ion Balance	CALC	8121740	N/A	2015/11/26	Automated Statchk
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8124806	N/A	2015/11/25	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8123275	N/A	2015/11/25	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	Lucy Luo
pH Water	AT/ALK	8124296	N/A	2015/11/25	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8125108	N/A	2015/11/25	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	Maxwell Forrester Mogg

Maxxam ID: NR8644
Sample ID: KZ-28
Matrix: Water

Collected: 2015/11/18
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	Tim Matsushita
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	Isabel Choi
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	Maria Maclean
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	Andy Lu
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	Edwin Lamigo
Ion Balance	CALC	8121740	N/A	2015/11/26	Automated Statchk
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8644
Sample ID: KZ-28
Matrix: Water

Collected: 2015/11/18
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8123275	N/A	2015/11/25	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	Lucy Luo
pH Water	AT/ALK	8124296	N/A	2015/11/25	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8125101	N/A	2015/11/25	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	Maxwell Forrester Mogg

Maxxam ID: NR8645
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/11/23
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	Tim Matsushita
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8124784	N/A	2015/11/25	Isabel Choi
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	Maria Maclean
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	Andy Lu
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	Edwin Lamigo
Ion Balance	CALC	8121740	N/A	2015/11/26	Automated Statchk
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8123275	N/A	2015/11/25	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	Automated Statchk
pH Water	AT/ALK	8124296	N/A	2015/11/25	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8645
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/11/23
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8125101	N/A	2015/11/25	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	Maxwell Forrester Mogg

Maxxam ID: NR8645 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/11/23
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	Edwin Lamigo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.7°C

Sample NR8578, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NR8578, Na, K, Ca, Mg, S by CRC ICPMS (diss.): Test repeated.
Sample NR8643, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8122942	Total Suspended Solids	2015/11/25			98	80 - 120	<1.0	mg/L		
8123042	Total Aluminum (Al)	2015/11/24	93	80 - 120	108	80 - 120	<0.00050	mg/L	3.8	20
8123042	Total Antimony (Sb)	2015/11/24	98	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8123042	Total Arsenic (As)	2015/11/24	99	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8123042	Total Barium (Ba)	2015/11/24	NC	80 - 120	104	80 - 120	<0.000020	mg/L	6.4	20
8123042	Total Beryllium (Be)	2015/11/24	91	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8123042	Total Bismuth (Bi)	2015/11/24	95	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8123042	Total Boron (B)	2015/11/24					<0.010	mg/L	NC	20
8123042	Total Cadmium (Cd)	2015/11/24	97	80 - 120	101	80 - 120	<0.0000050	mg/L	6.4	20
8123042	Total Chromium (Cr)	2015/11/24	94	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8123042	Total Cobalt (Co)	2015/11/24	91	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8123042	Total Copper (Cu)	2015/11/24	89	80 - 120	99	80 - 120	<0.000050	mg/L	3.5	20
8123042	Total Iron (Fe)	2015/11/24	93	80 - 120	108	80 - 120	<0.0010	mg/L	6.8	20
8123042	Total Lead (Pb)	2015/11/24	98	80 - 120	106	80 - 120	<0.0000050	mg/L	3.1	20
8123042	Total Lithium (Li)	2015/11/24	90	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8123042	Total Manganese (Mn)	2015/11/24	94	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8123042	Total Molybdenum (Mo)	2015/11/24	NC	80 - 120	96	80 - 120	<0.000050	mg/L	3.3	20
8123042	Total Nickel (Ni)	2015/11/24	90	80 - 120	99	80 - 120	<0.000020	mg/L	1.5	20
8123042	Total Phosphorus (P)	2015/11/24					<0.0020	mg/L	NC	20
8123042	Total Selenium (Se)	2015/11/24	97	80 - 120	96	80 - 120	<0.000040	mg/L	2.0	20
8123042	Total Silicon (Si)	2015/11/24					<0.050	mg/L	1.2	20
8123042	Total Silver (Ag)	2015/11/24	91	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8123042	Total Strontium (Sr)	2015/11/24	NC	80 - 120	103	80 - 120	<0.000050	mg/L	2.5	20
8123042	Total Thallium (Tl)	2015/11/24	91	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8123042	Total Tin (Sn)	2015/11/24	96	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8123042	Total Titanium (Ti)	2015/11/24	95	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8123042	Total Uranium (U)	2015/11/24	103	80 - 120	106	80 - 120	<0.0000020	mg/L	2.0	20
8123042	Total Vanadium (V)	2015/11/24	97	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
8123042	Total Zinc (Zn)	2015/11/24	NC	80 - 120	100	80 - 120	<0.00010	mg/L	1.3	20
8123042	Total Zirconium (Zr)	2015/11/24					<0.00010	mg/L	NC	20
8123054	Dissolved Aluminum (Al)	2015/11/24	101	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8123054	Dissolved Antimony (Sb)	2015/11/24	97	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8123054	Dissolved Arsenic (As)	2015/11/24	96	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8123054	Dissolved Barium (Ba)	2015/11/24	98	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8123054	Dissolved Beryllium (Be)	2015/11/24	94	80 - 120	99	80 - 120	<0.000010	mg/L	NC	20
8123054	Dissolved Bismuth (Bi)	2015/11/24	96	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8123054	Dissolved Boron (B)	2015/11/24					<0.010	mg/L	NC	20
8123054	Dissolved Cadmium (Cd)	2015/11/24	99	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8123054	Dissolved Chromium (Cr)	2015/11/24	101	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8123054	Dissolved Cobalt (Co)	2015/11/24	99	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8123054	Dissolved Copper (Cu)	2015/11/24	100	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8123054	Dissolved Iron (Fe)	2015/11/24	105	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
8123054	Dissolved Lead (Pb)	2015/11/24	99	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8123054	Dissolved Lithium (Li)	2015/11/24	94	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8123054	Dissolved Manganese (Mn)	2015/11/24	100	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8123054	Dissolved Molybdenum (Mo)	2015/11/24	93	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20
8123054	Dissolved Nickel (Ni)	2015/11/24	100	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8123054	Dissolved Phosphorus (P)	2015/11/24					<0.0020	mg/L	NC	20
8123054	Dissolved Selenium (Se)	2015/11/24	93	80 - 120	96	80 - 120	<0.000040	mg/L	NC	20
8123054	Dissolved Silicon (Si)	2015/11/24					<0.050	mg/L	NC	20
8123054	Dissolved Silver (Ag)	2015/11/24	91	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8123054	Dissolved Strontium (Sr)	2015/11/24	94	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8123054	Dissolved Thallium (Tl)	2015/11/24	96	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8123054	Dissolved Tin (Sn)	2015/11/24	96	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8123054	Dissolved Titanium (Ti)	2015/11/24	94	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8123054	Dissolved Uranium (U)	2015/11/24	99	80 - 120	108	80 - 120	<0.0000020	mg/L	NC	20
8123054	Dissolved Vanadium (V)	2015/11/24	103	80 - 120	107	80 - 120	<0.00020	mg/L	NC	20
8123054	Dissolved Zinc (Zn)	2015/11/24	103	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8123054	Dissolved Zirconium (Zr)	2015/11/24					<0.00010	mg/L	NC	20
8123122	Dissolved Mercury (Hg)	2015/11/24	104	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8123140	Total Mercury (Hg)	2015/11/24	102	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8123275	Total Aluminum (Al)	2015/11/25	100	80 - 120	103	80 - 120	<0.00050	mg/L	6.4	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8123275	Total Antimony (Sb)	2015/11/25	106	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8123275	Total Arsenic (As)	2015/11/25	99	80 - 120	98	80 - 120	<0.000020	mg/L	0.27	20
8123275	Total Barium (Ba)	2015/11/25	NC	80 - 120	103	80 - 120	<0.000020	mg/L	2.6	20
8123275	Total Beryllium (Be)	2015/11/25	99	80 - 120	95	80 - 120	<0.000010	mg/L	NC	20
8123275	Total Bismuth (Bi)	2015/11/25	100	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8123275	Total Boron (B)	2015/11/25					<0.010	mg/L	NC	20
8123275	Total Cadmium (Cd)	2015/11/25	98	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8123275	Total Chromium (Cr)	2015/11/25	98	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8123275	Total Cobalt (Co)	2015/11/25	95	80 - 120	100	80 - 120	<0.0000050	mg/L	0	20
8123275	Total Copper (Cu)	2015/11/25	93	80 - 120	101	80 - 120	<0.000050	mg/L	6.8	20
8123275	Total Iron (Fe)	2015/11/25	NC	80 - 120	109	80 - 120	<0.0010	mg/L	1.7	20
8123275	Total Lead (Pb)	2015/11/25	103	80 - 120	107	80 - 120	<0.0000050	mg/L	3.7	20
8123275	Total Lithium (Li)	2015/11/25	NC	80 - 120	103	80 - 120	0.00069, RDL=0.00050	mg/L	13	20
8123275	Total Manganese (Mn)	2015/11/25	NC	80 - 120	100	80 - 120	<0.000050	mg/L	0.31	20
8123275	Total Molybdenum (Mo)	2015/11/25	NC	80 - 120	96	80 - 120	<0.000050	mg/L	0.78	20
8123275	Total Nickel (Ni)	2015/11/25	92	80 - 120	100	80 - 120	<0.000020	mg/L	2.3	20
8123275	Total Phosphorus (P)	2015/11/25					<0.0020	mg/L	NC	20
8123275	Total Selenium (Se)	2015/11/25	100	80 - 120	95	80 - 120	<0.000040	mg/L	1.2	20
8123275	Total Silicon (Si)	2015/11/25					<0.050	mg/L	1.2	20
8123275	Total Silver (Ag)	2015/11/25	101	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8123275	Total Strontium (Sr)	2015/11/25	NC	80 - 120	98	80 - 120	<0.000050	mg/L	1.4	20
8123275	Total Thallium (Tl)	2015/11/25	98	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8123275	Total Tin (Sn)	2015/11/25	104	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8123275	Total Titanium (Ti)	2015/11/25	95	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8123275	Total Uranium (U)	2015/11/25	105	80 - 120	105	80 - 120	<0.0000020	mg/L	2.3	20
8123275	Total Vanadium (V)	2015/11/25	101	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8123275	Total Zinc (Zn)	2015/11/25	96	80 - 120	101	80 - 120	<0.00010	mg/L	2.3	20
8123275	Total Zirconium (Zr)	2015/11/25					<0.00010	mg/L	NC	20
8123319	Acidity (pH 4.5)	2015/11/24					<0.50	mg/L	NC	20
8123319	Acidity (pH 8.3)	2015/11/24			104	80 - 120	<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8123424	Dissolved Sulphate (SO4)	2015/11/24	NC	80 - 120	93	80 - 120	<0.50	mg/L	1.2	20
8123428	Dissolved Chloride (Cl)	2015/11/24	95	80 - 120	98	80 - 120	<0.50	mg/L	2.3	20
8123432	Dissolved Sulphate (SO4)	2015/11/24			92	80 - 120	<0.50	mg/L	3.1	20
8123764	Nitrate plus Nitrite (N)	2015/11/24	100	80 - 120	102	80 - 120	<0.0020	mg/L	0.44	25
8123768	Nitrite (N)	2015/11/24	98	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25
8123943	Fluoride (F)	2015/11/24	110	80 - 120	98	80 - 120	0.011, RDL=0.010	mg/L	1.4	20
8124292	Alkalinity (PP as CaCO3)	2015/11/25					<0.50	mg/L	NC	20
8124292	Alkalinity (Total as CaCO3)	2015/11/25	NC	80 - 120	91	80 - 120	0.57, RDL=0.50	mg/L	0.26	20
8124292	Bicarbonate (HCO3)	2015/11/25					0.70, RDL=0.50	mg/L	0.26	20
8124292	Carbonate (CO3)	2015/11/25					<0.50	mg/L	NC	20
8124292	Hydroxide (OH)	2015/11/25					<0.50	mg/L	NC	20
8124293	Conductivity	2015/11/25			96	80 - 120	1.1, RDL=1.0	uS/cm	0.33	20
8124296	pH	2015/11/25			102	97 - 103			0.32	N/A
8124783	Dissolved Organic Carbon (C)	2015/11/25	109	80 - 120	101	80 - 120	<0.50	mg/L	12	20
8124784	Dissolved Organic Carbon (C)	2015/11/25	112	80 - 120	100	80 - 120	<0.50	mg/L	NC	20
8124806	Dissolved Aluminum (Al)	2015/11/25			110	80 - 120	<0.00050	mg/L		
8124897	Dissolved Chloride (Cl)	2015/11/25			100	80 - 120	<0.50	mg/L		
8124958	True Colour	2015/11/24			106	80 - 120	<5.0	Col. Unit	NC	20
8125043	Strong Acid Dissoc. Cyanide (CN)	2015/11/25	98	80 - 120	94	80 - 120	<0.00050	mg/L	NC	20
8125057	Weak Acid Dissoc. Cyanide (CN)	2015/11/25	95	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8125098	Dissolved Phosphorus (P)	2015/11/25	111	80 - 120	104	80 - 120	<0.0020	mg/L	NC	20
8125099	Total Ammonia (N)	2015/11/25	110	80 - 120	100	80 - 120	<0.0050	mg/L	NC	20
8125101	Total Phosphorus (P)	2015/11/25	NC	80 - 120	112	80 - 120	<0.0020	mg/L	1.4	20
8125108	Total Phosphorus (P)	2015/11/25	100	80 - 120	109	80 - 120	<0.0020	mg/L	NC	20
8127531	Dissolved Aluminum (Al)	2015/11/27			96	80 - 120	<0.00050	mg/L		
8128660	Dissolved Phosphorus (P)	2015/11/28	90	80 - 120	92	80 - 120	<0.0020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8128662	Total Phosphorus (P)	2015/11/28	90	80 - 120	92	80 - 120	<0.0020	mg/L	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

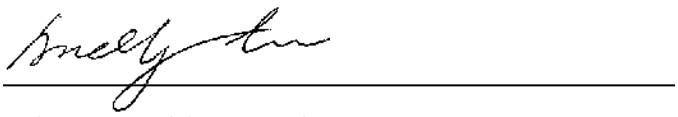
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Andy Lu, Data Validation Coordinator

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

08413843

CHAIN OF CUSTODY RECORD

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #:

BBY FCD-00077/05

Page 1 2

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: BMC MINERALS LTD.	Company Name: ALEXCO ENVIRONMENTAL	Quotation #: B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:	Contact Name: KAI WOLOSHYN	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 530-1130 WEST PENDER ST	Address: UNIT 3 151 INDUSTRIAL RD	Project #: BMC-15-01	Rush TAT (Surcharges will be applied)
Vancouver, BC PC: V6E 4A4	Whitehorse, YK PC: Y1A 2V3	Site Location: Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:	Phone: (867) 668-6483	Site #:	[ ] 1 Day [ ] 3 Days
Email:	Email: kwoloshyn@alexcoresource.com	Sampled By:	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Drop Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

Rush Confirmation #:

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

LABORATORY USE ONLY

CUSTODY SEAL Y / N — Present / Intact

COOLER TEMPERATURES: NA | 1.3, 7/4.5, 7 | 2.3.3

COOLING MEDIA PRESENT Y / N

COMMENTS

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2	NR 8577	20/11/2015	13:17	Water	12	
2	KZ-7	NR 8578	20/11/2015	11:15	Water	12	
3	KZ-9	NR 8579	20/11/2015	9:04	Water	12	
4							
5	KZ-15	NR 8580	19/11/2015	11:30	Water	12	
6	KZ-16	NR 8581	19/11/2015	12:44	Water	12	
7	KZ-17	NR 8582	19/11/2015	14:15	Water	12	
8	KZ-19	NR 8583	20/11/2015	15:00	Water	12	
9	KZ-21	NR 8584	19/11/2015	9:37	Water	12	
10	KZ-22	NR 8585	18/11/2015	15:22	Water	12	

B5A4311_COC

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Andrew Hanham	2015/11/22	10:30	ALFRED NGAI	2015/11/23	09:32

B5A4311

08413844

CHAIN OF CUSTODY RECORD

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

BBY FCD-00077/05

COC #:

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	LABORATORY USE ONLY	COMMENTS
1	~~KZ-26~~	~~NR8643~~	~~18/11/2015~~	~~12:45~~	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		CUSTODY SEAL Y (N) Present: NA Intact:	~~DOC not filtered or preserved~~
2	KZ-28	NR8644	18/11/2015	13:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		COOLER TEMPERATURES 1.3, 1.5, 2.3	DOC not filtered or preserved
3	Trip Blank	NR8645			Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		COOLING MEDIA PRESENT (Y) N	
4																									
5																									
6																									
7																									
8																									
9																									
10																									

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
			ALFRED NGAI	2015/11/23	09:32	B5A4311

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08414227, 08414228

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/12/11
Report #: R2094741
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B5A8198
Received: 2015/12/04, 13:40

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	14	N/A	2015/12/08	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	14	2015/12/05	2015/12/05	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	14	N/A	2015/12/07	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	14	N/A	2015/12/08	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	14	N/A	2015/12/08	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	14	N/A	2015/12/05	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	13	N/A	2015/12/07	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2015/12/07	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	14	N/A	2015/12/05	BBY6SOP-00026	SM 22 2510 B m
Fluoride	14	N/A	2015/12/07	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	14	N/A	2015/12/08	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	14	N/A	2015/12/08	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	14	N/A	2015/12/08	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	14	2015/12/08	2015/12/08	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	14	N/A	2015/12/08	BBY WI-00033	SM 22 1030E
Sum of cations, anions	14	N/A	2015/12/08	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	14	N/A	2015/12/08	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	14	N/A	2015/12/08	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	14	N/A	2015/12/08	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	14	N/A	2015/12/08	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	14	N/A	2015/12/07	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	14	N/A	2015/12/05	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	14	N/A	2015/12/05	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	14	N/A	2015/12/05	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	13	N/A	2015/12/07	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	14	N/A	2015/12/05	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	14	N/A	2015/12/07	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	14	2015/12/05	2015/12/05	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	14	N/A	2015/12/05	BBY6SOP-00013	SM 22 4500-P E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08414227, 08414228

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/12/11
Report #: R2094741
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B5A8198
Received: 2015/12/04, 13:40

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Suspended Solids-Low Level	5	2015/12/07	2015/12/08	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	9	2015/12/08	2015/12/08	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.

(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NU0016	NU0017	NU0018	NU0019	NU0020		
Sampling Date		2015/12/03 08:21	2015/12/02 16:41	2015/12/02 12:18	2015/12/02 14:41	2015/12/02 09:07		
COC Number		08414227	08414227	08414227	08414227	08414227		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8137883
Acidity (pH 8.3)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8137883
Calculated Parameters								
Anion Sum	meq/L	2.4	3.5	3.9	1.8	4.6	N/A	8135237
Cation Sum	meq/L	2.4	3.5	3.8	1.8	4.6	N/A	8135237
Filter and HNO3 Preservation	N/A	LAB	LAB	LAB	LAB	LAB	N/A	8136230
Ion Balance	N/A	1.0	0.99	0.98	1.0	1.0	0.010	8134200
Nitrate (N)	mg/L	0.138	0.0959	0.175	0.0855	0.194	0.0020	8134304
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8138190
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8138245
Fluoride (F)	mg/L	0.037	0.054	0.068	0.039	0.078	0.010	8138236
Dissolved Organic Carbon (C)	mg/L	0.76	1.64	1.90	3.09	1.55	0.50	8136813
Alkalinity (Total as CaCO3)	mg/L	69.9	135	161	75.6	193	0.50	8135721
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8135721
Bicarbonate (HCO3)	mg/L	85.3	165	197	92.3	235	0.50	8135721
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8135721
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8135721
Anions								
Dissolved Sulphate (SO4)	mg/L	48.4	38.5	31.5	15.4	31.9	0.50	8136867
Dissolved Chloride (Cl)	mg/L	<0.50	<0.50	<0.50	<0.50	0.59	0.50	8136863
MISCELLANEOUS								
True Colour	Col. Unit	<5.0	<5.0	16.4	13.9	<5.0	5.0	8135787
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0022	0.0021	0.0023	0.0023	0.0020	8135779
Total Ammonia (N)	mg/L	<0.0050 (1)	0.0229 (1)	0.0234 (1)	<0.0050 (1)	0.0084 (1)	0.0050	8135778
Nitrate plus Nitrite (N)	mg/L	0.138	0.0959	0.175	0.0855	0.194	0.0020	8135760
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8135761
Total Phosphorus (P)	mg/L	<0.0020	0.0020	0.0023	0.0037	0.0028	0.0020	8135783
Physical Properties								
Conductivity	uS/cm	249	342	379	183	426	1.0	8135723
pH	pH	8.00	8.07	7.75	8.05	8.07	N/A	8135722

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NU0016	NU0017	NU0018	NU0019	NU0020		
Sampling Date		2015/12/03 08:21	2015/12/02 16:41	2015/12/02 12:18	2015/12/02 14:41	2015/12/02 09:07		
COC Number		08414227	08414227	08414227	08414227	08414227		
	UNITS	**KZ-2**	**KZ-7**	**KZ-9**	**KZ-13**	**KZ-15**	**RDL**	**QC Batch**
Physical Properties								
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8137550
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NU0021	NU0022	NU0023		NU0024		
Sampling Date		2015/12/02 10:20	2015/12/02 10:00	2015/12/03 09:37		2015/12/01 15:11		
COC Number		08414227	08414227	08414227		08414227		
	UNITS	KZ-16	KZ-17	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	8137883	<0.50	0.50	8137883
Acidity (pH 8.3)	mg/L	<0.50	<0.50	<0.50	8137883	<0.50	0.50	8137883
Calculated Parameters								
Anion Sum	meq/L	4.6	4.4	0.014	8135237	6.1	N/A	8135237
Cation Sum	meq/L	4.9	4.6	0.0012	8135237	6.0	N/A	8135237
Filter and HNO3 Preservation	N/A	LAB	LAB	LAB	8136230	LAB	N/A	8136230
Ion Balance	N/A	1.1	1.0	0.086 (1)	8134200	0.99	0.010	8134200
Nitrate (N)	mg/L	0.233	0.164	<0.0020	8134304	0.105	0.0020	8134304
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	8138190	<0.00050	0.00050	8138190
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	8138245	<0.00050	0.00050	8138245
Fluoride (F)	mg/L	0.061	0.096	0.012	8138236	0.160	0.010	8138236
Dissolved Organic Carbon (C)	mg/L	1.29	1.87	<0.50	8136813	3.26	0.50	8136813
Alkalinity (Total as CaCO3)	mg/L	195	187	0.67	8135721	254	0.50	8135721
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	8135721	<0.50	0.50	8135721
Bicarbonate (HCO3)	mg/L	238	228	0.82	8135721	310	0.50	8135721
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	8135721	<0.50	0.50	8135721
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	8135721	<0.50	0.50	8135721
Anions								
Dissolved Sulphate (SO4)	mg/L	32.5	31.6	<0.50	8136867	45.5	0.50	8136867
Dissolved Chloride (Cl)	mg/L	0.54	0.61	<0.50	8136863	0.72	0.50	8136863
MISCELLANEOUS								
True Colour	Col. Unit	<5.0	5.6	<5.0	8135787	29.0 (2)	5.0	8135787
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0041	<0.0020	8135779	0.0095 (2)	0.0020	8135779
Total Ammonia (N)	mg/L	<0.0050 (3)	0.0120 (3)	<0.0050 (3)	8135778	0.0653 (2)	0.0050	8135778
Nitrate plus Nitrite (N)	mg/L	0.233	0.164	<0.0020	8135760	0.108 (2)	0.0020	8135760
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	8135761	0.0025 (2)	0.0020	8135761
Total Phosphorus (P)	mg/L	<0.0020	0.0038	<0.0020	8135783	0.0100 (2)	0.0020	8135783

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(3) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NU0021	NU0022	NU0023		NU0024		
Sampling Date		2015/12/02 10:20	2015/12/02 10:00	2015/12/03 09:37		2015/12/01 15:11		
COC Number		08414227	08414227	08414227		08414227		
	UNITS	KZ-16	KZ-17	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Physical Properties								
Conductivity	uS/cm	434	416	<1.0	8135723	546	1.0	8135723
pH	pH	8.03	8.08	5.92	8135722	8.05	N/A	8135722
Physical Properties								
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	8137550	2.7	1.0	8136208

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NU0025		NU0031		NU0032		
Sampling Date		2015/12/01 14:13		2015/12/01 11:45		2015/12/01 10:28		
COC Number		08414227		08414228		08414228		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	8137883	<0.50	8137883	<0.50	0.50	8137883
Acidity (pH 8.3)	mg/L	<0.50	8137883	<0.50	8137883	<0.50	0.50	8137883
Calculated Parameters								
Anion Sum	meq/L	5.5	8135237	5.3	8135237	5.3	N/A	8135237
Cation Sum	meq/L	5.5	8135237	5.4	8135237	5.6	N/A	8135237
Filter and HNO3 Preservation	N/A	LAB	8136230	LAB	8136230	LAB	N/A	8136230
Ion Balance	N/A	1.0	8134200	1.0	8134200	1.0	0.010	8134200
Nitrate (N)	mg/L	0.152	8134304	0.157	8134304	0.161	0.0020	8134304
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00050	8138190	0.00051	8138190	0.00051	0.00050	8138190
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8138245	<0.00050	8138245	0.00069	0.00050	8138245
Fluoride (F)	mg/L	0.120	8138236	0.100	8138236	0.100	0.010	8138236
Dissolved Organic Carbon (C)	mg/L	1.91	8136813	1.64	8136813	1.44	0.50	8136813
Alkalinity (Total as CaCO3)	mg/L	230	8135721	222	8135725	223	0.50	8135721
Alkalinity (PP as CaCO3)	mg/L	<0.50	8135721	<0.50	8135725	<0.50	0.50	8135721
Bicarbonate (HCO3)	mg/L	281	8135721	270	8135725	273	0.50	8135721
Carbonate (CO3)	mg/L	<0.50	8135721	<0.50	8135725	<0.50	0.50	8135721
Hydroxide (OH)	mg/L	<0.50	8135721	<0.50	8135725	<0.50	0.50	8135721
Anions								
Dissolved Sulphate (SO4)	mg/L	40.3	8136867	39.5	8136861	39.2	0.50	8136867
Dissolved Chloride (Cl)	mg/L	<0.50	8136863	0.59	8136855	0.59	0.50	8136863
MISCELLANEOUS								
True Colour	Col. Unit	18.3 (1)	8135787	8.0 (1)	8135787	6.2 (1)	5.0	8135787
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0082 (1)	8135779	0.0025 (1)	8135779	0.0031 (1)	0.0020	8135779
Total Ammonia (N)	mg/L	0.0438 (1)	8135778	0.0084 (1)	8135778	0.0193 (1)	0.0050	8135778
Nitrate plus Nitrite (N)	mg/L	0.152 (1)	8135760	0.157 (1)	8135760	0.161 (1)	0.0020	8135760
Nitrite (N)	mg/L	<0.0020 (1)	8135761	<0.0020 (1)	8135761	<0.0020 (1)	0.0020	8135761
Total Phosphorus (P)	mg/L	0.0080 (1)	8135783	0.0025 (1)	8135783	0.0028 (1)	0.0020	8135783
Physical Properties								
Conductivity	uS/cm	506	8135723	485	8135728	487	1.0	8135723
pH	pH	8.08	8135722	8.20	8135727	8.29	N/A	8135722

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NU0025		NU0031		NU0032		
Sampling Date		2015/12/01 14:13		2015/12/01 11:45		2015/12/01 10:28		
COC Number		08414227		08414228		08414228		
	UNITS	**KZ-22**	**QC Batch**	**KZ-26**	**QC Batch**	**KZ-28**	**RDL**	**QC Batch**
Physical Properties								
Total Suspended Solids	mg/L	1.5	8136208	1.1	8136208	1.0	1.0	8136208
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NU0033		NU0034		
Sampling Date		2015/12/03 18:45		2015/12/02 17:45		
COC Number		08414228		08414228		
	UNITS	TRIP BLANK	QC Batch	KZ-6	RDL	QC Batch
Misc. Inorganics						
Acidity (pH 4.5)	mg/L	<0.50	8137883	<0.50	0.50	8137883
Acidity (pH 8.3)	mg/L	<0.50	8137883	<0.50	0.50	8137883
Calculated Parameters						
Anion Sum	meq/L	0.021	8135237	3.5	N/A	8135237
Cation Sum	meq/L	0.00050	8135237	3.4	N/A	8135237
Filter and HNO3 Preservation	N/A		8136230	LAB	N/A	8136230
Ion Balance	N/A	0.024 (1)	8134200	0.97	0.010	8134200
Nitrate (N)	mg/L	<0.0020	8134304	0.138	0.0020	8134304
Misc. Inorganics						
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8138190	<0.00050	0.00050	8138190
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8138245	<0.00050	0.00050	8138245
Fluoride (F)	mg/L	0.011	8138236	0.055	0.010	8138236
Dissolved Organic Carbon (C)	mg/L	<0.50	8135780	1.35	0.50	8136813
Alkalinity (Total as CaCO3)	mg/L	1.03	8135721	147	0.50	8135721
Alkalinity (PP as CaCO3)	mg/L	<0.50	8135721	<0.50	0.50	8135721
Bicarbonate (HCO3)	mg/L	1.26	8135721	180	0.50	8135721
Carbonate (CO3)	mg/L	<0.50	8135721	<0.50	0.50	8135721
Hydroxide (OH)	mg/L	<0.50	8135721	<0.50	0.50	8135721
Anions						
Dissolved Sulphate (SO4)	mg/L	<0.50	8136867	23.6	0.50	8136867
Dissolved Chloride (Cl)	mg/L	<0.50	8136863	<0.50	0.50	8136863
MISCELLANEOUS						
True Colour	Col. Unit	<5.0	8135787	5.1	5.0	8135787
Nutrients						
Dissolved Phosphorus (P)	mg/L	<0.0020	8135779	0.0026	0.0020	8135779
Total Ammonia (N)	mg/L	<0.0050	8135778	0.0116 (2)	0.0050	8135778
Nitrate plus Nitrite (N)	mg/L	<0.0020	8135760	0.138	0.0020	8135760
Nitrite (N)	mg/L	<0.0020	8135761	<0.0020	0.0020	8135761
Total Phosphorus (P)	mg/L	<0.0020	8135783	0.0022	0.0020	8135783
Physical Properties						
Conductivity	uS/cm	1.3	8135723	327	1.0	8135723

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).
(2) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NU0033		NU0034		
Sampling Date		2015/12/03 18:45		2015/12/02 17:45		
COC Number		08414228		08414228		
	UNITS	**TRIP BLANK**	**QC Batch**	**KZ-6**	**RDL**	**QC Batch**
pH	pH	6.26	8135722	8.25	N/A	8135722
Physical Properties						
Total Suspended Solids	mg/L	<1.0	8136208	<1.0	1.0	8137550

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NU0016	NU0017	NU0018	NU0019	NU0020		
Sampling Date		2015/12/03 08:21	2015/12/02 16:41	2015/12/02 12:18	2015/12/02 14:41	2015/12/02 09:07		
COC Number		08414227	08414227	08414227	08414227	08414227		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	116	169	186	87.6	224	0.50	8135236
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8137659
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00193	0.00134	0.00100	0.00487	0.00051	0.00050	8137300
Dissolved Antimony (Sb)	mg/L	0.000021	0.000051	0.000036	0.000030	0.000031	0.000020	8137300
Dissolved Arsenic (As)	mg/L	0.000061	0.000176	0.000181	0.000156	0.000412	0.000020	8137300
Dissolved Barium (Ba)	mg/L	0.0654	0.0863	0.0916	0.101	0.0798	0.000020	8137300
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8137300
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8137300
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8137300
Dissolved Cadmium (Cd)	mg/L	0.000171	0.000117	0.0000540	0.0000150	0.0000220	0.0000050	8137300
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8137300
Dissolved Cobalt (Co)	mg/L	0.0000070	0.0000900	0.0000880	0.0000240	0.0000190	0.0000050	8137300
Dissolved Copper (Cu)	mg/L	0.000420	0.000214	0.000222	0.000385	0.000226	0.000050	8137300
Dissolved Iron (Fe)	mg/L	<0.0010	0.111	0.111	0.0417	0.0102	0.0010	8137300
Dissolved Lead (Pb)	mg/L	0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8137300
Dissolved Lithium (Li)	mg/L	0.00111	0.00216	0.00319	0.00147	0.00262	0.00050	8137300
Dissolved Manganese (Mn)	mg/L	<0.000050	0.110	0.0797	0.0226	0.0191	0.000050	8137300
Dissolved Molybdenum (Mo)	mg/L	0.000665	0.000575	0.000661	0.000664	0.00116	0.000050	8137300
Dissolved Nickel (Ni)	mg/L	0.000275	0.000479	0.000373	0.000351	0.000600	0.000020	8137300
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8137300
Dissolved Selenium (Se)	mg/L	0.00180	0.00118	0.00134	0.000306	0.00155	0.000040	8137300
Dissolved Silicon (Si)	mg/L	2.51	3.77	4.09	3.66	3.85	0.050	8137300
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8137300
Dissolved Strontium (Sr)	mg/L	0.127	0.184	0.211	0.0861	0.221	0.000050	8137300
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8137300
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8137300
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8137300
Dissolved Uranium (U)	mg/L	0.00326	0.00137	0.00157	0.000939	0.00352	0.0000020	8137300
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8137300
Dissolved Zinc (Zn)	mg/L	0.0207	0.0434	0.0132	0.00142	0.00226	0.00010	8137300
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8137300
Dissolved Calcium (Ca)	mg/L	38.0	55.1	61.5	29.6	65.1	0.050	8135145

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NU0016	NU0017	NU0018	NU0019	NU0020		
Sampling Date		2015/12/03 08:21	2015/12/02 16:41	2015/12/02 12:18	2015/12/02 14:41	2015/12/02 09:07		
COC Number		08414227	08414227	08414227	08414227	08414227		
	UNITS	**KZ-2**	**KZ-7**	**KZ-9**	**KZ-13**	**KZ-15**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	5.16	7.50	7.97	3.32	14.9	0.050	8135145
Dissolved Potassium (K)	mg/L	1.97	1.70	1.68	1.73	1.35	0.050	8135145
Dissolved Sodium (Na)	mg/L	0.867	1.22	1.30	1.03	1.31	0.050	8135145
Dissolved Sulphur (S)	mg/L	17.1	14.0	12.3	5.7	12.2	3.0	8135145
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NU0021		NU0022	NU0023		
Sampling Date		2015/12/02 10:20		2015/12/02 10:00	2015/12/03 09:37		
COC Number		08414227		08414227	08414227		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-19	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	239	8135236	223	<0.50	0.50	8135236
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	8137659	<0.0000020	<0.0000020	0.0000020	8137659
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	<0.00050	8137300	0.00060	<0.00050	0.00050	8137300
Dissolved Antimony (Sb)	mg/L	<0.000020	8137300	0.000039	<0.000020	0.000020	8137300
Dissolved Arsenic (As)	mg/L	0.000204	8137300	0.000553	<0.000020	0.000020	8137300
Dissolved Barium (Ba)	mg/L	0.0784	8137300	0.0760	<0.000020	0.000020	8137300
Dissolved Beryllium (Be)	mg/L	<0.000010	8137300	<0.000010	<0.000010	0.000010	8137300
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8137300	<0.0000050	<0.0000050	0.0000050	8137300
Dissolved Boron (B)	mg/L	<0.010	8137300	<0.010	<0.010	0.010	8137300
Dissolved Cadmium (Cd)	mg/L	0.0000160	8137300	0.0000300	<0.0000050	0.0000050	8137300
Dissolved Chromium (Cr)	mg/L	<0.00010	8137300	<0.00010	<0.00010	0.00010	8137300
Dissolved Cobalt (Co)	mg/L	0.0000240	8137300	0.0000210	<0.0000050	0.0000050	8137300
Dissolved Copper (Cu)	mg/L	0.000196	8137300	0.000228	<0.000050	0.000050	8137300
Dissolved Iron (Fe)	mg/L	0.0027	8137300	0.0183	<0.0010	0.0010	8137300
Dissolved Lead (Pb)	mg/L	<0.0000050	8137300	<0.0000050	<0.0000050	0.0000050	8137300
Dissolved Lithium (Li)	mg/L	0.00286	8137300	0.00306	<0.00050	0.00050	8137300
Dissolved Manganese (Mn)	mg/L	0.00785	8137300	0.0300	<0.000050	0.000050	8137300
Dissolved Molybdenum (Mo)	mg/L	0.000466	8137300	0.00174	<0.000050	0.000050	8137300
Dissolved Nickel (Ni)	mg/L	0.000458	8137300	0.000674	<0.000020	0.000020	8137300
Dissolved Phosphorus (P)	mg/L	<0.0020	8137300	<0.0020	<0.0020	0.0020	8137300
Dissolved Selenium (Se)	mg/L	0.00143	8139141	0.00159	<0.000040	0.000040	8137300
Dissolved Silicon (Si)	mg/L	3.69	8137300	4.03	<0.050	0.050	8137300
Dissolved Silver (Ag)	mg/L	<0.0000050	8137300	<0.0000050	<0.0000050	0.0000050	8137300
Dissolved Strontium (Sr)	mg/L	0.226	8137300	0.211	<0.000050	0.000050	8137300
Dissolved Thallium (Tl)	mg/L	<0.0000020	8137300	<0.0000020	<0.0000020	0.0000020	8137300
Dissolved Tin (Sn)	mg/L	<0.00020	8137300	<0.00020	<0.00020	0.00020	8137300
Dissolved Titanium (Ti)	mg/L	<0.00050	8137300	<0.00050	<0.00050	0.00050	8137300
Dissolved Uranium (U)	mg/L	0.00248	8137300	0.00426	<0.0000020	0.0000020	8137300
Dissolved Vanadium (V)	mg/L	<0.00020	8137300	<0.00020	<0.00020	0.00020	8137300
Dissolved Zinc (Zn)	mg/L	0.00040	8137300	0.00375	<0.00010	0.00010	8137300
Dissolved Zirconium (Zr)	mg/L	<0.00010	8137300	<0.00010	<0.00010	0.00010	8137300
Dissolved Calcium (Ca)	mg/L	72.9	8135145	65.6	<0.050	0.050	8135145

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NU0021		NU0022	NU0023		
Sampling Date		2015/12/02 10:20		2015/12/02 10:00	2015/12/03 09:37		
COC Number		08414227		08414227	08414227		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-19	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	13.8	8135145	14.5	<0.050	0.050	8135145
Dissolved Potassium (K)	mg/L	1.32	8135145	1.35	<0.050	0.050	8135145
Dissolved Sodium (Na)	mg/L	1.28	8135145	1.22	<0.050	0.050	8135145
Dissolved Sulphur (S)	mg/L	12.0	8135145	11.6	<3.0	3.0	8135145
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NU0024	NU0025		NU0031		
Sampling Date		2015/12/01 15:11	2015/12/01 14:13		2015/12/01 11:45		
COC Number		08414227	08414227		08414228		
	UNITS	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	293	268	8135236	263	0.50	8135236
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8137659	<0.0000020	0.0000020	8137659
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00067	0.00064	8137300	0.00076	0.00050	8137300
Dissolved Antimony (Sb)	mg/L	0.000043	0.000042	8137300	0.000060	0.000020	8137300
Dissolved Arsenic (As)	mg/L	0.00105	0.000906	8137300	0.000514	0.000020	8137300
Dissolved Barium (Ba)	mg/L	0.0693	0.0699	8137300	0.0738	0.000020	8137300
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	8137300	<0.000010	0.000010	8137300
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8137300	<0.0000050	0.0000050	8137300
Dissolved Boron (B)	mg/L	<0.010	<0.010	8137300	<0.010	0.010	8137300
Dissolved Cadmium (Cd)	mg/L	0.0000070	0.0000100	8137300	0.0000050	0.0000050	8137300
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	8137300	<0.00010	0.00010	8137300
Dissolved Cobalt (Co)	mg/L	0.0000520	0.0000390	8137300	0.0000110	0.0000050	8137300
Dissolved Copper (Cu)	mg/L	0.000220	0.000237	8137300	0.000353	0.000050	8137300
Dissolved Iron (Fe)	mg/L	0.0802	0.0702 (1)	8139141	0.0128	0.0010	8137300
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	8137300	<0.0000050	0.0000050	8137300
Dissolved Lithium (Li)	mg/L	0.00710	0.00510	8137300	0.00566	0.00050	8137300
Dissolved Manganese (Mn)	mg/L	0.0740	0.0392	8137300	0.000557	0.000050	8137300
Dissolved Molybdenum (Mo)	mg/L	0.00156	0.00135	8137300	0.00103	0.000050	8137300
Dissolved Nickel (Ni)	mg/L	0.00172	0.00113	8137300	0.000663	0.000020	8137300
Dissolved Phosphorus (P)	mg/L	0.0044	0.0034	8137300	<0.0020	0.0020	8137300
Dissolved Selenium (Se)	mg/L	0.000783	0.00114	8137300	0.00107	0.000040	8137300
Dissolved Silicon (Si)	mg/L	6.15	5.13	8137300	4.97	0.050	8137300
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8137300	<0.0000050	0.0000050	8137300
Dissolved Strontium (Sr)	mg/L	0.225	0.233	8137300	0.240	0.000050	8137300
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8137300	<0.0000020	0.0000020	8137300
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8137300	<0.00020	0.00020	8137300
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8137300	<0.00050	0.00050	8137300
Dissolved Uranium (U)	mg/L	0.00318	0.00342	8137300	0.00307	0.0000020	8137300
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8137300	<0.00020	0.00020	8137300
Dissolved Zinc (Zn)	mg/L	0.00048	0.00057 (1)	8139141	0.00023	0.00010	8137300
Dissolved Zirconium (Zr)	mg/L	0.00016	0.00012	8137300	<0.00010	0.00010	8137300

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NU0024	NU0025		NU0031		
Sampling Date		2015/12/01 15:11	2015/12/01 14:13		2015/12/01 11:45		
COC Number		08414227	08414227		08414228		
	UNITS	**KZ-21**	**KZ-22**	**QC Batch**	**KZ-26**	**RDL**	**QC Batch**
Dissolved Calcium (Ca)	mg/L	72.5	69.5	8135145	69.1	0.050	8135145
Dissolved Magnesium (Mg)	mg/L	27.2	22.9	8135145	21.9	0.050	8135145
Dissolved Potassium (K)	mg/L	1.91	1.65	8135145	1.48	0.050	8135145
Dissolved Sodium (Na)	mg/L	1.85	1.70	8135145	1.77	0.050	8135145
Dissolved Sulphur (S)	mg/L	15.2	14.5	8135145	14.4	3.0	8135145
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NU0032		NU0033	NU0034		
Sampling Date		2015/12/01 10:28		2015/12/03 18:45	2015/12/02 17:45		
COC Number		08414228		08414228	08414228		
	UNITS	KZ-28	QC Batch	TRIP BLANK	KZ-6	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	272	8135236	<0.50	165	0.50	8135236
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	8137659	<0.0000020	<0.0000020	0.0000020	8137659
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00067	8137300	<0.00050	0.00108	0.00050	8137300
Dissolved Antimony (Sb)	mg/L	0.000062	8137300	<0.000020	<0.000020	0.000020	8137300
Dissolved Arsenic (As)	mg/L	0.000537	8137300	<0.000020	0.000066	0.000020	8137300
Dissolved Barium (Ba)	mg/L	0.0762	8137300	<0.000020	0.0445	0.000020	8137300
Dissolved Beryllium (Be)	mg/L	<0.000010	8137300	<0.000010	<0.000010	0.000010	8137300
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8137300	<0.0000050	<0.0000050	0.0000050	8137300
Dissolved Boron (B)	mg/L	<0.010	8137300	<0.010	<0.010	0.010	8137300
Dissolved Cadmium (Cd)	mg/L	0.0000050	8137300	<0.0000050	0.0000100	0.0000050	8137300
Dissolved Chromium (Cr)	mg/L	<0.00010	8137300	<0.00010	<0.00010	0.00010	8137300
Dissolved Cobalt (Co)	mg/L	0.0000100	8137300	<0.0000050	0.0000060	0.0000050	8137300
Dissolved Copper (Cu)	mg/L	0.000378	8137300	<0.000050	0.000105	0.000050	8137300
Dissolved Iron (Fe)	mg/L	0.0156 (1)	8139141	<0.0010	0.0083	0.0010	8137300
Dissolved Lead (Pb)	mg/L	<0.0000050	8137300	<0.0000050	<0.0000050	0.0000050	8137300
Dissolved Lithium (Li)	mg/L	0.00550	8137300	<0.00050	0.00082	0.00050	8137300
Dissolved Manganese (Mn)	mg/L	0.000433	8139141	<0.000050	0.000077	0.000050	8137300
Dissolved Molybdenum (Mo)	mg/L	0.00107	8137300	<0.000050	0.000585	0.000050	8137300
Dissolved Nickel (Ni)	mg/L	0.000704	8137300	<0.000020	0.000126	0.000020	8137300
Dissolved Phosphorus (P)	mg/L	0.0025	8137300	<0.0020	<0.0020	0.0020	8137300
Dissolved Selenium (Se)	mg/L	0.00113	8137300	<0.000040	0.00114	0.000040	8137300
Dissolved Silicon (Si)	mg/L	4.96	8137300	<0.050	3.40	0.050	8137300
Dissolved Silver (Ag)	mg/L	<0.0000050	8137300	<0.0000050	<0.0000050	0.0000050	8137300
Dissolved Strontium (Sr)	mg/L	0.239	8137300	<0.000050	0.166	0.000050	8137300
Dissolved Thallium (Tl)	mg/L	<0.0000020	8137300	<0.0000020	<0.0000020	0.0000020	8137300
Dissolved Tin (Sn)	mg/L	<0.00020	8137300	<0.00020	<0.00020	0.00020	8137300
Dissolved Titanium (Ti)	mg/L	<0.00050	8137300	<0.00050	<0.00050	0.00050	8137300
Dissolved Uranium (U)	mg/L	0.00326	8137300	<0.0000020	0.00116	0.0000020	8137300
Dissolved Vanadium (V)	mg/L	<0.00020	8137300	<0.00020	<0.00020	0.00020	8137300
Dissolved Zinc (Zn)	mg/L	0.00025	8137300	<0.00010	0.00016	0.00010	8137300
Dissolved Zirconium (Zr)	mg/L	<0.00010	8137300	<0.00010	<0.00010	0.00010	8137300

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NU0032		NU0033	NU0034		
Sampling Date		2015/12/01 10:28		2015/12/03 18:45	2015/12/02 17:45		
COC Number		08414228		08414228	08414228		
	UNITS	**KZ-28**	**QC Batch**	**TRIP BLANK**	**KZ-6**	**RDL**	**QC Batch**
Dissolved Calcium (Ca)	mg/L	70.4	8135145	<0.050	54.8	0.050	8135145
Dissolved Magnesium (Mg)	mg/L	23.4	8135145	<0.050	6.92	0.050	8135145
Dissolved Potassium (K)	mg/L	1.63	8135145	<0.050	0.916	0.050	8135145
Dissolved Sodium (Na)	mg/L	1.88	8135145	<0.050	0.741	0.050	8135145
Dissolved Sulphur (S)	mg/L	16.1	8135145	<3.0	8.0	3.0	8135145
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NU0016	NU0017	NU0018	NU0019	NU0020		
Sampling Date		2015/12/03 08:21	2015/12/02 16:41	2015/12/02 12:18	2015/12/02 14:41	2015/12/02 09:07		
COC Number		08414227	08414227	08414227	08414227	08414227		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	124	175	199	89.8	236	0.50	8134268
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8137916
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00959	0.0288	0.0226	0.0273	0.0103	0.00050	8136449
Total Antimony (Sb)	mg/L	0.000028	0.000061	0.000041	0.000034	0.000033	0.000020	8136449
Total Arsenic (As)	mg/L	0.000088	0.000428	0.000370	0.000229	0.000505	0.000020	8136449
Total Barium (Ba)	mg/L	0.0695	0.0953	0.0979	0.111	0.0859	0.000020	8136449
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8136449
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8136449
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8136449
Total Cadmium (Cd)	mg/L	0.000237	0.000281	0.0000820	0.0000340	0.0000380	0.0000050	8136449
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8136449
Total Cobalt (Co)	mg/L	0.0000070	0.000156	0.000129	0.0000470	0.0000400	0.0000050	8136449
Total Copper (Cu)	mg/L	0.000541	0.000489	0.000341	0.000500	0.000279	0.000050	8136449
Total Iron (Fe)	mg/L	0.0017	0.710	1.18	0.132	0.0764	0.0010	8136449
Total Lead (Pb)	mg/L	0.0000190	0.000177	0.0000600	0.0000520	0.0000200	0.0000050	8136449
Total Lithium (Li)	mg/L	0.00090	0.00241	0.00306	0.00130	0.00312	0.00050	8136449
Total Manganese (Mn)	mg/L	<0.000050	0.141	0.0898	0.0420	0.0320	0.000050	8136449
Total Molybdenum (Mo)	mg/L	0.000700	0.000567	0.000641	0.000633	0.00107	0.000050	8136449
Total Nickel (Ni)	mg/L	0.000292	0.000590	0.000415	0.000398	0.000650	0.000020	8136449
Total Phosphorus (P)	mg/L	<0.0020	0.0050	0.0044	0.0027	0.0023	0.0020	8136449
Total Selenium (Se)	mg/L	0.00178	0.00111	0.00124	0.000296	0.00134	0.000040	8136449
Total Silicon (Si)	mg/L	2.62	3.68	3.88	3.74	3.76	0.050	8136449
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8136449
Total Strontium (Sr)	mg/L	0.130	0.189	0.212	0.0911	0.216	0.000050	8136449
Total Thallium (Tl)	mg/L	0.0000020	0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8136449
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8136449
Total Titanium (Ti)	mg/L	<0.00050	0.00058	<0.00050	0.00102	<0.00050	0.00050	8136449
Total Uranium (U)	mg/L	0.00348	0.00146	0.00164	0.00107	0.00360	0.0000020	8136449
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8136449
Total Zinc (Zn)	mg/L	0.0286	0.0761	0.0200	0.00377	0.00435	0.00010	8136449
Total Zirconium (Zr)	mg/L	<0.00010	0.00011	<0.00010	<0.00010	<0.00010	0.00010	8136449
Total Calcium (Ca)	mg/L	40.7	57.3	66.2	30.3	69.8	0.050	8135146

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NU0016	NU0017	NU0018	NU0019	NU0020		
Sampling Date		2015/12/03 08:21	2015/12/02 16:41	2015/12/02 12:18	2015/12/02 14:41	2015/12/02 09:07		
COC Number		08414227	08414227	08414227	08414227	08414227		
	UNITS	**KZ-2**	**KZ-7**	**KZ-9**	**KZ-13**	**KZ-15**	**RDL**	**QC Batch**
Total Magnesium (Mg)	mg/L	5.38	7.62	8.11	3.44	14.9	0.050	8135146
Total Potassium (K)	mg/L	2.07	1.78	1.71	1.84	1.44	0.050	8135146
Total Sodium (Na)	mg/L	0.890	1.23	1.36	1.11	1.32	0.050	8135146
Total Sulphur (S)	mg/L	18.0	13.2	11.4	5.6	11.5	3.0	8135146

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NU0021		NU0022	NU0023	NU0024		
Sampling Date		2015/12/02 10:20		2015/12/02 10:00	2015/12/03 09:37	2015/12/01 15:11		
COC Number		08414227		08414227	08414227	08414227		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-19	KZ-21	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	238	8134268	221	<0.50	303	0.50	8134268
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	8137916	<0.0000020	<0.0000020	<0.0000020	0.0000020	8137985
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0103	8136449	0.0140	0.00609	0.00082	0.00050	8136449
Total Antimony (Sb)	mg/L	<0.000020	8136449	0.000051	<0.000020	0.000049	0.000020	8136449
Total Arsenic (As)	mg/L	0.000247	8136449	0.000761	<0.000020	0.00114	0.000020	8136449
Total Barium (Ba)	mg/L	0.0914	8136449	0.0914	<0.000020	0.0706	0.000020	8136449
Total Beryllium (Be)	mg/L	<0.000010	8136449	<0.000010	<0.000010	<0.000010	0.000010	8136449
Total Bismuth (Bi)	mg/L	<0.0000050	8136449	<0.0000050	<0.0000050	<0.0000050	0.0000050	8136449
Total Boron (B)	mg/L	<0.010	8136449	<0.010	<0.010	<0.010	0.010	8136449
Total Cadmium (Cd)	mg/L	0.0000210	8136449	0.0000500	<0.0000050	0.0000070	0.0000050	8136449
Total Chromium (Cr)	mg/L	<0.00010	8136449	<0.00010	<0.00010	<0.00010	0.00010	8136449
Total Cobalt (Co)	mg/L	0.0000310	8136449	0.0000570	<0.0000050	0.0000600	0.0000050	8136449
Total Copper (Cu)	mg/L	0.000261	8136449	0.000330	<0.000050	0.000217	0.000050	8136449
Total Iron (Fe)	mg/L	0.0224	8136449	0.141	<0.0010	0.0965	0.0010	8136449
Total Lead (Pb)	mg/L	0.0000090	8136449	0.0000360	<0.0000050	<0.0000050	0.0000050	8136449
Total Lithium (Li)	mg/L	0.00252	8136449	0.00330	<0.00050	0.00686	0.00050	8136449
Total Manganese (Mn)	mg/L	0.00984	8136449	0.0556	<0.000050	0.0804	0.000050	8136449
Total Molybdenum (Mo)	mg/L	0.000473	8136449	0.00173	<0.000050	0.00161	0.000050	8136449
Total Nickel (Ni)	mg/L	0.000530	8136449	0.000786	<0.000020	0.00180	0.000020	8136449
Total Phosphorus (P)	mg/L	<0.0020	8136449	0.0035	<0.0020	0.0057	0.0020	8136449
Total Selenium (Se)	mg/L	0.00134	8136449	0.00142	<0.000040	0.000800	0.000040	8136449
Total Silicon (Si)	mg/L	3.62	8136449	3.79	<0.050	6.48	0.050	8136449
Total Silver (Ag)	mg/L	<0.0000050	8136449	<0.0000050	<0.0000050	<0.0000050	0.0000050	8136449
Total Strontium (Sr)	mg/L	0.235	8136449	0.208	0.000097	0.251	0.000050	8136449
Total Thallium (Tl)	mg/L	<0.0000020	8136449	<0.0000020	<0.0000020	<0.0000020	0.0000020	8136449
Total Tin (Sn)	mg/L	<0.00020	8136449	<0.00020	<0.00020	<0.00020	0.00020	8136449
Total Titanium (Ti)	mg/L	<0.00050	8136449	<0.00050	<0.00050	<0.00050	0.00050	8136449
Total Uranium (U)	mg/L	0.00265	8136449	0.00491	<0.0000020	0.00336	0.0000020	8136449
Total Vanadium (V)	mg/L	<0.00020	8136449	<0.00020	<0.00020	<0.00020	0.00020	8136449
Total Zinc (Zn)	mg/L	0.00080	8136449	0.00724	0.00013	0.00041	0.00010	8136449
Total Zirconium (Zr)	mg/L	<0.00010	8136449	<0.00010	<0.00010	0.00018	0.00010	8136449
Total Calcium (Ca)	mg/L	70.9	8135146	64.5	<0.050	74.2	0.050	8135146
RDL = Reportable Detection Limit								

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NU0021		NU0022	NU0023	NU0024		
Sampling Date		2015/12/02 10:20		2015/12/02 10:00	2015/12/03 09:37	2015/12/01 15:11		
COC Number		08414227		08414227	08414227	08414227		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-19	KZ-21	RDL	QC Batch
Total Magnesium (Mg)	mg/L	14.7	8135146	14.5	<0.050	28.7	0.050	8135146
Total Potassium (K)	mg/L	1.42	8135146	1.44	<0.050	2.06	0.050	8135146
Total Sodium (Na)	mg/L	1.38	8135146	1.27	<0.050	1.98	0.050	8135146
Total Sulphur (S)	mg/L	11.1	8135146	11.1	<3.0	16.5	3.0	8135146

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NU0025	NU0031	NU0032	NU0033	NU0034		
Sampling Date		2015/12/01 14:13	2015/12/01 11:45	2015/12/01 10:28	2015/12/03 18:45	2015/12/02 17:45		
COC Number		08414227	08414228	08414228	08414228	08414228		
	UNITS	KZ-22	KZ-26	KZ-28	TRIP BLANK	KZ-6	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	273	273	265	<0.50	166	0.50	8134268
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8137985
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00074	0.00080	0.00097	<0.00050	0.00117	0.00050	8136449
Total Antimony (Sb)	mg/L	0.000040	0.000064	0.000063	<0.000020	<0.000020	0.000020	8136449
Total Arsenic (As)	mg/L	0.000953	0.000559	0.000532	<0.000020	0.000069	0.000020	8136449
Total Barium (Ba)	mg/L	0.0759	0.0792	0.0782	<0.000020	0.0446	0.000020	8136449
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8136449
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8136449
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8136449
Total Cadmium (Cd)	mg/L	0.0000110	0.0000050	0.0000060	<0.0000050	0.0000090	0.0000050	8136449
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8136449
Total Cobalt (Co)	mg/L	0.0000390	0.0000100	0.0000100	<0.0000050	0.0000080	0.0000050	8136449
Total Copper (Cu)	mg/L	0.000240	0.000341	0.000327	<0.000050	0.000103	0.000050	8136449
Total Iron (Fe)	mg/L	0.0546	0.0166	0.0111	<0.0010	0.0087	0.0010	8136449
Total Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8136449
Total Lithium (Li)	mg/L	0.00572	0.00587	0.00613	<0.00050	0.00072	0.00050	8136449
Total Manganese (Mn)	mg/L	0.0392	0.000649	0.000595	<0.000050	0.000105	0.000050	8136449
Total Molybdenum (Mo)	mg/L	0.00140	0.00109	0.00106	<0.000050	0.000570	0.000050	8136449
Total Nickel (Ni)	mg/L	0.00111	0.000672	0.000639	<0.000020	0.000120	0.000020	8136449
Total Phosphorus (P)	mg/L	0.0033	<0.0020	0.0026	<0.0020	0.0034	0.0020	8136449
Total Selenium (Se)	mg/L	0.00115	0.00116	0.00117	<0.000040	0.00108	0.000040	8136449
Total Silicon (Si)	mg/L	5.44	5.19	5.11	<0.050	3.36	0.050	8136449
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8136449
Total Strontium (Sr)	mg/L	0.244	0.248	0.244	<0.000050	0.166	0.000050	8136449
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8136449
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8136449
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8136449
Total Uranium (U)	mg/L	0.00349	0.00325	0.00318	0.0000040	0.00111	0.0000020	8136449
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8136449
Total Zinc (Zn)	mg/L	0.00043	0.00028	0.00019	<0.00010	0.00018	0.00010	8136449
Total Zirconium (Zr)	mg/L	0.00011	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8136449
Total Calcium (Ca)	mg/L	71.3	73.2	70.7	<0.050	55.1	0.050	8135146

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NU0025	NU0031	NU0032	NU0033	NU0034		
Sampling Date		2015/12/01 14:13	2015/12/01 11:45	2015/12/01 10:28	2015/12/03 18:45	2015/12/02 17:45		
COC Number		08414227	08414228	08414228	08414228	08414228		
	UNITS	**KZ-22**	**KZ-26**	**KZ-28**	**TRIP BLANK**	**KZ-6**	**RDL**	**QC Batch**
Total Magnesium (Mg)	mg/L	23.1	22.0	21.6	<0.050	7.04	0.050	8135146
Total Potassium (K)	mg/L	1.72	1.57	1.51	<0.050	0.936	0.050	8135146
Total Sodium (Na)	mg/L	1.75	1.76	1.77	<0.050	0.760	0.050	8135146
Total Sulphur (S)	mg/L	14.9	15.2	14.4	<3.0	8.4	3.0	8135146
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0016
Sample ID: KZ-2
Matrix: Water

Collected: 2015/12/03
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	Isabel Choi
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	Maria Maclean
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8137916	2015/12/08	2015/12/08	Edwin Lamigo
Ion Balance	CALC	8134200	N/A	2015/12/08	Automated Statchk
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	Lucy Luo
pH Water	AT/ALK	8135722	N/A	2015/12/05	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	Tessa Millsap
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	Tessa Millsap
Total Suspended Solids-Low Level	BAL/BAL	8137550	2015/12/08	2015/12/08	Coco Guo

Maxxam ID: NU0016 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2015/12/03
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	Tatyana Serzhanova
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	Andrew An

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0017 **Collected:** 2015/12/02
Sample ID: KZ-7 **Shipped:**
Matrix: Water **Received:** 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	Isabel Choi
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	Maria Maclean
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8137916	2015/12/08	2015/12/08	Edwin Lamigo
Ion Balance	CALC	8134200	N/A	2015/12/08	Automated Statchk
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	Lucy Luo
pH Water	AT/ALK	8135722	N/A	2015/12/05	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	Tessa Millsap
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	Tessa Millsap
Total Suspended Solids-Low Level	BAL/BAL	8137550	2015/12/08	2015/12/08	Coco Guo

Maxxam ID: NU0017 Dup **Collected:** 2015/12/02
Sample ID: KZ-7 **Shipped:**
Matrix: Water **Received:** 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Wilson Au Yueng
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	Tessa Millsap

Maxxam ID: NU0018 **Collected:** 2015/12/02
Sample ID: KZ-9 **Shipped:**
Matrix: Water **Received:** 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Wilson Au Yueng

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0018
Sample ID: KZ-9
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	Isabel Choi
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	Maria Maclean
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8137916	2015/12/08	2015/12/08	Edwin Lamigo
Ion Balance	CALC	8134200	N/A	2015/12/08	Automated Statchk
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	Lucy Luo
pH Water	AT/ALK	8135722	N/A	2015/12/05	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	Tessa Millsap
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	Tessa Millsap
Total Suspended Solids-Low Level	BAL/BAL	8137550	2015/12/08	2015/12/08	Coco Guo

Maxxam ID: NU0019
Sample ID: KZ-13
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	Isabel Choi
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	Maria Maclean
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0019
Sample ID: KZ-13
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8137916	2015/12/08	2015/12/08	Edwin Lamigo
Ion Balance	CALC	8134200	N/A	2015/12/08	Automated Statchk
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	Lucy Luo
pH Water	AT/ALK	8135722	N/A	2015/12/05	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	Tessa Millsap
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	Tessa Millsap
Total Suspended Solids-Low Level	BAL/BAL	8137550	2015/12/08	2015/12/08	Coco Guo

Maxxam ID: NU0020
Sample ID: KZ-15
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	Isabel Choi
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	Maria Maclean
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8137916	2015/12/08	2015/12/08	Edwin Lamigo
Ion Balance	CALC	8134200	N/A	2015/12/08	Automated Statchk
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	Andrew An

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0020
Sample ID: KZ-15
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	Lucy Luo
pH Water	AT/ALK	8135722	N/A	2015/12/05	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	Tessa Millsap
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	Tessa Millsap
Total Suspended Solids-Low Level	BAL/BAL	8137550	2015/12/08	2015/12/08	Coco Guo

Maxxam ID: NU0021
Sample ID: KZ-16
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	Isabel Choi
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	Maria Maclean
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8137916	2015/12/08	2015/12/08	Edwin Lamigo
Ion Balance	CALC	8134200	N/A	2015/12/08	Automated Statchk
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	Lucy Luo
pH Water	AT/ALK	8135722	N/A	2015/12/05	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	Tessa Millsap
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	Tessa Millsap

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0021 **Collected:** 2015/12/02
Sample ID: KZ-16 **Shipped:**
Matrix: Water **Received:** 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Suspended Solids-Low Level	BAL/BAL	8137550	2015/12/08	2015/12/08	Coco Guo

Maxxam ID: NU0021 Dup **Collected:** 2015/12/02
Sample ID: KZ-16 **Shipped:**
Matrix: Water **Received:** 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8137916	2015/12/08	2015/12/08	Edwin Lamigo

Maxxam ID: NU0022 **Collected:** 2015/12/02
Sample ID: KZ-17 **Shipped:**
Matrix: Water **Received:** 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	Isabel Choi
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	Maria Maclean
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8137985	2015/12/08	2015/12/08	Edwin Lamigo
Ion Balance	CALC	8134200	N/A	2015/12/08	Automated Statchk
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	Lucy Luo
pH Water	AT/ALK	8135722	N/A	2015/12/05	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	Tessa Millsap
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	Tessa Millsap
Total Suspended Solids-Low Level	BAL/BAL	8137550	2015/12/08	2015/12/08	Coco Guo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0023
Sample ID: KZ-19
Matrix: Water

Collected: 2015/12/03
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	Isabel Choi
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	Maria Maclean
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8137985	2015/12/08	2015/12/08	Edwin Lamigo
Ion Balance	CALC	8134200	N/A	2015/12/08	Automated Statchk
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	Lucy Luo
pH Water	AT/ALK	8135722	N/A	2015/12/05	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	Tessa Millsap
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	Tessa Millsap
Total Suspended Solids-Low Level	BAL/BAL	8137550	2015/12/08	2015/12/08	Coco Guo

Maxxam ID: NU0024
Sample ID: KZ-21
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	Isabel Choi
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	Maria Maclean
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	Simon Chan

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0024
Sample ID: KZ-21
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8137985	2015/12/08	2015/12/08	Edwin Lamigo
Ion Balance	CALC	8134200	N/A	2015/12/08	Automated Statchk
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	David Huang
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	Lucy Luo
pH Water	AT/ALK	8135722	N/A	2015/12/05	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	Tessa Millsap
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	Tessa Millsap
Total Suspended Solids-Low Level	BAL/BAL	8136208	2015/12/07	2015/12/08	Coco Guo

Maxxam ID: NU0025
Sample ID: KZ-22
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	Isabel Choi
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	Maria Maclean
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8137985	2015/12/08	2015/12/08	Edwin Lamigo
Ion Balance	CALC	8134200	N/A	2015/12/08	Automated Statchk
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	David Huang
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0025
Sample ID: KZ-22
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	Lucy Luo
pH Water	AT/ALK	8135722	N/A	2015/12/05	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	Tessa Millsap
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	Tessa Millsap
Total Suspended Solids-Low Level	BAL/BAL	8136208	2015/12/07	2015/12/08	Coco Guo

Maxxam ID: NU0025 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	Isabel Choi

Maxxam ID: NU0031
Sample ID: KZ-26
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8135725	2015/12/05	2015/12/05	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8136855	N/A	2015/12/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	Isabel Choi
Conductance - water	AT/ALK	8135728	N/A	2015/12/05	Maria Maclean
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8137985	2015/12/08	2015/12/08	Edwin Lamigo
Ion Balance	CALC	8134200	N/A	2015/12/08	Automated Statchk
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	Sherryl Flores

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0031
Sample ID: KZ-26
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	Lucy Luo
pH Water	AT/ALK	8135727	N/A	2015/12/05	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8136861	N/A	2015/12/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	Tessa Millsap
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	Tessa Millsap
Total Suspended Solids-Low Level	BAL/BAL	8136208	2015/12/07	2015/12/08	Coco Guo

Maxxam ID: NU0031 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	Simon Chan
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	Isaac Wang

Maxxam ID: NU0032
Sample ID: KZ-28
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	Isabel Choi
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	Maria Maclean
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8137985	2015/12/08	2015/12/08	Edwin Lamigo
Ion Balance	CALC	8134200	N/A	2015/12/08	Automated Statchk
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	David Huang
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	Sherryl Flores

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0032
Sample ID: KZ-28
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	Lucy Luo
pH Water	AT/ALK	8135722	N/A	2015/12/05	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	Tessa Millsap
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	Tessa Millsap
Total Suspended Solids-Low Level	BAL/BAL	8136208	2015/12/07	2015/12/08	Coco Guo

Maxxam ID: NU0033
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/12/03
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	Tessa Millsap
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8135780	N/A	2015/12/07	Isabel Choi
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	Maria Maclean
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8137985	2015/12/08	2015/12/08	Edwin Lamigo
Ion Balance	CALC	8134200	N/A	2015/12/08	Automated Statchk
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	Automated Statchk
pH Water	AT/ALK	8135722	N/A	2015/12/05	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	Tessa Millsap
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	Tessa Millsap
Total Suspended Solids-Low Level	BAL/BAL	8136208	2015/12/07	2015/12/08	Coco Guo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0033 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/12/03
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8135780	N/A	2015/12/07	Isabel Choi
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	Edwin Lamigo

Maxxam ID: NU0034
Sample ID: KZ-6
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	Tessa Millsap
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	Isabel Choi
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	Maria Maclean
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	Simon Chan
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8137985	2015/12/08	2015/12/08	Edwin Lamigo
Ion Balance	CALC	8134200	N/A	2015/12/08	Automated Statchk
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	Lucy Luo
pH Water	AT/ALK	8135722	N/A	2015/12/05	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	Tessa Millsap
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	Tessa Millsap
Total Suspended Solids-Low Level	BAL/BAL	8137550	2015/12/08	2015/12/08	Coco Guo

Maxxam ID: NU0034 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	Tessa Millsap

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
Package 2	3.0°C
Package 3	1.7°C
Package 4	2.0°C

Sample NU0021, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NU0024, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NU0025, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NU0032, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8135721	Alkalinity (PP as CaCO3)	2015/12/05					<0.50	mg/L	NC	20
8135721	Alkalinity (Total as CaCO3)	2015/12/05	NC	80 - 120	94	80 - 120	<0.50	mg/L	0.41	20
8135721	Bicarbonate (HCO3)	2015/12/05					<0.50	mg/L	0.41	20
8135721	Carbonate (CO3)	2015/12/05					<0.50	mg/L	NC	20
8135721	Hydroxide (OH)	2015/12/05					<0.50	mg/L	NC	20
8135722	pH	2015/12/05			102	97 - 103			0.25	N/A
8135723	Conductivity	2015/12/05			101	80 - 120	<1.0	uS/cm	0.67	20
8135725	Alkalinity (PP as CaCO3)	2015/12/05					<0.50	mg/L	NC	20
8135725	Alkalinity (Total as CaCO3)	2015/12/05	NC	80 - 120	96	80 - 120	0.63, RDL=0.50	mg/L	3.9	20
8135725	Bicarbonate (HCO3)	2015/12/05					0.77, RDL=0.50	mg/L	3.9	20
8135725	Carbonate (CO3)	2015/12/05					<0.50	mg/L	NC	20
8135725	Hydroxide (OH)	2015/12/05					<0.50	mg/L	NC	20
8135727	pH	2015/12/05			102	97 - 103			0.13	N/A
8135728	Conductivity	2015/12/05			101	80 - 120	<1.0	uS/cm	0.43	20
8135760	Nitrate plus Nitrite (N)	2015/12/05	99	80 - 120	106	80 - 120	<0.0020	mg/L	0	25
8135761	Nitrite (N)	2015/12/05	100	80 - 120	105	80 - 120	<0.0020	mg/L	NC	25
8135778	Total Ammonia (N)	2015/12/07	NC	80 - 120	96	80 - 120	<0.0050	mg/L	0.98	20
8135779	Dissolved Phosphorus (P)	2015/12/05	NC	80 - 120	91	80 - 120	<0.0020	mg/L	0.12	20
8135780	Dissolved Organic Carbon (C)	2015/12/07	99	80 - 120	105	80 - 120	<0.50	mg/L	NC	20
8135783	Total Phosphorus (P)	2015/12/05	94	80 - 120	94	80 - 120	<0.0020	mg/L	NC	20
8135787	True Colour	2015/12/05			106	80 - 120	<5.0	Col. Unit	NC	20
8136208	Total Suspended Solids	2015/12/07			102	80 - 120	<1.0	mg/L		
8136449	Total Aluminum (Al)	2015/12/08	99	80 - 120	98	80 - 120	<0.00050	mg/L	14	20
8136449	Total Antimony (Sb)	2015/12/08	101	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8136449	Total Arsenic (As)	2015/12/08	97	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8136449	Total Barium (Ba)	2015/12/08	100	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8136449	Total Beryllium (Be)	2015/12/08	94	80 - 120	94	80 - 120	<0.000010	mg/L	NC	20
8136449	Total Bismuth (Bi)	2015/12/08	99	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8136449	Total Boron (B)	2015/12/08	100	80 - 120	97	80 - 120	<0.010	mg/L	NC	20
8136449	Total Cadmium (Cd)	2015/12/08	97	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8136449	Total Chromium (Cr)	2015/12/08	99	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8136449	Total Cobalt (Co)	2015/12/08	100	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8136449	Total Copper (Cu)	2015/12/08	96	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8136449	Total Iron (Fe)	2015/12/08	108	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
8136449	Total Lead (Pb)	2015/12/08	103	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8136449	Total Lithium (Li)	2015/12/08	93	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20
8136449	Total Manganese (Mn)	2015/12/08	96	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8136449	Total Molybdenum (Mo)	2015/12/08	96	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8136449	Total Nickel (Ni)	2015/12/08	96	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8136449	Total Phosphorus (P)	2015/12/08					<0.0020	mg/L		
8136449	Total Selenium (Se)	2015/12/08	92	80 - 120	92	80 - 120	<0.000040	mg/L	NC	20
8136449	Total Silicon (Si)	2015/12/08					<0.050	mg/L	0.69	20
8136449	Total Silver (Ag)	2015/12/08	90	80 - 120	82	80 - 120	<0.0000050	mg/L	NC	20
8136449	Total Strontium (Sr)	2015/12/08	96	80 - 120	93	80 - 120	<0.000050	mg/L	NC	20
8136449	Total Thallium (Tl)	2015/12/08	98	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8136449	Total Tin (Sn)	2015/12/08	101	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8136449	Total Titanium (Ti)	2015/12/08	92	80 - 120	89	80 - 120	<0.00050	mg/L	NC	20
8136449	Total Uranium (U)	2015/12/08	105	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8136449	Total Vanadium (V)	2015/12/08	105	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
8136449	Total Zinc (Zn)	2015/12/08	96	80 - 120	94	80 - 120	<0.00010	mg/L	0.63	20
8136449	Total Zirconium (Zr)	2015/12/08					<0.00010	mg/L	NC	20
8136813	Dissolved Organic Carbon (C)	2015/12/07	104	80 - 120	108	80 - 120	<0.50	mg/L	NC	20
8136855	Dissolved Chloride (Cl)	2015/12/07	NC	80 - 120	97	80 - 120	<0.50	mg/L	9.4	20
8136861	Dissolved Sulphate (SO4)	2015/12/07	NC	80 - 120	108	80 - 120	<0.50	mg/L	NC	20
8136863	Dissolved Chloride (Cl)	2015/12/07	102	80 - 120	109	80 - 120	<0.50	mg/L	1.1	20
8136867	Dissolved Sulphate (SO4)	2015/12/07	NC	80 - 120	90	80 - 120	<0.50	mg/L	2.1	20
8137300	Dissolved Aluminum (Al)	2015/12/08	106	80 - 120	120	80 - 120	<0.00050	mg/L	NC	20
8137300	Dissolved Antimony (Sb)	2015/12/08	103	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8137300	Dissolved Arsenic (As)	2015/12/08	104	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8137300	Dissolved Barium (Ba)	2015/12/08	NC	80 - 120	100	80 - 120	<0.000020	mg/L	0.84	20
8137300	Dissolved Beryllium (Be)	2015/12/08	110	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8137300	Dissolved Bismuth (Bi)	2015/12/08	101	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20

Maxxam Job #: B5A8198
Report Date: 2015/12/11

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8137300	Dissolved Boron (B)	2015/12/08	113	80 - 120	119	80 - 120	<0.010	mg/L	NC	20
8137300	Dissolved Cadmium (Cd)	2015/12/08	98	80 - 120	99	80 - 120	<0.0000050	mg/L	2.3	20
8137300	Dissolved Chromium (Cr)	2015/12/08	102	80 - 120	107	80 - 120	<0.00010	mg/L	NC	20
8137300	Dissolved Cobalt (Co)	2015/12/08	101	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8137300	Dissolved Copper (Cu)	2015/12/08	99	80 - 120	101	80 - 120	<0.000050	mg/L	1.9	20
8137300	Dissolved Iron (Fe)	2015/12/08	102	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
8137300	Dissolved Lead (Pb)	2015/12/08	106	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8137300	Dissolved Lithium (Li)	2015/12/08	98	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8137300	Dissolved Manganese (Mn)	2015/12/08	98	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8137300	Dissolved Molybdenum (Mo)	2015/12/08	NC	80 - 120	101	80 - 120	<0.000050	mg/L	0.75	20
8137300	Dissolved Nickel (Ni)	2015/12/08	99	80 - 120	106	80 - 120	<0.000020	mg/L	1.8	20
8137300	Dissolved Phosphorus (P)	2015/12/08					<0.0020	mg/L	NC	20
8137300	Dissolved Selenium (Se)	2015/12/08	100	80 - 120	96	80 - 120	<0.000040	mg/L	0.78	20
8137300	Dissolved Silicon (Si)	2015/12/08					<0.050	mg/L	2.3	20
8137300	Dissolved Silver (Ag)	2015/12/08	85	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8137300	Dissolved Strontium (Sr)	2015/12/08	NC	80 - 120	98	80 - 120	<0.000050	mg/L	1.4	20
8137300	Dissolved Thallium (Tl)	2015/12/08	105	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8137300	Dissolved Tin (Sn)	2015/12/08	101	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8137300	Dissolved Titanium (Ti)	2015/12/08	97	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8137300	Dissolved Uranium (U)	2015/12/08	112	80 - 120	107	80 - 120	<0.0000020	mg/L	3.0	20
8137300	Dissolved Vanadium (V)	2015/12/08	107	80 - 120	110	80 - 120	<0.00020	mg/L	NC	20
8137300	Dissolved Zinc (Zn)	2015/12/08	NC	80 - 120	106	80 - 120	<0.00010	mg/L	4.2	20
8137300	Dissolved Zirconium (Zr)	2015/12/08					<0.00010	mg/L	NC	20
8137550	Total Suspended Solids	2015/12/08			101	80 - 120	<1.0	mg/L		
8137659	Dissolved Mercury (Hg)	2015/12/08	100	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20
8137883	Acidity (pH 4.5)	2015/12/08					<0.50	mg/L	NC	20
8137883	Acidity (pH 8.3)	2015/12/08			100	80 - 120	<0.50	mg/L	NC	20
8137916	Total Mercury (Hg)	2015/12/08	96	80 - 120	93	80 - 120	<0.0000020	mg/L	NC	20
8137985	Total Mercury (Hg)	2015/12/08	93	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8138190	Strong Acid Dissoc. Cyanide (CN)	2015/12/08	99	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8138236	Fluoride (F)	2015/12/07	94	80 - 120	94	80 - 120	<0.010	mg/L	0	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8138245	Weak Acid Dissoc. Cyanide (CN)	2015/12/08	100	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8139141	Dissolved Iron (Fe)	2015/12/09	NC	80 - 120	105	80 - 120	<0.0010	mg/L	4.0	20
8139141	Dissolved Manganese (Mn)	2015/12/09	NC	80 - 120	100	80 - 120	<0.000050	mg/L	1.3	20
8139141	Dissolved Selenium (Se)	2015/12/09	96	80 - 120	94	80 - 120	<0.000040	mg/L	NC	20
8139141	Dissolved Zinc (Zn)	2015/12/09	99	80 - 120	100	80 - 120	<0.00010	mg/L	9.0	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

David Huang, BBY Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Updated CoC

CHAIN OF CUSTODY RECORD

08414227

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[X] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 1 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: Y1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		Date Required:
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	A. BIER	Rush Confirmation #:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water [ ] CCME (Specify) [ ] Other (Specify) [ ] Drinking Water [ ] BC Water Quality	[ ] Return Cooler [ ] Ship Sample Bottles (Please Specify) USE SCENARIO # 12685

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (WAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	LABORATORY USE ONLY: CUSTODY SEAL Y / N (Present / Intact)	COOLER TEMPERATURES	COMMENTS
1	KZ-2	MM0016	2015/12/03	08:21	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		UA		11.2
2	KZ-7	MM0017	2015/12/02	16:41	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		UA		3.3
3	KZ-9	MM0018	2015/12/02	12:18	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		UA		2.2/1.2.3
4	KZ-13	MM0019	2015/12/02	19:41	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12				
5	KZ-15	MM0020	2015/12/02	09:07	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12				
6	KZ-16	MM0021	2015/12/02	10:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12				
7	KZ-17	MM0022	2015/12/02	10:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12				
8	KZ-19	MM0023	2015/12/03	07:37	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12				
9	KZ-21	MM0024	2015/12/01	15:11	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12				
10	KZ-22	MM0025	2015/12/01	19:13	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12				

COOLING MEDIA PRESENT Y / N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
A.Bier / A.BIER	2015/12/03	19:45	MM Laurel Berthier	2015/12/04	13:40	B5A8198

B5A8198_COC

Updated CoC

CHAIN OF CUSTODY RECORD

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

08414228

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Info		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[X] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	A. BER	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Y / N (Present / Intact) — COOLER TEMPERATURES

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	Present	Intact	COOLER TEMPERATURES
1	KZ-26	NH0031	2015/12/01	11:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		NA		1,1,2
2	KZ-28	NH0032	2015/12/01	10:28	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		NA		3,3,3
3	Trip Blank	NH0033	N/A	N/A	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		NA		2,2,1,2,3
4	KZ-6	NH0034	2015/12/02	17:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12				
5																							
6																							
7																							
8																							
9																							
10																							

COOLING MEDIA PRESENT Y / N

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
A Ber / A BER	2015/12/03	18:45	Laurel Berthier	2015/12/04	13:40	B5A8128

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08417751, 08417753

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/09
Report #: R2193597
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B605186
Received: 2016/01/22, 12:50

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	13	N/A	2016/01/25	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	13	2016/01/25	2016/01/25	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	13	N/A	2016/01/25	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	13	N/A	2016/01/25	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	13	N/A	2016/01/25	BBY6SOP-00004	SM 22 4500-CN O m
Colour (True) by Kone Lab	13	N/A	2016/01/23	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	12	N/A	2016/01/26	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2016/01/26	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	13	N/A	2016/01/25	BBY6SOP-00026	SM 22 2510 B m
Fluoride	13	N/A	2016/01/25	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	13	N/A	2016/01/26	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	13	N/A	2016/01/26	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	13	N/A	2016/01/26	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	13	2016/01/26	2016/01/26	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	13	N/A	2016/01/26	BBY WI-00033	SM 22 1030E
Sum of cations, anions	13	N/A	2016/01/26	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	13	N/A	2016/01/26	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	13	N/A	2016/01/26	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	13	N/A	2016/01/26	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	13	N/A	2016/01/26	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Unpreserved)	13	N/A	2016/01/25	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	13	N/A	2016/01/23	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	13	N/A	2016/01/23	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	13	N/A	2016/01/23	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	12	N/A	2016/01/25	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	13	N/A	2016/01/25	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	13	N/A	2016/01/25	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	13	2016/01/26	2016/01/26	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	13	N/A	2016/01/26	BBY6SOP-00013	SM 22 4500-P E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08417751, 08417753

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/09
Report #: R2193597
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B605186
Received: 2016/01/22, 12:50

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Suspended Solids-Low Level	13	2016/01/25	2016/01/26	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NZ7218		NZ7219		NZ7220		
Sampling Date		2016/01/20 15:00		2016/01/20 13:34		2016/01/20 12:15		
COC Number		08417751		08417751		08417751		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.7	8172804	3.7	8172804	3.8	N/A	8172804
Cation Sum	meq/L	2.7	8172804	3.7	8172804	3.8	N/A	8172804
Filter and HNO3 Preservation	N/A	LAB	8173876	LAB	8173876	LAB	N/A	8173876
Ion Balance	N/A	1.0	8172803	1.0	8172803	1.0	0.010	8172803
Nitrate (N)	mg/L	0.163	8173137	0.173	8173137	0.125	0.0020	8173137
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00053	8174205	<0.00050	8174205	0.00058	0.00050	8174205
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00062	8174322	<0.00050	8174322	0.00067	0.00050	8174322
Fluoride (F)	mg/L	0.051	8174942	0.066	8174940	0.073	0.010	8174942
Dissolved Organic Carbon (C)	mg/L	0.80	8175678	1.27	8175678	1.61	0.50	8175678
Acidity (pH 4.5)	mg/L	<0.50	8174238	<0.50	8174238	<0.50	0.50	8174238
Alkalinity (Total as CaCO3)	mg/L	79.1	8174445	160	8174445	153	0.50	8174453
Acidity (pH 8.3)	mg/L	1.92	8174238	<0.50	8174238	<0.50	0.50	8174238
Alkalinity (PP as CaCO3)	mg/L	<0.50	8174445	<0.50	8174445	<0.50	0.50	8174453
Bicarbonate (HCO3)	mg/L	96.5	8174445	195	8174445	187	0.50	8174453
Carbonate (CO3)	mg/L	<0.50	8174445	<0.50	8174445	<0.50	0.50	8174453
Hydroxide (OH)	mg/L	<0.50	8174445	<0.50	8174445	<0.50	0.50	8174453
Anions								
Dissolved Sulphate (SO4)	mg/L	52.7	8174515	23.9	8174512	36.2	0.50	8174515
Dissolved Chloride (Cl)	mg/L	<0.50	8174513	<0.50	8174509	0.63	0.50	8174513
MISCELLANEOUS								
True Colour	Col. Unit	<5.0	8175668	<5.0	8175668	10.7	5.0	8175668
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	8175680	0.0027 (1)	8175680	0.0025 (1)	0.0020	8175680
Total Ammonia (N)	mg/L	0.016 (1)	8174601	0.012 (1)	8174601	0.038 (1)	0.0050	8174601
Nitrate plus Nitrite (N)	mg/L	0.163	8173573	0.173	8173573	0.125	0.0020	8173573
Nitrite (N)	mg/L	<0.0020	8173574	<0.0020	8173574	<0.0020	0.0020	8173574
Total Phosphorus (P)	mg/L	<0.0020 (1)	8175682	0.0028 (1)	8175682	0.0025 (1)	0.0020	8175682
Physical Properties								
Conductivity	uS/cm	264	8174447	340	8174447	356	1.0	8174455

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NZ7218		NZ7219		NZ7220		
Sampling Date		2016/01/20 15:00		2016/01/20 13:34		2016/01/20 12:15		
COC Number		08417751		08417751		08417751		
	UNITS	**KZ-2**	**QC Batch**	**KZ-6**	**QC Batch**	**KZ-7**	**RDL**	**QC Batch**
pH	pH	7.72	8174446	8.16	8174446	8.16		8174454
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8174317	<1.0	8174317	<1.0	1.0	8174317
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NZ7221	NZ7222	NZ7223		NZ7224		
Sampling Date		2016/01/20 11:15	2016/01/21 10:30	2016/01/20 08:30		2016/01/20 09:15		
COC Number		08417751	08417751	08417751		08417751		
	UNITS	KZ-9	KZ-13	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	4.4	1.9	5.5	8172804	6.2	N/A	8172804
Cation Sum	meq/L	4.5	1.9	5.7	8172804	6.1	N/A	8172804
Filter and HNO3 Preservation	N/A	LAB	LAB	LAB	8173876	LAB	N/A	8173876
Ion Balance	N/A	1.0	1.0	1.0	8172803	1.0	0.010	8172803
Nitrate (N)	mg/L	0.199	0.154	0.209	8173137	0.253	0.0020	8173137
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00055	0.00063	0.00050	8174205	0.00051	0.00050	8174205
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00065	0.00072	0.00062	8174322	0.00072	0.00050	8174322
Fluoride (F)	mg/L	0.088	0.045	0.100	8174940	0.082	0.010	8174940
Dissolved Organic Carbon (C)	mg/L	0.84	1.43	1.70	8175678	1.56	0.50	8175678
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	8174238	<0.50	0.50	8174238
Alkalinity (Total as CaCO3)	mg/L	184	77.5	235	8174453	263	0.50	8174445
Acidity (pH 8.3)	mg/L	3.30	0.67	1.51	8174238	4.77	0.50	8174238
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	8174453	<0.50	0.50	8174445
Bicarbonate (HCO3)	mg/L	224	94.6	286	8174453	321	0.50	8174445
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	8174453	<0.50	0.50	8174445
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	8174453	<0.50	0.50	8174445
Anions								
Dissolved Sulphate (SO4)	mg/L	34.1	13.8	36.7	8174512	41.5	0.50	8174512
Dissolved Chloride (Cl)	mg/L	0.98	0.57	0.82	8174509	0.78	0.50	8174509
MISCELLANEOUS								
True Colour	Col. Unit	18.4	10.6	<5.0	8175668	<5.0	5.0	8175668
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0021 (1)	0.0022 (1)	0.0057 (1)	8175680	0.0020 (1)	0.0020	8175680
Total Ammonia (N)	mg/L	0.034 (1)	0.0090 (1)	0.036 (1)	8174601	<0.0050 (1)	0.0050	8174601
Nitrate plus Nitrite (N)	mg/L	0.199	0.154	0.209	8173573	0.253	0.0020	8173573
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	8173574	<0.0020	0.0020	8173574
Total Phosphorus (P)	mg/L	0.0025 (1)	0.0026 (1)	0.0034 (1)	8175682	0.0023 (1)	0.0020	8175682
Physical Properties								
Conductivity	uS/cm	405	181	490	8174455	544	1.0	8174447

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NZ7221	NZ7222	NZ7223		NZ7224		
Sampling Date		2016/01/20 11:15	2016/01/21 10:30	2016/01/20 08:30		2016/01/20 09:15		
COC Number		08417751	08417751	08417751		08417751		
	UNITS	**KZ-9**	**KZ-13**	**KZ-15**	**QC Batch**	**KZ-16**	**RDL**	**QC Batch**
pH	pH	8.00	7.99	8.19	8174454	7.88		8174446
Physical Properties								
Total Suspended Solids	mg/L	1.0	<1.0	<1.0	8174317	<1.0	1.0	8174317
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NZ7225	NZ7226		NZ7227	NZ7229	NZ7230		
Sampling Date		2016/01/20 09:50	2016/01/21 11:00		2016/01/19 14:55	2016/01/19 14:00	2016/01/20 10:45		
COC Number		08417751	08417751		08417751	08417753	08417753		
	UNITS	**KZ-17**	**KZ-19**	**QC Batch**	**KZ-21**	**KZ-22**	**KZ-28**	**RDL**	**QC Batch**
Calculated Parameters									
Anion Sum	meq/L	5.2	0.016	8172804	7.2	6.5	5.3	N/A	8172804
Cation Sum	meq/L	5.6	0.0028	8172804	7.5	6.8	5.6	N/A	8172804
Filter and HNO3 Preservation	N/A	LAB	LAB	8173876	LAB	LAB	LAB	N/A	8173876
Ion Balance	N/A	1.1	0.17	8172803	1.0	1.0	1.0	0.010	8172803
Nitrate (N)	mg/L	0.204	<0.0020	8173137	0.185	0.223	0.203	0.0020	8173137
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00061	0.00053	8174205	0.00065	0.00059	0.00060	0.00050	8174205
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00073	0.00067	8174322	0.00061	0.00077	0.00064	0.00050	8174322
Fluoride (F)	mg/L	0.110	<0.010	8174940	0.200	0.160	0.110	0.010	8174940
Dissolved Organic Carbon (C)	mg/L	1.15	<0.50	8175678	2.38	2.23	1.15	0.50	8175678
Acidity (pH 4.5)	mg/L	<0.50	<0.50	8174238	<0.50	<0.50	<0.50	0.50	8174238
Alkalinity (Total as CaCO3)	mg/L	223	0.81	8174453	315	280	226	0.50	8174445
Acidity (pH 8.3)	mg/L	<0.50	<0.50	8174238	4.47	<0.50	<0.50	0.50	8174238
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	8174453	<0.50	<0.50	<0.50	0.50	8174445
Bicarbonate (HCO3)	mg/L	272	0.99	8174453	384	342	276	0.50	8174445
Carbonate (CO3)	mg/L	<0.50	<0.50	8174453	<0.50	<0.50	<0.50	0.50	8174445
Hydroxide (OH)	mg/L	<0.50	<0.50	8174453	<0.50	<0.50	<0.50	0.50	8174445
Anions									
Dissolved Sulphate (SO4)	mg/L	33.7	<0.50	8174512	39.4	42.8	34.9	0.50	8174512
Dissolved Chloride (Cl)	mg/L	1.3	<0.50	8174509	0.60	0.83	0.79	0.50	8174509
MISCELLANEOUS									
True Colour	Col. Unit	<5.0	<5.0	8175668	17.1 (1)	10.4 (1)	5.1	5.0	8175668
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0028 (2)	<0.0020 (2)	8175680	0.0070 (1)	0.0043 (1)	0.0032 (2)	0.0020	8175680
Total Ammonia (N)	mg/L	0.0078 (2)	0.022 (2)	8174601	0.095	0.043	0.015 (2)	0.0050	8174601
Nitrate plus Nitrite (N)	mg/L	0.204	<0.0020	8173573	0.185 (1)	0.223 (1)	0.203	0.0020	8173573
Nitrite (N)	mg/L	<0.0020	<0.0020	8173574	<0.0020 (1)	<0.0020 (1)	<0.0020	0.0020	8173574
Total Phosphorus (P)	mg/L	0.0033 (2)	<0.0020 (2)	8175682	0.0066 (1)	0.0042 (1)	0.0031 (2)	0.0020	8175682

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.
(2) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NZ7225	NZ7226		NZ7227	NZ7229	NZ7230		
Sampling Date		2016/01/20 09:50	2016/01/21 11:00		2016/01/19 14:55	2016/01/19 14:00	2016/01/20 10:45		
COC Number		08417751	08417751		08417751	08417753	08417753		
	UNITS	**KZ-17**	**KZ-19**	**QC Batch**	**KZ-21**	**KZ-22**	**KZ-28**	**RDL**	**QC Batch**
Physical Properties									
Conductivity	uS/cm	471	1.4	8174455	620	570	469	1.0	8174447
pH	pH	8.17	5.96	8174454	8.02	8.15	8.18		8174446
Physical Properties									
Total Suspended Solids	mg/L	<1.0	<1.0	8174317	<1.0	1.0	<1.0	1.0	8174317
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NZ7231		
Sampling Date		2016/01/22 12:50		
COC Number		08417753		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	0.016	N/A	8172804
Cation Sum	meq/L	0.0047	N/A	8172804
Ion Balance	N/A	0.30	0.010	8172803
Nitrate (N)	mg/L	<0.0020	0.0020	8173137
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8174205
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00052	0.00050	8174322
Fluoride (F)	mg/L	<0.010	0.010	8174940
Dissolved Organic Carbon (C)	mg/L	<0.50 (1)	0.50	8175679
Acidity (pH 4.5)	mg/L	<0.50	0.50	8174238
Alkalinity (Total as CaCO3)	mg/L	0.79	0.50	8174445
Acidity (pH 8.3)	mg/L	<0.50	0.50	8174238
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8174445
Bicarbonate (HCO3)	mg/L	0.96	0.50	8174445
Carbonate (CO3)	mg/L	<0.50	0.50	8174445
Hydroxide (OH)	mg/L	<0.50	0.50	8174445
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8174512
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8174509
MISCELLANEOUS				
True Colour	Col. Unit	<5.0	5.0	8175668
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	0.0020	8175680
Total Ammonia (N)	mg/L	<0.0050	0.0050	8174601
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8173573
Nitrite (N)	mg/L	<0.0020	0.0020	8173574
Total Phosphorus (P)	mg/L	<0.0020 (1)	0.0020	8175682
Physical Properties				
Conductivity	uS/cm	1.5	1.0	8174447
pH	pH	5.33		8174446

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NZ7231		
Sampling Date		2016/01/22 12:50		
COC Number		08417753		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8174317
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NZ7218		NZ7219	NZ7220	NZ7221		
Sampling Date		2016/01/20 15:00		2016/01/20 13:34	2016/01/20 12:15	2016/01/20 11:15		
COC Number		08417751		08417751	08417751	08417751		
	UNITS	KZ-2	QC Batch	KZ-6	KZ-7	KZ-9	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	131	8172332	183	186	219	0.50	8172332
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8175082	<0.0000020	<0.0000020	<0.0000020	0.0000020	8175082
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00113	8176397	0.00209	0.00227	0.00202	0.00050	8174294
Dissolved Antimony (Sb)	mg/L	<0.000020	8174294	<0.000020	0.000028	0.000025	0.000020	8174294
Dissolved Arsenic (As)	mg/L	0.000066	8174294	0.000094	0.000154	0.000184	0.000020	8174294
Dissolved Barium (Ba)	mg/L	0.0733	8174294	0.0510	0.103	0.108	0.000020	8174294
Dissolved Beryllium (Be)	mg/L	<0.000010	8174294	<0.000010	<0.000010	<0.000010	0.000010	8174294
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8174294	<0.0000050	<0.0000050	<0.0000050	0.0000050	8174294
Dissolved Boron (B)	mg/L	<0.010	8174294	<0.010	<0.010	<0.010	0.010	8174294
Dissolved Cadmium (Cd)	mg/L	0.000218	8174294	0.0000160	0.0000400	0.0000550	0.0000050	8174294
Dissolved Chromium (Cr)	mg/L	<0.00010	8174294	<0.00010	<0.00010	<0.00010	0.00010	8174294
Dissolved Cobalt (Co)	mg/L	0.0000070	8174294	0.0000060	0.0000660	0.000130	0.0000050	8174294
Dissolved Copper (Cu)	mg/L	0.000414	8174294	0.000155	0.000132	0.000189	0.000050	8174294
Dissolved Iron (Fe)	mg/L	<0.0010	8174294	0.0024	0.0091	0.0148	0.0010	8174294
Dissolved Lead (Pb)	mg/L	0.0000160	8174294	0.0000160	<0.0000050	<0.0000050	0.0000050	8174294
Dissolved Lithium (Li)	mg/L	0.00105	8174294	0.00056	0.00285	0.00355	0.00050	8174294
Dissolved Manganese (Mn)	mg/L	<0.000050	8174294	0.000104	0.0981	0.115	0.000050	8174294
Dissolved Molybdenum (Mo)	mg/L	0.000748	8174294	0.000636	0.000690	0.000722	0.000050	8174294
Dissolved Nickel (Ni)	mg/L	0.000250	8174294	0.000122	0.000394	0.000455	0.000020	8174294
Dissolved Phosphorus (P)	mg/L	<0.0020	8174294	<0.0020	<0.0020	0.0034	0.0020	8174294
Dissolved Selenium (Se)	mg/L	0.00186	8174294	0.00119	0.000995	0.00119	0.000040	8174294
Dissolved Silicon (Si)	mg/L	2.47	8174294	3.16	3.84	4.15	0.050	8174294
Dissolved Silver (Ag)	mg/L	<0.0000050	8174294	<0.0000050	<0.0000050	<0.0000050	0.0000050	8174294
Dissolved Strontium (Sr)	mg/L	0.148	8174294	0.185	0.213	0.259	0.000050	8174294
Dissolved Thallium (Tl)	mg/L	0.0000020	8174294	<0.0000020	<0.0000020	<0.0000020	0.0000020	8174294
Dissolved Tin (Sn)	mg/L	<0.00020	8174294	<0.00020	<0.00020	<0.00020	0.00020	8174294
Dissolved Titanium (Ti)	mg/L	<0.00050	8174294	<0.00050	<0.00050	<0.00050	0.00050	8174294
Dissolved Uranium (U)	mg/L	0.00438	8174294	0.00132	0.00153	0.00177	0.0000020	8174294
Dissolved Vanadium (V)	mg/L	<0.00020	8174294	<0.00020	<0.00020	<0.00020	0.00020	8174294
Dissolved Zinc (Zn)	mg/L	0.0263	8174294	0.00052	0.0400	0.0133	0.00010	8174294

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NZ7218		NZ7219	NZ7220	NZ7221		
Sampling Date		2016/01/20 15:00		2016/01/20 13:34	2016/01/20 12:15	2016/01/20 11:15		
COC Number		08417751		08417751	08417751	08417751		
	UNITS	KZ-2	QC Batch	KZ-6	KZ-7	KZ-9	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	<0.00010	8174294	<0.00010	<0.00010	<0.00010	0.00010	8174294
Dissolved Calcium (Ca)	mg/L	42.3	8172485	60.9	61.7	73.5	0.050	8172485
Dissolved Magnesium (Mg)	mg/L	6.12	8172485	7.46	7.77	8.58	0.050	8172485
Dissolved Potassium (K)	mg/L	2.37	8172485	1.04	1.87	1.96	0.050	8172485
Dissolved Sodium (Na)	mg/L	0.924	8172485	0.793	1.30	1.59	0.050	8172485
Dissolved Sulphur (S)	mg/L	16.9	8172485	8.4	13.0	12.1	3.0	8172485
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NZ7222	NZ7223		NZ7224		
Sampling Date		2016/01/21 10:30	2016/01/20 08:30		2016/01/20 09:15		
COC Number		08417751	08417751		08417751		
	UNITS	KZ-13	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	89.4	282	8172332	302	0.50	8172332
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8175082	<0.0000020	0.0000020	8175082
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00357	0.00185	8174294	0.00179	0.00050	8174294
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000025	8174294	<0.000020	0.000020	8174294
Dissolved Arsenic (As)	mg/L	0.000123	0.000392	8174294	0.000165	0.000020	8174294
Dissolved Barium (Ba)	mg/L	0.139	0.100	8174294	0.112	0.000020	8174294
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	8174294	<0.000010	0.000010	8174294
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8174294	0.0000050	0.0000050	8174294
Dissolved Boron (B)	mg/L	<0.010	<0.010	8174294	<0.010	0.010	8174294
Dissolved Cadmium (Cd)	mg/L	0.0000270	0.0000420	8174294	0.0000260	0.0000050	8174294
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	8174294	0.00011	0.00010	8174294
Dissolved Cobalt (Co)	mg/L	0.0000220	0.0000180	8174294	0.0000300	0.0000050	8174294
Dissolved Copper (Cu)	mg/L	0.000272	0.000250	8174294	0.000199	0.000050	8176397
Dissolved Iron (Fe)	mg/L	0.0305	0.0035	8174294	0.0037	0.0010	8174294
Dissolved Lead (Pb)	mg/L	0.0000050	<0.0000050	8174294	<0.0000050	0.0000050	8174294
Dissolved Lithium (Li)	mg/L	0.00096	0.00362	8174294	0.00350	0.00050	8174294
Dissolved Manganese (Mn)	mg/L	0.0575	0.0306	8174294	0.0112	0.000050	8174294
Dissolved Molybdenum (Mo)	mg/L	0.000755	0.00143	8174294	0.000406	0.000050	8174294
Dissolved Nickel (Ni)	mg/L	0.000291	0.000824	8174294	0.000745	0.000020	8174294
Dissolved Phosphorus (P)	mg/L	0.0031	<0.0020	8174294	0.0045	0.0020	8174294
Dissolved Selenium (Se)	mg/L	0.000277	0.00151	8174294	0.00173	0.000040	8174294
Dissolved Silicon (Si)	mg/L	3.82	4.21	8174294	4.39	0.050	8174294
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8174294	<0.0000050	0.0000050	8174294
Dissolved Strontium (Sr)	mg/L	0.0956	0.281	8174294	0.320	0.000050	8174294
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8174294	<0.0000020	0.0000020	8174294
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8174294	<0.00020	0.00020	8174294
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8174294	<0.00050	0.00050	8174294
Dissolved Uranium (U)	mg/L	0.000788	0.00512	8174294	0.00346	0.0000020	8174294
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8174294	<0.00020	0.00020	8174294
Dissolved Zinc (Zn)	mg/L	0.00243	0.00560	8174294	0.00114	0.00010	8174294

RDL = Reportable Detection Limit

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NZ7222	NZ7223		NZ7224		
Sampling Date		2016/01/21 10:30	2016/01/20 08:30		2016/01/20 09:15		
COC Number		08417751	08417751		08417751		
	UNITS	**KZ-13**	**KZ-15**	**QC Batch**	**KZ-16**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	8174294	<0.00010	0.00010	8174294
Dissolved Calcium (Ca)	mg/L	30.5	83.5	8172485	88.9	0.050	8172485
Dissolved Magnesium (Mg)	mg/L	3.24	17.9	8172485	19.4	0.050	8172485
Dissolved Potassium (K)	mg/L	2.37	1.60	8172485	1.64	0.050	8172485
Dissolved Sodium (Na)	mg/L	1.16	1.49	8172485	1.64	0.050	8172485
Dissolved Sulphur (S)	mg/L	5.0	12.9	8172485	14.5	3.0	8172485
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NZ7225		NZ7226		NZ7227		
Sampling Date		2016/01/20 09:50		2016/01/21 11:00		2016/01/19 14:55		
COC Number		08417751		08417751		08417751		
	UNITS	KZ-17	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	275	8172332	<0.50	8172332	363	0.50	8172332
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8175082	<0.0000020	8175082	<0.0000020	0.0000020	8175082
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00185	8174294	0.00087	8174294	0.00121	0.00050	8174294
Dissolved Antimony (Sb)	mg/L	0.000031	8174294	<0.000020	8174294	0.000026	0.000020	8174294
Dissolved Arsenic (As)	mg/L	0.000413	8174294	<0.000020	8174294	0.000606	0.000020	8174294
Dissolved Barium (Ba)	mg/L	0.0973	8174294	<0.000020	8176397	0.0897	0.000020	8174294
Dissolved Beryllium (Be)	mg/L	<0.000010	8174294	<0.000010	8174294	<0.000010	0.000010	8174294
Dissolved Bismuth (Bi)	mg/L	0.0000060	8174294	0.0000050	8174294	0.0000070	0.0000050	8174294
Dissolved Boron (B)	mg/L	<0.010	8174294	<0.010	8174294	<0.010	0.010	8174294
Dissolved Cadmium (Cd)	mg/L	0.0000400	8174294	<0.0000050	8174294	0.0000140	0.0000050	8174294
Dissolved Chromium (Cr)	mg/L	<0.00010	8174294	<0.00010	8174294	<0.00010	0.00010	8174294
Dissolved Cobalt (Co)	mg/L	0.0000150	8174294	<0.0000050	8174294	0.000131	0.0000050	8174294
Dissolved Copper (Cu)	mg/L	0.000278	8174294	<0.000050	8174294	0.000191	0.000050	8174294
Dissolved Iron (Fe)	mg/L	0.0036	8174294	<0.0010	8174294	0.0091	0.0010	8174294
Dissolved Lead (Pb)	mg/L	0.0000060	8174294	0.0000050	8174294	0.0000050	0.0000050	8174294
Dissolved Lithium (Li)	mg/L	0.00374 (1)	8174294	<0.00050	8174294	0.00955	0.00050	8174294
Dissolved Manganese (Mn)	mg/L	0.0302	8174294	<0.000050	8174294	0.164	0.000050	8174294
Dissolved Molybdenum (Mo)	mg/L	0.00173	8174294	<0.000050	8174294	0.00171	0.000050	8174294
Dissolved Nickel (Ni)	mg/L	0.000813	8174294	<0.000020	8174294	0.00229	0.000020	8174294
Dissolved Phosphorus (P)	mg/L	<0.0020	8174294	<0.0020	8174294	<0.0020	0.0020	8174294
Dissolved Selenium (Se)	mg/L	0.00144	8174294	<0.000040	8174294	0.000555	0.000040	8174294
Dissolved Silicon (Si)	mg/L	4.24	8174294	<0.050	8174294	7.11	0.050	8174294
Dissolved Silver (Ag)	mg/L	<0.0000050	8174294	<0.0000050	8174294	<0.0000050	0.0000050	8174294
Dissolved Strontium (Sr)	mg/L	0.271	8174294	0.000161	8174294	0.299	0.000050	8174294
Dissolved Thallium (Tl)	mg/L	<0.0000020	8174294	<0.0000020	8174294	<0.0000020	0.0000020	8174294
Dissolved Tin (Sn)	mg/L	<0.00020	8174294	<0.00020	8174294	<0.00020	0.00020	8174294
Dissolved Titanium (Ti)	mg/L	<0.00050	8174294	<0.00050	8174294	<0.00050	0.00050	8174294
Dissolved Uranium (U)	mg/L	0.00570	8174294	<0.0000020	8176397	0.00338	0.0000020	8174294
Dissolved Vanadium (V)	mg/L	<0.00020	8174294	<0.00020	8174294	<0.00020	0.00020	8174294

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NZ7225		NZ7226		NZ7227		
Sampling Date		2016/01/20 09:50		2016/01/21 11:00		2016/01/19 14:55		
COC Number		08417751		08417751		08417751		
	UNITS	**KZ-17**	**QC Batch**	**KZ-19**	**QC Batch**	**KZ-21**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.00576	8174294	<0.00010	8174294	0.00114	0.00010	8174294
Dissolved Zirconium (Zr)	mg/L	<0.00010	8174294	<0.00010	8174294	0.00018	0.00010	8174294
Dissolved Calcium (Ca)	mg/L	80.0	8172485	<0.050	8172485	90.1	0.050	8172485
Dissolved Magnesium (Mg)	mg/L	18.2	8172485	<0.050	8172485	33.6	0.050	8172485
Dissolved Potassium (K)	mg/L	1.62	8172485	<0.050	8172485	2.67	0.050	8172485
Dissolved Sodium (Na)	mg/L	1.54	8172485	<0.050	8172485	2.70	0.050	8172485
Dissolved Sulphur (S)	mg/L	12.7	8172485	<3.0	8172485	14.3	3.0	8172485
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NZ7229	NZ7230	NZ7231		
Sampling Date		2016/01/19 14:00	2016/01/20 10:45	2016/01/22 12:50		
COC Number		08417753	08417753	08417753		
	UNITS	KZ-22	KZ-28	TRIP BLANK	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	334	273	<0.50	0.50	8172332
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8175082
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.00171	0.00109	<0.00050	0.00050	8174294
Dissolved Antimony (Sb)	mg/L	0.000029	0.000029	<0.000020	0.000020	8174294
Dissolved Arsenic (As)	mg/L	0.000677	0.000410	<0.000020	0.000020	8174294
Dissolved Barium (Ba)	mg/L	0.0939	0.0946	<0.000020	0.000020	8174294
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8174294
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000060	<0.0000050	0.0000050	8174294
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8174294
Dissolved Cadmium (Cd)	mg/L	0.0000160	0.0000380	<0.0000050	0.0000050	8174294
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8174294
Dissolved Cobalt (Co)	mg/L	0.0000730	0.0000160	<0.0000050	0.0000050	8174294
Dissolved Copper (Cu)	mg/L	0.000272	0.000257	<0.000050	0.000050	8174294
Dissolved Iron (Fe)	mg/L	0.0056	0.0029	<0.0010	0.0010	8174294
Dissolved Lead (Pb)	mg/L	0.0000060	<0.0000050	<0.0000050	0.0000050	8174294
Dissolved Lithium (Li)	mg/L	0.00674	0.00316	<0.00050	0.00050	8174294
Dissolved Manganese (Mn)	mg/L	0.0769	0.0298	<0.000050	0.000050	8174294
Dissolved Molybdenum (Mo)	mg/L	0.00143	0.00163	<0.000050	0.000050	8174294
Dissolved Nickel (Ni)	mg/L	0.00142	0.000782	<0.000020	0.000020	8174294
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020		0.0020	8174294
Dissolved Selenium (Se)	mg/L	0.00102	0.00154	<0.000040	0.000040	8174294
Dissolved Silicon (Si)	mg/L	5.84	4.22	<0.050	0.050	8174294
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8174294
Dissolved Strontium (Sr)	mg/L	0.299	0.268	<0.000050	0.000050	8174294
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8174294
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8174294
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8174294
Dissolved Uranium (U)	mg/L	0.00416	0.00557	<0.0000020	0.0000020	8174294
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8174294
Dissolved Zinc (Zn)	mg/L	0.00134	0.00560	<0.00010	0.00010	8174294
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NZ7229	NZ7230	NZ7231		
Sampling Date		2016/01/19 14:00	2016/01/20 10:45	2016/01/22 12:50		
COC Number		08417753	08417753	08417753		
	UNITS	KZ-22	KZ-28	TRIP BLANK	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	0.00011	<0.00010	<0.00010	0.00010	8174294
Dissolved Calcium (Ca)	mg/L	88.1	80.0	<0.050	0.050	8172485
Dissolved Magnesium (Mg)	mg/L	27.7	17.7	<0.050	0.050	8172485
Dissolved Potassium (K)	mg/L	2.17	1.57	<0.050	0.050	8172485
Dissolved Sodium (Na)	mg/L	2.30	1.46	<0.050	0.050	8172485
Dissolved Sulphur (S)	mg/L	15.5	12.8	<3.0	3.0	8172485
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NZ7218	NZ7219	NZ7220	NZ7221	NZ7222		
Sampling Date		2016/01/20 15:00	2016/01/20 13:34	2016/01/20 12:15	2016/01/20 11:15	2016/01/21 10:30		
COC Number		08417751	08417751	08417751	08417751	08417751		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	129	183	191	228	88.8	0.50	8172331
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8175081
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00318 (1)	0.00758	0.0151	0.00854	0.0149	0.00050	8174261
Total Antimony (Sb)	mg/L	0.000020	<0.000020	0.000035	0.000025	<0.000020	0.000020	8174261
Total Arsenic (As)	mg/L	0.000069	0.000086	0.000523	0.000416	0.000188	0.000020	8174261
Total Barium (Ba)	mg/L	0.0725	0.0540	0.105	0.108	0.139	0.000020	8174261
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8174261
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8174261
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8174261
Total Cadmium (Cd)	mg/L	0.000220	0.0000360	0.000194	0.0000740	0.0000410	0.0000050	8174261
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8174261
Total Cobalt (Co)	mg/L	0.0000090	0.0000180	0.000150	0.000176	0.0000510	0.0000050	8174261
Total Copper (Cu)	mg/L	0.000531	0.000174	0.000409	0.000263	0.000347	0.000050	8174261
Total Iron (Fe)	mg/L	0.0051 (1)	0.0932	0.935	1.54	0.171	0.0010	8174261
Total Lead (Pb)	mg/L	0.0000280	0.0000270	0.000216	0.0000560	0.0000420	0.0000050	8174261
Total Lithium (Li)	mg/L	0.00091	0.00081	0.00312	0.00414	0.00095	0.00050	8174261
Total Manganese (Mn)	mg/L	0.000103	0.0148	0.138	0.127	0.0824	0.000050	8174261
Total Molybdenum (Mo)	mg/L	0.000730	0.000629	0.000650	0.000703	0.000737	0.000050	8174261
Total Nickel (Ni)	mg/L	0.000263	0.000176	0.000514	0.000510	0.000362	0.000020	8174261
Total Phosphorus (P)	mg/L	0.0026	0.0061	0.0076	0.0070	<0.0020	0.0020	8174261
Total Selenium (Se)	mg/L	0.00210	0.00124	0.00102	0.00129	0.000297	0.000040	8174261
Total Silicon (Si)	mg/L	2.55	3.19	3.95	4.27	4.08	0.050	8174261
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8174261
Total Strontium (Sr)	mg/L	0.152	0.190	0.221	0.260	0.0940	0.000050	8174261
Total Thallium (Tl)	mg/L	0.0000020	<0.0000020	0.0000020	<0.0000020	<0.0000020	0.0000020	8174261
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8174261
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00059	<0.00050	0.00058	0.00050	8174261
Total Uranium (U)	mg/L	0.00441	0.00135	0.00162	0.00178	0.000861	0.0000020	8174261
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8174261

RDL = Reportable Detection Limit
(1) Duplicate RPD above control limit - (10% of analytes failure allowed).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NZ7218	NZ7219	NZ7220	NZ7221	NZ7222		
Sampling Date		2016/01/20 15:00	2016/01/20 13:34	2016/01/20 12:15	2016/01/20 11:15	2016/01/21 10:30		
COC Number		08417751	08417751	08417751	08417751	08417751		
	UNITS	**KZ-2**	**KZ-6**	**KZ-7**	**KZ-9**	**KZ-13**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.0285	0.00131	0.0651	0.0171	0.00388	0.00010	8174261
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00019	<0.00010	<0.00010	0.00010	8174261
Total Calcium (Ca)	mg/L	41.5	60.6	62.6	76.4	30.0	0.050	8172695
Total Magnesium (Mg)	mg/L	6.23	7.74	8.34	8.96	3.41	0.050	8172695
Total Potassium (K)	mg/L	2.36	1.08	1.95	1.97	2.35	0.050	8172695
Total Sodium (Na)	mg/L	0.946	0.819	1.36	1.58	1.19	0.050	8172695
Total Sulphur (S)	mg/L	18.5	8.5	13.7	12.1	5.2	3.0	8172695
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NZ7223	NZ7224	NZ7225		NZ7226		
Sampling Date		2016/01/20 08:30	2016/01/20 09:15	2016/01/20 09:50		2016/01/21 11:00		
COC Number		08417751	08417751	08417751		08417751		
	UNITS	KZ-15	KZ-16	KZ-17	QC Batch	KZ-19	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	271	312	274	8172331	<0.50	0.50	8172331
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8175081	<0.0000020	0.0000020	8175081
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00305	0.00091	0.00537	8174261	<0.00050	0.00050	8174261
Total Antimony (Sb)	mg/L	0.000026	<0.000020	0.000029	8174261	<0.000020	0.000020	8174261
Total Arsenic (As)	mg/L	0.000531	0.000195	0.000750	8174261	<0.000020	0.000020	8174261
Total Barium (Ba)	mg/L	0.0961	0.112	0.0934	8174261	<0.000020	0.000020	8270237
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8174261	<0.000010	0.000010	8174261
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8174261	0.0000060	0.0000050	8174261
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	8174261	<0.010	0.010	8174261
Total Cadmium (Cd)	mg/L	0.0000490	0.0000280	0.0000530	8174261	<0.0000050	0.0000050	8174261
Total Chromium (Cr)	mg/L	0.00144	<0.00010	<0.00010	8174261	<0.00010	0.00010	8174261
Total Cobalt (Co)	mg/L	0.0000590	0.0000310	0.0000620	8174261	<0.0000050	0.0000050	8174261
Total Copper (Cu)	mg/L	0.000305	0.000236	0.000343	8174261	0.000378	0.000050	8174261
Total Iron (Fe)	mg/L	0.0858	0.0122	0.149	8174261	<0.0010	0.0010	8174261
Total Lead (Pb)	mg/L	0.0000310	<0.0000050	0.0000440	8174261	0.0000080	0.0000050	8174261
Total Lithium (Li)	mg/L	0.00352	0.00377	0.00287	8174261	<0.00050	0.00050	8174261
Total Manganese (Mn)	mg/L	0.0468	0.0121	0.0700	8174261	<0.000050	0.000050	8174261
Total Molybdenum (Mo)	mg/L	0.00132	0.000403	0.00147	8174261	<0.000050	0.000050	8174261
Total Nickel (Ni)	mg/L	0.00183	0.000749	0.000991	8174261	<0.000020	0.000020	8174261
Total Phosphorus (P)	mg/L	0.0064	0.0025	0.0064	8174261	<0.0020	0.0020	8174261
Total Selenium (Se)	mg/L	0.00156	0.00179	0.00147	8174261	<0.000040	0.000040	8174261
Total Silicon (Si)	mg/L	4.32	4.38	4.09	8174261	<0.050	0.050	8174261
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8174261	<0.0000050	0.0000050	8174261
Total Strontium (Sr)	mg/L	0.273	0.322	0.289	8174261	<0.000050	0.000050	8270237
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8174261	<0.0000020	0.0000020	8174261
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8174261	<0.00020	0.00020	8174261
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8174261	<0.00050	0.00050	8174261
Total Uranium (U)	mg/L	0.00498	0.00345	0.00550	8174261	<0.0000020	0.0000020	8270237
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8174261	<0.00020	0.00020	8174261
Total Zinc (Zn)	mg/L	0.00622	0.00118	0.00798	8174261	0.00025	0.00010	8174261
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NZ7223	NZ7224	NZ7225		NZ7226		
Sampling Date		2016/01/20 08:30	2016/01/20 09:15	2016/01/20 09:50		2016/01/21 11:00		
COC Number		08417751	08417751	08417751		08417751		
	UNITS	KZ-15	KZ-16	KZ-17	QC Batch	KZ-19	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8174261	<0.00010	0.00010	8174261
Total Calcium (Ca)	mg/L	78.3	92.3	77.6	8172695	<0.050	0.050	8172695
Total Magnesium (Mg)	mg/L	18.3	19.8	19.6	8172695	<0.050	0.050	8172695
Total Potassium (K)	mg/L	1.58	1.64	1.75	8172695	<0.050	0.050	8172695
Total Sodium (Na)	mg/L	1.53	1.69	1.68	8172695	<0.050	0.050	8172695
Total Sulphur (S)	mg/L	14.0	15.1	14.4	8172695	<3.0	3.0	8172695
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NZ7227	NZ7229	NZ7230	NZ7231		
Sampling Date		2016/01/19 14:55	2016/01/19 14:00	2016/01/20 10:45	2016/01/22 12:50		
COC Number		08417751	08417753	08417753	08417753		
	UNITS	KZ-21	KZ-22	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	359	363	268	<0.50	0.50	8172331
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8175081
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00720	0.00571	0.00471	<0.00050	0.00050	8174261
Total Antimony (Sb)	mg/L	0.000028	0.000028	0.000028	<0.000020	0.000020	8174261
Total Arsenic (As)	mg/L	0.00372	0.00228	0.000688	<0.000020	0.000020	8174261
Total Barium (Ba)	mg/L	0.0900	0.0914	0.0928	<0.000020	0.000020	8174261
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8174261
Total Bismuth (Bi)	mg/L	0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8174261
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8174261
Total Cadmium (Cd)	mg/L	0.0000200	0.0000260	0.0000540	<0.0000050	0.0000050	8174261
Total Chromium (Cr)	mg/L	0.00010	<0.00010	0.00018	<0.00010	0.00010	8174261
Total Cobalt (Co)	mg/L	0.000318	0.000166	0.0000620	<0.0000050	0.0000050	8174261
Total Copper (Cu)	mg/L	0.000272	0.000278	0.000313	<0.000050	0.000050	8174261
Total Iron (Fe)	mg/L	1.32	0.651	0.134	<0.0010	0.0010	8174261
Total Lead (Pb)	mg/L	0.0000490	0.0000360	0.0000320	<0.0000050	0.0000050	8174261
Total Lithium (Li)	mg/L	0.00983	0.00657	0.00344	<0.00050	0.00050	8174261
Total Manganese (Mn)	mg/L	0.232	0.111	0.0627	<0.000050	0.000050	8174261
Total Molybdenum (Mo)	mg/L	0.00156	0.00128	0.00145	<0.000050	0.000050	8174261
Total Nickel (Ni)	mg/L	0.00259	0.00160	0.00103	<0.000020	0.000020	8174261
Total Phosphorus (P)	mg/L	0.0228	0.0127	0.0043	<0.0020	0.0020	8174261
Total Selenium (Se)	mg/L	0.000637	0.00123	0.00154	<0.000040	0.000040	8174261
Total Silicon (Si)	mg/L	7.29	7.04	4.14	<0.050	0.050	8174261
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8174261
Total Strontium (Sr)	mg/L	0.303	0.306	0.266	<0.000050	0.000050	8174261
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8174261
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8174261
Total Titanium (Ti)	mg/L	0.00056	<0.00050	<0.00050	<0.00050	0.00050	8174261
Total Uranium (U)	mg/L	0.00333	0.00403	0.00538	<0.0000020	0.0000020	8174261
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8174261
Total Zinc (Zn)	mg/L	0.00225	0.00209	0.00726	<0.00010	0.00010	8174261
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NZ7227	NZ7229	NZ7230	NZ7231		
Sampling Date		2016/01/19 14:55	2016/01/19 14:00	2016/01/20 10:45	2016/01/22 12:50		
COC Number		08417751	08417753	08417753	08417753		
	UNITS	KZ-21	KZ-22	KZ-28	TRIP BLANK	RDL	QC Batch
Total Zirconium (Zr)	mg/L	0.00035	0.00019	<0.00010	<0.00010	0.00010	8174261
Total Calcium (Ca)	mg/L	88.7	99.2	77.8	<0.050	0.050	8172695
Total Magnesium (Mg)	mg/L	33.5	28.0	17.8	<0.050	0.050	8172695
Total Potassium (K)	mg/L	2.62	2.16	1.57	<0.050	0.050	8172695
Total Sodium (Na)	mg/L	2.62	2.35	1.53	<0.050	0.050	8172695
Total Sulphur (S)	mg/L	14.4	16.3	13.1	<3.0	3.0	8172695
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7218
Sample ID: KZ-2
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8174445	2016/01/25	2016/01/25	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8174513	N/A	2016/01/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	Isabel Choi
Conductance - water	AT/ALK	8174447	N/A	2016/01/25	Wilson Au Yueng
Fluoride	ISE/ISE	8174942	N/A	2016/01/25	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	Edwin Lamigo
Ion Balance	CALC	8172803	N/A	2016/01/26	Automated Statchk
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8176397	N/A	2016/01/27	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	Lucy Luo
pH Water	AT/ALK	8174446	N/A	2016/01/25	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8174515	N/A	2016/01/25	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	Coco Guo

Maxxam ID: NZ7218 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	Isabel Choi
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	Andrew An
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	Andrew An

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7219
Sample ID: KZ-6
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8174445	2016/01/25	2016/01/25	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	Isabel Choi
Conductance - water	AT/ALK	8174447	N/A	2016/01/25	Wilson Au Yueng
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	Edwin Lamigo
Ion Balance	CALC	8172803	N/A	2016/01/26	Automated Statchk
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	Lucy Luo
pH Water	AT/ALK	8174446	N/A	2016/01/25	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	Coco Guo

Maxxam ID: NZ7220
Sample ID: KZ-7
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8174453	2016/01/25	2016/01/25	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8174513	N/A	2016/01/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	Isabel Choi
Conductance - water	AT/ALK	8174455	N/A	2016/01/25	Wilson Au Yueng
Fluoride	ISE/ISE	8174942	N/A	2016/01/25	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7220
Sample ID: KZ-7
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	Edwin Lamigo
Ion Balance	CALC	8172803	N/A	2016/01/26	Automated Statchk
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	Lucy Luo
pH Water	AT/ALK	8174454	N/A	2016/01/25	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8174515	N/A	2016/01/25	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	Coco Guo

Maxxam ID: NZ7220 Dup
Sample ID: KZ-7
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8174513	N/A	2016/01/25	Balwinder Bassi
Sulphate by Automated Colourimetry	KONE/COL	8174515	N/A	2016/01/25	Balwinder Bassi

Maxxam ID: NZ7221
Sample ID: KZ-9
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8174453	2016/01/25	2016/01/25	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	Isabel Choi
Conductance - water	AT/ALK	8174455	N/A	2016/01/25	Wilson Au Yueng
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	Edwin Lamigo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7221
Sample ID: KZ-9
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	Edwin Lamigo
Ion Balance	CALC	8172803	N/A	2016/01/26	Automated Statchk
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	Lucy Luo
pH Water	AT/ALK	8174454	N/A	2016/01/25	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	Coco Guo

Maxxam ID: NZ7221 Dup
Sample ID: KZ-9
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	Diana Cruz

Maxxam ID: NZ7222
Sample ID: KZ-13
Matrix: Water

Collected: 2016/01/21
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8174453	2016/01/25	2016/01/25	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	Isabel Choi
Conductance - water	AT/ALK	8174455	N/A	2016/01/25	Wilson Au Yueng
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	Edwin Lamigo
Ion Balance	CALC	8172803	N/A	2016/01/26	Automated Statchk
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7222
Sample ID: KZ-13
Matrix: Water

Collected: 2016/01/21
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	Lucy Luo
pH Water	AT/ALK	8174454	N/A	2016/01/25	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	Coco Guo

Maxxam ID: NZ7223
Sample ID: KZ-15
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8174453	2016/01/25	2016/01/25	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	Isabel Choi
Conductance - water	AT/ALK	8174455	N/A	2016/01/25	Wilson Au Yueng
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	Edwin Lamigo
Ion Balance	CALC	8172803	N/A	2016/01/26	Automated Statchk
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	Lucy Luo
pH Water	AT/ALK	8174454	N/A	2016/01/25	Wilson Au Yueng

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7223
Sample ID: KZ-15
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	Coco Guo

Maxxam ID: NZ7223 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	Balwinder Bassi
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	Balwinder Bassi

Maxxam ID: NZ7224
Sample ID: KZ-16
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8174445	2016/01/25	2016/01/25	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	Isabel Choi
Conductance - water	AT/ALK	8174447	N/A	2016/01/25	Wilson Au Yueng
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	Edwin Lamigo
Ion Balance	CALC	8172803	N/A	2016/01/26	Automated Statchk
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	Lucy Luo
pH Water	AT/ALK	8174446	N/A	2016/01/25	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	Isabel Choi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7224
Sample ID: KZ-16
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	Coco Guo

Maxxam ID: NZ7225
Sample ID: KZ-17
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8174453	2016/01/25	2016/01/25	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	Isabel Choi
Conductance - water	AT/ALK	8174455	N/A	2016/01/25	Wilson Au Yueng
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	Edwin Lamigo
Ion Balance	CALC	8172803	N/A	2016/01/26	Automated Statchk
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	Lucy Luo
pH Water	AT/ALK	8174454	N/A	2016/01/25	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	Coco Guo

Maxxam ID: NZ7226
Sample ID: KZ-19
Matrix: Water

Collected: 2016/01/21
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8174453	2016/01/25	2016/01/25	Wilson Au Yueng

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7226
Sample ID: KZ-19
Matrix: Water

Collected: 2016/01/21
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	Isabel Choi
Conductance - water	AT/ALK	8174455	N/A	2016/01/25	Wilson Au Yueng
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	Edwin Lamigo
Ion Balance	CALC	8172803	N/A	2016/01/26	Automated Statchk
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	Lucy Luo
pH Water	AT/ALK	8174454	N/A	2016/01/25	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	Coco Guo

Maxxam ID: NZ7227
Sample ID: KZ-21
Matrix: Water

Collected: 2016/01/19
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8174445	2016/01/25	2016/01/25	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	Isabel Choi
Conductance - water	AT/ALK	8174447	N/A	2016/01/25	Wilson Au Yueng
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	Edwin Lamigo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7227
Sample ID: KZ-21
Matrix: Water

Collected: 2016/01/19
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	Edwin Lamigo
Ion Balance	CALC	8172803	N/A	2016/01/26	Automated Statchk
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	Lucy Luo
pH Water	AT/ALK	8174446	N/A	2016/01/25	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	Coco Guo

Maxxam ID: NZ7229
Sample ID: KZ-22
Matrix: Water

Collected: 2016/01/19
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8174445	2016/01/25	2016/01/25	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	Isabel Choi
Conductance - water	AT/ALK	8174447	N/A	2016/01/25	Wilson Au Yueng
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	Edwin Lamigo
Ion Balance	CALC	8172803	N/A	2016/01/26	Automated Statchk
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7229
Sample ID: KZ-22
Matrix: Water

Collected: 2016/01/19
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	Lucy Luo
pH Water	AT/ALK	8174446	N/A	2016/01/25	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	Coco Guo

Maxxam ID: NZ7229 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2016/01/19
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	Isabel Choi

Maxxam ID: NZ7230
Sample ID: KZ-28
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8174445	2016/01/25	2016/01/25	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	Isabel Choi
Conductance - water	AT/ALK	8174447	N/A	2016/01/25	Wilson Au Yueng
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	Edwin Lamigo
Ion Balance	CALC	8172803	N/A	2016/01/26	Automated Statchk
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	Lucy Luo
pH Water	AT/ALK	8174446	N/A	2016/01/25	Wilson Au Yueng

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7230
Sample ID: KZ-28
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	Coco Guo

Maxxam ID: NZ7231
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/01/22
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8174445	2016/01/25	2016/01/25	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	Isabel Choi
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8175679	N/A	2016/01/26	Isabel Choi
Conductance - water	AT/ALK	8174447	N/A	2016/01/25	Wilson Au Yueng
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	Edwin Lamigo
Ion Balance	CALC	8172803	N/A	2016/01/26	Automated Statchk
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	Automated Statchk
pH Water	AT/ALK	8174446	N/A	2016/01/25	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	Coco Guo

Maxxam ID: NZ7231 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/01/22
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8175679	N/A	2016/01/26	Isabel Choi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7231 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/01/22
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	Edwin Lamigo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.7°C
Package 2	4.0°C
Package 3	5.7°C

Revised report V2 (2016/05/19): Due to client request, samples were reanalyzed for Total Barium. Corrected values for sample NZ7226 are included in this report (MM4).

Revised report V3 (2016/06/08): Corrected values for NZ7226 are included in this report for Total Strontium and Uranium, after review of all metals data greater than 3 times the RDL.

Sample NZ7218, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NZ7224, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NZ7226, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NZ7226, Elements by ICPMS Low Level (total): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8173573	Nitrate plus Nitrite (N)	2016/01/23	NC	80 - 120	99	80 - 120	<0.0020	mg/L	4.4	25
8173574	Nitrite (N)	2016/01/23	98	80 - 120	94	80 - 120	<0.0020	mg/L	NC	25
8174205	Strong Acid Dissoc. Cyanide (CN)	2016/01/25	102	80 - 120	102	80 - 120	0.00051, RDL=0.00050	mg/L	NC	20
8174238	Acidity (pH 4.5)	2016/01/25					<0.50	mg/L	NC	20
8174238	Acidity (pH 8.3)	2016/01/25			102	80 - 120	<0.50	mg/L	4.1	20
8174261	Total Aluminum (Al)	2016/01/26	101	80 - 120	111	80 - 120	<0.00050	mg/L	22 (1)	20
8174261	Total Antimony (Sb)	2016/01/26	107	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
8174261	Total Arsenic (As)	2016/01/26	109	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8174261	Total Barium (Ba)	2016/01/26	NC	80 - 120	101	80 - 120	<0.000020	mg/L	3.3	20
8174261	Total Beryllium (Be)	2016/01/26	96	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8174261	Total Bismuth (Bi)	2016/01/26	103	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8174261	Total Boron (B)	2016/01/26	97	80 - 120	99	80 - 120	<0.010	mg/L	NC	20
8174261	Total Cadmium (Cd)	2016/01/26	103	80 - 120	104	80 - 120	<0.0000050	mg/L	2.2	20
8174261	Total Chromium (Cr)	2016/01/26	104	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8174261	Total Cobalt (Co)	2016/01/26	100	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8174261	Total Copper (Cu)	2016/01/26	98	80 - 120	102	80 - 120	<0.000050	mg/L	8.8	20
8174261	Total Iron (Fe)	2016/01/26	97	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
8174261	Total Lead (Pb)	2016/01/26	103	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8174261	Total Lithium (Li)	2016/01/26	100	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8174261	Total Manganese (Mn)	2016/01/26	101	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8174261	Total Molybdenum (Mo)	2016/01/26	NC	80 - 120	100	80 - 120	<0.000050	mg/L	2.3	20
8174261	Total Nickel (Ni)	2016/01/26	99	80 - 120	100	80 - 120	<0.000020	mg/L	0.38	20
8174261	Total Phosphorus (P)	2016/01/26					<0.0020	mg/L	NC	20
8174261	Total Selenium (Se)	2016/01/26	104	80 - 120	100	80 - 120	<0.000040	mg/L	3.7	20
8174261	Total Silicon (Si)	2016/01/26					<0.050	mg/L	1.6	20
8174261	Total Silver (Ag)	2016/01/26	98	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8174261	Total Strontium (Sr)	2016/01/26	NC	80 - 120	101	80 - 120	<0.000050	mg/L	0.047	20
8174261	Total Thallium (Tl)	2016/01/26	100	80 - 120	110	80 - 120	<0.0000020	mg/L	NC	20
8174261	Total Tin (Sn)	2016/01/26	104	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
8174261	Total Titanium (Ti)	2016/01/26	99	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8174261	Total Uranium (U)	2016/01/26	110	80 - 120	112	80 - 120	<0.0000020	mg/L	2.6	20
8174261	Total Vanadium (V)	2016/01/26	105	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8174261	Total Zinc (Zn)	2016/01/26	NC	80 - 120	108	80 - 120	0.00018, RDL=0.00010	mg/L	1.4	20
8174261	Total Zirconium (Zr)	2016/01/26					<0.00010	mg/L	NC	20
8174294	Dissolved Aluminum (Al)	2016/01/26	103	80 - 120	107	80 - 120	<0.00050	mg/L		
8174294	Dissolved Antimony (Sb)	2016/01/26	103	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8174294	Dissolved Arsenic (As)	2016/01/26	104	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8174294	Dissolved Barium (Ba)	2016/01/26	NC	80 - 120	100	80 - 120	<0.000020	mg/L	1.2	20
8174294	Dissolved Beryllium (Be)	2016/01/26	95	80 - 120	93	80 - 120	<0.000010	mg/L	NC	20
8174294	Dissolved Bismuth (Bi)	2016/01/26	99	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8174294	Dissolved Boron (B)	2016/01/26	93	80 - 120	90	80 - 120	<0.010	mg/L	NC	20
8174294	Dissolved Cadmium (Cd)	2016/01/26	100	80 - 120	103	80 - 120	<0.0000050	mg/L	0.92	20
8174294	Dissolved Chromium (Cr)	2016/01/26	102	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8174294	Dissolved Cobalt (Co)	2016/01/26	98	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8174294	Dissolved Copper (Cu)	2016/01/26	96	80 - 120	103	80 - 120	<0.000050	mg/L	0.72	20
8174294	Dissolved Iron (Fe)	2016/01/26	100	80 - 120	110	80 - 120	<0.0010	mg/L	NC	20
8174294	Dissolved Lead (Pb)	2016/01/26	102	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8174294	Dissolved Lithium (Li)	2016/01/26	92	80 - 120	90	80 - 120	<0.00050	mg/L	NC	20
8174294	Dissolved Manganese (Mn)	2016/01/26	101	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8174294	Dissolved Molybdenum (Mo)	2016/01/26	NC	80 - 120	99	80 - 120	<0.000050	mg/L	0.54	20
8174294	Dissolved Nickel (Ni)	2016/01/26	97	80 - 120	103	80 - 120	<0.000020	mg/L	2.8	20
8174294	Dissolved Phosphorus (P)	2016/01/26					<0.0020	mg/L	NC	20
8174294	Dissolved Selenium (Se)	2016/01/26	103	80 - 120	99	80 - 120	<0.000040	mg/L	2.6	20
8174294	Dissolved Silicon (Si)	2016/01/26					<0.050	mg/L	0.11	20
8174294	Dissolved Silver (Ag)	2016/01/26	94	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8174294	Dissolved Strontium (Sr)	2016/01/26	NC	80 - 120	104	80 - 120	<0.000050	mg/L	0.010	20
8174294	Dissolved Thallium (Tl)	2016/01/26	100	80 - 120	106	80 - 120	<0.0000020	mg/L	NC	20
8174294	Dissolved Tin (Sn)	2016/01/26	101	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8174294	Dissolved Titanium (Ti)	2016/01/26	99	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8174294	Dissolved Uranium (U)	2016/01/26	115	80 - 120	111	80 - 120	<0.0000020	mg/L	3.3	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8174294	Dissolved Vanadium (V)	2016/01/26	102	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8174294	Dissolved Zinc (Zn)	2016/01/26	NC	80 - 120	107	80 - 120	<0.00010	mg/L	2.0	20
8174294	Dissolved Zirconium (Zr)	2016/01/26					<0.00010	mg/L	NC	20
8174317	Total Suspended Solids	2016/01/26			101	80 - 120	<1.0	mg/L		
8174322	Weak Acid Dissoc. Cyanide (CN)	2016/01/25	108	80 - 120	105	80 - 120	0.00053, RDL=0.00050	mg/L	NC	20
8174445	Alkalinity (PP as CaCO3)	2016/01/25					<0.50	mg/L		
8174445	Alkalinity (Total as CaCO3)	2016/01/25	95	80 - 120	97	80 - 120	<0.50	mg/L		
8174445	Bicarbonate (HCO3)	2016/01/25					<0.50	mg/L		
8174445	Carbonate (CO3)	2016/01/25					<0.50	mg/L		
8174445	Hydroxide (OH)	2016/01/25					<0.50	mg/L		
8174446	pH	2016/01/25			101	97 - 103				
8174447	Conductivity	2016/01/25			101	80 - 120	<1.0	uS/cm		
8174453	Alkalinity (PP as CaCO3)	2016/01/25					<0.50	mg/L	NC	20
8174453	Alkalinity (Total as CaCO3)	2016/01/25	NC	80 - 120	101	80 - 120	0.55, RDL=0.50	mg/L	0.075	20
8174453	Bicarbonate (HCO3)	2016/01/25					0.67, RDL=0.50	mg/L	0.17	20
8174453	Carbonate (CO3)	2016/01/25					<0.50	mg/L	NC	20
8174453	Hydroxide (OH)	2016/01/25					<0.50	mg/L	NC	20
8174454	pH	2016/01/25			101	97 - 103				
8174455	Conductivity	2016/01/25			101	80 - 120	<1.0	uS/cm		
8174509	Dissolved Chloride (Cl)	2016/01/25	107	80 - 120	100	80 - 120	<0.50	mg/L	NC	20
8174512	Dissolved Sulphate (SO4)	2016/01/25	NC	80 - 120	90	80 - 120	0.81, RDL=0.50	mg/L	0.55	20
8174513	Dissolved Chloride (Cl)	2016/01/25			100	80 - 120	<0.50	mg/L	NC	20
8174515	Dissolved Sulphate (SO4)	2016/01/25			92	80 - 120	<0.50	mg/L	1.6	20
8174601	Total Ammonia (N)	2016/01/25	100	80 - 120	106	80 - 120	<0.0050	mg/L	2.0	20
8174940	Fluoride (F)	2016/01/25	96	80 - 120	94	80 - 120	<0.010	mg/L	NC	20
8174942	Fluoride (F)	2016/01/25	96	80 - 120	96	80 - 120	<0.010	mg/L	0	20
8175081	Total Mercury (Hg)	2016/01/26	109	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8175082	Dissolved Mercury (Hg)	2016/01/26	85	80 - 120	84	80 - 120	<0.0000020	mg/L	NC	20
8175668	True Colour	2016/01/23			103	80 - 120	<5.0	Col. Unit	NC	20
8175678	Dissolved Organic Carbon (C)	2016/01/26	96	80 - 120	102	80 - 120	<0.50	mg/L	NC	20

Maxxam Job #: B605186
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8175679	Dissolved Organic Carbon (C)	2016/01/26	97	80 - 120	108	80 - 120	<0.50	mg/L	NC	20
8175680	Dissolved Phosphorus (P)	2016/01/26			96	80 - 120	<0.0020	mg/L		
8175682	Total Phosphorus (P)	2016/01/26			101	80 - 120	<0.0020	mg/L		
8176397	Dissolved Aluminum (Al)	2016/01/27			101	80 - 120	<0.00050	mg/L		
8176397	Dissolved Barium (Ba)	2016/01/27			104	80 - 120	<0.000020	mg/L		
8176397	Dissolved Copper (Cu)	2016/01/27			102	80 - 120	<0.000050	mg/L		
8176397	Dissolved Uranium (U)	2016/01/27			99	80 - 120	<0.0000020	mg/L		
8270237	Total Barium (Ba)	2016/05/16	NC	80 - 120	103	80 - 120	<0.000020	mg/L	0.19	20
8270237	Total Strontium (Sr)	2016/05/16	NC	80 - 120	97	80 - 120	<0.000050	mg/L	0.90	20
8270237	Total Uranium (U)	2016/05/16	102	80 - 120	100	80 - 120	<0.0000020	mg/L	2.5	20

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

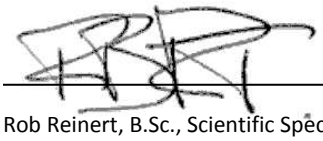
Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Andy Lu, Ph.D., P.Chem., Scientific Specialist



Rob Reinert, B.Sc., Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08417751

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required	
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[X] Regular TAT 5 days (Most analyses)	
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS	
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)	
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days	
Phone:		Phone:	(867) 668-6463	Site #:			
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:	

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2	NZ7218	20/01/2016	15:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
2	KZ-6	NZ7219	20/01/2016	13:34	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
3	KZ-7	NZ7220	20/01/2016	12:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
4	KZ-9	NZ7221	20/01/2016	11:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
5	KZ-13	NZ7222	21/01/2016	10:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
6	KZ-15	NZ7223	20/01/2016	8:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
7	KZ-16	NZ7224	20/01/2016	9:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
8	KZ-17	NZ7225	20/01/2016	9:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
9	KZ-19	NZ7226	21/01/2016	11:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
10	KZ-21	NZ7227	19/01/2016	14:55	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		3,6,5
NA		4,4,4
NA		5,7,5

COOLING MEDIA PRESENT Y / N

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM
Andrew MacPhail	2016/01/21	18:00	ALFRED NGAI	2016/01/22	12:50	B605186

B605186_COC

CHAIN OF CUSTODY RECORD

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08417753

BBY FCD-

Page ___

Invoice Information		Report Information (if differs from invoice)		Project Information (where app...)		Turnaround Time (TAT) Requi
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	BS0743	[x] Regular TAT 5 days (Most
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RU
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be ap
	Vancouver, BC PC: V6E 4A4		Whitehorse, Yk PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2
Phone:		Phone:	(867) 668-6483	Site #:		[ ] 1 Day [ ] 3
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested: TOTAL LOW LEVEL METALS INCL. MERCURY; DISSOLVED LOW LEVEL METALS INCL. MERCURY; LOW LEVEL TSS; ANIONS (CL, F, SO4, NO2, NO3); AMMONIA; CYANIDE (TAD & WAD); CONDUCTIVITY; pH; ALKALINITY & ACIDITY; TRUE COLOR; DOC; TOTAL PHOSPHORUS - LOW LEVEL; DISSOLVED PHOSPHORUS - LOW LEVEL; # OF CONTAINERS SUBMITTED; HOLD - DO NOT ANALYZE

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	# OF CONTAINERS SUBMITTED
1	KZ-22	NZ7229	19/01/2016	14:00	Water	12
3	KZ-28	NZ7230	20/01/2016	10:45	Water	12
4	Trip Blank	NZ7231			Water	12
5						
6						
7						
8						
9						
10						

LABORATORY USE ONL

CUSTODY SEAL Y / N		COC TEMPER
Present	Intact	
NA		36.5
NA		4.4.4
NA		5.7.5

COOLING MEDIA PRESENT Y

COMMENTS

B605186_COC

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
[signature] Kaiwen Woloshyn	2016/01/21	18:00	[signature] ALFRED NGAI	2016/01/22	12:50

MAXXAM JOB #: B605186

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08418210, 08418211

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/09
Report #: R2193598
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B610526
Received: 2016/02/10, 16:00

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	13	N/A	2016/02/12	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	13	2016/02/12	2016/02/12	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	13	N/A	2016/02/12	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	13	N/A	2016/02/12	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	13	N/A	2016/02/12	BBY6SOP-00004	SM 22 4500-CN O m
Colour (True) by Kone Lab	13	N/A	2016/02/13	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	12	N/A	2016/02/12	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2016/02/12	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	13	N/A	2016/02/12	BBY6SOP-00026	SM 22 2510 B m
Fluoride	13	N/A	2016/02/12	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	13	N/A	2016/02/15	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	13	N/A	2016/02/15	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	13	N/A	2016/02/15	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	13	2016/02/15	2016/02/15	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	13	N/A	2016/02/15	BBY WI-00033	SM 22 1030E
Sum of cations, anions	13	N/A	2016/02/15	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	13	N/A	2016/02/15	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	13	N/A	2016/02/12	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	13	N/A	2016/02/15	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	13	N/A	2016/02/12	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Unpreserved)	13	N/A	2016/02/15	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	13	N/A	2016/02/12	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	13	N/A	2016/02/12	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	13	N/A	2016/02/13	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	12	N/A	2016/02/12	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	1	N/A	2016/02/15	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	13	N/A	2016/02/12	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	13	N/A	2016/02/12	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	13	2016/02/13	2016/02/13	BBY6SOP-00013	SM 22 4500-P E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08418210, 08418211

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/09
Report #: R2193598
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B610526
Received: 2016/02/10, 16:00

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Phosphorus - unpreserved	13	N/A	2016/02/13	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	4	2016/02/12	2016/02/12	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	9	2016/02/12	2016/02/13	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5496		OC5497		OC5498		
Sampling Date		2016/02/09 15:15		2016/02/08 14:00		2016/02/09 14:20		
COC Number		08418210		08418210		08418210		
	UNITS	KZ-2	QC Batch	KZ-26	QC Batch	KZ-7	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.8	8189915	6.3	8189915	3.9	N/A	8189915
Cation Sum	meq/L	2.7	8189915	6.1	8189915	3.7	N/A	8189915
Filter and HNO3 Preservation	N/A	LAB	8190240	LAB	8190240	LAB	N/A	8190240
Ion Balance	N/A	0.96	8189413	0.97	8189413	0.95	0.010	8189413
Nitrate (N)	mg/L	0.165	8188852	0.252	8188852	0.131	0.0020	8188852
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8190751	<0.00050	8190751	<0.00050	0.00050	8190751
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8190763	<0.00050	8190763	<0.00050	0.00050	8190763
Fluoride (F)	mg/L	0.042	8191399	0.110	8191399	0.067	0.010	8191399
Dissolved Organic Carbon (C)	mg/L	<0.50	8191020	1.48	8191020	<0.50	0.50	8191020
Acidity (pH 4.5)	mg/L	<0.50	8190702	<0.50	8190702	<0.50	0.50	8190702
Alkalinity (Total as CaCO3)	mg/L	84.6	8190257	267	8190257	156	0.50	8190257
Acidity (pH 8.3)	mg/L	<0.50	8190702	<0.50	8190702	<0.50	0.50	8190702
Alkalinity (PP as CaCO3)	mg/L	<0.50	8190257	3.50	8190257	<0.50	0.50	8190257
Bicarbonate (HCO3)	mg/L	103	8190257	317	8190257	190	0.50	8190257
Carbonate (CO3)	mg/L	<0.50	8190257	4.20	8190257	<0.50	0.50	8190257
Hydroxide (OH)	mg/L	<0.50	8190257	<0.50	8190257	<0.50	0.50	8190257
Anions								
Dissolved Sulphate (SO4)	mg/L	52.8	8190866	46.1	8190847	34.9	0.50	8190866
Dissolved Chloride (Cl)	mg/L	<0.50	8190859	0.75	8190844	0.63	0.50	8190859
MISCELLANEOUS								
True Colour	Col. Unit	<5.0 (1)	8191817	6.7 (1)	8191817	10.7 (1)	5.0	8191817
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0021	8191832	0.0032	8191832	0.0031	0.0020	8191832
Total Ammonia (N)	mg/L	0.0064 (2)	8191866	0.0099 (3)	8191866	0.018 (2)	0.0050	8191866
Nitrate plus Nitrite (N)	mg/L	0.165	8191035	0.252 (1)	8191035	0.131	0.0020	8191035
Nitrite (N)	mg/L	<0.0020	8191036	<0.0020 (1)	8191036	<0.0020	0.0020	8191036
Total Phosphorus (P)	mg/L	<0.0020	8191836	0.0031	8191836	0.0030	0.0020	8191836

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample preserved to extend hold time.
(3) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5496		OC5497		OC5498		
Sampling Date		2016/02/09 15:15		2016/02/08 14:00		2016/02/09 14:20		
COC Number		08418210		08418210		08418210		
	UNITS	**KZ-2**	**QC Batch**	**KZ-26**	**QC Batch**	**KZ-7**	**RDL**	**QC Batch**
Physical Properties								
Conductivity	uS/cm	275	8190262	547	8190262	360	1.0	8190262
pH	pH	8.00	8190263	8.35	8190263	8.19		8190263
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8190481	3.3	8190006	1.0	1.0	8190481
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5499		OC5500		OC5501		
Sampling Date		2016/02/09 12:45		2016/02/08 12:45		2016/02/09 10:00		
COC Number		08418210		08418210		08418210		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-15	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	4.6	8189915	1.9	8189915	5.7	N/A	8189915
Cation Sum	meq/L	4.2	8189915	1.9	8189915	5.3	N/A	8189915
Filter and HNO3 Preservation	N/A	LAB	8190240	LAB	8190240	LAB	N/A	8190240
Ion Balance	N/A	0.90	8189413	1.0	8189413	0.94	0.010	8189413
Nitrate (N)	mg/L	0.191	8188852	0.159	8188852	0.216	0.0020	8188852
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8190751	<0.00050	8190751	<0.00050	0.00050	8190751
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8190763	0.00065	8190763	<0.00050	0.00050	8190763
Fluoride (F)	mg/L	0.086	8191399	0.047	8191399	0.100	0.010	8191399
Dissolved Organic Carbon (C)	mg/L	<0.50	8191020	<0.50	8191020	<0.50	0.50	8191020
Acidity (pH 4.5)	mg/L	<0.50	8190709	<0.50	8190709	<0.50	0.50	8190709
Alkalinity (Total as CaCO3)	mg/L	193	8190269	77.9	8190269	242	0.50	8190269
Acidity (pH 8.3)	mg/L	3.76	8190709	<0.50	8190709	<0.50	0.50	8190709
Alkalinity (PP as CaCO3)	mg/L	<0.50	8190269	<0.50	8190269	<0.50	0.50	8190269
Bicarbonate (HCO3)	mg/L	235	8190269	95.0	8190269	295	0.50	8190269
Carbonate (CO3)	mg/L	<0.50	8190269	<0.50	8190269	<0.50	0.50	8190269
Hydroxide (OH)	mg/L	<0.50	8190269	<0.50	8190269	<0.50	0.50	8190269
Anions								
Dissolved Sulphate (SO4)	mg/L	34.1	8190866	13.5	8190866	37.3	0.50	8190866
Dissolved Chloride (Cl)	mg/L	0.87	8190859	<0.50	8190859	0.55	0.50	8190859
MISCELLANEOUS								
True Colour	Col. Unit	28.3 (1)	8191817	17.2 (1)	8191817	7.8 (1)	5.0	8191817
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0031	8191832	0.0047	8191832	0.0027	0.0020	8191832
Total Ammonia (N)	mg/L	0.017 (2)	8191866	0.0066 (3)	8191866	0.012 (2)	0.0050	8191866
Nitrate plus Nitrite (N)	mg/L	0.191	8191035	0.159 (1)	8191035	0.216	0.0020	8191035
Nitrite (N)	mg/L	<0.0020	8191036	<0.0020 (1)	8191036	<0.0020	0.0020	8191036
Total Phosphorus (P)	mg/L	0.0021	8191836	0.0037	8191836	0.0028	0.0020	8191836

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample preserved to extend hold time.
(3) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5499		OC5500		OC5501		
Sampling Date		2016/02/09 12:45		2016/02/08 12:45		2016/02/09 10:00		
COC Number		08418210		08418210		08418210		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-15	RDL	QC Batch
Physical Properties								
Conductivity	uS/cm	421	8190271	179	8190271	504	1.0	8190271
pH	pH	7.90	8190272	7.99	8190272	8.16		8190272
Physical Properties								
Total Suspended Solids	mg/L	1.4	8190481	<1.0	8190006	<1.0	1.0	8190481
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5502		OC5503		OC5504		
Sampling Date		2016/02/09 10:40		2016/02/09 11:20		2016/02/08 13:30		
COC Number		08418210		08418210		08418210		
	UNITS	KZ-16	QC Batch	KZ-17	QC Batch	KZ-19	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	6.1	8189915	5.7	8189915	0.00090	N/A	8189915
Cation Sum	meq/L	5.9	8189915	5.3	8189915	0.0023	N/A	8189915
Filter and HNO3 Preservation	N/A	LAB	8190240	LAB	8190240	LAB	N/A	8190240
Ion Balance	N/A	0.97	8189413	0.94	8189413	NC	0.010	8189413
Nitrate (N)	mg/L	0.248	8188852	0.228	8188852	<0.0020	0.0020	8188852
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8190751	<0.00050	8190751	0.00062	0.00050	8190757
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8190763	<0.00050	8190763	0.00072	0.00050	8190763
Fluoride (F)	mg/L	0.073	8191399	0.090	8191399	0.018	0.010	8191399
Dissolved Organic Carbon (C)	mg/L	<0.50	8191020	0.91	8191020	<0.50	0.50	8191020
Acidity (pH 4.5)	mg/L	<0.50	8190702	<0.50	8190702	<0.50	0.50	8190709
Alkalinity (Total as CaCO3)	mg/L	259	8190269	241	8190257	<0.50	0.50	8190269
Acidity (pH 8.3)	mg/L	3.49	8190702	1.09	8190702	<0.50	0.50	8190709
Alkalinity (PP as CaCO3)	mg/L	<0.50	8190269	<0.50	8190257	<0.50	0.50	8190269
Bicarbonate (HCO3)	mg/L	316	8190269	294	8190257	<0.50	0.50	8190269
Carbonate (CO3)	mg/L	<0.50	8190269	<0.50	8190257	<0.50	0.50	8190269
Hydroxide (OH)	mg/L	<0.50	8190269	<0.50	8190257	<0.50	0.50	8190269
Anions								
Dissolved Sulphate (SO4)	mg/L	41.5	8190847	38.6	8190866	<0.50	0.50	8190866
Dissolved Chloride (Cl)	mg/L	0.64	8190844	0.85	8190859	<0.50	0.50	8190859
MISCELLANEOUS								
True Colour	Col. Unit	9.5 (1)	8191817	8.0 (1)	8191817	7.8 (1)	5.0	8191817
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0027	8191832	0.0028	8191832	<0.0020	0.0020	8191832
Total Ammonia (N)	mg/L	0.0094 (2)	8191866	<0.0050 (2)	8191866	0.0056 (3)	0.0050	8191866
Nitrate plus Nitrite (N)	mg/L	0.248	8191035	0.228	8191035	<0.0020 (1)	0.0020	8191035
Nitrite (N)	mg/L	<0.0020	8191036	<0.0020	8191036	<0.0020 (1)	0.0020	8191036
Total Phosphorus (P)	mg/L	<0.0020	8191836	0.0028	8191836	<0.0020	0.0020	8191836

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample preserved to extend hold time.
(3) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5502		OC5503		OC5504		
Sampling Date		2016/02/09 10:40		2016/02/09 11:20		2016/02/08 13:30		
COC Number		08418210		08418210		08418210		
	UNITS	KZ-16	QC Batch	KZ-17	QC Batch	KZ-19	RDL	QC Batch
Physical Properties								
Conductivity	uS/cm	544	8190271	501	8190262	1.4	1.0	8190271
pH	pH	7.99	8190272	8.11	8190263	5.73		8190272
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8190481	<1.0	8190481	<1.0	1.0	8190006
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5505		OC5508		OC5509		
Sampling Date		2016/02/09 08:45		2016/02/08 15:30		2016/02/09 14:50		
COC Number		08418210		08418211		08418211		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-28	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	7.1	8189915	6.9	8189915	3.8	N/A	8189915
Cation Sum	meq/L	6.8	8189915	6.7	8189915	3.7	N/A	8189915
Filter and HNO3 Preservation	N/A	LAB	8190240	LAB	8190240	LAB	N/A	8190240
Ion Balance	N/A	0.95	8189413	0.97	8189413	0.97	0.010	8189413
Nitrate (N)	mg/L	0.189	8188852	0.205	8188852	0.130	0.0020	8188852
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8190757	<0.00050	8190757	<0.00050	0.00050	8190757
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8190763	0.00055	8190763	<0.00050	0.00050	8190768
Fluoride (F)	mg/L	0.200	8191399	0.170	8191399	0.066	0.010	8191399
Dissolved Organic Carbon (C)	mg/L	1.43	8191020	0.77	8191020	<0.50	0.50	8191020
Acidity (pH 4.5)	mg/L	<0.50	8190702	<0.50	8190702	<0.50	0.50	8190702
Alkalinity (Total as CaCO3)	mg/L	312	8190269	300	8190257	155	0.50	8190257
Acidity (pH 8.3)	mg/L	4.41	8190702	2.80	8190702	<0.50	0.50	8190702
Alkalinity (PP as CaCO3)	mg/L	<0.50	8190269	<0.50	8190257	<0.50	0.50	8190257
Bicarbonate (HCO3)	mg/L	380	8190269	366	8190257	189	0.50	8190257
Carbonate (CO3)	mg/L	<0.50	8190269	<0.50	8190257	<0.50	0.50	8190257
Hydroxide (OH)	mg/L	<0.50	8190269	<0.50	8190257	<0.50	0.50	8190257
Anions								
Dissolved Sulphate (SO4)	mg/L	40.9	8190866	41.1	8190866	33.2	0.50	8190866
Dissolved Chloride (Cl)	mg/L	1.2	8190859	1.2	8190859	0.64	0.50	8190859
MISCELLANEOUS								
True Colour	Col. Unit	28.6 (1)	8191817	17.3 (1)	8191817	26.6 (1)	5.0	8191817
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0070	8191832	0.0062	8191832	0.0028	0.0020	8191832
Total Ammonia (N)	mg/L	0.071 (2)	8191866	0.057 (3)	8191866	0.016 (2)	0.0050	8191866
Nitrate plus Nitrite (N)	mg/L	0.189	8191035	0.207 (1)	8191035	0.130	0.0020	8191035
Nitrite (N)	mg/L	<0.0020	8191036	0.0020 (1)	8191036	<0.0020	0.0020	8191036
Total Phosphorus (P)	mg/L	0.0065	8191836	0.0057	8191836	0.0027	0.0020	8191836

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample preserved to extend hold time.
(3) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5505		OC5508		OC5509		
Sampling Date		2016/02/09 08:45		2016/02/08 15:30		2016/02/09 14:50		
COC Number		08418210		08418211		08418211		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-28	RDL	QC Batch
Physical Properties								
Conductivity	uS/cm	624	8190271	602	8190262	360	1.0	8190262
pH	pH	8.01	8190272	8.09	8190263	8.21		8190263
Physical Properties								
Total Suspended Solids	mg/L	1.2	8190481	1.1	8190006	1.2	1.0	8190481
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5510		
Sampling Date		2016/02/10 16:00		
COC Number		08418211		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	0.00090	N/A	8189915
Cation Sum	meq/L	0.010	N/A	8189915
Filter and HNO3 Preservation	N/A	FIELD	N/A	ONSITE
Ion Balance	N/A	NC	0.010	8189413
Nitrate (N)	mg/L	<0.0020	0.0020	8188852
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8190757
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8190768
Fluoride (F)	mg/L	0.018	0.010	8191399
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8191015
Acidity (pH 4.5)	mg/L	<0.50	0.50	8190702
Alkalinity (Total as CaCO3)	mg/L	<0.50	0.50	8190257
Acidity (pH 8.3)	mg/L	<0.50	0.50	8190702
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8190257
Bicarbonate (HCO3)	mg/L	<0.50	0.50	8190257
Carbonate (CO3)	mg/L	<0.50	0.50	8190257
Hydroxide (OH)	mg/L	<0.50	0.50	8190257
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8190866
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8190859
MISCELLANEOUS				
True Colour	Col. Unit	<5.0	5.0	8191817
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8191832
Total Ammonia (N)	mg/L	0.0051 (1)	0.0050	8191866
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8191035
Nitrite (N)	mg/L	<0.0020	0.0020	8191036
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8191836
Physical Properties				
Conductivity	uS/cm	1.4	1.0	8190262

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5510		
Sampling Date		2016/02/10 16:00		
COC Number		08418211		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
pH	pH	5.00		8190263
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8190481
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OC5496		OC5497	OC5498	OC5499		
Sampling Date		2016/02/09 15:15		2016/02/08 14:00	2016/02/09 14:20	2016/02/09 12:45		
COC Number		08418210		08418210	08418210	08418210		
	UNITS	KZ-2	QC Batch	KZ-26	KZ-7	KZ-9	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	130	8188994	300	178	203	0.50	8188994
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8191772	<0.0000020	<0.0000020	<0.0000020	0.0000020	8191772
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00199	8190538	0.00072	0.00106	0.00080	0.00050	8190538
Dissolved Antimony (Sb)	mg/L	0.000030	8190538	0.000048	0.000027	0.000024	0.000020	8190538
Dissolved Arsenic (As)	mg/L	0.000080	8190538	0.000426	0.000114	0.000171	0.000020	8190538
Dissolved Barium (Ba)	mg/L	0.0736	8190538	0.0914	0.108	0.108	0.000020	8190538
Dissolved Beryllium (Be)	mg/L	<0.000010	8190538	<0.000010	<0.000010	<0.000010	0.000010	8190538
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8190538	<0.0000050	<0.0000050	<0.0000050	0.0000050	8190538
Dissolved Boron (B)	mg/L	<0.010	8190538	<0.010	<0.010	<0.010	0.010	8190538
Dissolved Cadmium (Cd)	mg/L	0.000235	8190538	0.0000090	0.0000240	0.0000520	0.0000050	8190538
Dissolved Chromium (Cr)	mg/L	<0.00010	8190538	<0.00010	<0.00010	<0.00010	0.00010	8190538
Dissolved Cobalt (Co)	mg/L	0.0000050	8190538	0.0000090	0.0000580	0.000144	0.0000050	8190538
Dissolved Copper (Cu)	mg/L	0.000949	8190538	0.000331	0.000143	0.000170	0.000050	8190538
Dissolved Iron (Fe)	mg/L	<0.0010	8190538	0.0034	0.0061	0.0153	0.0010	8190538
Dissolved Lead (Pb)	mg/L	0.0000590	8190538	<0.0000050	<0.0000050	<0.0000050	0.0000050	8190538
Dissolved Lithium (Li)	mg/L	0.00174	8190538	0.00689	0.00348	0.00470	0.00050	8190538
Dissolved Manganese (Mn)	mg/L	0.000086	8190538	0.00190	0.0877	0.119	0.000050	8190538
Dissolved Molybdenum (Mo)	mg/L	0.000749	8190538	0.00105	0.000709	0.000706	0.000050	8190538
Dissolved Nickel (Ni)	mg/L	0.000267	8190538	0.000688	0.000420	0.000501	0.000020	8190538
Dissolved Phosphorus (P)	mg/L	<0.0020	8192370	0.0045	0.0031	<0.0020	0.0020	8190538
Dissolved Selenium (Se)	mg/L	0.00189	8190538	0.000891	0.000862	0.00104	0.000040	8190538
Dissolved Silicon (Si)	mg/L	2.40	8190538	5.00	3.68	4.09	0.050	8190538
Dissolved Silver (Ag)	mg/L	<0.0000050	8190538	<0.0000050	<0.0000050	<0.0000050	0.0000050	8190538
Dissolved Strontium (Sr)	mg/L	0.142	8190538	0.266	0.206	0.247	0.000050	8190538
Dissolved Thallium (Tl)	mg/L	0.0000020	8190538	<0.0000020	<0.0000020	<0.0000020	0.0000020	8190538
Dissolved Tin (Sn)	mg/L	<0.00020	8190538	<0.00020	<0.00020	<0.00020	0.00020	8190538
Dissolved Titanium (Ti)	mg/L	<0.00050	8190538	<0.00050	<0.00050	<0.00050	0.00050	8190538
Dissolved Uranium (U)	mg/L	0.00442	8190538	0.00363	0.00146	0.00168	0.0000020	8190538
Dissolved Vanadium (V)	mg/L	<0.00020	8190538	<0.00020	<0.00020	<0.00020	0.00020	8190538
Dissolved Zinc (Zn)	mg/L	0.0257	8190538	0.00062	0.0382	0.0122	0.00010	8190538

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OC5496		OC5497	OC5498	OC5499		
Sampling Date		2016/02/09 15:15		2016/02/08 14:00	2016/02/09 14:20	2016/02/09 12:45		
COC Number		08418210		08418210	08418210	08418210		
	UNITS	**KZ-2**	**QC Batch**	**KZ-26**	**KZ-7**	**KZ-9**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	8190538	<0.00010	<0.00010	<0.00010	0.00010	8190538
Dissolved Calcium (Ca)	mg/L	41.8	8189158	80.2	58.6	67.4	0.050	8189158
Dissolved Magnesium (Mg)	mg/L	6.10	8189158	24.2	7.70	8.30	0.050	8189158
Dissolved Potassium (K)	mg/L	2.31	8189158	1.71	1.87	1.89	0.050	8189158
Dissolved Sodium (Na)	mg/L	0.915	8189158	2.05	1.30	1.53	0.050	8189158
Dissolved Sulphur (S)	mg/L	17.5	8189158	15.0	12.0	11.5	3.0	8189158
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OC5500	OC5501	OC5502	OC5503	OC5504		
Sampling Date		2016/02/08 12:45	2016/02/09 10:00	2016/02/09 10:40	2016/02/09 11:20	2016/02/08 13:30		
COC Number		08418210	08418210	08418210	08418210	08418210		
	UNITS	KZ-13	KZ-15	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	87.0	259	291	262	<0.50	0.50	8188994
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8191772
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00279	0.00083	0.00176	0.00088	<0.00050	0.00050	8190538
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000027	0.000020	0.000029	<0.000020	0.000020	8190538
Dissolved Arsenic (As)	mg/L	0.000132	0.000308	0.000160	0.000307	<0.000020	0.000020	8190538
Dissolved Barium (Ba)	mg/L	0.145	0.0985	0.106	0.0992	<0.000020	0.000020	8190538
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8190538
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8190538
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8190538
Dissolved Cadmium (Cd)	mg/L	0.0000260	0.0000350	0.0000300	0.0000320	<0.0000050	0.0000050	8190538
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8190538
Dissolved Cobalt (Co)	mg/L	0.0000310	0.0000220	0.0000180	0.0000110	<0.0000050	0.0000050	8190538
Dissolved Copper (Cu)	mg/L	0.000282	0.000186	0.000290	0.000245	<0.000050	0.000050	8190538
Dissolved Iron (Fe)	mg/L	0.0373	0.0031	0.0028	0.0026	<0.0010	0.0010	8190538
Dissolved Lead (Pb)	mg/L	0.0000120	<0.0000050	0.0000060	<0.0000050	<0.0000050	0.0000050	8190538
Dissolved Lithium (Li)	mg/L	0.00118	0.00437	0.00459	0.00394	<0.00050	0.00050	8190538
Dissolved Manganese (Mn)	mg/L	0.0636	0.0301	0.00731	0.0195	<0.000050	0.000050	8190538
Dissolved Molybdenum (Mo)	mg/L	0.000765	0.00141	0.000369	0.00135	<0.000050	0.000050	8190538
Dissolved Nickel (Ni)	mg/L	0.000308	0.000859	0.000695	0.000733	<0.000020	0.000020	8190538
Dissolved Phosphorus (P)	mg/L	0.0033	0.0054	0.0037	0.0033	<0.0020	0.0020	8190538
Dissolved Selenium (Se)	mg/L	0.000311	0.00134	0.00148	0.00132	<0.000040	0.000040	8190538
Dissolved Silicon (Si)	mg/L	3.71	4.08	4.34	4.04	<0.050	0.050	8190538
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8190538
Dissolved Strontium (Sr)	mg/L	0.0863	0.259	0.288	0.257	<0.000050	0.000050	8190538
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8190538
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8190538
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8190538
Dissolved Uranium (U)	mg/L	0.000684	0.00476	0.00289	0.00501	<0.0000020	0.0000020	8190538
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8190538
Dissolved Zinc (Zn)	mg/L	0.00298	0.00518	0.00177	0.00405	<0.00010	0.00010	8190538

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OC5500	OC5501	OC5502	OC5503	OC5504		
Sampling Date		2016/02/08 12:45	2016/02/09 10:00	2016/02/09 10:40	2016/02/09 11:20	2016/02/08 13:30		
COC Number		08418210	08418210	08418210	08418210	08418210		
	UNITS	**KZ-13**	**KZ-15**	**KZ-16**	**KZ-17**	**KZ-19**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8190538
Dissolved Calcium (Ca)	mg/L	29.9	75.8	86.7	77.0	<0.050	0.050	8189158
Dissolved Magnesium (Mg)	mg/L	3.01	17.0	18.1	17.0	<0.050	0.050	8189158
Dissolved Potassium (K)	mg/L	2.27	1.48	1.57	1.50	<0.050	0.050	8189158
Dissolved Sodium (Na)	mg/L	1.13	1.43	1.58	1.46	<0.050	0.050	8189158
Dissolved Sulphur (S)	mg/L	4.4	12.7	14.2	12.7	<3.0	3.0	8189158
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OC5505		OC5508		OC5509		
Sampling Date		2016/02/09 08:45		2016/02/08 15:30		2016/02/09 14:50		
COC Number		08418210		08418211		08418211		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-28	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	331	8188994	326	8188994	181	0.50	8188994
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8191772	<0.0000020	8191772	<0.0000020	0.0000020	8191772
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00071	8190538	0.00158	8190538	0.00107	0.00050	8190538
Dissolved Antimony (Sb)	mg/L	0.000029	8190538	0.000026	8190538	0.000031	0.000020	8190538
Dissolved Arsenic (As)	mg/L	0.000694	8190538	0.000685	8190538	0.000156	0.000020	8190538
Dissolved Barium (Ba)	mg/L	0.0849	8190538	0.0865	8190538	0.104	0.000020	8190538
Dissolved Beryllium (Be)	mg/L	<0.000010	8190538	<0.000010	8190538	<0.000010	0.000010	8190538
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8190538	<0.0000050	8190538	<0.0000050	0.0000050	8190538
Dissolved Boron (B)	mg/L	<0.010	8190538	<0.010	8190538	<0.010	0.010	8190538
Dissolved Cadmium (Cd)	mg/L	0.0000100	8190538	0.0000110	8190538	0.0000610	0.0000050	8190538
Dissolved Chromium (Cr)	mg/L	<0.00010	8190538	<0.00010	8190538	<0.00010	0.00010	8190538
Dissolved Cobalt (Co)	mg/L	0.000143	8190538	0.000105	8190538	0.0000590	0.0000050	8190538
Dissolved Copper (Cu)	mg/L	0.000194	8190538	0.000269	8192370	0.000137	0.000050	8190538
Dissolved Iron (Fe)	mg/L	0.0840	8190538	0.0734	8190538	0.0484	0.0010	8190538
Dissolved Lead (Pb)	mg/L	<0.0000050	8190538	<0.0000050	8190538	0.0000050	0.0000050	8190538
Dissolved Lithium (Li)	mg/L	0.00941	8190538	0.00842	8190538	0.00389	0.00050	8190538
Dissolved Manganese (Mn)	mg/L	0.153	8190538	0.113	8190538	0.0870	0.000050	8190538
Dissolved Molybdenum (Mo)	mg/L	0.00170	8190538	0.00155	8190538	0.000744	0.000050	8190538
Dissolved Nickel (Ni)	mg/L	0.00213	8190538	0.00177	8190538	0.000390	0.000020	8190538
Dissolved Phosphorus (P)	mg/L	0.0095	8190538	0.0041	8190538	0.0033	0.0020	8190538
Dissolved Selenium (Se)	mg/L	0.000567	8190538	0.000772	8190538	0.000963	0.000040	8190538
Dissolved Silicon (Si)	mg/L	7.23	8190538	6.59	8190538	3.94	0.050	8190538
Dissolved Silver (Ag)	mg/L	<0.0000050	8190538	<0.0000050	8190538	<0.0000050	0.0000050	8190538
Dissolved Strontium (Sr)	mg/L	0.276	8190538	0.277	8190538	0.214	0.000050	8190538
Dissolved Thallium (Tl)	mg/L	<0.0000020	8190538	<0.0000020	8190538	<0.0000020	0.0000020	8190538
Dissolved Tin (Sn)	mg/L	<0.00020	8190538	<0.00020	8190538	<0.00020	0.00020	8190538
Dissolved Titanium (Ti)	mg/L	<0.00050	8190538	<0.00050	8190538	<0.00050	0.00050	8190538
Dissolved Uranium (U)	mg/L	0.00329	8190538	0.00351	8190538	0.00154	0.0000020	8190538
Dissolved Vanadium (V)	mg/L	<0.00020	8190538	<0.00020	8190538	<0.00020	0.00020	8190538
Dissolved Zinc (Zn)	mg/L	0.00080	8190538	0.00060	8190538	0.0288	0.00010	8190538

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OC5505		OC5508		OC5509		
Sampling Date		2016/02/09 08:45		2016/02/08 15:30		2016/02/09 14:50		
COC Number		08418210		08418211		08418211		
	UNITS	**KZ-21**	**QC Batch**	**KZ-22**	**QC Batch**	**KZ-28**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	0.00026	8190538	0.00020	8190538	<0.00010	0.00010	8190538
Dissolved Calcium (Ca)	mg/L	82.1	8189158	83.3	8189158	59.5	0.050	8189158
Dissolved Magnesium (Mg)	mg/L	30.5	8189158	28.6	8189158	7.88	0.050	8189158
Dissolved Potassium (K)	mg/L	2.39	8189158	2.20	8189158	1.85	0.050	8189158
Dissolved Sodium (Na)	mg/L	2.41	8189158	2.42	8189158	1.30	0.050	8189158
Dissolved Sulphur (S)	mg/L	14.5	8189158	15.1	8189158	12.7	3.0	8189158
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OC5510		
Sampling Date		2016/02/10 16:00		
COC Number		08418211		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Misc. Inorganics				
Dissolved Hardness (CaCO3)	mg/L	<0.50	0.50	8188994
Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000020	8191772
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	<0.00050	0.00050	8190538
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000020	8190538
Dissolved Arsenic (As)	mg/L	<0.000020	0.000020	8190538
Dissolved Barium (Ba)	mg/L	<0.000020	0.000020	8190538
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000010	8190538
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8190538
Dissolved Boron (B)	mg/L	<0.010	0.010	8190538
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000050	8190538
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00010	8190538
Dissolved Cobalt (Co)	mg/L	<0.0000050	0.0000050	8190538
Dissolved Copper (Cu)	mg/L	<0.000050	0.000050	8190538
Dissolved Iron (Fe)	mg/L	<0.0010	0.0010	8190538
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000050	8190538
Dissolved Lithium (Li)	mg/L	<0.00050	0.00050	8190538
Dissolved Manganese (Mn)	mg/L	<0.000050	0.000050	8190538
Dissolved Molybdenum (Mo)	mg/L	<0.000050	0.000050	8190538
Dissolved Nickel (Ni)	mg/L	<0.000020	0.000020	8190538
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8190538
Dissolved Selenium (Se)	mg/L	<0.000040	0.000040	8190538
Dissolved Silicon (Si)	mg/L	<0.050	0.050	8190538
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	8190538
Dissolved Strontium (Sr)	mg/L	<0.000050	0.000050	8190538
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000020	8190538
Dissolved Tin (Sn)	mg/L	<0.00020	0.00020	8190538
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00050	8190538
Dissolved Uranium (U)	mg/L	<0.0000020	0.0000020	8190538
Dissolved Vanadium (V)	mg/L	<0.00020	0.00020	8190538
Dissolved Zinc (Zn)	mg/L	<0.00010	0.00010	8190538
RDL = Reportable Detection Limit				

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OC5510		
Sampling Date		2016/02/10 16:00		
COC Number		08418211		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00010	8190538
Dissolved Calcium (Ca)	mg/L	<0.050	0.050	8189158
Dissolved Magnesium (Mg)	mg/L	<0.050	0.050	8189158
Dissolved Potassium (K)	mg/L	<0.050	0.050	8189158
Dissolved Sodium (Na)	mg/L	<0.050	0.050	8189158
Dissolved Sulphur (S)	mg/L	<3.0	3.0	8189158
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OC5496	OC5497	OC5498	OC5499	OC5500		
Sampling Date		2016/02/09 15:15	2016/02/08 14:00	2016/02/09 14:20	2016/02/09 12:45	2016/02/08 12:45		
COC Number		08418210	08418210	08418210	08418210	08418210		
	UNITS	KZ-2	KZ-26	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	127	294	176	214	84.9	0.50	8188939
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8191774
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0194	0.0420	0.0187	0.0193	0.0228	0.00050	8190243
Total Antimony (Sb)	mg/L	0.000033	0.000074	0.000035	0.000032	<0.000020	0.000020	8190243
Total Arsenic (As)	mg/L	0.000105	0.00193	0.000645	0.000682	0.000307	0.000020	8190243
Total Barium (Ba)	mg/L	0.0752	0.0993	0.112	0.115	0.149	0.000020	8190243
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8190243
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8190243
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8190243
Total Cadmium (Cd)	mg/L	0.000240	0.0000490	0.000204	0.0000850	0.0000430	0.0000050	8190243
Total Chromium (Cr)	mg/L	<0.00010	0.00018	<0.00010	0.00015	<0.00010	0.00010	8190243
Total Cobalt (Co)	mg/L	0.0000310	0.000243	0.000143	0.000192	0.0000720	0.0000050	8190243
Total Copper (Cu)	mg/L	0.000869	0.00107	0.000492	0.000381	0.00633	0.000050	8190243
Total Iron (Fe)	mg/L	0.0518	0.570	0.893	2.81	0.357	0.0010	8190243
Total Lead (Pb)	mg/L	0.000552	0.000443	0.000324	0.000196	0.000101	0.0000050	8190243
Total Lithium (Li)	mg/L	0.00148	0.00677	0.00344	0.00438	0.00148	0.00050	8190243
Total Manganese (Mn)	mg/L	0.00207	0.104	0.135	0.135	0.115	0.000050	8190243
Total Molybdenum (Mo)	mg/L	0.000760	0.000963	0.000720	0.000739	0.000696	0.000050	8190243
Total Nickel (Ni)	mg/L	0.000307	0.00157	0.000555	0.000552	0.000408	0.000020	8190243
Total Phosphorus (P)	mg/L	0.0063	0.0274	0.0092	0.0154	0.0048	0.0020	8190243
Total Selenium (Se)	mg/L	0.00206	0.000874	0.000916	0.00116	0.000304	0.000040	8190243
Total Silicon (Si)	mg/L	2.43	4.89	3.75	4.08	3.62	0.050	8190243
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8190243
Total Strontium (Sr)	mg/L	0.138	0.276	0.210	0.247	0.0862	0.000050	8190243
Total Thallium (Tl)	mg/L	0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8190243
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8190243
Total Titanium (Ti)	mg/L	0.00078	0.00223	0.00087	0.00056	0.00104	0.00050	8190243
Total Uranium (U)	mg/L	0.00452	0.00355	0.00150	0.00183	0.000733	0.0000020	8190243
Total Vanadium (V)	mg/L	<0.00020	0.00033	<0.00020	<0.00020	0.00021	0.00020	8190243
Total Zinc (Zn)	mg/L	0.0288	0.00421	0.0638	0.0170	0.00509	0.00010	8190243

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OC5496	OC5497	OC5498	OC5499	OC5500		
Sampling Date		2016/02/09 15:15	2016/02/08 14:00	2016/02/09 14:20	2016/02/09 12:45	2016/02/08 12:45		
COC Number		08418210	08418210	08418210	08418210	08418210		
	UNITS	KZ-2	KZ-26	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	0.00012	0.00017	<0.00010	<0.00010	0.00010	8190243
Total Calcium (Ca)	mg/L	41.0	78.2	57.4	72.0	29.0	0.050	8189159
Total Magnesium (Mg)	mg/L	6.04	24.0	7.87	8.37	3.07	0.050	8189159
Total Potassium (K)	mg/L	2.23	1.73	1.86	1.92	2.32	0.050	8189159
Total Sodium (Na)	mg/L	0.881	2.17	1.30	1.55	1.13	0.050	8189159
Total Sulphur (S)	mg/L	18.1	15.4	12.9	11.5	4.8	3.0	8189159

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OC5501	OC5502	OC5503		OC5504		
Sampling Date		2016/02/09 10:00	2016/02/09 10:40	2016/02/09 11:20		2016/02/08 13:30		
COC Number		08418210	08418210	08418210		08418210		
	UNITS	KZ-15	KZ-16	KZ-17	QC Batch	KZ-19	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	259	289	263	8188939	<0.50	0.50	8188939
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8191774	<0.0000020	0.0000020	8191774
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00964	0.00470	0.00838	8190243	0.00138	0.00050	8190243
Total Antimony (Sb)	mg/L	0.000030	0.000024	0.000037	8190243	<0.000020	0.000020	8190243
Total Arsenic (As)	mg/L	0.000793	0.000209	0.000850	8190243	<0.000020	0.000020	8190243
Total Barium (Ba)	mg/L	0.102	0.104	0.0978	8190243	<0.000020	0.000020	8270237
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8190243	<0.000010	0.000010	8190243
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8190243	<0.0000050	0.0000050	8190243
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	8190243	<0.010	0.010	8190243
Total Cadmium (Cd)	mg/L	0.0000540	0.0000340	0.0000560	8190243	<0.0000050	0.0000050	8190243
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8190243	<0.00010	0.00010	8190243
Total Cobalt (Co)	mg/L	0.0000530	0.0000380	0.0000590	8190243	<0.0000050	0.0000050	8190243
Total Copper (Cu)	mg/L	0.000355	0.000324	0.000352	8190243	<0.000050	0.000050	8190243
Total Iron (Fe)	mg/L	0.175	0.0305	0.185	8190243	<0.0010	0.0010	8270237
Total Lead (Pb)	mg/L	0.0000910	0.0000440	0.0000640	8190243	0.0000060	0.0000050	8190243
Total Lithium (Li)	mg/L	0.00373	0.00398	0.00369	8190243	<0.00050	0.00050	8190243
Total Manganese (Mn)	mg/L	0.0559	0.0141	0.0576	8190243	<0.000050	0.000050	8190243
Total Molybdenum (Mo)	mg/L	0.00134	0.000358	0.00127	8190243	<0.000050	0.000050	8190243
Total Nickel (Ni)	mg/L	0.00100	0.000733	0.000905	8190243	<0.000020	0.000020	8190243
Total Phosphorus (P)	mg/L	0.0087	0.0029	0.0103	8190243	<0.0020	0.0020	8190243
Total Selenium (Se)	mg/L	0.00135	0.00149	0.00136	8190243	<0.000040	0.000040	8190243
Total Silicon (Si)	mg/L	4.02	4.11	4.07	8190243	<0.050	0.050	8190243
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8190243	<0.0000050	0.0000050	8190243
Total Strontium (Sr)	mg/L	0.259	0.286	0.265	8190243	<0.000050	0.000050	8270237
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8190243	<0.0000020	0.0000020	8190243
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8190243	<0.00020	0.00020	8190243
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8190243	<0.00050	0.00050	8190243
Total Uranium (U)	mg/L	0.00495	0.00298	0.00507	8190243	<0.0000020	0.0000020	8270237
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8190243	<0.00020	0.00020	8190243
Total Zinc (Zn)	mg/L	0.00755	0.00176	0.00602	8190243	0.00012	0.00010	8190243
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OC5501	OC5502	OC5503		OC5504		
Sampling Date		2016/02/09 10:00	2016/02/09 10:40	2016/02/09 11:20		2016/02/08 13:30		
COC Number		08418210	08418210	08418210		08418210		
	UNITS	KZ-15	KZ-16	KZ-17	QC Batch	KZ-19	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8190243	<0.00010	0.00010	8190243
Total Calcium (Ca)	mg/L	74.5	86.1	76.8	8189159	<0.050	0.050	8189159
Total Magnesium (Mg)	mg/L	17.8	17.9	17.2	8189159	<0.050	0.050	8189159
Total Potassium (K)	mg/L	1.53	1.56	1.49	8189159	<0.050	0.050	8189159
Total Sodium (Na)	mg/L	1.50	1.58	1.46	8189159	<0.050	0.050	8189159
Total Sulphur (S)	mg/L	12.8	14.0	12.8	8189159	<3.0	3.0	8189159

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OC5505	OC5508	OC5509	OC5510		
Sampling Date		2016/02/09 08:45	2016/02/08 15:30	2016/02/09 14:50	2016/02/10 16:00		
COC Number		08418210	08418211	08418211	08418211		
	UNITS	KZ-21	KZ-22	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	338	325	182	<0.50	0.50	8188939
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8191774
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0136	0.0150	0.0268	<0.00050	0.00050	8190243
Total Antimony (Sb)	mg/L	0.000035	0.000034	0.000041	<0.000020	0.000020	8190243
Total Arsenic (As)	mg/L	0.00751	0.00472	0.000901	<0.000020	0.000020	8190243
Total Barium (Ba)	mg/L	0.0929	0.0970	0.116	<0.000020	0.000020	8190243
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8190243
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8190243
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8190243
Total Cadmium (Cd)	mg/L	0.0000230	0.0000210	0.000300	<0.0000050	0.0000050	8190243
Total Chromium (Cr)	mg/L	0.00013	<0.00010	0.00013	<0.00010	0.00010	8190243
Total Cobalt (Co)	mg/L	0.000316	0.000235	0.000204	<0.0000050	0.0000050	8190243
Total Copper (Cu)	mg/L	0.000299	0.000287	0.000668	<0.000050	0.000050	8190243
Total Iron (Fe)	mg/L	2.07	1.27	1.27	<0.0010	0.0010	8190243
Total Lead (Pb)	mg/L	0.0000690	0.0000590	0.000473	<0.0000050	0.0000050	8190243
Total Lithium (Li)	mg/L	0.00924	0.00857	0.00385	<0.00050	0.00050	8190243
Total Manganese (Mn)	mg/L	0.261	0.178	0.174	<0.000050	0.000050	8190243
Total Molybdenum (Mo)	mg/L	0.00156	0.00137	0.000728	<0.000050	0.000050	8190243
Total Nickel (Ni)	mg/L	0.00264	0.00204	0.000656	<0.000020	0.000020	8190243
Total Phosphorus (P)	mg/L	0.0497	0.0335	0.0090	<0.0020	0.0020	8190243
Total Selenium (Se)	mg/L	0.000544	0.000730	0.000890	<0.000040	0.000040	8190243
Total Silicon (Si)	mg/L	6.89	6.32	3.81	<0.050	0.050	8190243
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8190243
Total Strontium (Sr)	mg/L	0.271	0.271	0.211	<0.000050	0.000050	8190243
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8190243
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8190243
Total Titanium (Ti)	mg/L	0.00072	0.00086	0.00143	<0.00050	0.00050	8190243
Total Uranium (U)	mg/L	0.00307	0.00346	0.00159	<0.0000020	0.0000020	8190243
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8190243
Total Zinc (Zn)	mg/L	0.00246	0.00216	0.0745	<0.00010	0.00010	8190243
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OC5505	OC5508	OC5509	OC5510		
Sampling Date		2016/02/09 08:45	2016/02/08 15:30	2016/02/09 14:50	2016/02/10 16:00		
COC Number		08418210	08418211	08418211	08418211		
	UNITS	KZ-21	KZ-22	KZ-28	TRIP BLANK	RDL	QC Batch
Total Zirconium (Zr)	mg/L	0.00039	0.00028	0.00020	<0.00010	0.00010	8190243
Total Calcium (Ca)	mg/L	84.3	83.1	59.8	<0.050	0.050	8189159
Total Magnesium (Mg)	mg/L	30.9	28.6	7.91	<0.050	0.050	8189159
Total Potassium (K)	mg/L	2.44	2.20	1.85	<0.050	0.050	8189159
Total Sodium (Na)	mg/L	2.50	2.40	1.31	<0.050	0.050	8189159
Total Sulphur (S)	mg/L	14.0	14.6	12.5	<3.0	3.0	8189159
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5496
Sample ID: KZ-2
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190702	N/A	2016/02/12	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8190257	2016/02/12	2016/02/12	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8190751	N/A	2016/02/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	Isabel Choi
Conductance - water	AT/ALK	8190262	N/A	2016/02/12	Maria Maclean
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	Rob Mcclelland
Ion Balance	CALC	8189413	N/A	2016/02/15	Automated Statchk
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	Irene Popov
pH Water	AT/ALK	8190263	N/A	2016/02/12	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8190481	2016/02/12	2016/02/13	Coco Guo

Maxxam ID: OC5496 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8190751	N/A	2016/02/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	Tatyana Serzhanova
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	Diana Cruz

Maxxam ID: OC5497
Sample ID: KZ-26
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190702	N/A	2016/02/12	Wilson Au Yueng

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5497
Sample ID: KZ-26
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8190257	2016/02/12	2016/02/12	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8190844	N/A	2016/02/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8190751	N/A	2016/02/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	Isabel Choi
Conductance - water	AT/ALK	8190262	N/A	2016/02/12	Maria Maclean
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	Rob Mcclelland
Ion Balance	CALC	8189413	N/A	2016/02/15	Automated Statchk
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	Irene Popov
pH Water	AT/ALK	8190263	N/A	2016/02/12	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8190847	N/A	2016/02/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8190006	2016/02/12	2016/02/12	Coco Guo

Maxxam ID: OC5497 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	Isabel Choi

Maxxam ID: OC5498
Sample ID: KZ-7
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190702	N/A	2016/02/12	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8190257	2016/02/12	2016/02/12	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5498
Sample ID: KZ-7
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8190751	N/A	2016/02/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	Isabel Choi
Conductance - water	AT/ALK	8190262	N/A	2016/02/12	Maria Maclean
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	Rob Mcclelland
Ion Balance	CALC	8189413	N/A	2016/02/15	Automated Statchk
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	Irene Popov
pH Water	AT/ALK	8190263	N/A	2016/02/12	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8190481	2016/02/12	2016/02/13	Coco Guo

Maxxam ID: OC5499
Sample ID: KZ-9
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190709	N/A	2016/02/12	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8190269	2016/02/12	2016/02/12	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8190751	N/A	2016/02/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	Isabel Choi
Conductance - water	AT/ALK	8190271	N/A	2016/02/12	Maria Maclean
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	Rob Mcclelland

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5499
Sample ID: KZ-9
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance	CALC	8189413	N/A	2016/02/15	Automated Statchk
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	Irene Popov
pH Water	AT/ALK	8190272	N/A	2016/02/12	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8190481	2016/02/12	2016/02/13	Coco Guo

Maxxam ID: OC5500
Sample ID: KZ-13
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190709	N/A	2016/02/12	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8190269	2016/02/12	2016/02/12	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8190751	N/A	2016/02/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	Isabel Choi
Conductance - water	AT/ALK	8190271	N/A	2016/02/12	Maria Maclean
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	Rob Mcclelland
Ion Balance	CALC	8189413	N/A	2016/02/15	Automated Statchk
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5500
Sample ID: KZ-13
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	Irene Popov
pH Water	AT/ALK	8190272	N/A	2016/02/12	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8190006	2016/02/12	2016/02/12	Coco Guo

Maxxam ID: OC5501
Sample ID: KZ-15
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190709	N/A	2016/02/12	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8190269	2016/02/12	2016/02/12	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8190751	N/A	2016/02/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	Isabel Choi
Conductance - water	AT/ALK	8190271	N/A	2016/02/12	Maria Maclean
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	Rob Mcclelland
Ion Balance	CALC	8189413	N/A	2016/02/15	Automated Statchk
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	Irene Popov
pH Water	AT/ALK	8190272	N/A	2016/02/12	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8190481	2016/02/12	2016/02/13	Coco Guo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5501 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190709	N/A	2016/02/12	Wilson Au Yueng

Maxxam ID: OC5502
Sample ID: KZ-16
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190702	N/A	2016/02/12	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8190269	2016/02/12	2016/02/12	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8190844	N/A	2016/02/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8190751	N/A	2016/02/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	Isabel Choi
Conductance - water	AT/ALK	8190271	N/A	2016/02/12	Maria Maclean
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	Rob Mcclelland
Ion Balance	CALC	8189413	N/A	2016/02/15	Automated Statchk
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	Irene Popov
pH Water	AT/ALK	8190272	N/A	2016/02/12	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8190847	N/A	2016/02/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8190481	2016/02/12	2016/02/13	Coco Guo

Maxxam ID: OC5503
Sample ID: KZ-17
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190702	N/A	2016/02/12	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8190257	2016/02/12	2016/02/12	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5503
Sample ID: KZ-17
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8190751	N/A	2016/02/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	Isabel Choi
Conductance - water	AT/ALK	8190262	N/A	2016/02/12	Maria Maclean
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	Rob Mcclelland
Ion Balance	CALC	8189413	N/A	2016/02/15	Automated Statchk
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	Irene Popov
pH Water	AT/ALK	8190263	N/A	2016/02/12	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8190481	2016/02/12	2016/02/13	Coco Guo

Maxxam ID: OC5503 Dup
Sample ID: KZ-17
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8190257	2016/02/12	2016/02/12	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	Balwinder Bassi
Conductance - water	AT/ALK	8190262	N/A	2016/02/12	Maria Maclean
pH Water	AT/ALK	8190263	N/A	2016/02/12	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	Balwinder Bassi

Maxxam ID: OC5504
Sample ID: KZ-19
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190709	N/A	2016/02/12	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8190269	2016/02/12	2016/02/12	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5504
Sample ID: KZ-19
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8190757	N/A	2016/02/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	Isabel Choi
Conductance - water	AT/ALK	8190271	N/A	2016/02/12	Maria Maclean
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	Rob Mcclelland
Ion Balance	CALC	8189413	N/A	2016/02/15	Automated Statchk
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	Irene Popov
pH Water	AT/ALK	8190272	N/A	2016/02/12	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8190006	2016/02/12	2016/02/12	Coco Guo

Maxxam ID: OC5505
Sample ID: KZ-21
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190702	N/A	2016/02/12	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8190269	2016/02/12	2016/02/12	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8190757	N/A	2016/02/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	Isabel Choi
Conductance - water	AT/ALK	8190271	N/A	2016/02/12	Maria Maclean
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	Rob Mcclelland

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5505
Sample ID: KZ-21
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	Rob Mcclelland
Ion Balance	CALC	8189413	N/A	2016/02/15	Automated Statchk
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	Irene Popov
pH Water	AT/ALK	8190272	N/A	2016/02/12	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8190481	2016/02/12	2016/02/13	Coco Guo

Maxxam ID: OC5508
Sample ID: KZ-22
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190702	N/A	2016/02/12	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8190257	2016/02/12	2016/02/12	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8190757	N/A	2016/02/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	Isabel Choi
Conductance - water	AT/ALK	8190262	N/A	2016/02/12	Maria Maclean
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	Rob Mcclelland
Ion Balance	CALC	8189413	N/A	2016/02/15	Automated Statchk
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5508
Sample ID: KZ-22
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	Irene Popov
pH Water	AT/ALK	8190263	N/A	2016/02/12	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8190006	2016/02/12	2016/02/12	Coco Guo

Maxxam ID: OC5508 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	Balwinder Bassi

Maxxam ID: OC5509
Sample ID: KZ-28
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190702	N/A	2016/02/12	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8190257	2016/02/12	2016/02/12	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8190757	N/A	2016/02/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8190768	N/A	2016/02/12	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	Isabel Choi
Conductance - water	AT/ALK	8190262	N/A	2016/02/12	Maria Maclean
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	Rob Mcclelland
Ion Balance	CALC	8189413	N/A	2016/02/15	Automated Statchk
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	Irene Popov
pH Water	AT/ALK	8190263	N/A	2016/02/12	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5509
Sample ID: KZ-28
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8190481	2016/02/12	2016/02/13	Coco Guo

Maxxam ID: OC5510
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/02/10
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190702	N/A	2016/02/12	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8190257	2016/02/12	2016/02/12	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8190757	N/A	2016/02/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8190768	N/A	2016/02/12	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	Isabel Choi
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8191015	N/A	2016/02/12	Isabel Choi
Conductance - water	AT/ALK	8190262	N/A	2016/02/12	Maria Maclean
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	Rob Mcclelland
Ion Balance	CALC	8189413	N/A	2016/02/15	Automated Statchk
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2016/02/12	Jennifer Siu
pH Water	AT/ALK	8190263	N/A	2016/02/12	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8190481	2016/02/12	2016/02/13	Coco Guo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5510 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/02/10
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8190757	N/A	2016/02/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8190768	N/A	2016/02/12	Tatyana Serzhanova
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8191015	N/A	2016/02/12	Isabel Choi
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	Rob Mcclelland

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.3°C
Package 2	5.7°C

Revised report V2 (2016/05/19): Due to client request, samples were reanalyzed for Total Barium. Corrected values for sample OC5504 are included in this report (MM4).

Revised report V3 (2016/05/30): Report issued with no changes to metals analysis, in error (MM4).

Revised report V (2016/06/08): Corrected values for OC5504 are included in this report for Total Iron, Strontium and Uranium, after review of all metals data greater than 3 times the RDL (MM4).

Sample OC5504-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample OC5510-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].
Sample OC5496, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample OC5508, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample OC5504, Elements by ICPMS Low Level (total): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8190006	Total Suspended Solids	2016/02/12			98	80 - 120	<1.0	mg/L		
8190243	Total Aluminum (Al)	2016/02/12	98	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8190243	Total Antimony (Sb)	2016/02/12	96	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8190243	Total Arsenic (As)	2016/02/12	99	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8190243	Total Barium (Ba)	2016/02/12	94	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8190243	Total Beryllium (Be)	2016/02/12	96	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
8190243	Total Bismuth (Bi)	2016/02/12	92	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8190243	Total Boron (B)	2016/02/12	97	80 - 120	102	80 - 120	<0.010	mg/L	NC	20
8190243	Total Cadmium (Cd)	2016/02/12	99	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8190243	Total Chromium (Cr)	2016/02/12	91	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8190243	Total Cobalt (Co)	2016/02/12	94	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8190243	Total Copper (Cu)	2016/02/12	94	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8190243	Total Iron (Fe)	2016/02/12	93	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
8190243	Total Lead (Pb)	2016/02/12	91	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8190243	Total Lithium (Li)	2016/02/12	92	80 - 120	92	80 - 120	<0.00050	mg/L	NC	20
8190243	Total Manganese (Mn)	2016/02/12	94	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8190243	Total Molybdenum (Mo)	2016/02/12	95	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20
8190243	Total Nickel (Ni)	2016/02/12	94	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8190243	Total Phosphorus (P)	2016/02/12					<0.0020	mg/L		
8190243	Total Selenium (Se)	2016/02/12	94	80 - 120	95	80 - 120	<0.000040	mg/L	NC	20
8190243	Total Silicon (Si)	2016/02/12					<0.050	mg/L	NC	20
8190243	Total Silver (Ag)	2016/02/12	72 (1)	80 - 120	86	80 - 120	<0.0000050	mg/L	NC	20
8190243	Total Strontium (Sr)	2016/02/12	90	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8190243	Total Thallium (Tl)	2016/02/12	95	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8190243	Total Tin (Sn)	2016/02/12	91	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
8190243	Total Titanium (Ti)	2016/02/12	95	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8190243	Total Uranium (U)	2016/02/12	95	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8190243	Total Vanadium (V)	2016/02/12	94	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8190243	Total Zinc (Zn)	2016/02/12	105	80 - 120	106	80 - 120	<0.00010	mg/L	NC	20
8190243	Total Zirconium (Zr)	2016/02/12					<0.00010	mg/L	NC	20
8190257	Alkalinity (PP as CaCO3)	2016/02/12					<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8190257	Alkalinity (Total as CaCO3)	2016/02/12	NC	80 - 120	101	80 - 120	<0.50	mg/L	0.78	20
8190257	Bicarbonate (HCO3)	2016/02/12					<0.50	mg/L	0.78	20
8190257	Carbonate (CO3)	2016/02/12					<0.50	mg/L	NC	20
8190257	Hydroxide (OH)	2016/02/12					<0.50	mg/L	NC	20
8190262	Conductivity	2016/02/12			101	80 - 120	<1.0	uS/cm	0.20	20
8190263	pH	2016/02/12			102	97 - 103			0.25	N/A
8190269	Alkalinity (PP as CaCO3)	2016/02/12					<0.50	mg/L		
8190269	Alkalinity (Total as CaCO3)	2016/02/12	NC	80 - 120	101	80 - 120	0.71, RDL=0.50	mg/L		
8190269	Bicarbonate (HCO3)	2016/02/12					0.87, RDL=0.50	mg/L		
8190269	Carbonate (CO3)	2016/02/12					<0.50	mg/L		
8190269	Hydroxide (OH)	2016/02/12					<0.50	mg/L		
8190271	Conductivity	2016/02/12			101	80 - 120	1.0, RDL=1.0	uS/cm		
8190272	pH	2016/02/12			102	97 - 103				
8190481	Total Suspended Solids	2016/02/13			101	80 - 120	<1.0	mg/L		
8190538	Dissolved Aluminum (Al)	2016/02/12	98	80 - 120	107	80 - 120	<0.00050	mg/L	5.1	20
8190538	Dissolved Antimony (Sb)	2016/02/12	95	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8190538	Dissolved Arsenic (As)	2016/02/12	98	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8190538	Dissolved Barium (Ba)	2016/02/12	103	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8190538	Dissolved Beryllium (Be)	2016/02/12	96	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8190538	Dissolved Bismuth (Bi)	2016/02/12	99	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8190538	Dissolved Boron (B)	2016/02/12	96	80 - 120	107	80 - 120	<0.010	mg/L	NC	20
8190538	Dissolved Cadmium (Cd)	2016/02/12	98	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8190538	Dissolved Chromium (Cr)	2016/02/12	99	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
8190538	Dissolved Cobalt (Co)	2016/02/12	100	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8190538	Dissolved Copper (Cu)	2016/02/12	99	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8190538	Dissolved Iron (Fe)	2016/02/12	102	80 - 120	116	80 - 120	<0.0010	mg/L	NC	20
8190538	Dissolved Lead (Pb)	2016/02/12	101	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8190538	Dissolved Lithium (Li)	2016/02/12	97	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8190538	Dissolved Manganese (Mn)	2016/02/12	100	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8190538	Dissolved Molybdenum (Mo)	2016/02/12	96	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8190538	Dissolved Nickel (Ni)	2016/02/12	98	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8190538	Dissolved Phosphorus (P)	2016/02/12					<0.0020	mg/L	NC	20
8190538	Dissolved Selenium (Se)	2016/02/12	93	80 - 120	95	80 - 120	<0.000040	mg/L	NC	20
8190538	Dissolved Silicon (Si)	2016/02/12					<0.050	mg/L	NC	20
8190538	Dissolved Silver (Ag)	2016/02/12	82	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8190538	Dissolved Strontium (Sr)	2016/02/12	92	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8190538	Dissolved Thallium (Tl)	2016/02/12	98	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8190538	Dissolved Tin (Sn)	2016/02/12	98	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8190538	Dissolved Titanium (Ti)	2016/02/12	103	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8190538	Dissolved Uranium (U)	2016/02/12	99	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8190538	Dissolved Vanadium (V)	2016/02/12	97	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8190538	Dissolved Zinc (Zn)	2016/02/12	97	80 - 120	100	80 - 120	<0.00010	mg/L	6.2	20
8190538	Dissolved Zirconium (Zr)	2016/02/12					<0.00010	mg/L	NC	20
8190702	Acidity (pH 4.5)	2016/02/12					<0.50	mg/L	NC	20
8190702	Acidity (pH 8.3)	2016/02/12			100	80 - 120	<0.50	mg/L	15	20
8190709	Acidity (pH 4.5)	2016/02/12					<0.50	mg/L	NC	20
8190709	Acidity (pH 8.3)	2016/02/12			100	80 - 120	<0.50	mg/L	NC	20
8190751	Strong Acid Dissoc. Cyanide (CN)	2016/02/12	97	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8190757	Strong Acid Dissoc. Cyanide (CN)	2016/02/12	100	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8190763	Weak Acid Dissoc. Cyanide (CN)	2016/02/12	99	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8190768	Weak Acid Dissoc. Cyanide (CN)	2016/02/12	101	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8190844	Dissolved Chloride (Cl)	2016/02/12			100	80 - 120	<0.50	mg/L		
8190847	Dissolved Sulphate (SO4)	2016/02/12			96	80 - 120	0.82, RDL=0.50	mg/L		
8190859	Dissolved Chloride (Cl)	2016/02/12	NC	80 - 120	97	80 - 120	<0.50	mg/L	NC	20
8190866	Dissolved Sulphate (SO4)	2016/02/12			92	80 - 120	0.82, RDL=0.50	mg/L	6.6	20
8191015	Dissolved Organic Carbon (C)	2016/02/12	119	80 - 120	112	80 - 120	<0.50	mg/L	NC	20
8191020	Dissolved Organic Carbon (C)	2016/02/12	NC	80 - 120	103	80 - 120	<0.50	mg/L	NC	20
8191035	Nitrate plus Nitrite (N)	2016/02/12	NC	80 - 120	105	80 - 120	<0.0020	mg/L		
8191036	Nitrite (N)	2016/02/12	NC	80 - 120	102	80 - 120	<0.0020	mg/L	1.7	25
8191399	Fluoride (F)	2016/02/12	100	80 - 120	98	80 - 120	0.016, RDL=0.010	mg/L	0	20
8191772	Dissolved Mercury (Hg)	2016/02/15	90	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20

Maxxam Job #: B610526
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8191774	Total Mercury (Hg)	2016/02/15	99	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8191817	True Colour	2016/02/13			112	80 - 120	<5.0	Col. Unit	NC	20
8191832	Dissolved Phosphorus (P)	2016/02/13	82	80 - 120	108	80 - 120	<0.0020	mg/L	NC	20
8191836	Total Phosphorus (P)	2016/02/13	105	80 - 120	94	80 - 120	<0.0020	mg/L	NC	20
8191866	Total Ammonia (N)	2016/02/15	96	80 - 120	102	80 - 120	<0.0050	mg/L	NC	20
8192370	Dissolved Copper (Cu)	2016/02/16			108	80 - 120	<0.000050	mg/L		
8192370	Dissolved Phosphorus (P)	2016/02/16					<0.0020	mg/L		
8270237	Total Barium (Ba)	2016/05/16	NC	80 - 120	103	80 - 120	<0.000020	mg/L	0.19	20
8270237	Total Iron (Fe)	2016/05/16	NC	80 - 120	110	80 - 120	<0.0010	mg/L	2.5	20
8270237	Total Strontium (Sr)	2016/05/16	NC	80 - 120	97	80 - 120	<0.000050	mg/L	0.90	20
8270237	Total Uranium (U)	2016/05/16	102	80 - 120	100	80 - 120	<0.0000020	mg/L	2.5	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

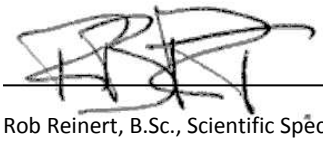
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Rob Reinert, B.Sc., Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RE[illegible]

COC #: 08418210

BBY FCD-00077/05
Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		Date Required:
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Rush Confirmation #:

Regulatory Criteria		Special Instructions
[ ] BC CSR Soil	[ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify)	[ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water	[ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (CL, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		09/02/2016	15:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
2	KZ-26		08/02/2016	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
3	KZ-7		09/02/2016	14:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
4	KZ-9		09/02/2016	12:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
5	KZ-13		08/02/2016	12:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
6	KZ-15		09/02/2016	10:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
7	KZ-16		09/02/2016	10:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
8	KZ-17		09/02/2016	11:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
9	KZ-19		08/02/2016	13:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
10	KZ-21		09/02/2016	8:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	

LABORATORY USE ONLY

CUSTODY SEAL Y / N N/A Present	Intact	COOLER TEMPERATURES
N/A		5.4.6
N/A		4.1.3

COOLING MEDIA PRESENT (Y) / N

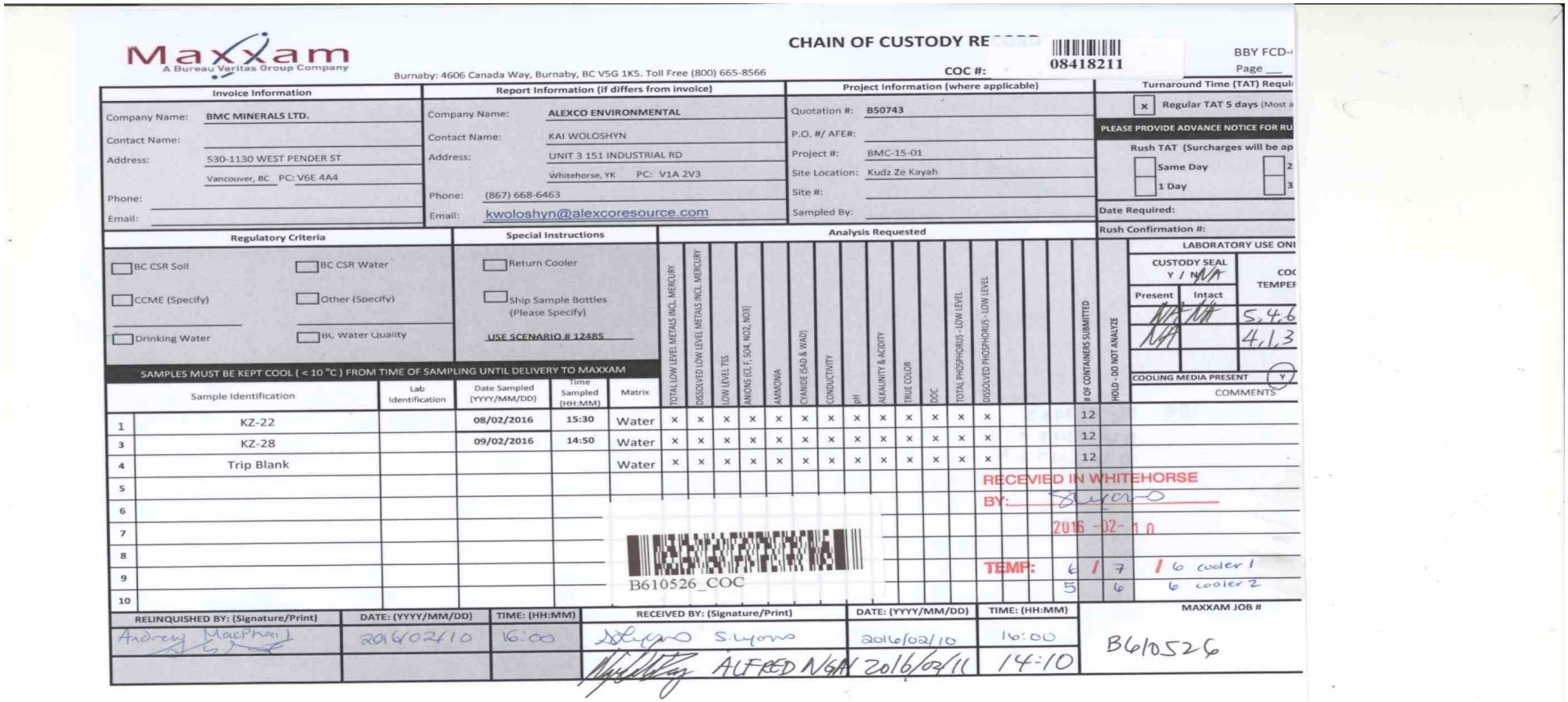
COMMENTS

B610526_COC

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Andrew MacPhail	10/02/2016	16:00	S Lyons S Lyons	2016/02/10	16:00
			ALFRED NGAI	2016/02/11	14:10

MAXXAM JOB #

B6 10526



Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC #: 08418211

BBY FCD-
Page ___

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)	
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:	
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah
Phone:		Phone:	(867) 668-6463	Site #:	
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	

Turnaround Time (TAT) Requi

[x] Regular TAT 5 days (Most a

PLEASE PROVIDE ADVANCE NOTICE FOR RU

Rush TAT (Surcharges will be ap

[ ] Same Day [ ] 2
[ ] 1 Day [ ] 3

Date Required:

Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water
[ ] CCME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-22		08/02/2016	15:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
3	KZ-28		09/02/2016	14:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
4	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
5																					
6																					
7																					
8																					
9																					
10																					

B610526_COC

LABORATORY USE ONL

CUSTODY SEAL Y / N NA		COC TEMPER
Present	Intact	
NA	NA	5,4,6
NA		4,1,3

COOLING MEDIA PRESENT (Y)

RECEVIED IN WHITEHORSE
BY: S.Lyons
2016-02-10

TEMP: 6 / 7 / 6 cooler 1
5 6 6 cooler 2

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Andrew MacPhail	2016/02/10	16:00	S.Lyons S.Lyons	2016/02/10	16:00	B610526
			ALFRED NGAI	2016/02/11	14:10	

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08419480, 08419481

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/05/19
Report #: R2184349
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B621867
Received: 2016/03/22, 13:20

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	13	N/A	2016/03/24	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	13	2016/03/24	2016/03/24	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	13	N/A	2016/03/24	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	13	N/A	2016/03/28	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	13	N/A	2016/03/28	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	13	N/A	2016/03/24	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	11	N/A	2016/03/28	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - field filtered/preserved (1)	1	N/A	2016/03/29	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2016/03/28	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	13	N/A	2016/03/24	BBY6SOP-00026	SM 22 2510 B m
Fluoride	13	N/A	2016/03/24	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	13	N/A	2016/03/29	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	13	N/A	2016/03/29	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	13	N/A	2016/03/28	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	13	2016/03/28	2016/03/28	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	13	N/A	2016/03/29	BBY WI-00033	SM 22 1030E
Sum of cations, anions	13	N/A	2016/03/29	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	13	N/A	2016/03/29	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	12	N/A	2016/03/25	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	1	N/A	2016/03/28	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	13	N/A	2016/03/29	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	12	N/A	2016/03/25	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	1	N/A	2016/03/28	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	11	N/A	2016/03/28	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Unpreserved)	2	N/A	2016/03/31	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	13	N/A	2016/03/24	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	13	N/A	2016/03/24	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	13	N/A	2016/03/29	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	12	N/A	2016/03/24	BBY7 WI-00004	BCMOE Reqs 08/14

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08419480, 08419481

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/05/19
Report #: R2184349
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B621867
Received: 2016/03/22, 13:20

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
pH Water (2)	13	N/A	2016/03/24	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	13	N/A	2016/03/24	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	12	2016/03/26	2016/03/26	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2016/03/30	2016/03/30	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	11	N/A	2016/03/26	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	1	N/A	2016/03/30	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	1	N/A	2016/03/31	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	13	2016/03/24	2016/03/28	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OI3665	OI3666	OI3667		OI3668		
Sampling Date		2016/03/20 18:36	2016/03/20 17:20	2016/03/20 15:45		2016/03/21 08:15		
COC Number		08419480	08419480	08419480		08419480		
	UNITS	KZ-2	KZ-7	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.9	3.8	5.3	8224540	2.0	N/A	8224540
Cation Sum	meq/L	2.8	3.8	5.1	8224540	1.9	N/A	8224540
Filter and HNO3 Preservation	N/A	LAB	LAB	LAB	8224944	LAB	N/A	8224944
Ion Balance	N/A	0.99	1.0	0.96	8224539	0.95	0.010	8224539
Nitrate (N)	mg/L	0.163	0.126	0.507	8224034	0.151	0.0020	8224034
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	8226581	<0.00050	0.00050	8226581
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	8226583	0.00054	0.00050	8226583
Fluoride (F)	mg/L	0.041	0.063	0.061	8225545	0.045	0.010	8225583
Dissolved Organic Carbon (C)	mg/L	1.00	<0.50	<0.50	8227122	1.29	0.50	8227122
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	8225498	<0.50	0.50	8225498
Alkalinity (Total as CaCO3)	mg/L	87.7	154	220	8224988	83.8	0.50	8224988
Acidity (pH 8.3)	mg/L	<0.50	<0.50	<0.50	8225498	1.96	0.50	8225498
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	8224988	<0.50	0.50	8224988
Bicarbonate (HCO3)	mg/L	107	188	268	8224988	102	0.50	8224988
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	8224988	<0.50	0.50	8224988
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	8224988	<0.50	0.50	8224988
Anions								
Dissolved Sulphate (SO4)	mg/L	51.3	33.5	41.7	8226476	14.6	0.50	8226516
Dissolved Chloride (Cl)	mg/L	0.68	<0.50	0.55	8226475	<0.50	0.50	8226478
MISCELLANEOUS								
True Colour	Col. Unit	<5.0 (1)	<5.0 (1)	<5.0 (1)	8226019	5.5	5.0	8226019
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0025 (1)	0.0032 (1)	0.0022 (1)	8226199	<0.0020 (2)	0.0020	8229431
Total Ammonia (N)	mg/L	0.0079 (1)	0.0083 (1)	<0.0050 (1)	8227234	0.0510 (3)	0.0050	8227234
Nitrate plus Nitrite (N)	mg/L	0.163 (1)	0.126 (1)	0.507 (1)	8226051	0.151	0.0020	8226051

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample was originally analysed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.

(3) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OI3665	OI3666	OI3667		OI3668		
Sampling Date		2016/03/20 18:36	2016/03/20 17:20	2016/03/20 15:45		2016/03/21 08:15		
COC Number		08419480	08419480	08419480		08419480		
	UNITS	**KZ-2**	**KZ-7**	**KZ-9**	**QC Batch**	**KZ-13**	**RDL**	**QC Batch**
Nitrite (N)	mg/L	<0.0020 (1)	<0.0020 (1)	<0.0020 (1)	8226052	<0.0020	0.0020	8226052
Total Phosphorus (P)	mg/L	<0.0020 (1)	0.0030 (1)	<0.0020 (1)	8226203	<0.0020 (2)	0.0020	8229432
Physical Properties								
Conductivity	uS/cm	280	357	480	8224989	187	1.0	8224989
pH	pH	7.96	8.05	8.14	8224990	7.83		8224990
Physical Properties								
Total Suspended Solids	mg/L	<1.0	1.0	<1.0	8225029	<1.0	1.0	8225029

RDL = Reportable Detection Limit

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample was originally analysed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OI3669		OI3670		OI3671		
Sampling Date		2016/03/20 11:45		2016/03/20 13:00		2016/03/20 14:25		
COC Number		08419480		08419480		08419480		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	5.6	8224540	5.8	8224540	5.5	N/A	8224540
Cation Sum	meq/L	5.4	8224540	5.9	8224540	5.3	N/A	8224540
Filter and HNO3 Preservation	N/A	LAB	8224944	LAB	8224944	LAB	N/A	8224944
Ion Balance	N/A	0.95	8224539	1.0	8224539	0.97	0.010	8224539
Nitrate (N)	mg/L	0.217	8224034	0.259	8224034	0.225	0.0020	8224034
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8226581	<0.00050	8226581	<0.00050	0.00050	8226581
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00050	8226583	0.00066	8226583	0.00053	0.00050	8226583
Fluoride (F)	mg/L	0.100	8225545	0.075	8225545	0.092	0.010	8225545
Dissolved Organic Carbon (C)	mg/L	0.89	8228331	0.89	8227122	0.52	0.50	8227122
Acidity (pH 4.5)	mg/L	<0.50	8225498	<0.50	8225498	<0.50	0.50	8225498
Alkalinity (Total as CaCO3)	mg/L	242	8224988	247	8224988	237	0.50	8224998
Acidity (pH 8.3)	mg/L	2.13	8225498	7.14	8225498	5.07	0.50	8225498
Alkalinity (PP as CaCO3)	mg/L	<0.50	8224988	<0.50	8224988	<0.50	0.50	8224998
Bicarbonate (HCO3)	mg/L	295	8224988	302	8224988	289	0.50	8224998
Carbonate (CO3)	mg/L	<0.50	8224988	<0.50	8224988	<0.50	0.50	8224998
Hydroxide (OH)	mg/L	<0.50	8224988	<0.50	8224988	<0.50	0.50	8224998
Anions								
Dissolved Sulphate (SO4)	mg/L	36.5	8226476	36.8	8226476	35.0	0.50	8226476
Dissolved Chloride (Cl)	mg/L	0.52	8226475	0.72	8226475	0.71	0.50	8226475
MISCELLANEOUS								
True Colour	Col. Unit	<5.0 (1)	8226020	<5.0 (1)	8226019	<5.0 (1)	5.0	8226020
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0029 (1)	8226199	0.0027 (1)	8226199	0.0027 (1)	0.0020	8226199
Total Ammonia (N)	mg/L	0.0058 (1)	8227234	0.0129 (1)	8227234	0.0100 (1)	0.0050	8227234
Nitrate plus Nitrite (N)	mg/L	0.217 (1)	8226051	0.259 (1)	8226051	0.225 (1)	0.0020	8226051
Nitrite (N)	mg/L	<0.0020 (1)	8226052	<0.0020 (1)	8226052	<0.0020 (1)	0.0020	8226052
Total Phosphorus (P)	mg/L	0.0056 (1)	8226203	<0.0020 (1)	8226203	0.0023 (1)	0.0020	8226203

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OI3669		OI3670		OI3671		
Sampling Date		2016/03/20 11:45		2016/03/20 13:00		2016/03/20 14:25		
COC Number		08419480		08419480		08419480		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Physical Properties								
Conductivity	uS/cm	501	8224989	519	8224989	499	1.0	8224997
pH	pH	8.02	8224990	7.77	8224990	7.95		8224996
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8225029	<1.0	8225029	<1.0	1.0	8225029
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OI3672		OI3673		OI3674		
Sampling Date		2016/03/21 10:25		2016/03/20 10:25		2016/03/20 09:30		
COC Number		08419480		08419480		08419481		
	UNITS	KZ-19	QC Batch	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	0.011	8224540	7.3	8224540	6.7	N/A	8224540
Cation Sum	meq/L	0.0031	8224540	7.0	8224540	6.6	N/A	8224540
Filter and HNO3 Preservation	N/A	LAB	8224944	LAB	8224944	LAB	N/A	8224944
Ion Balance	N/A	0.28	8224539	0.96	8224539	0.99	0.010	8224539
Nitrate (N)	mg/L	<0.0020	8224034	0.230	8224034	0.247	0.0020	8224034
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8226581	0.00059	8226581	0.00057	0.00050	8226581
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8226583	0.00080	8226583	0.00070	0.00050	8226583
Fluoride (F)	mg/L	<0.010	8225545	0.210	8225545	0.150	0.010	8225583
Dissolved Organic Carbon (C)	mg/L	0.53	8227122	1.86	8227122	1.39	0.50	8227122
Acidity (pH 4.5)	mg/L	<0.50 (1)	8225498	<0.50	8225498	<0.50	0.50	8225498
Alkalinity (Total as CaCO3)	mg/L	0.55	8224988	320	8224988	286	0.50	8224988
Acidity (pH 8.3)	mg/L	<0.50	8225498	8.85	8225498	3.85	0.50	8225498
Alkalinity (PP as CaCO3)	mg/L	<0.50	8224988	<0.50	8224988	<0.50	0.50	8224988
Bicarbonate (HCO3)	mg/L	0.67	8224988	391	8224988	349	0.50	8224988
Carbonate (CO3)	mg/L	<0.50	8224988	<0.50	8224988	<0.50	0.50	8224988
Hydroxide (OH)	mg/L	<0.50	8224988	<0.50	8224988	<0.50	0.50	8224988
Anions								
Dissolved Sulphate (SO4)	mg/L	<0.50	8226476	40.2	8226476	45.3	0.50	8226516
Dissolved Chloride (Cl)	mg/L	<0.50	8226475	0.77	8226475	0.73	0.50	8226478
MISCELLANEOUS								
True Colour	Col. Unit	<5.0	8226019	<5.0 (2)	8226019	<5.0 (2)	5.0	8226019
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020 (3)	8226199	0.0063 (2)	8226199	0.0039 (2)	0.0020	8226199
Total Ammonia (N)	mg/L	<0.0050 (4)	8230249	0.0592 (2)	8227234	0.0550 (2)	0.0050	8227234

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(3) Sample preserved to extend hold time.

(4) Sample was originally analysed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OI3672		OI3673		OI3674		
Sampling Date		2016/03/21 10:25		2016/03/20 10:25		2016/03/20 09:30		
COC Number		08419480		08419480		08419481		
	UNITS	KZ-19	QC Batch	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Nitrate plus Nitrite (N)	mg/L	<0.0020	8226051	0.230 (1)	8226051	0.247 (1)	0.0020	8226051
Nitrite (N)	mg/L	<0.0020	8226052	<0.0020 (1)	8226052	<0.0020 (1)	0.0020	8226052
Total Phosphorus (P)	mg/L	0.0022 (2)	8226203	0.0058 (1)	8226203	0.0036 (1)	0.0020	8226203
Physical Properties								
Conductivity	uS/cm	1.5	8224989	639	8224989	588	1.0	8224989
pH	pH	5.94	8224990	7.85	8224990	8.00		8224990
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8225029	1.2	8225029	<1.0	1.0	8225029

RDL = Reportable Detection Limit

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OI3675		OI3676		OI3677		
Sampling Date		2016/03/19 14:30		2016/03/19 15:30		2016/03/22 13:20		
COC Number		08419481		08419481		08419481		
	UNITS	KZ-26	QC Batch	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	6.4	8224540	6.3	8224540	0.0000	N/A	8224540
Cation Sum	meq/L	6.3	8224540	6.2	8224540	0.0030	N/A	8224540
Filter and HNO3 Preservation	N/A	LAB	8224944	LAB	8224944		N/A	8224944
Ion Balance	N/A	0.98	8224539	0.98	8224539	NC	0.010	8224539
Nitrate (N)	mg/L	0.272	8224034	0.274	8224034	<0.0020	0.0020	8224034
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8226581	<0.00050	8226581	<0.00050	0.00050	8226581
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00060	8226583	0.00057	8226583	<0.00050	0.00050	8226583
Fluoride (F)	mg/L	0.110	8225545	0.110	8225545	<0.010	0.010	8225545
Dissolved Organic Carbon (C)	mg/L	1.23	8227122	1.49	8227122	<0.50 (1)	0.50	8227119
Acidity (pH 4.5)	mg/L	<0.50	8225498	<0.50	8225498	<0.50	0.50	8225498
Alkalinity (Total as CaCO3)	mg/L	271	8224988	267	8224988	<0.50	0.50	8224998
Acidity (pH 8.3)	mg/L	<0.50	8225498	<0.50	8225498	<0.50	0.50	8225498
Alkalinity (PP as CaCO3)	mg/L	<0.50	8224988	<0.50	8224988	<0.50	0.50	8224998
Bicarbonate (HCO3)	mg/L	330	8224988	325	8224988	<0.50	0.50	8224998
Carbonate (CO3)	mg/L	<0.50	8224988	<0.50	8224988	<0.50	0.50	8224998
Hydroxide (OH)	mg/L	<0.50	8224988	<0.50	8224988	<0.50	0.50	8224998
Anions								
Dissolved Sulphate (SO4)	mg/L	44.5	8226476	44.4	8226476	<0.50	0.50	8226476
Dissolved Chloride (Cl)	mg/L	0.55	8226475	0.63	8226475	<0.50	0.50	8226475
MISCELLANEOUS								
True Colour	Col. Unit	<5.0 (2)	8226020	<5.0 (3)	8226019	<5.0	5.0	8226020
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0021 (3)	8226199	0.0031 (3)	8226199	<0.0020 (4)	0.0020	8226199
Total Ammonia (N)	mg/L	0.0394 (3)	8227234	0.0054 (3)	8227234	<0.0050 (5)	0.0050	8230249

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Sample analysed past recommended hold time.

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(3) Sample arrived to laboratory past recommended hold time.

(4) Sample preserved to extend hold time.

(5) Sample was originally analysed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OI3675		OI3676		OI3677		
Sampling Date		2016/03/19 14:30		2016/03/19 15:30		2016/03/22 13:20		
COC Number		08419481		08419481		08419481		
	UNITS	**KZ-26**	**QC Batch**	**KZ-28**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**
Nitrate plus Nitrite (N)	mg/L	0.272 (1)	8226051	0.274 (1)	8226051	<0.0020	0.0020	8226051
Nitrite (N)	mg/L	<0.0020 (1)	8226052	<0.0020 (1)	8226052	<0.0020	0.0020	8226052
Total Phosphorus (P)	mg/L	0.0030 (1)	8226203	0.0030 (1)	8226203	<0.0020 (2)	0.0020	8230309
Physical Properties								
Conductivity	uS/cm	554	8224989	557	8224989	1.4	1.0	8224997
pH	pH	8.29	8224990	8.23	8224990	5.68		8224996
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8225029	<1.0	8225029	<1.0	1.0	8225029

RDL = Reportable Detection Limit

(1) Sample arrived to laboratory past recommended hold time.

(2) Sample was originally analysed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OI3665	OI3666	OI3667	OI3668	OI3669		
Sampling Date		2016/03/20 18:36	2016/03/20 17:20	2016/03/20 15:45	2016/03/21 08:15	2016/03/20 11:45		
COC Number		08419480	08419480	08419480	08419480	08419480		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	136	185	250	88.4	263	0.50	8223812
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8226582
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00596	0.00542	0.00315	0.00485	0.00261	0.00050	8225433
Dissolved Antimony (Sb)	mg/L	0.000029	0.000034	0.000020	<0.000020	0.000031	0.000020	8225433
Dissolved Arsenic (As)	mg/L	0.000079	0.000124	0.000109	0.000122	0.000341	0.000020	8225433
Dissolved Barium (Ba)	mg/L	0.0769	0.107	0.179	0.151	0.104	0.000020	8225433
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8225433
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225433
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8225433
Dissolved Cadmium (Cd)	mg/L	0.000204	0.0000250	0.0000330	0.0000200	0.0000340	0.0000050	8225433
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00017	<0.00010	<0.00010	0.00010	8225433
Dissolved Cobalt (Co)	mg/L	0.0000070	0.0000520	0.0000050	0.0000410	0.0000250	0.0000050	8225433
Dissolved Copper (Cu)	mg/L	0.000388	0.000125	0.000068	0.000238	0.000241	0.000050	8225433
Dissolved Iron (Fe)	mg/L	<0.0010	0.0072	<0.0010	0.0411	0.0028	0.0010	8225433
Dissolved Lead (Pb)	mg/L	0.0000160	0.0000060	0.0000060	0.0000060	0.0000060	0.0000050	8225433
Dissolved Lithium (Li)	mg/L	0.00172	0.00449	0.00220	0.00196	0.00436	0.00050	8225433
Dissolved Manganese (Mn)	mg/L	<0.000050	0.0716	0.00146	0.0800	0.0280	0.000050	8225433
Dissolved Molybdenum (Mo)	mg/L	0.000751	0.000731	0.00149	0.000763	0.00145	0.000050	8225433
Dissolved Nickel (Ni)	mg/L	0.000254	0.000413	0.000081	0.000318	0.000863	0.000020	8225433
Dissolved Phosphorus (P)	mg/L	0.0021	<0.0020	0.0026	0.0024	0.0029	0.0020	8225433
Dissolved Selenium (Se)	mg/L	0.00218	0.000901	0.00326	0.000308	0.00143	0.000040	8225433
Dissolved Silicon (Si)	mg/L	2.39	3.68	3.44	3.57	4.05	0.050	8225433
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225433
Dissolved Strontium (Sr)	mg/L	0.154	0.211	0.254	0.0954	0.257	0.000050	8225433
Dissolved Thallium (Tl)	mg/L	0.0000020	0.0000020	<0.0000020	0.0000020	<0.0000020	0.0000020	8225433
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8225433
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8225433
Dissolved Uranium (U)	mg/L	0.00494	0.00157	0.00303	0.000784	0.00510	0.0000020	8225433
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8225433

RDL = Reportable Detection Limit

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OI3665	OI3666	OI3667	OI3668	OI3669		
Sampling Date		2016/03/20 18:36	2016/03/20 17:20	2016/03/20 15:45	2016/03/21 08:15	2016/03/20 11:45		
COC Number		08419480	08419480	08419480	08419480	08419480		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0241	0.0342	0.00086	0.00197	0.00423	0.00010	8225433
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8225433
Dissolved Calcium (Ca)	mg/L	43.5	61.2	83.8	30.0	76.0	0.050	8224367
Dissolved Magnesium (Mg)	mg/L	6.69	7.76	9.98	3.30	17.8	0.050	8224367
Dissolved Potassium (K)	mg/L	2.34	1.93	1.28	2.48	1.57	0.050	8224367
Dissolved Sodium (Na)	mg/L	0.907	1.34	1.04	1.18	1.48	0.050	8224367
Dissolved Sulphur (S)	mg/L	16.9	11.5	13.5	4.6	11.9	3.0	8224367

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OI3670	OI3671	OI3672	OI3673	OI3674		
Sampling Date		2016/03/20 13:00	2016/03/20 14:25	2016/03/21 10:25	2016/03/20 10:25	2016/03/20 09:30		
COC Number		08419480	08419480	08419480	08419480	08419481		
	UNITS	KZ-16	KZ-17	KZ-19	KZ-21	KZ-22	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	292	262	<0.50	341	322	0.50	8223812
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8226582
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00263	0.00315	<0.00050	0.00200	0.00195	0.00050	8225433
Dissolved Antimony (Sb)	mg/L	0.000022	0.000029	<0.000020	0.000029	0.000031	0.000020	8225433
Dissolved Arsenic (As)	mg/L	0.000173	0.000333	<0.000020	0.000374	0.000553	0.000020	8225433
Dissolved Barium (Ba)	mg/L	0.102	0.102	0.000026	0.0842	0.0918	0.000020	8225433
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8225433
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225433
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8225433
Dissolved Cadmium (Cd)	mg/L	0.0000330	0.0000370	<0.0000050	0.0000090	0.0000130	0.0000050	8225433
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8225433
Dissolved Cobalt (Co)	mg/L	0.0000480	0.0000200	<0.0000050	0.000189	0.0000940	0.0000050	8225433
Dissolved Copper (Cu)	mg/L	0.000188	0.000216	<0.000050	0.000163	0.000202	0.000050	8225433
Dissolved Iron (Fe)	mg/L	0.0034	0.0032	<0.0010	0.0068	0.0066	0.0010	8225433
Dissolved Lead (Pb)	mg/L	0.0000100	0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225433
Dissolved Lithium (Li)	mg/L	0.00413	0.00393	<0.00050	0.0109	0.00754	0.00050	8225433
Dissolved Manganese (Mn)	mg/L	0.0207	0.0249	<0.000050	0.143	0.0631	0.000050	8225433
Dissolved Molybdenum (Mo)	mg/L	0.000410	0.00141	<0.000050	0.00167	0.00140	0.000050	8225433
Dissolved Nickel (Ni)	mg/L	0.000923	0.000826	<0.000020	0.00233	0.00134	0.000020	8225433
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0024	<0.0020	0.0033	0.0023	0.0020	8225433
Dissolved Selenium (Se)	mg/L	0.00161	0.00130	<0.000040	0.000493	0.00104	0.000040	8225433
Dissolved Silicon (Si)	mg/L	4.57	3.79	<0.050	6.76	4.98	0.050	8225433
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225433
Dissolved Strontium (Sr)	mg/L	0.277	0.272	<0.000050	0.278	0.296	0.000050	8225433
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8225433
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8225433
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8225433
Dissolved Uranium (U)	mg/L	0.00264	0.00509	<0.0000020	0.00306	0.00406	0.0000020	8225433
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8225433

RDL = Reportable Detection Limit

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OI3670	OI3671	OI3672	OI3673	OI3674		
Sampling Date		2016/03/20 13:00	2016/03/20 14:25	2016/03/21 10:25	2016/03/20 10:25	2016/03/20 09:30		
COC Number		08419480	08419480	08419480	08419480	08419481		
	UNITS	KZ-16	KZ-17	KZ-19	KZ-21	KZ-22	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00092	0.00393	0.00019	0.00084	0.00098	0.00010	8225433
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00018	<0.00010	0.00010	8225433
Dissolved Calcium (Ca)	mg/L	88.5	75.6	<0.050	84.6	84.3	0.050	8224367
Dissolved Magnesium (Mg)	mg/L	17.1	17.8	<0.050	31.4	27.2	0.050	8224367
Dissolved Potassium (K)	mg/L	1.50	1.63	<0.050	2.34	1.99	0.050	8224367
Dissolved Sodium (Na)	mg/L	1.47	1.52	<0.050	2.43	2.26	0.050	8224367
Dissolved Sulphur (S)	mg/L	12.4	11.6	<3.0	13.3	15.3	3.0	8224367
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OI3675	OI3676	OI3677		
Sampling Date		2016/03/19 14:30	2016/03/19 15:30	2016/03/22 13:20		
COC Number		08419481	08419481	08419481		
	UNITS	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	306	303	<0.50	0.50	8223812
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8226582
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.00260	0.00168	<0.00050	0.00050	8225433
Dissolved Antimony (Sb)	mg/L	0.000066	0.000060	<0.000020	0.000020	8225433
Dissolved Arsenic (As)	mg/L	0.000411	0.000405	<0.000020	0.000020	8225433
Dissolved Barium (Ba)	mg/L	0.109	0.0964	<0.000020	0.000020	8225433
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8225433
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	<0.0000050	0.0000050	8225433
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8225433
Dissolved Cadmium (Cd)	mg/L	0.0000080	0.0000090	<0.0000050	0.0000050	8225433
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8225433
Dissolved Cobalt (Co)	mg/L	0.0000100	0.0000110	<0.0000050	0.0000050	8225433
Dissolved Copper (Cu)	mg/L	0.000332	0.000299	<0.000050	0.000050	8225433
Dissolved Iron (Fe)	mg/L	0.0027	0.0025	<0.0010	0.0010	8225433
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000050	<0.0000050	0.0000050	8225433
Dissolved Lithium (Li)	mg/L	0.00832	0.00694	0.00053	0.00050	8225433
Dissolved Manganese (Mn)	mg/L	0.00130	0.00133	<0.000050	0.000050	8225433
Dissolved Molybdenum (Mo)	mg/L	0.00115	0.00101	<0.000050	0.000050	8225433
Dissolved Nickel (Ni)	mg/L	0.000621	0.000612	<0.000020	0.000020	8225433
Dissolved Phosphorus (P)	mg/L	0.0032	0.0028	<0.0020	0.0020	8225433
Dissolved Selenium (Se)	mg/L	0.000957	0.000940	<0.000040	0.000040	8225433
Dissolved Silicon (Si)	mg/L	4.69	4.75	<0.050	0.050	8225433
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225433
Dissolved Strontium (Sr)	mg/L	0.279	0.277	<0.000050	0.000050	8225433
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8225433
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8225433
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8225433
Dissolved Uranium (U)	mg/L	0.00404	0.00374	<0.0000020	0.0000020	8225433
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8225433
RDL = Reportable Detection Limit						

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OI3675	OI3676	OI3677		
Sampling Date		2016/03/19 14:30	2016/03/19 15:30	2016/03/22 13:20		
COC Number		08419481	08419481	08419481		
	UNITS	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00033	0.00031	<0.00010	0.00010	8225433
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8225433
Dissolved Calcium (Ca)	mg/L	81.5	80.5	<0.050	0.050	8224367
Dissolved Magnesium (Mg)	mg/L	24.9	24.8	<0.050	0.050	8224367
Dissolved Potassium (K)	mg/L	1.74	1.70	<0.050	0.050	8224367
Dissolved Sodium (Na)	mg/L	2.15	2.18	<0.050	0.050	8224367
Dissolved Sulphur (S)	mg/L	14.4	14.6	<3.0	3.0	8224367
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OI3665	OI3666		OI3667		
Sampling Date		2016/03/20 18:36	2016/03/20 17:20		2016/03/20 15:45		
COC Number		08419480	08419480		08419480		
	UNITS	KZ-2	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	133	181	8223872	239	0.50	8223872
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8226970	<0.0000020	0.0000020	8226970
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00300	0.0198	8225448	0.00272	0.00050	8234133
Total Antimony (Sb)	mg/L	0.000025	0.000042	8225448	0.000020	0.000020	8225448
Total Arsenic (As)	mg/L	0.000076	0.000416	8225448	0.000117	0.000020	8225448
Total Barium (Ba)	mg/L	0.0774	0.115	8225448	0.180	0.000020	8225448
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	8225448	<0.000010	0.000010	8225448
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8225448	<0.0000050	0.0000050	8225448
Total Boron (B)	mg/L	<0.010	<0.010	8225448	<0.010	0.010	8225448
Total Cadmium (Cd)	mg/L	0.000198	0.000158	8225448	0.0000420	0.0000050	8225448
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	8225448	0.00021	0.00010	8225448
Total Cobalt (Co)	mg/L	0.0000080	0.000121	8225448	0.0000060	0.0000050	8225448
Total Copper (Cu)	mg/L	0.000427	0.000340	8225448	0.000069	0.000050	8225448
Total Iron (Fe)	mg/L	0.0018	0.678	8225448	0.0028	0.0010	8234133
Total Lead (Pb)	mg/L	0.0000210	0.000160	8225448	0.0000330	0.0000050	8225448
Total Lithium (Li)	mg/L	0.00191	0.00431	8225448	0.00197	0.00050	8225448
Total Manganese (Mn)	mg/L	<0.000050	0.0987	8225448	0.00198	0.000050	8225448
Total Molybdenum (Mo)	mg/L	0.000760	0.000749	8225448	0.00145	0.000050	8225448
Total Nickel (Ni)	mg/L	0.000254	0.000498	8225448	0.000102	0.000020	8225448
Total Phosphorus (P)	mg/L	0.0021	0.0063	8225448	<0.0020	0.0020	8225448
Total Selenium (Se)	mg/L	0.00219	0.000868	8225448	0.00307	0.000040	8225448
Total Silicon (Si)	mg/L	2.28	3.63	8225448	3.36	0.050	8225448
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	8225448	<0.0000050	0.0000050	8225448
Total Strontium (Sr)	mg/L	0.148	0.210	8225448	0.261	0.000050	8225448
Total Thallium (Tl)	mg/L	0.0000030	0.0000020	8225448	<0.0000020	0.0000020	8225448
Total Tin (Sn)	mg/L	<0.00020	<0.00020	8225448	<0.00020	0.00020	8225448
Total Titanium (Ti)	mg/L	<0.00050	0.00111	8225448	<0.00050	0.00050	8225448
Total Uranium (U)	mg/L	0.00493	0.00158	8225448	0.00313	0.0000020	8225448
Total Vanadium (V)	mg/L	<0.00020	<0.00020	8225448	<0.00020	0.00020	8225448
RDL = Reportable Detection Limit							

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OI3665	OI3666		OI3667		
Sampling Date		2016/03/20 18:36	2016/03/20 17:20		2016/03/20 15:45		
COC Number		08419480	08419480		08419480		
	UNITS	KZ-2	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0232	0.0497	8225448	0.00171	0.00010	8225448
Total Zirconium (Zr)	mg/L	<0.00010	0.00013	8225448	<0.00010	0.00010	8225448
Total Calcium (Ca)	mg/L	42.4	59.3	8224061	88.1	0.050	8224061
Total Magnesium (Mg)	mg/L	6.60	7.88	8224061	11.2	0.050	8224061
Total Potassium (K)	mg/L	2.33	1.89	8224061	1.40	0.050	8224061
Total Sodium (Na)	mg/L	0.929	1.36	8224061	1.20	0.050	8224061
Total Sulphur (S)	mg/L	17.0	11.9	8224061	16.6	3.0	8224061
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OI3668	OI3669	OI3670	OI3671		
Sampling Date		2016/03/21 08:15	2016/03/20 11:45	2016/03/20 13:00	2016/03/20 14:25		
COC Number		08419480	08419480	08419480	08419480		
	UNITS	KZ-13	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	91.8	266	273	273	0.50	8223872
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8226970
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0136	0.00909	0.00199	0.00829	0.00050	8225448
Total Antimony (Sb)	mg/L	<0.000020	0.000032	<0.000020	0.000032	0.000020	8225448
Total Arsenic (As)	mg/L	0.000193	0.000563	0.000180	0.000628	0.000020	8225448
Total Barium (Ba)	mg/L	0.153	0.0996	0.103	0.101	0.000020	8225448
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8225448
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225448
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8225448
Total Cadmium (Cd)	mg/L	0.0000270	0.0000440	0.0000300	0.0000440	0.0000050	8225448
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8225448
Total Cobalt (Co)	mg/L	0.0000580	0.0000510	0.0000510	0.0000480	0.0000050	8225448
Total Copper (Cu)	mg/L	0.000269	0.000246	0.000184	0.000284	0.000050	8225448
Total Iron (Fe)	mg/L	0.221	0.105	0.0159	0.126	0.0010	8225448
Total Lead (Pb)	mg/L	0.0000230	0.0000330	<0.0000050	0.0000410	0.0000050	8225448
Total Lithium (Li)	mg/L	0.00157	0.00397	0.00419	0.00411	0.00050	8225448
Total Manganese (Mn)	mg/L	0.0945	0.0434	0.0213	0.0478	0.000050	8225448
Total Molybdenum (Mo)	mg/L	0.000755	0.00140	0.000422	0.00131	0.000050	8225448
Total Nickel (Ni)	mg/L	0.000345	0.000942	0.000928	0.000920	0.000020	8225448
Total Phosphorus (P)	mg/L	0.0034	0.0057	<0.0020	0.0075	0.0020	8225448
Total Selenium (Se)	mg/L	0.000328	0.00142	0.00151	0.00141	0.000040	8225448
Total Silicon (Si)	mg/L	3.57	3.72	3.74	3.75	0.050	8225448
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225448
Total Strontium (Sr)	mg/L	0.0913	0.260	0.263	0.260	0.000050	8225448
Total Thallium (Tl)	mg/L	0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8225448
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8225448
Total Titanium (Ti)	mg/L	<0.00050	0.00051	<0.00050	0.00051	0.00050	8225448
Total Uranium (U)	mg/L	0.000783	0.00514	0.00283	0.00517	0.0000020	8225448
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8225448
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OI3668	OI3669	OI3670	OI3671		
Sampling Date		2016/03/21 08:15	2016/03/20 11:45	2016/03/20 13:00	2016/03/20 14:25		
COC Number		08419480	08419480	08419480	08419480		
	UNITS	KZ-13	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00255	0.00485	0.00080	0.00512	0.00010	8225448
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8225448
Total Calcium (Ca)	mg/L	31.4	77.6	80.5	80.3	0.050	8224061
Total Magnesium (Mg)	mg/L	3.23	17.5	17.5	17.6	0.050	8224061
Total Potassium (K)	mg/L	2.34	1.54	1.52	1.59	0.050	8224061
Total Sodium (Na)	mg/L	1.14	1.46	1.53	1.54	0.050	8224061
Total Sulphur (S)	mg/L	4.5	12.0	12.4	12.1	3.0	8224061
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OI3672		OI3673	OI3674	OI3675		
Sampling Date		2016/03/21 10:25		2016/03/20 10:25	2016/03/20 09:30	2016/03/19 14:30		
COC Number		08419480		08419480	08419481	08419481		
	UNITS	KZ-19	QC Batch	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	<0.50	8223872	340	316	376	0.50	8223872
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	8226970	<0.0000020	<0.0000020	<0.0000020	0.0000020	8226970
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	<0.00050	8225448	0.00784	0.00939	0.00821	0.00050	8225448
Total Antimony (Sb)	mg/L	<0.000020	8225448	0.000030	0.000036	0.000060	0.000020	8225448
Total Arsenic (As)	mg/L	<0.000020	8225448	0.00434	0.00364	0.000498	0.000020	8225448
Total Barium (Ba)	mg/L	<0.000020	8270237	0.0888	0.0940	0.0964	0.000020	8225448
Total Beryllium (Be)	mg/L	<0.000010	8225448	<0.000010	<0.000010	<0.000010	0.000010	8225448
Total Bismuth (Bi)	mg/L	<0.0000050	8225448	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225448
Total Boron (B)	mg/L	<0.010	8225448	<0.010	<0.010	<0.010	0.010	8225448
Total Cadmium (Cd)	mg/L	<0.0000050	8225448	0.0000140	0.0000210	0.0000110	0.0000050	8225448
Total Chromium (Cr)	mg/L	<0.00010	8225448	<0.00010	<0.00010	<0.00010	0.00010	8225448
Total Cobalt (Co)	mg/L	<0.0000050	8225448	0.000276	0.000201	0.0000240	0.0000050	8225448
Total Copper (Cu)	mg/L	<0.000050	8225448	0.000204	0.000263	0.000339	0.000050	8225448
Total Iron (Fe)	mg/L	<0.0010	8225448	1.47	1.07	0.0694	0.0010	8225448
Total Lead (Pb)	mg/L	<0.0000050	8225448	0.0000240	0.0000360	0.0000210	0.0000050	8225448
Total Lithium (Li)	mg/L	<0.00050	8225448	0.0107	0.00756	0.00747	0.00050	8225448
Total Manganese (Mn)	mg/L	<0.000050	8225448	0.185	0.117	0.00710	0.000050	8225448
Total Molybdenum (Mo)	mg/L	<0.000050	8225448	0.00166	0.00132	0.00104	0.000050	8225448
Total Nickel (Ni)	mg/L	<0.000020	8225448	0.00256	0.00154	0.000698	0.000020	8225448
Total Phosphorus (P)	mg/L	0.0029	8225448	0.0291	0.0244	0.0030	0.0020	8225448
Total Selenium (Se)	mg/L	<0.000040	8225448	0.000512	0.00106	0.00133	0.000040	8225448
Total Silicon (Si)	mg/L	<0.050	8225448	6.71	5.20	4.43	0.050	8225448
Total Silver (Ag)	mg/L	<0.0000050	8225448	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225448
Total Strontium (Sr)	mg/L	<0.000050	8225448	0.280	0.273	0.270	0.000050	8225448
Total Thallium (Tl)	mg/L	<0.0000020	8225448	<0.0000020	<0.0000020	<0.0000020	0.0000020	8225448
Total Tin (Sn)	mg/L	<0.00020	8225448	<0.00020	<0.00020	<0.00020	0.00020	8225448
Total Titanium (Ti)	mg/L	<0.00050	8225448	0.00057	0.00052	<0.00050	0.00050	8225448
Total Uranium (U)	mg/L	<0.0000020	8225448	0.00316	0.00435	0.00376	0.0000020	8225448
Total Vanadium (V)	mg/L	<0.00020	8225448	<0.00020	<0.00020	<0.00020	0.00020	8225448
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OI3672		OI3673	OI3674	OI3675		
Sampling Date		2016/03/21 10:25		2016/03/20 10:25	2016/03/20 09:30	2016/03/19 14:30		
COC Number		08419480		08419480	08419481	08419481		
	UNITS	KZ-19	QC Batch	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00020	8225448	0.00137	0.00175	0.00053	0.00010	8225448
Total Zirconium (Zr)	mg/L	<0.00010	8225448	0.00036	0.00019	<0.00010	0.00010	8225448
Total Calcium (Ca)	mg/L	<0.050	8224061	84.4	83.7	109	0.050	8224061
Total Magnesium (Mg)	mg/L	<0.050	8224061	31.4	26.0	25.3	0.050	8224061
Total Potassium (K)	mg/L	<0.050	8224061	2.34	1.94	1.73	0.050	8224061
Total Sodium (Na)	mg/L	<0.050	8224061	2.59	2.16	2.23	0.050	8224061
Total Sulphur (S)	mg/L	<3.0	8224061	13.3	15.4	15.6	3.0	8224061
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OI3676	OI3677		
Sampling Date		2016/03/19 15:30	2016/03/22 13:20		
COC Number		08419481	08419481		
	UNITS	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters					
Total Hardness (CaCO3)	mg/L	300	<0.50	0.50	8223872
Elements					
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8226970
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	0.00478	<0.00050	0.00050	8225448
Total Antimony (Sb)	mg/L	0.000062	<0.000020	0.000020	8225448
Total Arsenic (As)	mg/L	0.000469	<0.000020	0.000020	8225448
Total Barium (Ba)	mg/L	0.0929	<0.000020	0.000020	8225448
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8225448
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000050	8225448
Total Boron (B)	mg/L	<0.010	<0.010	0.010	8225448
Total Cadmium (Cd)	mg/L	0.0000090	<0.0000050	0.0000050	8225448
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00010	8225448
Total Cobalt (Co)	mg/L	0.0000180	<0.0000050	0.0000050	8225448
Total Copper (Cu)	mg/L	0.000303	<0.000050	0.000050	8225448
Total Iron (Fe)	mg/L	0.0527	<0.0010	0.0010	8225448
Total Lead (Pb)	mg/L	0.0000260	<0.0000050	0.0000050	8225448
Total Lithium (Li)	mg/L	0.00737	<0.00050	0.00050	8225448
Total Manganese (Mn)	mg/L	0.00795	<0.000050	0.000050	8225448
Total Molybdenum (Mo)	mg/L	0.00101	<0.000050	0.000050	8225448
Total Nickel (Ni)	mg/L	0.000648	<0.000020	0.000020	8225448
Total Phosphorus (P)	mg/L	0.0037	<0.0020	0.0020	8225448
Total Selenium (Se)	mg/L	0.00101	<0.000040	0.000040	8225448
Total Silicon (Si)	mg/L	4.51	<0.050	0.050	8225448
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000050	8225448
Total Strontium (Sr)	mg/L	0.257	<0.000050	0.000050	8225448
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	8225448
Total Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8225448
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00050	8225448
Total Uranium (U)	mg/L	0.00372	<0.0000020	0.0000020	8225448
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	8225448
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OI3676	OI3677		
Sampling Date		2016/03/19 15:30	2016/03/22 13:20		
COC Number		08419481	08419481		
	UNITS	KZ-28	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00042	<0.00010	0.00010	8225448
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8225448
Total Calcium (Ca)	mg/L	80.9	<0.050	0.050	8224061
Total Magnesium (Mg)	mg/L	23.9	<0.050	0.050	8224061
Total Potassium (K)	mg/L	1.62	<0.050	0.050	8224061
Total Sodium (Na)	mg/L	2.13	<0.050	0.050	8224061
Total Sulphur (S)	mg/L	14.8	<3.0	3.0	8224061
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3665
Sample ID: KZ-2
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	Wilson Au Yueng
Colour (True) by Kone Lab	KONE	8226019	N/A	2016/03/24	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	Isabel Choi
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	Maria Maclean
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	Andy Lu
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	Edwin Lamigo
Ion Balance	CALC	8224539	N/A	2016/03/29	Rob Reinert
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	Andy Lu
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	Lucy Luo
pH Water	AT/ALK	8224990	N/A	2016/03/24	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	Tim Matsushita

Maxxam ID: OI3665 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	Wilson Au Yueng
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	Andrew An
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	Andrew An

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3666
Sample ID: KZ-7
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	Wilson Au Yueng
Colour (True) by Kone Lab	KONE	8226019	N/A	2016/03/24	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	Isabel Choi
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	Maria Maclean
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	Andy Lu
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	Edwin Lamigo
Ion Balance	CALC	8224539	N/A	2016/03/29	Rob Reinert
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	Andy Lu
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	Lucy Luo
pH Water	AT/ALK	8224990	N/A	2016/03/24	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	Tim Matsushita

Maxxam ID: OI3667
Sample ID: KZ-9
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	Wilson Au Yueng
Colour (True) by Kone Lab	KONE	8226019	N/A	2016/03/24	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	Isabel Choi
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	Maria Maclean
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	Balwinder Bassi

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3667
Sample ID: KZ-9
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	Andy Lu
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	Edwin Lamigo
Ion Balance	CALC	8224539	N/A	2016/03/29	Rob Reinert
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8234133	N/A	2016/04/06	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	Andy Lu
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	Lucy Luo
pH Water	AT/ALK	8224990	N/A	2016/03/24	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	Tim Matsushita

Maxxam ID: OI3668
Sample ID: KZ-13
Matrix: Water

Collected: 2016/03/21
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8226478	N/A	2016/03/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	Wilson Au Yueng
Colour (True) by Kone Lab	KONE	8226019	N/A	2016/03/24	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	Isabel Choi
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	Maria Maclean
Fluoride	ISE/ISE	8225583	N/A	2016/03/24	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	Andy Lu
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	Edwin Lamigo
Ion Balance	CALC	8224539	N/A	2016/03/29	Rob Reinert
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	Andy Lu

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3668
Sample ID: KZ-13
Matrix: Water

Collected: 2016/03/21
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	Andy Lu
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	Lucy Luo
pH Water	AT/ALK	8224990	N/A	2016/03/24	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8226516	N/A	2016/03/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8229431	2016/03/30	2016/03/30	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8229432	N/A	2016/03/30	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	Tim Matsushita

Maxxam ID: OI3668 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2016/03/21
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8226478	N/A	2016/03/24	Balwinder Bassi
Sulphate by Automated Colourimetry	KONE/COL	8226516	N/A	2016/03/24	Balwinder Bassi

Maxxam ID: OI3669
Sample ID: KZ-15
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	Wilson Au Yueng
Colour (True) by Kone Lab	KONE	8226020	N/A	2016/03/24	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8228331	N/A	2016/03/29	Victor Lee
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	Maria Maclean
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	Andy Lu
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	Edwin Lamigo
Ion Balance	CALC	8224539	N/A	2016/03/29	Rob Reinert
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	Andrew An

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3669
Sample ID: KZ-15
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	Andy Lu
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	Lucy Luo
pH Water	AT/ALK	8224990	N/A	2016/03/24	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	Tim Matsushita

Maxxam ID: OI3669 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Colour (True) by Kone Lab	KONE	8226020	N/A	2016/03/24	Diana Cruz

Maxxam ID: OI3670
Sample ID: KZ-16
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	Wilson Au Yueng
Colour (True) by Kone Lab	KONE	8226019	N/A	2016/03/24	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	Isabel Choi
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	Maria Maclean
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	Andy Lu
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	Edwin Lamigo
Ion Balance	CALC	8224539	N/A	2016/03/29	Rob Reinert
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3670
Sample ID: KZ-16
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	Andy Lu
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	Lucy Luo
pH Water	AT/ALK	8224990	N/A	2016/03/24	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	Tim Matsushita

Maxxam ID: OI3671
Sample ID: KZ-17
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8224998	2016/03/24	2016/03/24	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	Wilson Au Yueng
Colour (True) by Kone Lab	KONE	8226020	N/A	2016/03/24	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	Isabel Choi
Conductance - water	AT/ALK	8224997	N/A	2016/03/24	Maria Maclean
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	Andy Lu
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	Edwin Lamigo
Ion Balance	CALC	8224539	N/A	2016/03/29	Rob Reinert
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	Andy Lu
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	Lucy Luo
pH Water	AT/ALK	8224996	N/A	2016/03/24	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	Tim Matsushita

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3672 **Collected:** 2016/03/21
Sample ID: KZ-19 **Shipped:**
Matrix: Water **Received:** 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	Wilson Au Yueng
Colour (True) by Kone Lab	KONE	8226019	N/A	2016/03/24	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	Isabel Choi
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	Maria Maclean
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	Andy Lu
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	Edwin Lamigo
Ion Balance	CALC	8224539	N/A	2016/03/29	Rob Reinert
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/28	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/28	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8230249	N/A	2016/03/31	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	Andy Lu
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	Lucy Luo
pH Water	AT/ALK	8224990	N/A	2016/03/24	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	Tim Matsushita

Maxxam ID: OI3672 Dup **Collected:** 2016/03/21
Sample ID: KZ-19 **Shipped:**
Matrix: Water **Received:** 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	Isaac Wang

Maxxam ID: OI3673 **Collected:** 2016/03/20
Sample ID: KZ-21 **Shipped:**
Matrix: Water **Received:** 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Wilson Au Yueng

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3673
Sample ID: KZ-21
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	Wilson Au Yueng
Colour (True) by Kone Lab	KONE	8226019	N/A	2016/03/24	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	Isabel Choi
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	Maria Maclean
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	Andy Lu
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	Edwin Lamigo
Ion Balance	CALC	8224539	N/A	2016/03/29	Rob Reinert
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	Andy Lu
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	Lucy Luo
pH Water	AT/ALK	8224990	N/A	2016/03/24	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	Tim Matsushita

Maxxam ID: OI3673 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	Isabel Choi

Maxxam ID: OI3674
Sample ID: KZ-22
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8226478	N/A	2016/03/24	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3674
Sample ID: KZ-22
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	Wilson Au Yueng
Colour (True) by Kone Lab	KONE	8226019	N/A	2016/03/24	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	Isabel Choi
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	Maria Maclean
Fluoride	ISE/ISE	8225583	N/A	2016/03/24	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	Andy Lu
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	Edwin Lamigo
Ion Balance	CALC	8224539	N/A	2016/03/29	Rob Reinert
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	Andy Lu
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	Lucy Luo
pH Water	AT/ALK	8224990	N/A	2016/03/24	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8226516	N/A	2016/03/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	Tim Matsushita

Maxxam ID: OI3674 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8225583	N/A	2016/03/24	Balwinder Bassi

Maxxam ID: OI3675
Sample ID: KZ-26
Matrix: Water

Collected: 2016/03/19
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	Wilson Au Yueng

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3675
Sample ID: KZ-26
Matrix: Water

Collected: 2016/03/19
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Colour (True) by Kone Lab	KONE	8226020	N/A	2016/03/24	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	Isabel Choi
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	Maria Maclean
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	Andy Lu
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	Edwin Lamigo
Ion Balance	CALC	8224539	N/A	2016/03/29	Rob Reinert
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	Andy Lu
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	Lucy Luo
pH Water	AT/ALK	8224990	N/A	2016/03/24	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	Tim Matsushita

Maxxam ID: OI3676
Sample ID: KZ-28
Matrix: Water

Collected: 2016/03/19
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	Wilson Au Yueng
Colour (True) by Kone Lab	KONE	8226019	N/A	2016/03/24	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	Isabel Choi
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	Maria Maclean
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	Andy Lu
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	Edwin Lamigo
Ion Balance	CALC	8224539	N/A	2016/03/29	Rob Reinert

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3676
Sample ID: KZ-28
Matrix: Water

Collected: 2016/03/19
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	Andy Lu
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	Lucy Luo
pH Water	AT/ALK	8224990	N/A	2016/03/24	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	Tim Matsushita

Maxxam ID: OI3677
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/03/22
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8224998	2016/03/24	2016/03/24	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	Wilson Au Yueng
Colour (True) by Kone Lab	KONE	8226020	N/A	2016/03/24	Diana Cruz
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8227119	N/A	2016/03/28	Isabel Choi
Conductance - water	AT/ALK	8224997	N/A	2016/03/24	Maria Maclean
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	Andy Lu
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	Andy Lu
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	Edwin Lamigo
Ion Balance	CALC	8224539	N/A	2016/03/29	Rob Reinert
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	Andy Lu
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8230249	N/A	2016/03/31	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	Andy Lu

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3677
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/03/22
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH Water	AT/ALK	8224996	N/A	2016/03/24	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8230309	N/A	2016/03/31	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	Tim Matsushita

Maxxam ID: OI3677 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/03/22
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	Edwin Lamigo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.0°C
Package 2	1.0°C
Package 3	1.0°C

Revised report V2 (2016/04/06): Due to client request, samples were reanalyzed for Total Iron. Corrected values for sample OI3667 are included in this report (MM4).

Revised report V3 (2016/04/06): Due to client request, samples were reanalyzed for Total Aluminum. Corrected values for sample OI3667 are included in this report (MM4).

Revised report V4 (2016/05/19): Due to client request, samples were reanalyzed for Total Barium. Corrected values for sample OI3672 are included in this report (MM4).

Sample OI3677-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].
Sample OI3667, Elements by ICPMS Low Level (total): Test repeated.
Sample OI3672, Elements by ICPMS Low Level (total): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8224988	Alkalinity (PP as CaCO3)	2016/03/24					<0.50	mg/L	NC	20
8224988	Alkalinity (Total as CaCO3)	2016/03/24	100	80 - 120	95	80 - 120	0.84, RDL=0.50	mg/L	NC	20
8224988	Bicarbonate (HCO3)	2016/03/24					1.02, RDL=0.50	mg/L	NC	20
8224988	Carbonate (CO3)	2016/03/24					<0.50	mg/L	NC	20
8224988	Hydroxide (OH)	2016/03/24					<0.50	mg/L	NC	20
8224989	Conductivity	2016/03/24			100	80 - 120	1.5, RDL=1.0	uS/cm	NC	20
8224990	pH	2016/03/24			101	97 - 103			2.0	N/A
8224996	pH	2016/03/24			101	97 - 103			0.38	N/A
8224997	Conductivity	2016/03/24			100	80 - 120	<1.0	uS/cm	1.6	20
8224998	Alkalinity (PP as CaCO3)	2016/03/24					<0.50	mg/L	NC	20
8224998	Alkalinity (Total as CaCO3)	2016/03/24	NC	80 - 120	108	80 - 120	0.62, RDL=0.50	mg/L	2.0	20
8224998	Bicarbonate (HCO3)	2016/03/24					0.76, RDL=0.50	mg/L	2.0	20
8224998	Carbonate (CO3)	2016/03/24					<0.50	mg/L	NC	20
8224998	Hydroxide (OH)	2016/03/24					<0.50	mg/L	NC	20
8225029	Total Suspended Solids	2016/03/28			98	80 - 120	<1.0	mg/L		
8225433	Dissolved Aluminum (Al)	2016/03/25	96	80 - 120	96	80 - 120	<0.00050	mg/L	0.85	20
8225433	Dissolved Antimony (Sb)	2016/03/25	102	80 - 120	94	80 - 120	<0.000020	mg/L	NC	20
8225433	Dissolved Arsenic (As)	2016/03/25	101	80 - 120	96	80 - 120	<0.000020	mg/L	NC	20
8225433	Dissolved Barium (Ba)	2016/03/25	NC	80 - 120	111	80 - 120	<0.000020	mg/L	2.0	20
8225433	Dissolved Beryllium (Be)	2016/03/25	99	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
8225433	Dissolved Bismuth (Bi)	2016/03/25	94	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8225433	Dissolved Boron (B)	2016/03/25	98	80 - 120	98	80 - 120	<0.010	mg/L	NC	20
8225433	Dissolved Cadmium (Cd)	2016/03/25	97	80 - 120	101	80 - 120	<0.0000050	mg/L	2.0	20
8225433	Dissolved Chromium (Cr)	2016/03/25	97	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8225433	Dissolved Cobalt (Co)	2016/03/25	95	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8225433	Dissolved Copper (Cu)	2016/03/25	93	80 - 120	98	80 - 120	<0.000050	mg/L	1.5	20
8225433	Dissolved Iron (Fe)	2016/03/25	95	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
8225433	Dissolved Lead (Pb)	2016/03/25	100	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8225433	Dissolved Lithium (Li)	2016/03/25	96	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8225433	Dissolved Manganese (Mn)	2016/03/25	96	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8225433	Dissolved Molybdenum (Mo)	2016/03/25	NC	80 - 120	96	80 - 120	<0.000050	mg/L	0	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8225433	Dissolved Nickel (Ni)	2016/03/25	94	80 - 120	98	80 - 120	<0.000020	mg/L	1.2	20
8225433	Dissolved Phosphorus (P)	2016/03/25					0.0023, RDL=0.0020	mg/L	NC	20
8225433	Dissolved Selenium (Se)	2016/03/25	99	80 - 120	93	80 - 120	<0.000040	mg/L	0.37	20
8225433	Dissolved Silicon (Si)	2016/03/25					<0.050	mg/L	2.3	20
8225433	Dissolved Silver (Ag)	2016/03/25	86	80 - 120	94	80 - 120	<0.0000050	mg/L	NC	20
8225433	Dissolved Strontium (Sr)	2016/03/25	NC	80 - 120	97	80 - 120	<0.000050	mg/L	0.038	20
8225433	Dissolved Thallium (Tl)	2016/03/25	103	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8225433	Dissolved Tin (Sn)	2016/03/25	99	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
8225433	Dissolved Titanium (Ti)	2016/03/25	92	80 - 120	91	80 - 120	<0.00050	mg/L	NC	20
8225433	Dissolved Uranium (U)	2016/03/25	97	80 - 120	96	80 - 120	<0.0000020	mg/L	0.77	20
8225433	Dissolved Vanadium (V)	2016/03/25	97	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8225433	Dissolved Zinc (Zn)	2016/03/25	NC	80 - 120	96	80 - 120	<0.00010	mg/L	0.48	20
8225433	Dissolved Zirconium (Zr)	2016/03/25					<0.00010	mg/L	NC	20
8225448	Total Aluminum (Al)	2016/03/25	94	80 - 120	103	80 - 120	<0.00050	mg/L	2.4	20
8225448	Total Antimony (Sb)	2016/03/25	96	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8225448	Total Arsenic (As)	2016/03/25	96	80 - 120	96	80 - 120	<0.000020	mg/L	NC	20
8225448	Total Barium (Ba)	2016/03/25	NC	80 - 120	102	80 - 120	<0.000020	mg/L	0.28	20
8225448	Total Beryllium (Be)	2016/03/25	93	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8225448	Total Bismuth (Bi)	2016/03/25	93	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8225448	Total Boron (B)	2016/03/25	94	80 - 120	97	80 - 120	<0.010	mg/L	NC	20
8225448	Total Cadmium (Cd)	2016/03/25	94	80 - 120	98	80 - 120	<0.0000050	mg/L	5.2	20
8225448	Total Chromium (Cr)	2016/03/25	94	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8225448	Total Cobalt (Co)	2016/03/25	94	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8225448	Total Copper (Cu)	2016/03/25	89	80 - 120	100	80 - 120	<0.000050	mg/L	0.23	20
8225448	Total Iron (Fe)	2016/03/25	93	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
8225448	Total Lead (Pb)	2016/03/25	98	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8225448	Total Lithium (Li)	2016/03/25	85	80 - 120	94	80 - 120	<0.00050	mg/L	NC	20
8225448	Total Manganese (Mn)	2016/03/25	93	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8225448	Total Molybdenum (Mo)	2016/03/25	NC	80 - 120	95	80 - 120	<0.000050	mg/L	0	20
8225448	Total Nickel (Ni)	2016/03/25	91	80 - 120	99	80 - 120	<0.000020	mg/L	5.0	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8225448	Total Phosphorus (P)	2016/03/25					<0.0020	mg/L	NC	20
8225448	Total Selenium (Se)	2016/03/25	91	80 - 120	90	80 - 120	<0.000040	mg/L	0.23	20
8225448	Total Silicon (Si)	2016/03/25					<0.050	mg/L	2.2	20
8225448	Total Silver (Ag)	2016/03/25	91	80 - 120	85	80 - 120	<0.0000050	mg/L	NC	20
8225448	Total Strontium (Sr)	2016/03/25	NC	80 - 120	99	80 - 120	<0.000050	mg/L	2.2	20
8225448	Total Thallium (Tl)	2016/03/25	93	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8225448	Total Tin (Sn)	2016/03/25	96	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8225448	Total Titanium (Ti)	2016/03/25	94	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20
8225448	Total Uranium (U)	2016/03/25	101	80 - 120	100	80 - 120	<0.0000020	mg/L	4.6	20
8225448	Total Vanadium (V)	2016/03/25	97	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
8225448	Total Zinc (Zn)	2016/03/25	NC	80 - 120	98	80 - 120	<0.00010	mg/L	1.5	20
8225448	Total Zirconium (Zr)	2016/03/25					<0.00010	mg/L	NC	20
8225498	Acidity (pH 4.5)	2016/03/24					<0.50	mg/L	NC	20
8225498	Acidity (pH 8.3)	2016/03/24			98	80 - 120	<0.50	mg/L	NC	20
8225545	Fluoride (F)	2016/03/24	95	80 - 120	96	80 - 120	<0.010	mg/L	NC	20
8225583	Fluoride (F)	2016/03/24	92	80 - 120	94	80 - 120	<0.010	mg/L	0	20
8226019	True Colour	2016/03/24			109	80 - 120	<5.0	Col. Unit	1.6	20
8226020	True Colour	2016/03/24			112	80 - 120	<5.0	Col. Unit	NC	20
8226051	Nitrate plus Nitrite (N)	2016/03/24	105	80 - 120	99	80 - 120	<0.0020	mg/L	NC	25
8226052	Nitrite (N)	2016/03/24	99	80 - 120	97	80 - 120	<0.0020	mg/L	NC	25
8226199	Dissolved Phosphorus (P)	2016/03/26	84	80 - 120	105	80 - 120	<0.0020	mg/L	13	20
8226203	Total Phosphorus (P)	2016/03/26	82	80 - 120	102	80 - 120	0.0020, RDL=0.0020	mg/L	NC	20
8226475	Dissolved Chloride (Cl)	2016/03/24	108	80 - 120	97	80 - 120	<0.50	mg/L	NC	20
8226476	Dissolved Sulphate (SO4)	2016/03/24	102	80 - 120	91	80 - 120	<0.50	mg/L	NC	20
8226478	Dissolved Chloride (Cl)	2016/03/24	104	80 - 120	98	80 - 120	<0.50	mg/L	NC	20
8226516	Dissolved Sulphate (SO4)	2016/03/24	NC	80 - 120	93	80 - 120	<0.50	mg/L	9.6	20
8226581	Strong Acid Dissoc. Cyanide (CN)	2016/03/28	101	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8226582	Dissolved Mercury (Hg)	2016/03/28	105	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8226583	Weak Acid Dissoc. Cyanide (CN)	2016/03/28	99	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8226970	Total Mercury (Hg)	2016/03/28	100	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8227119	Dissolved Organic Carbon (C)	2016/03/28	112	80 - 120	107	80 - 120	<0.50	mg/L	NC	20
8227122	Dissolved Organic Carbon (C)	2016/03/28	103	80 - 120	108	80 - 120	<0.50	mg/L	NC	20
8227234	Total Ammonia (N)	2016/03/28	NC	80 - 120	102	80 - 120	<0.0050	mg/L	0.48	20
8228331	Dissolved Organic Carbon (C)	2016/03/29	NC	80 - 120	110	80 - 120	<0.50	mg/L	1.7	20
8229431	Dissolved Phosphorus (P)	2016/03/30	NC	80 - 120	108	80 - 120	<0.0020	mg/L	0.26	20
8229432	Total Phosphorus (P)	2016/03/30			108	80 - 120	<0.0020	mg/L		
8230249	Total Ammonia (N)	2016/03/31	NC	80 - 120	99	80 - 120	<0.0050	mg/L	1.4	20
8230309	Total Phosphorus (P)	2016/03/31			95	80 - 120	<0.0020	mg/L		
8234133	Total Aluminum (Al)	2016/04/06	96	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8234133	Total Iron (Fe)	2016/04/06	95	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
8270237	Total Barium (Ba)	2016/05/16	NC	80 - 120	103	80 - 120	<0.000020	mg/L	0.19	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

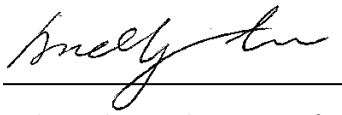
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

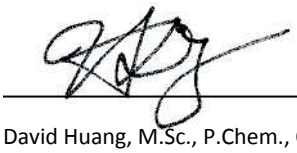
ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

VALIDATION SIGNATURE PAGE

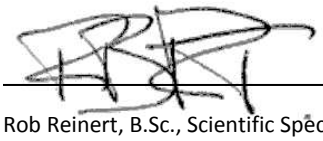
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Andy Lu, Ph.D., P.Chem., Scientific Specialist



David Huang, M.Sc., P.Chem., QP, Scientific Services Manager



Rob Reinert, B.Sc., Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC # 08419480

BBY FCD-

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Requi
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most a
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RU
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be ap
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

Rush Confirmation #:

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		20-Mar-16	18:36	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
3	KZ-7		20-Mar-16	17:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
4	KZ-9		20-Mar-16	15:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
5	KZ-13		21-Mar-16	8:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
6	KZ-15		20-Mar-16	11:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
7	KZ-16		20-Mar-16	13:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
8	KZ-17		20-Mar-16	14:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
9	KZ-19		21-Mar-16	10:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
10	KZ-21		20-Mar-16	10:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	

LABORATORY USE ONL

CUSTODY SEAL Present (Y/N)	CUSTODY SEAL Intact (Y/N)	COC TEMPER
Y	Y	
Y	Y	
Y	Y	

COOLING MEDIA PRESENT (Y)

B621867_COC

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Andrew MacPhail	22/03/2016	13:30	Laurel Berthier	2016/03/23	12:45	B621867

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC 08419481

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (whe		nd Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	x Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	☐ Same Day ☐ 2 Days ☐ 1 Day ☐ 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Andrew MacPhail	Date Required:

Regulatory Criteria	Special Instructions
☐ BC CSR Soil ☐ BC CSR Water	☐ Return Cooler
☐ CCME (Specify) ☐ Other (Specify)	☐ Ship Sample Bottles (Please Specify)
☐ Drinking Water ☐ BC Water Quality	USE SCENARIO # 12485

Rush Confirmation #:

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-22		20-Mar-16	9:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
2	KZ-26		19-Mar-16	14:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
3	KZ-28		19-Mar-16	15:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
4	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
5																								
6																								
7																								
8																								
9																								
10																								

B621867_COC

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
Y	Y	1 1 1
Y	Y	1 1 1
Y	Y	1 1 1

COOLING MEDIA PRESENT Y / N

RECEIVED IN WHITEHORSE
BY: Stevens @1320
2016 -03- 22
TEMP: 0 / 1 / 2→cooler 1
1 / 5 / 2→cooler 2

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Andrew MacPhail	22/03/2016	13:30		2016/03/23	12:45	

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08420290, 08420291

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/04/27
Report #: R2166370
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B629952
Received: 2016/04/20, 15:00

Sample Matrix: Water
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	9	N/A	2016/04/22	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	8	2016/04/22	2016/04/22	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	1	2016/04/22	2016/04/23	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	9	N/A	2016/04/22	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	9	N/A	2016/04/25	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	9	N/A	2016/04/25	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	8	N/A	2016/04/22	BBY6SOP-00057	SM 22 2120 C m
Colour (True) by Kone Lab	1	N/A	2016/04/27	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	9	N/A	2016/04/22	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	8	N/A	2016/04/22	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	1	N/A	2016/04/23	BBY6SOP-00026	SM 22 2510 B m
Fluoride	8	N/A	2016/04/22	BBY6SOP-00048	SM 22 4500-F C m
Fluoride	1	N/A	2016/04/27	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	3	N/A	2016/04/26	BBY7SOP-00002	EPA 6020a R1 m
Hardness Total (calculated as CaCO3)	6	N/A	2016/04/27	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	9	N/A	2016/04/26	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	9	N/A	2016/04/25	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	9	2016/04/25	2016/04/25	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	9	N/A	2016/04/26	BBY WI-00033	SM 22 1030E
Sum of cations, anions	9	N/A	2016/04/26	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	9	N/A	2016/04/26	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	9	N/A	2016/04/26	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Digested LL (total)	3	2016/04/22	2016/04/26	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Digested LL (total)	4	2016/04/25	2016/04/26	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	3	N/A	2016/04/26	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	6	N/A	2016/04/27	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	2	N/A	2016/04/26	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	8	N/A	2016/04/25	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Unpreserved)	1	N/A	2016/04/26	BBY6SOP-00009	SM 22 4500-NH3- G m

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08420290, 08420291

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/04/27
Report #: R2166370
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B629952
Received: 2016/04/20, 15:00

Sample Matrix: Water
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrate+Nitrite (N) (low level)	8	N/A	2016/04/22	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrate+Nitrite (N) (low level)	1	N/A	2016/04/26	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	8	N/A	2016/04/22	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	1	N/A	2016/04/26	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	8	N/A	2016/04/26	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	1	N/A	2016/04/27	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	9	N/A	2016/04/22	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	8	N/A	2016/04/22	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	1	N/A	2016/04/23	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	9	N/A	2016/04/22	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	9	2016/04/22	2016/04/22	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	9	N/A	2016/04/22	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	9	2016/04/25	2016/04/26	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OM4605	OM4606	OM4607	OM4608	OM4609		
Sampling Date		2016/04/20 08:15	2016/04/20 08:50	2016/04/20 10:30	2016/04/20 11:20	2016/04/20 08:50		
COC Number		08420290	08420290	08420290	08420290	08420290		
	UNITS	KZ-13	KZ-15	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.2	5.1	5.6	5.0	0.020	N/A	8249010
Cation Sum	meq/L	2.5	5.8	6.3	5.4	0.0024	N/A	8249010
Filter and HNO3 Preservation	N/A	LAB	LAB	LAB	LAB	LAB	N/A	8249308
Ion Balance	N/A	1.1	1.1	1.1	1.1	0.12	0.010	8248420
Nitrate (N)	mg/L	0.0808	0.145	0.182	0.148	<0.0020	0.0020	8248315
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8251169
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8251174
Fluoride (F)	mg/L	0.053	0.110	0.086	0.120	0.013	0.010	8250598
Dissolved Organic Carbon (C)	mg/L	3.74	1.50	1.46	1.60	0.60	0.50	8249937
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8249888
Alkalinity (Total as CaCO3)	mg/L	94.5	220	237	215	0.94	0.50	8249660
Acidity (pH 8.3)	mg/L	<0.50	1.18	3.12	1.46	<0.50	0.50	8249888
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8249660
Bicarbonate (HCO3)	mg/L	115	269	289	262	1.15	0.50	8249660
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8249660
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8249660
Anions								
Dissolved Sulphate (SO4)	mg/L	14.5	34.0	36.8	33.2	<0.50	0.50	8249901
Dissolved Chloride (Cl)	mg/L	<0.50	0.62	2.3	0.55	<0.50	0.50	8249894
MISCELLANEOUS								
True Colour	Col. Unit	14.6	<5.0	<5.0	5.7	<5.0	5.0	8250078
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0052	0.0043	0.0035	0.0054	<0.0020	0.0020	8250164
Total Ammonia (N)	mg/L	0.0124 (1)	0.0065 (1)	0.0120 (1)	0.0166 (1)	0.0165 (1)	0.0050	8251506
Nitrate plus Nitrite (N)	mg/L	0.0808	0.145	0.182	0.148	<0.0020	0.0020	8250297
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8250298
Total Phosphorus (P)	mg/L	0.0062	0.0044	0.0026	0.0049	<0.0020	0.0020	8250165
Physical Properties								
Conductivity	uS/cm	211	462	494	452	1.2	1.0	8249667

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OM4605	OM4606	OM4607	OM4608	OM4609		
Sampling Date		2016/04/20 08:15	2016/04/20 08:50	2016/04/20 10:30	2016/04/20 11:20	2016/04/20 08:50		
COC Number		08420290	08420290	08420290	08420290	08420290		
	UNITS	**KZ-13**	**KZ-15**	**KZ-16**	**KZ-17**	**KZ-19**	**RDL**	**QC Batch**
pH	pH	8.07	8.17	8.08	8.16	5.92		8249668
Physical Properties								
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8250744
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OM4610		OM4611	OM4612	OM4613		
Sampling Date		2016/04/19 15:30		2016/04/19 14:00	2016/04/19 11:40	2016/04/19 12:30		
COC Number		08420290		08420291	08420291	08420291		
	UNITS	KZ-21	QC Batch	KZ-22	KZ-26	KZ-28	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	4.8	8249010	5.1	5.1	5.1	N/A	8249010
Cation Sum	meq/L	5.5	8249010	5.7	5.9	6.1	N/A	8249010
Filter and HNO3 Preservation	N/A	LAB	8249308	LAB	LAB	LAB	N/A	8249308
Ion Balance	N/A	1.1	8248420	1.1	1.1	1.2	0.010	8248420
Nitrate (N)	mg/L	0.0615	8248315	0.0913	0.115	0.118	0.0020	8248315
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00066	8251169	0.00055	0.00059	<0.00050	0.00050	8251169
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8251174	<0.00050	0.00052	<0.00050	0.00050	8251174
Fluoride (F)	mg/L	0.180	8253852	0.150	0.120	0.120	0.010	8250598
Dissolved Organic Carbon (C)	mg/L	6.21	8249937	4.36	4.79	4.66	0.50	8249937
Acidity (pH 4.5)	mg/L	<0.50	8249917	<0.50	<0.50	<0.50	0.50	8249888
Alkalinity (Total as CaCO3)	mg/L	199	8249683	213	214	216	0.50	8249660
Acidity (pH 8.3)	mg/L	0.53	8249917	0.96	<0.50	<0.50	0.50	8249888
Alkalinity (PP as CaCO3)	mg/L	<0.50	8249683	<0.50	2.89	2.58	0.50	8249660
Bicarbonate (HCO3)	mg/L	243	8249683	260	254	257	0.50	8249660
Carbonate (CO3)	mg/L	<0.50	8249683	<0.50	3.47	3.10	0.50	8249660
Hydroxide (OH)	mg/L	<0.50	8249683	<0.50	<0.50	<0.50	0.50	8249660
Anions								
Dissolved Sulphate (SO4)	mg/L	38.5	8249901	40.1	39.8	38.7	0.50	8249901
Dissolved Chloride (Cl)	mg/L	0.63	8249894	0.68	0.57	0.61	0.50	8249894
MISCELLANEOUS								
True Colour	Col. Unit	31.4 (1)	8254062	21.0	20.4	20.2	5.0	8250078
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0254	8250164	0.0160	0.0082	0.0088	0.0020	8250164
Total Ammonia (N)	mg/L	0.0172 (1)	8252906	0.0105 (2)	<0.0050 (2)	<0.0050 (2)	0.0050	8251506
Nitrate plus Nitrite (N)	mg/L	0.0670 (1)	8253389	0.0913	0.115	0.118	0.0020	8250297
Nitrite (N)	mg/L	0.0055 (1)	8253390	<0.0020	<0.0020	<0.0020	0.0020	8250298
Total Phosphorus (P)	mg/L	0.0245	8250165	0.0163	0.0075	0.0082	0.0020	8250165
Physical Properties								
Conductivity	uS/cm	437	8249686	459	459	456	1.0	8249667

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OM4610		OM4611	OM4612	OM4613		
Sampling Date		2016/04/19 15:30		2016/04/19 14:00	2016/04/19 11:40	2016/04/19 12:30		
COC Number		08420290		08420291	08420291	08420291		
	UNITS	**KZ-21**	**QC Batch**	**KZ-22**	**KZ-26**	**KZ-28**	**RDL**	**QC Batch**
pH	pH	8.14	8249688	8.18	8.35	8.34		8249668
Physical Properties								
Total Suspended Solids	mg/L	3.2	8250744	1.6	1.6	1.3	1.0	8250744
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OM4605	OM4606	OM4607	OM4608	OM4609		
Sampling Date		2016/04/20 08:15	2016/04/20 08:50	2016/04/20 10:30	2016/04/20 11:20	2016/04/20 08:50		
COC Number		08420290	08420290	08420290	08420290	08420290		
	UNITS	KZ-13	KZ-15	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	116	286	308	264	<0.50	0.50	8248339
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8251076
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00688	0.00124	0.00083	0.00120	<0.00050	0.00050	8249542
Dissolved Antimony (Sb)	mg/L	0.000032	0.000033	0.000027	0.000041	<0.000020	0.000020	8249542
Dissolved Arsenic (As)	mg/L	0.000196	0.000500	0.000218	0.000507	<0.000020	0.000020	8249542
Dissolved Barium (Ba)	mg/L	0.126	0.101	0.103	0.0843	0.000217	0.000020	8249542
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8249542
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	0.0000050	8249542
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8249542
Dissolved Cadmium (Cd)	mg/L	0.0000200	0.0000310	0.0000240	0.0000350	<0.0000050	0.0000050	8249542
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8249542
Dissolved Cobalt (Co)	mg/L	0.0000240	0.0000210	0.0000280	0.0000170	<0.0000050	0.0000050	8249542
Dissolved Copper (Cu)	mg/L	0.000439	0.000311	0.000236	0.000287	<0.000050	0.000050	8249542
Dissolved Iron (Fe)	mg/L	0.0677	0.0165	0.0040	0.0216	<0.0010	0.0010	8249542
Dissolved Lead (Pb)	mg/L	0.0000060	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8249542
Dissolved Lithium (Li)	mg/L	0.00233	0.00418	0.00444	0.00418	<0.00050	0.00050	8249542
Dissolved Manganese (Mn)	mg/L	0.0298	0.0185	0.0148	0.0220	<0.000050	0.000050	8249542
Dissolved Molybdenum (Mo)	mg/L	0.000770	0.00157	0.000568	0.00192	<0.000050	0.000050	8249542
Dissolved Nickel (Ni)	mg/L	0.000455	0.000899	0.000951	0.000829	<0.000020	0.000020	8249542
Dissolved Phosphorus (P)	mg/L	0.0069	0.0035	0.0041	0.0100	0.0043	0.0020	8249542
Dissolved Selenium (Se)	mg/L	0.000274	0.00119	0.00127	0.00126	<0.000040	0.000040	8249542
Dissolved Silicon (Si)	mg/L	5.03	4.32	4.54	4.43	<0.050	0.050	8249542
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8249542
Dissolved Strontium (Sr)	mg/L	0.121	0.302	0.320	0.263	0.000134	0.000050	8249542
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8249542
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8249542
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8249542
Dissolved Uranium (U)	mg/L	0.00200	0.00549	0.00336	0.00567	0.0000140	0.0000020	8249542
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8249542
Dissolved Zinc (Zn)	mg/L	0.00183	0.00329	0.00096	0.00364	<0.00010	0.00010	8249542

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OM4605	OM4606	OM4607	OM4608	OM4609		
Sampling Date		2016/04/20 08:15	2016/04/20 08:50	2016/04/20 10:30	2016/04/20 11:20	2016/04/20 08:50		
COC Number		08420290	08420290	08420290	08420290	08420290		
	UNITS	**KZ-13**	**KZ-15**	**KZ-16**	**KZ-17**	**KZ-19**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8249542
Dissolved Calcium (Ca)	mg/L	39.1	83.4	90.5	76.0	<0.050	0.050	8248340
Dissolved Magnesium (Mg)	mg/L	4.45	18.8	19.8	18.0	<0.050	0.050	8248340
Dissolved Potassium (K)	mg/L	2.92	1.81	1.67	1.63	<0.050	0.050	8248340
Dissolved Sodium (Na)	mg/L	1.37	1.72	1.72	1.55	<0.050	0.050	8248340
Dissolved Sulphur (S)	mg/L	5.0	11.2	12.5	12.1	<3.0	3.0	8248340
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OM4610	OM4611	OM4612	OM4613		
Sampling Date		2016/04/19 15:30	2016/04/19 14:00	2016/04/19 11:40	2016/04/19 12:30		
COC Number		08420290	08420291	08420291	08420291		
	UNITS	KZ-21	KZ-22	KZ-26	KZ-28	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	267	279	288	299	0.50	8248339
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8251076
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00234	0.00186	0.00186	0.00175	0.00050	8249542
Dissolved Antimony (Sb)	mg/L	0.000090	0.000066	0.000064	0.000070	0.000020	8249542
Dissolved Arsenic (As)	mg/L	0.00183	0.00145	0.000860	0.000865	0.000020	8249542
Dissolved Barium (Ba)	mg/L	0.0644	0.0716	0.0823	0.0844	0.000020	8249542
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8249542
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8249542
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8249542
Dissolved Cadmium (Cd)	mg/L	0.0000160	0.0000120	0.0000140	0.0000130	0.0000050	8249542
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8249542
Dissolved Cobalt (Co)	mg/L	0.000158	0.000117	0.0000280	0.0000280	0.0000050	8249542
Dissolved Copper (Cu)	mg/L	0.000391	0.000353	0.000525	0.000527	0.000050	8249542
Dissolved Iron (Fe)	mg/L	0.316	0.194	0.0866	0.0924	0.0010	8249542
Dissolved Lead (Pb)	mg/L	0.0000070	<0.0000050	<0.0000050	<0.0000050	0.0000050	8249542
Dissolved Lithium (Li)	mg/L	0.00560	0.00493	0.00627	0.00629	0.00050	8249542
Dissolved Manganese (Mn)	mg/L	0.113	0.0669	0.00822	0.00819	0.000050	8249542
Dissolved Molybdenum (Mo)	mg/L	0.00176	0.00156	0.00118	0.00118	0.000050	8249542
Dissolved Nickel (Ni)	mg/L	0.00278	0.00178	0.00124	0.00126	0.000020	8249542
Dissolved Phosphorus (P)	mg/L	0.0169	0.0151	0.0091	0.0078	0.0020	8249542
Dissolved Selenium (Se)	mg/L	0.000361	0.000704	0.000664	0.000640	0.000040	8249542
Dissolved Silicon (Si)	mg/L	5.38	5.09	5.07	5.19	0.050	8249542
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8249542
Dissolved Strontium (Sr)	mg/L	0.220	0.239	0.273	0.275	0.000050	8249542
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8249542
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8249542
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8249542
Dissolved Uranium (U)	mg/L	0.00281	0.00357	0.00354	0.00352	0.0000020	8249542
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8249542
Dissolved Zinc (Zn)	mg/L	0.00134	0.00109	0.00059	0.00060	0.00010	8249542
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OM4610	OM4611	OM4612	OM4613		
Sampling Date		2016/04/19 15:30	2016/04/19 14:00	2016/04/19 11:40	2016/04/19 12:30		
COC Number		08420290	08420291	08420291	08420291		
	UNITS	KZ-21	KZ-22	KZ-26	KZ-28	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	0.00013	<0.00010	0.00010	<0.00010	0.00010	8249542
Dissolved Calcium (Ca)	mg/L	65.5	73.3	75.2	78.5	0.050	8248340
Dissolved Magnesium (Mg)	mg/L	25.1	23.3	24.3	25.0	0.050	8248340
Dissolved Potassium (K)	mg/L	2.50	2.05	2.02	2.05	0.050	8248340
Dissolved Sodium (Na)	mg/L	1.86	1.81	2.07	2.10	0.050	8248340
Dissolved Sulphur (S)	mg/L	14.3	15.3	13.2	13.8	3.0	8248340

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OM4607	OM4609		
Sampling Date		2016/04/20 10:30	2016/04/20 08:50		
COC Number		08420290	08420290		
	UNITS	KZ-16	KZ-19	RDL	QC Batch
Calculated Parameters					
Total Hardness (CaCO3)	mg/L	249	<0.50	0.50	8248121
Elements					
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8251300
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	0.00145	<0.00050	0.00050	8248894
Total Antimony (Sb)	mg/L	<0.000020	<0.000020	0.000020	8248894
Total Arsenic (As)	mg/L	0.000253	<0.000020	0.000020	8248894
Total Barium (Ba)	mg/L	0.0838	0.000025	0.000020	8248894
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8248894
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000050	8248894
Total Boron (B)	mg/L	<0.010	<0.010	0.010	8248894
Total Cadmium (Cd)	mg/L	0.0000230	<0.0000050	0.0000050	8248894
Total Chromium (Cr)	mg/L	0.00014	<0.00010	0.00010	8248894
Total Cobalt (Co)	mg/L	0.0000350	<0.0000050	0.0000050	8248894
Total Copper (Cu)	mg/L	0.000252	0.000058	0.000050	8248894
Total Iron (Fe)	mg/L	0.0257	<0.0010	0.0010	8248894
Total Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000050	8248894
Total Lithium (Li)	mg/L	0.00359	<0.00050	0.00050	8248894
Total Manganese (Mn)	mg/L	0.0137	<0.000050	0.000050	8248894
Total Molybdenum (Mo)	mg/L	0.000449	<0.000050	0.000050	8248894
Total Nickel (Ni)	mg/L	0.000927	<0.000020	0.000020	8248894
Total Phosphorus (P)	mg/L	<0.0020	<0.0020	0.0020	8248894
Total Selenium (Se)	mg/L	0.00109	<0.000040	0.000040	8248894
Total Silicon (Si)	mg/L	3.68	<0.050	0.050	8248894
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000050	8248894
Total Strontium (Sr)	mg/L	0.260	<0.000050	0.000050	8248894
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	8248894
Total Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8248894
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00050	8248894
Total Uranium (U)	mg/L	0.00261	0.0000090	0.0000020	8248894
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	8248894
Total Zinc (Zn)	mg/L	0.00071	<0.00010	0.00010	8248894
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OM4607	OM4609		
Sampling Date		2016/04/20 10:30	2016/04/20 08:50		
COC Number		08420290	08420290		
	UNITS	KZ-16	KZ-19	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8248894
Total Calcium (Ca)	mg/L	72.8	<0.050	0.050	8248369
Total Magnesium (Mg)	mg/L	16.4	<0.050	0.050	8248369
Total Potassium (K)	mg/L	1.42	<0.050	0.050	8248369
Total Sodium (Na)	mg/L	1.42	<0.050	0.050	8248369
Total Sulphur (S)	mg/L	10.2	<3.0	3.0	8248369
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OM4605	OM4606	OM4608		OM4610		
Sampling Date		2016/04/20 08:15	2016/04/20 08:50	2016/04/20 11:20		2016/04/19 15:30		
COC Number		08420290	08420290	08420290		08420290		
	UNITS	KZ-13	KZ-15	KZ-17	QC Batch	KZ-21	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	91.0	238	255	8248121	205	0.50	8249009
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8251300	<0.0000020	0.0000020	8251300
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0072	0.0050	0.0049	8251717	0.0086	0.0030	8251717
Total Antimony (Sb)	mg/L	<0.000050	<0.000050	<0.000050	8251717	0.000071	0.000050	8251717
Total Arsenic (As)	mg/L	0.000151	0.000554	0.000711	8251717	0.00339	0.000020	8251717
Total Barium (Ba)	mg/L	0.0949	0.0832	0.0820	8251717	0.0544	0.00010	8251717
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8251717	<0.000010	0.000010	8251717
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	8251717	<0.000020	0.000020	8251717
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	8251717	<0.050	0.050	8251717
Total Cadmium (Cd)	mg/L	0.0000210	0.0000360	0.000112	8251717	0.0000210	0.0000050	8251717
Total Chromium (Cr)	mg/L	<0.00050	<0.00050	<0.00050	8251717	<0.00050	0.00050	8251717
Total Cobalt (Co)	mg/L	0.000024	0.000028	0.000033	8251717	0.000185	0.000010	8251717
Total Copper (Cu)	mg/L	0.00056	0.00043	0.00055	8251717	0.00046	0.00020	8251717
Total Iron (Fe)	mg/L	0.0823	0.0710	0.109	8251717	0.830	0.0050	8251717
Total Lead (Pb)	mg/L	<0.000050	<0.000050	<0.000050	8251717	<0.000050	0.000050	8251717
Total Lithium (Li)	mg/L	0.00214	0.00450	0.00432	8251717	0.00445	0.00050	8251717
Total Manganese (Mn)	mg/L	0.0246	0.0234	0.0336	8251717	0.110	0.00010	8251717
Total Molybdenum (Mo)	mg/L	0.000664	0.00148	0.00183	8251717	0.00158	0.000050	8251717
Total Nickel (Ni)	mg/L	0.00037	0.00086	0.00097	8251717	0.00235	0.00010	8251717
Total Phosphorus (P)	mg/L	<0.010	<0.010	<0.010	8251717	0.028	0.010	8251717
Total Selenium (Se)	mg/L	0.000252	0.00115	0.00122	8251717	0.000307	0.000040	8251717
Total Silicon (Si)	mg/L	4.21	4.05	4.15	8251717	4.63	0.10	8251717
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8251717	<0.0000050	0.0000050	8251717
Total Strontium (Sr)	mg/L	0.0889	0.243	0.239	8251717	0.164	0.000050	8251717
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8251717	<0.0000020	0.0000020	8251717
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8251717	<0.00020	0.00020	8251717
Total Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	8251717	<0.0050	0.0050	8251717
Total Uranium (U)	mg/L	0.00154	0.00477	0.00557	8251717	0.00237	0.0000050	8251717
Total Vanadium (V)	mg/L	<0.00050	<0.00050	<0.00050	8251717	<0.00050	0.00050	8251717
Total Zinc (Zn)	mg/L	0.0018	0.0038	0.0047	8251717	0.0019	0.0010	8251717

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OM4605	OM4606	OM4608		OM4610		
Sampling Date		2016/04/20 08:15	2016/04/20 08:50	2016/04/20 11:20		2016/04/19 15:30		
COC Number		08420290	08420290	08420290		08420290		
	UNITS	KZ-13	KZ-15	KZ-17	QC Batch	KZ-21	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8251717	0.00014	0.00010	8251717
Total Calcium (Ca)	mg/L	30.8	69.2	73.8	8248369	50.7	0.25	8248369
Total Magnesium (Mg)	mg/L	3.43	15.8	17.1	8248369	19.1	0.25	8248369
Total Potassium (K)	mg/L	2.19	1.48	1.57	8248369	1.81	0.25	8248369
Total Sodium (Na)	mg/L	1.02	1.39	1.45	8248369	1.30	0.25	8248369
Total Sulphur (S)	mg/L	<15	<15	<15	8248369	<15	15	8248369
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OM4611	OM4612	OM4613		
Sampling Date		2016/04/19 14:00	2016/04/19 11:40	2016/04/19 12:30		
COC Number		08420291	08420291	08420291		
	UNITS	KZ-22	KZ-26	KZ-28	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	259	246	245	0.50	8249009
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8251300
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.0060	0.0078	0.0053	0.0030	8249850
Total Antimony (Sb)	mg/L	0.000064	0.000067	0.000060	0.000050	8249850
Total Arsenic (As)	mg/L	0.00225	0.00104	0.00101	0.000020	8249850
Total Barium (Ba)	mg/L	0.0679	0.0728	0.0681	0.00010	8249850
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8249850
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	0.000020	8249850
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	0.050	8249850
Total Cadmium (Cd)	mg/L	0.0000210	0.0000190	0.0000180	0.0000050	8249850
Total Chromium (Cr)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8249850
Total Cobalt (Co)	mg/L	0.000132	0.000038	0.000030	0.000010	8249850
Total Copper (Cu)	mg/L	0.00058	0.00063	0.00066	0.00020	8249850
Total Iron (Fe)	mg/L	0.456	0.198	0.175	0.0050	8249850
Total Lead (Pb)	mg/L	<0.000050	<0.000050	<0.000050	0.000050	8249850
Total Lithium (Li)	mg/L	0.00468	0.00544	0.00505	0.00050	8249850
Total Manganese (Mn)	mg/L	0.0741	0.0125	0.0100	0.00010	8249850
Total Molybdenum (Mo)	mg/L	0.00154	0.00114	0.00110	0.000050	8249850
Total Nickel (Ni)	mg/L	0.00190	0.00114	0.00108	0.00010	8249850
Total Phosphorus (P)	mg/L	0.017	0.012	<0.010	0.010	8249850
Total Selenium (Se)	mg/L	0.000661	0.000649	0.000626	0.000040	8249850
Total Silicon (Si)	mg/L	4.77	4.53	4.31	0.10	8249850
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8249850
Total Strontium (Sr)	mg/L	0.220	0.222	0.214	0.000050	8249850
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8249850
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8249850
Total Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	0.0050	8249850
Total Uranium (U)	mg/L	0.00345	0.00309	0.00306	0.0000050	8249850
Total Vanadium (V)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8249850
Total Zinc (Zn)	mg/L	0.0015	<0.0010	<0.0010	0.0010	8249850
RDL = Reportable Detection Limit						

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OM4611	OM4612	OM4613		
Sampling Date		2016/04/19 14:00	2016/04/19 11:40	2016/04/19 12:30		
COC Number		08420291	08420291	08420291		
	UNITS	KZ-22	KZ-26	KZ-28	RDL	QC Batch
Total Zirconium (Zr)	mg/L	0.00012	<0.00010	0.00013	0.00010	8249850
Total Calcium (Ca)	mg/L	66.6	63.7	63.7	0.25	8248369
Total Magnesium (Mg)	mg/L	22.5	21.1	20.8	0.25	8248369
Total Potassium (K)	mg/L	1.95	1.68	1.61	0.25	8248369
Total Sodium (Na)	mg/L	1.79	1.83	1.79	0.25	8248369
Total Sulphur (S)	mg/L	16	<15	<15	15	8248369
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OM4605
Sample ID: KZ-13
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8249888	N/A	2016/04/22	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8249660	2016/04/22	2016/04/22	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8250078	N/A	2016/04/22	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8249937	N/A	2016/04/22	Isabel Choi
Conductance - water	AT/ALK	8249667	N/A	2016/04/22	Maria Maclean
Fluoride	ISE/ISE	8250598	N/A	2016/04/22	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8248121	N/A	2016/04/27	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8248339	N/A	2016/04/26	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251076	N/A	2016/04/25	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8251300	2016/04/25	2016/04/25	Edwin Lamigo
Ion Balance	CALC	8248420	N/A	2016/04/26	Rob Reinert
Sum of cations, anions	CALC	8249010	N/A	2016/04/26	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8248340	N/A	2016/04/26	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8251717	2016/04/25	2016/04/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8248369	N/A	2016/04/27	Rob Reinert
Ammonia-N (Unpreserved)	KONE/COL	8251506	N/A	2016/04/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250297	N/A	2016/04/22	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8250298	N/A	2016/04/22	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8248315	N/A	2016/04/26	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8249308	N/A	2016/04/22	Irene Popov
pH Water	AT/ALK	8249668	N/A	2016/04/22	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8250164	2016/04/22	2016/04/22	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8250165	N/A	2016/04/22	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8250744	2016/04/25	2016/04/26	Coco Guo

Maxxam ID: OM4605 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	Tatyana Serzhanova
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8251717	2016/04/25	2016/04/26	Andrew An

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OM4606
Sample ID: KZ-15
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8249888	N/A	2016/04/22	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8249660	2016/04/22	2016/04/22	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8250078	N/A	2016/04/22	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8249937	N/A	2016/04/22	Isabel Choi
Conductance - water	AT/ALK	8249667	N/A	2016/04/22	Maria Maclean
Fluoride	ISE/ISE	8250598	N/A	2016/04/22	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8248121	N/A	2016/04/27	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8248339	N/A	2016/04/26	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251076	N/A	2016/04/25	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8251300	2016/04/25	2016/04/25	Edwin Lamigo
Ion Balance	CALC	8248420	N/A	2016/04/26	Rob Reinert
Sum of cations, anions	CALC	8249010	N/A	2016/04/26	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8248340	N/A	2016/04/26	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8251717	2016/04/25	2016/04/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8248369	N/A	2016/04/27	Rob Reinert
Ammonia-N (Unpreserved)	KONE/COL	8251506	N/A	2016/04/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250297	N/A	2016/04/22	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8250298	N/A	2016/04/22	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8248315	N/A	2016/04/26	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8249308	N/A	2016/04/22	Irene Popov
pH Water	AT/ALK	8249668	N/A	2016/04/22	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8250164	2016/04/22	2016/04/22	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8250165	N/A	2016/04/22	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8250744	2016/04/25	2016/04/26	Coco Guo

Maxxam ID: OM4607
Sample ID: KZ-16
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8249888	N/A	2016/04/22	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8249660	2016/04/22	2016/04/22	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8250078	N/A	2016/04/22	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8249937	N/A	2016/04/22	Isabel Choi
Conductance - water	AT/ALK	8249667	N/A	2016/04/22	Maria Maclean
Fluoride	ISE/ISE	8250598	N/A	2016/04/22	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8248121	N/A	2016/04/27	Rob Reinert

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OM4607
Sample ID: KZ-16
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8248339	N/A	2016/04/26	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251076	N/A	2016/04/25	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8251300	2016/04/25	2016/04/25	Edwin Lamigo
Ion Balance	CALC	8248420	N/A	2016/04/26	Rob Reinert
Sum of cations, anions	CALC	8249010	N/A	2016/04/26	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8248340	N/A	2016/04/26	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8248369	N/A	2016/04/27	Rob Reinert
Elements by ICPMS Low Level (total)	ICP/CRCM	8248894	N/A	2016/04/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8251506	N/A	2016/04/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250297	N/A	2016/04/22	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8250298	N/A	2016/04/22	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8248315	N/A	2016/04/26	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8249308	N/A	2016/04/22	Irene Popov
pH Water	AT/ALK	8249668	N/A	2016/04/22	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8250164	2016/04/22	2016/04/22	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8250165	N/A	2016/04/22	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8250744	2016/04/25	2016/04/26	Coco Guo

Maxxam ID: OM4607 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	Balwinder Bassi
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	Balwinder Bassi

Maxxam ID: OM4608
Sample ID: KZ-17
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8249888	N/A	2016/04/22	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8249660	2016/04/22	2016/04/22	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8250078	N/A	2016/04/22	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8249937	N/A	2016/04/22	Isabel Choi
Conductance - water	AT/ALK	8249667	N/A	2016/04/22	Maria Maclean
Fluoride	ISE/ISE	8250598	N/A	2016/04/22	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8248121	N/A	2016/04/27	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8248339	N/A	2016/04/26	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251076	N/A	2016/04/25	Edwin Lamigo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OM4608
Sample ID: KZ-17
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8251300	2016/04/25	2016/04/25	Edwin Lamigo
Ion Balance	CALC	8248420	N/A	2016/04/26	Rob Reinert
Sum of cations, anions	CALC	8249010	N/A	2016/04/26	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8248340	N/A	2016/04/26	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8251717	2016/04/25	2016/04/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8248369	N/A	2016/04/27	Rob Reinert
Ammonia-N (Unpreserved)	KONE/COL	8251506	N/A	2016/04/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250297	N/A	2016/04/22	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8250298	N/A	2016/04/22	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8248315	N/A	2016/04/26	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8249308	N/A	2016/04/22	Irene Popov
pH Water	AT/ALK	8249668	N/A	2016/04/22	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8250164	2016/04/22	2016/04/22	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8250165	N/A	2016/04/22	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8250744	2016/04/25	2016/04/26	Coco Guo

Maxxam ID: OM4609
Sample ID: KZ-19
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8249888	N/A	2016/04/22	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8249660	2016/04/22	2016/04/22	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8250078	N/A	2016/04/22	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8249937	N/A	2016/04/22	Isabel Choi
Conductance - water	AT/ALK	8249667	N/A	2016/04/22	Maria Maclean
Fluoride	ISE/ISE	8250598	N/A	2016/04/22	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8248121	N/A	2016/04/27	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8248339	N/A	2016/04/26	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251076	N/A	2016/04/25	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8251300	2016/04/25	2016/04/25	Edwin Lamigo
Ion Balance	CALC	8248420	N/A	2016/04/26	Rob Reinert
Sum of cations, anions	CALC	8249010	N/A	2016/04/26	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8248340	N/A	2016/04/26	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8248369	N/A	2016/04/27	Rob Reinert
Elements by ICPMS Low Level (total)	ICP/CRCM	8248894	N/A	2016/04/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8251506	N/A	2016/04/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250297	N/A	2016/04/22	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8250298	N/A	2016/04/22	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OM4609
Sample ID: KZ-19
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8248315	N/A	2016/04/26	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8249308	N/A	2016/04/22	Irene Popov
pH Water	AT/ALK	8249668	N/A	2016/04/22	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8250164	2016/04/22	2016/04/22	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8250165	N/A	2016/04/22	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8250744	2016/04/25	2016/04/26	Coco Guo

Maxxam ID: OM4610
Sample ID: KZ-21
Matrix: Water

Collected: 2016/04/19
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8249917	N/A	2016/04/22	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8249683	2016/04/22	2016/04/23	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8254062	N/A	2016/04/27	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8249937	N/A	2016/04/22	Isabel Choi
Conductance - water	AT/ALK	8249686	N/A	2016/04/23	Maria Maclean
Fluoride	ISE/ISE	8253852	N/A	2016/04/27	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8249009	N/A	2016/04/27	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8248339	N/A	2016/04/26	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251076	N/A	2016/04/25	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8251300	2016/04/25	2016/04/25	Edwin Lamigo
Ion Balance	CALC	8248420	N/A	2016/04/26	Rob Reinert
Sum of cations, anions	CALC	8249010	N/A	2016/04/26	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8248340	N/A	2016/04/26	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8251717	2016/04/25	2016/04/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8248369	N/A	2016/04/27	Rob Reinert
Ammonia-N (Unpreserved)	KONE/COL	8252906	N/A	2016/04/26	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8253389	N/A	2016/04/26	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8253390	N/A	2016/04/26	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8248315	N/A	2016/04/27	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8249308	N/A	2016/04/22	Irene Popov
pH Water	AT/ALK	8249688	N/A	2016/04/23	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8250164	2016/04/22	2016/04/22	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8250165	N/A	2016/04/22	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8250744	2016/04/25	2016/04/26	Coco Guo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OM4610 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2016/04/19
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8253852	N/A	2016/04/27	Balwinder Bassi
Ammonia-N (Unpreserved)	KONE/COL	8252906	N/A	2016/04/26	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8253389	N/A	2016/04/26	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8253390	N/A	2016/04/26	Isaac Wang

Maxxam ID: OM4611
Sample ID: KZ-22
Matrix: Water

Collected: 2016/04/19
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8249888	N/A	2016/04/22	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8249660	2016/04/22	2016/04/22	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8250078	N/A	2016/04/22	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8249937	N/A	2016/04/22	Isabel Choi
Conductance - water	AT/ALK	8249667	N/A	2016/04/22	Maria Maclean
Fluoride	ISE/ISE	8250598	N/A	2016/04/22	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8249009	N/A	2016/04/26	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8248339	N/A	2016/04/26	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251076	N/A	2016/04/25	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8251300	2016/04/25	2016/04/25	Edwin Lamigo
Ion Balance	CALC	8248420	N/A	2016/04/26	Rob Reinert
Sum of cations, anions	CALC	8249010	N/A	2016/04/26	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8248340	N/A	2016/04/26	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8249850	2016/04/22	2016/04/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8248369	N/A	2016/04/26	Rob Reinert
Ammonia-N (Unpreserved)	KONE/COL	8251506	N/A	2016/04/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250297	N/A	2016/04/22	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8250298	N/A	2016/04/22	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8248315	N/A	2016/04/26	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8249308	N/A	2016/04/22	Irene Popov
pH Water	AT/ALK	8249668	N/A	2016/04/22	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8250164	2016/04/22	2016/04/22	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8250165	N/A	2016/04/22	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8250744	2016/04/25	2016/04/26	Coco Guo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OM4612
Sample ID: KZ-26
Matrix: Water

Collected: 2016/04/19
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8249888	N/A	2016/04/22	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8249660	2016/04/22	2016/04/22	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8250078	N/A	2016/04/22	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8249937	N/A	2016/04/22	Isabel Choi
Conductance - water	AT/ALK	8249667	N/A	2016/04/22	Maria Maclean
Fluoride	ISE/ISE	8250598	N/A	2016/04/22	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8249009	N/A	2016/04/26	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8248339	N/A	2016/04/26	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251076	N/A	2016/04/25	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8251300	2016/04/25	2016/04/25	Edwin Lamigo
Ion Balance	CALC	8248420	N/A	2016/04/26	Rob Reinert
Sum of cations, anions	CALC	8249010	N/A	2016/04/26	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8248340	N/A	2016/04/26	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8249850	2016/04/22	2016/04/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8248369	N/A	2016/04/26	Rob Reinert
Ammonia-N (Unpreserved)	KONE/COL	8251506	N/A	2016/04/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250297	N/A	2016/04/22	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8250298	N/A	2016/04/22	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8248315	N/A	2016/04/26	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8249308	N/A	2016/04/22	Irene Popov
pH Water	AT/ALK	8249668	N/A	2016/04/22	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8250164	2016/04/22	2016/04/22	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8250165	N/A	2016/04/22	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8250744	2016/04/25	2016/04/26	Coco Guo

Maxxam ID: OM4613
Sample ID: KZ-28
Matrix: Water

Collected: 2016/04/19
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8249888	N/A	2016/04/22	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8249660	2016/04/22	2016/04/22	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8250078	N/A	2016/04/22	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8249937	N/A	2016/04/22	Isabel Choi
Conductance - water	AT/ALK	8249667	N/A	2016/04/22	Maria Maclean
Fluoride	ISE/ISE	8250598	N/A	2016/04/22	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8249009	N/A	2016/04/26	Rob Reinert

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OM4613
Sample ID: KZ-28
Matrix: Water

Collected: 2016/04/19
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8248339	N/A	2016/04/26	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251076	N/A	2016/04/25	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8251300	2016/04/25	2016/04/25	Edwin Lamigo
Ion Balance	CALC	8248420	N/A	2016/04/26	Rob Reinert
Sum of cations, anions	CALC	8249010	N/A	2016/04/26	Rob Reinert
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8248340	N/A	2016/04/26	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8249850	2016/04/22	2016/04/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8248369	N/A	2016/04/26	Rob Reinert
Ammonia-N (Unpreserved)	KONE/COL	8251506	N/A	2016/04/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250297	N/A	2016/04/22	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8250298	N/A	2016/04/22	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8248315	N/A	2016/04/26	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8249308	N/A	2016/04/22	Irene Popov
pH Water	AT/ALK	8249668	N/A	2016/04/22	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8250164	2016/04/22	2016/04/22	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8250165	N/A	2016/04/22	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8250744	2016/04/25	2016/04/26	Coco Guo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.0°C
Package 2	6.0°C

Sample OM4605-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OM4606-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OM4608-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OM4610-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OM4611-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OM4612-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OM4613-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8248894	Total Aluminum (Al)	2016/04/22	97	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8248894	Total Antimony (Sb)	2016/04/22	98	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8248894	Total Arsenic (As)	2016/04/22	99	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8248894	Total Barium (Ba)	2016/04/22	98	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8248894	Total Beryllium (Be)	2016/04/22	97	80 - 120	97	80 - 120	<0.000010	mg/L	NC	20
8248894	Total Bismuth (Bi)	2016/04/22	93	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8248894	Total Boron (B)	2016/04/22	93	80 - 120	93	80 - 120	<0.010	mg/L	NC	20
8248894	Total Cadmium (Cd)	2016/04/22	97	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8248894	Total Chromium (Cr)	2016/04/22	98	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8248894	Total Cobalt (Co)	2016/04/22	100	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8248894	Total Copper (Cu)	2016/04/22	101	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8248894	Total Iron (Fe)	2016/04/22	104	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20
8248894	Total Lead (Pb)	2016/04/22	97	80 - 120	98	80 - 120	<0.0000050	mg/L	0.85	20
8248894	Total Lithium (Li)	2016/04/22	100	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8248894	Total Manganese (Mn)	2016/04/22	101	80 - 120	99	80 - 120	<0.000050	mg/L	1.6	20
8248894	Total Molybdenum (Mo)	2016/04/22	97	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8248894	Total Nickel (Ni)	2016/04/22	100	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8248894	Total Phosphorus (P)	2016/04/22					<0.0020	mg/L		
8248894	Total Selenium (Se)	2016/04/22	99	80 - 120	94	80 - 120	<0.000040	mg/L	NC	20
8248894	Total Silicon (Si)	2016/04/22					<0.050	mg/L	NC	20
8248894	Total Silver (Ag)	2016/04/22	94	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8248894	Total Strontium (Sr)	2016/04/22	94	80 - 120	94	80 - 120	<0.000050	mg/L	NC	20
8248894	Total Thallium (Tl)	2016/04/22	96	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8248894	Total Tin (Sn)	2016/04/22	101	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8248894	Total Titanium (Ti)	2016/04/22	100	80 - 120	89	80 - 120	<0.00050	mg/L	NC	20
8248894	Total Uranium (U)	2016/04/22	103	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8248894	Total Vanadium (V)	2016/04/22	98	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8248894	Total Zinc (Zn)	2016/04/22	105	80 - 120	103	80 - 120	<0.00010	mg/L	5.9	20
8248894	Total Zirconium (Zr)	2016/04/22					<0.00010	mg/L	NC	20
8249542	Dissolved Aluminum (Al)	2016/04/26	95	80 - 120	103	80 - 120	<0.00050	mg/L	0.99	20
8249542	Dissolved Antimony (Sb)	2016/04/26	99	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8249542	Dissolved Arsenic (As)	2016/04/26	106	80 - 120	100	80 - 120	<0.000020	mg/L	0.51	20
8249542	Dissolved Barium (Ba)	2016/04/26	NC	80 - 120	105	80 - 120	<0.000020	mg/L	2.9	20
8249542	Dissolved Beryllium (Be)	2016/04/26	94	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8249542	Dissolved Bismuth (Bi)	2016/04/26	97	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8249542	Dissolved Boron (B)	2016/04/26	95	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
8249542	Dissolved Cadmium (Cd)	2016/04/26	102	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8249542	Dissolved Chromium (Cr)	2016/04/26	96	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8249542	Dissolved Cobalt (Co)	2016/04/26	95	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8249542	Dissolved Copper (Cu)	2016/04/26	89	80 - 120	100	80 - 120	<0.000050	mg/L	2.3	20
8249542	Dissolved Iron (Fe)	2016/04/26	NC	80 - 120	107	80 - 120	<0.0010	mg/L	0.52	20
8249542	Dissolved Lead (Pb)	2016/04/26	101	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8249542	Dissolved Lithium (Li)	2016/04/26	110	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8249542	Dissolved Manganese (Mn)	2016/04/26	NC	80 - 120	103	80 - 120	<0.000050	mg/L	1.1	20
8249542	Dissolved Molybdenum (Mo)	2016/04/26	NC	80 - 120	98	80 - 120	<0.000050	mg/L	1.8	20
8249542	Dissolved Nickel (Ni)	2016/04/26	94	80 - 120	98	80 - 120	<0.000020	mg/L	2.6	20
8249542	Dissolved Phosphorus (P)	2016/04/26					0.0020, RDL=0.0020	mg/L	NC	20
8249542	Dissolved Selenium (Se)	2016/04/26	114	80 - 120	95	80 - 120	<0.000040	mg/L	4.6	20
8249542	Dissolved Silicon (Si)	2016/04/26					<0.050	mg/L	0.67	20
8249542	Dissolved Silver (Ag)	2016/04/26	97	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8249542	Dissolved Strontium (Sr)	2016/04/26	NC	80 - 120	106	80 - 120	<0.000050	mg/L	0.24	20
8249542	Dissolved Thallium (Tl)	2016/04/26	97	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8249542	Dissolved Tin (Sn)	2016/04/26	103	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8249542	Dissolved Titanium (Ti)	2016/04/26	94	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8249542	Dissolved Uranium (U)	2016/04/26	116	80 - 120	105	80 - 120	<0.0000020	mg/L	3.3	20
8249542	Dissolved Vanadium (V)	2016/04/26	100	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8249542	Dissolved Zinc (Zn)	2016/04/26	91	80 - 120	103	80 - 120	<0.00010	mg/L	3.1	20
8249542	Dissolved Zirconium (Zr)	2016/04/26					<0.00010	mg/L	NC	20
8249660	Alkalinity (PP as CaCO3)	2016/04/22					<0.50	mg/L	NC	20
8249660	Alkalinity (Total as CaCO3)	2016/04/22	NC	80 - 120	96	80 - 120	<0.50	mg/L	0.47	20
8249660	Bicarbonate (HCO3)	2016/04/22					<0.50	mg/L	0.47	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8249660	Carbonate (CO3)	2016/04/22					<0.50	mg/L	NC	20
8249660	Hydroxide (OH)	2016/04/22					<0.50	mg/L	NC	20
8249667	Conductivity	2016/04/22			101	80 - 120	<1.0	uS/cm	0.17	20
8249668	pH	2016/04/22			101	97 - 103			0	N/A
8249683	Alkalinity (PP as CaCO3)	2016/04/23					<0.50	mg/L	NC	20
8249683	Alkalinity (Total as CaCO3)	2016/04/23	NC	80 - 120	100	80 - 120	0.64, RDL=0.50	mg/L	1.7	20
8249683	Bicarbonate (HCO3)	2016/04/23					0.78, RDL=0.50	mg/L	1.7	20
8249683	Carbonate (CO3)	2016/04/23					<0.50	mg/L	NC	20
8249683	Hydroxide (OH)	2016/04/23					<0.50	mg/L	NC	20
8249686	Conductivity	2016/04/23			101	80 - 120			0.47	20
8249688	pH	2016/04/23			101	97 - 103			0.38	N/A
8249850	Total Aluminum (Al)	2016/04/25	111	80 - 120	107	80 - 120	<0.0030	mg/L		
8249850	Total Antimony (Sb)	2016/04/25	104	80 - 120	99	80 - 120	<0.000050	mg/L		
8249850	Total Arsenic (As)	2016/04/25	122 (1)	80 - 120	101	80 - 120	<0.000020	mg/L		
8249850	Total Barium (Ba)	2016/04/25	NC	80 - 120	101	80 - 120	<0.00010	mg/L		
8249850	Total Beryllium (Be)	2016/04/25	100	80 - 120	103	80 - 120	<0.000010	mg/L		
8249850	Total Bismuth (Bi)	2016/04/26	101	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8249850	Total Boron (B)	2016/04/25	NC	80 - 120	104	80 - 120	<0.050	mg/L		
8249850	Total Cadmium (Cd)	2016/04/25	102	80 - 120	102	80 - 120	<0.0000050	mg/L		
8249850	Total Chromium (Cr)	2016/04/25	NC	80 - 120	100	80 - 120	<0.00050	mg/L		
8249850	Total Cobalt (Co)	2016/04/25	97	80 - 120	100	80 - 120	<0.000010	mg/L		
8249850	Total Copper (Cu)	2016/04/25	91	80 - 120	103	80 - 120	<0.00020	mg/L		
8249850	Total Iron (Fe)	2016/04/25	NC	80 - 120	107	80 - 120	<0.0050	mg/L		
8249850	Total Lead (Pb)	2016/04/25	105	80 - 120	99	80 - 120	<0.000050	mg/L		
8249850	Total Lithium (Li)	2016/04/25	NC	80 - 120	98	80 - 120	<0.00050	mg/L		
8249850	Total Manganese (Mn)	2016/04/25	NC	80 - 120	101	80 - 120	<0.00010	mg/L		
8249850	Total Molybdenum (Mo)	2016/04/25	NC	80 - 120	96	80 - 120	<0.000050	mg/L		
8249850	Total Nickel (Ni)	2016/04/25	NC	80 - 120	98	80 - 120	<0.00010	mg/L		
8249850	Total Phosphorus (P)	2016/04/25					<0.010	mg/L		
8249850	Total Selenium (Se)	2016/04/25	NC	80 - 120	99	80 - 120	<0.000040	mg/L		
8249850	Total Silicon (Si)	2016/04/25					<0.10	mg/L		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8249850	Total Silver (Ag)	2016/04/25	100	80 - 120	103	80 - 120	<0.0000050	mg/L		
8249850	Total Strontium (Sr)	2016/04/25	NC	80 - 120	99	80 - 120	<0.000050	mg/L		
8249850	Total Thallium (Tl)	2016/04/25	103	80 - 120	93	80 - 120	<0.0000020	mg/L		
8249850	Total Tin (Sn)	2016/04/25	104	80 - 120	103	80 - 120	<0.00020	mg/L		
8249850	Total Titanium (Ti)	2016/04/25	104	80 - 120	106	80 - 120	<0.0050	mg/L		
8249850	Total Uranium (U)	2016/04/25	NC	80 - 120	100	80 - 120	<0.0000050	mg/L		
8249850	Total Vanadium (V)	2016/04/25	NC	80 - 120	101	80 - 120	<0.00050	mg/L		
8249850	Total Zinc (Zn)	2016/04/25	91	80 - 120	101	80 - 120	<0.0010	mg/L		
8249850	Total Zirconium (Zr)	2016/04/25					<0.00010	mg/L		
8249888	Acidity (pH 4.5)	2016/04/22					<0.50	mg/L	NC	20
8249888	Acidity (pH 8.3)	2016/04/22			99	80 - 120	<0.50	mg/L	NC	20
8249894	Dissolved Chloride (Cl)	2016/04/22	110	80 - 120	98	80 - 120	<0.50	mg/L	NC	20
8249901	Dissolved Sulphate (SO4)	2016/04/22	NC	80 - 120	91	80 - 120	0.68, RDL=0.50	mg/L	0.80	20
8249917	Acidity (pH 4.5)	2016/04/22					<0.50	mg/L	NC	20
8249917	Acidity (pH 8.3)	2016/04/22			99	80 - 120	<0.50	mg/L	3.5	20
8249937	Dissolved Organic Carbon (C)	2016/04/22	102	80 - 120	106	80 - 120	<0.50	mg/L	NC	20
8250078	True Colour	2016/04/22			109	80 - 120	<5.0	Col. Unit	NC	20
8250164	Dissolved Phosphorus (P)	2016/04/22	99	80 - 120	107	80 - 120	<0.0020	mg/L	NC	20
8250165	Total Phosphorus (P)	2016/04/22	99	80 - 120	109	80 - 120	<0.0020	mg/L	NC	20
8250297	Nitrate plus Nitrite (N)	2016/04/22	104	80 - 120	109	80 - 120	<0.0020	mg/L	3.8	25
8250298	Nitrite (N)	2016/04/22	99	80 - 120	102	80 - 120	<0.0020	mg/L	NC	25
8250598	Fluoride (F)	2016/04/22			96	80 - 120	0.014, RDL=0.010	mg/L		
8250744	Total Suspended Solids	2016/04/26			94	80 - 120	<1.0	mg/L		
8251076	Dissolved Mercury (Hg)	2016/04/25	98	80 - 120	106	80 - 120	<0.0000020	mg/L	NC	20
8251169	Strong Acid Dissoc. Cyanide (CN)	2016/04/25	96	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8251174	Weak Acid Dissoc. Cyanide (CN)	2016/04/25	98	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8251300	Total Mercury (Hg)	2016/04/25	90	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8251506	Total Ammonia (N)	2016/04/25	103	80 - 120	92	80 - 120	<0.0050	mg/L	NC	20
8251717	Total Aluminum (Al)	2016/04/26	105	80 - 120	101	80 - 120	<0.0030	mg/L	NC	20
8251717	Total Antimony (Sb)	2016/04/26	110	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8251717	Total Arsenic (As)	2016/04/26	111	80 - 120	102	80 - 120	<0.000020	mg/L	14	20
8251717	Total Barium (Ba)	2016/04/26	NC	80 - 120	100	80 - 120	<0.00010	mg/L	2.1	20
8251717	Total Beryllium (Be)	2016/04/26	107	80 - 120	101	80 - 120	<0.000010	mg/L	NC	20
8251717	Total Bismuth (Bi)	2016/04/26	97	80 - 120	95	80 - 120	<0.000020	mg/L	NC	20
8251717	Total Boron (B)	2016/04/26	113	80 - 120	106	80 - 120	<0.050	mg/L	NC	20
8251717	Total Cadmium (Cd)	2016/04/26	108	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8251717	Total Chromium (Cr)	2016/04/26	101	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8251717	Total Cobalt (Co)	2016/04/26	102	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
8251717	Total Copper (Cu)	2016/04/26	99	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8251717	Total Iron (Fe)	2016/04/26	NC	80 - 120	107	80 - 120	<0.0050	mg/L	0.053	20
8251717	Total Lead (Pb)	2016/04/26	106	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8251717	Total Lithium (Li)	2016/04/26	100	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8251717	Total Manganese (Mn)	2016/04/26	NC	80 - 120	98	80 - 120	<0.00010	mg/L	2.0	20
8251717	Total Molybdenum (Mo)	2016/04/26	NC	80 - 120	98	80 - 120	<0.000050	mg/L	6.4	20
8251717	Total Nickel (Ni)	2016/04/26	99	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8251717	Total Phosphorus (P)	2016/04/26					<0.010	mg/L	NC	20
8251717	Total Selenium (Se)	2016/04/26	109	80 - 120	101	80 - 120	<0.000040	mg/L	12	20
8251717	Total Silicon (Si)	2016/04/26					<0.10	mg/L	3.6	20
8251717	Total Silver (Ag)	2016/04/26	106	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8251717	Total Strontium (Sr)	2016/04/26	NC	80 - 120	100	80 - 120	<0.000050	mg/L	1.4	20
8251717	Total Thallium (Tl)	2016/04/26	100	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8251717	Total Tin (Sn)	2016/04/26	107	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8251717	Total Titanium (Ti)	2016/04/26	100	80 - 120	98	80 - 120	<0.0050	mg/L	NC	20
8251717	Total Uranium (U)	2016/04/26	106	80 - 120	104	80 - 120	<0.0000050	mg/L	6.2	20
8251717	Total Vanadium (V)	2016/04/26	108	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8251717	Total Zinc (Zn)	2016/04/26	103	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
8251717	Total Zirconium (Zr)	2016/04/26					<0.00010	mg/L	NC	20
8252906	Total Ammonia (N)	2016/04/26	93	80 - 120	91	80 - 120	<0.0050	mg/L	NC	20
8253389	Nitrate plus Nitrite (N)	2016/04/26	102	80 - 120	104	80 - 120	<0.0020	mg/L	0.30	25
8253390	Nitrite (N)	2016/04/26	96	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8253852	Fluoride (F)	2016/04/27	94	80 - 120	98	80 - 120	0.016, RDL=0.010	mg/L	0	20
8254062	True Colour	2016/04/27			95	80 - 120	<5.0	Col. Unit	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

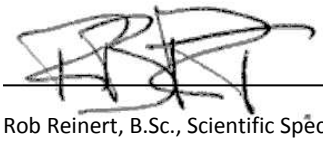
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Rob Reinert, B.Sc., Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC # 08420290

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where a		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	~~KZ-2~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
3	~~KZ-7~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
4	~~KZ-9~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
5	KZ-13		20-Apr-16	8:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
6	KZ-15		20-Apr-16	8:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
7	KZ-16		20-Apr-16	10:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
8	KZ-17		20-Apr-16	11:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
9	KZ-19		20-Apr-16	8:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
10	KZ-21		19-Apr-16	15:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
		3,2,2
		4,4,4

COOLING MEDIA PRESENT Y / N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Andrew MacPhail	20/04/2016	12:30	Pacheco	2016/04/21	13:30
			ROCHELLE PACHECO		

MAXX/ B629952

B629952_COC

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CC 08420291

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (w.		around Time (TAT) Required	
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	x	Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS	
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)	
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	Same Day / 2 Days / 1 Day / 3 Days	
Phone:		Phone:	(867) 668-6463	Site #:			
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Andrew MacPhail	Date Required:	

Regulatory Criteria	Special Instructions	Rush Confirmation #:
BC CSR Soil / BC CSR Water	Return Cooler	
CCME (Specify) / Other (Specify)	Ship Sample Bottles (Please Specify)	
Drinking Water / BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-22		19-Apr-16	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
2	KZ-26		19-Apr-16	11:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
3	KZ-28		19-Apr-16	12:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
4	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
5																							
6																							
7																							
8																							
9																							
10																							

B629952_COC

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
		3,2,2
		4,4,4

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: @1500
2016 -04- 20
TEMP: 6 / 4 / 5 → 1 cooler
7 / 7 / 4 → 2

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Andrew MacPhail	20/04/2016	12:00	Rpacheco	2016/04/21	13:30	B629952
			ROCHELLE PACHECO			

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08420310

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/09
Report #: R2194029
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B630374
Received: 2016/04/21, 16:10

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	5	N/A	2016/04/25	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	5	2016/04/23	2016/04/24	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	5	N/A	2016/04/25	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	5	N/A	2016/04/25	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	5	N/A	2016/04/25	BBY6SOP-00004	SM 22 4500-CN O m
Colour (True) by Kone Lab	5	N/A	2016/04/23	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	5	N/A	2016/04/25	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	5	N/A	2016/04/24	BBY6SOP-00026	SM 22 2510 B m
Fluoride	5	N/A	2016/04/26	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	5	N/A	2016/04/26	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	5	N/A	2016/04/26	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	5	N/A	2016/04/26	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	5	2016/04/26	2016/04/26	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	5	N/A	2016/06/09	BBY WI-00033	SM 22 1030E
Sum of cations, anions	5	N/A	2016/06/09	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	5	N/A	2016/04/26	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	5	N/A	2016/04/26	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	1	2016/04/25	2016/04/26	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	5	N/A	2016/04/26	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	4	N/A	2016/04/26	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Unpreserved)	5	N/A	2016/04/25	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	5	N/A	2016/04/23	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	5	N/A	2016/04/23	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	5	N/A	2016/04/26	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	4	N/A	2016/04/25	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	5	N/A	2016/04/24	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	5	N/A	2016/04/25	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	5	2016/04/25	2016/04/26	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	5	N/A	2016/04/26	BBY6SOP-00013	SM 22 4500-P E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08420310

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/09
Report #: R2194029
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B630374
Received: 2016/04/21, 16:10

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Suspended Solids-Low Level	5	2016/04/25	2016/04/26	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OM7108		OM7152	OM7153		OM7157		
Sampling Date		2016/04/21 08:30		2016/04/20 15:15	2016/04/20 13:20		2016/04/21 16:10		
COC Number		08420310		08420310	08420310		08420310		
	UNITS	KZ-2	QC Batch	KZ-7	KZ-9	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	2.8	8293579	3.4	3.9	8293579	0.016	N/A	8293579
Cation Sum	meq/L	2.9	8293579	3.4	3.9	8293579	0.0020	N/A	8293579
Filter and HNO3 Preservation	N/A	LAB	8250937	LAB	LAB	8250937		N/A	8250937
Ion Balance	N/A	1.0	8293322	1.0	0.99	8293322	0.13	0.010	8293322
Nitrate (N)	mg/L	0.129	8250149	0.0880	0.123	8250149	<0.0020	0.0020	8250149
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8251169	0.00050	0.00051	8251169	<0.00050	0.00050	8251173
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8251174	<0.00050	<0.00050	8251174	<0.00050	0.00050	8251174
Fluoride (F)	mg/L	0.044	8252818	0.061	0.069	8252818	0.014	0.010	8252818
Dissolved Organic Carbon (C)	mg/L	1.37	8251658	3.56	3.36	8251658	<0.50	0.50	8251658
Acidity (pH 4.5)	mg/L	<0.50	8251112	<0.50	<0.50	8251112	<0.50	0.50	8251112
Alkalinity (Total as CaCO3)	mg/L	90.4	8250514	138	166	8250364	<0.50	0.50	8250364
Acidity (pH 8.3)	mg/L	<0.50	8251112	<0.50	3.73	8251112	<0.50	0.50	8251112
Alkalinity (PP as CaCO3)	mg/L	<0.50	8250514	<0.50	<0.50	8250364	<0.50	0.50	8250364
Bicarbonate (HCO3)	mg/L	110	8250514	168	203	8250364	<0.50	0.50	8250364
Carbonate (CO3)	mg/L	<0.50	8250514	<0.50	<0.50	8250364	<0.50	0.50	8250364
Hydroxide (OH)	mg/L	<0.50	8250514	<0.50	<0.50	8250364	<0.50	0.50	8250364
Anions									
Dissolved Sulphate (SO4)	mg/L	47.8	8251619	29.6	26.4	8251619	<0.50	0.50	8251619
Dissolved Chloride (Cl)	mg/L	0.83	8251615	0.65	1.1	8251615	0.52	0.50	8251615
MISCELLANEOUS									
True Colour	Col. Unit	<5.0	8250595	12.2	12.0	8250595	<5.0	5.0	8250595
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	8251697	0.0038 (1)	0.0026 (1)	8251697	<0.0020 (1)	0.0020	8251697
Total Ammonia (N)	mg/L	0.016 (1)	8250601	0.0080 (1)	0.019 (1)	8250601	0.0083 (1)	0.0050	8250601
Nitrate plus Nitrite (N)	mg/L	0.129	8250611	0.0880	0.123	8250611	<0.0020	0.0020	8250611
Nitrite (N)	mg/L	<0.0020	8250612	<0.0020	<0.0020	8250612	<0.0020	0.0020	8250612
Total Phosphorus (P)	mg/L	<0.0020 (1)	8251698	0.0029 (1)	0.0027 (1)	8251698	<0.0020 (1)	0.0020	8251698
Physical Properties									
Conductivity	uS/cm	282	8250515	318	361	8250363	1.2	1.0	8250363

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OM7108		OM7152	OM7153		OM7157		
Sampling Date		2016/04/21 08:30		2016/04/20 15:15	2016/04/20 13:20		2016/04/21 16:10		
COC Number		08420310		08420310	08420310		08420310		
	UNITS	**KZ-2**	**QC Batch**	**KZ-7**	**KZ-9**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**
pH	pH	8.06	8250516	8.25	8.04	8250361	5.85		8250361
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8251343	1.0	2.4	8251343	<1.0	1.0	8251343
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OM7158		
Sampling Date		2016/04/20 16:15		
COC Number		08420310		
	UNITS	KZ-6	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	3.3	N/A	8293579
Cation Sum	meq/L	3.4	N/A	8293579
Filter and HNO3 Preservation	N/A	LAB	N/A	8250937
Ion Balance	N/A	1.0	0.010	8293322
Nitrate (N)	mg/L	0.129	0.0020	8250149
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8251173
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8251174
Fluoride (F)	mg/L	0.060	0.010	8252818
Dissolved Organic Carbon (C)	mg/L	2.57	0.50	8251658
Acidity (pH 4.5)	mg/L	<0.50	0.50	8251112
Alkalinity (Total as CaCO3)	mg/L	142	0.50	8250514
Acidity (pH 8.3)	mg/L	<0.50	0.50	8251112
Alkalinity (PP as CaCO3)	mg/L	0.63	0.50	8250514
Bicarbonate (HCO3)	mg/L	172	0.50	8250514
Carbonate (CO3)	mg/L	0.76	0.50	8250514
Hydroxide (OH)	mg/L	<0.50	0.50	8250514
Anions				
Dissolved Sulphate (SO4)	mg/L	20.6	0.50	8251619
Dissolved Chloride (Cl)	mg/L	1.0	0.50	8251615
MISCELLANEOUS				
True Colour	Col. Unit	11.7	5.0	8250595
Nutrients				
Dissolved Phosphorus (P)	mg/L	0.0024 (1)	0.0020	8251697
Total Ammonia (N)	mg/L	0.0069 (1)	0.0050	8250601
Nitrate plus Nitrite (N)	mg/L	0.129	0.0020	8250611
Nitrite (N)	mg/L	<0.0020	0.0020	8250612
Total Phosphorus (P)	mg/L	0.0025 (1)	0.0020	8251698
Physical Properties				
Conductivity	uS/cm	308	1.0	8250515

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OM7158		
Sampling Date		2016/04/20 16:15		
COC Number		08420310		
	UNITS	**KZ-6**	**RDL**	**QC Batch**
pH	pH	8.31		8250516
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8251343
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OM7108	OM7152	OM7153		OM7157		
Sampling Date		2016/04/21 08:30	2016/04/20 15:15	2016/04/20 13:20		2016/04/21 16:10		
COC Number		08420310	08420310	08420310		08420310		
	UNITS	KZ-2	KZ-7	KZ-9	QC Batch	TRIP BLANK	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	142	165	188	8249197	<0.50	0.50	8250177
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8251936	<0.0000020	0.0000020	8251936
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00225	0.00655	0.00267	8251299	<0.00050	0.00050	8251299
Dissolved Antimony (Sb)	mg/L	0.000031	0.000043	0.000035	8251299	<0.000020	0.000020	8251299
Dissolved Arsenic (As)	mg/L	0.000082	0.000290	0.000285	8251299	<0.000020	0.000020	8251299
Dissolved Barium (Ba)	mg/L	0.0776	0.0908	0.0929	8251299	<0.000020	0.000020	8251299
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8251299	<0.000010	0.000010	8251299
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8251299	<0.0000050	0.0000050	8251299
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8251299	<0.010	0.010	8251299
Dissolved Cadmium (Cd)	mg/L	0.000201	0.0000810	0.0000720	8251299	<0.0000050	0.0000050	8251299
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8251299	<0.00010	0.00010	8251299
Dissolved Cobalt (Co)	mg/L	0.0000070	0.0000580	0.0000910	8251299	<0.0000050	0.0000050	8251299
Dissolved Copper (Cu)	mg/L	0.000929	0.000439	0.000488	8251299	<0.000050	0.000050	8251299
Dissolved Iron (Fe)	mg/L	0.0015	0.0894	0.206	8251299	<0.0010	0.0010	8251299
Dissolved Lead (Pb)	mg/L	0.0000320	0.0000120	0.0000320	8251299	<0.0000050	0.0000050	8251299
Dissolved Lithium (Li)	mg/L	0.00182	0.00393	0.00396	8251299	<0.00050	0.00050	8251299
Dissolved Manganese (Mn)	mg/L	0.000091	0.0592	0.0917	8251299	<0.000050	0.000050	8251299
Dissolved Molybdenum (Mo)	mg/L	0.000775	0.000641	0.000674	8251299	<0.000050	0.000050	8251299
Dissolved Nickel (Ni)	mg/L	0.000275	0.000471	0.000533	8251299	<0.000020	0.000020	8251299
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020	<0.0020	8251299	<0.0020	0.0020	8251299
Dissolved Selenium (Se)	mg/L	0.00300	0.000811	0.000943	8251299	<0.000040	0.000040	8251299
Dissolved Silicon (Si)	mg/L	2.43	3.54	3.88	8251299	<0.050	0.050	8251299
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8251299	<0.0000050	0.0000050	8251299
Dissolved Strontium (Sr)	mg/L	0.151	0.184	0.220	8251299	<0.000050	0.000050	8251299
Dissolved Thallium (Tl)	mg/L	0.0000030	0.0000020	<0.0000020	8251299	<0.0000020	0.0000020	8251299
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8251299	<0.00020	0.00020	8251299
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8251299	<0.00050	0.00050	8251299
Dissolved Uranium (U)	mg/L	0.00535	0.00138	0.00153	8251299	<0.0000020	0.0000020	8251299
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8251299	<0.00020	0.00020	8251299

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OM7108	OM7152	OM7153		OM7157		
Sampling Date		2016/04/21 08:30	2016/04/20 15:15	2016/04/20 13:20		2016/04/21 16:10		
COC Number		08420310	08420310	08420310		08420310		
	UNITS	KZ-2	KZ-7	KZ-9	QC Batch	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0238	0.0319	0.0103	8251299	<0.00010	0.00010	8251299
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8251299	<0.00010	0.00010	8251299
Dissolved Calcium (Ca)	mg/L	44.6	53.9	62.2	8249198	<0.050	0.050	8249198
Dissolved Magnesium (Mg)	mg/L	7.38	7.32	7.85	8249198	<0.050	0.050	8249198
Dissolved Potassium (K)	mg/L	2.49	2.02	2.00	8249198	<0.050	0.050	8249198
Dissolved Sodium (Na)	mg/L	0.944	1.25	1.41	8249198	<0.050	0.050	8249198
Dissolved Sulphur (S)	mg/L	17.0	10.3	9.5	8249198	<3.0	3.0	8249198

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OM7158		
Sampling Date		2016/04/20 16:15		
COC Number		08420310		
	UNITS	KZ-6	RDL	QC Batch
Misc. Inorganics				
Dissolved Hardness (CaCO3)	mg/L	168	0.50	8250177
Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000020	8251936
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	0.00428	0.00050	8251299
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000020	8251299
Dissolved Arsenic (As)	mg/L	0.000086	0.000020	8251299
Dissolved Barium (Ba)	mg/L	0.0503	0.000020	8251299
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000010	8251299
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8251299
Dissolved Boron (B)	mg/L	<0.010	0.010	8251299
Dissolved Cadmium (Cd)	mg/L	0.0000130	0.0000050	8251299
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00010	8251299
Dissolved Cobalt (Co)	mg/L	0.0000180	0.0000050	8251299
Dissolved Copper (Cu)	mg/L	0.000503	0.000050	8251299
Dissolved Iron (Fe)	mg/L	0.0098	0.0010	8251299
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000050	8251299
Dissolved Lithium (Li)	mg/L	0.00092	0.00050	8251299
Dissolved Manganese (Mn)	mg/L	0.000178	0.000050	8251299
Dissolved Molybdenum (Mo)	mg/L	0.000675	0.000050	8251299
Dissolved Nickel (Ni)	mg/L	0.000298	0.000020	8251299
Dissolved Phosphorus (P)	mg/L	0.0051	0.0020	8251299
Dissolved Selenium (Se)	mg/L	0.00121	0.000040	8251299
Dissolved Silicon (Si)	mg/L	3.13	0.050	8251299
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	8251299
Dissolved Strontium (Sr)	mg/L	0.166	0.000050	8251299
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000020	8251299
Dissolved Tin (Sn)	mg/L	<0.00020	0.00020	8251299
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00050	8251299
Dissolved Uranium (U)	mg/L	0.00129	0.0000020	8251299
Dissolved Vanadium (V)	mg/L	<0.00020	0.00020	8251299
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OM7158		
Sampling Date		2016/04/20 16:15		
COC Number		08420310		
	UNITS	**KZ-6**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.00061	0.00010	8251299
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00010	8251299
Dissolved Calcium (Ca)	mg/L	55.7	0.050	8249198
Dissolved Magnesium (Mg)	mg/L	6.93	0.050	8249198
Dissolved Potassium (K)	mg/L	1.51	0.050	8249198
Dissolved Sodium (Na)	mg/L	0.737	0.050	8249198
Dissolved Sulphur (S)	mg/L	6.9	3.0	8249198
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OM7108	OM7152	OM7157	OM7158		
Sampling Date		2016/04/21 08:30	2016/04/20 15:15	2016/04/21 16:10	2016/04/20 16:15		
COC Number		08420310	08420310	08420310	08420310		
	UNITS	KZ-2	KZ-7	TRIP BLANK	KZ-6	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	145	176	<0.50	167	0.50	8249196
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8251947
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00299	0.0208	<0.00050	0.00809	0.00050	8252056
Total Antimony (Sb)	mg/L	0.000027	0.000046	<0.000020	<0.000020	0.000020	8252056
Total Arsenic (As)	mg/L	0.000094	0.000452	<0.000020	0.000147	0.000020	8252056
Total Barium (Ba)	mg/L	0.0785	0.0999	<0.000020	0.0494	0.000020	8252056
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8252056
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8252056
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8252056
Total Cadmium (Cd)	mg/L	0.000199	0.000221	<0.0000050	0.0000300	0.0000050	8252056
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8252056
Total Cobalt (Co)	mg/L	0.0000080	0.0000850	<0.0000050	0.0000270	0.0000050	8252056
Total Copper (Cu)	mg/L	0.000983	0.000545	<0.000050	0.000525	0.000050	8252056
Total Iron (Fe)	mg/L	0.0031	0.525	<0.0010	0.0516	0.0010	8252056
Total Lead (Pb)	mg/L	0.0000400	0.000119	<0.0000050	0.0000450	0.0000050	8252056
Total Lithium (Li)	mg/L	0.00153	0.00410	<0.00050	0.00105	0.00050	8252056
Total Manganese (Mn)	mg/L	0.000081	0.0810	<0.000050	0.00810	0.000050	8252056
Total Molybdenum (Mo)	mg/L	0.000791	0.000645	<0.000050	0.000652	0.000050	8252056
Total Nickel (Ni)	mg/L	0.000283	0.000554	<0.000020	0.000339	0.000020	8252056
Total Phosphorus (P)	mg/L	0.0024	0.0065	<0.0020	0.0030	0.0020	8252056
Total Selenium (Se)	mg/L	0.00308	0.000777	<0.000040	0.00122	0.000040	8252056
Total Silicon (Si)	mg/L	2.44	3.66	<0.050	3.31	0.050	8252056
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8252056
Total Strontium (Sr)	mg/L	0.155	0.203	<0.000050	0.170	0.000050	8252056
Total Thallium (Tl)	mg/L	0.0000030	0.0000020	<0.0000020	<0.0000020	0.0000020	8252056
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8252056
Total Titanium (Ti)	mg/L	<0.00050	0.00103	<0.00050	<0.00050	0.00050	8252056
Total Uranium (U)	mg/L	0.00545	0.00142	<0.0000020	0.00127	0.0000020	8252056
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8252056

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OM7108	OM7152	OM7157	OM7158		
Sampling Date		2016/04/21 08:30	2016/04/20 15:15	2016/04/21 16:10	2016/04/20 16:15		
COC Number		08420310	08420310	08420310	08420310		
	UNITS	KZ-2	KZ-7	TRIP BLANK	KZ-6	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0241	0.0457	<0.00010	0.00101	0.00010	8252056
Total Zirconium (Zr)	mg/L	<0.00010	0.00011	<0.00010	<0.00010	0.00010	8252056
Total Calcium (Ca)	mg/L	46.1	58.0	<0.050	55.7	0.050	8249199
Total Magnesium (Mg)	mg/L	7.29	7.64	<0.050	6.91	0.050	8249199
Total Potassium (K)	mg/L	2.51	2.22	<0.050	1.52	0.050	8249199
Total Sodium (Na)	mg/L	0.925	1.29	<0.050	0.732	0.050	8249199
Total Sulphur (S)	mg/L	16.5	10.1	<3.0	6.9	3.0	8249199
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OM7153		
Sampling Date		2016/04/20 13:20		
COC Number		08420310		
	UNITS	KZ-9	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	153	0.50	8249196
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8251947
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.0225	0.0030	8251717
Total Antimony (Sb)	mg/L	<0.000050	0.000050	8251717
Total Arsenic (As)	mg/L	0.000304	0.000020	8251717
Total Barium (Ba)	mg/L	0.0784	0.00010	8251717
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8251717
Total Bismuth (Bi)	mg/L	<0.000020	0.000020	8251717
Total Boron (B)	mg/L	<0.050	0.050	8251717
Total Cadmium (Cd)	mg/L	0.0000730	0.0000050	8251717
Total Chromium (Cr)	mg/L	<0.00050	0.00050	8251717
Total Cobalt (Co)	mg/L	0.000138	0.000010	8251717
Total Copper (Cu)	mg/L	0.00061	0.00020	8251717
Total Iron (Fe)	mg/L	0.476	0.0050	8251717
Total Lead (Pb)	mg/L	0.000120	0.000050	8251717
Total Lithium (Li)	mg/L	0.00365	0.00050	8251717
Total Manganese (Mn)	mg/L	0.0852	0.00010	8251717
Total Molybdenum (Mo)	mg/L	0.000564	0.000050	8251717
Total Nickel (Ni)	mg/L	0.00050	0.00010	8251717
Total Phosphorus (P)	mg/L	<0.010	0.010	8251717
Total Selenium (Se)	mg/L	0.000695	0.000040	8251717
Total Silicon (Si)	mg/L	3.52	0.10	8251717
Total Silver (Ag)	mg/L	<0.0000050	0.0000050	8251717
Total Strontium (Sr)	mg/L	0.181	0.000050	8251717
Total Thallium (Tl)	mg/L	<0.0000020	0.0000020	8251717
Total Tin (Sn)	mg/L	<0.00020	0.00020	8251717
Total Titanium (Ti)	mg/L	<0.0050	0.0050	8251717
Total Uranium (U)	mg/L	0.00122	0.0000050	8251717
Total Vanadium (V)	mg/L	<0.00050	0.00050	8251717
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OM7153		
Sampling Date		2016/04/20 13:20		
COC Number		08420310		
	UNITS	KZ-9	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0101	0.0010	8251717
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8251717
Total Calcium (Ca)	mg/L	50.7	0.25	8249199
Total Magnesium (Mg)	mg/L	6.36	0.25	8249199
Total Potassium (K)	mg/L	1.60	0.25	8249199
Total Sodium (Na)	mg/L	1.12	0.25	8249199
Total Sulphur (S)	mg/L	<15	15	8249199
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: OM7108 **Collected:** 2016/04/21
Sample ID: KZ-2 **Shipped:**
Matrix: Water **Received:** 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8251112	N/A	2016/04/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8250514	2016/04/23	2016/04/24	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8251615	N/A	2016/04/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8250595	N/A	2016/04/23	Vanessa Tso
Carbon (DOC) - field filtered/preserved	TRAA/COL	8251658	N/A	2016/04/25	Isabel Choi
Conductance - water	AT/ALK	8250515	N/A	2016/04/24	Maria Maclean
Fluoride	ISE/ISE	8252818	N/A	2016/04/26	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8249196	N/A	2016/04/26	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8249197	N/A	2016/04/26	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251936	N/A	2016/04/26	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8251947	2016/04/26	2016/04/26	Edwin Lamigo
Ion Balance	CALC	8293322	N/A	2016/06/09	David Huang
Sum of cations, anions	CALC	8293579	N/A	2016/06/09	David Huang
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8249198	N/A	2016/04/26	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8251299	N/A	2016/04/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8249199	N/A	2016/04/26	Rob Reinert
Elements by ICPMS Low Level (total)	ICP/CRCM	8252056	N/A	2016/04/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8250601	N/A	2016/04/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250611	N/A	2016/04/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8250612	N/A	2016/04/23	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8250149	N/A	2016/04/26	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8250937	N/A	2016/04/25	Lucy Luo
pH Water	AT/ALK	8250516	N/A	2016/04/24	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8251619	N/A	2016/04/25	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8251697	2016/04/25	2016/04/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8251698	N/A	2016/04/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8251343	2016/04/25	2016/04/26	Prabhleen Sodhi

Maxxam ID: OM7108 Dup **Collected:** 2016/04/21
Sample ID: KZ-2 **Shipped:**
Matrix: Water **Received:** 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8251698	N/A	2016/04/26	Isabel Choi

Maxxam ID: OM7152 **Collected:** 2016/04/20
Sample ID: KZ-7 **Shipped:**
Matrix: Water **Received:** 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8251112	N/A	2016/04/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8250364	2016/04/23	2016/04/24	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: OM7152
Sample ID: KZ-7
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8251615	N/A	2016/04/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8250595	N/A	2016/04/23	Vanessa Tso
Carbon (DOC) - field filtered/preserved	TRAA/COL	8251658	N/A	2016/04/25	Isabel Choi
Conductance - water	AT/ALK	8250363	N/A	2016/04/24	Maria Maclean
Fluoride	ISE/ISE	8252818	N/A	2016/04/26	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8249196	N/A	2016/04/26	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8249197	N/A	2016/04/26	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251936	N/A	2016/04/26	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8251947	2016/04/26	2016/04/26	Edwin Lamigo
Ion Balance	CALC	8293322	N/A	2016/06/09	David Huang
Sum of cations, anions	CALC	8293579	N/A	2016/06/09	David Huang
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8249198	N/A	2016/04/26	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8251299	N/A	2016/04/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8249199	N/A	2016/04/26	Rob Reinert
Elements by ICPMS Low Level (total)	ICP/CRCM	8252056	N/A	2016/04/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8250601	N/A	2016/04/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250611	N/A	2016/04/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8250612	N/A	2016/04/23	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8250149	N/A	2016/04/26	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8250937	N/A	2016/04/25	Lucy Luo
pH Water	AT/ALK	8250361	N/A	2016/04/24	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8251619	N/A	2016/04/25	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8251697	2016/04/25	2016/04/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8251698	N/A	2016/04/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8251343	2016/04/25	2016/04/26	Prabhleen Sodhi

Maxxam ID: OM7152 Dup
Sample ID: KZ-7
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8251112	N/A	2016/04/25	Wilson Au Yueng
Colour (True) by Kone Lab	KONE	8250595	N/A	2016/04/23	Vanessa Tso

Maxxam ID: OM7153
Sample ID: KZ-9
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8251112	N/A	2016/04/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8250364	2016/04/23	2016/04/24	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8251615	N/A	2016/04/25	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: OM7153
Sample ID: KZ-9
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8250595	N/A	2016/04/23	Vanessa Tso
Carbon (DOC) - field filtered/preserved	TRAA/COL	8251658	N/A	2016/04/25	Isabel Choi
Conductance - water	AT/ALK	8250363	N/A	2016/04/24	Maria Maclean
Fluoride	ISE/ISE	8252818	N/A	2016/04/26	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8249196	N/A	2016/04/26	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8249197	N/A	2016/04/26	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251936	N/A	2016/04/26	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8251947	2016/04/26	2016/04/26	Edwin Lamigo
Ion Balance	CALC	8293322	N/A	2016/06/09	David Huang
Sum of cations, anions	CALC	8293579	N/A	2016/06/09	David Huang
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8249198	N/A	2016/04/26	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8251299	N/A	2016/04/26	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8251717	2016/04/25	2016/04/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8249199	N/A	2016/04/26	Rob Reinert
Ammonia-N (Unpreserved)	KONE/COL	8250601	N/A	2016/04/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250611	N/A	2016/04/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8250612	N/A	2016/04/23	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8250149	N/A	2016/04/26	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8250937	N/A	2016/04/25	Lucy Luo
pH Water	AT/ALK	8250361	N/A	2016/04/24	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8251619	N/A	2016/04/25	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8251697	2016/04/25	2016/04/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8251698	N/A	2016/04/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8251343	2016/04/25	2016/04/26	Prabhleen Sodhi

Maxxam ID: OM7157
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/04/21
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8251112	N/A	2016/04/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8250364	2016/04/23	2016/04/24	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8251615	N/A	2016/04/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8251173	N/A	2016/04/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8250595	N/A	2016/04/23	Vanessa Tso
Carbon (DOC) - field filtered/preserved	TRAA/COL	8251658	N/A	2016/04/25	Isabel Choi
Conductance - water	AT/ALK	8250363	N/A	2016/04/24	Maria Maclean
Fluoride	ISE/ISE	8252818	N/A	2016/04/26	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8249196	N/A	2016/04/26	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8250177	N/A	2016/04/26	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251936	N/A	2016/04/26	Edwin Lamigo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: OM7157
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/04/21
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8251947	2016/04/26	2016/04/26	Edwin Lamigo
Ion Balance	CALC	8293322	N/A	2016/06/09	David Huang
Sum of cations, anions	CALC	8293579	N/A	2016/06/09	David Huang
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8249198	N/A	2016/04/26	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8251299	N/A	2016/04/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8249199	N/A	2016/04/26	Rob Reinert
Elements by ICPMS Low Level (total)	ICP/CRCM	8252056	N/A	2016/04/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8250601	N/A	2016/04/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250611	N/A	2016/04/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8250612	N/A	2016/04/23	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8250149	N/A	2016/04/26	Rob Reinert
pH Water	AT/ALK	8250361	N/A	2016/04/24	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8251619	N/A	2016/04/25	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8251697	2016/04/25	2016/04/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8251698	N/A	2016/04/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8251343	2016/04/25	2016/04/26	Prabhleen Sodhi

Maxxam ID: OM7157 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/04/21
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251936	N/A	2016/04/26	Edwin Lamigo

Maxxam ID: OM7158
Sample ID: KZ-6
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8251112	N/A	2016/04/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8250514	2016/04/23	2016/04/24	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8251615	N/A	2016/04/25	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8251173	N/A	2016/04/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8250595	N/A	2016/04/23	Vanessa Tso
Carbon (DOC) - field filtered/preserved	TRAA/COL	8251658	N/A	2016/04/25	Isabel Choi
Conductance - water	AT/ALK	8250515	N/A	2016/04/24	Maria Maclean
Fluoride	ISE/ISE	8252818	N/A	2016/04/26	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8249196	N/A	2016/04/26	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8250177	N/A	2016/04/26	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251936	N/A	2016/04/26	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8251947	2016/04/26	2016/04/26	Edwin Lamigo
Ion Balance	CALC	8293322	N/A	2016/06/09	David Huang
Sum of cations, anions	CALC	8293579	N/A	2016/06/09	David Huang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: OM7158
Sample ID: KZ-6
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8249198	N/A	2016/04/26	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8251299	N/A	2016/04/26	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8249199	N/A	2016/04/26	Rob Reinert
Elements by ICPMS Low Level (total)	ICP/CRCM	8252056	N/A	2016/04/26	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8250601	N/A	2016/04/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250611	N/A	2016/04/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8250612	N/A	2016/04/23	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8250149	N/A	2016/04/26	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8250937	N/A	2016/04/25	Lucy Luo
pH Water	AT/ALK	8250516	N/A	2016/04/24	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8251619	N/A	2016/04/25	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8251697	2016/04/25	2016/04/26	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8251698	N/A	2016/04/26	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8251343	2016/04/25	2016/04/26	Prabhleen Sodhi

Maxxam ID: OM7158 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8251173	N/A	2016/04/25	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	Tatyana Serzhanova
Ammonia-N (Unpreserved)	KONE/COL	8250601	N/A	2016/04/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250611	N/A	2016/04/23	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8250612	N/A	2016/04/23	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.0°C
Package 2	5.0°C

Revised report V2: Ion Balance and Ion Sum added per client requirements, not originally reported (MM4).

Sample OM7153-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8250361	pH	2016/04/24			102	97 - 103			0.49	N/A
8250363	Conductivity	2016/04/24			101	80 - 120	1.0, RDL=1.0	uS/cm	0.086	20
8250364	Alkalinity (PP as CaCO3)	2016/04/24					<0.50	mg/L	NC	20
8250364	Alkalinity (Total as CaCO3)	2016/04/24	NC	80 - 120	100	80 - 120	<0.50	mg/L	0.069	20
8250364	Bicarbonate (HCO3)	2016/04/24					<0.50	mg/L	0.069	20
8250364	Carbonate (CO3)	2016/04/24					<0.50	mg/L	NC	20
8250364	Hydroxide (OH)	2016/04/24					<0.50	mg/L	NC	20
8250514	Alkalinity (PP as CaCO3)	2016/04/24					<0.50	mg/L	NC	20
8250514	Alkalinity (Total as CaCO3)	2016/04/24	99	80 - 120	99	80 - 120	<0.50	mg/L	11	20
8250514	Bicarbonate (HCO3)	2016/04/24					<0.50	mg/L	11	20
8250514	Carbonate (CO3)	2016/04/24					<0.50	mg/L	NC	20
8250514	Hydroxide (OH)	2016/04/24					<0.50	mg/L	NC	20
8250515	Conductivity	2016/04/24			101	80 - 120	1.1, RDL=1.0	uS/cm	0	20
8250516	pH	2016/04/24			101	97 - 103			0.86	N/A
8250595	True Colour	2016/04/23			99	80 - 120	<5.0	Col. Unit	NC	20
8250601	Total Ammonia (N)	2016/04/25	93	80 - 120	95	80 - 120	<0.0050	mg/L	NC	20
8250611	Nitrate plus Nitrite (N)	2016/04/23	106	80 - 120	101	80 - 120	<0.0020	mg/L	0.077	25
8250612	Nitrite (N)	2016/04/23	100	80 - 120	96	80 - 120	<0.0020	mg/L	NC	25
8251112	Acidity (pH 4.5)	2016/04/25					<0.50	mg/L	NC	20
8251112	Acidity (pH 8.3)	2016/04/25			101	80 - 120	<0.50	mg/L	NC	20
8251169	Strong Acid Dissoc. Cyanide (CN)	2016/04/25	96	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8251173	Strong Acid Dissoc. Cyanide (CN)	2016/04/25	100	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8251174	Weak Acid Dissoc. Cyanide (CN)	2016/04/25	98	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8251299	Dissolved Aluminum (Al)	2016/04/26	100	80 - 120	97	80 - 120	<0.00050	mg/L	1.2	20
8251299	Dissolved Antimony (Sb)	2016/04/26	NC	80 - 120	97	80 - 120	<0.000020	mg/L	2.3	20
8251299	Dissolved Arsenic (As)	2016/04/26	104	80 - 120	100	80 - 120	<0.000020	mg/L	4.2	20
8251299	Dissolved Barium (Ba)	2016/04/26	NC	80 - 120	98	80 - 120	<0.000020	mg/L	0.22	20
8251299	Dissolved Beryllium (Be)	2016/04/26	112	80 - 120	107	80 - 120	<0.000010	mg/L	NC	20
8251299	Dissolved Bismuth (Bi)	2016/04/26	104	80 - 120	92	80 - 120	<0.0000050	mg/L	NC	20
8251299	Dissolved Boron (B)	2016/04/26	119	80 - 120	106	80 - 120	<0.010	mg/L	NC	20
8251299	Dissolved Cadmium (Cd)	2016/04/26	99	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8251299	Dissolved Chromium (Cr)	2016/04/26	99	80 - 120	98	80 - 120	<0.00010	mg/L	1.2	20
8251299	Dissolved Cobalt (Co)	2016/04/26	99	80 - 120	103	80 - 120	<0.0000050	mg/L	9.3	20
8251299	Dissolved Copper (Cu)	2016/04/26	95	80 - 120	102	80 - 120	<0.000050	mg/L	1.5	20
8251299	Dissolved Iron (Fe)	2016/04/26	107	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20
8251299	Dissolved Lead (Pb)	2016/04/26	108	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8251299	Dissolved Lithium (Li)	2016/04/26	102	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8251299	Dissolved Manganese (Mn)	2016/04/26	95	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20
8251299	Dissolved Molybdenum (Mo)	2016/04/26	NC	80 - 120	97	80 - 120	<0.000050	mg/L	0.26	20
8251299	Dissolved Nickel (Ni)	2016/04/26	97	80 - 120	101	80 - 120	<0.000020	mg/L	13	20
8251299	Dissolved Phosphorus (P)	2016/04/26					<0.0020	mg/L		
8251299	Dissolved Selenium (Se)	2016/04/26	97	80 - 120	100	80 - 120	<0.000040	mg/L	1.5	20
8251299	Dissolved Silicon (Si)	2016/04/26					<0.050	mg/L	1.7	20
8251299	Dissolved Silver (Ag)	2016/04/26	102	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8251299	Dissolved Strontium (Sr)	2016/04/26	NC	80 - 120	91	80 - 120	<0.000050	mg/L	4.4	20
8251299	Dissolved Thallium (Tl)	2016/04/26	101	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8251299	Dissolved Tin (Sn)	2016/04/26	102	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
8251299	Dissolved Titanium (Ti)	2016/04/26	93	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8251299	Dissolved Uranium (U)	2016/04/26	107	80 - 120	97	80 - 120	<0.0000020	mg/L	0.83	20
8251299	Dissolved Vanadium (V)	2016/04/26	103	80 - 120	101	80 - 120	<0.00020	mg/L	3.5	20
8251299	Dissolved Zinc (Zn)	2016/04/26	99	80 - 120	102	80 - 120	<0.00010	mg/L	6.2	20
8251299	Dissolved Zirconium (Zr)	2016/04/26					<0.00010	mg/L	NC	20
8251343	Total Suspended Solids	2016/04/26			96	80 - 120	<1.0	mg/L		
8251615	Dissolved Chloride (Cl)	2016/04/25	NC	80 - 120	95	80 - 120	0.65, RDL=0.50	mg/L	0.35	20
8251619	Dissolved Sulphate (SO4)	2016/04/25	NC	80 - 120	101	80 - 120	0.53, RDL=0.50	mg/L	0.95	20
8251658	Dissolved Organic Carbon (C)	2016/04/25	99	80 - 120	112	80 - 120	<0.50	mg/L	NC	20
8251697	Dissolved Phosphorus (P)	2016/04/26	103	80 - 120	103	80 - 120	<0.0020	mg/L	NC	20
8251698	Total Phosphorus (P)	2016/04/26	98	80 - 120	98	80 - 120	<0.0020	mg/L	NC	20
8251717	Total Aluminum (Al)	2016/04/26	105	80 - 120	101	80 - 120	<0.0030	mg/L	NC	20
8251717	Total Antimony (Sb)	2016/04/26	110	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8251717	Total Arsenic (As)	2016/04/26	111	80 - 120	102	80 - 120	<0.000020	mg/L	14	20
8251717	Total Barium (Ba)	2016/04/26	NC	80 - 120	100	80 - 120	<0.00010	mg/L	2.1	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8251717	Total Beryllium (Be)	2016/04/26	107	80 - 120	101	80 - 120	<0.000010	mg/L	NC	20
8251717	Total Bismuth (Bi)	2016/04/26	97	80 - 120	95	80 - 120	<0.000020	mg/L	NC	20
8251717	Total Boron (B)	2016/04/26	113	80 - 120	106	80 - 120	<0.050	mg/L	NC	20
8251717	Total Cadmium (Cd)	2016/04/26	108	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8251717	Total Chromium (Cr)	2016/04/26	101	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8251717	Total Cobalt (Co)	2016/04/26	102	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
8251717	Total Copper (Cu)	2016/04/26	99	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8251717	Total Iron (Fe)	2016/04/26	NC	80 - 120	107	80 - 120	<0.0050	mg/L	0.053	20
8251717	Total Lead (Pb)	2016/04/26	106	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8251717	Total Lithium (Li)	2016/04/26	100	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8251717	Total Manganese (Mn)	2016/04/26	NC	80 - 120	98	80 - 120	<0.00010	mg/L	2.0	20
8251717	Total Molybdenum (Mo)	2016/04/26	NC	80 - 120	98	80 - 120	<0.000050	mg/L	6.4	20
8251717	Total Nickel (Ni)	2016/04/26	99	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8251717	Total Phosphorus (P)	2016/04/26					<0.010	mg/L	NC	20
8251717	Total Selenium (Se)	2016/04/26	109	80 - 120	101	80 - 120	<0.000040	mg/L	12	20
8251717	Total Silicon (Si)	2016/04/26					<0.10	mg/L	3.6	20
8251717	Total Silver (Ag)	2016/04/26	106	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8251717	Total Strontium (Sr)	2016/04/26	NC	80 - 120	100	80 - 120	<0.000050	mg/L	1.4	20
8251717	Total Thallium (Tl)	2016/04/26	100	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8251717	Total Tin (Sn)	2016/04/26	107	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8251717	Total Titanium (Ti)	2016/04/26	100	80 - 120	98	80 - 120	<0.0050	mg/L	NC	20
8251717	Total Uranium (U)	2016/04/26	106	80 - 120	104	80 - 120	<0.0000050	mg/L	6.2	20
8251717	Total Vanadium (V)	2016/04/26	108	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8251717	Total Zinc (Zn)	2016/04/26	103	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
8251717	Total Zirconium (Zr)	2016/04/26					<0.00010	mg/L	NC	20
8251936	Dissolved Mercury (Hg)	2016/04/26	92	80 - 120	92	80 - 120	<0.0000020	mg/L	NC	20
8251947	Total Mercury (Hg)	2016/04/26	94	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8252056	Total Aluminum (Al)	2016/04/26	96	80 - 120	100	80 - 120	<0.00050	mg/L	9.2	20
8252056	Total Antimony (Sb)	2016/04/26	97	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8252056	Total Arsenic (As)	2016/04/26	103	80 - 120	99	80 - 120	<0.000020	mg/L	6.8	20
8252056	Total Barium (Ba)	2016/04/26	99	80 - 120	100	80 - 120	<0.000020	mg/L	0.28	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8252056	Total Beryllium (Be)	2016/04/26	108	80 - 120	109	80 - 120	<0.000010	mg/L	NC	20
8252056	Total Bismuth (Bi)	2016/04/26	96	80 - 120	93	80 - 120	<0.0000050	mg/L	NC	20
8252056	Total Boron (B)	2016/04/26	108	80 - 120	108	80 - 120	<0.010	mg/L	NC	20
8252056	Total Cadmium (Cd)	2016/04/26	101	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8252056	Total Chromium (Cr)	2016/04/26	100	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8252056	Total Cobalt (Co)	2016/04/26	100	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8252056	Total Copper (Cu)	2016/04/26	99	80 - 120	101	80 - 120	<0.000050	mg/L	5.0	20
8252056	Total Iron (Fe)	2016/04/26	101	80 - 120	105	80 - 120	<0.0010	mg/L	7.3	20
8252056	Total Lead (Pb)	2016/04/26	103	80 - 120	98	80 - 120	<0.0000050	mg/L	2.2	20
8252056	Total Lithium (Li)	2016/04/26	108	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8252056	Total Manganese (Mn)	2016/04/26	94	80 - 120	96	80 - 120	<0.000050	mg/L	0.24	20
8252056	Total Molybdenum (Mo)	2016/04/26	98	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8252056	Total Nickel (Ni)	2016/04/26	99	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8252056	Total Phosphorus (P)	2016/04/26					<0.0020	mg/L		
8252056	Total Selenium (Se)	2016/04/26	99	80 - 120	100	80 - 120	<0.000040	mg/L	NC	20
8252056	Total Silicon (Si)	2016/04/26					<0.050	mg/L	1.2	20
8252056	Total Silver (Ag)	2016/04/26	95	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8252056	Total Strontium (Sr)	2016/04/26	NC	80 - 120	91	80 - 120	<0.000050	mg/L	1.6	20
8252056	Total Thallium (Tl)	2016/04/26	101	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8252056	Total Tin (Sn)	2016/04/26	98	80 - 120	110	80 - 120	<0.00020	mg/L	NC	20
8252056	Total Titanium (Ti)	2016/04/26	102	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20
8252056	Total Uranium (U)	2016/04/26	102	80 - 120	101	80 - 120	<0.0000020	mg/L	0	20
8252056	Total Vanadium (V)	2016/04/26	105	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8252056	Total Zinc (Zn)	2016/04/26	102	80 - 120	105	80 - 120	<0.00010	mg/L	5.8	20
8252056	Total Zirconium (Zr)	2016/04/26					<0.00010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8252818	Fluoride (F)	2016/04/26			100	80 - 120	0.013, RDL=0.010	mg/L	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

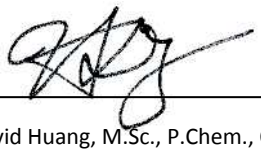
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

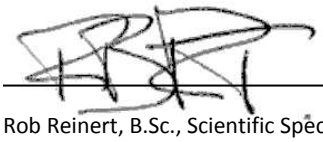
ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



David Huang, M.Sc., P.Chem., QP, Scientific Services Manager



Rob Reinert, B.Sc., Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08420310

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[X] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Andrew MacPhail	Date Required:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

Rush Confirmation #:

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		21-Apr-16	8:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
3	KZ-7		20-Apr-16	15:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
4	KZ-9		20-Apr-16	13:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
5	KZ-13				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
6	KZ-15				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
7	KZ-16				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
8	KZ-17				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
9	KZ-19				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
10	KZ-21				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	

LABORATORY USE ONLY

CUSTODY SEAL Y / (N) Present	Intact	COOLER TEMPERATURES
		2, 3, 4
		5, 6, 4

COOLING MEDIA PRESENT (Y) / N

B630374_COC

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Andrew MacPhail	21/04/2016	16:15	Rocheco	2016/04/22	13:15
			ROCHELLE PACHECO		

MAX. B630374

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY F

COC 08420311

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Andrew MacPhail	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-22				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
2	KZ-26				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
3	KZ-28				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
4	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
5	KZ-6		20-Apr-16	16:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
6																							
7																							
8																							
9																							
10																							

B630374_COC

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
		2, 3, 4
		5, 6, 4

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEVIED IN WHITEHORSE

BY: [signature] 16:10

2016-04-21

TEMP: 8 / 7 / 8

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Andrew MacPhail	22/03/2016	13:30	Pacheco	2016/04/22	13:15	
			ROCHELLE PACHECO			

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08420816, 08420817

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/05/16
Report #: R2181680
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B635308
Received: 2016/05/06, 11:50

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	13	N/A	2016/05/10	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	13	2016/05/10	2016/05/10	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	13	N/A	2016/05/10	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	13	N/A	2016/05/10	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	13	N/A	2016/05/10	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	13	N/A	2016/05/10	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	12	N/A	2016/05/10	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2016/05/10	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	13	N/A	2016/05/10	BBY6SOP-00026	SM 22 2510 B m
Fluoride	13	N/A	2016/05/11	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	13	N/A	2016/05/11	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	13	N/A	2016/05/11	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	13	N/A	2016/05/11	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	13	2016/05/11	2016/05/11	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	13	N/A	2016/05/11	BBY WI-00033	SM 22 1030E
Sum of cations, anions	13	N/A	2016/05/11	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	13	N/A	2016/05/11	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	4	N/A	2016/05/10	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	9	N/A	2016/05/11	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Digested LL (total)	8	2016/05/10	2016/05/10	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	13	N/A	2016/05/11	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	5	N/A	2016/05/11	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	13	N/A	2016/05/11	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	13	N/A	2016/05/10	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	13	N/A	2016/05/10	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	13	N/A	2016/05/11	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	12	N/A	2016/05/10	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	13	N/A	2016/05/10	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	13	N/A	2016/05/10	BBY6SOP-00017	SM 22 4500-SO42- E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08420816, 08420817

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/05/16
Report #: R2181680
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B635308
Received: 2016/05/06, 11:50

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Phosphorus-P (LL Tot, dissolved) - UF/UP	13	2016/05/10	2016/05/10	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	13	N/A	2016/05/10	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	13	2016/05/10	2016/05/11	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OP1398		OP1399		OP1400	OP1401		
Sampling Date		2016/05/05 12:19		2016/05/05 10:35		2016/05/05 09:02	2016/05/04 15:57		
COC Number		08420816		08420816		08420816	08420816		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	KZ-9	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	2.5	8264162	2.4	8264162	2.3	2.5	N/A	8264162
Cation Sum	meq/L	2.4	8264162	2.3	8264162	2.3	2.4	N/A	8264162
Filter and HNO3 Preservation	N/A	LAB	8265017	LAB	8265017	LAB	LAB	N/A	8265017
Ion Balance	N/A	0.96	8264161	0.95	8264161	1.0	0.97	0.010	8264161
Nitrate (N)	mg/L	0.0973	8264443	0.0604	8264443	0.0524	0.0571	0.0020	8264443
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00050	8265317	0.00064	8265317	0.00062	0.00066	0.00050	8265317
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8265322	0.00052	8265322	0.00057	<0.00050	0.00050	8265322
Fluoride (F)	mg/L	0.049	8266847	0.051	8266847	0.055	0.065	0.010	8266847
Dissolved Organic Carbon (C)	mg/L	2.26	8265288	4.97	8265288	4.85	3.80	0.50	8265288
Acidity (pH 4.5)	mg/L	<0.50	8265059	<0.50	8265061	<0.50	<0.50	0.50	8265059
Alkalinity (Total as CaCO3)	mg/L	78.4	8265235	103	8265245	92.4	106	0.50	8265235
Acidity (pH 8.3)	mg/L	<0.50	8265059	<0.50	8265061	0.58	3.72	0.50	8265059
Alkalinity (PP as CaCO3)	mg/L	<0.50	8265235	<0.50	8265245	<0.50	<0.50	0.50	8265235
Bicarbonate (HCO3)	mg/L	95.6	8265235	125	8265245	113	129	0.50	8265235
Carbonate (CO3)	mg/L	<0.50	8265235	<0.50	8265245	<0.50	<0.50	0.50	8265235
Hydroxide (OH)	mg/L	<0.50	8265235	<0.50	8265245	<0.50	<0.50	0.50	8265235
Anions									
Dissolved Sulphate (SO4)	mg/L	41.3	8265613	15.2	8265616	18.7	16.6	0.50	8265613
Dissolved Chloride (Cl)	mg/L	0.99	8265612	0.95	8265614	1.1	1.1	0.50	8265612
MISCELLANEOUS									
True Colour	Col. Unit	7.7 (1)	8265376	23.2 (1)	8265376	44.2 (1)	31.2 (1)	5.0	8265376
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0026 (1)	8265390	0.0060 (1)	8265391	0.0074 (1)	0.0067 (1)	0.0020	8265390
Total Ammonia (N)	mg/L	0.0164 (1)	8266220	<0.0050 (1)	8266223	0.0158 (1)	0.0171 (1)	0.0050	8266220
Nitrate plus Nitrite (N)	mg/L	0.0973 (1)	8265729	0.0604 (1)	8265731	0.0545 (1)	0.0571 (1)	0.0020	8265729
Nitrite (N)	mg/L	<0.0020 (1)	8265730	<0.0020 (1)	8265732	0.0021 (1)	<0.0020 (1)	0.0020	8265730
Total Phosphorus (P)	mg/L	0.0021 (1)	8265394	0.0058 (1)	8265394	0.0080 (1)	0.0060 (1)	0.0020	8265394
Physical Properties									
Conductivity	uS/cm	244	8265240	227	8265255	221	239	1.0	8265240

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OP1398		OP1399		OP1400	OP1401		
Sampling Date		2016/05/05 12:19		2016/05/05 10:35		2016/05/05 09:02	2016/05/04 15:57		
COC Number		08420816		08420816		08420816	08420816		
	UNITS	**KZ-2**	**QC Batch**	**KZ-6**	**QC Batch**	**KZ-7**	**KZ-9**	**RDL**	**QC Batch**
pH	pH	7.96	8265241	8.15	8265256	7.98	7.84		8265241
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8264707	<1.0	8264707	1.7	4.1	1.0	8264707
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OP1402		OP1403	OP1404		OP1405		
Sampling Date		2016/05/04 12:06		2016/05/04 13:54	2016/05/04 13:25		2016/05/04 11:27		
COC Number		08420816		08420816	08420816		08420816		
	UNITS	KZ-15	QC Batch	KZ-16	KZ-17	QC Batch	KZ-19	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	3.6	8264162	3.4	3.4	8264162	2.5	N/A	8264162
Cation Sum	meq/L	3.5	8264162	3.4	3.4	8264162	2.4	N/A	8264162
Filter and HNO3 Preservation	N/A	LAB	8265017	LAB	LAB	8265017	LAB	N/A	8265017
Ion Balance	N/A	0.97	8264161	0.99	0.98	8264161	0.98	0.010	8264161
Nitrate (N)	mg/L	0.0883	8264443	0.101	0.0702	8264443	0.0967	0.0020	8264443
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00053	8265317	0.00061	0.00050	8265317	0.00054	0.00050	8265317
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8265322	<0.00050	<0.00050	8265322	0.00050	0.00050	8265322
Fluoride (F)	mg/L	0.092	8266847	0.076	0.100	8266847	0.050	0.010	8266847
Dissolved Organic Carbon (C)	mg/L	3.24	8265288	2.50	4.16	8265288	2.87	0.50	8265288
Acidity (pH 4.5)	mg/L	<0.50	8265059	<0.50	<0.50	8265059	<0.50	0.50	8265061
Alkalinity (Total as CaCO3)	mg/L	154	8265245	147	148	8265235	78.2	0.50	8265245
Acidity (pH 8.3)	mg/L	0.73	8265059	1.09	0.51	8265059	<0.50	0.50	8265061
Alkalinity (PP as CaCO3)	mg/L	<0.50	8265245	<0.50	<0.50	8265235	<0.50	0.50	8265245
Bicarbonate (HCO3)	mg/L	188	8265245	179	181	8265235	95.4	0.50	8265245
Carbonate (CO3)	mg/L	<0.50	8265245	<0.50	<0.50	8265235	<0.50	0.50	8265245
Hydroxide (OH)	mg/L	<0.50	8265245	<0.50	<0.50	8265235	<0.50	0.50	8265245
Anions									
Dissolved Sulphate (SO4)	mg/L	22.3	8265613	21.7	20.8	8265613	43.6	0.50	8265616
Dissolved Chloride (Cl)	mg/L	1.1	8265612	1.0	1.1	8265612	0.57	0.50	8265614
MISCELLANEOUS									
True Colour	Col. Unit	14.8 (1)	8265376	7.8 (1)	22.9 (1)	8265376	7.5 (1)	5.0	8265376
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0087 (1)	8265390	0.0031 (1)	0.0101 (1)	8265390	<0.0020 (1)	0.0020	8265391
Total Ammonia (N)	mg/L	<0.0050 (1)	8266220	0.0207 (1)	0.0102 (1)	8266220	0.0062 (1)	0.0050	8266223
Nitrate plus Nitrite (N)	mg/L	0.0883 (1)	8265729	0.101 (1)	0.0702 (1)	8265729	0.0967 (1)	0.0020	8265731
Nitrite (N)	mg/L	<0.0020 (1)	8265730	<0.0020 (1)	<0.0020 (1)	8265730	<0.0020 (1)	0.0020	8265732
Total Phosphorus (P)	mg/L	0.0063 (1)	8265394	0.0025 (1)	0.0083 (1)	8265394	<0.0020 (1)	0.0020	8265394
Physical Properties									
Conductivity	uS/cm	328	8265255	314	321	8265240	246	1.0	8265255

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OP1402		OP1403	OP1404		OP1405		
Sampling Date		2016/05/04 12:06		2016/05/04 13:54	2016/05/04 13:25		2016/05/04 11:27		
COC Number		08420816		08420816	08420816		08420816		
	UNITS	**KZ-15**	**QC Batch**	**KZ-16**	**KZ-17**	**QC Batch**	**KZ-19**	**RDL**	**QC Batch**
pH	pH	8.12	8265256	8.10	8.15	8265241	8.05		8265256
Physical Properties									
Total Suspended Solids	mg/L	1.5	8264707	<1.0	2.1	8264707	1.5	1.0	8264707
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OP1407		OP1408		OP1409	OP1410		
Sampling Date		2016/05/04 10:11		2016/05/04 08:53		2016/05/03 13:59	2016/05/03 15:07		
COC Number		08420817		08420817		08420817	08420817		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	KZ-28	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	3.9	8264162	4.1	8264162	4.2	0.048	N/A	8264162
Cation Sum	meq/L	3.9	8264162	4.0	8264162	4.2	0.0020	N/A	8264162
Filter and HNO3 Preservation	N/A	LAB	8265017	LAB	8265017	LAB	LAB	N/A	8265017
Ion Balance	N/A	1.0	8264161	0.97	8264161	0.98	0.041	0.010	8264161
Nitrate (N)	mg/L	0.0496	8264443	0.0609	8264443	0.0538	<0.0020	0.0020	8264443
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00075	8265317	0.00075	8265317	0.00070	<0.00050	0.00050	8265317
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00070	8265322	0.00069	8265322	0.00062	<0.00050	0.00050	8265322
Fluoride (F)	mg/L	0.170	8266847	0.130	8266847	0.120	0.011	0.010	8266847
Dissolved Organic Carbon (C)	mg/L	5.75	8265288	5.29	8265288	4.61	<0.50	0.50	8265288
Acidity (pH 4.5)	mg/L	<0.50	8265059	<0.50	8265061	<0.50	<0.50 (1)	0.50	8265059
Alkalinity (Total as CaCO3)	mg/L	164	8265235	171	8265245	178	1.17	0.50	8265235
Acidity (pH 8.3)	mg/L	2.00	8265059	0.67	8265061	<0.50	<0.50	0.50	8265059
Alkalinity (PP as CaCO3)	mg/L	<0.50	8265235	<0.50	8265245	<0.50	<0.50	0.50	8265235
Bicarbonate (HCO3)	mg/L	200	8265235	209	8265245	217	1.43	0.50	8265235
Carbonate (CO3)	mg/L	<0.50	8265235	<0.50	8265245	<0.50	<0.50	0.50	8265235
Hydroxide (OH)	mg/L	<0.50	8265235	<0.50	8265245	<0.50	<0.50	0.50	8265235
Anions									
Dissolved Sulphate (SO4)	mg/L	27.2	8265613	29.6	8265616	30.5	<0.50	0.50	8265613
Dissolved Chloride (Cl)	mg/L	1.2	8265612	0.82	8265614	1.2	0.86	0.50	8265612
MISCELLANEOUS									
True Colour	Col. Unit	46.4 (2)	8265376	31.7 (2)	8265376	24.5 (2)	<5.0 (2)	5.0	8265376
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0210 (2)	8265390	0.0120 (2)	8265391	0.0085 (2)	<0.0020 (2)	0.0020	8265390
Total Ammonia (N)	mg/L	0.0147 (2)	8266220	0.0089 (2)	8266223	0.0100 (2)	0.0116 (2)	0.0050	8266220
Nitrate plus Nitrite (N)	mg/L	0.0496 (2)	8265729	0.0609 (2)	8265731	0.0538 (2)	<0.0020 (2)	0.0020	8265729
Nitrite (N)	mg/L	<0.0020 (2)	8265730	<0.0020 (2)	8265732	<0.0020 (2)	<0.0020 (2)	0.0020	8265730
Total Phosphorus (P)	mg/L	0.0203 (2)	8265394	0.0109 (2)	8265394	0.0080 (2)	<0.0020 (2)	0.0020	8265394

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

(2) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OP1407		OP1408		OP1409	OP1410		
Sampling Date		2016/05/04 10:11		2016/05/04 08:53		2016/05/03 13:59	2016/05/03 15:07		
COC Number		08420817		08420817		08420817	08420817		
	UNITS	**KZ-21**	**QC Batch**	**KZ-22**	**QC Batch**	**KZ-26**	**KZ-28**	**RDL**	**QC Batch**
Physical Properties									
Conductivity	uS/cm	356	8265240	369	8265255	380	1.1	1.0	8265240
pH	pH	8.09	8265241	8.22	8265256	8.23	5.95		8265241
Physical Properties									
Total Suspended Solids	mg/L	2.8	8264707	1.7	8264707	4.0	<1.0	1.0	8264707
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OP1411		
Sampling Date		2016/05/06 11:50		
COC Number		08420817		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	0.034	N/A	8264162
Cation Sum	meq/L	0.0017	N/A	8264162
Ion Balance	N/A	0.050	0.010	8264161
Nitrate (N)	mg/L	<0.0020	0.0020	8264443
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8265317
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8265322
Fluoride (F)	mg/L	0.011	0.010	8266847
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8263437
Acidity (pH 4.5)	mg/L	<0.50 (1)	0.50	8265061
Alkalinity (Total as CaCO3)	mg/L	0.94	0.50	8265245
Acidity (pH 8.3)	mg/L	<0.50	0.50	8265061
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8265245
Bicarbonate (HCO3)	mg/L	1.15	0.50	8265245
Carbonate (CO3)	mg/L	<0.50	0.50	8265245
Hydroxide (OH)	mg/L	<0.50	0.50	8265245
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8265616
Dissolved Chloride (Cl)	mg/L	0.51	0.50	8265614
MISCELLANEOUS				
True Colour	Col. Unit	<5.0	5.0	8265376
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8265391
Total Ammonia (N)	mg/L	0.0073	0.0050	8266223
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8265731
Nitrite (N)	mg/L	<0.0020	0.0020	8265732
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8265394
Physical Properties				
Conductivity	uS/cm	1.1	1.0	8265255

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OP1411		
Sampling Date		2016/05/06 11:50		
COC Number		08420817		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
pH	pH	5.93		8265256
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8264707
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OP1398	OP1399	OP1400	OP1401	OP1402		
Sampling Date		2016/05/05 12:19	2016/05/05 10:35	2016/05/05 09:02	2016/05/04 15:57	2016/05/04 12:06		
COC Number		08420816	08420816	08420816	08420816	08420816		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-9	KZ-15	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	114	111	112	116	170	0.50	8264028
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8265992
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00295	0.00654	0.00764	0.00510	0.00294	0.00050	8265346
Dissolved Antimony (Sb)	mg/L	0.000025	<0.000020	0.000060	0.000046	0.000033	0.000020	8265346
Dissolved Arsenic (As)	mg/L	0.000074	0.000081	0.000430	0.000309	0.000410	0.000020	8265346
Dissolved Barium (Ba)	mg/L	0.0647	0.0359	0.0614	0.0609	0.0641	0.000020	8265346
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8265346
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000060	<0.0000050	0.0000050	8265346
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8265346
Dissolved Cadmium (Cd)	mg/L	0.000190	0.0000110	0.000107	0.0000540	0.0000190	0.0000050	8265346
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8265346
Dissolved Cobalt (Co)	mg/L	0.0000070	0.0000180	0.0000450	0.0000720	0.0000160	0.0000050	8265346
Dissolved Copper (Cu)	mg/L	0.00143	0.000579	0.000853	0.000805	0.000492	0.000050	8265346
Dissolved Iron (Fe)	mg/L	0.0020	0.0234	0.246	0.238	0.0401	0.0010	8265346
Dissolved Lead (Pb)	mg/L	0.0000230	<0.0000050	0.000227	0.0000850	0.0000120	0.0000050	8265346
Dissolved Lithium (Li)	mg/L	0.00160	<0.00050	0.00168	0.00228	0.00242	0.00050	8265346
Dissolved Manganese (Mn)	mg/L	0.000118	0.000225	0.0348	0.0456	0.00842	0.000050	8265346
Dissolved Molybdenum (Mo)	mg/L	0.000674	0.000490	0.000515	0.000516	0.00109	0.000050	8265346
Dissolved Nickel (Ni)	mg/L	0.000318	0.000410	0.000480	0.000514	0.000676	0.000020	8265346
Dissolved Phosphorus (P)	mg/L	0.0030	0.0068	0.0057	0.0029	<0.0020	0.0020	8265346
Dissolved Selenium (Se)	mg/L	0.00240	0.000811	0.000618	0.000649	0.000765	0.000040	8265346
Dissolved Silicon (Si)	mg/L	2.22	2.37	2.52	2.67	3.08	0.050	8265346
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265346
Dissolved Strontium (Sr)	mg/L	0.128	0.114	0.122	0.135	0.171	0.000050	8265346
Dissolved Thallium (Tl)	mg/L	0.0000040	<0.0000020	0.0000020	<0.0000020	<0.0000020	0.0000020	8265346
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8265346
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8265346
Dissolved Uranium (U)	mg/L	0.00388	0.000666	0.000764	0.000799	0.00272	0.0000020	8265346
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8265346
Dissolved Zinc (Zn)	mg/L	0.0226	0.00056	0.0248	0.00973	0.00212	0.00010	8265346
RDL = Reportable Detection Limit								

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OP1398	OP1399	OP1400	OP1401	OP1402		
Sampling Date		2016/05/05 12:19	2016/05/05 10:35	2016/05/05 09:02	2016/05/04 15:57	2016/05/04 12:06		
COC Number		08420816	08420816	08420816	08420816	08420816		
	UNITS	**KZ-2**	**KZ-6**	**KZ-7**	**KZ-9**	**KZ-15**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8265346
Dissolved Calcium (Ca)	mg/L	36.0	36.6	37.2	38.6	50.2	0.050	8264201
Dissolved Magnesium (Mg)	mg/L	5.76	4.77	4.73	4.78	11.0	0.050	8264201
Dissolved Potassium (K)	mg/L	2.22	1.43	1.66	1.56	1.26	0.050	8264201
Dissolved Sodium (Na)	mg/L	0.718	0.488	0.738	0.797	0.976	0.050	8264201
Dissolved Sulphur (S)	mg/L	14.0	5.4	6.4	5.6	7.4	3.0	8264201
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OP1403	OP1404	OP1405	OP1407	OP1408		
Sampling Date		2016/05/04 13:54	2016/05/04 13:25	2016/05/04 11:27	2016/05/04 10:11	2016/05/04 08:53		
COC Number		08420816	08420816	08420816	08420817	08420817		
	UNITS	KZ-16	KZ-17	KZ-19	KZ-21	KZ-22	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	165	164	118	189	193	0.50	8264028
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8265992
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00159	0.00341	0.00290	0.00256	0.00184	0.00050	8265346
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000039	0.000022	0.000089	0.000068	0.000020	8265346
Dissolved Arsenic (As)	mg/L	0.000238	0.000619	0.000086	0.00172	0.00125	0.000020	8265346
Dissolved Barium (Ba)	mg/L	0.0580	0.0603	0.0639	0.0482	0.0544	0.000020	8265346
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8265346
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265346
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8265346
Dissolved Cadmium (Cd)	mg/L	0.0000090	0.0000310	0.000176	0.0000100	0.0000090	0.0000050	8265346
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8265346
Dissolved Cobalt (Co)	mg/L	0.0000170	0.0000230	0.0000080	0.0000780	0.0000710	0.0000050	8265346
Dissolved Copper (Cu)	mg/L	0.000412	0.000567	0.00154	0.000431	0.000399	0.000050	8265346
Dissolved Iron (Fe)	mg/L	0.0072	0.0920	0.0021	0.282	0.158	0.0010	8265346
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000270	0.0000220	0.0000060	0.0000090	0.0000050	8265346
Dissolved Lithium (Li)	mg/L	0.00172	0.00291	0.00104	0.00399	0.00331	0.00050	8265346
Dissolved Manganese (Mn)	mg/L	0.00410	0.0209	0.000121	0.0671	0.0409	0.000050	8265346
Dissolved Molybdenum (Mo)	mg/L	0.000480	0.00149	0.000707	0.00180	0.00140	0.000050	8265346
Dissolved Nickel (Ni)	mg/L	0.000529	0.000783	0.000313	0.00250	0.00159	0.000020	8265346
Dissolved Phosphorus (P)	mg/L	0.0023	0.0058	0.0040	0.0095	0.0060	0.0020	8265346
Dissolved Selenium (Se)	mg/L	0.000727	0.000782	0.00237	0.000335	0.000542	0.000040	8265346
Dissolved Silicon (Si)	mg/L	2.96	2.98	2.23	3.71	3.52	0.050	8265346
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265346
Dissolved Strontium (Sr)	mg/L	0.167	0.162	0.133	0.149	0.168	0.000050	8265346
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000040	<0.0000020	<0.0000020	0.0000020	8265346
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8265346
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8265346
Dissolved Uranium (U)	mg/L	0.00172	0.00307	0.00399	0.00216	0.00246	0.0000020	8265346
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8265346
Dissolved Zinc (Zn)	mg/L	0.00046	0.00357	0.0216	0.00087	0.00072	0.00010	8265346
RDL = Reportable Detection Limit								

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OP1403	OP1404	OP1405	OP1407	OP1408		
Sampling Date		2016/05/04 13:54	2016/05/04 13:25	2016/05/04 11:27	2016/05/04 10:11	2016/05/04 08:53		
COC Number		08420816	08420816	08420816	08420817	08420817		
	UNITS	**KZ-16**	**KZ-17**	**KZ-19**	**KZ-21**	**KZ-22**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8265346
Dissolved Calcium (Ca)	mg/L	50.8	47.7	37.8	47.4	51.1	0.050	8264201
Dissolved Magnesium (Mg)	mg/L	9.35	10.9	5.75	17.2	15.9	0.050	8264201
Dissolved Potassium (K)	mg/L	1.12	1.41	2.21	1.53	1.40	0.050	8264201
Dissolved Sodium (Na)	mg/L	0.943	0.929	0.702	1.17	1.18	0.050	8264201
Dissolved Sulphur (S)	mg/L	7.3	7.5	13.6	9.3	9.5	3.0	8264201
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OP1409	OP1410	OP1411		
Sampling Date		2016/05/03 13:59	2016/05/03 15:07	2016/05/06 11:50		
COC Number		08420817	08420817	08420817		
	UNITS	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	204	<0.50	<0.50	0.50	8264028
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8265992
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.00150	<0.00050	<0.00050	0.00050	8265346
Dissolved Antimony (Sb)	mg/L	0.000084	<0.000020	<0.000020	0.000020	8265346
Dissolved Arsenic (As)	mg/L	0.000883	<0.000020	<0.000020	0.000020	8265346
Dissolved Barium (Ba)	mg/L	0.0592	<0.000020	<0.000020	0.000020	8265346
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8265346
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265346
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8265346
Dissolved Cadmium (Cd)	mg/L	0.0000060	<0.0000050	<0.0000050	0.0000050	8265346
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8265346
Dissolved Cobalt (Co)	mg/L	0.0000160	<0.0000050	<0.0000050	0.0000050	8265346
Dissolved Copper (Cu)	mg/L	0.000519	<0.000050	<0.000050	0.000050	8265346
Dissolved Iron (Fe)	mg/L	0.0607	<0.0010	<0.0010	0.0010	8265346
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265346
Dissolved Lithium (Li)	mg/L	0.00387	<0.00050	<0.00050	0.00050	8265346
Dissolved Manganese (Mn)	mg/L	0.00113	<0.000050	<0.000050	0.000050	8265346
Dissolved Molybdenum (Mo)	mg/L	0.00121	<0.000050	<0.000050	0.000050	8265346
Dissolved Nickel (Ni)	mg/L	0.00113	<0.000020	<0.000020	0.000020	8265346
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020	<0.0020	0.0020	8265346
Dissolved Selenium (Se)	mg/L	0.000589	<0.000040	<0.000040	0.000040	8265346
Dissolved Silicon (Si)	mg/L	3.46	<0.050	<0.050	0.050	8265346
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265346
Dissolved Strontium (Sr)	mg/L	0.185	<0.000050	<0.000050	0.000050	8265346
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8265346
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8265346
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8265346
Dissolved Uranium (U)	mg/L	0.00250	<0.0000020	<0.0000020	0.0000020	8265346
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8265346
Dissolved Zinc (Zn)	mg/L	0.00025	<0.00010	<0.00010	0.00010	8265346
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OP1409	OP1410	OP1411		
Sampling Date		2016/05/03 13:59	2016/05/03 15:07	2016/05/06 11:50		
COC Number		08420817	08420817	08420817		
	UNITS	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8265346
Dissolved Calcium (Ca)	mg/L	54.2	<0.050	<0.050	0.050	8264201
Dissolved Magnesium (Mg)	mg/L	16.6	<0.050	<0.050	0.050	8264201
Dissolved Potassium (K)	mg/L	1.33	<0.050	<0.050	0.050	8264201
Dissolved Sodium (Na)	mg/L	1.34	<0.050	<0.050	0.050	8264201
Dissolved Sulphur (S)	mg/L	10.6	<3.0	<3.0	3.0	8264201
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OP1398	OP1403	OP1405	OP1410	OP1411		
Sampling Date		2016/05/05 12:19	2016/05/04 13:54	2016/05/04 11:27	2016/05/03 15:07	2016/05/06 11:50		
COC Number		08420816	08420816	08420816	08420817	08420817		
	UNITS	KZ-2	KZ-16	KZ-19	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	117	167	119	<0.50	<0.50	0.50	8264070
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8265985
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00611	0.00353	0.0987	<0.00050	<0.00050	0.00050	8265075
Total Antimony (Sb)	mg/L	0.000024	<0.000020	0.000031	<0.000020	<0.000020	0.000020	8265075
Total Arsenic (As)	mg/L	0.000080	0.000284	0.000084	<0.000020	<0.000020	0.000020	8265075
Total Barium (Ba)	mg/L	0.0639	0.0609	0.0670	<0.000020	<0.000020	0.000020	8265075
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8265075
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265075
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8265075
Total Cadmium (Cd)	mg/L	0.000194	0.0000190	0.000189	<0.0000050	<0.0000050	0.0000050	8265075
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00018	<0.00010	<0.00010	0.00010	8265075
Total Cobalt (Co)	mg/L	0.0000110	0.0000340	0.0000710	<0.0000050	<0.0000050	0.0000050	8265075
Total Copper (Cu)	mg/L	0.00157	0.000474	0.00170	0.000062	<0.000050	0.000050	8265075
Total Iron (Fe)	mg/L	0.0109	0.0435	0.140	<0.0010	<0.0010	0.0010	8265075
Total Lead (Pb)	mg/L	0.0000690	0.0000210	0.000103	0.0000060	<0.0000050	0.0000050	8265075
Total Lithium (Li)	mg/L	0.00140	0.00164	0.00129	<0.00050	<0.00050	0.00050	8265075
Total Manganese (Mn)	mg/L	0.000324	0.00940	0.00196	<0.000050	<0.000050	0.000050	8265075
Total Molybdenum (Mo)	mg/L	0.000700	0.000493	0.000734	<0.000050	<0.000050	0.000050	8265075
Total Nickel (Ni)	mg/L	0.000309	0.000583	0.000446	<0.000020	<0.000020	0.000020	8265075
Total Phosphorus (P)	mg/L	0.0068	0.0032	0.0042	<0.0020	<0.0020	0.0020	8265075
Total Selenium (Se)	mg/L	0.00244	0.000710	0.00236	<0.000040	<0.000040	0.000040	8265075
Total Silicon (Si)	mg/L	2.31	2.93	2.43	<0.050	<0.050	0.050	8265075
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265075
Total Strontium (Sr)	mg/L	0.129	0.170	0.134	<0.000050	<0.000050	0.000050	8265075
Total Thallium (Tl)	mg/L	0.0000040	<0.0000020	0.0000040	<0.0000020	<0.0000020	0.0000020	8265075
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8265075
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00724	<0.00050	<0.00050	0.00050	8265075
Total Uranium (U)	mg/L	0.00399	0.00175	0.00386	<0.0000020	<0.0000020	0.0000020	8265075
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00042	<0.00020	<0.00020	0.00020	8265075
Total Zinc (Zn)	mg/L	0.0227	0.00062	0.0242	0.00040	<0.00010	0.00010	8265075

RDL = Reportable Detection Limit

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OP1398	OP1403	OP1405	OP1410	OP1411		
Sampling Date		2016/05/05 12:19	2016/05/04 13:54	2016/05/04 11:27	2016/05/03 15:07	2016/05/06 11:50		
COC Number		08420816	08420816	08420816	08420817	08420817		
	UNITS	**KZ-2**	**KZ-16**	**KZ-19**	**KZ-28**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8265075
Total Calcium (Ca)	mg/L	37.4	50.6	38.1	<0.050	<0.050	0.050	8264442
Total Magnesium (Mg)	mg/L	5.83	9.91	5.87	<0.050	<0.050	0.050	8264442
Total Potassium (K)	mg/L	2.24	1.17	2.26	<0.050	<0.050	0.050	8264442
Total Sodium (Na)	mg/L	0.717	0.955	0.735	<0.050	<0.050	0.050	8264442
Total Sulphur (S)	mg/L	14.2	7.3	14.2	<3.0	<3.0	3.0	8264442

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OP1399	OP1400	OP1401	OP1402	OP1404		
Sampling Date		2016/05/05 10:35	2016/05/05 09:02	2016/05/04 15:57	2016/05/04 12:06	2016/05/04 13:25		
COC Number		08420816	08420816	08420816	08420816	08420816		
	UNITS	KZ-6	KZ-7	KZ-9	KZ-15	KZ-17	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	118	114	121	169	165	0.50	8264070
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8265985
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0095	0.0587	0.0422	0.0125	0.0181	0.0030	8265052
Total Antimony (Sb)	mg/L	<0.000050	0.000070	<0.000050	<0.000050	<0.000050	0.000050	8265052
Total Arsenic (As)	mg/L	0.000109	0.000622	0.000380	0.000554	0.000998	0.000020	8265052
Total Barium (Ba)	mg/L	0.0363	0.0633	0.0656	0.0629	0.0619	0.00010	8265052
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8265052
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	8265052
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8265052
Total Cadmium (Cd)	mg/L	0.0000200	0.000170	0.0000760	0.0000310	0.0000520	0.0000050	8265052
Total Chromium (Cr)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8265052
Total Cobalt (Co)	mg/L	0.000019	0.000076	0.000105	0.000036	0.000060	0.000010	8265052
Total Copper (Cu)	mg/L	0.00080	0.00134	0.00124	0.00072	0.00088	0.00020	8265052
Total Iron (Fe)	mg/L	0.0378	0.506	0.527	0.146	0.300	0.0050	8265052
Total Lead (Pb)	mg/L	<0.000050	0.000631	0.000283	0.000062	0.000115	0.000050	8265052
Total Lithium (Li)	mg/L	0.00081	0.00236	0.00248	0.00277	0.00322	0.00050	8265052
Total Manganese (Mn)	mg/L	0.00175	0.0418	0.0573	0.0218	0.0489	0.00010	8265052
Total Molybdenum (Mo)	mg/L	0.000506	0.000536	0.000571	0.00101	0.00149	0.000050	8265052
Total Nickel (Ni)	mg/L	0.00043	0.00067	0.00070	0.00075	0.00101	0.00010	8265052
Total Phosphorus (P)	mg/L	<0.010	<0.010	<0.010	<0.010	0.011	0.010	8265052
Total Selenium (Se)	mg/L	0.000797	0.000652	0.000627	0.000742	0.000756	0.000040	8265052
Total Silicon (Si)	mg/L	2.53	2.70	2.78	3.08	3.10	0.10	8265052
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265052
Total Strontium (Sr)	mg/L	0.117	0.125	0.136	0.166	0.161	0.000050	8265052
Total Thallium (Tl)	mg/L	0.0000020	0.0000030	0.0000020	<0.0000020	<0.0000020	0.0000020	8265052
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8265052
Total Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8265052
Total Uranium (U)	mg/L	0.000691	0.000796	0.000851	0.00255	0.00315	0.0000050	8265052
Total Vanadium (V)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8265052
Total Zinc (Zn)	mg/L	<0.0010	0.0350	0.0134	0.0034	0.0064	0.0010	8265052

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OP1399	OP1400	OP1401	OP1402	OP1404		
Sampling Date		2016/05/05 10:35	2016/05/05 09:02	2016/05/04 15:57	2016/05/04 12:06	2016/05/04 13:25		
COC Number		08420816	08420816	08420816	08420816	08420816		
	UNITS	**KZ-6**	**KZ-7**	**KZ-9**	**KZ-15**	**KZ-17**	**RDL**	**QC Batch**
Total Zirconium (Zr)	mg/L	<0.00010	0.00013	<0.00010	<0.00010	<0.00010	0.00010	8265052
Total Calcium (Ca)	mg/L	39.1	37.6	40.2	50.1	48.5	0.25	8264442
Total Magnesium (Mg)	mg/L	4.95	4.79	4.93	10.7	10.6	0.25	8264442
Total Potassium (K)	mg/L	1.41	1.66	1.59	1.24	1.38	0.25	8264442
Total Sodium (Na)	mg/L	0.49	0.74	0.80	0.95	0.92	0.25	8264442
Total Sulphur (S)	mg/L	<15	<15	<15	<15	<15	15	8264442

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OP1407	OP1408	OP1409		
Sampling Date		2016/05/04 10:11	2016/05/04 08:53	2016/05/03 13:59		
COC Number		08420817	08420817	08420817		
	UNITS	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	193	196	207	0.50	8264070
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8265985
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.0103	0.0085	0.0139	0.0030	8265052
Total Antimony (Sb)	mg/L	0.000098	0.000083	0.000081	0.000050	8265052
Total Arsenic (As)	mg/L	0.00373	0.00227	0.00129	0.000020	8265052
Total Barium (Ba)	mg/L	0.0504	0.0646	0.0600	0.00010	8265052
Total Beryllium (Be)	mg/L	0.000010	<0.000010	<0.000010	0.000010	8265052
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	0.000020	8265052
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	0.050	8265052
Total Cadmium (Cd)	mg/L	0.0000190	0.0000200	0.0000210	0.0000050	8265052
Total Chromium (Cr)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8265052
Total Cobalt (Co)	mg/L	0.000149	0.000094	0.000048	0.000010	8265052
Total Copper (Cu)	mg/L	0.00079	0.00067	0.00083	0.00020	8265052
Total Iron (Fe)	mg/L	0.811	0.459	0.270	0.0050	8265052
Total Lead (Pb)	mg/L	<0.000050	<0.000050	<0.000050	0.000050	8265052
Total Lithium (Li)	mg/L	0.00415	0.00460	0.00458	0.00050	8265052
Total Manganese (Mn)	mg/L	0.110	0.0616	0.0161	0.00010	8265052
Total Molybdenum (Mo)	mg/L	0.00193	0.00169	0.00126	0.000050	8265052
Total Nickel (Ni)	mg/L	0.00276	0.00177	0.00128	0.00010	8265052
Total Phosphorus (P)	mg/L	0.017	0.010	<0.010	0.010	8265052
Total Selenium (Se)	mg/L	0.000343	0.000564	0.000535	0.000040	8265052
Total Silicon (Si)	mg/L	3.92	3.51	3.49	0.10	8265052
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265052
Total Strontium (Sr)	mg/L	0.153	0.176	0.190	0.000050	8265052
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8265052
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8265052
Total Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	0.0050	8265052
Total Uranium (U)	mg/L	0.00214	0.00288	0.00263	0.0000050	8265052
Total Vanadium (V)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8265052
Total Zinc (Zn)	mg/L	0.0020	0.0018	0.0012	0.0010	8265052
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OP1407	OP1408	OP1409		
Sampling Date		2016/05/04 10:11	2016/05/04 08:53	2016/05/03 13:59		
COC Number		08420817	08420817	08420817		
	UNITS	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Total Zirconium (Zr)	mg/L	0.00019	0.00011	0.00011	0.00010	8265052
Total Calcium (Ca)	mg/L	48.1	52.1	54.9	0.25	8264442
Total Magnesium (Mg)	mg/L	17.7	16.0	17.1	0.25	8264442
Total Potassium (K)	mg/L	1.52	1.43	1.32	0.25	8264442
Total Sodium (Na)	mg/L	1.19	1.21	1.36	0.25	8264442
Total Sulphur (S)	mg/L	<15	<15	<15	15	8264442
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1398
Sample ID: KZ-2
Matrix: Water

Collected: 2016/05/05
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8265235	2016/05/10	2016/05/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8265612	N/A	2016/05/10	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	Isabel Choi
Conductance - water	AT/ALK	8265240	N/A	2016/05/10	Maria Maclean
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	Edwin Lamigo
Ion Balance	CALC	8264161	N/A	2016/05/11	Andy Lu
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/10	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	Rob Reinert
Elements by ICPMS Low Level (total)	ICP/CRCM	8265075	N/A	2016/05/11	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	Lucy Luo
pH Water	AT/ALK	8265241	N/A	2016/05/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8265613	N/A	2016/05/10	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265390	2016/05/10	2016/05/10	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	Prabhleen Sodhi

Maxxam ID: OP1398 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2016/05/05
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Wilson Au Yueng
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	Tatyana Serzhanova
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	Isaac Wang
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	Diana Cruz

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1399
Sample ID: KZ-6
Matrix: Water

Collected: 2016/05/05
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265061	N/A	2016/05/10	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8265245	2016/05/10	2016/05/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8265614	N/A	2016/05/10	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	Isabel Choi
Conductance - water	AT/ALK	8265255	N/A	2016/05/10	Maria Maclean
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	Edwin Lamigo
Ion Balance	CALC	8264161	N/A	2016/05/11	Automated Statchk
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/10	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8265052	2016/05/10	2016/05/10	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	Automated Statchk
Ammonia-N (Unpreserved)	KONE/COL	8266223	N/A	2016/05/11	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265731	N/A	2016/05/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8265732	N/A	2016/05/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	Lucy Luo
pH Water	AT/ALK	8265256	N/A	2016/05/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8265616	N/A	2016/05/10	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265391	2016/05/10	2016/05/10	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	Prabhleen Sodhi

Maxxam ID: OP1400
Sample ID: KZ-7
Matrix: Water

Collected: 2016/05/05
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8265235	2016/05/10	2016/05/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8265612	N/A	2016/05/10	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	Isabel Choi
Conductance - water	AT/ALK	8265240	N/A	2016/05/10	Maria Maclean
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1400
Sample ID: KZ-7
Matrix: Water

Collected: 2016/05/05
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	Edwin Lamigo
Ion Balance	CALC	8264161	N/A	2016/05/11	Automated Statchk
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/11	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8265052	2016/05/10	2016/05/10	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	Automated Statchk
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	Lucy Luo
pH Water	AT/ALK	8265241	N/A	2016/05/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8265613	N/A	2016/05/10	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265390	2016/05/10	2016/05/10	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	Prabhleen Sodhi

Maxxam ID: OP1401
Sample ID: KZ-9
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8265235	2016/05/10	2016/05/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8265612	N/A	2016/05/10	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	Isabel Choi
Conductance - water	AT/ALK	8265240	N/A	2016/05/10	Maria Maclean
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	Edwin Lamigo
Ion Balance	CALC	8264161	N/A	2016/05/11	Automated Statchk
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/11	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8265052	2016/05/10	2016/05/10	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	Automated Statchk
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	Sherryl Flores

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1401
Sample ID: KZ-9
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	Lucy Luo
pH Water	AT/ALK	8265241	N/A	2016/05/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8265613	N/A	2016/05/10	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265390	2016/05/10	2016/05/10	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	Prabhleen Sodhi

Maxxam ID: OP1401 Dup
Sample ID: KZ-9
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	Isaac Wang

Maxxam ID: OP1402
Sample ID: KZ-15
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8265245	2016/05/10	2016/05/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8265612	N/A	2016/05/10	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	Isabel Choi
Conductance - water	AT/ALK	8265255	N/A	2016/05/10	Maria Maclean
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	Edwin Lamigo
Ion Balance	CALC	8264161	N/A	2016/05/11	Automated Statchk
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/11	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8265052	2016/05/10	2016/05/10	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	Automated Statchk
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1402
Sample ID: KZ-15
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	Lucy Luo
pH Water	AT/ALK	8265256	N/A	2016/05/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8265613	N/A	2016/05/10	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265390	2016/05/10	2016/05/10	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	Prabhleen Sodhi

Maxxam ID: OP1402 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8265245	2016/05/10	2016/05/10	Maria Maclean
Conductance - water	AT/ALK	8265255	N/A	2016/05/10	Maria Maclean
pH Water	AT/ALK	8265256	N/A	2016/05/10	Maria Maclean

Maxxam ID: OP1403
Sample ID: KZ-16
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8265235	2016/05/10	2016/05/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8265612	N/A	2016/05/10	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	Isabel Choi
Conductance - water	AT/ALK	8265240	N/A	2016/05/10	Maria Maclean
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	Edwin Lamigo
Ion Balance	CALC	8264161	N/A	2016/05/11	Andy Lu
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/11	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	Rob Reinert
Elements by ICPMS Low Level (total)	ICP/CRCM	8265075	N/A	2016/05/11	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	Lucy Luo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1403
Sample ID: KZ-16
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH Water	AT/ALK	8265241	N/A	2016/05/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8265613	N/A	2016/05/10	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265390	2016/05/10	2016/05/10	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	Prabhleen Sodhi

Maxxam ID: OP1404
Sample ID: KZ-17
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8265235	2016/05/10	2016/05/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8265612	N/A	2016/05/10	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	Isabel Choi
Conductance - water	AT/ALK	8265240	N/A	2016/05/10	Maria Maclean
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	Edwin Lamigo
Ion Balance	CALC	8264161	N/A	2016/05/11	Automated Statchk
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/11	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8265052	2016/05/10	2016/05/10	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	Automated Statchk
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	Lucy Luo
pH Water	AT/ALK	8265241	N/A	2016/05/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8265613	N/A	2016/05/10	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265390	2016/05/10	2016/05/10	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	Prabhleen Sodhi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1405
Sample ID: KZ-19
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265061	N/A	2016/05/10	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8265245	2016/05/10	2016/05/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8265614	N/A	2016/05/10	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	Isabel Choi
Conductance - water	AT/ALK	8265255	N/A	2016/05/10	Maria Maclean
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	Edwin Lamigo
Ion Balance	CALC	8264161	N/A	2016/05/11	Andy Lu
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/11	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	Rob Reinert
Elements by ICPMS Low Level (total)	ICP/CRCM	8265075	N/A	2016/05/11	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8266223	N/A	2016/05/11	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265731	N/A	2016/05/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8265732	N/A	2016/05/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	Lucy Luo
pH Water	AT/ALK	8265256	N/A	2016/05/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8265616	N/A	2016/05/10	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265391	2016/05/10	2016/05/10	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	Prabhleen Sodhi

Maxxam ID: OP1407
Sample ID: KZ-21
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8265235	2016/05/10	2016/05/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8265612	N/A	2016/05/10	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	Isabel Choi
Conductance - water	AT/ALK	8265240	N/A	2016/05/10	Maria Maclean
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1407
Sample ID: KZ-21
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	Edwin Lamigo
Ion Balance	CALC	8264161	N/A	2016/05/11	Automated Statchk
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/11	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8265052	2016/05/10	2016/05/10	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	Automated Statchk
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	Lucy Luo
pH Water	AT/ALK	8265241	N/A	2016/05/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8265613	N/A	2016/05/10	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265390	2016/05/10	2016/05/10	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	Prabhleen Sodhi

Maxxam ID: OP1408
Sample ID: KZ-22
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265061	N/A	2016/05/10	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8265245	2016/05/10	2016/05/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8265614	N/A	2016/05/10	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	Isabel Choi
Conductance - water	AT/ALK	8265255	N/A	2016/05/10	Maria Maclean
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	Edwin Lamigo
Ion Balance	CALC	8264161	N/A	2016/05/11	Automated Statchk
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/11	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8265052	2016/05/10	2016/05/10	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	Automated Statchk
Ammonia-N (Unpreserved)	KONE/COL	8266223	N/A	2016/05/11	Sherryl Flores

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1408
Sample ID: KZ-22
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265731	N/A	2016/05/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8265732	N/A	2016/05/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	Lucy Luo
pH Water	AT/ALK	8265256	N/A	2016/05/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8265616	N/A	2016/05/10	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265391	2016/05/10	2016/05/10	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	Prabhleen Sodhi

Maxxam ID: OP1409
Sample ID: KZ-26
Matrix: Water

Collected: 2016/05/03
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8265235	2016/05/10	2016/05/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8265612	N/A	2016/05/10	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	Isabel Choi
Conductance - water	AT/ALK	8265240	N/A	2016/05/10	Maria Maclean
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	Edwin Lamigo
Ion Balance	CALC	8264161	N/A	2016/05/11	Automated Statchk
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/11	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8265052	2016/05/10	2016/05/10	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	Automated Statchk
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	Lucy Luo
pH Water	AT/ALK	8265241	N/A	2016/05/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8265613	N/A	2016/05/10	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265390	2016/05/10	2016/05/10	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	Prabhleen Sodhi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1410
Sample ID: KZ-28
Matrix: Water

Collected: 2016/05/03
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8265235	2016/05/10	2016/05/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8265612	N/A	2016/05/10	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	Diana Cruz
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	Isabel Choi
Conductance - water	AT/ALK	8265240	N/A	2016/05/10	Maria Maclean
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	Edwin Lamigo
Ion Balance	CALC	8264161	N/A	2016/05/11	Andy Lu
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/10	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	Rob Reinert
Elements by ICPMS Low Level (total)	ICP/CRCM	8265075	N/A	2016/05/11	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	Lucy Luo
pH Water	AT/ALK	8265241	N/A	2016/05/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8265613	N/A	2016/05/10	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265390	2016/05/10	2016/05/10	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	Prabhleen Sodhi

Maxxam ID: OP1410 Dup
Sample ID: KZ-28
Matrix: Water

Collected: 2016/05/03
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/10	Andrew An
Elements by ICPMS Low Level (total)	ICP/CRCM	8265075	N/A	2016/05/11	Andrew An

Maxxam ID: OP1411
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/05/06
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265061	N/A	2016/05/10	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8265245	2016/05/10	2016/05/10	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1411
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/05/06
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8265614	N/A	2016/05/10	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	Diana Cruz
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8263437	N/A	2016/05/10	Isabel Choi
Conductance - water	AT/ALK	8265255	N/A	2016/05/10	Maria Maclean
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	Edwin Lamigo
Ion Balance	CALC	8264161	N/A	2016/05/11	Andy Lu
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/10	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8265075	N/A	2016/05/11	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8266223	N/A	2016/05/11	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265731	N/A	2016/05/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8265732	N/A	2016/05/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	Automated Statchk
pH Water	AT/ALK	8265256	N/A	2016/05/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8265616	N/A	2016/05/10	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265391	2016/05/10	2016/05/10	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	Prabhleen Sodhi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.0°C
Package 2	3.7°C
Package 3	1.3°C

Sample OP1399-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OP1400-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OP1401-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OP1402-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OP1404-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OP1407-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OP1408-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OP1409-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8263437	Dissolved Organic Carbon (C)	2016/05/10	113	80 - 120	111	80 - 120	<0.50	mg/L	4.2	20
8264707	Total Suspended Solids	2016/05/11			98	80 - 120	<1.0	mg/L		
8265052	Total Aluminum (Al)	2016/05/10	NC	80 - 120	105	80 - 120	<0.0030	mg/L	4.8	20
8265052	Total Antimony (Sb)	2016/05/10	102	80 - 120	100	80 - 120	<0.000050	mg/L	0.97	20
8265052	Total Arsenic (As)	2016/05/10	101	80 - 120	99	80 - 120	<0.000020	mg/L	4.9	20
8265052	Total Barium (Ba)	2016/05/10	NC	80 - 120	102	80 - 120	<0.00010	mg/L	0.0046	20
8265052	Total Beryllium (Be)	2016/05/10	101	80 - 120	97	80 - 120	<0.000010	mg/L	NC	20
8265052	Total Bismuth (Bi)	2016/05/10	98	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8265052	Total Boron (B)	2016/05/10	NC	80 - 120	111	80 - 120	<0.050	mg/L	NC	20
8265052	Total Cadmium (Cd)	2016/05/10	101	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8265052	Total Chromium (Cr)	2016/05/10	101	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8265052	Total Cobalt (Co)	2016/05/10	99	80 - 120	100	80 - 120	<0.000010	mg/L	3.8	20
8265052	Total Copper (Cu)	2016/05/10	99	80 - 120	107	80 - 120	<0.00020	mg/L	0.16	20
8265052	Total Iron (Fe)	2016/05/10	NC	80 - 120	104	80 - 120	<0.0050	mg/L	0.85	20
8265052	Total Lead (Pb)	2016/05/10	104	80 - 120	98	80 - 120	<0.000050	mg/L	4.7	20
8265052	Total Lithium (Li)	2016/05/10	NC	80 - 120	94	80 - 120	<0.00050	mg/L	4.9	20
8265052	Total Manganese (Mn)	2016/05/10	NC	80 - 120	100	80 - 120	<0.00010	mg/L	0.064	20
8265052	Total Molybdenum (Mo)	2016/05/10	NC	80 - 120	100	80 - 120	<0.000050	mg/L	1.8	20
8265052	Total Nickel (Ni)	2016/05/10	95	80 - 120	100	80 - 120	<0.00010	mg/L	0.98	20
8265052	Total Phosphorus (P)	2016/05/10					<0.010	mg/L		
8265052	Total Selenium (Se)	2016/05/10	101	80 - 120	98	80 - 120	<0.000040	mg/L	NC	20
8265052	Total Silicon (Si)	2016/05/10					<0.10	mg/L	1.8	20
8265052	Total Silver (Ag)	2016/05/10	120	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8265052	Total Strontium (Sr)	2016/05/10	NC	80 - 120	102	80 - 120	<0.000050	mg/L	0.80	20
8265052	Total Thallium (Tl)	2016/05/10	89	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8265052	Total Tin (Sn)	2016/05/10	90	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
8265052	Total Titanium (Ti)	2016/05/10	NC	80 - 120	105	80 - 120	<0.0050	mg/L	NC	20
8265052	Total Uranium (U)	2016/05/10	103	80 - 120	96	80 - 120	<0.0000050	mg/L	5.1	20
8265052	Total Vanadium (V)	2016/05/10	100	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8265052	Total Zinc (Zn)	2016/05/10	NC	80 - 120	107	80 - 120	<0.0010	mg/L	0.38	20
8265052	Total Zirconium (Zr)	2016/05/10					<0.00010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8265059	Acidity (pH 4.5)	2016/05/10					<0.50	mg/L	NC	20
8265059	Acidity (pH 8.3)	2016/05/10			99	80 - 120	<0.50	mg/L	NC	20
8265061	Acidity (pH 4.5)	2016/05/10					<0.50	mg/L	NC	20
8265061	Acidity (pH 8.3)	2016/05/10			99	80 - 120	<0.50	mg/L	NC	20
8265075	Total Aluminum (Al)	2016/05/11	107	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8265075	Total Antimony (Sb)	2016/05/11	103	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8265075	Total Arsenic (As)	2016/05/11	102	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8265075	Total Barium (Ba)	2016/05/11	104	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8265075	Total Beryllium (Be)	2016/05/11	104	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8265075	Total Bismuth (Bi)	2016/05/11	101	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8265075	Total Boron (B)	2016/05/11	108	80 - 120	107	80 - 120	<0.010	mg/L	NC	20
8265075	Total Cadmium (Cd)	2016/05/11	105	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8265075	Total Chromium (Cr)	2016/05/11	95	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8265075	Total Cobalt (Co)	2016/05/11	99	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8265075	Total Copper (Cu)	2016/05/11	100	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8265075	Total Iron (Fe)	2016/05/11	103	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
8265075	Total Lead (Pb)	2016/05/11	101	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8265075	Total Lithium (Li)	2016/05/11	104	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8265075	Total Manganese (Mn)	2016/05/11	100	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8265075	Total Molybdenum (Mo)	2016/05/11	100	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8265075	Total Nickel (Ni)	2016/05/11	98	80 - 120	101	80 - 120	0.000024, RDL=0.000020	mg/L	NC	20
8265075	Total Phosphorus (P)	2016/05/11					<0.0020	mg/L	NC	20
8265075	Total Selenium (Se)	2016/05/11	100	80 - 120	96	80 - 120	<0.000040	mg/L	NC	20
8265075	Total Silicon (Si)	2016/05/11					<0.050	mg/L	NC	20
8265075	Total Silver (Ag)	2016/05/11	102	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8265075	Total Strontium (Sr)	2016/05/11	97	80 - 120	105	80 - 120	<0.000050	mg/L	NC	20
8265075	Total Thallium (Tl)	2016/05/11	110	80 - 120	110	80 - 120	<0.0000020	mg/L	NC	20
8265075	Total Tin (Sn)	2016/05/11	103	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8265075	Total Titanium (Ti)	2016/05/11	96	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8265075	Total Uranium (U)	2016/05/11	101	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8265075	Total Vanadium (V)	2016/05/11	98	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8265075	Total Zinc (Zn)	2016/05/11	108	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8265075	Total Zirconium (Zr)	2016/05/11					<0.00010	mg/L	NC	20
8265235	Alkalinity (PP as CaCO3)	2016/05/10					<0.50	mg/L	NC	20
8265235	Alkalinity (Total as CaCO3)	2016/05/10	NC	80 - 120	98	80 - 120	<0.50	mg/L	0.20	20
8265235	Bicarbonate (HCO3)	2016/05/10					<0.50	mg/L	0.20	20
8265235	Carbonate (CO3)	2016/05/10					<0.50	mg/L	NC	20
8265235	Hydroxide (OH)	2016/05/10					<0.50	mg/L	NC	20
8265240	Conductivity	2016/05/10			100	80 - 120	<1.0	uS/cm	0.29	20
8265241	pH	2016/05/10			102	97 - 103			0.25	N/A
8265245	Alkalinity (PP as CaCO3)	2016/05/10					<0.50	mg/L	NC	20
8265245	Alkalinity (Total as CaCO3)	2016/05/10	NC	80 - 120	100	80 - 120	0.77, RDL=0.50	mg/L	1.3	20
8265245	Bicarbonate (HCO3)	2016/05/10					0.94, RDL=0.50	mg/L	1.3	20
8265245	Carbonate (CO3)	2016/05/10					<0.50	mg/L	NC	20
8265245	Hydroxide (OH)	2016/05/10					<0.50	mg/L	NC	20
8265255	Conductivity	2016/05/10			102	80 - 120	<1.0	uS/cm	0	20
8265256	pH	2016/05/10			102	97 - 103			0.61	N/A
8265288	Dissolved Organic Carbon (C)	2016/05/10	96	80 - 120	109	80 - 120	<0.50	mg/L	8.3	20
8265317	Strong Acid Dissoc. Cyanide (CN)	2016/05/10	101	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8265322	Weak Acid Dissoc. Cyanide (CN)	2016/05/10	106	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8265346	Dissolved Aluminum (Al)	2016/05/10	98	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8265346	Dissolved Antimony (Sb)	2016/05/10	99	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8265346	Dissolved Arsenic (As)	2016/05/10	102	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8265346	Dissolved Barium (Ba)	2016/05/10	100	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8265346	Dissolved Beryllium (Be)	2016/05/10	98	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
8265346	Dissolved Bismuth (Bi)	2016/05/10	98	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8265346	Dissolved Boron (B)	2016/05/10	104	80 - 120	96	80 - 120	<0.010	mg/L	NC	20
8265346	Dissolved Cadmium (Cd)	2016/05/10	115	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8265346	Dissolved Chromium (Cr)	2016/05/10	96	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8265346	Dissolved Cobalt (Co)	2016/05/10	99	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8265346	Dissolved Copper (Cu)	2016/05/10	98	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8265346	Dissolved Iron (Fe)	2016/05/10	105	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
8265346	Dissolved Lead (Pb)	2016/05/10	99	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8265346	Dissolved Lithium (Li)	2016/05/10	94	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8265346	Dissolved Manganese (Mn)	2016/05/10	99	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8265346	Dissolved Molybdenum (Mo)	2016/05/10	96	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8265346	Dissolved Nickel (Ni)	2016/05/10	99	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8265346	Dissolved Phosphorus (P)	2016/05/10					<0.0020	mg/L	NC	20
8265346	Dissolved Selenium (Se)	2016/05/10	100	80 - 120	97	80 - 120	<0.000040	mg/L	NC	20
8265346	Dissolved Silicon (Si)	2016/05/10					<0.050	mg/L	NC	20
8265346	Dissolved Silver (Ag)	2016/05/10	101	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8265346	Dissolved Strontium (Sr)	2016/05/10	97	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8265346	Dissolved Thallium (Tl)	2016/05/10	107	80 - 120	108	80 - 120	<0.0000020	mg/L	NC	20
8265346	Dissolved Tin (Sn)	2016/05/10	102	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8265346	Dissolved Titanium (Ti)	2016/05/10	98	80 - 120	94	80 - 120	<0.00050	mg/L	NC	20
8265346	Dissolved Uranium (U)	2016/05/10	99	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8265346	Dissolved Vanadium (V)	2016/05/10	96	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8265346	Dissolved Zinc (Zn)	2016/05/10	108	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8265346	Dissolved Zirconium (Zr)	2016/05/10					<0.00010	mg/L	NC	20
8265376	True Colour	2016/05/10			111	80 - 120	<5.0	Col. Unit	NC	20
8265390	Dissolved Phosphorus (P)	2016/05/10	99	80 - 120	97	80 - 120	<0.0020	mg/L		
8265391	Dissolved Phosphorus (P)	2016/05/10	NC	80 - 120	97	80 - 120	<0.0020	mg/L	3.0	20
8265394	Total Phosphorus (P)	2016/05/10	104	80 - 120	96	80 - 120	<0.0020	mg/L	NC	20
8265612	Dissolved Chloride (Cl)	2016/05/10	112	80 - 120	97	80 - 120	0.94, RDL=0.50	mg/L	NC	20
8265613	Dissolved Sulphate (SO4)	2016/05/10	NC	80 - 120	93	80 - 120	<0.50	mg/L	0.36	20
8265614	Dissolved Chloride (Cl)	2016/05/10			97	80 - 120	0.63, RDL=0.50	mg/L		
8265616	Dissolved Sulphate (SO4)	2016/05/10			94	80 - 120	<0.50	mg/L		
8265729	Nitrate plus Nitrite (N)	2016/05/10	107	80 - 120	110	80 - 120	<0.0020	mg/L	0.21	25
8265730	Nitrite (N)	2016/05/10	96	80 - 120	100	80 - 120	<0.0020	mg/L	NC	25
8265731	Nitrate plus Nitrite (N)	2016/05/10	107	80 - 120	110	80 - 120	<0.0020	mg/L	1.8	25
8265732	Nitrite (N)	2016/05/10	101	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25
8265985	Total Mercury (Hg)	2016/05/11	93	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8265992	Dissolved Mercury (Hg)	2016/05/11	94	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8266220	Total Ammonia (N)	2016/05/11	92	80 - 120	95	80 - 120	<0.0050	mg/L	NC	20
8266223	Total Ammonia (N)	2016/05/11	98	80 - 120	97	80 - 120	<0.0050	mg/L	NC	20
8266847	Fluoride (F)	2016/05/11	96	80 - 120	98	80 - 120	0.015, RDL=0.010	mg/L	0	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

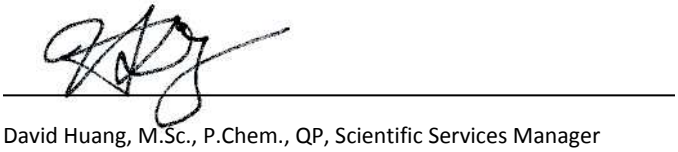
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

B635308_COC

CHAIN OF CUSTODY RE

Burnaby: 4606 Ca[illegible] Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08420816

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:
						Rush Confirmation #:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-2		2016/05/05	12:19	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg filtered & preserved as indicated on vials
3	KZ-6		2016/05/05	10:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg filtered & preserved as indicated on vials
4	KZ-7		2016/05/05	09:02	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg filtered & preserved as indicated on vials
5	KZ-9		2016/05/04	15:57	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg raw.
~~6~~	~~KZ-13~~		~~[illegible]~~		~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~12~~		
7	KZ-15		2016/05/04	12:06	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg Raw
8	KZ-16		2016/05/04	13:54	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg Raw
9	KZ-17		2016/05/04	13:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg Raw
10	KZ-19		2016/05/04	11:27	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg filtered and preserved as indicated on vials.

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	~~See Temp Bell~~ 2016/05/[illegible]
		3,3,4 (7.7)
N	A	4,4,4 (7.8)
		4,4,4 (8.8)

COOLING MEDIA PRESENT Y / N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
[signature] / Anthony Bier ~~Andrew MacPhail~~	2016/05/06 ~~22/03/2016~~	11:50 ~~13:30~~	[signature] MARILOU TRUAN	2016/05/09	09:45	B635308

3,3,4
4,4,4

Maxxam
A Bureau Veritas Group Company

B635308_COC

Burnaby: 4606

CHAIN OF CUSTODY RE

COC #: 08420817

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Andrew MacPhail	Date Required:

Rush Confirmation #:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-21		2016/05/04	~~9:30~~ 10:11	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg both raw
2	KZ-22		2016/05/04	~~10:30~~ 08:53	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg both raw
3	KZ-26		2016/05/03	~~15:30~~ 13:59	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		filtered one Hg Vial & Labelled
4	KZ-28		2016/05/03	15:07	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		filtered on Hg Vial & Labelled
5	Trip Blank		N/A	N/A	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	13		
6																					
7																					
8																					
9																					
10																					

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	2016/05/09
		3,3,4
N/A		4,4,4
		4,4,4

COOLING MEDIA PRESENT Y / N

RECEIVED IN WHITEHORSE
BY [signature] @ 1150
2016 -05- 06

TEMP: 0 / 0 / 0 cooler

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
ABin / Anthony Bier	2016/05/06	11:50	MARILOU TRUANT	2016/05/09	09:45

MAXXAM JOB #: 3/6/2 2 2 0 2 3

B635308

3,3,4
4,4,4

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08421149

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/05/27
Report #: R2187628
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B638452
Received: 2016/05/17, 13:00

Sample Matrix: Water
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	9	N/A	2016/05/19	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	9	2016/05/19	2016/05/20	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	9	N/A	2016/05/19	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	9	N/A	2016/05/24	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	9	N/A	2016/05/24	BBY6SOP-00004	SM 22 4500-CN O m
Colour (True) by Kone Lab	9	N/A	2016/05/19	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	9	N/A	2016/05/20	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	9	N/A	2016/05/20	BBY6SOP-00026	SM 22 2510 B m
Fluoride	9	N/A	2016/05/19	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	9	N/A	2016/05/24	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	9	N/A	2016/05/24	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	9	N/A	2016/05/20	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	9	2016/05/20	2016/05/20	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	9	N/A	2016/05/25	BBY WI-00033	SM 22 1030E
Sum of cations, anions	9	N/A	2016/05/25	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	9	N/A	2016/05/24	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	9	N/A	2016/05/20	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	3	2016/05/19	2016/05/20	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Digested LL (total)	6	2016/05/20	2016/05/20	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	9	N/A	2016/05/24	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Unpreserved)	9	N/A	2016/05/19	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	9	N/A	2016/05/19	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	9	N/A	2016/05/19	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	9	N/A	2016/05/24	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	9	N/A	2016/05/19	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	9	N/A	2016/05/20	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	4	N/A	2016/05/19	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	5	N/A	2016/05/20	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	9	2016/05/19	2016/05/19	BBY6SOP-00013	SM 22 4500-P E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08421149

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/05/27
Report #: R2187628
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B638452
Received: 2016/05/17, 13:00

Sample Matrix: Water
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Phosphorus - unpreserved	9	N/A	2016/05/19	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	9	2016/05/19	2016/05/20	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.

(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OQ7198	OQ7199		OQ7200		OQ7201		
Sampling Date		2016/05/14 10:40	2016/05/14 10:15		2016/05/16 08:22		2016/05/15 17:02		
COC Number		08421149	08421149		08421149		08421149		
	UNITS	KZ-6	KZ-7	QC Batch	KZ-13	QC Batch	KZ-15	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	2.8	2.7	8273224	1.3	8273224	2.4	N/A	8273224
Cation Sum	meq/L	2.8	2.6	8273224	1.3	8273224	2.4	N/A	8273224
Filter and HNO3 Preservation	N/A	LAB	LAB	8274227	LAB	8274227	LAB	N/A	8274227
Ion Balance	N/A	0.98	0.96	8273223	1.0	8273223	1.0	0.010	8273223
Nitrate (N)	mg/L	0.0605	0.0639	8273090	0.0344	8273090	0.0533	0.0020	8273090
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00051	0.00051	8277533	0.00053	8277533	0.00055	0.00050	8277533
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8277538	<0.00050	8277538	0.00053	0.00050	8277538
Fluoride (F)	mg/L	0.064	0.065	8275672	0.044	8275672	0.074	0.010	8275672
Dissolved Organic Carbon (C)	mg/L	2.48	2.55	8276144	3.17	8276144	2.12	0.50	8276144
Acidity (pH 4.5)	mg/L	<0.50	<0.50	8274251	<0.50	8274251	<0.50	0.50	8274251
Alkalinity (Total as CaCO3)	mg/L	119	110	8274287	53.5	8274287	102	0.50	8274287
Acidity (pH 8.3)	mg/L	<0.50	<0.50	8274251	<0.50	8274251	<0.50	0.50	8274251
Alkalinity (PP as CaCO3)	mg/L	0.96	<0.50	8274287	<0.50	8274287	<0.50	0.50	8274287
Bicarbonate (HCO3)	mg/L	143	134	8274287	65.2	8274287	125	0.50	8274287
Carbonate (CO3)	mg/L	1.15	<0.50	8274287	<0.50	8274287	<0.50	0.50	8274287
Hydroxide (OH)	mg/L	<0.50	<0.50	8274287	<0.50	8274287	<0.50	0.50	8274287
Anions									
Dissolved Sulphate (SO4)	mg/L	20.0	23.5	8275948	8.17	8274755	15.8	0.50	8275948
Dissolved Chloride (Cl)	mg/L	0.63	0.59	8274752	0.54	8274752	0.54	0.50	8274752
MISCELLANEOUS									
True Colour	Col. Unit	11.1 (1)	9.4 (1)	8274675	18.3	8274675	14.2 (2)	5.0	8274675
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0034 (1)	0.0069 (1)	8274694	0.0062	8274694	0.0118 (2)	0.0020	8274694
Total Ammonia (N)	mg/L	<0.0050 (1)	0.0062 (1)	8274771	<0.0050	8274771	<0.0050 (2)	0.0050	8274773
Nitrate plus Nitrite (N)	mg/L	0.0605 (1)	0.0639 (1)	8276016	0.0344	8276016	0.0533 (2)	0.0020	8276016
Nitrite (N)	mg/L	<0.0020 (1)	<0.0020 (1)	8276017	<0.0020	8276017	<0.0020 (2)	0.0020	8276017
Total Phosphorus (P)	mg/L	0.0040 (1)	0.0042 (1)	8274697	0.0053	8274697	0.0076 (2)	0.0020	8274697

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Sample arrived to laboratory past recommended hold time.

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OQ7198	OQ7199		OQ7200		OQ7201		
Sampling Date		2016/05/14 10:40	2016/05/14 10:15		2016/05/16 08:22		2016/05/15 17:02		
COC Number		08421149	08421149		08421149		08421149		
	UNITS	KZ-6	KZ-7	QC Batch	KZ-13	QC Batch	KZ-15	RDL	QC Batch
Physical Properties									
Conductivity	uS/cm	256	250	8274291	119	8274291	221	1.0	8274291
pH	pH	8.31	8.24	8274293	7.99	8274293	8.18		8274293
Physical Properties									
Total Suspended Solids	mg/L	<1.0	<1.0	8273554	1.0	8273554	2.7	1.0	8273554
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OQ7202		OQ7203	OQ7204	OQ7205		
Sampling Date		2016/05/15 17:50		2016/05/15 17:29	2016/05/15 16:10	2016/05/15 15:37		
COC Number		08421149		08421149	08421149	08421149		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-21	KZ-22	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	1.9	8273224	4.0	4.6	3.8	N/A	8273224
Cation Sum	meq/L	1.9	8273224	4.2	4.4	4.1	N/A	8273224
Filter and HNO3 Preservation	N/A	LAB	8274227	LAB	LAB	LAB	N/A	8274227
Ion Balance	N/A	0.99	8273223	1.1	0.95	1.1	0.010	8273223
Nitrate (N)	mg/L	0.0486	8273090	0.0517	<0.0020	0.0137	0.0020	8273090
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00061	8277533	<0.00050	0.00062	0.00056	0.00050	8277533
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8277538	0.00050	<0.00050	0.00054	0.00050	8277538
Fluoride (F)	mg/L	0.065	8275672	0.120	0.190	0.130	0.010	8275675
Dissolved Organic Carbon (C)	mg/L	3.79	8276144	3.08	5.45	3.77	0.50	8276144
Acidity (pH 4.5)	mg/L	<0.50	8274251	<0.50	<0.50	<0.50	0.50	8274251
Alkalinity (Total as CaCO3)	mg/L	82.5	8274287	170	190	161	0.50	8274287
Acidity (pH 8.3)	mg/L	<0.50	8274251	<0.50	<0.50	<0.50	0.50	8274251
Alkalinity (PP as CaCO3)	mg/L	<0.50	8274287	2.33	2.96	2.36	0.50	8274287
Bicarbonate (HCO3)	mg/L	101	8274287	201	225	190	0.50	8274287
Carbonate (CO3)	mg/L	<0.50	8274287	2.80	3.55	2.83	0.50	8274287
Hydroxide (OH)	mg/L	<0.50	8274287	<0.50	<0.50	<0.50	0.50	8274287
Anions								
Dissolved Sulphate (SO4)	mg/L	12.9	8275967	27.8	38.9	28.4	0.50	8274778
Dissolved Chloride (Cl)	mg/L	0.51	8274752	0.77	0.78	0.91	0.50	8274762
MISCELLANEOUS								
True Colour	Col. Unit	16.7 (1)	8274675	<5.0 (1)	19.6 (1)	13.7 (1)	5.0	8274675
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0046 (1)	8274694	0.0038 (1)	0.0160 (1)	0.0072 (1)	0.0020	8274694
Total Ammonia (N)	mg/L	<0.0050 (1)	8274771	0.0112 (1)	<0.0050 (1)	0.0080 (1)	0.0050	8274773
Nitrate plus Nitrite (N)	mg/L	0.0486 (1)	8276016	0.0517 (1)	<0.0020 (1)	0.0137 (1)	0.0020	8276016
Nitrite (N)	mg/L	<0.0020 (1)	8276017	<0.0020 (1)	<0.0020 (1)	<0.0020 (1)	0.0020	8276017
Total Phosphorus (P)	mg/L	0.0044 (1)	8274697	0.0047 (1)	0.0193 (1)	0.0068 (1)	0.0020	8274697
Physical Properties								
Conductivity	uS/cm	179	8274291	355	394	339	1.0	8274291

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OQ7202		OQ7203	OQ7204	OQ7205		
Sampling Date		2016/05/15 17:50		2016/05/15 17:29	2016/05/15 16:10	2016/05/15 15:37		
COC Number		08421149		08421149	08421149	08421149		
	UNITS	**KZ-16**	**QC Batch**	**KZ-17**	**KZ-21**	**KZ-22**	**RDL**	**QC Batch**
pH	pH	8.13	8274293	8.37	8.39	8.38		8274293
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8273554	2.9	2.7	2.3	1.0	8273554
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OQ7206		
Sampling Date		2016/05/14 18:17		
COC Number		08421149		
	UNITS	KZ-26	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	4.8	N/A	8273224
Cation Sum	meq/L	4.6	N/A	8273224
Filter and HNO3 Preservation	N/A	LAB	N/A	8274227
Ion Balance	N/A	0.96	0.010	8273223
Nitrate (N)	mg/L	0.0280	0.0020	8273090
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00050	0.00050	8277533
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8277538
Fluoride (F)	mg/L	0.140	0.010	8275672
Dissolved Organic Carbon (C)	mg/L	3.27	0.50	8276144
Acidity (pH 4.5)	mg/L	<0.50	0.50	8274251
Alkalinity (Total as CaCO3)	mg/L	199	0.50	8274287
Acidity (pH 8.3)	mg/L	<0.50	0.50	8274251
Alkalinity (PP as CaCO3)	mg/L	5.27	0.50	8274287
Bicarbonate (HCO3)	mg/L	229	0.50	8274287
Carbonate (CO3)	mg/L	6.32	0.50	8274287
Hydroxide (OH)	mg/L	<0.50	0.50	8274287
Anions				
Dissolved Sulphate (SO4)	mg/L	37.0	0.50	8275967
Dissolved Chloride (Cl)	mg/L	1.2	0.50	8274752
MISCELLANEOUS				
True Colour	Col. Unit	9.4 (1)	5.0	8274675
Nutrients				
Dissolved Phosphorus (P)	mg/L	0.0039 (1)	0.0020	8274694
Total Ammonia (N)	mg/L	<0.0050 (1)	0.0050	8274771
Nitrate plus Nitrite (N)	mg/L	0.0280 (1)	0.0020	8276016
Nitrite (N)	mg/L	<0.0020 (1)	0.0020	8276017
Total Phosphorus (P)	mg/L	0.0052 (1)	0.0020	8274697
Physical Properties				
Conductivity	uS/cm	417	1.0	8274291

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OQ7206		
Sampling Date		2016/05/14 18:17		
COC Number		08421149		
	UNITS	**KZ-26**	**RDL**	**QC Batch**
pH	pH	8.48		8274293
Physical Properties				
Total Suspended Solids	mg/L	1.1	1.0	8273554
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OQ7198		OQ7199	OQ7200	OQ7201		
Sampling Date		2016/05/14 10:40		2016/05/14 10:15	2016/05/16 08:22	2016/05/15 17:02		
COC Number		08421149		08421149	08421149	08421149		
	UNITS	KZ-6	QC Batch	KZ-7	KZ-13	KZ-15	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	136	8272442	126	59.4	118	0.50	8272442
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8275424	<0.0000020	<0.0000020	<0.0000020	0.0000020	8275424
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00441	8275057	0.00381	0.0108	0.00320	0.00050	8275057
Dissolved Antimony (Sb)	mg/L	<0.000020	8275057	0.000060	0.000020	0.000023	0.000020	8275057
Dissolved Arsenic (As)	mg/L	0.000096	8275057	0.000267	0.000155	0.000261	0.000020	8275057
Dissolved Barium (Ba)	mg/L	0.0406	8275057	0.0626	0.0719	0.0445	0.000020	8275057
Dissolved Beryllium (Be)	mg/L	<0.000010	8275057	<0.000010	<0.000010	<0.000010	0.000010	8275057
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8275057	<0.0000050	<0.0000050	<0.0000050	0.0000050	8275057
Dissolved Boron (B)	mg/L	<0.010	8275057	<0.010	<0.010	<0.010	0.010	8275057
Dissolved Cadmium (Cd)	mg/L	0.0000100	8275057	0.0000590	0.0000120	0.0000130	0.0000050	8275057
Dissolved Chromium (Cr)	mg/L	<0.00010	8275057	<0.00010	<0.00010	<0.00010	0.00010	8275057
Dissolved Cobalt (Co)	mg/L	0.0000130	8275057	0.0000180	0.0000130	0.0000140	0.0000050	8275057
Dissolved Copper (Cu)	mg/L	0.000437	8275057	0.000565	0.000634	0.000705	0.000050	8275057
Dissolved Iron (Fe)	mg/L	0.0093	8275057	0.136	0.0369	0.0156	0.0010	8275057
Dissolved Lead (Pb)	mg/L	<0.0000050	8275057	0.0000470	0.0000070	<0.0000050	0.0000050	8275057
Dissolved Lithium (Li)	mg/L	0.00054	8275057	0.00210	0.00102	0.00126	0.00050	8275057
Dissolved Manganese (Mn)	mg/L	0.000225	8275057	0.0165	0.00559	0.00385	0.000050	8275057
Dissolved Molybdenum (Mo)	mg/L	0.000533	8275057	0.000542	0.000499	0.000652	0.000050	8275057
Dissolved Nickel (Ni)	mg/L	0.000308	8279202	0.000465	0.000451	0.000552	0.000020	8275057
Dissolved Phosphorus (P)	mg/L	<0.0020	8275057	0.0039	0.0065	0.0095	0.0020	8275057
Dissolved Selenium (Se)	mg/L	0.000686	8275057	0.000562	0.000123	0.000403	0.000040	8275057
Dissolved Silicon (Si)	mg/L	2.43	8275057	2.61	2.57	2.30	0.050	8275057
Dissolved Silver (Ag)	mg/L	0.0000050	8275057	<0.0000050	0.0000050	0.0000060	0.0000050	8275057
Dissolved Strontium (Sr)	mg/L	0.133	8275057	0.138	0.0557	0.114	0.000050	8275057
Dissolved Thallium (Tl)	mg/L	0.0000050	8275057	0.0000030	0.0000040	<0.0000020	0.0000020	8275057
Dissolved Tin (Sn)	mg/L	<0.00020	8275057	<0.00020	<0.00020	<0.00020	0.00020	8275057
Dissolved Titanium (Ti)	mg/L	<0.00050	8275057	<0.00050	<0.00050	<0.00050	0.00050	8275057
Dissolved Uranium (U)	mg/L	0.000870	8275057	0.000887	0.000355	0.00128	0.0000020	8275057
Dissolved Vanadium (V)	mg/L	<0.00020	8275057	<0.00020	<0.00020	<0.00020	0.00020	8275057
Dissolved Zinc (Zn)	mg/L	0.00040	8275057	0.0129	0.00165	0.00095	0.00010	8275057

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OQ7198		OQ7199	OQ7200	OQ7201		
Sampling Date		2016/05/14 10:40		2016/05/14 10:15	2016/05/16 08:22	2016/05/15 17:02		
COC Number		08421149		08421149	08421149	08421149		
	UNITS	**KZ-6**	**QC Batch**	**KZ-7**	**KZ-13**	**KZ-15**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	8275057	<0.00010	<0.00010	<0.00010	0.00010	8275057
Dissolved Calcium (Ca)	mg/L	44.7	8272825	41.5	20.3	36.6	0.050	8272825
Dissolved Magnesium (Mg)	mg/L	5.88	8272825	5.46	2.14	6.54	0.050	8272825
Dissolved Potassium (K)	mg/L	1.22	8272825	1.47	1.69	1.02	0.050	8272825
Dissolved Sodium (Na)	mg/L	0.604	8272825	0.925	0.719	0.777	0.050	8272825
Dissolved Sulphur (S)	mg/L	6.1	8272825	7.3	<3.0	4.9	3.0	8272825
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OQ7202	OQ7203	OQ7204	OQ7205	OQ7206		
Sampling Date		2016/05/15 17:50	2016/05/15 17:29	2016/05/15 16:10	2016/05/15 15:37	2016/05/14 18:17		
COC Number		08421149	08421149	08421149	08421149	08421149		
	UNITS	KZ-16	KZ-17	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	93.9	206	216	201	225	0.50	8272442
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8275424
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00361	0.00157	0.00130	0.00152	0.00104	0.00050	8275057
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000047	0.000097	0.000057	0.000086	0.000020	8275057
Dissolved Arsenic (As)	mg/L	0.000198	0.000588	0.00148	0.00105	0.000662	0.000020	8275057
Dissolved Barium (Ba)	mg/L	0.0361	0.0701	0.0507	0.0558	0.0660	0.000020	8275057
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8275057
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8275057
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8275057
Dissolved Cadmium (Cd)	mg/L	0.0000110	0.0000220	0.0000050	0.0000100	0.0000060	0.0000050	8275057
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8275057
Dissolved Cobalt (Co)	mg/L	0.0000100	0.0000130	0.0000370	0.0000270	0.0000150	0.0000050	8275057
Dissolved Copper (Cu)	mg/L	0.000723	0.000470	0.000420	0.000539	0.000538	0.000050	8275057
Dissolved Iron (Fe)	mg/L	0.0115	0.0304	0.150	0.0821	0.0217	0.0010	8275057
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000070	<0.0000050	<0.0000050	<0.0000050	0.0000050	8275057
Dissolved Lithium (Li)	mg/L	0.00079	0.00302	0.00430	0.00341	0.00489	0.00050	8275057
Dissolved Manganese (Mn)	mg/L	0.00111	0.0100	0.00830	0.00669	0.00164	0.000050	8275057
Dissolved Molybdenum (Mo)	mg/L	0.000353	0.00172	0.00202	0.00131	0.00124	0.000050	8275057
Dissolved Nickel (Ni)	mg/L	0.000441	0.000711	0.00202	0.00108	0.000876	0.000020	8275057
Dissolved Phosphorus (P)	mg/L	0.0052	0.0033	0.0059	<0.0020	0.0081	0.0020	8275057
Dissolved Selenium (Se)	mg/L	0.000317	0.000866	0.000340	0.000473	0.000549	0.000040	8275057
Dissolved Silicon (Si)	mg/L	2.06	3.27	3.21	2.98	3.41	0.050	8275057
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8275057
Dissolved Strontium (Sr)	mg/L	0.0933	0.191	0.170	0.166	0.207	0.000050	8275057
Dissolved Thallium (Tl)	mg/L	0.0000020	0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8275057
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8275057
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8275057
Dissolved Uranium (U)	mg/L	0.000632	0.00375	0.00244	0.00230	0.00281	0.0000020	8275057
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8275057
Dissolved Zinc (Zn)	mg/L	0.00034	0.00239	0.00029	0.00045	0.00027	0.00010	8275057
RDL = Reportable Detection Limit								

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OQ7202	OQ7203	OQ7204	OQ7205	OQ7206		
Sampling Date		2016/05/15 17:50	2016/05/15 17:29	2016/05/15 16:10	2016/05/15 15:37	2016/05/14 18:17		
COC Number		08421149	08421149	08421149	08421149	08421149		
	UNITS	**KZ-16**	**KZ-17**	**KZ-21**	**KZ-22**	**KZ-26**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8275057
Dissolved Calcium (Ca)	mg/L	29.7	62.0	54.4	56.6	59.4	0.050	8272825
Dissolved Magnesium (Mg)	mg/L	4.77	12.4	19.5	14.6	18.7	0.050	8272825
Dissolved Potassium (K)	mg/L	0.907	1.56	1.63	1.42	1.43	0.050	8272825
Dissolved Sodium (Na)	mg/L	0.635	1.27	1.52	1.34	1.70	0.050	8272825
Dissolved Sulphur (S)	mg/L	3.6	8.9	11.0	9.0	11.5	3.0	8272825
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OQ7198		OQ7199	OQ7200		
Sampling Date		2016/05/14 10:40		2016/05/14 10:15	2016/05/16 08:22		
COC Number		08421149		08421149	08421149		
	UNITS	KZ-6	QC Batch	KZ-7	KZ-13	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	131	8272394	124	56.5	0.50	8272394
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	8275459	<0.0000020	<0.0000020	0.0000020	8275530
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0080	8274504	0.0125	0.0200	0.0030	8274504
Total Antimony (Sb)	mg/L	<0.000050	8274504	0.000057	<0.000050	0.000050	8274504
Total Arsenic (As)	mg/L	0.000105	8274504	0.000399	0.000150	0.000020	8274504
Total Barium (Ba)	mg/L	0.0422	8274504	0.0679	0.0768	0.00010	8274504
Total Beryllium (Be)	mg/L	<0.000010	8274504	<0.000010	<0.000010	0.000010	8274504
Total Bismuth (Bi)	mg/L	<0.000020	8274504	<0.000020	<0.000020	0.000020	8274504
Total Boron (B)	mg/L	<0.050	8274504	<0.050	<0.050	0.050	8274504
Total Cadmium (Cd)	mg/L	0.0000210	8274504	0.0000960	0.0000150	0.0000050	8274504
Total Chromium (Cr)	mg/L	<0.00050	8274504	<0.00050	<0.00050	0.00050	8274504
Total Cobalt (Co)	mg/L	0.000017	8274504	0.000034	0.000025	0.000010	8274504
Total Copper (Cu)	mg/L	0.00061	8274504	0.00071	0.00083	0.00020	8274504
Total Iron (Fe)	mg/L	0.0274	8274504	0.314	0.0758	0.0050	8274504
Total Lead (Pb)	mg/L	<0.000050	8274504	0.000149	<0.000050	0.000050	8274504
Total Lithium (Li)	mg/L	0.00058	8274504	0.00218	0.00103	0.00050	8274504
Total Manganese (Mn)	mg/L	0.00307	8274504	0.0272	0.0136	0.00010	8274504
Total Molybdenum (Mo)	mg/L	0.000519	8274504	0.000596	0.000500	0.000050	8274504
Total Nickel (Ni)	mg/L	0.00032	8274504	0.00039	0.00044	0.00010	8274504
Total Phosphorus (P)	mg/L	<0.010	8274504	<0.010	<0.010	0.010	8274504
Total Selenium (Se)	mg/L	0.000822	8274504	0.000643	0.000158	0.000040	8274504
Total Silicon (Si)	mg/L	2.54	8274504	2.63	2.55	0.10	8274504
Total Silver (Ag)	mg/L	<0.0000050	8274504	<0.0000050	<0.0000050	0.0000050	8274504
Total Strontium (Sr)	mg/L	0.135	8274504	0.143	0.0550	0.000050	8274504
Total Thallium (Tl)	mg/L	0.0000020	8274504	0.0000030	0.0000030	0.0000020	8274504
Total Tin (Sn)	mg/L	<0.00020	8274504	<0.00020	<0.00020	0.00020	8274504
Total Titanium (Ti)	mg/L	<0.0050	8274504	<0.0050	<0.0050	0.0050	8274504
Total Uranium (U)	mg/L	0.000915	8274504	0.000937	0.000402	0.0000050	8274504
Total Vanadium (V)	mg/L	<0.00050	8274504	<0.00050	<0.00050	0.00050	8274504
Total Zinc (Zn)	mg/L	<0.0010	8274504	0.0199	0.0022	0.0010	8274504
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OQ7198		OQ7199	OQ7200		
Sampling Date		2016/05/14 10:40		2016/05/14 10:15	2016/05/16 08:22		
COC Number		08421149		08421149	08421149		
	UNITS	KZ-6	QC Batch	KZ-7	KZ-13	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	8274504	<0.00010	<0.00010	0.00010	8274504
Total Calcium (Ca)	mg/L	42.8	8272444	40.7	19.1	0.25	8272444
Total Magnesium (Mg)	mg/L	5.94	8272444	5.53	2.13	0.25	8272444
Total Potassium (K)	mg/L	1.17	8272444	1.46	1.66	0.25	8272444
Total Sodium (Na)	mg/L	0.60	8272444	0.91	0.72	0.25	8272444
Total Sulphur (S)	mg/L	<15	8272444	<15	<15	15	8272444
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OQ7201	OQ7202	OQ7203	OQ7204	OQ7205		
Sampling Date		2016/05/15 17:02	2016/05/15 17:50	2016/05/15 17:29	2016/05/15 16:10	2016/05/15 15:37		
COC Number		08421149	08421149	08421149	08421149	08421149		
	UNITS	KZ-15	KZ-16	KZ-17	KZ-21	KZ-22	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	121	94.4	206	216	189	0.50	8272394
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8275530
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0158	0.0096	0.0075	0.0083	0.0064	0.0030	8275630
Total Antimony (Sb)	mg/L	<0.000050	<0.000050	0.000058	0.000105	0.000056	0.000050	8275630
Total Arsenic (As)	mg/L	0.000398	0.000292	0.000657	0.00298	0.00167	0.000020	8275630
Total Barium (Ba)	mg/L	0.0451	0.0372	0.0721	0.0532	0.0570	0.00010	8275630
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8275630
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	8275630
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8275630
Total Cadmium (Cd)	mg/L	0.0000270	0.0000200	0.0000310	0.0000110	0.0000190	0.0000050	8275630
Total Chromium (Cr)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8275630
Total Cobalt (Co)	mg/L	0.000042	0.000036	0.000034	0.000074	0.000057	0.000010	8275630
Total Copper (Cu)	mg/L	0.00098	0.00094	0.00061	0.00070	0.00087	0.00020	8275630
Total Iron (Fe)	mg/L	0.108	0.0677	0.122	0.620	0.336	0.0050	8275630
Total Lead (Pb)	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8275630
Total Lithium (Li)	mg/L	0.00146	0.00097	0.00341	0.00471	0.00341	0.00050	8275630
Total Manganese (Mn)	mg/L	0.0150	0.00789	0.0221	0.0333	0.0238	0.00010	8275630
Total Molybdenum (Mo)	mg/L	0.000654	0.000363	0.00179	0.00207	0.00130	0.000050	8275630
Total Nickel (Ni)	mg/L	0.00058	0.00047	0.00078	0.00239	0.00125	0.00010	8275630
Total Phosphorus (P)	mg/L	<0.010	<0.010	<0.010	0.017	0.011	0.010	8275630
Total Selenium (Se)	mg/L	0.000434	0.000321	0.000841	0.000344	0.000479	0.000040	8275630
Total Silicon (Si)	mg/L	2.49	2.15	3.41	3.49	3.02	0.10	8275630
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8275630
Total Strontium (Sr)	mg/L	0.115	0.0951	0.189	0.178	0.164	0.000050	8275630
Total Thallium (Tl)	mg/L	0.0000030	0.0000030	0.0000030	0.0000030	<0.0000020	0.0000020	8275630
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8275630
Total Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8275630
Total Uranium (U)	mg/L	0.00134	0.000664	0.00387	0.00251	0.00229	0.0000050	8275630
Total Vanadium (V)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8275630
Total Zinc (Zn)	mg/L	0.0018	<0.0010	0.0040	0.0012	0.0013	0.0010	8275630

RDL = Reportable Detection Limit

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OQ7201	OQ7202	OQ7203	OQ7204	OQ7205		
Sampling Date		2016/05/15 17:02	2016/05/15 17:50	2016/05/15 17:29	2016/05/15 16:10	2016/05/15 15:37		
COC Number		08421149	08421149	08421149	08421149	08421149		
	UNITS	**KZ-15**	**KZ-16**	**KZ-17**	**KZ-21**	**KZ-22**	**RDL**	**QC Batch**
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00012	<0.00010	0.00010	8275630
Total Calcium (Ca)	mg/L	37.6	29.8	61.5	54.6	51.6	0.25	8272444
Total Magnesium (Mg)	mg/L	6.69	4.82	12.6	19.4	14.6	0.25	8272444
Total Potassium (K)	mg/L	1.02	0.88	1.48	1.62	1.34	0.25	8272444
Total Sodium (Na)	mg/L	0.81	0.66	1.29	1.53	1.29	0.25	8272444
Total Sulphur (S)	mg/L	<15	<15	<15	<15	<15	15	8272444
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OQ7206		
Sampling Date		2016/05/14 18:17		
COC Number		08421149		
	UNITS	KZ-26	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	215	0.50	8272394
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8275530
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.0064	0.0030	8275630
Total Antimony (Sb)	mg/L	0.000078	0.000050	8275630
Total Arsenic (As)	mg/L	0.000725	0.000020	8275630
Total Barium (Ba)	mg/L	0.0576	0.00010	8275630
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8275630
Total Bismuth (Bi)	mg/L	<0.000020	0.000020	8275630
Total Boron (B)	mg/L	<0.050	0.050	8275630
Total Cadmium (Cd)	mg/L	0.0000110	0.0000050	8275630
Total Chromium (Cr)	mg/L	<0.00050	0.00050	8275630
Total Cobalt (Co)	mg/L	0.000027	0.000010	8275630
Total Copper (Cu)	mg/L	0.00067	0.00020	8275630
Total Iron (Fe)	mg/L	0.0937	0.0050	8275630
Total Lead (Pb)	mg/L	<0.000050	0.000050	8275630
Total Lithium (Li)	mg/L	0.00406	0.00050	8275630
Total Manganese (Mn)	mg/L	0.00556	0.00010	8275630
Total Molybdenum (Mo)	mg/L	0.00105	0.000050	8275630
Total Nickel (Ni)	mg/L	0.00089	0.00010	8275630
Total Phosphorus (P)	mg/L	<0.010	0.010	8275630
Total Selenium (Se)	mg/L	0.000543	0.000040	8275630
Total Silicon (Si)	mg/L	3.36	0.10	8275630
Total Silver (Ag)	mg/L	<0.0000050	0.0000050	8275630
Total Strontium (Sr)	mg/L	0.183	0.000050	8275630
Total Thallium (Tl)	mg/L	0.0000030	0.0000020	8275630
Total Tin (Sn)	mg/L	<0.00020	0.00020	8275630
Total Titanium (Ti)	mg/L	<0.0050	0.0050	8275630
Total Uranium (U)	mg/L	0.00245	0.0000050	8275630
Total Vanadium (V)	mg/L	<0.00050	0.00050	8275630
Total Zinc (Zn)	mg/L	<0.0010	0.0010	8275630
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OQ7206		
Sampling Date		2016/05/14 18:17		
COC Number		08421149		
	UNITS	**KZ-26**	**RDL**	**QC Batch**
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8275630
Total Calcium (Ca)	mg/L	59.0	0.25	8272444
Total Magnesium (Mg)	mg/L	16.5	0.25	8272444
Total Potassium (K)	mg/L	1.28	0.25	8272444
Total Sodium (Na)	mg/L	1.56	0.25	8272444
Total Sulphur (S)	mg/L	<15	15	8272444
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OQ7198
Sample ID: KZ-6
Matrix: Water

Collected: 2016/05/14
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8274287	2016/05/19	2016/05/20	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8274752	N/A	2016/05/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8274675	N/A	2016/05/19	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8276144	N/A	2016/05/20	Isabel Choi
Conductance - water	AT/ALK	8274291	N/A	2016/05/20	Maria Maclean
Fluoride	ISE/ISE	8275672	N/A	2016/05/19	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8272394	N/A	2016/05/24	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8272442	N/A	2016/05/24	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8275424	N/A	2016/05/20	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8275459	2016/05/20	2016/05/20	Edwin Lamigo
Ion Balance	CALC	8273223	N/A	2016/05/25	Andy Lu
Sum of cations, anions	CALC	8273224	N/A	2016/05/25	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8272825	N/A	2016/05/24	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8274504	2016/05/19	2016/05/20	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8272444	N/A	2016/05/24	Rob Reinert
Ammonia-N (Unpreserved)	KONE/COL	8274771	N/A	2016/05/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8273090	N/A	2016/05/24	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8274227	N/A	2016/05/19	Irene Popov
pH Water	AT/ALK	8274293	N/A	2016/05/20	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8275948	N/A	2016/05/20	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8273554	2016/05/19	2016/05/20	Jamie Sun

Maxxam ID: OQ7198 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2016/05/14
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	Tatyana Serzhanova
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	Andrew An

Maxxam ID: OQ7199
Sample ID: KZ-7
Matrix: Water

Collected: 2016/05/14
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Wilson Au Yueng

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OQ7199
Sample ID: KZ-7
Matrix: Water

Collected: 2016/05/14
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8274287	2016/05/19	2016/05/20	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8274752	N/A	2016/05/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8274675	N/A	2016/05/19	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8276144	N/A	2016/05/20	Isabel Choi
Conductance - water	AT/ALK	8274291	N/A	2016/05/20	Maria Maclean
Fluoride	ISE/ISE	8275672	N/A	2016/05/19	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8272394	N/A	2016/05/24	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8272442	N/A	2016/05/24	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8275424	N/A	2016/05/20	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8275530	2016/05/20	2016/05/20	Edwin Lamigo
Ion Balance	CALC	8273223	N/A	2016/05/25	Andy Lu
Sum of cations, anions	CALC	8273224	N/A	2016/05/25	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8272825	N/A	2016/05/24	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8274504	2016/05/19	2016/05/20	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8272444	N/A	2016/05/24	Rob Reinert
Ammonia-N (Unpreserved)	KONE/COL	8274771	N/A	2016/05/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8273090	N/A	2016/05/24	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8274227	N/A	2016/05/19	Irene Popov
pH Water	AT/ALK	8274293	N/A	2016/05/20	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8275948	N/A	2016/05/20	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8273554	2016/05/19	2016/05/20	Jamie Sun

Maxxam ID: OQ7200
Sample ID: KZ-13
Matrix: Water

Collected: 2016/05/16
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8274287	2016/05/19	2016/05/20	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8274752	N/A	2016/05/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8274675	N/A	2016/05/19	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8276144	N/A	2016/05/20	Isabel Choi
Conductance - water	AT/ALK	8274291	N/A	2016/05/20	Maria Maclean
Fluoride	ISE/ISE	8275672	N/A	2016/05/19	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8272394	N/A	2016/05/24	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8272442	N/A	2016/05/24	Rob Reinert

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OQ7200
Sample ID: KZ-13
Matrix: Water

Collected: 2016/05/16
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8275424	N/A	2016/05/20	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8275530	2016/05/20	2016/05/20	Edwin Lamigo
Ion Balance	CALC	8273223	N/A	2016/05/25	Andy Lu
Sum of cations, anions	CALC	8273224	N/A	2016/05/25	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8272825	N/A	2016/05/24	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8274504	2016/05/19	2016/05/20	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8272444	N/A	2016/05/24	Rob Reinert
Ammonia-N (Unpreserved)	KONE/COL	8274771	N/A	2016/05/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8273090	N/A	2016/05/24	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8274227	N/A	2016/05/19	Irene Popov
pH Water	AT/ALK	8274293	N/A	2016/05/20	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8274755	N/A	2016/05/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8273554	2016/05/19	2016/05/20	Jamie Sun

Maxxam ID: OQ7201
Sample ID: KZ-15
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8274287	2016/05/19	2016/05/20	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8274752	N/A	2016/05/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8274675	N/A	2016/05/19	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8276144	N/A	2016/05/20	Isabel Choi
Conductance - water	AT/ALK	8274291	N/A	2016/05/20	Maria Maclean
Fluoride	ISE/ISE	8275672	N/A	2016/05/19	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8272394	N/A	2016/05/24	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8272442	N/A	2016/05/24	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8275424	N/A	2016/05/20	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8275530	2016/05/20	2016/05/20	Edwin Lamigo
Ion Balance	CALC	8273223	N/A	2016/05/25	Andy Lu
Sum of cations, anions	CALC	8273224	N/A	2016/05/25	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8272825	N/A	2016/05/24	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8275630	2016/05/20	2016/05/20	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8272444	N/A	2016/05/24	Rob Reinert
Ammonia-N (Unpreserved)	KONE/COL	8274773	N/A	2016/05/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OQ7201
Sample ID: KZ-15
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8273090	N/A	2016/05/24	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8274227	N/A	2016/05/19	Irene Popov
pH Water	AT/ALK	8274293	N/A	2016/05/20	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8275948	N/A	2016/05/20	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8273554	2016/05/19	2016/05/20	Jamie Sun

Maxxam ID: OQ7201 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Wilson Au Yueng
Ammonia-N (Unpreserved)	KONE/COL	8274773	N/A	2016/05/19	Sherryl Flores
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	Isabel Choi

Maxxam ID: OQ7202
Sample ID: KZ-16
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8274287	2016/05/19	2016/05/20	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8274752	N/A	2016/05/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8274675	N/A	2016/05/19	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8276144	N/A	2016/05/20	Isabel Choi
Conductance - water	AT/ALK	8274291	N/A	2016/05/20	Maria Maclean
Fluoride	ISE/ISE	8275672	N/A	2016/05/19	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8272394	N/A	2016/05/24	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8272442	N/A	2016/05/24	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8275424	N/A	2016/05/20	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8275530	2016/05/20	2016/05/20	Edwin Lamigo
Ion Balance	CALC	8273223	N/A	2016/05/25	Andy Lu
Sum of cations, anions	CALC	8273224	N/A	2016/05/25	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8272825	N/A	2016/05/24	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8275630	2016/05/20	2016/05/20	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8272444	N/A	2016/05/24	Rob Reinert
Ammonia-N (Unpreserved)	KONE/COL	8274771	N/A	2016/05/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OQ7202
Sample ID: KZ-16
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8273090	N/A	2016/05/24	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8274227	N/A	2016/05/19	Irene Popov
pH Water	AT/ALK	8274293	N/A	2016/05/20	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8275967	N/A	2016/05/20	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8273554	2016/05/19	2016/05/20	Jamie Sun

Maxxam ID: OQ7203
Sample ID: KZ-17
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8274287	2016/05/19	2016/05/20	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8274762	N/A	2016/05/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8274675	N/A	2016/05/19	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8276144	N/A	2016/05/20	Isabel Choi
Conductance - water	AT/ALK	8274291	N/A	2016/05/20	Maria Maclean
Fluoride	ISE/ISE	8275675	N/A	2016/05/19	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8272394	N/A	2016/05/24	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8272442	N/A	2016/05/24	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8275424	N/A	2016/05/20	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8275530	2016/05/20	2016/05/20	Edwin Lamigo
Ion Balance	CALC	8273223	N/A	2016/05/25	Andy Lu
Sum of cations, anions	CALC	8273224	N/A	2016/05/25	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8272825	N/A	2016/05/24	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8275630	2016/05/20	2016/05/20	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8272444	N/A	2016/05/24	Rob Reinert
Ammonia-N (Unpreserved)	KONE/COL	8274773	N/A	2016/05/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8273090	N/A	2016/05/24	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8274227	N/A	2016/05/19	Irene Popov
pH Water	AT/ALK	8274293	N/A	2016/05/20	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8274778	N/A	2016/05/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8273554	2016/05/19	2016/05/20	Jamie Sun

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OQ7203 Dup
Sample ID: KZ-17
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	Isaac Wang

Maxxam ID: OQ7204
Sample ID: KZ-21
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8274287	2016/05/19	2016/05/20	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8274762	N/A	2016/05/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8274675	N/A	2016/05/19	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8276144	N/A	2016/05/20	Isabel Choi
Conductance - water	AT/ALK	8274291	N/A	2016/05/20	Maria Maclean
Fluoride	ISE/ISE	8275675	N/A	2016/05/19	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8272394	N/A	2016/05/24	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8272442	N/A	2016/05/24	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8275424	N/A	2016/05/20	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8275530	2016/05/20	2016/05/20	Edwin Lamigo
Ion Balance	CALC	8273223	N/A	2016/05/25	Andy Lu
Sum of cations, anions	CALC	8273224	N/A	2016/05/25	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8272825	N/A	2016/05/24	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8275630	2016/05/20	2016/05/20	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8272444	N/A	2016/05/24	Rob Reinert
Ammonia-N (Unpreserved)	KONE/COL	8274773	N/A	2016/05/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8273090	N/A	2016/05/24	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8274227	N/A	2016/05/19	Irene Popov
pH Water	AT/ALK	8274293	N/A	2016/05/20	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8274778	N/A	2016/05/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8273554	2016/05/19	2016/05/20	Jamie Sun

Maxxam ID: OQ7204 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8274762	N/A	2016/05/19	Balwinder Bassi
Sulphate by Automated Colourimetry	KONE/COL	8274778	N/A	2016/05/19	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OQ7205
Sample ID: KZ-22
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8274287	2016/05/19	2016/05/20	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8274762	N/A	2016/05/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8274675	N/A	2016/05/19	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8276144	N/A	2016/05/20	Isabel Choi
Conductance - water	AT/ALK	8274291	N/A	2016/05/20	Maria Maclean
Fluoride	ISE/ISE	8275675	N/A	2016/05/19	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8272394	N/A	2016/05/24	Rob Reinert
Hardness (calculated as CaCO3)	CALC	8272442	N/A	2016/05/24	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8275424	N/A	2016/05/20	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8275530	2016/05/20	2016/05/20	Edwin Lamigo
Ion Balance	CALC	8273223	N/A	2016/05/25	Andy Lu
Sum of cations, anions	CALC	8273224	N/A	2016/05/25	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8272825	N/A	2016/05/24	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8275630	2016/05/20	2016/05/20	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8272444	N/A	2016/05/24	Rob Reinert
Ammonia-N (Unpreserved)	KONE/COL	8274773	N/A	2016/05/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8273090	N/A	2016/05/24	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8274227	N/A	2016/05/19	Irene Popov
pH Water	AT/ALK	8274293	N/A	2016/05/20	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8274778	N/A	2016/05/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8273554	2016/05/19	2016/05/20	Jamie Sun

Maxxam ID: OQ7206
Sample ID: KZ-26
Matrix: Water

Collected: 2016/05/14
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8274287	2016/05/19	2016/05/20	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8274752	N/A	2016/05/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8274675	N/A	2016/05/19	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8276144	N/A	2016/05/20	Isabel Choi
Conductance - water	AT/ALK	8274291	N/A	2016/05/20	Maria Maclean
Fluoride	ISE/ISE	8275672	N/A	2016/05/19	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8272394	N/A	2016/05/24	Rob Reinert

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OQ7206
Sample ID: KZ-26
Matrix: Water

Collected: 2016/05/14
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8272442	N/A	2016/05/24	Rob Reinert
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8275424	N/A	2016/05/20	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8275530	2016/05/20	2016/05/20	Edwin Lamigo
Ion Balance	CALC	8273223	N/A	2016/05/25	Andy Lu
Sum of cations, anions	CALC	8273224	N/A	2016/05/25	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8272825	N/A	2016/05/24	Rob Reinert
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8275630	2016/05/20	2016/05/20	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8272444	N/A	2016/05/24	Rob Reinert
Ammonia-N (Unpreserved)	KONE/COL	8274771	N/A	2016/05/19	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8273090	N/A	2016/05/24	Rob Reinert
Filter and HNO3 Preserve for Metals	ICP	8274227	N/A	2016/05/19	Irene Popov
pH Water	AT/ALK	8274293	N/A	2016/05/20	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8275967	N/A	2016/05/20	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8273554	2016/05/19	2016/05/20	Jamie Sun

Maxxam ID: OQ7206 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2016/05/14
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Digested LL (total)	ICP/CRCM	8275630	2016/05/20	2016/05/20	Andrew An

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.3°C
Package 2	4.0°C
Package 3	5.3°C
Package 4	5.0°C
Package 5	7.0°C
Package 6	5.3°C

Sample OQ7198-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OQ7199-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OQ7200-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OQ7201-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OQ7202-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OQ7203-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OQ7204-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OQ7205-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OQ7206-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OQ7198, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8273554	Total Suspended Solids	2016/05/20			97	80 - 120	<1.0	mg/L		
8274251	Acidity (pH 4.5)	2016/05/19					<0.50	mg/L	NC	20
8274251	Acidity (pH 8.3)	2016/05/19			101	80 - 120	<0.50	mg/L	NC	20
8274287	Alkalinity (PP as CaCO3)	2016/05/20					<0.50	mg/L	NC	20
8274287	Alkalinity (Total as CaCO3)	2016/05/20	NC	80 - 120	103	80 - 120	<0.50	mg/L	0.60	20
8274287	Bicarbonate (HCO3)	2016/05/20					<0.50	mg/L	0.60	20
8274287	Carbonate (CO3)	2016/05/20					<0.50	mg/L	NC	20
8274287	Hydroxide (OH)	2016/05/20					<0.50	mg/L	NC	20
8274291	Conductivity	2016/05/20			101	80 - 120	<1.0	uS/cm	0.22	20
8274293	pH	2016/05/20			101	97 - 103			1.0	N/A
8274504	Total Aluminum (Al)	2016/05/20	NC	80 - 120	107	80 - 120	<0.0030	mg/L	24 (1)	20
8274504	Total Antimony (Sb)	2016/05/20	96	80 - 120	106	80 - 120	<0.000050	mg/L	NC	20
8274504	Total Arsenic (As)	2016/05/20	110	80 - 120	104	80 - 120	<0.000020	mg/L	3.7	20
8274504	Total Barium (Ba)	2016/05/20	NC	80 - 120	106	80 - 120	<0.00010	mg/L	3.1	20
8274504	Total Beryllium (Be)	2016/05/20	105	80 - 120	105	80 - 120	<0.000010	mg/L	5.0	20
8274504	Total Bismuth (Bi)	2016/05/20	108	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
8274504	Total Boron (B)	2016/05/20	104	80 - 120	101	80 - 120	<0.050	mg/L	NC	20
8274504	Total Cadmium (Cd)	2016/05/20	101	80 - 120	110	80 - 120	<0.0000050	mg/L	2.3	20
8274504	Total Chromium (Cr)	2016/05/20	112	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8274504	Total Cobalt (Co)	2016/05/20	109	80 - 120	106	80 - 120	<0.000010	mg/L	0.28	20
8274504	Total Copper (Cu)	2016/05/20	109	80 - 120	107	80 - 120	<0.00020	mg/L	3.2	20
8274504	Total Iron (Fe)	2016/05/20	NC	80 - 120	110	80 - 120	<0.0050	mg/L	9.2	20
8274504	Total Lead (Pb)	2016/05/20	114	80 - 120	106	80 - 120	<0.000050	mg/L	4.0	20
8274504	Total Lithium (Li)	2016/05/20	103	80 - 120	107	80 - 120	<0.00050	mg/L	NC	20
8274504	Total Manganese (Mn)	2016/05/20	NC	80 - 120	104	80 - 120	<0.00010	mg/L	1.2	20
8274504	Total Molybdenum (Mo)	2016/05/20	112	80 - 120	101	80 - 120	<0.000050	mg/L	3.7	20
8274504	Total Nickel (Ni)	2016/05/20	109	80 - 120	104	80 - 120	<0.00010	mg/L	2.2	20
8274504	Total Phosphorus (P)	2016/05/20					<0.010	mg/L	NC	20
8274504	Total Selenium (Se)	2016/05/20	95	80 - 120	111	80 - 120	<0.000040	mg/L	4.7	20
8274504	Total Silicon (Si)	2016/05/20					<0.10	mg/L	4.9	20
8274504	Total Silver (Ag)	2016/05/20	129 (1)	80 - 120	95	80 - 120	<0.0000050	mg/L	5.0	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8274504	Total Strontium (Sr)	2016/05/20	NC	80 - 120	107	80 - 120	<0.000050	mg/L	1.2	20
8274504	Total Thallium (Tl)	2016/05/20	97	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8274504	Total Tin (Sn)	2016/05/20	101	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
8274504	Total Titanium (Ti)	2016/05/20	NC	80 - 120	101	80 - 120	<0.0050	mg/L	NC	20
8274504	Total Uranium (U)	2016/05/20	114	80 - 120	106	80 - 120	<0.0000050	mg/L	4.8	20
8274504	Total Vanadium (V)	2016/05/20	113	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8274504	Total Zinc (Zn)	2016/05/20	NC	80 - 120	110	80 - 120	<0.0010	mg/L	1.0	20
8274504	Total Zirconium (Zr)	2016/05/20					<0.00010	mg/L	13	20
8274675	True Colour	2016/05/19			115	80 - 120	<5.0	Col. Unit	NC	20
8274694	Dissolved Phosphorus (P)	2016/05/19	93	80 - 120	105	80 - 120	<0.0020	mg/L	0.85	20
8274697	Total Phosphorus (P)	2016/05/19	92	80 - 120	98	80 - 120	<0.0020	mg/L	NC	20
8274752	Dissolved Chloride (Cl)	2016/05/19			99	80 - 120	<0.50	mg/L		
8274755	Dissolved Sulphate (SO4)	2016/05/19	NC	80 - 120	100	80 - 120	<0.50	mg/L	1.7	20
8274762	Dissolved Chloride (Cl)	2016/05/19	103	80 - 120	98	80 - 120	0.60, RDL=0.50	mg/L	NC	20
8274771	Total Ammonia (N)	2016/05/19	97	80 - 120	95	80 - 120	<0.0050	mg/L	NC	20
8274773	Total Ammonia (N)	2016/05/19	95	80 - 120	93	80 - 120	<0.0050	mg/L	NC	20
8274778	Dissolved Sulphate (SO4)	2016/05/19	NC	80 - 120	100	80 - 120	<0.50	mg/L	17	20
8275057	Dissolved Aluminum (Al)	2016/05/20	104	80 - 120	105	80 - 120	<0.00050	mg/L	5.0	20
8275057	Dissolved Antimony (Sb)	2016/05/20	95	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8275057	Dissolved Arsenic (As)	2016/05/20	102	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8275057	Dissolved Barium (Ba)	2016/05/20	NC	80 - 120	101	80 - 120	<0.000020	mg/L	1.2	20
8275057	Dissolved Beryllium (Be)	2016/05/20	99	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
8275057	Dissolved Bismuth (Bi)	2016/05/20	98	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8275057	Dissolved Boron (B)	2016/05/20	93	80 - 120	94	80 - 120	<0.010	mg/L	NC	20
8275057	Dissolved Cadmium (Cd)	2016/05/20	100	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8275057	Dissolved Chromium (Cr)	2016/05/20	96	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8275057	Dissolved Cobalt (Co)	2016/05/20	96	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8275057	Dissolved Copper (Cu)	2016/05/20	94	80 - 120	102	80 - 120	<0.000050	mg/L	6.0	20
8275057	Dissolved Iron (Fe)	2016/05/20	111	80 - 120	118	80 - 120	<0.0010	mg/L	16	20
8275057	Dissolved Lead (Pb)	2016/05/20	100	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8275057	Dissolved Lithium (Li)	2016/05/20	98	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8275057	Dissolved Manganese (Mn)	2016/05/20	98	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8275057	Dissolved Molybdenum (Mo)	2016/05/20	NC	80 - 120	96	80 - 120	<0.000050	mg/L	3.8	20
8275057	Dissolved Nickel (Ni)	2016/05/20	94	80 - 120	102	80 - 120	<0.000020	mg/L		
8275057	Dissolved Phosphorus (P)	2016/05/20					0.0024, RDL=0.0020	mg/L	NC	20
8275057	Dissolved Selenium (Se)	2016/05/20	97	80 - 120	97	80 - 120	<0.000040	mg/L	14	20
8275057	Dissolved Silicon (Si)	2016/05/20					<0.050	mg/L	4.9	20
8275057	Dissolved Silver (Ag)	2016/05/20	99	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8275057	Dissolved Strontium (Sr)	2016/05/20	NC	80 - 120	104	80 - 120	<0.000050	mg/L	4.8	20
8275057	Dissolved Thallium (Tl)	2016/05/20	113	80 - 120	106	80 - 120	0.0000020, RDL=0.0000020	mg/L	NC	20
8275057	Dissolved Tin (Sn)	2016/05/20	102	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8275057	Dissolved Titanium (Ti)	2016/05/20	98	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20
8275057	Dissolved Uranium (U)	2016/05/20	101	80 - 120	98	80 - 120	<0.0000020	mg/L	4.4	20
8275057	Dissolved Vanadium (V)	2016/05/20	99	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8275057	Dissolved Zinc (Zn)	2016/05/20	102	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8275057	Dissolved Zirconium (Zr)	2016/05/20					<0.00010	mg/L	NC	20
8275424	Dissolved Mercury (Hg)	2016/05/20	90	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
8275459	Total Mercury (Hg)	2016/05/20	99	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8275530	Total Mercury (Hg)	2016/05/20	99	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8275630	Total Aluminum (Al)	2016/05/20	100	80 - 120	106	80 - 120	<0.0030	mg/L	NC	20
8275630	Total Antimony (Sb)	2016/05/20	101	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8275630	Total Arsenic (As)	2016/05/20	101	80 - 120	104	80 - 120	<0.000020	mg/L	0.82	20
8275630	Total Barium (Ba)	2016/05/20	NC	80 - 120	103	80 - 120	<0.00010	mg/L	1.7	20
8275630	Total Beryllium (Be)	2016/05/20	98	80 - 120	101	80 - 120	<0.000010	mg/L	NC	20
8275630	Total Bismuth (Bi)	2016/05/20	97	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8275630	Total Boron (B)	2016/05/20	96	80 - 120	98	80 - 120	<0.050	mg/L	NC	20
8275630	Total Cadmium (Cd)	2016/05/20	102	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8275630	Total Chromium (Cr)	2016/05/20	98	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8275630	Total Cobalt (Co)	2016/05/20	96	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8275630	Total Copper (Cu)	2016/05/20	93	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8275630	Total Iron (Fe)	2016/05/20	NC	80 - 120	122 (2)	80 - 120	<0.0050	mg/L	6.3	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8275630	Total Lead (Pb)	2016/05/20	100	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8275630	Total Lithium (Li)	2016/05/20	97	80 - 120	97	80 - 120	<0.00050	mg/L	8.5	20
8275630	Total Manganese (Mn)	2016/05/20	NC	80 - 120	102	80 - 120	0.00013, RDL=0.00010	mg/L	4.0	20
8275630	Total Molybdenum (Mo)	2016/05/20	NC	80 - 120	97	80 - 120	<0.000050	mg/L	0.57	20
8275630	Total Nickel (Ni)	2016/05/20	94	80 - 120	102	80 - 120	<0.00010	mg/L	6.2	20
8275630	Total Phosphorus (P)	2016/05/20					<0.010	mg/L	NC	20
8275630	Total Selenium (Se)	2016/05/20	94	80 - 120	96	80 - 120	<0.000040	mg/L	7.3	20
8275630	Total Silicon (Si)	2016/05/20					<0.10	mg/L	5.0	20
8275630	Total Silver (Ag)	2016/05/20	90	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8275630	Total Strontium (Sr)	2016/05/20	NC	80 - 120	102	80 - 120	<0.000050	mg/L	2.8	20
8275630	Total Thallium (Tl)	2016/05/20	85	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20
8275630	Total Tin (Sn)	2016/05/20	104	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8275630	Total Titanium (Ti)	2016/05/20	92	80 - 120	109	80 - 120	<0.0050	mg/L	NC	20
8275630	Total Uranium (U)	2016/05/20	103	80 - 120	99	80 - 120	<0.0000050	mg/L	2.9	20
8275630	Total Vanadium (V)	2016/05/20	99	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8275630	Total Zinc (Zn)	2016/05/20	92	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
8275630	Total Zirconium (Zr)	2016/05/20					<0.00010	mg/L	NC	20
8275672	Fluoride (F)	2016/05/19	98	80 - 120	100	80 - 120	<0.010	mg/L	3.6	20
8275675	Fluoride (F)	2016/05/19	NC	80 - 120	102	80 - 120	0.010, RDL=0.010	mg/L	0	20
8275948	Dissolved Sulphate (SO4)	2016/05/20	NC	80 - 120	99	80 - 120	0.62, RDL=0.50	mg/L	0.45	20
8275967	Dissolved Sulphate (SO4)	2016/05/20	111	80 - 120	97	80 - 120	<0.50	mg/L		
8276016	Nitrate plus Nitrite (N)	2016/05/19	106	80 - 120	108	80 - 120	<0.0020	mg/L	2.5	25
8276017	Nitrite (N)	2016/05/19	101	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25
8276144	Dissolved Organic Carbon (C)	2016/05/20	106	80 - 120	118	80 - 120	<0.50	mg/L		
8277533	Strong Acid Dissoc. Cyanide (CN)	2016/05/24	101	80 - 120	103	80 - 120	0.00050, RDL=0.00050	mg/L	NC	20
8277538	Weak Acid Dissoc. Cyanide (CN)	2016/05/24	102	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8279202	Dissolved Nickel (Ni)	2016/05/26			101	80 - 120	<0.000020	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) Blank Spike outside acceptance criteria (10% of analytes failure allowed).

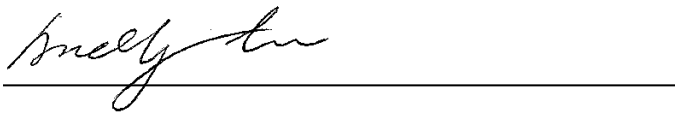
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Andy Lu, Ph.D., P.Chem., Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

BY: Slymno@13800

2016 -05- 17

TEMP: 3.4 / 3.3 / 4.4

cooler 5→ 4 / 7 / 17 } COMPLETED COC
cooler 6→ 6 / 5 / 15 }

cooler 1 2 3 4 } ground ~~surface~~ water (MW samples)

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC 08421149

BBY FCD-00077/05
Page 1

Invoice Information		Report Information (if differs from invoice)		Project Information (whe...		ound Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-6		16-May-14	10:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		please send copy of report to: crystalb@equityexploration.com
3	KZ-7		16-May-14	10:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
4	KZ-13		16-May-16	8:22	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
5	KZ-15		16-May-15	17:02	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
6	KZ-16		16-May-15	17:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
7	KZ-17		16-May-15	17:29	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
8	KZ-21		16-May-15	16:10	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
9	KZ-22		16-May-15	15:37	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
10	KZ-26		16-May-14	18:17	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		4.5
NA		3.3

COOLING MEDIA PRESENT Y / N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Crystal Beaudry	16/05/2016	20:42	Laurel Beaulieu	2016/05/18	14:00

MAXXAM JOB #

B638452_COC

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08421243

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/06/02
Report #: R2190444
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B639571
Received: 2016/05/21, 09:50

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	5	N/A	2016/05/25	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	5	2016/05/25	2016/05/25	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	5	N/A	2016/05/24	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	5	N/A	2016/05/27	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	5	N/A	2016/05/27	BBY6SOP-00004	SM 22 4500-CN O m
Colour (True) by Kone Lab	5	N/A	2016/05/21	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	4	N/A	2016/05/24	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2016/05/24	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	5	N/A	2016/05/25	BBY6SOP-00026	SM 22 2510 B m
Fluoride	5	N/A	2016/05/24	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	4	N/A	2016/05/30	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	1	N/A	2016/06/01	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	3	N/A	2016/05/30	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	2	N/A	2016/06/01	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	5	N/A	2016/05/30	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	5	2016/05/30	2016/05/30	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	5	N/A	2016/05/30	BBY WI-00033	SM 22 1030E
Sum of cations, anions	5	N/A	2016/05/30	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	3	N/A	2016/05/30	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	2	N/A	2016/06/01	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	5	N/A	2016/05/29	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	1	2016/05/26	2016/05/27	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2016/05/27	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	4	N/A	2016/05/30	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	4	N/A	2016/05/29	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Unpreserved)	1	N/A	2016/05/24	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	4	N/A	2016/05/25	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	5	N/A	2016/05/21	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	5	N/A	2016/05/21	BBY6SOP-00010	SM 22 4500-NO3- I m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08421243

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/06/02
Report #: R2190444
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B639571
Received: 2016/05/21, 09:50

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrogen - Nitrate (as N)	5	N/A	2016/05/25	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	4	N/A	2016/05/24	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	5	N/A	2016/05/25	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	5	N/A	2016/05/24	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	5	2016/05/25	2016/05/25	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	5	N/A	2016/05/25	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	5	2016/05/25	2016/05/26	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OR3139		OR3143	OR3144		OR3145		
Sampling Date		2016/05/19 11:10		2016/05/19 12:12	2016/05/19 11:20		2016/05/19 11:30		
COC Number		08421243		08421243	08421243		08421243		
	UNITS	KZ-2	QC Batch	KZ-9	KZ-SWFB	QC Batch	KZ-SWDUP	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	1.3	8276508	2.5	0.00070	8276508	1.3	N/A	8276508
Cation Sum	meq/L	1.4	8276508	2.5	0.0074	8276508	1.3	N/A	8276508
Filter and HNO3 Preservation	N/A	LAB	8277063	LAB	LAB	8277063	LAB	N/A	8277063
Ion Balance	N/A	1.1	8276507	1.0	NC	8276507	1.1	0.010	8276507
Nitrate (N)	mg/L	0.110	8276511	0.0355	<0.0020	8276511	0.111	0.0020	8276511
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00063	8281267	0.00057	<0.00050	8281267	0.00061	0.00050	8281267
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8281274	<0.00050	<0.00050	8281274	0.00062	0.00050	8281274
Fluoride (F)	mg/L	0.039	8279057	0.070	0.014	8279055	0.037	0.010	8279057
Dissolved Organic Carbon (C)	mg/L	2.49	8278599	1.25	<0.50	8278599	2.57	0.50	8278599
Acidity (pH 4.5)	mg/L	<0.50	8278484	<0.50	<0.50	8278484	<0.50	0.50	8278484
Alkalinity (Total as CaCO3)	mg/L	43.2	8278658	101	<0.50	8278658	41.3	0.50	8278658
Acidity (pH 8.3)	mg/L	<0.50	8278484	<0.50	0.54	8278484	<0.50	0.50	8278484
Alkalinity (PP as CaCO3)	mg/L	<0.50	8278658	<0.50	<0.50	8278658	<0.50	0.50	8278658
Bicarbonate (HCO3)	mg/L	52.7	8278658	124	<0.50	8278658	50.4	0.50	8278658
Carbonate (CO3)	mg/L	<0.50	8278658	<0.50	<0.50	8278658	<0.50	0.50	8278658
Hydroxide (OH)	mg/L	<0.50	8278658	<0.50	<0.50	8278658	<0.50	0.50	8278658
Anions									
Dissolved Sulphate (SO4)	mg/L	19.8	8277816	22.1	<0.50	8277816	21.0	0.50	8277816
Dissolved Chloride (Cl)	mg/L	<0.50	8277815	0.53	<0.50	8277815	<0.50	0.50	8277815
MISCELLANEOUS									
True Colour	Col. Unit	18.3	8276688	16.3	<5.0	8276688	18.9	5.0	8276688
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0039 (1)	8278323	0.0034 (1)	<0.0020 (1)	8278323	0.0030 (1)	0.0020	8278323
Total Ammonia (N)	mg/L	0.018	8278887	0.021	0.011	8278887	0.018	0.0050	8278887
Nitrate plus Nitrite (N)	mg/L	0.110	8277614	0.0355	<0.0020	8277614	0.111	0.0020	8277614
Nitrite (N)	mg/L	<0.0020	8277621	<0.0020	<0.0020	8277621	<0.0020	0.0020	8277621
Total Phosphorus (P)	mg/L	0.0036 (1)	8278338	0.0042 (1)	<0.0020 (1)	8278338	0.0039 (1)	0.0020	8278338
Physical Properties									
Conductivity	uS/cm	131	8278659	236	1.1	8278659	131	1.0	8278659

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OR3139		OR3143	OR3144		OR3145		
Sampling Date		2016/05/19 11:10		2016/05/19 12:12	2016/05/19 11:20		2016/05/19 11:30		
COC Number		08421243		08421243	08421243		08421243		
	UNITS	**KZ-2**	**QC Batch**	**KZ-9**	**KZ-SWFB**	**QC Batch**	**KZ-SWDUP**	**RDL**	**QC Batch**
pH	pH	7.82	8278661	8.16	5.18	8278661	7.83		8278661
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8277647	13.8	<1.0	8277647	1.9	1.0	8277647
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OR3146		
Sampling Date		2016/05/21 09:50		
COC Number		08421243		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	0.011	N/A	8276508
Cation Sum	meq/L	0.0018	N/A	8276508
Ion Balance	N/A	0.17	0.010	8276507
Nitrate (N)	mg/L	<0.0020	0.0020	8276511
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8281267
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8281274
Fluoride (F)	mg/L	0.013	0.010	8279057
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8276684
Acidity (pH 4.5)	mg/L	<0.50	0.50	8278484
Alkalinity (Total as CaCO3)	mg/L	0.50	0.50	8278658
Acidity (pH 8.3)	mg/L	0.83	0.50	8278484
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8278658
Bicarbonate (HCO3)	mg/L	0.61	0.50	8278658
Carbonate (CO3)	mg/L	<0.50	0.50	8278658
Hydroxide (OH)	mg/L	<0.50	0.50	8278658
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8277816
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8277815
MISCELLANEOUS				
True Colour	Col. Unit	<5.0	5.0	8276688
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	0.0020	8278323
Total Ammonia (N)	mg/L	<0.0050	0.0050	8277814
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8277614
Nitrite (N)	mg/L	<0.0020	0.0020	8277621
Total Phosphorus (P)	mg/L	<0.0020 (1)	0.0020	8278338
Physical Properties				
Conductivity	uS/cm	1.1	1.0	8278659
pH	pH	5.74		8278661

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OR3146		
Sampling Date		2016/05/21 09:50		
COC Number		08421243		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8277647
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OR3139		OR3143		OR3144		
Sampling Date		2016/05/19 11:10		2016/05/19 12:12		2016/05/19 11:20		
COC Number		08421243		08421243		08421243		
	UNITS	KZ-2	QC Batch	KZ-9	QC Batch	KZ-SWFB	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	65.3	8276303	122	8283518	<0.50	0.50	8276303
Elements								
Dissolved Mercury (Hg)	mg/L	0.0000030	8282955	<0.0000020	8282955	<0.0000020	0.0000020	8282955
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0103	8278568	0.00437	8284499	<0.00050	0.00050	8278568
Dissolved Antimony (Sb)	mg/L	0.000027	8278568	0.000058	8284499	<0.000020	0.000020	8278568
Dissolved Arsenic (As)	mg/L	0.000087	8278568	0.000219	8284499	<0.000020	0.000020	8278568
Dissolved Barium (Ba)	mg/L	0.0386	8278568	0.0608	8284499	<0.000020	0.000020	8278568
Dissolved Beryllium (Be)	mg/L	<0.000010	8278568	<0.000010	8284499	<0.000010	0.000010	8278568
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8278568	<0.0000050	8284499	<0.0000050	0.0000050	8278568
Dissolved Boron (B)	mg/L	<0.010	8278568	<0.010	8284499	<0.010	0.010	8278568
Dissolved Cadmium (Cd)	mg/L	0.000144	8278568	0.0000360	8284499	0.0000050	0.0000050	8278568
Dissolved Chromium (Cr)	mg/L	<0.00010	8278568	<0.00010	8284499	<0.00010	0.00010	8278568
Dissolved Cobalt (Co)	mg/L	0.0000150	8278568	0.0000150	8284499	<0.0000050	0.0000050	8278568
Dissolved Copper (Cu)	mg/L	0.00241	8278568	0.000644	8284499	<0.000050	0.000050	8278568
Dissolved Iron (Fe)	mg/L	0.0068	8278568	0.113	8284499	<0.0010	0.0010	8278568
Dissolved Lead (Pb)	mg/L	0.0000480	8278568	0.0000480	8284499	0.0000070	0.0000050	8278568
Dissolved Lithium (Li)	mg/L	0.00089	8278568	0.00176	8284499	<0.00050	0.00050	8278568
Dissolved Manganese (Mn)	mg/L	0.000300	8278568	0.0173	8284499	<0.000050	0.000050	8278568
Dissolved Molybdenum (Mo)	mg/L	0.000457	8278568	0.000533 (1)	8278568	<0.000050	0.000050	8278568
Dissolved Nickel (Ni)	mg/L	0.000459	8278568	0.000340	8284499	<0.000020	0.000020	8278568
Dissolved Phosphorus (P)	mg/L	<0.0020	8278568	0.0028	8284499	<0.0020	0.0020	8278568
Dissolved Selenium (Se)	mg/L	0.000425	8278568	0.000626	8284499	<0.000040	0.000040	8278568
Dissolved Silicon (Si)	mg/L	1.73	8278568	2.26	8284499	<0.050	0.050	8278568
Dissolved Silver (Ag)	mg/L	<0.0000050	8278568	<0.0000050	8284499	<0.0000050	0.0000050	8278568
Dissolved Strontium (Sr)	mg/L	0.0640	8278568	0.136	8284499	<0.000050	0.000050	8278568
Dissolved Thallium (Tl)	mg/L	0.0000050	8278568	<0.0000020	8284499	<0.0000020	0.0000020	8278568
Dissolved Tin (Sn)	mg/L	<0.00020	8278568	<0.00020	8284499	<0.00020	0.00020	8278568
Dissolved Titanium (Ti)	mg/L	<0.00050	8278568	<0.00050	8284499	<0.00050	0.00050	8278568
Dissolved Uranium (U)	mg/L	0.00112	8278568	0.000729	8284499	0.0000020	0.0000020	8278568
Dissolved Vanadium (V)	mg/L	<0.00020	8278568	<0.00020	8284499	<0.00020	0.00020	8278568

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OR3139		OR3143		OR3144		
Sampling Date		2016/05/19 11:10		2016/05/19 12:12		2016/05/19 11:20		
COC Number		08421243		08421243		08421243		
	UNITS	**KZ-2**	**QC Batch**	**KZ-9**	**QC Batch**	**KZ-SWFB**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.0235	8278568	0.00565	8284499	<0.00010 (1)	0.00010	8278568
Dissolved Zirconium (Zr)	mg/L	<0.00010	8278568	<0.00010	8284499	<0.00010	0.00010	8278568
Dissolved Calcium (Ca)	mg/L	22.3	8276509	40.8	8283891	<0.050	0.050	8276509
Dissolved Magnesium (Mg)	mg/L	2.31	8276509	4.79	8283891	<0.050	0.050	8276509
Dissolved Potassium (K)	mg/L	1.50	8276509	1.39	8283891	<0.050	0.050	8276509
Dissolved Sodium (Na)	mg/L	0.376	8276509	0.782	8283891	<0.050	0.050	8276509
Dissolved Sulphur (S)	mg/L	6.9	8276509	7.7	8283891	<3.0	3.0	8276509

RDL = Reportable Detection Limit
(1) Matrix Spike outside acceptance criteria (10% of analytes failure allowed).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OR3145		OR3146		
Sampling Date		2016/05/19 11:30		2016/05/21 09:50		
COC Number		08421243		08421243		
	UNITS	KZ-SWDUP	QC Batch	TRIP BLANK	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	61.4	8283518	<0.50	0.50	8276303
Elements						
Dissolved Mercury (Hg)	mg/L	0.0000031	8282955	<0.0000020	0.0000020	8282955
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.0105	8278568	<0.00050	0.00050	8278568
Dissolved Antimony (Sb)	mg/L	0.000024	8278568	<0.000020	0.000020	8278568
Dissolved Arsenic (As)	mg/L	0.000104	8278568	<0.000020	0.000020	8278568
Dissolved Barium (Ba)	mg/L	0.0386	8278568	<0.000020	0.000020	8278568
Dissolved Beryllium (Be)	mg/L	<0.000010	8278568	<0.000010	0.000010	8278568
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8278568	<0.0000050	0.0000050	8278568
Dissolved Boron (B)	mg/L	<0.010	8278568	<0.010	0.010	8278568
Dissolved Cadmium (Cd)	mg/L	0.000155	8278568	<0.0000050	0.0000050	8278568
Dissolved Chromium (Cr)	mg/L	<0.00010	8278568	<0.00010	0.00010	8278568
Dissolved Cobalt (Co)	mg/L	0.0000120	8278568	<0.0000050	0.0000050	8278568
Dissolved Copper (Cu)	mg/L	0.00235	8278568	<0.000050	0.000050	8278568
Dissolved Iron (Fe)	mg/L	0.0071	8278568	<0.0010	0.0010	8278568
Dissolved Lead (Pb)	mg/L	0.0000500	8278568	<0.0000050	0.0000050	8278568
Dissolved Lithium (Li)	mg/L	0.00098	8278568	<0.00050	0.00050	8278568
Dissolved Manganese (Mn)	mg/L	0.000225	8278568	<0.000050	0.000050	8278568
Dissolved Molybdenum (Mo)	mg/L	0.000452	8278568	<0.000050	0.000050	8278568
Dissolved Nickel (Ni)	mg/L	0.000452	8278568	<0.000020	0.000020	8278568
Dissolved Phosphorus (P)	mg/L	<0.0020	8278568	<0.0020	0.0020	8278568
Dissolved Selenium (Se)	mg/L	0.000422	8278568	<0.000040	0.000040	8278568
Dissolved Silicon (Si)	mg/L	1.74	8278568	<0.050	0.050	8278568
Dissolved Silver (Ag)	mg/L	<0.0000050	8278568	<0.0000050	0.0000050	8278568
Dissolved Strontium (Sr)	mg/L	0.0644	8278568	<0.000050	0.000050	8278568
Dissolved Thallium (Tl)	mg/L	0.0000040	8278568	<0.0000020	0.0000020	8278568
Dissolved Tin (Sn)	mg/L	<0.00020	8278568	<0.00020	0.00020	8278568
Dissolved Titanium (Ti)	mg/L	<0.00050	8278568	<0.00050	0.00050	8278568
Dissolved Uranium (U)	mg/L	0.00114	8278568	<0.0000020	0.0000020	8278568
Dissolved Vanadium (V)	mg/L	<0.00020	8278568	<0.00020	0.00020	8278568
Dissolved Zinc (Zn)	mg/L	0.0241	8278568	<0.00010	0.00010	8278568
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OR3145		OR3146		
Sampling Date		2016/05/19 11:30		2016/05/21 09:50		
COC Number		08421243		08421243		
	UNITS	**KZ-SWDUP**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	8278568	<0.00010	0.00010	8278568
Dissolved Calcium (Ca)	mg/L	21.2	8283891	<0.050	0.050	8276509
Dissolved Magnesium (Mg)	mg/L	2.06	8283891	<0.050	0.050	8276509
Dissolved Potassium (K)	mg/L	1.34	8283891	<0.050	0.050	8276509
Dissolved Sodium (Na)	mg/L	0.379	8283891	<0.050	0.050	8276509
Dissolved Sulphur (S)	mg/L	6.8	8283891	<3.0	3.0	8276509
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OR3139	OR3144	OR3145	OR3146		
Sampling Date		2016/05/19 11:10	2016/05/19 11:20	2016/05/19 11:30	2016/05/21 09:50		
COC Number		08421243	08421243	08421243	08421243		
	UNITS	KZ-2	KZ-SWFB	KZ-SWDUP	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	64.9	<0.50	65.0	<0.50	0.50	8276322
Elements							
Total Mercury (Hg)	mg/L	0.0000024	<0.0000020	0.0000028	<0.0000020	0.0000020	8282908
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0475	<0.00050	0.0283	<0.00050	0.00050	8279151
Total Antimony (Sb)	mg/L	0.000031	<0.000020	0.000028	<0.000020	0.000020	8279151
Total Arsenic (As)	mg/L	0.000122	<0.000020	0.000095	<0.000020	0.000020	8279151
Total Barium (Ba)	mg/L	0.0405	<0.000020	0.0404	<0.000020	0.000020	8279151
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8279151
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8279151
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8279151
Total Cadmium (Cd)	mg/L	0.000172	<0.0000050	0.000174	<0.0000050	0.0000050	8279151
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8279151
Total Cobalt (Co)	mg/L	0.0000490	<0.0000050	0.0000380	<0.0000050	0.0000050	8279151
Total Copper (Cu)	mg/L	0.00289	0.000546	0.00273	<0.000050	0.000050	8279151
Total Iron (Fe)	mg/L	0.0820	<0.0010	0.0411	<0.0010	0.0010	8279151
Total Lead (Pb)	mg/L	0.000375	0.0000250	0.000214	<0.0000050	0.0000050	8279151
Total Lithium (Li)	mg/L	0.00052	<0.00050	<0.00050	<0.00050	0.00050	8279151
Total Manganese (Mn)	mg/L	0.00235	<0.000050	0.00130	<0.000050	0.000050	8279151
Total Molybdenum (Mo)	mg/L	0.000498	<0.000050	0.000515	<0.000050	0.000050	8279151
Total Nickel (Ni)	mg/L	0.000581	<0.000020	0.000530	<0.000020	0.000020	8279151
Total Phosphorus (P)	mg/L	0.0089	0.0029	0.0069	<0.0020	0.0020	8279151
Total Selenium (Se)	mg/L	0.000448	<0.000040	0.000451	<0.000040	0.000040	8279151
Total Silicon (Si)	mg/L	1.53	<0.050	1.55	<0.050	0.050	8279151
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8279151
Total Strontium (Sr)	mg/L	0.0694	<0.000050	0.0673	<0.000050	0.000050	8279151
Total Thallium (Tl)	mg/L	0.0000050	<0.0000020	0.0000060	<0.0000020	0.0000020	8279151
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8279151
Total Titanium (Ti)	mg/L	0.00259	<0.00050	0.00142	<0.00050	0.00050	8279151
Total Uranium (U)	mg/L	0.00114	<0.0000020	0.00111	<0.0000020	0.0000020	8279151
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8279151
Total Zinc (Zn)	mg/L	0.0279	0.00011	0.0268	<0.00010	0.00010	8279151
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OR3139	OR3144	OR3145	OR3146		
Sampling Date		2016/05/19 11:10	2016/05/19 11:20	2016/05/19 11:30	2016/05/21 09:50		
COC Number		08421243	08421243	08421243	08421243		
	UNITS	KZ-2	KZ-SWFB	KZ-SWDUP	TRIP BLANK	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8279151
Total Calcium (Ca)	mg/L	22.9	<0.050	22.9	<0.050	0.050	8276510
Total Magnesium (Mg)	mg/L	1.90	<0.050	1.91	<0.050	0.050	8276510
Total Potassium (K)	mg/L	1.28	<0.050	1.27	<0.050	0.050	8276510
Total Sodium (Na)	mg/L	0.321	<0.050	0.326	<0.050	0.050	8276510
Total Sulphur (S)	mg/L	6.1	<3.0	6.3	<3.0	3.0	8276510
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OR3143		
Sampling Date		2016/05/19 12:12		
COC Number		08421243		
	UNITS	KZ-9	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	105	0.50	8283517
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8282908
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.175	0.0030	8283897
Total Antimony (Sb)	mg/L	0.000054	0.000050	8283897
Total Arsenic (As)	mg/L	0.000483	0.000020	8283897
Total Barium (Ba)	mg/L	0.0534	0.00010	8283897
Total Beryllium (Be)	mg/L	0.000013	0.000010	8283897
Total Bismuth (Bi)	mg/L	<0.000020	0.000020	8283897
Total Boron (B)	mg/L	<0.050	0.050	8283897
Total Cadmium (Cd)	mg/L	0.0000760	0.0000050	8283897
Total Chromium (Cr)	mg/L	<0.00050	0.00050	8283897
Total Cobalt (Co)	mg/L	0.000258	0.000010	8283897
Total Copper (Cu)	mg/L	0.00174	0.00020	8283897
Total Iron (Fe)	mg/L	0.671	0.0050	8283897
Total Lead (Pb)	mg/L	0.000585	0.000050	8283897
Total Lithium (Li)	mg/L	0.00195	0.00050	8283897
Total Manganese (Mn)	mg/L	0.0402	0.00010	8283897
Total Molybdenum (Mo)	mg/L	0.000415	0.000050	8279986
Total Nickel (Ni)	mg/L	0.00083	0.00010	8283897
Total Phosphorus (P)	mg/L	0.017	0.010	8283897
Total Selenium (Se)	mg/L	0.000529	0.000040	8283897
Total Silicon (Si)	mg/L	2.15	0.10	8283897
Total Silver (Ag)	mg/L	<0.000010	0.000010	8283897
Total Strontium (Sr)	mg/L	0.114	0.000050	8283897
Total Thallium (Tl)	mg/L	0.0000030	0.0000020	8283897
Total Tin (Sn)	mg/L	<0.00020	0.00020	8283897
Total Titanium (Ti)	mg/L	0.0102	0.0050	8283897
Total Uranium (U)	mg/L	0.000635	0.0000050	8283897
Total Vanadium (V)	mg/L	<0.00050	0.00050	8283897
Total Zinc (Zn)	mg/L	0.0157	0.0010	8283897
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OR3143		
Sampling Date		2016/05/19 12:12		
COC Number		08421243		
	UNITS	**KZ-9**	**RDL**	**QC Batch**
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8283897
Total Calcium (Ca)	mg/L	35.4	0.25	8284035
Total Magnesium (Mg)	mg/L	3.99	0.25	8284035
Total Potassium (K)	mg/L	1.17	0.25	8284035
Total Sodium (Na)	mg/L	0.67	0.25	8276510
Total Sulphur (S)	mg/L	<15	15	8284035
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OR3139
Sample ID: KZ-2
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8278484	N/A	2016/05/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8278658	2016/05/25	2016/05/25	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8277815	N/A	2016/05/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8281267	N/A	2016/05/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8281274	N/A	2016/05/27	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8276688	N/A	2016/05/21	Alex Leung
Carbon (DOC) - field filtered/preserved	TRAA/COL	8278599	N/A	2016/05/24	Isabel Choi
Conductance - water	AT/ALK	8278659	N/A	2016/05/25	Maria Maclean
Fluoride	ISE/ISE	8279057	N/A	2016/05/24	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8276322	N/A	2016/05/30	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8276303	N/A	2016/05/30	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8282955	N/A	2016/05/30	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8282908	2016/05/30	2016/05/30	Edwin Lamigo
Ion Balance	CALC	8276507	N/A	2016/05/30	Automated Statchk
Sum of cations, anions	CALC	8276508	N/A	2016/05/30	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8276509	N/A	2016/05/30	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8278568	N/A	2016/05/29	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8276510	N/A	2016/05/30	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8279151	N/A	2016/05/29	Andrew An
Ammonia-N (Preserved)	KONE/COL	8278887	N/A	2016/05/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8277614	N/A	2016/05/21	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8277621	N/A	2016/05/21	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8276511	N/A	2016/05/25	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8277063	N/A	2016/05/24	Lucy Luo
pH Water	AT/ALK	8278661	N/A	2016/05/25	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8277816	N/A	2016/05/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8278323	2016/05/25	2016/05/25	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8278338	N/A	2016/05/25	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8277647	2016/05/25	2016/05/26	Wendy Fong

Maxxam ID: OR3139 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8281267	N/A	2016/05/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8281274	N/A	2016/05/27	Tatyana Serzhanova
Mercury (Total-LowLevel) by CVAF	CV/AF	8282908	2016/05/30	2016/05/30	Edwin Lamigo

Maxxam ID: OR3143
Sample ID: KZ-9
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8278484	N/A	2016/05/25	Wilson Au Yueng

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OR3143
Sample ID: KZ-9
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8278658	2016/05/25	2016/05/25	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8277815	N/A	2016/05/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8281267	N/A	2016/05/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8281274	N/A	2016/05/27	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8276688	N/A	2016/05/21	Alex Leung
Carbon (DOC) - field filtered/preserved	TRAA/COL	8278599	N/A	2016/05/24	Isabel Choi
Conductance - water	AT/ALK	8278659	N/A	2016/05/25	Maria Maclean
Fluoride	ISE/ISE	8279055	N/A	2016/05/24	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8283517	N/A	2016/06/01	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8283518	N/A	2016/06/01	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8282955	N/A	2016/05/30	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8282908	2016/05/30	2016/05/30	Edwin Lamigo
Ion Balance	CALC	8276507	N/A	2016/05/30	Automated Statchk
Sum of cations, anions	CALC	8276508	N/A	2016/05/30	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8283891	N/A	2016/06/01	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8284499	N/A	2016/06/01	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8283897	2016/05/31	2016/06/01	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8284035	N/A	2016/06/01	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8278887	N/A	2016/05/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8277614	N/A	2016/05/21	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8277621	N/A	2016/05/21	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8276511	N/A	2016/05/25	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8277063	N/A	2016/05/24	Lucy Luo
pH Water	AT/ALK	8278661	N/A	2016/05/25	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8277816	N/A	2016/05/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8278323	2016/05/25	2016/05/25	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8278338	N/A	2016/05/25	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8277647	2016/05/25	2016/05/26	Wendy Fong

Maxxam ID: OR3143 Dup
Sample ID: KZ-9
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Colour (True) by Kone Lab	KONE	8276688	N/A	2016/05/21	Alex Leung
Elements by ICPMS Digested LL (total)	ICP/CRCM	8279986	2016/05/26	2016/05/27	Andrew An

Maxxam ID: OR3144
Sample ID: KZ-SWFB
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8278484	N/A	2016/05/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8278658	2016/05/25	2016/05/25	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8277815	N/A	2016/05/24	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OR3144
Sample ID: KZ-SWFB
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8281267	N/A	2016/05/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8281274	N/A	2016/05/27	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8276688	N/A	2016/05/21	Alex Leung
Carbon (DOC) - field filtered/preserved	TRAA/COL	8278599	N/A	2016/05/24	Isabel Choi
Conductance - water	AT/ALK	8278659	N/A	2016/05/25	Maria Maclean
Fluoride	ISE/ISE	8279055	N/A	2016/05/24	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8276322	N/A	2016/05/30	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8276303	N/A	2016/05/30	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8282955	N/A	2016/05/30	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8282908	2016/05/30	2016/05/30	Edwin Lamigo
Ion Balance	CALC	8276507	N/A	2016/05/30	Automated Statchk
Sum of cations, anions	CALC	8276508	N/A	2016/05/30	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8276509	N/A	2016/05/30	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8278568	N/A	2016/05/29	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8276510	N/A	2016/05/30	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8279151	N/A	2016/05/29	Andrew An
Ammonia-N (Preserved)	KONE/COL	8278887	N/A	2016/05/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8277614	N/A	2016/05/21	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8277621	N/A	2016/05/21	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8276511	N/A	2016/05/25	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8277063	N/A	2016/05/24	Lucy Luo
pH Water	AT/ALK	8278661	N/A	2016/05/25	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8277816	N/A	2016/05/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8278323	2016/05/25	2016/05/25	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8278338	N/A	2016/05/25	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8277647	2016/05/25	2016/05/26	Wendy Fong

Maxxam ID: OR3144 Dup
Sample ID: KZ-SWFB
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8277815	N/A	2016/05/24	Balwinder Bassi
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8278568	N/A	2016/05/29	Andrew An
Elements by ICPMS Low Level (total)	ICP/CRCM	8279151	N/A	2016/05/29	Andrew An
Sulphate by Automated Colourimetry	KONE/COL	8277816	N/A	2016/05/24	Balwinder Bassi

Maxxam ID: OR3145
Sample ID: KZ-SWDUP
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8278484	N/A	2016/05/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8278658	2016/05/25	2016/05/25	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8277815	N/A	2016/05/24	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OR3145
Sample ID: KZ-SWDUP
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8281267	N/A	2016/05/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8281274	N/A	2016/05/27	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8276688	N/A	2016/05/21	Alex Leung
Carbon (DOC) - field filtered/preserved	TRAA/COL	8278599	N/A	2016/05/24	Isabel Choi
Conductance - water	AT/ALK	8278659	N/A	2016/05/25	Maria Maclean
Fluoride	ISE/ISE	8279057	N/A	2016/05/24	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8276322	N/A	2016/05/30	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8283518	N/A	2016/06/01	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8282955	N/A	2016/05/30	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8282908	2016/05/30	2016/05/30	Edwin Lamigo
Ion Balance	CALC	8276507	N/A	2016/05/30	Automated Statchk
Sum of cations, anions	CALC	8276508	N/A	2016/05/30	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8283891	N/A	2016/06/01	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8278568	N/A	2016/05/29	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8276510	N/A	2016/05/30	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8279151	N/A	2016/05/29	Andrew An
Ammonia-N (Preserved)	KONE/COL	8278887	N/A	2016/05/25	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8277614	N/A	2016/05/21	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8277621	N/A	2016/05/21	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8276511	N/A	2016/05/25	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8277063	N/A	2016/05/24	Lucy Luo
pH Water	AT/ALK	8278661	N/A	2016/05/25	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8277816	N/A	2016/05/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8278323	2016/05/25	2016/05/25	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8278338	N/A	2016/05/25	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8277647	2016/05/25	2016/05/26	Wendy Fong

Maxxam ID: OR3146
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/05/21
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8278484	N/A	2016/05/25	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8278658	2016/05/25	2016/05/25	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8277815	N/A	2016/05/24	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8281267	N/A	2016/05/27	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8281274	N/A	2016/05/27	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8276688	N/A	2016/05/21	Alex Leung
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8276684	N/A	2016/05/24	Isabel Choi
Conductance - water	AT/ALK	8278659	N/A	2016/05/25	Maria Maclean
Fluoride	ISE/ISE	8279057	N/A	2016/05/24	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8276322	N/A	2016/05/30	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8276303	N/A	2016/05/30	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8282955	N/A	2016/05/30	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8282908	2016/05/30	2016/05/30	Edwin Lamigo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OR3146
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/05/21
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance	CALC	8276507	N/A	2016/05/30	Automated Statchk
Sum of cations, anions	CALC	8276508	N/A	2016/05/30	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8276509	N/A	2016/05/30	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8278568	N/A	2016/05/29	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8276510	N/A	2016/05/30	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8279151	N/A	2016/05/29	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8277814	N/A	2016/05/24	Sherryl Flores
Nitrate+Nitrite (N) (low level)	TRAA/COL	8277614	N/A	2016/05/21	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8277621	N/A	2016/05/21	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8276511	N/A	2016/05/25	Automated Statchk
pH Water	AT/ALK	8278661	N/A	2016/05/25	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8277816	N/A	2016/05/24	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8278323	2016/05/25	2016/05/25	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8278338	N/A	2016/05/25	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8277647	2016/05/25	2016/05/26	Wendy Fong

Maxxam ID: OR3146 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/05/21
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8282955	N/A	2016/05/30	Edwin Lamigo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.7°C
Package 2	4.0°C
Package 3	1.3°C

Sample OR3143-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OR3144-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].
Sample OR3143, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample OR3143, Elements by ICPMS Digested LL (total): Test repeated.
Sample OR3143, Na, K, Ca, Mg, S by CRC ICPMS (total): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8276684	Dissolved Organic Carbon (C)	2016/05/24	93	80 - 120	112	80 - 120	<0.50	mg/L	8.1	20
8276688	True Colour	2016/05/21			104	80 - 120	<5.0	Col. Unit	NC	20
8277614	Nitrate plus Nitrite (N)	2016/05/21			116	80 - 120	<0.0020	mg/L		
8277621	Nitrite (N)	2016/05/21			100	80 - 120	<0.0020	mg/L		
8277647	Total Suspended Solids	2016/05/26			99	80 - 120	<1.0	mg/L		
8277814	Total Ammonia (N)	2016/05/24	110	80 - 120	97	80 - 120	<0.0050	mg/L	NC	20
8277815	Dissolved Chloride (Cl)	2016/05/24	NC	80 - 120	99	80 - 120	<0.50	mg/L	1.1	20
8277816	Dissolved Sulphate (SO4)	2016/05/24	NC	80 - 120	94	80 - 120	<0.50	mg/L	0.62	20
8278323	Dissolved Phosphorus (P)	2016/05/25	95	80 - 120	101	80 - 120	<0.0020	mg/L	NC	20
8278338	Total Phosphorus (P)	2016/05/25	96	80 - 120	98	80 - 120	<0.0020	mg/L	NC	20
8278484	Acidity (pH 4.5)	2016/05/25					<0.50	mg/L	NC	20
8278484	Acidity (pH 8.3)	2016/05/25			97	80 - 120	<0.50	mg/L	0.91	20
8278568	Dissolved Aluminum (Al)	2016/05/29	102	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8278568	Dissolved Antimony (Sb)	2016/05/29	99	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8278568	Dissolved Arsenic (As)	2016/05/29	105	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8278568	Dissolved Barium (Ba)	2016/05/29	96	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8278568	Dissolved Beryllium (Be)	2016/05/29	100	80 - 120	95	80 - 120	<0.000010	mg/L	NC	20
8278568	Dissolved Bismuth (Bi)	2016/05/29	92	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8278568	Dissolved Boron (B)	2016/05/29	104	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
8278568	Dissolved Cadmium (Cd)	2016/05/29	98	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8278568	Dissolved Chromium (Cr)	2016/05/29	102	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8278568	Dissolved Cobalt (Co)	2016/05/29	102	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8278568	Dissolved Copper (Cu)	2016/05/29	103	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8278568	Dissolved Iron (Fe)	2016/05/29	103	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
8278568	Dissolved Lead (Pb)	2016/05/29	93	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8278568	Dissolved Lithium (Li)	2016/05/29	97	80 - 120	92	80 - 120	<0.00050	mg/L	NC	20
8278568	Dissolved Manganese (Mn)	2016/05/29	100	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8278568	Dissolved Molybdenum (Mo)	2016/05/29	90	80 - 120	93	80 - 120	<0.000050	mg/L	NC	20
8278568	Dissolved Nickel (Ni)	2016/05/29	101	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8278568	Dissolved Phosphorus (P)	2016/05/29					<0.0020	mg/L	NC	20
8278568	Dissolved Selenium (Se)	2016/05/29	105	80 - 120	101	80 - 120	<0.000040	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8278568	Dissolved Silicon (Si)	2016/05/29					<0.050	mg/L	NC	20
8278568	Dissolved Silver (Ag)	2016/05/29	103	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8278568	Dissolved Strontium (Sr)	2016/05/29	95	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8278568	Dissolved Thallium (Tl)	2016/05/29	98	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8278568	Dissolved Tin (Sn)	2016/05/29	97	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8278568	Dissolved Titanium (Ti)	2016/05/29	102	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8278568	Dissolved Uranium (U)	2016/05/29	97	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8278568	Dissolved Vanadium (V)	2016/05/29	106	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8278568	Dissolved Zinc (Zn)	2016/05/29	123 (1)	80 - 120	113	80 - 120	<0.00010	mg/L	NC	20
8278568	Dissolved Zirconium (Zr)	2016/05/29					<0.00010	mg/L	NC	20
8278599	Dissolved Organic Carbon (C)	2016/05/24	NC	80 - 120	110	80 - 120	0.65, RDL=0.50	mg/L	2.4	20
8278658	Alkalinity (PP as CaCO3)	2016/05/25					<0.50	mg/L	NC	20
8278658	Alkalinity (Total as CaCO3)	2016/05/25	NC	80 - 120	97	80 - 120	<0.50	mg/L	0.59	20
8278658	Bicarbonate (HCO3)	2016/05/25					<0.50	mg/L	0.59	20
8278658	Carbonate (CO3)	2016/05/25					<0.50	mg/L	NC	20
8278658	Hydroxide (OH)	2016/05/25					<0.50	mg/L	NC	20
8278659	Conductivity	2016/05/25			101	80 - 120	<1.0	uS/cm	3.4	20
8278661	pH	2016/05/25			101	97 - 103			0.13	N/A
8278887	Total Ammonia (N)	2016/05/25	NC	80 - 120	100	80 - 120	<0.0050	mg/L	3.2	20
8279055	Fluoride (F)	2016/05/24	100	80 - 120	102	80 - 120	0.016, RDL=0.010	mg/L	1.9	20
8279057	Fluoride (F)	2016/05/24	102	80 - 120	102	80 - 120	0.012, RDL=0.010	mg/L	0	20
8279151	Total Aluminum (Al)	2016/05/29	113	80 - 120	111	80 - 120	<0.00050	mg/L	NC	20
8279151	Total Antimony (Sb)	2016/05/29	108	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8279151	Total Arsenic (As)	2016/05/29	105	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8279151	Total Barium (Ba)	2016/05/29	107	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
8279151	Total Beryllium (Be)	2016/05/29	100	80 - 120	92	80 - 120	<0.000010	mg/L	NC	20
8279151	Total Bismuth (Bi)	2016/05/29	101	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8279151	Total Boron (B)	2016/05/29	114	80 - 120	112	80 - 120	<0.010	mg/L	NC	20
8279151	Total Cadmium (Cd)	2016/05/29	107	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8279151	Total Chromium (Cr)	2016/05/29	104	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8279151	Total Cobalt (Co)	2016/05/29	105	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8279151	Total Copper (Cu)	2016/05/29	107	80 - 120	106	80 - 120	<0.000050	mg/L	5.7	20
8279151	Total Iron (Fe)	2016/05/29	108	80 - 120	110	80 - 120	<0.0010	mg/L	NC	20
8279151	Total Lead (Pb)	2016/05/29	90	80 - 120	93	80 - 120	<0.0000050	mg/L	NC	20
8279151	Total Lithium (Li)	2016/05/29	93	80 - 120	80	80 - 120	<0.00050	mg/L	NC	20
8279151	Total Manganese (Mn)	2016/05/29	104	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8279151	Total Molybdenum (Mo)	2016/05/29	100	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8279151	Total Nickel (Ni)	2016/05/29	105	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8279151	Total Phosphorus (P)	2016/05/29					0.0024, RDL=0.0020	mg/L	NC	20
8279151	Total Selenium (Se)	2016/05/29	116	80 - 120	106	80 - 120	<0.000040	mg/L	NC	20
8279151	Total Silicon (Si)	2016/05/29					<0.050	mg/L	NC	20
8279151	Total Silver (Ag)	2016/05/29	112	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8279151	Total Strontium (Sr)	2016/05/29	98	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8279151	Total Thallium (Tl)	2016/05/29	106	80 - 120	110	80 - 120	<0.0000020	mg/L	NC	20
8279151	Total Tin (Sn)	2016/05/29	110	80 - 120	113	80 - 120	<0.00020	mg/L	NC	20
8279151	Total Titanium (Ti)	2016/05/29	105	80 - 120	108	80 - 120	<0.00050	mg/L	NC	20
8279151	Total Uranium (U)	2016/05/29	97	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8279151	Total Vanadium (V)	2016/05/29	104	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8279151	Total Zinc (Zn)	2016/05/29	119	80 - 120	113	80 - 120	<0.00010	mg/L	NC	20
8279151	Total Zirconium (Zr)	2016/05/29					<0.00010	mg/L	NC	20
8279986	Total Molybdenum (Mo)	2016/05/27	100	80 - 120	98	80 - 120	<0.000050	mg/L	1.2	20
8281267	Strong Acid Dissoc. Cyanide (CN)	2016/05/27	101	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8281274	Weak Acid Dissoc. Cyanide (CN)	2016/05/27	112	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8282908	Total Mercury (Hg)	2016/05/30	94	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8282955	Dissolved Mercury (Hg)	2016/05/30	114	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
8283897	Total Aluminum (Al)	2016/06/01	NC	80 - 120	115	80 - 120	<0.0030	mg/L	4.9	20
8283897	Total Antimony (Sb)	2016/06/01	103	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8283897	Total Arsenic (As)	2016/06/01	104	80 - 120	106	80 - 120	<0.000020	mg/L	8.0	20
8283897	Total Barium (Ba)	2016/06/01	NC	80 - 120	100	80 - 120	<0.00010	mg/L	4.4	20
8283897	Total Beryllium (Be)	2016/06/01	106	80 - 120	106	80 - 120	<0.000010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8283897	Total Bismuth (Bi)	2016/06/01	101	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8283897	Total Boron (B)	2016/06/01	111	80 - 120	102	80 - 120	<0.050	mg/L	NC	20
8283897	Total Cadmium (Cd)	2016/06/01	104	80 - 120	102	80 - 120	<0.0000050	mg/L	3.4	20
8283897	Total Chromium (Cr)	2016/06/01	101	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8283897	Total Cobalt (Co)	2016/06/01	100	80 - 120	99	80 - 120	<0.000010	mg/L	7.1	20
8283897	Total Copper (Cu)	2016/06/01	NC	80 - 120	104	80 - 120	<0.00020	mg/L	4.3	20
8283897	Total Iron (Fe)	2016/06/01	NC	80 - 120	109	80 - 120	<0.0050	mg/L	3.5	20
8283897	Total Lead (Pb)	2016/06/01	100	80 - 120	98	80 - 120	<0.000050	mg/L	6.1	20
8283897	Total Lithium (Li)	2016/06/01	95	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
8283897	Total Manganese (Mn)	2016/06/01	NC	80 - 120	102	80 - 120	<0.00010	mg/L	1.7	20
8283897	Total Nickel (Ni)	2016/06/01	99	80 - 120	101	80 - 120	<0.00010	mg/L	2.2	20
8283897	Total Phosphorus (P)	2016/06/01					<0.010	mg/L	0.68	20
8283897	Total Selenium (Se)	2016/06/01	105	80 - 120	112	80 - 120	<0.000040	mg/L	NC	20
8283897	Total Silicon (Si)	2016/06/01					<0.10	mg/L	1.3	20
8283897	Total Silver (Ag)	2016/06/01	121 (1)	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
8283897	Total Strontium (Sr)	2016/06/01	NC	80 - 120	106	80 - 120	<0.000050	mg/L	0.053	20
8283897	Total Thallium (Tl)	2016/06/01	97	80 - 120	90	80 - 120	<0.0000020	mg/L	NC	20
8283897	Total Tin (Sn)	2016/06/01	104	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
8283897	Total Titanium (Ti)	2016/06/01	NC	80 - 120	91	80 - 120	<0.0050	mg/L	NC	20
8283897	Total Uranium (U)	2016/06/01	99	80 - 120	94	80 - 120	<0.0000050	mg/L	4.7	20
8283897	Total Vanadium (V)	2016/06/01	106	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8283897	Total Zinc (Zn)	2016/06/01	NC	80 - 120	113	80 - 120	<0.0010	mg/L	2.1	20
8283897	Total Zirconium (Zr)	2016/06/01					<0.00010	mg/L	NC	20
8284499	Dissolved Aluminum (Al)	2016/06/01			111	80 - 120	<0.00050	mg/L		
8284499	Dissolved Antimony (Sb)	2016/06/01			104	80 - 120	<0.000020	mg/L		
8284499	Dissolved Arsenic (As)	2016/06/01			104	80 - 120	<0.000020	mg/L		
8284499	Dissolved Barium (Ba)	2016/06/01			100	80 - 120	<0.000020	mg/L		
8284499	Dissolved Beryllium (Be)	2016/06/01			104	80 - 120	<0.000010	mg/L		
8284499	Dissolved Bismuth (Bi)	2016/06/01			97	80 - 120	<0.0000050	mg/L		
8284499	Dissolved Boron (B)	2016/06/01			102	80 - 120	<0.010	mg/L		
8284499	Dissolved Cadmium (Cd)	2016/06/01			104	80 - 120	<0.0000050	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8284499	Dissolved Chromium (Cr)	2016/06/01			101	80 - 120	<0.00010	mg/L		
8284499	Dissolved Cobalt (Co)	2016/06/01			104	80 - 120	<0.0000050	mg/L		
8284499	Dissolved Copper (Cu)	2016/06/01			103	80 - 120	<0.000050	mg/L		
8284499	Dissolved Iron (Fe)	2016/06/01			108	80 - 120	<0.0010	mg/L		
8284499	Dissolved Lead (Pb)	2016/06/01			97	80 - 120	<0.0000050	mg/L		
8284499	Dissolved Lithium (Li)	2016/06/01			101	80 - 120	<0.00050	mg/L		
8284499	Dissolved Manganese (Mn)	2016/06/01			103	80 - 120	<0.000050	mg/L		
8284499	Dissolved Nickel (Ni)	2016/06/01			104	80 - 120	<0.000020	mg/L		
8284499	Dissolved Phosphorus (P)	2016/06/01					<0.0020	mg/L		
8284499	Dissolved Selenium (Se)	2016/06/01			104	80 - 120	<0.000040	mg/L		
8284499	Dissolved Silicon (Si)	2016/06/01					<0.050	mg/L		
8284499	Dissolved Silver (Ag)	2016/06/01			110	80 - 120	<0.0000050	mg/L		
8284499	Dissolved Strontium (Sr)	2016/06/01			95	80 - 120	<0.000050	mg/L		
8284499	Dissolved Thallium (Tl)	2016/06/01			103	80 - 120	<0.0000020	mg/L		
8284499	Dissolved Tin (Sn)	2016/06/01			103	80 - 120	<0.00020	mg/L		
8284499	Dissolved Titanium (Ti)	2016/06/01			107	80 - 120	<0.00050	mg/L		
8284499	Dissolved Uranium (U)	2016/06/01			94	80 - 120	<0.0000020	mg/L		
8284499	Dissolved Vanadium (V)	2016/06/01			103	80 - 120	<0.00020	mg/L		
8284499	Dissolved Zinc (Zn)	2016/06/01			106	80 - 120	<0.00010	mg/L		
8284499	Dissolved Zirconium (Zr)	2016/06/01					<0.00010	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

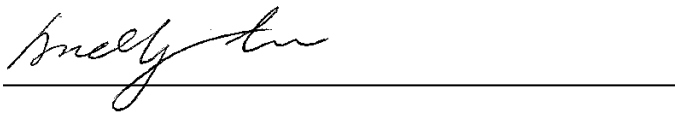
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Andy Lu, Ph.D., P.Chem., Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC 08421243

BBY FCD-00077/05

Page 1

Invoice Information		Report Information (if differs from invoice)		Project Information (wher		ound Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	AB x Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	Same Day / 2 Days / 1 Day / 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
BC CSR Soil / BC CSR Water / CCME (Specify) / Other (Specify) / Drinking Water / BC Water Quality	Return Cooler / Ship Sample Bottles (Please Specify)	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-2		19-May-16	11:10	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
3	KZ-9		19-May-16	12:12	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
4	KZ-SWFB		19-May-16	11:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
5	KZ-SWDUP		19-May-16	11:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
6	Trip Blank		19-May-16		Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
7					Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
8					Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
9					Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
10					Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		

LABORATORY USE ONLY

CUSTODY SEAL Y / (N)		COOLER TEMPERATURES
Present	Intact	
NA	NA	1,3,1
NA	NA	3,5,2
NA	NA	1,2,1

COOLING MEDIA PRESENT (Y) / N

B639571_COC

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
	20/5/2016	12:00	Ron Hapse	2016/05/21	9:50	B639571

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08423166

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/22
Report #: R2204041
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B647873
Received: 2016/06/14, 16:30

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	7	N/A	2016/06/16	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	5	2016/06/16	2016/06/16	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	2	2016/06/16	2016/06/17	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	7	N/A	2016/06/16	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	7	N/A	2016/06/16	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	7	N/A	2016/06/16	BBY6SOP-00004	SM 22 4500-CN O m
Colour (True) by Kone Lab	7	N/A	2016/06/16	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	7	N/A	2016/06/17	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	5	N/A	2016/06/16	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	2	N/A	2016/06/17	BBY6SOP-00026	SM 22 2510 B m
Fluoride	7	N/A	2016/06/16	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	7	N/A	2016/06/17	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	7	N/A	2016/06/17	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	7	N/A	2016/06/16	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	7	2016/06/16	2016/06/16	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	7	N/A	2016/06/17	BBY WI-00033	SM 22 1030E
Sum of cations, anions	7	N/A	2016/06/17	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	7	N/A	2016/06/17	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	7	N/A	2016/06/16	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	6	2016/06/16	2016/06/17	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	7	N/A	2016/06/17	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	1	N/A	2016/06/17	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	7	N/A	2016/06/16	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	7	N/A	2016/06/16	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	7	N/A	2016/06/16	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	7	N/A	2016/06/17	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	7	N/A	2016/06/16	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	6	N/A	2016/06/16	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	1	N/A	2016/06/17	BBY6SOP-00026	SM 22 4500-H+ B m

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08423166

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/22
Report #: R2204041
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B647873
Received: 2016/06/14, 16:30

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Sulphate by Automated Colourimetry	7	N/A	2016/06/16	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	6	2016/06/16	2016/06/16	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2016/06/21	2016/06/21	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	6	N/A	2016/06/16	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	1	N/A	2016/06/21	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	7	2016/06/16	2016/06/17	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.

(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OV5240		OV5361		OV5382		
Sampling Date		2016/06/13 13:20		2016/06/13 12:00		2016/06/13 09:30		
COC Number		08423166		08423166		08423166		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	5.0	8299904	3.8	8299904	4.2	N/A	8299904
Cation Sum	meq/L	4.9	8299904	3.7	8299904	4.1	N/A	8299904
Filter and HNO3 Preservation	N/A	LAB	8300992	LAB	8300992	LAB	N/A	8300992
Ion Balance	N/A	0.97	8299902	0.97	8299902	0.98	0.010	8299902
Nitrate (N)	mg/L	0.0073	8300282	0.0112	8300282	0.0303	0.0020	8300282
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00069	8301635	0.00066	8301635	0.00073	0.00050	8301635
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00063	8301641	0.00071	8301641	0.00060	0.00050	8301641
Fluoride (F)	mg/L	0.180	8301933	0.110	8301933	0.120	0.010	8301933
Dissolved Organic Carbon (C)	mg/L	3.86	8303633	2.74	8303633	2.35	0.50	8303633
Acidity (pH 4.5)	mg/L	<0.50	8301670	<0.50	8301670	<0.50	0.50	8301670
Alkalinity (Total as CaCO3)	mg/L	213	8301171	161	8301171	176	0.50	8301105
Acidity (pH 8.3)	mg/L	<0.50	8301670	<0.50	8301670	<0.50	0.50	8301670
Alkalinity (PP as CaCO3)	mg/L	3.84	8301171	2.06	8301171	<0.50	0.50	8301105
Bicarbonate (HCO3)	mg/L	251	8301171	191	8301171	215	0.50	8301105
Carbonate (CO3)	mg/L	4.61	8301171	2.47	8301171	<0.50	0.50	8301105
Hydroxide (OH)	mg/L	<0.50	8301171	<0.50	8301171	<0.50	0.50	8301105
Anions								
Dissolved Sulphate (SO4)	mg/L	35.5	8302055	28.6	8302055	30.9	0.50	8302055
Dissolved Chloride (Cl)	mg/L	0.87	8302042	0.87	8302042	0.80	0.50	8302042
MISCELLANEOUS								
True Colour	Col. Unit	16.6	8302111	8.8	8302111	7.2	5.0	8302111
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0050 (1)	8306782	0.0040	8302122	0.0029	0.0020	8302122
Total Ammonia (N)	mg/L	0.011	8301563	0.011	8301565	0.019	0.0050	8301565
Nitrate plus Nitrite (N)	mg/L	0.0073	8302073	0.0112	8302073	0.0325	0.0020	8302073
Nitrite (N)	mg/L	<0.0020	8302076	<0.0020	8302076	0.0022	0.0020	8302076
Total Phosphorus (P)	mg/L	0.0151 (1)	8306821	0.0038	8302121	0.0036	0.0020	8302121
Physical Properties								
Conductivity	uS/cm	445	8301169	348	8301169	380	1.0	8301103

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample was originally analysed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OV5240		OV5361		OV5382		
Sampling Date		2016/06/13 13:20		2016/06/13 12:00		2016/06/13 09:30		
COC Number		08423166		08423166		08423166		
	UNITS	**KZ-21**	**QC Batch**	**KZ-22**	**QC Batch**	**KZ-26**	**RDL**	**QC Batch**
pH	pH	8.39	8301168	8.33	8301168	8.29		8301097
Physical Properties								
Total Suspended Solids	mg/L	1.3	8301206	1.2	8301206	1.1	1.0	8301206
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OV5383		OV5384	OV5385	OV5386		
Sampling Date		2016/06/13 14:50		2016/06/13 16:10	2016/06/13 17:30	2016/06/13 09:45		
COC Number		08423166		08423166	08423166	08423166		
	UNITS	KZ-15	QC Batch	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.8	8299904	2.4	3.3	4.3	N/A	8299904
Cation Sum	meq/L	2.7	8299904	2.4	3.2	3.7	N/A	8299904
Filter and HNO3 Preservation	N/A	LAB	8300992	LAB	LAB	LAB	N/A	8300992
Ion Balance	N/A	0.98	8299902	0.99	0.97	0.86	0.010	8299902
Nitrate (N)	mg/L	0.0123	8300282	0.0139	0.0149	0.0301	0.0020	8300282
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00068	8301635	0.00063	0.00064	0.00070	0.00050	8301635
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00053	8301641	0.00063	0.00071	<0.00050	0.00050	8301641
Fluoride (F)	mg/L	0.075	8301917	0.068	0.087	0.110	0.010	8301933
Dissolved Organic Carbon (C)	mg/L	1.68	8303633	1.36	1.47	2.84	0.50	8303633
Acidity (pH 4.5)	mg/L	<0.50	8301670	<0.50	<0.50	<0.50	0.50	8301670
Alkalinity (Total as CaCO3)	mg/L	114	8301105	101	132	179	0.50	8301171
Acidity (pH 8.3)	mg/L	<0.50	8301670	<0.50	<0.50	<0.50	0.50	8301670
Alkalinity (PP as CaCO3)	mg/L	<0.50	8301105	<0.50	1.60	3.65	0.50	8301171
Bicarbonate (HCO3)	mg/L	139	8301105	124	158	210	0.50	8301171
Carbonate (CO3)	mg/L	<0.50	8301105	<0.50	1.92	4.38	0.50	8301171
Hydroxide (OH)	mg/L	<0.50	8301105	<0.50	<0.50	<0.50	0.50	8301171
Anions								
Dissolved Sulphate (SO4)	mg/L	22.5	8302055	16.4	28.9	30.8	0.50	8302055
Dissolved Chloride (Cl)	mg/L	0.74	8302042	0.69	<0.50	0.77	0.50	8302042
MISCELLANEOUS								
True Colour	Col. Unit	5.6	8302111	5.9	6.9	7.8	5.0	8302111
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0023	8302122	<0.0020	0.0039	0.0032	0.0020	8302122
Total Ammonia (N)	mg/L	0.015	8301565	0.0063	0.011	0.0070	0.0050	8301563
Nitrate plus Nitrite (N)	mg/L	0.0123	8302073	0.0139	0.0149	0.0301	0.0020	8302073
Nitrite (N)	mg/L	<0.0020	8302076	<0.0020	<0.0020	<0.0020	0.0020	8302076
Total Phosphorus (P)	mg/L	0.0023	8302121	<0.0020	0.0037	0.0058	0.0020	8302121
Physical Properties								
Conductivity	uS/cm	259	8301103	226	302	379	1.0	8301169
pH	pH	8.09	8301097	8.22	8.31	8.42		8301168

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OV5383		OV5384	OV5385	OV5386		
Sampling Date		2016/06/13 14:50		2016/06/13 16:10	2016/06/13 17:30	2016/06/13 09:45		
COC Number		08423166		08423166	08423166	08423166		
	UNITS	**KZ-15**	**QC Batch**	**KZ-16**	**KZ-17**	**KZ-19**	**RDL**	**QC Batch**
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8301206	<1.0	<1.0	1.1	1.0	8301206
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OV5240	OV5361	OV5382	OV5383	OV5384		
Sampling Date		2016/06/13 13:20	2016/06/13 12:00	2016/06/13 09:30	2016/06/13 14:50	2016/06/13 16:10		
COC Number		08423166	08423166	08423166	08423166	08423166		
	UNITS	**KZ-21**	**KZ-22**	**KZ-26**	**KZ-15**	**KZ-16**	**RDL**	**QC Batch**
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	238	183	202	132	115	0.50	8300559
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8301333
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00096	0.00107	0.00085	0.00164	0.00161	0.00050	8301267
Dissolved Antimony (Sb)	mg/L	0.000081	0.000053	0.000074	0.000039	<0.000020	0.000020	8301267
Dissolved Arsenic (As)	mg/L	0.00131	0.000788	0.000582	0.000336	0.000217	0.000020	8301267
Dissolved Barium (Ba)	mg/L	0.0564	0.0565	0.0640	0.0541	0.0493	0.000020	8301267
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8301267
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8301267
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8301267
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000088	0.0000061	0.0000131	0.0000090	0.0000050	8301267
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8301267
Dissolved Cobalt (Co)	mg/L	0.0000289	0.0000251	0.0000123	0.0000137	0.0000126	0.0000050	8301267
Dissolved Copper (Cu)	mg/L	0.000415	0.000440	0.000530	0.000465	0.000464	0.000050	8301267
Dissolved Iron (Fe)	mg/L	0.0747	0.0336	0.0124	0.0138	0.0035	0.0010	8301267
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8301267
Dissolved Lithium (Li)	mg/L	0.00547	0.00369	0.00473	0.00188	0.00154	0.00050	8301267
Dissolved Manganese (Mn)	mg/L	0.00310	0.00363	0.00141	0.00688	0.00214	0.000050	8301267
Dissolved Molybdenum (Mo)	mg/L	0.00176	0.00118	0.00106	0.000826	0.000495	0.000050	8301267
Dissolved Nickel (Ni)	mg/L	0.00179	0.000842	0.000716	0.000363	0.000273	0.000020	8301267
Dissolved Phosphorus (P)	mg/L	0.0029	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8301267
Dissolved Selenium (Se)	mg/L	0.000347	0.000503	0.000539	0.000539	0.000380	0.000040	8301267
Dissolved Silicon (Si)	mg/L	3.62	3.17	3.46	2.67	2.28	0.050	8301267
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8301267
Dissolved Strontium (Sr)	mg/L	0.180	0.163	0.174	0.130	0.118	0.000050	8301267
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8301267
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8301267
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8301267
Dissolved Uranium (U)	mg/L	0.00253	0.00186	0.00224	0.00141	0.000833	0.0000020	8301267
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8301267
Dissolved Zinc (Zn)	mg/L	0.00033	0.00054	0.00030	0.00116	0.00031	0.00010	8301267
RDL = Reportable Detection Limit								

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OV5240	OV5361	OV5382	OV5383	OV5384		
Sampling Date		2016/06/13 13:20	2016/06/13 12:00	2016/06/13 09:30	2016/06/13 14:50	2016/06/13 16:10		
COC Number		08423166	08423166	08423166	08423166	08423166		
	UNITS	**KZ-21**	**KZ-22**	**KZ-26**	**KZ-15**	**KZ-16**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8301267
Dissolved Calcium (Ca)	mg/L	60.4	50.6	54.5	41.3	36.8	0.050	8299845
Dissolved Magnesium (Mg)	mg/L	21.1	13.6	15.9	6.90	5.64	0.050	8299845
Dissolved Potassium (K)	mg/L	1.57	1.35	1.34	1.18	1.10	0.050	8299845
Dissolved Sodium (Na)	mg/L	1.60	1.26	1.45	0.859	0.743	0.050	8299845
Dissolved Sulphur (S)	mg/L	11.9	10.1	10.7	7.8	5.7	3.0	8299845
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OV5385	OV5386		
Sampling Date		2016/06/13 17:30	2016/06/13 09:45		
COC Number		08423166	08423166		
	UNITS	KZ-17	KZ-19	RDL	QC Batch
Misc. Inorganics					
Dissolved Hardness (CaCO3)	mg/L	155	178	0.50	8300559
Elements					
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8301333
Dissolved Metals by ICPMS					
Dissolved Aluminum (Al)	mg/L	0.00182	0.00093	0.00050	8301267
Dissolved Antimony (Sb)	mg/L	0.000064	0.000077	0.000020	8301267
Dissolved Arsenic (As)	mg/L	0.000518	0.000572	0.000020	8301267
Dissolved Barium (Ba)	mg/L	0.0640	0.0638	0.000020	8301267
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8301267
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000050	8301267
Dissolved Boron (B)	mg/L	<0.010	<0.010	0.010	8301267
Dissolved Cadmium (Cd)	mg/L	0.0000213	0.0000081	0.0000050	8301267
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00010	8301267
Dissolved Cobalt (Co)	mg/L	0.0000161	0.0000144	0.0000050	8301267
Dissolved Copper (Cu)	mg/L	0.000504	0.000525	0.000050	8301267
Dissolved Iron (Fe)	mg/L	0.0339	0.0100	0.0010	8301267
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000050	8301267
Dissolved Lithium (Li)	mg/L	0.00230	0.00466	0.00050	8301267
Dissolved Manganese (Mn)	mg/L	0.0144	0.00122	0.000050	8301267
Dissolved Molybdenum (Mo)	mg/L	0.00121	0.00111	0.000050	8301267
Dissolved Nickel (Ni)	mg/L	0.000490	0.000697	0.000020	8301267
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020	0.0020	8301267
Dissolved Selenium (Se)	mg/L	0.000705	0.000468	0.000040	8301267
Dissolved Silicon (Si)	mg/L	2.70	3.77	0.050	8301267
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000050	8301267
Dissolved Strontium (Sr)	mg/L	0.153	0.170	0.000050	8301267
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	8301267
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8301267
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00050	8301267
Dissolved Uranium (U)	mg/L	0.00194	0.00207	0.0000020	8301267
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	8301267
Dissolved Zinc (Zn)	mg/L	0.00239	0.00030	0.00010	8301267
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OV5385	OV5386		
Sampling Date		2016/06/13 17:30	2016/06/13 09:45		
COC Number		08423166	08423166		
	UNITS	KZ-17	KZ-19	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8301267
Dissolved Calcium (Ca)	mg/L	48.0	46.4	0.050	8299845
Dissolved Magnesium (Mg)	mg/L	8.48	15.1	0.050	8299845
Dissolved Potassium (K)	mg/L	1.25	1.31	0.050	8299845
Dissolved Sodium (Na)	mg/L	0.915	1.38	0.050	8299845
Dissolved Sulphur (S)	mg/L	10.0	10.5	3.0	8299845
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OV5384		
Sampling Date		2016/06/13 16:10		
COC Number		08423166		
	UNITS	KZ-16	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	114	0.50	8300609
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8301653
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.00219	0.00050	8301426
Total Antimony (Sb)	mg/L	0.000022	0.000020	8301426
Total Arsenic (As)	mg/L	0.000234	0.000020	8301426
Total Barium (Ba)	mg/L	0.0470	0.000020	8301426
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8301426
Total Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8301426
Total Boron (B)	mg/L	<0.010	0.010	8301426
Total Cadmium (Cd)	mg/L	0.0000120	0.0000050	8301426
Total Chromium (Cr)	mg/L	<0.00010	0.00010	8301426
Total Cobalt (Co)	mg/L	0.0000130	0.0000050	8301426
Total Copper (Cu)	mg/L	0.000476	0.000050	8301426
Total Iron (Fe)	mg/L	0.0079	0.0010	8301426
Total Lead (Pb)	mg/L	<0.0000050	0.0000050	8301426
Total Lithium (Li)	mg/L	0.00142	0.00050	8301426
Total Manganese (Mn)	mg/L	0.00286	0.000050	8301426
Total Molybdenum (Mo)	mg/L	0.000460	0.000050	8301426
Total Nickel (Ni)	mg/L	0.000288	0.000020	8301426
Total Phosphorus (P)	mg/L	0.0021	0.0020	8301426
Total Selenium (Se)	mg/L	0.000397	0.000040	8301426
Total Silicon (Si)	mg/L	2.31	0.050	8301426
Total Silver (Ag)	mg/L	<0.0000050	0.0000050	8301426
Total Strontium (Sr)	mg/L	0.121	0.000050	8301426
Total Thallium (Tl)	mg/L	<0.0000020	0.0000020	8301426
Total Tin (Sn)	mg/L	<0.00020	0.00020	8301426
Total Titanium (Ti)	mg/L	<0.00050	0.00050	8301426
Total Uranium (U)	mg/L	0.000718	0.0000020	8301426
Total Vanadium (V)	mg/L	<0.00020	0.00020	8301426
Total Zinc (Zn)	mg/L	0.00039	0.00010	8301426
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OV5384		
Sampling Date		2016/06/13 16:10		
COC Number		08423166		
	UNITS	**KZ-16**	**RDL**	**QC Batch**
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8301426
Total Calcium (Ca)	mg/L	36.8	0.050	8299907
Total Magnesium (Mg)	mg/L	5.41	0.050	8299907
Total Potassium (K)	mg/L	1.06	0.050	8299907
Total Sodium (Na)	mg/L	0.720	0.050	8299907
Total Sulphur (S)	mg/L	5.9	3.0	8299907
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OV5240	OV5361	OV5382	OV5383	OV5385		
Sampling Date		2016/06/13 13:20	2016/06/13 12:00	2016/06/13 09:30	2016/06/13 14:50	2016/06/13 17:30		
COC Number		08423166	08423166	08423166	08423166	08423166		
	UNITS	KZ-21	KZ-22	KZ-26	KZ-15	KZ-17	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	236	183	201	131	160	0.50	8300609
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8301653
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0040	0.0072	0.0081	0.0055	0.0073	0.0030	8301259
Total Antimony (Sb)	mg/L	0.000086	0.000055	0.000067	<0.000050	0.000060	0.000050	8301259
Total Arsenic (As)	mg/L	0.00212	0.00114	0.000743	0.000408	0.000689	0.000020	8301259
Total Barium (Ba)	mg/L	0.0620	0.0604	0.0664	0.0563	0.0689	0.00010	8301259
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8301259
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	8301259
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8301259
Total Cadmium (Cd)	mg/L	0.0000050	0.0000150	0.0000130	0.0000190	0.0000410	0.0000050	8301259
Total Chromium (Cr)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8301259
Total Cobalt (Co)	mg/L	0.000052	0.000055	0.000025	0.000018	0.000030	0.000010	8301259
Total Copper (Cu)	mg/L	0.00073	0.00082	0.00070	0.00070	0.00068	0.00020	8301259
Total Iron (Fe)	mg/L	0.363	0.174	0.0687	0.0554	0.124	0.0050	8301259
Total Lead (Pb)	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8301259
Total Lithium (Li)	mg/L	0.00573	0.00382	0.00433	0.00174	0.00219	0.00050	8301259
Total Manganese (Mn)	mg/L	0.0224	0.0168	0.00667	0.0107	0.0235	0.00010	8301259
Total Molybdenum (Mo)	mg/L	0.00182	0.00113	0.00104	0.000842	0.00119	0.000050	8301259
Total Nickel (Ni)	mg/L	0.00191	0.00092	0.00080	0.00038	0.00056	0.00010	8301259
Total Phosphorus (P)	mg/L	0.014	<0.010	<0.010	0.010	<0.010	0.010	8301259
Total Selenium (Se)	mg/L	0.000327	0.000466	0.000496	0.000485	0.000671	0.000040	8301259
Total Silicon (Si)	mg/L	3.80	3.30	3.60	2.56	2.84	0.10	8301259
Total Silver (Ag)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8301259
Total Strontium (Sr)	mg/L	0.206	0.177	0.193	0.142	0.168	0.000050	8301259
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8301259
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8301259
Total Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8301259
Total Uranium (U)	mg/L	0.00237	0.00186	0.00205	0.00132	0.00205	0.0000050	8301259
Total Vanadium (V)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8301259
Total Zinc (Zn)	mg/L	<0.0010	0.0013	<0.0010	0.0020	0.0040	0.0010	8301259

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OV5240	OV5361	OV5382	OV5383	OV5385		
Sampling Date		2016/06/13 13:20	2016/06/13 12:00	2016/06/13 09:30	2016/06/13 14:50	2016/06/13 17:30		
COC Number		08423166	08423166	08423166	08423166	08423166		
	UNITS	KZ-21	KZ-22	KZ-26	KZ-15	KZ-17	RDL	QC Batch
Total Zirconium (Zr)	mg/L	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8301259
Total Calcium (Ca)	mg/L	59.6	51.1	54.8	41.2	49.8	0.25	8299907
Total Magnesium (Mg)	mg/L	21.3	13.5	15.7	6.81	8.72	0.25	8299907
Total Potassium (K)	mg/L	1.55	1.31	1.29	1.14	1.22	0.25	8299907
Total Sodium (Na)	mg/L	1.52	1.16	1.35	0.78	0.86	0.25	8299907
Total Sulphur (S)	mg/L	<15	<15	<15	<15	<15	15	8299907

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OV5386		
Sampling Date		2016/06/13 09:45		
COC Number		08423166		
	UNITS	KZ-19	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	204	0.50	8300609
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8301653
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.0095	0.0030	8301259
Total Antimony (Sb)	mg/L	0.000077	0.000050	8301259
Total Arsenic (As)	mg/L	0.000722	0.000020	8301259
Total Barium (Ba)	mg/L	0.0673	0.00010	8301259
Total Beryllium (Be)	mg/L	0.000010	0.000010	8301259
Total Bismuth (Bi)	mg/L	<0.000020	0.000020	8301259
Total Boron (B)	mg/L	<0.050	0.050	8301259
Total Cadmium (Cd)	mg/L	0.0000110	0.0000050	8301259
Total Chromium (Cr)	mg/L	<0.00050	0.00050	8301259
Total Cobalt (Co)	mg/L	0.000026	0.000010	8301259
Total Copper (Cu)	mg/L	0.00081	0.00020	8301259
Total Iron (Fe)	mg/L	0.0727	0.0050	8301259
Total Lead (Pb)	mg/L	<0.000050	0.000050	8301259
Total Lithium (Li)	mg/L	0.00442	0.00050	8301259
Total Manganese (Mn)	mg/L	0.00667	0.00010	8301259
Total Molybdenum (Mo)	mg/L	0.00106	0.000050	8301259
Total Nickel (Ni)	mg/L	0.00078	0.00010	8301259
Total Phosphorus (P)	mg/L	<0.010	0.010	8301259
Total Selenium (Se)	mg/L	0.000501	0.000040	8301259
Total Silicon (Si)	mg/L	3.63	0.10	8301259
Total Silver (Ag)	mg/L	<0.000010	0.000010	8301259
Total Strontium (Sr)	mg/L	0.193	0.000050	8301259
Total Thallium (Tl)	mg/L	0.0000030	0.0000020	8301259
Total Tin (Sn)	mg/L	<0.00020	0.00020	8301259
Total Titanium (Ti)	mg/L	<0.0050	0.0050	8301259
Total Uranium (U)	mg/L	0.00204	0.0000050	8301259
Total Vanadium (V)	mg/L	<0.00050	0.00050	8301259
Total Zinc (Zn)	mg/L	<0.0010	0.0010	8301259
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OV5386		
Sampling Date		2016/06/13 09:45		
COC Number		08423166		
	UNITS	**KZ-19**	**RDL**	**QC Batch**
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8301259
Total Calcium (Ca)	mg/L	55.5	0.25	8299907
Total Magnesium (Mg)	mg/L	16.0	0.25	8299907
Total Potassium (K)	mg/L	1.30	0.25	8299907
Total Sodium (Na)	mg/L	1.34	0.25	8299907
Total Sulphur (S)	mg/L	<15	15	8299907
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OV5240
Sample ID: KZ-21
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8301670	N/A	2016/06/16	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8301171	2016/06/16	2016/06/16	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8302042	N/A	2016/06/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8301635	N/A	2016/06/16	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8301641	N/A	2016/06/16	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8302111	N/A	2016/06/16	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8303633	N/A	2016/06/17	Isabel Choi
Conductance - water	AT/ALK	8301169	N/A	2016/06/16	Maria Maclean
Fluoride	ISE/ISE	8301933	N/A	2016/06/16	Diana Cruz
Hardness Total (calculated as CaCO3)	CALC	8300609	N/A	2016/06/17	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8300559	N/A	2016/06/17	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8301333	N/A	2016/06/16	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8301653	2016/06/16	2016/06/16	Edwin Lamigo
Ion Balance	CALC	8299902	N/A	2016/06/17	Automated Statchk
Sum of cations, anions	CALC	8299904	N/A	2016/06/17	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8299845	N/A	2016/06/17	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8301267	N/A	2016/06/16	Adnan Dzebic
Elements by ICPMS Digested LL (total)	ICP/CRCM	8301259	2016/06/16	2016/06/17	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8299907	N/A	2016/06/17	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8301563	N/A	2016/06/16	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8302073	N/A	2016/06/16	Diana Cruz
Nitrite (N) (low level)	TRAA/COL	8302076	N/A	2016/06/16	Diana Cruz
Nitrogen - Nitrate (as N)	CALC	8300282	N/A	2016/06/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8300992	N/A	2016/06/16	Lucy Luo
pH Water	AT/ALK	8301168	N/A	2016/06/16	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8302055	N/A	2016/06/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306782	2016/06/21	2016/06/21	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8306821	N/A	2016/06/21	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8301206	2016/06/16	2016/06/17	Wendy Fong

Maxxam ID: OV5361
Sample ID: KZ-22
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8301670	N/A	2016/06/16	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8301171	2016/06/16	2016/06/17	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8302042	N/A	2016/06/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8301635	N/A	2016/06/16	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8301641	N/A	2016/06/16	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8302111	N/A	2016/06/16	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8303633	N/A	2016/06/17	Isabel Choi
Conductance - water	AT/ALK	8301169	N/A	2016/06/17	Maria Maclean
Fluoride	ISE/ISE	8301933	N/A	2016/06/16	Diana Cruz
Hardness Total (calculated as CaCO3)	CALC	8300609	N/A	2016/06/17	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OV5361
Sample ID: KZ-22
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8300559	N/A	2016/06/17	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8301333	N/A	2016/06/16	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8301653	2016/06/16	2016/06/16	Edwin Lamigo
Ion Balance	CALC	8299902	N/A	2016/06/17	Automated Statchk
Sum of cations, anions	CALC	8299904	N/A	2016/06/17	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8299845	N/A	2016/06/17	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8301267	N/A	2016/06/16	Adnan Dzebic
Elements by ICPMS Digested LL (total)	ICP/CRCM	8301259	2016/06/16	2016/06/17	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8299907	N/A	2016/06/17	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8301565	N/A	2016/06/16	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8302073	N/A	2016/06/16	Diana Cruz
Nitrite (N) (low level)	TRAA/COL	8302076	N/A	2016/06/16	Diana Cruz
Nitrogen - Nitrate (as N)	CALC	8300282	N/A	2016/06/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8300992	N/A	2016/06/16	Lucy Luo
pH Water	AT/ALK	8301168	N/A	2016/06/17	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8302055	N/A	2016/06/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8302122	2016/06/16	2016/06/16	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8302121	N/A	2016/06/16	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8301206	2016/06/16	2016/06/17	Wendy Fong

Maxxam ID: OV5361 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8301933	N/A	2016/06/16	Diana Cruz
Ammonia-N (Preserved)	KONE/COL	8301565	N/A	2016/06/16	Clare Kwok

Maxxam ID: OV5382
Sample ID: KZ-26
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8301670	N/A	2016/06/16	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8301105	2016/06/16	2016/06/16	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8302042	N/A	2016/06/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8301635	N/A	2016/06/16	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8301641	N/A	2016/06/16	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8302111	N/A	2016/06/16	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8303633	N/A	2016/06/17	Isabel Choi
Conductance - water	AT/ALK	8301103	N/A	2016/06/16	Maria Maclean
Fluoride	ISE/ISE	8301933	N/A	2016/06/16	Diana Cruz
Hardness Total (calculated as CaCO3)	CALC	8300609	N/A	2016/06/17	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8300559	N/A	2016/06/17	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8301333	N/A	2016/06/16	Edwin Lamigo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OV5382
Sample ID: KZ-26
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8301653	2016/06/16	2016/06/16	Edwin Lamigo
Ion Balance	CALC	8299902	N/A	2016/06/17	Automated Statchk
Sum of cations, anions	CALC	8299904	N/A	2016/06/17	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8299845	N/A	2016/06/17	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8301267	N/A	2016/06/16	Adnan Dzebic
Elements by ICPMS Digested LL (total)	ICP/CRCM	8301259	2016/06/16	2016/06/17	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8299907	N/A	2016/06/17	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8301565	N/A	2016/06/16	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8302073	N/A	2016/06/16	Diana Cruz
Nitrite (N) (low level)	TRAA/COL	8302076	N/A	2016/06/16	Diana Cruz
Nitrogen - Nitrate (as N)	CALC	8300282	N/A	2016/06/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8300992	N/A	2016/06/16	Lucy Luo
pH Water	AT/ALK	8301097	N/A	2016/06/16	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8302055	N/A	2016/06/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8302122	2016/06/16	2016/06/16	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8302121	N/A	2016/06/16	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8301206	2016/06/16	2016/06/17	Wendy Fong

Maxxam ID: OV5383
Sample ID: KZ-15
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8301670	N/A	2016/06/16	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8301105	2016/06/16	2016/06/16	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8302042	N/A	2016/06/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8301635	N/A	2016/06/16	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8301641	N/A	2016/06/16	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8302111	N/A	2016/06/16	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8303633	N/A	2016/06/17	Isabel Choi
Conductance - water	AT/ALK	8301103	N/A	2016/06/16	Maria Maclean
Fluoride	ISE/ISE	8301917	N/A	2016/06/16	Diana Cruz
Hardness Total (calculated as CaCO3)	CALC	8300609	N/A	2016/06/17	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8300559	N/A	2016/06/17	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8301333	N/A	2016/06/16	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8301653	2016/06/16	2016/06/16	Edwin Lamigo
Ion Balance	CALC	8299902	N/A	2016/06/17	Automated Statchk
Sum of cations, anions	CALC	8299904	N/A	2016/06/17	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8299845	N/A	2016/06/17	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8301267	N/A	2016/06/16	Adnan Dzebic
Elements by ICPMS Digested LL (total)	ICP/CRCM	8301259	2016/06/16	2016/06/17	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8299907	N/A	2016/06/17	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8301565	N/A	2016/06/16	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8302073	N/A	2016/06/16	Diana Cruz
Nitrite (N) (low level)	TRAA/COL	8302076	N/A	2016/06/16	Diana Cruz

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OV5383
Sample ID: KZ-15
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8300282	N/A	2016/06/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8300992	N/A	2016/06/16	Lucy Luo
pH Water	AT/ALK	8301097	N/A	2016/06/16	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8302055	N/A	2016/06/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8302122	2016/06/16	2016/06/16	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8302121	N/A	2016/06/16	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8301206	2016/06/16	2016/06/17	Wendy Fong

Maxxam ID: OV5383 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Colour (True) by Kone Lab	KONE	8302111	N/A	2016/06/16	Isabel Choi

Maxxam ID: OV5384
Sample ID: KZ-16
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8301670	N/A	2016/06/16	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8301171	2016/06/16	2016/06/17	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8302042	N/A	2016/06/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8301635	N/A	2016/06/16	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8301641	N/A	2016/06/16	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8302111	N/A	2016/06/16	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8303633	N/A	2016/06/17	Isabel Choi
Conductance - water	AT/ALK	8301169	N/A	2016/06/17	Maria Maclean
Fluoride	ISE/ISE	8301933	N/A	2016/06/16	Diana Cruz
Hardness Total (calculated as CaCO3)	CALC	8300609	N/A	2016/06/17	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8300559	N/A	2016/06/17	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8301333	N/A	2016/06/16	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8301653	2016/06/16	2016/06/16	Edwin Lamigo
Ion Balance	CALC	8299902	N/A	2016/06/17	Automated Statchk
Sum of cations, anions	CALC	8299904	N/A	2016/06/17	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8299845	N/A	2016/06/17	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8301267	N/A	2016/06/16	Adnan Dzebic
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8299907	N/A	2016/06/17	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8301426	N/A	2016/06/17	Andrew An
Ammonia-N (Preserved)	KONE/COL	8301563	N/A	2016/06/16	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8302073	N/A	2016/06/16	Diana Cruz
Nitrite (N) (low level)	TRAA/COL	8302076	N/A	2016/06/16	Diana Cruz
Nitrogen - Nitrate (as N)	CALC	8300282	N/A	2016/06/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8300992	N/A	2016/06/16	Lucy Luo
pH Water	AT/ALK	8301168	N/A	2016/06/16	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OV5384
Sample ID: KZ-16
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8302055	N/A	2016/06/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8302122	2016/06/16	2016/06/16	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8302121	N/A	2016/06/16	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8301206	2016/06/16	2016/06/17	Wendy Fong

Maxxam ID: OV5385
Sample ID: KZ-17
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8301670	N/A	2016/06/16	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8301171	2016/06/16	2016/06/16	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8302042	N/A	2016/06/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8301635	N/A	2016/06/16	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8301641	N/A	2016/06/16	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8302111	N/A	2016/06/16	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8303633	N/A	2016/06/17	Isabel Choi
Conductance - water	AT/ALK	8301169	N/A	2016/06/16	Maria Maclean
Fluoride	ISE/ISE	8301933	N/A	2016/06/16	Diana Cruz
Hardness Total (calculated as CaCO3)	CALC	8300609	N/A	2016/06/17	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8300559	N/A	2016/06/17	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8301333	N/A	2016/06/16	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8301653	2016/06/16	2016/06/16	Edwin Lamigo
Ion Balance	CALC	8299902	N/A	2016/06/17	Automated Statchk
Sum of cations, anions	CALC	8299904	N/A	2016/06/17	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8299845	N/A	2016/06/17	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8301267	N/A	2016/06/16	Adnan Dzebic
Elements by ICPMS Digested LL (total)	ICP/CRCM	8301259	2016/06/16	2016/06/17	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8299907	N/A	2016/06/17	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8301563	N/A	2016/06/16	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8302073	N/A	2016/06/16	Diana Cruz
Nitrite (N) (low level)	TRAA/COL	8302076	N/A	2016/06/16	Diana Cruz
Nitrogen - Nitrate (as N)	CALC	8300282	N/A	2016/06/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8300992	N/A	2016/06/16	Lucy Luo
pH Water	AT/ALK	8301168	N/A	2016/06/16	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8302055	N/A	2016/06/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8302122	2016/06/16	2016/06/16	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8302121	N/A	2016/06/16	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8301206	2016/06/16	2016/06/17	Wendy Fong

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OV5386
Sample ID: KZ-19
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8301670	N/A	2016/06/16	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8301171	2016/06/16	2016/06/16	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8302042	N/A	2016/06/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8301635	N/A	2016/06/16	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8301641	N/A	2016/06/16	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8302111	N/A	2016/06/16	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8303633	N/A	2016/06/17	Isabel Choi
Conductance - water	AT/ALK	8301169	N/A	2016/06/16	Maria Maclean
Fluoride	ISE/ISE	8301933	N/A	2016/06/16	Diana Cruz
Hardness Total (calculated as CaCO3)	CALC	8300609	N/A	2016/06/17	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8300559	N/A	2016/06/17	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8301333	N/A	2016/06/16	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8301653	2016/06/16	2016/06/16	Edwin Lamigo
Ion Balance	CALC	8299902	N/A	2016/06/17	Automated Statchk
Sum of cations, anions	CALC	8299904	N/A	2016/06/17	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8299845	N/A	2016/06/17	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8301267	N/A	2016/06/16	Adnan Dzebic
Elements by ICPMS Digested LL (total)	ICP/CRCM	8301259	2016/06/16	2016/06/17	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8299907	N/A	2016/06/17	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8301563	N/A	2016/06/16	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8302073	N/A	2016/06/16	Diana Cruz
Nitrite (N) (low level)	TRAA/COL	8302076	N/A	2016/06/16	Diana Cruz
Nitrogen - Nitrate (as N)	CALC	8300282	N/A	2016/06/17	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8300992	N/A	2016/06/16	Lucy Luo
pH Water	AT/ALK	8301168	N/A	2016/06/16	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8302055	N/A	2016/06/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8302122	2016/06/16	2016/06/16	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8302121	N/A	2016/06/16	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8301206	2016/06/16	2016/06/17	Wendy Fong

Maxxam ID: OV5386 Dup
Sample ID: KZ-19
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8301635	N/A	2016/06/16	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8301641	N/A	2016/06/16	Tatyana Serzhanova

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	7.7°C
Package 2	8.3°C
Package 3	7.3°C

Sample OV5240-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OV5361-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OV5382-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OV5383-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OV5385-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OV5386-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8301097	pH	2016/06/16			102	97 - 103			0.15	N/A
8301103	Conductivity	2016/06/16			99	80 - 120	<1.0	uS/cm	0.37	20
8301105	Alkalinity (PP as CaCO3)	2016/06/16					<0.50	mg/L	NC	20
8301105	Alkalinity (Total as CaCO3)	2016/06/16	NC	80 - 120	98	80 - 120	<0.50	mg/L	0.63	20
8301105	Bicarbonate (HCO3)	2016/06/16					<0.50	mg/L	0.63	20
8301105	Carbonate (CO3)	2016/06/16					<0.50	mg/L	NC	20
8301105	Hydroxide (OH)	2016/06/16					<0.50	mg/L	NC	20
8301168	pH	2016/06/16			102	97 - 103			0.24	N/A
8301169	Conductivity	2016/06/16			100	80 - 120	<1.0	uS/cm		
8301171	Alkalinity (PP as CaCO3)	2016/06/16					<0.50	mg/L	NC	20
8301171	Alkalinity (Total as CaCO3)	2016/06/16	NC	80 - 120	98	80 - 120	<0.50	mg/L	0.17	20
8301171	Bicarbonate (HCO3)	2016/06/16					<0.50	mg/L	0.66	20
8301171	Carbonate (CO3)	2016/06/16					<0.50	mg/L	NC	20
8301171	Hydroxide (OH)	2016/06/16					<0.50	mg/L	NC	20
8301206	Total Suspended Solids	2016/06/17			99	80 - 120	<1.0	mg/L		
8301259	Total Aluminum (Al)	2016/06/17	117	80 - 120	115	80 - 120	<0.0030	mg/L		
8301259	Total Antimony (Sb)	2016/06/17	103	80 - 120	105	80 - 120	<0.000050	mg/L		
8301259	Total Arsenic (As)	2016/06/17	105	80 - 120	109	80 - 120	<0.000020	mg/L	13	20
8301259	Total Barium (Ba)	2016/06/17	NC	80 - 120	102	80 - 120	<0.00010	mg/L		
8301259	Total Beryllium (Be)	2016/06/17	104	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8301259	Total Bismuth (Bi)	2016/06/17	102	80 - 120	103	80 - 120	<0.000020	mg/L		
8301259	Total Boron (B)	2016/06/17	105	80 - 120	101	80 - 120	<0.050	mg/L		
8301259	Total Cadmium (Cd)	2016/06/17	106	80 - 120	110	80 - 120	<0.0000050	mg/L		
8301259	Total Chromium (Cr)	2016/06/17	104	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
8301259	Total Cobalt (Co)	2016/06/17	102	80 - 120	106	80 - 120	<0.000010	mg/L	3.6	20
8301259	Total Copper (Cu)	2016/06/17	104	80 - 120	110	80 - 120	0.00035, RDL=0.00020	mg/L	NC	20
8301259	Total Iron (Fe)	2016/06/17	NC	80 - 120	112	80 - 120	<0.0050	mg/L	1.9	20
8301259	Total Lead (Pb)	2016/06/17	104	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8301259	Total Lithium (Li)	2016/06/17	NC	80 - 120	98	80 - 120	<0.00050	mg/L	5.7	20
8301259	Total Manganese (Mn)	2016/06/17	NC	80 - 120	106	80 - 120	<0.00010	mg/L	1.9	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8301259	Total Molybdenum (Mo)	2016/06/17	106	80 - 120	95	80 - 120	<0.000050	mg/L		
8301259	Total Nickel (Ni)	2016/06/17	99	80 - 120	105	80 - 120	<0.00010	mg/L	NC	20
8301259	Total Phosphorus (P)	2016/06/17					<0.010	mg/L		
8301259	Total Selenium (Se)	2016/06/17	101	80 - 120	107	80 - 120	<0.000040	mg/L	NC	20
8301259	Total Silicon (Si)	2016/06/17					<0.10	mg/L		
8301259	Total Silver (Ag)	2016/06/17	110	80 - 120	99	80 - 120	<0.000010	mg/L		
8301259	Total Strontium (Sr)	2016/06/17	NC	80 - 120	105	80 - 120	<0.000050	mg/L	0.42	20
8301259	Total Thallium (Tl)	2016/06/17	93	80 - 120	90	80 - 120	0.0000020, RDL=0.0000020	mg/L		
8301259	Total Tin (Sn)	2016/06/17	104	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8301259	Total Titanium (Ti)	2016/06/17	101	80 - 120	105	80 - 120	<0.0050	mg/L		
8301259	Total Uranium (U)	2016/06/17	103	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8301259	Total Vanadium (V)	2016/06/17	110	80 - 120	109	80 - 120	<0.00050	mg/L		
8301259	Total Zinc (Zn)	2016/06/17	105	80 - 120	119	80 - 120	<0.0010	mg/L		
8301259	Total Zirconium (Zr)	2016/06/17					<0.00010	mg/L	NC	20
8301267	Dissolved Aluminum (Al)	2016/06/16	98	80 - 120	112	80 - 120	<0.00050	mg/L	NC	20
8301267	Dissolved Antimony (Sb)	2016/06/16	102	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8301267	Dissolved Arsenic (As)	2016/06/16	104	80 - 120	98	80 - 120	<0.000020	mg/L	6.6	20
8301267	Dissolved Barium (Ba)	2016/06/16	NC	80 - 120	98	80 - 120	<0.000020	mg/L	4.3	20
8301267	Dissolved Beryllium (Be)	2016/06/16	99	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8301267	Dissolved Bismuth (Bi)	2016/06/16	96	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8301267	Dissolved Boron (B)	2016/06/16	91	80 - 120	98	80 - 120	<0.010	mg/L	NC	20
8301267	Dissolved Cadmium (Cd)	2016/06/16	101	80 - 120	111	80 - 120	<0.0000050	mg/L	NC	20
8301267	Dissolved Chromium (Cr)	2016/06/16	100	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8301267	Dissolved Cobalt (Co)	2016/06/16	97	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8301267	Dissolved Copper (Cu)	2016/06/16	97	80 - 120	105	80 - 120	<0.000050	mg/L	NC	20
8301267	Dissolved Iron (Fe)	2016/06/16	98	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
8301267	Dissolved Lead (Pb)	2016/06/16	95	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8301267	Dissolved Lithium (Li)	2016/06/16	NC	80 - 120	100	80 - 120	<0.00050	mg/L	1.2	20
8301267	Dissolved Manganese (Mn)	2016/06/16	NC	80 - 120	100	80 - 120	<0.000050	mg/L	1.3	20
8301267	Dissolved Molybdenum (Mo)	2016/06/16	96	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8301267	Dissolved Nickel (Ni)	2016/06/16	93	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8301267	Dissolved Phosphorus (P)	2016/06/16					<0.0020	mg/L	NC	20
8301267	Dissolved Selenium (Se)	2016/06/16	115	80 - 120	95	80 - 120	<0.000040	mg/L	NC	20
8301267	Dissolved Silicon (Si)	2016/06/16					<0.050	mg/L	4.2	20
8301267	Dissolved Silver (Ag)	2016/06/16	92	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8301267	Dissolved Strontium (Sr)	2016/06/16	NC	80 - 120	94	80 - 120	<0.000050	mg/L	3.6	20
8301267	Dissolved Thallium (Tl)	2016/06/16	88	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8301267	Dissolved Tin (Sn)	2016/06/16	98	80 - 120	91	80 - 120	<0.00020	mg/L	NC	20
8301267	Dissolved Titanium (Ti)	2016/06/16	99	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8301267	Dissolved Uranium (U)	2016/06/16	99	80 - 120	106	80 - 120	<0.0000020	mg/L	0.50	20
8301267	Dissolved Vanadium (V)	2016/06/16	101	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8301267	Dissolved Zinc (Zn)	2016/06/16	97	80 - 120	99	80 - 120	<0.00010	mg/L	2.6	20
8301267	Dissolved Zirconium (Zr)	2016/06/16					<0.00010	mg/L	NC	20
8301333	Dissolved Mercury (Hg)	2016/06/16	96	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8301426	Total Aluminum (Al)	2016/06/17	107	80 - 120	113	80 - 120	<0.00050	mg/L	NC	20
8301426	Total Antimony (Sb)	2016/06/17	93	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8301426	Total Arsenic (As)	2016/06/17	97	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
8301426	Total Barium (Ba)	2016/06/17	92	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8301426	Total Beryllium (Be)	2016/06/17	92	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8301426	Total Bismuth (Bi)	2016/06/17	94	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8301426	Total Boron (B)	2016/06/17	93	80 - 120	103	80 - 120	<0.010	mg/L	NC	20
8301426	Total Cadmium (Cd)	2016/06/17	99	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8301426	Total Chromium (Cr)	2016/06/17	94	80 - 120	105	80 - 120	<0.00010	mg/L	NC	20
8301426	Total Cobalt (Co)	2016/06/17	95	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8301426	Total Copper (Cu)	2016/06/17	95	80 - 120	107	80 - 120	<0.000050	mg/L	NC	20
8301426	Total Iron (Fe)	2016/06/17	102	80 - 120	116	80 - 120	<0.0010	mg/L	NC	20
8301426	Total Lead (Pb)	2016/06/17	94	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8301426	Total Lithium (Li)	2016/06/17	89	80 - 120	94	80 - 120	<0.00050	mg/L	NC	20
8301426	Total Manganese (Mn)	2016/06/17	94	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20
8301426	Total Molybdenum (Mo)	2016/06/17	91	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8301426	Total Nickel (Ni)	2016/06/17	94	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8301426	Total Phosphorus (P)	2016/06/17					<0.0020	mg/L		
8301426	Total Selenium (Se)	2016/06/17	97	80 - 120	100	80 - 120	<0.000040	mg/L	NC	20
8301426	Total Silicon (Si)	2016/06/17					<0.050	mg/L	NC	20
8301426	Total Silver (Ag)	2016/06/17	85	80 - 120	103	80 - 120	0.0000050, RDL=0.0000050	mg/L	NC	20
8301426	Total Strontium (Sr)	2016/06/17	92	80 - 120	110	80 - 120	<0.000050	mg/L	NC	20
8301426	Total Thallium (Tl)	2016/06/17	101	80 - 120	109	80 - 120	<0.0000020	mg/L	NC	20
8301426	Total Tin (Sn)	2016/06/17	94	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8301426	Total Titanium (Ti)	2016/06/17	73 (1)	80 - 120	110	80 - 120	<0.00050	mg/L	NC	20
8301426	Total Uranium (U)	2016/06/17	90	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8301426	Total Vanadium (V)	2016/06/17	91	80 - 120	109	80 - 120	<0.00020	mg/L	NC	20
8301426	Total Zinc (Zn)	2016/06/17	103	80 - 120	109	80 - 120	<0.00010	mg/L	NC	20
8301426	Total Zirconium (Zr)	2016/06/17					<0.00010	mg/L	NC	20
8301563	Total Ammonia (N)	2016/06/16	103	80 - 120	96	80 - 120	<0.0050	mg/L	NC	20
8301565	Total Ammonia (N)	2016/06/16	100	80 - 120	99	80 - 120	<0.0050	mg/L	NC	20
8301635	Strong Acid Dissoc. Cyanide (CN)	2016/06/16	104	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8301641	Weak Acid Dissoc. Cyanide (CN)	2016/06/16	112	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
8301653	Total Mercury (Hg)	2016/06/16	96	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8301670	Acidity (pH 4.5)	2016/06/16					<0.50	mg/L	NC	20
8301670	Acidity (pH 8.3)	2016/06/16			100	80 - 120	<0.50	mg/L	NC	20
8301917	Fluoride (F)	2016/06/16	99	80 - 120	100	80 - 120	0.016, RDL=0.010	mg/L	0	20
8301933	Fluoride (F)	2016/06/16	98	80 - 120	100	80 - 120	0.013, RDL=0.010	mg/L	0	20
8302042	Dissolved Chloride (Cl)	2016/06/16	116	80 - 120	102	80 - 120	<0.50	mg/L	NC	20
8302055	Dissolved Sulphate (SO4)	2016/06/16	111	80 - 120	93	80 - 120	0.74, RDL=0.50	mg/L	NC	20
8302073	Nitrate plus Nitrite (N)	2016/06/16	110	80 - 120	106	80 - 120	<0.0020	mg/L	NC	25
8302076	Nitrite (N)	2016/06/16	99	80 - 120	93	80 - 120	<0.0020	mg/L	NC	25
8302111	True Colour	2016/06/16			98	80 - 120	<5.0	Col. Unit	NC	20
8302121	Total Phosphorus (P)	2016/06/16	NC	80 - 120	105	80 - 120	<0.0020	mg/L	2.0	20
8302122	Dissolved Phosphorus (P)	2016/06/16	94	80 - 120	104	80 - 120	<0.0020	mg/L	0.98	20
8303633	Dissolved Organic Carbon (C)	2016/06/17	NC	80 - 120	111	80 - 120	<0.50	mg/L	1.7	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8306782	Dissolved Phosphorus (P)	2016/06/21	NC	80 - 120	108	80 - 120	<0.0020	mg/L	0.34	20
8306821	Total Phosphorus (P)	2016/06/21	95	80 - 120	104	80 - 120	<0.0020	mg/L	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

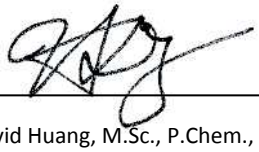
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

RECEIVED IN WHITEHORSE
BY: Sayona @ 1630
2016 -06- 14
TEMP: 8 / 6 / 9 8 / 7 9 / 2 cooler

Maxxam
A Bureau Veritas Group Company
Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY

08423166

COC #:

BBY FCD-00077/05
Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:
						Rush Confirmation #:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1																							
3																							
4	KZ-21		13-Jun-16	13:20	Water	x	x	x	x	x	x	x	x	x	x	x	x				12		
5	KZ-22		13-Jun-16	12:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				12		
6	KZ-26		13-Jun-16	9:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				12		
7	KZ-15		13-Jun-16	14:50	Water	x	x	x	x	x	x	x	x	x	x	x	x				12		
8	KZ-16		13-Jun-16	16:10	Water	x	x	x	x	x	x	x	x	x	x	x	x				12		
9	KZ-17		13-Jun-16	17:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				12		
10	KZ-19		13-Jun-16	9:45	Water	x	x	x	x	x	x	x	x	x	x	x	x				12		

LABORATORY USE ONLY

CUSTODY SEAL Y / N Present	Intact	COOLER TEMPERATURES
N/A	—	3, 3, 3
		6, 4, 4
		4, 4, 3

COOLING MEDIA PRESENT (Y) / N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Jody Inkster	13/06/2016	16:00	MARILOU TRUAM	2016/06/15	12:30	B647873

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08423306

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/28
Report #: R2207760
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B649484
Received: 2016/06/17, 15:30

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	7	N/A	2016/06/22	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	7	2016/06/21	2016/06/21	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	7	N/A	2016/06/21	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	5	N/A	2016/06/22	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide SAD (strong acid dissociable)	2	N/A	2016/06/27	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	1	N/A	2016/06/22	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	6	N/A	2016/06/27	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	6	N/A	2016/06/21	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2016/06/21	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	7	N/A	2016/06/21	BBY6SOP-00026	SM 22 2510 B m
Fluoride	7	N/A	2016/06/22	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	1	N/A	2016/06/22	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	6	N/A	2016/06/23	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	7	N/A	2016/06/22	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	7	N/A	2016/06/23	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	7	2016/06/23	2016/06/23	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	7	N/A	2016/06/22	BBY WI-00033	SM 22 1030E
Sum of cations, anions	7	N/A	2016/06/22	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	7	N/A	2016/06/22	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	7	N/A	2016/06/21	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2016/06/22	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	6	N/A	2016/06/23	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	7	N/A	2016/06/22	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Unpreserved)	1	N/A	2016/06/21	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	6	N/A	2016/06/21	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	7	N/A	2016/06/21	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	7	N/A	2016/06/21	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	7	N/A	2016/06/22	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	6	N/A	2016/06/21	BBY7 WI-00004	BCMOE Reqs 08/14

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08423306

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/28
Report #: R2207760
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B649484
Received: 2016/06/17, 15:30

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
pH Water (2)	7	N/A	2016/06/21	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	7	N/A	2016/06/21	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	7	2016/06/21	2016/06/21	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	7	N/A	2016/06/21	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	7	2016/06/21	2016/06/22	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OW2139		OW3580		OW3628	OW3632		
Sampling Date		2016/06/17 15:30		2016/06/14 17:00		2016/06/14 14:00	2016/06/14 12:35		
COC Number		08423306		08423306		08423306	08423306		
	UNITS	TRIP BLANK	QC Batch	KZ-28	QC Batch	KZ-2	KZ-6	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	0.0000	8305592	0.017	8305592	1.6	2.7	N/A	8305592
Cation Sum	meq/L	0.0046	8305592	0.0014	8305592	1.4	2.6	N/A	8305592
Filter and HNO3 Preservation	N/A		8305638	LAB	8305638	LAB	LAB	N/A	8305638
Ion Balance	N/A	NC	8304864	0.083	8304864	0.90	0.94	0.010	8304864
Nitrate (N)	mg/L	<0.0020	8305594	<0.0020	8305594	0.0829	0.0120	0.0020	8305594
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8311832	<0.00050	8311832	0.00099	0.00108	0.00050	8307163
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8311837	<0.00050	8311837	<0.00050	0.00059	0.00050	8311837
Fluoride (F)	mg/L	<0.010	8308097	<0.010	8308097	0.035	0.054	0.010	8308097
Dissolved Organic Carbon (C)	mg/L	<0.50	8307433	<0.50	8307437	<0.50	1.12	0.50	8307437
Acidity (pH 4.5)	mg/L	<0.50	8308968	<0.50	8308968	<0.50	<0.50	0.50	8308968
Alkalinity (Total as CaCO3)	mg/L	<0.50	8306445	<0.50	8306445	43.3	117	0.50	8306442
Acidity (pH 8.3)	mg/L	<0.50	8308968	<0.50	8308968	<0.50	<0.50	0.50	8308968
Alkalinity (PP as CaCO3)	mg/L	<0.50	8306445	<0.50	8306445	<0.50	<0.50	0.50	8306442
Bicarbonate (HCO3)	mg/L	<0.50	8306445	<0.50	8306445	52.9	143	0.50	8306442
Carbonate (CO3)	mg/L	<0.50	8306445	<0.50	8306445	<0.50	<0.50	0.50	8306442
Hydroxide (OH)	mg/L	<0.50	8306445	<0.50	8306445	<0.50	<0.50	0.50	8306442
Anions									
Dissolved Sulphate (SO4)	mg/L	<0.50	8306778	<0.50	8306778	31.6	17.6	0.50	8306778
Dissolved Chloride (Cl)	mg/L	<0.50	8306771	0.60	8306771	0.68	0.74	0.50	8306771
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020	8306895	<0.0020 (1)	8306895	<0.0020 (1)	0.0035 (1)	0.0020	8306895
Total Ammonia (N)	mg/L	<0.0050	8306390	<0.0050	8306381	0.0099	0.0077	0.0050	8306381
Nitrate plus Nitrite (N)	mg/L	<0.0020	8307350	<0.0020 (1)	8307350	0.0829 (1)	0.0120 (1)	0.0020	8307350
Nitrite (N)	mg/L	<0.0020	8307354	0.0020 (1)	8307354	<0.0020 (1)	<0.0020 (1)	0.0020	8307354
Total Phosphorus (P)	mg/L	<0.0020	8306896	<0.0020 (1)	8306896	<0.0020 (1)	0.0039 (1)	0.0020	8306896
Physical Properties									
Conductivity	uS/cm	<1.0	8306448	1.1	8306448	153	252	1.0	8306440
pH	pH	5.34	8306450	5.84	8306450	7.85	8.25		8306438

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OW2139		OW3580		OW3628	OW3632		
Sampling Date		2016/06/17 15:30		2016/06/14 17:00		2016/06/14 14:00	2016/06/14 12:35		
COC Number		08423306		08423306		08423306	08423306		
	UNITS	**TRIP BLANK**	**QC Batch**	**KZ-28**	**QC Batch**	**KZ-2**	**KZ-6**	**RDL**	**QC Batch**
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8305800	<1.0	8305800	<1.0	1.2	1.0	8305800
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OW3633		OW3634		OW3635		
Sampling Date		2016/06/14 11:25		2016/06/14 08:35		2016/06/14 16:40		
COC Number		08423306		08423306		08423306		
	UNITS	KZ-7	QC Batch	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.6	8305592	2.7	8305592	1.4	N/A	8305592
Cation Sum	meq/L	2.4	8305592	2.6	8305592	1.3	N/A	8305592
Filter and HNO3 Preservation	N/A	LAB	8305638	LAB	8305638	LAB	N/A	8305638
Ion Balance	N/A	0.94	8304864	0.96	8304864	0.95	0.010	8304864
Nitrate (N)	mg/L	0.0209	8305594	0.0274	8305594	0.0404	0.0020	8305594
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00102	8307163	0.00107	8307163	0.00107	0.00050	8307163
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00093	8311837	0.00144	8307200	0.00065	0.00050	8311837
Fluoride (F)	mg/L	0.045	8308097	0.056	8308097	0.042	0.010	8308097
Dissolved Organic Carbon (C)	mg/L	1.62	8307434	0.96	8307437	2.50	0.50	8307437
Acidity (pH 4.5)	mg/L	<0.50	8308968	<0.50	8308968	<0.50	0.50	8308968
Alkalinity (Total as CaCO3)	mg/L	95.7	8306445	106	8306445	55.3	0.50	8306445
Acidity (pH 8.3)	mg/L	<0.50	8308968	<0.50	8308968	<0.50	0.50	8308968
Alkalinity (PP as CaCO3)	mg/L	<0.50	8306445	<0.50	8306445	<0.50	0.50	8306445
Bicarbonate (HCO3)	mg/L	117	8306445	129	8306445	67.5	0.50	8306445
Carbonate (CO3)	mg/L	<0.50	8306445	<0.50	8306445	<0.50	0.50	8306445
Hydroxide (OH)	mg/L	<0.50	8306445	<0.50	8306445	<0.50	0.50	8306445
Anions								
Dissolved Sulphate (SO4)	mg/L	31.6	8306778	29.5	8306778	11.4	0.50	8306778
Dissolved Chloride (Cl)	mg/L	0.71	8306771	<0.50	8306771	0.54	0.50	8306771
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	8306895	0.0024 (1)	8306895	0.0090 (1)	0.0020	8306895
Total Ammonia (N)	mg/L	0.023	8306381	0.022	8306381	0.0073	0.0050	8306381
Nitrate plus Nitrite (N)	mg/L	0.0209 (1)	8307350	0.0274 (1)	8307350	0.0404 (1)	0.0020	8307350
Nitrite (N)	mg/L	<0.0020 (1)	8307354	<0.0020 (1)	8307354	<0.0020 (1)	0.0020	8307354
Total Phosphorus (P)	mg/L	<0.0020 (1)	8306896	0.0030 (1)	8306896	0.0036 (1)	0.0020	8306896
Physical Properties								
Conductivity	uS/cm	243	8306448	257	8306448	130	1.0	8306448
pH	pH	8.10	8306450	8.07	8306450	7.98		8306450

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OW3633		OW3634		OW3635		
Sampling Date		2016/06/14 11:25		2016/06/14 08:35		2016/06/14 16:40		
COC Number		08423306		08423306		08423306		
	UNITS	KZ-7	QC Batch	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	1.0	8305800	2.1	8305800	1.6	1.0	8305800
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OW2139	OW3580	OW3628	OW3632	OW3633		
Sampling Date		2016/06/17 15:30	2016/06/14 17:00	2016/06/14 14:00	2016/06/14 12:35	2016/06/14 11:25		
COC Number		08423306	08423306	08423306	08423306	08423306		
	UNITS	TRIP BLANK	KZ-28	KZ-2	KZ-6	KZ-7	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	<0.50	<0.50	67.1	126	119	0.50	8304581
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8309019
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	<0.00050	<0.00050	0.00349	0.00367	0.00192	0.00050	8306582
Dissolved Antimony (Sb)	mg/L	<0.000020	<0.000020	0.000023	<0.000020	0.000058	0.000020	8306582
Dissolved Arsenic (As)	mg/L	<0.000020	<0.000020	0.000064	0.000079	0.000195	0.000020	8306582
Dissolved Barium (Ba)	mg/L	<0.000020	<0.000020	0.0387	0.0366	0.0471	0.000020	8306582
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8306582
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8306582
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8306582
Dissolved Cadmium (Cd)	mg/L	<0.0000050	<0.0000050	0.000205	0.0000100	0.0000690	0.0000050	8306582
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8306582
Dissolved Cobalt (Co)	mg/L	<0.0000050	<0.0000050	0.0000070	0.0000090	0.0000100	0.0000050	8306582
Dissolved Copper (Cu)	mg/L	<0.000050	<0.000050	0.000632	0.000195	0.000533	0.000050	8306582
Dissolved Iron (Fe)	mg/L	<0.0010	<0.0010	0.0012	0.0073	0.0440	0.0010	8306582
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000100	0.0000090	0.0000150	0.0000050	8306582
Dissolved Lithium (Li)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8306582
Dissolved Manganese (Mn)	mg/L	<0.000050	<0.000050	0.000085	0.000281	0.00624	0.000050	8306582
Dissolved Molybdenum (Mo)	mg/L	<0.000050	<0.000050	0.000581	0.000388	0.000431	0.000050	8306582
Dissolved Nickel (Ni)	mg/L	<0.000020	<0.000020	0.000318	0.000196	0.000280	0.000020	8306582
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0025	<0.0020	0.0055	0.0035	0.0020	8306582
Dissolved Selenium (Se)	mg/L	<0.000040	<0.000040	0.000442	0.000395	0.000529	0.000040	8306582
Dissolved Silicon (Si)	mg/L	<0.050	<0.050	1.76	2.20	2.05	0.050	8306582
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000080	0.0000050	8306582
Dissolved Strontium (Sr)	mg/L	<0.000050	<0.000050	0.0713	0.130	0.120	0.000050	8306582
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000050	<0.0000020	0.0000030	0.0000020	8306582
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8306582
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8306582
Dissolved Uranium (U)	mg/L	<0.0000020	<0.0000020	0.00112	0.000642	0.000783	0.0000020	8306582
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8306582
Dissolved Zinc (Zn)	mg/L	<0.00010	<0.00010	0.0306	0.00030	0.0150	0.00010	8306582

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OW2139	OW3580	OW3628	OW3632	OW3633		
Sampling Date		2016/06/17 15:30	2016/06/14 17:00	2016/06/14 14:00	2016/06/14 12:35	2016/06/14 11:25		
COC Number		08423306	08423306	08423306	08423306	08423306		
	UNITS	**TRIP BLANK**	**KZ-28**	**KZ-2**	**KZ-6**	**KZ-7**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8306582
Dissolved Calcium (Ca)	mg/L	<0.050	<0.050	23.3	42.2	38.8	0.050	8305342
Dissolved Magnesium (Mg)	mg/L	<0.050	<0.050	2.13	5.00	5.42	0.050	8305342
Dissolved Potassium (K)	mg/L	<0.050	<0.050	1.19	0.575	0.928	0.050	8305342
Dissolved Sodium (Na)	mg/L	<0.050	<0.050	0.469	0.577	0.638	0.050	8305342
Dissolved Sulphur (S)	mg/L	<3.0	<3.0	10.0	6.0	10.4	3.0	8305342
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OW3634	OW3635		
Sampling Date		2016/06/14 08:35	2016/06/14 16:40		
COC Number		08423306	08423306		
	UNITS	KZ-9	KZ-13	RDL	QC Batch
Misc. Inorganics					
Dissolved Hardness (CaCO3)	mg/L	127	61.5	0.50	8304581
Elements					
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8309019
Dissolved Metals by ICPMS					
Dissolved Aluminum (Al)	mg/L	0.00114	0.00827	0.00050	8306582
Dissolved Antimony (Sb)	mg/L	0.000053	0.000020	0.000020	8306582
Dissolved Arsenic (As)	mg/L	0.000164	0.000161	0.000020	8306582
Dissolved Barium (Ba)	mg/L	0.0581	0.0897	0.000020	8306582
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8306582
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000050	8306582
Dissolved Boron (B)	mg/L	<0.010	<0.010	0.010	8306582
Dissolved Cadmium (Cd)	mg/L	0.0000360	0.0000130	0.0000050	8306582
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00010	8306582
Dissolved Cobalt (Co)	mg/L	0.0000200	0.0000090	0.0000050	8306582
Dissolved Copper (Cu)	mg/L	0.000480	0.000423	0.000050	8306582
Dissolved Iron (Fe)	mg/L	0.0625	0.0123	0.0010	8306582
Dissolved Lead (Pb)	mg/L	0.0000230	<0.0000050	0.0000050	8306582
Dissolved Lithium (Li)	mg/L	0.00119	<0.00050	0.00050	8306582
Dissolved Manganese (Mn)	mg/L	0.0157	0.00136	0.000050	8306582
Dissolved Molybdenum (Mo)	mg/L	0.000476	0.000528	0.000050	8306582
Dissolved Nickel (Ni)	mg/L	0.000262	0.000336	0.000020	8306582
Dissolved Phosphorus (P)	mg/L	0.0060	0.0039	0.0020	8306582
Dissolved Selenium (Se)	mg/L	0.000557	0.000115	0.000040	8306582
Dissolved Silicon (Si)	mg/L	2.17	2.20	0.050	8306582
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	0.0000050	8306582
Dissolved Strontium (Sr)	mg/L	0.136	0.0640	0.000050	8306582
Dissolved Thallium (Tl)	mg/L	0.0000020	0.0000030 (1)	0.0000020	8306582
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8306582
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00050	8306582
Dissolved Uranium (U)	mg/L	0.000714	0.000418	0.0000020	8306582
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	8306582

RDL = Reportable Detection Limit
(1) Matrix Spike outside acceptance criteria (10% of analytes failure allowed).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OW3634	OW3635		
Sampling Date		2016/06/14 08:35	2016/06/14 16:40		
COC Number		08423306	08423306		
	UNITS	KZ-9	KZ-13	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00699	0.00137	0.00010	8306582
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8306582
Dissolved Calcium (Ca)	mg/L	42.7	21.0	0.050	8305342
Dissolved Magnesium (Mg)	mg/L	5.03	2.18	0.050	8305342
Dissolved Potassium (K)	mg/L	1.17	1.32	0.050	8305342
Dissolved Sodium (Na)	mg/L	0.763	0.801	0.050	8305342
Dissolved Sulphur (S)	mg/L	9.6	3.9	3.0	8305342
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OW2139	OW3580	OW3628	OW3632	OW3633		
Sampling Date		2016/06/17 15:30	2016/06/14 17:00	2016/06/14 14:00	2016/06/14 12:35	2016/06/14 11:25		
COC Number		08423306	08423306	08423306	08423306	08423306		
	UNITS	TRIP BLANK	KZ-28	KZ-2	KZ-6	KZ-7	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	<0.50	<0.50	72.3	132	128	0.50	8304529
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8309051
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	<0.00050	<0.00050	0.0135	0.0271	0.00296	0.00050	8307264
Total Antimony (Sb)	mg/L	<0.000020	<0.000020	0.000035	<0.000020	0.000064	0.000020	8307264
Total Arsenic (As)	mg/L	<0.000020	<0.000020	0.000093	0.000133	0.000234	0.000020	8307264
Total Barium (Ba)	mg/L	<0.000020	<0.000020	0.0403	0.0372	0.0504	0.000020	8307264
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8307264
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8307264
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8307264
Total Cadmium (Cd)	mg/L	<0.0000050	<0.0000050	0.000214	0.0000330	0.0000710	0.0000050	8307264
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8307264
Total Cobalt (Co)	mg/L	<0.0000050	<0.0000050	0.0000140	0.0000530	0.0000100	0.0000050	8307264
Total Copper (Cu)	mg/L	<0.000050	<0.000050	0.000825	0.000353	0.000556	0.000050	8307264
Total Iron (Fe)	mg/L	<0.0010	<0.0010	0.0207	0.281	0.0618	0.0010	8307264
Total Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.000109	0.000128	0.0000210	0.0000050	8307264
Total Lithium (Li)	mg/L	<0.00050	<0.00050	0.00072	0.00066	0.00104	0.00050	8307264
Total Manganese (Mn)	mg/L	<0.000050	<0.000050	0.000934	0.0442	0.00633	0.000050	8307264
Total Molybdenum (Mo)	mg/L	<0.000050	<0.000050	0.000581	0.000367	0.000478	0.000050	8307264
Total Nickel (Ni)	mg/L	<0.000020	<0.000020	0.000351	0.000281	0.000284	0.000020	8307264
Total Phosphorus (P)	mg/L	<0.0020	0.0029	0.0022	0.0089	0.0041	0.0020	8307264
Total Selenium (Se)	mg/L	<0.000040	<0.000040	0.000435	0.000430	0.000668	0.000040	8307264
Total Silicon (Si)	mg/L	<0.050	<0.050	1.91	2.42	2.47	0.050	8307264
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8307264
Total Strontium (Sr)	mg/L	<0.000050	<0.000050	0.0789	0.133	0.130	0.000050	8307264
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000030	<0.0000020	<0.0000020	0.0000020	8307264
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8307264
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00081	0.00109	<0.00050	0.00050	8307264
Total Uranium (U)	mg/L	<0.0000020	<0.0000020	0.00112	0.000670	0.000798	0.0000020	8307264
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8307264
Total Zinc (Zn)	mg/L	<0.00010	0.00012	0.0341	0.00140	0.0142	0.00010	8307264

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OW2139	OW3580	OW3628	OW3632	OW3633		
Sampling Date		2016/06/17 15:30	2016/06/14 17:00	2016/06/14 14:00	2016/06/14 12:35	2016/06/14 11:25		
COC Number		08423306	08423306	08423306	08423306	08423306		
	UNITS	**TRIP BLANK**	**KZ-28**	**KZ-2**	**KZ-6**	**KZ-7**	**RDL**	**QC Batch**
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8307264
Total Calcium (Ca)	mg/L	<0.050	<0.050	25.4	44.9	42.0	0.050	8305593
Total Magnesium (Mg)	mg/L	<0.050	<0.050	2.14	4.94	5.66	0.050	8305593
Total Potassium (K)	mg/L	<0.050	<0.050	1.28	0.570	0.968	0.050	8305593
Total Sodium (Na)	mg/L	<0.050	<0.050	0.469	0.540	0.667	0.050	8305593
Total Sulphur (S)	mg/L	<3.0	<3.0	9.8	6.2	11.1	3.0	8305593

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OW3634	OW3635		
Sampling Date		2016/06/14 08:35	2016/06/14 16:40		
COC Number		08423306	08423306		
	UNITS	KZ-9	KZ-13	RDL	QC Batch
Calculated Parameters					
Total Hardness (CaCO3)	mg/L	132	61.5	0.50	8304529
Elements					
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8309051
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	0.0291	0.0810	0.00050	8307264
Total Antimony (Sb)	mg/L	0.000063	0.000055	0.000020	8307264
Total Arsenic (As)	mg/L	0.000267	0.000252	0.000020	8307264
Total Barium (Ba)	mg/L	0.0634	0.0975	0.000020	8307264
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8307264
Total Bismuth (Bi)	mg/L	<0.0000050	0.0000050	0.0000050	8307264
Total Boron (B)	mg/L	<0.010	<0.010	0.010	8307264
Total Cadmium (Cd)	mg/L	0.0000560	0.0000390	0.0000050	8307264
Total Chromium (Cr)	mg/L	<0.00010	0.00019	0.00010	8307264
Total Cobalt (Co)	mg/L	0.0000840	0.0000780	0.0000050	8307264
Total Copper (Cu)	mg/L	0.000677	0.000779	0.000050	8307264
Total Iron (Fe)	mg/L	0.328	0.206	0.0010	8307264
Total Lead (Pb)	mg/L	0.000159	0.000204	0.0000050	8307264
Total Lithium (Li)	mg/L	0.00149	0.00102	0.00050	8307264
Total Manganese (Mn)	mg/L	0.0379	0.0398	0.000050	8307264
Total Molybdenum (Mo)	mg/L	0.000497	0.000547	0.000050	8307264
Total Nickel (Ni)	mg/L	0.000361	0.000519	0.000020	8307264
Total Phosphorus (P)	mg/L	0.0095	0.0080	0.0020	8307264
Total Selenium (Se)	mg/L	0.000611	0.000142	0.000040	8307264
Total Silicon (Si)	mg/L	2.36	2.46	0.050	8307264
Total Silver (Ag)	mg/L	0.0000070	0.0000060	0.0000050	8307264
Total Strontium (Sr)	mg/L	0.146	0.0681	0.000050	8307264
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	8307264
Total Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8307264
Total Titanium (Ti)	mg/L	0.00216	0.00538	0.00050	8307264
Total Uranium (U)	mg/L	0.000802	0.000457	0.0000020	8307264
Total Vanadium (V)	mg/L	<0.00020	0.00037	0.00020	8307264
Total Zinc (Zn)	mg/L	0.0114	0.00502	0.00010	8307264
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OW3634	OW3635		
Sampling Date		2016/06/14 08:35	2016/06/14 16:40		
COC Number		08423306	08423306		
	UNITS	KZ-9	KZ-13	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8307264
Total Calcium (Ca)	mg/L	44.3	21.0	0.050	8305593
Total Magnesium (Mg)	mg/L	5.26	2.22	0.050	8305593
Total Potassium (K)	mg/L	1.21	1.35	0.050	8305593
Total Sodium (Na)	mg/L	0.759	0.814	0.050	8305593
Total Sulphur (S)	mg/L	9.7	3.9	3.0	8305593
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW2139
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/06/17
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8308968	N/A	2016/06/22	Tatyana Serzhanova
Alkalinity - Water	AT/ALK	8306445	2016/06/21	2016/06/21	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8306771	N/A	2016/06/21	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8311832	N/A	2016/06/27	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8311837	N/A	2016/06/27	Wilson Au Yueng
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8307433	N/A	2016/06/21	Isabel Choi
Conductance - water	AT/ALK	8306448	N/A	2016/06/21	Maria Maclean
Fluoride	ISE/ISE	8308097	N/A	2016/06/22	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8304529	N/A	2016/06/22	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8304581	N/A	2016/06/22	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8309019	N/A	2016/06/23	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8309051	2016/06/23	2016/06/23	Rob Mcclelland
Ion Balance	CALC	8304864	N/A	2016/06/22	Automated Statchk
Sum of cations, anions	CALC	8305592	N/A	2016/06/22	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8305342	N/A	2016/06/22	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8306582	N/A	2016/06/21	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8305593	N/A	2016/06/22	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8307264	N/A	2016/06/22	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8306390	N/A	2016/06/21	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8307350	N/A	2016/06/21	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8307354	N/A	2016/06/21	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8305594	N/A	2016/06/22	Automated Statchk
pH Water	AT/ALK	8306450	N/A	2016/06/21	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8306778	N/A	2016/06/21	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306895	2016/06/21	2016/06/21	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8306896	N/A	2016/06/21	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8305800	2016/06/21	2016/06/22	Prabhleen Sodhi

Maxxam ID: OW2139 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/06/17
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8307433	N/A	2016/06/21	Isabel Choi
Ammonia-N (Unpreserved)	KONE/COL	8306390	N/A	2016/06/21	Clare Kwok

Maxxam ID: OW3580
Sample ID: KZ-28
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8308968	N/A	2016/06/22	Tatyana Serzhanova
Alkalinity - Water	AT/ALK	8306445	2016/06/21	2016/06/21	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8306771	N/A	2016/06/21	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8311832	N/A	2016/06/27	Wilson Au Yueng

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW3580
Sample ID: KZ-28
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide WAD (weak acid dissociable)	TECH/COL	8311837	N/A	2016/06/27	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8307437	N/A	2016/06/21	Isabel Choi
Conductance - water	AT/ALK	8306448	N/A	2016/06/21	Maria Maclean
Fluoride	ISE/ISE	8308097	N/A	2016/06/22	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8304529	N/A	2016/06/23	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8304581	N/A	2016/06/22	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8309019	N/A	2016/06/23	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8309051	2016/06/23	2016/06/23	Rob Mcclelland
Ion Balance	CALC	8304864	N/A	2016/06/22	Automated Statchk
Sum of cations, anions	CALC	8305592	N/A	2016/06/22	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8305342	N/A	2016/06/22	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8306582	N/A	2016/06/21	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8305593	N/A	2016/06/23	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8307264	N/A	2016/06/22	Andrew An
Ammonia-N (Preserved)	KONE/COL	8306381	N/A	2016/06/21	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8307350	N/A	2016/06/21	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8307354	N/A	2016/06/21	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8305594	N/A	2016/06/22	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8305638	N/A	2016/06/21	Lucy Luo
pH Water	AT/ALK	8306450	N/A	2016/06/21	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8306778	N/A	2016/06/21	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306895	2016/06/21	2016/06/21	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8306896	N/A	2016/06/21	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8305800	2016/06/21	2016/06/22	Prabhleen Sodhi

Maxxam ID: OW3580 Dup
Sample ID: KZ-28
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8311832	N/A	2016/06/27	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8311837	N/A	2016/06/27	Wilson Au Yueng

Maxxam ID: OW3628
Sample ID: KZ-2
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8308968	N/A	2016/06/22	Tatyana Serzhanova
Alkalinity - Water	AT/ALK	8306442	2016/06/21	2016/06/21	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8306771	N/A	2016/06/21	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8307163	N/A	2016/06/22	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8311837	N/A	2016/06/27	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8307437	N/A	2016/06/21	Isabel Choi
Conductance - water	AT/ALK	8306440	N/A	2016/06/21	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW3628
Sample ID: KZ-2
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8308097	N/A	2016/06/22	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8304529	N/A	2016/06/23	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8304581	N/A	2016/06/22	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8309019	N/A	2016/06/23	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8309051	2016/06/23	2016/06/23	Rob Mcclelland
Ion Balance	CALC	8304864	N/A	2016/06/22	Automated Statchk
Sum of cations, anions	CALC	8305592	N/A	2016/06/22	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8305342	N/A	2016/06/22	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8306582	N/A	2016/06/21	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8305593	N/A	2016/06/23	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8307264	N/A	2016/06/22	Andrew An
Ammonia-N (Preserved)	KONE/COL	8306381	N/A	2016/06/21	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8307350	N/A	2016/06/21	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8307354	N/A	2016/06/21	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8305594	N/A	2016/06/22	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8305638	N/A	2016/06/21	Lucy Luo
pH Water	AT/ALK	8306438	N/A	2016/06/21	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8306778	N/A	2016/06/21	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306895	2016/06/21	2016/06/21	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8306896	N/A	2016/06/21	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8305800	2016/06/21	2016/06/22	Prabhleen Sodhi

Maxxam ID: OW3632
Sample ID: KZ-6
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8308968	N/A	2016/06/22	Tatyana Serzhanova
Alkalinity - Water	AT/ALK	8306442	2016/06/21	2016/06/21	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8306771	N/A	2016/06/21	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8307163	N/A	2016/06/22	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8311837	N/A	2016/06/27	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8307437	N/A	2016/06/21	Isabel Choi
Conductance - water	AT/ALK	8306440	N/A	2016/06/21	Maria Maclean
Fluoride	ISE/ISE	8308097	N/A	2016/06/22	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8304529	N/A	2016/06/23	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8304581	N/A	2016/06/22	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8309019	N/A	2016/06/23	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8309051	2016/06/23	2016/06/23	Rob Mcclelland
Ion Balance	CALC	8304864	N/A	2016/06/22	Automated Statchk
Sum of cations, anions	CALC	8305592	N/A	2016/06/22	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8305342	N/A	2016/06/22	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8306582	N/A	2016/06/21	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8305593	N/A	2016/06/23	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8307264	N/A	2016/06/22	Andrew An

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW3632
Sample ID: KZ-6
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8306381	N/A	2016/06/21	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8307350	N/A	2016/06/21	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8307354	N/A	2016/06/21	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8305594	N/A	2016/06/22	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8305638	N/A	2016/06/21	Lucy Luo
pH Water	AT/ALK	8306438	N/A	2016/06/21	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8306778	N/A	2016/06/21	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306895	2016/06/21	2016/06/21	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8306896	N/A	2016/06/21	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8305800	2016/06/21	2016/06/22	Prabhleen Sodhi

Maxxam ID: OW3632 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8308968	N/A	2016/06/22	Tatyana Serzhanova
Nitrate+Nitrite (N) (low level)	TRAA/COL	8307350	N/A	2016/06/21	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8307354	N/A	2016/06/21	Isaac Wang
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306895	2016/06/21	2016/06/21	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8306896	N/A	2016/06/21	Isabel Choi

Maxxam ID: OW3633
Sample ID: KZ-7
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8308968	N/A	2016/06/22	Tatyana Serzhanova
Alkalinity - Water	AT/ALK	8306445	2016/06/21	2016/06/21	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8306771	N/A	2016/06/21	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8307163	N/A	2016/06/22	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8311837	N/A	2016/06/27	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8307434	N/A	2016/06/21	Isabel Choi
Conductance - water	AT/ALK	8306448	N/A	2016/06/21	Maria Maclean
Fluoride	ISE/ISE	8308097	N/A	2016/06/22	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8304529	N/A	2016/06/23	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8304581	N/A	2016/06/22	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8309019	N/A	2016/06/23	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8309051	2016/06/23	2016/06/23	Rob Mcclelland
Ion Balance	CALC	8304864	N/A	2016/06/22	Automated Statchk
Sum of cations, anions	CALC	8305592	N/A	2016/06/22	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8305342	N/A	2016/06/22	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8306582	N/A	2016/06/21	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8305593	N/A	2016/06/23	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8307264	N/A	2016/06/22	Andrew An

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW3633
Sample ID: KZ-7
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8306381	N/A	2016/06/21	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8307350	N/A	2016/06/21	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8307354	N/A	2016/06/21	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8305594	N/A	2016/06/22	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8305638	N/A	2016/06/21	Lucy Luo
pH Water	AT/ALK	8306450	N/A	2016/06/21	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8306778	N/A	2016/06/21	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306895	2016/06/21	2016/06/21	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8306896	N/A	2016/06/21	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8305800	2016/06/21	2016/06/22	Prabhleen Sodhi

Maxxam ID: OW3633 Dup
Sample ID: KZ-7
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8307434	N/A	2016/06/21	Isabel Choi

Maxxam ID: OW3634
Sample ID: KZ-9
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8308968	N/A	2016/06/22	Tatyana Serzhanova
Alkalinity - Water	AT/ALK	8306445	2016/06/21	2016/06/21	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8306771	N/A	2016/06/21	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8307163	N/A	2016/06/22	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8307200	N/A	2016/06/22	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8307437	N/A	2016/06/21	Isabel Choi
Conductance - water	AT/ALK	8306448	N/A	2016/06/21	Maria Maclean
Fluoride	ISE/ISE	8308097	N/A	2016/06/22	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8304529	N/A	2016/06/23	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8304581	N/A	2016/06/22	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8309019	N/A	2016/06/23	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8309051	2016/06/23	2016/06/23	Rob Mcclelland
Ion Balance	CALC	8304864	N/A	2016/06/22	Automated Statchk
Sum of cations, anions	CALC	8305592	N/A	2016/06/22	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8305342	N/A	2016/06/22	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8306582	N/A	2016/06/21	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8305593	N/A	2016/06/23	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8307264	N/A	2016/06/22	Andrew An
Ammonia-N (Preserved)	KONE/COL	8306381	N/A	2016/06/21	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8307350	N/A	2016/06/21	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8307354	N/A	2016/06/21	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8305594	N/A	2016/06/22	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW3634
Sample ID: KZ-9
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	8305638	N/A	2016/06/21	Lucy Luo
pH Water	AT/ALK	8306450	N/A	2016/06/21	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8306778	N/A	2016/06/21	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306895	2016/06/21	2016/06/21	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8306896	N/A	2016/06/21	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8305800	2016/06/21	2016/06/22	Prabhleen Sodhi

Maxxam ID: OW3635
Sample ID: KZ-13
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8308968	N/A	2016/06/22	Tatyana Serzhanova
Alkalinity - Water	AT/ALK	8306445	2016/06/21	2016/06/21	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8306771	N/A	2016/06/21	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8307163	N/A	2016/06/22	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8311837	N/A	2016/06/27	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8307437	N/A	2016/06/21	Isabel Choi
Conductance - water	AT/ALK	8306448	N/A	2016/06/21	Maria Maclean
Fluoride	ISE/ISE	8308097	N/A	2016/06/22	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8304529	N/A	2016/06/23	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8304581	N/A	2016/06/22	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8309019	N/A	2016/06/23	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8309051	2016/06/23	2016/06/23	Rob Mcclelland
Ion Balance	CALC	8304864	N/A	2016/06/22	Automated Statchk
Sum of cations, anions	CALC	8305592	N/A	2016/06/22	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8305342	N/A	2016/06/22	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8306582	N/A	2016/06/21	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8305593	N/A	2016/06/23	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8307264	N/A	2016/06/22	Andrew An
Ammonia-N (Preserved)	KONE/COL	8306381	N/A	2016/06/21	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8307350	N/A	2016/06/21	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8307354	N/A	2016/06/21	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8305594	N/A	2016/06/22	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8305638	N/A	2016/06/21	Lucy Luo
pH Water	AT/ALK	8306450	N/A	2016/06/21	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8306778	N/A	2016/06/21	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306895	2016/06/21	2016/06/21	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8306896	N/A	2016/06/21	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8305800	2016/06/21	2016/06/22	Prabhleen Sodhi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW3635 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8306582	N/A	2016/06/21	Andrew An
Ammonia-N (Preserved)	KONE/COL	8306381	N/A	2016/06/21	Clare Kwok

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	10.0°C

Sample OW2139-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8305800	Total Suspended Solids	2016/06/22			96	80 - 120	<1.0	mg/L		
8306381	Total Ammonia (N)	2016/06/21	103	80 - 120	101	80 - 120	<0.0050	mg/L	NC	20
8306390	Total Ammonia (N)	2016/06/21	98	80 - 120	101	80 - 120	<0.0050	mg/L	NC	20
8306438	pH	2016/06/21			102	97 - 103			0	N/A
8306440	Conductivity	2016/06/21			99	80 - 120	<1.0	uS/cm		
8306442	Alkalinity (PP as CaCO3)	2016/06/21					<0.50	mg/L		
8306442	Alkalinity (Total as CaCO3)	2016/06/21	NC	80 - 120	96	80 - 120	<0.50	mg/L		
8306442	Bicarbonate (HCO3)	2016/06/21					<0.50	mg/L		
8306442	Carbonate (CO3)	2016/06/21					<0.50	mg/L		
8306442	Hydroxide (OH)	2016/06/21					<0.50	mg/L		
8306445	Alkalinity (PP as CaCO3)	2016/06/21					<0.50	mg/L	NC	20
8306445	Alkalinity (Total as CaCO3)	2016/06/21	NC	80 - 120	101	80 - 120	<0.50	mg/L	1.3	20
8306445	Bicarbonate (HCO3)	2016/06/21					<0.50	mg/L	1.3	20
8306445	Carbonate (CO3)	2016/06/21					<0.50	mg/L	NC	20
8306445	Hydroxide (OH)	2016/06/21					<0.50	mg/L	NC	20
8306448	Conductivity	2016/06/21			100	80 - 120	<1.0	uS/cm	0.54	20
8306450	pH	2016/06/21			102	97 - 103			0.91	N/A
8306582	Dissolved Aluminum (Al)	2016/06/21	104	80 - 120	110	80 - 120	<0.00050	mg/L	0.31	20
8306582	Dissolved Antimony (Sb)	2016/06/21	95	80 - 120	94	80 - 120	<0.000020	mg/L	NC	20
8306582	Dissolved Arsenic (As)	2016/06/21	99	80 - 120	98	80 - 120	<0.000020	mg/L	3.2	20
8306582	Dissolved Barium (Ba)	2016/06/21	NC	80 - 120	98	80 - 120	<0.000020	mg/L	0.25	20
8306582	Dissolved Beryllium (Be)	2016/06/21	98	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8306582	Dissolved Bismuth (Bi)	2016/06/21	95	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8306582	Dissolved Boron (B)	2016/06/21	97	80 - 120	96	80 - 120	<0.010	mg/L	NC	20
8306582	Dissolved Cadmium (Cd)	2016/06/21	95	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8306582	Dissolved Chromium (Cr)	2016/06/21	95	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
8306582	Dissolved Cobalt (Co)	2016/06/21	95	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8306582	Dissolved Copper (Cu)	2016/06/21	94	80 - 120	98	80 - 120	<0.000050	mg/L	0.95	20
8306582	Dissolved Iron (Fe)	2016/06/21	108	80 - 120	107	80 - 120	<0.0010	mg/L	1.0	20
8306582	Dissolved Lead (Pb)	2016/06/21	95	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8306582	Dissolved Lithium (Li)	2016/06/21	98	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8306582	Dissolved Manganese (Mn)	2016/06/21	95	80 - 120	100	80 - 120	<0.000050	mg/L	2.2	20
8306582	Dissolved Molybdenum (Mo)	2016/06/21	NC	80 - 120	95	80 - 120	<0.000050	mg/L	1.5	20
8306582	Dissolved Nickel (Ni)	2016/06/21	93	80 - 120	99	80 - 120	<0.000020	mg/L	2.4	20
8306582	Dissolved Phosphorus (P)	2016/06/21					0.0027, RDL=0.0020	mg/L	NC	20
8306582	Dissolved Selenium (Se)	2016/06/21	96	80 - 120	93	80 - 120	<0.000040	mg/L	NC	20
8306582	Dissolved Silicon (Si)	2016/06/21					<0.050	mg/L	0.95	20
8306582	Dissolved Silver (Ag)	2016/06/21	102	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8306582	Dissolved Strontium (Sr)	2016/06/21	NC	80 - 120	101	80 - 120	<0.000050	mg/L	1.6	20
8306582	Dissolved Thallium (Tl)	2016/06/21	74 (1)	80 - 120	108	80 - 120	<0.0000020	mg/L	NC	20
8306582	Dissolved Tin (Sn)	2016/06/21	97	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8306582	Dissolved Titanium (Ti)	2016/06/21	94	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8306582	Dissolved Uranium (U)	2016/06/21	95	80 - 120	101	80 - 120	<0.0000020	mg/L	2.7	20
8306582	Dissolved Vanadium (V)	2016/06/21	97	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8306582	Dissolved Zinc (Zn)	2016/06/21	101	80 - 120	97	80 - 120	<0.00010	mg/L	7.7	20
8306582	Dissolved Zirconium (Zr)	2016/06/21					<0.00010	mg/L	NC	20
8306771	Dissolved Chloride (Cl)	2016/06/21			99	80 - 120	<0.50	mg/L	NC	20
8306778	Dissolved Sulphate (SO4)	2016/06/21			92	80 - 120	<0.50	mg/L	1.9	20
8306895	Dissolved Phosphorus (P)	2016/06/21	107	80 - 120	106	80 - 120	<0.0020	mg/L	NC (2)	20
8306896	Total Phosphorus (P)	2016/06/21	89	80 - 120	106	80 - 120	<0.0020	mg/L	NC (2)	20
8307163	Strong Acid Dissoc. Cyanide (CN)	2016/06/22	NC	80 - 120	103	80 - 120	0.00076, RDL=0.00050	mg/L	0.46	20
8307200	Weak Acid Dissoc. Cyanide (CN)	2016/06/22	49 (1)	80 - 120	98	80 - 120	0.00074, RDL=0.00050	mg/L	NC	20
8307264	Total Aluminum (Al)	2016/06/22	114	80 - 120	111	80 - 120	<0.00050	mg/L	NC	20
8307264	Total Antimony (Sb)	2016/06/22	106	80 - 120	100	80 - 120	<0.000020	mg/L		
8307264	Total Arsenic (As)	2016/06/22	102	80 - 120	100	80 - 120	<0.000020	mg/L		
8307264	Total Barium (Ba)	2016/06/22	108	80 - 120	102	80 - 120	<0.000020	mg/L		
8307264	Total Beryllium (Be)	2016/06/22	102	80 - 120	97	80 - 120	0.000010, RDL=0.000010	mg/L		
8307264	Total Bismuth (Bi)	2016/06/22	107	80 - 120	105	80 - 120	<0.0000050	mg/L		
8307264	Total Boron (B)	2016/06/22	88	80 - 120	100	80 - 120	<0.010	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8307264	Total Cadmium (Cd)	2016/06/22	101	80 - 120	99	80 - 120	<0.0000050	mg/L		
8307264	Total Chromium (Cr)	2016/06/22	99	80 - 120	98	80 - 120	<0.00010	mg/L		
8307264	Total Cobalt (Co)	2016/06/22	99	80 - 120	99	80 - 120	<0.0000050	mg/L		
8307264	Total Copper (Cu)	2016/06/22	100	80 - 120	100	80 - 120	<0.000050	mg/L		
8307264	Total Iron (Fe)	2016/06/22	105	80 - 120	106	80 - 120	<0.0010	mg/L		
8307264	Total Lead (Pb)	2016/06/22	108	80 - 120	106	80 - 120	<0.0000050	mg/L		
8307264	Total Lithium (Li)	2016/06/22	99	80 - 120	98	80 - 120	<0.00050	mg/L		
8307264	Total Manganese (Mn)	2016/06/22	103	80 - 120	101	80 - 120	<0.000050	mg/L		
8307264	Total Molybdenum (Mo)	2016/06/22	97	80 - 120	97	80 - 120	<0.000050	mg/L		
8307264	Total Nickel (Ni)	2016/06/22	99	80 - 120	99	80 - 120	<0.000020	mg/L		
8307264	Total Phosphorus (P)	2016/06/22					0.0024, RDL=0.0020	mg/L		
8307264	Total Selenium (Se)	2016/06/22	101	80 - 120	98	80 - 120	<0.000040	mg/L		
8307264	Total Silicon (Si)	2016/06/22					<0.050	mg/L		
8307264	Total Silver (Ag)	2016/06/22	86	80 - 120	107	80 - 120	<0.0000050	mg/L		
8307264	Total Strontium (Sr)	2016/06/22	96	80 - 120	102	80 - 120	<0.000050	mg/L		
8307264	Total Thallium (Tl)	2016/06/22	114	80 - 120	112	80 - 120	<0.0000020	mg/L		
8307264	Total Tin (Sn)	2016/06/22	118	80 - 120	102	80 - 120	<0.00020	mg/L		
8307264	Total Titanium (Ti)	2016/06/22	101	80 - 120	105	80 - 120	<0.00050	mg/L		
8307264	Total Uranium (U)	2016/06/22	106	80 - 120	104	80 - 120	<0.0000020	mg/L		
8307264	Total Vanadium (V)	2016/06/22	106	80 - 120	101	80 - 120	<0.00020	mg/L		
8307264	Total Zinc (Zn)	2016/06/22	103	80 - 120	118	80 - 120	<0.00010	mg/L	4.2	20
8307264	Total Zirconium (Zr)	2016/06/22					<0.00010	mg/L		
8307350	Nitrate plus Nitrite (N)	2016/06/21	106	80 - 120	108	80 - 120	<0.0020	mg/L	8.8 (2)	25
8307354	Nitrite (N)	2016/06/21	99	80 - 120	102	80 - 120	<0.0020	mg/L	NC (2)	25
8307433	Dissolved Organic Carbon (C)	2016/06/21	108	80 - 120	106	80 - 120	<0.50	mg/L	NC	20
8307434	Dissolved Organic Carbon (C)	2016/06/21	101	80 - 120	104	80 - 120	<0.50	mg/L	NC	20
8307437	Dissolved Organic Carbon (C)	2016/06/21	NC	80 - 120	99	80 - 120	<0.50	mg/L	0.80	20
8308097	Fluoride (F)	2016/06/22			98	80 - 120	<0.010	mg/L	1.9	20
8308968	Acidity (pH 4.5)	2016/06/22					<0.50	mg/L	NC	20
8308968	Acidity (pH 8.3)	2016/06/22			97	80 - 120	<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8309019	Dissolved Mercury (Hg)	2016/06/23	93	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20
8309051	Total Mercury (Hg)	2016/06/23	102	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8311832	Strong Acid Dissoc. Cyanide (CN)	2016/06/27	99	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8311837	Weak Acid Dissoc. Cyanide (CN)	2016/06/27	97	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) Sample analysed past recommended hold time.

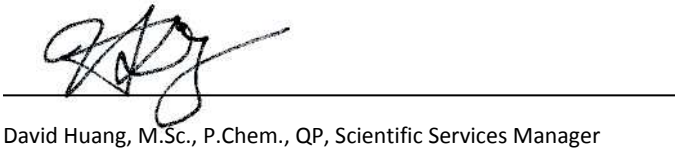
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

B649484_COC

B649484

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

08423306

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (...)		...ound Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	X Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	Same Day 2 Days
Phone:		Phone:	(867) 668-6453	Site #:		1 Day 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions
BC CSR Soil / BC CSR Water	Return Cooler
CCME (Specify) / Other (Specify)	Ship Sample Bottles (Please Specify)
Drinking Water / BC Water Quality	USE SCENARIO # 12185

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

Rush Confirmation #:

LABORATORY USE ONLY

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	CUSTODY SEAL Y / N (Present / Intact)	COOLER TEMPERATURES	COMMENTS
1	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	12				
3	KZ-28		14-Jun-16	17:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	12				
4	KZ-2		14-Jun-16	14:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	12				
	KZ-6		14-Jun-16	12:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	12				
5	KZ-7		14-Jun-16	11:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	12				
	KZ-9		14-Jun-16	8:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	12				
6	KZ-13		14-Jun-16	16:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	12				

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Andrew MacPhail	15/06/2017	11:00	MARILOU TRUANT	2016/06/16	12:30

MAXXAM JOB #

RECEIVED IN WHITEHORSE BY: 2016-06-17 TEMP:

Your Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 495921-01-01

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/07/05
Report #: R2210579
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B649116
Received: 2016/06/17, 15:30

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	4	N/A	2016/06/20	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	4	2016/06/20	2016/06/20	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	4	N/A	2016/06/20	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	4	N/A	2016/06/22	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	4	N/A	2016/06/22	BBY6SOP-00004	SM 22 4500-CN O m
COD by Colorimeter	4	2016/06/21	2016/06/22	BBY6SOP-00024	SM 22 5220 D m
Colour (True) by Kone Lab	4	N/A	2016/06/20	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	4	N/A	2016/06/20	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	4	N/A	2016/06/20	BBY6SOP-00026	SM 22 2510 B m
Fluoride	4	N/A	2016/06/21	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	3	N/A	2016/06/22	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	1	N/A	2016/06/24	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	4	N/A	2016/06/22	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	4	N/A	2016/06/22	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	4	2016/06/22	2016/06/22	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Bromide as Bromine (Br) by ICPMS	4	N/A	2016/06/20	BBY7SOP-00002	EPA 6020B R2 m
Ion Balance	4	N/A	2016/06/22	BBY WI-00033	SM 22 1030E
Sum of cations, anions	4	N/A	2016/06/22	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	4	N/A	2016/06/22	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	4	N/A	2016/06/22	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	1	2016/06/21	2016/06/22	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Digested LL (total)	2	2016/06/22	2016/06/22	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	3	N/A	2016/06/22	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2016/06/24	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	1	N/A	2016/06/21	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Nitrogen (Total)	4	2016/06/21	2016/06/21	BBY6SOP-00016	SM 22 4500-N C m
Ammonia-N (Preserved)	4	N/A	2016/06/21	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	4	N/A	2016/06/19	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	4	N/A	2016/06/19	BBY6SOP-00010	SM 22 4500-NO3- I m

Your Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 495921-01-01

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/07/05
Report #: R2210579
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B649116
Received: 2016/06/17, 15:30

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrogen - Nitrate (as N)	4	N/A	2016/06/21	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	4	N/A	2016/06/20	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	4	N/A	2016/06/20	BBY6SOP-00026	SM 22 4500-H+ B m
Orthophosphate by Konelab (low level)	4	N/A	2016/06/20	BBY6SOP-00013	SM 22 4500-P E m
Sulphate by Automated Colourimetry	4	N/A	2016/06/20	BBY6SOP-00017	SM 22 4500-SO42- E m
Total Dissolved Solids - Low Level	4	N/A	2016/06/22	BBY6SOP-00033	SM 22 2540 C m
TKN (Calc. TN, N/N) total	4	N/A	2016/06/22	BBY WI-00033	Calculation
Carbon (Total Organic) (3)	4	N/A	2016/06/20	BBY6SOP-00003	SM 22 5310 C m
Phosphorus-P (LL Tot, dissolved) - UF/UP	4	2016/06/21	2016/06/21	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	4	N/A	2016/06/21	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	4	2016/06/20	2016/06/21	BBY6SOP-00034	SM 22 2540 D
Turbidity	4	N/A	2016/06/18	BBY6SOP-00027	SM 22 2130 B m

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.
(3) TOC present in the sample should be considered as non-purgeable TOC.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OW2120	OW2136	OW2137	OW2138	OY8575		
Sampling Date		2016/06/14 09:52	2016/06/16 11:30	2016/06/16 14:20	2016/06/16 12:20	2016/06/16 12:05		
COC Number		495921-01-01	495921-01-01	495921-01-01	495921-01-01	495921-01-01		
	UNITS	KZ-9 WEST SEEP	KZ-9 EAST SEEP	SEEP 4	SEEP 5	KZ-9 WEST SEEP	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	5.2	18	3.4	5.7		N/A	8304169
Cation Sum	meq/L	5.1	17	3.2	5.6		N/A	8304169
Filter and HNO3 Preservation	N/A	LAB	LAB	LAB	LAB		N/A	8304808
Ion Balance	N/A	0.97	0.94	0.96	0.98		0.010	8304168
Nitrate (N)	mg/L	0.358	0.0152	0.489	0.0046		0.0020	8304029
Demand Parameters								
Chemical Oxygen Demand	mg/L	21	18	<10	26		10	8306226
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00078	0.00059	0.00081	0.00093		0.00050	8307163
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00107	0.00091	0.00131	0.00123		0.00050	8307200
Fluoride (F)	mg/L	0.072	0.970	0.038	0.170		0.010	8306756
Dissolved Organic Carbon (C)	mg/L	1.27	0.63	0.91	4.17		0.50	8306429
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50		0.50	8305190
Alkalinity (Total as CaCO3)	mg/L	211	901	124	262		0.50	8305343
Total Organic Carbon (C)	mg/L	1.43	1.81	2.07	6.34		0.50	8306431
Acidity (pH 8.3)	mg/L	0.87	271	<0.50	8.22		0.50	8305190
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	<0.50		0.50	8305343
Bicarbonate (HCO3)	mg/L	257	1100	151	319		0.50	8305343
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	<0.50		0.50	8305343
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	<0.50		0.50	8305343
Anions								
Orthophosphate (P)	mg/L	0.0019 (1)	0.0079 (2)	0.0012 (2)	0.014 (2)		0.0010	8305544
Dissolved Sulphate (SO4)	mg/L	47.2	17.0	39.5	8.60		0.50	8305561
Dissolved Chloride (Cl)	mg/L	0.91	2.1	0.71	11		0.50	8305558
MISCELLANEOUS								
True Colour	Col. Unit	<5.0 (2)	12.6 (2)	<5.0 (2)	16.0 (2)		5.0	8305542
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0021 (1)	0.0066 (2)	0.0023 (2)	0.0127 (2)		0.0020	8306812
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.032	0.328	0.054	0.545		0.020	8304130

RDL = Reportable Detection Limit

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OW2120	OW2136	OW2137	OW2138	OY8575		
Sampling Date		2016/06/14 09:52	2016/06/16 11:30	2016/06/16 14:20	2016/06/16 12:20	2016/06/16 12:05		
COC Number		495921-01-01	495921-01-01	495921-01-01	495921-01-01	495921-01-01		
	UNITS	KZ-9 WEST SEEP	KZ-9 EAST SEEP	SEEP 4	SEEP 5	KZ-9 WEST SEEP	RDL	QC Batch
Total Ammonia (N)	mg/L	0.048	0.12	0.034	0.030		0.0050	8305698
Nitrate plus Nitrite (N)	mg/L	0.358 (1)	0.0152	0.489	0.0046		0.0020	8306263
Nitrite (N)	mg/L	<0.0020 (1)	<0.0020	<0.0020	<0.0020		0.0020	8306266
Total Nitrogen (N)	mg/L	0.391	0.343	0.543	0.549		0.020	8306042
Total Phosphorus (P)	mg/L	0.0026 (1)	0.0127 (2)	0.0027 (2)	0.0635 (2)		0.0020	8306889
Physical Properties								
Conductivity	uS/cm	463	1550	309	520		1.0	8305346
pH	pH	8.21	6.65	8.17	8.06			8305345
Physical Properties								
Total Suspended Solids	mg/L		11.6	1.0	13.1	1.1	1.0	8305103
Total Dissolved Solids	mg/L	300	946	200	314		1.0	8306095
Turbidity	NTU	0.75	14.4	0.21	28.2		0.10	8303918

RDL = Reportable Detection Limit

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		OW2120		OW2136		OW2137	OW2138		
Sampling Date		2016/06/14 09:52		2016/06/16 11:30		2016/06/16 14:20	2016/06/16 12:20		
COC Number		495921-01-01		495921-01-01		495921-01-01	495921-01-01		
	UNITS	KZ-9 WEST SEEP	RDL	KZ-9 EAST SEEP	RDL	SEEP 4	SEEP 5	RDL	QC Batch
ANIONS									
Bromide (Br)	mg/L	<0.010	0.010	<0.10 (1)	0.10	<0.010	<0.010	0.010	8305166

RDL = Reportable Detection Limit
(1) RDL raised due to sample matrix interference.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OW2120		OW2136		OW2137		
Sampling Date		2016/06/14 09:52		2016/06/16 11:30		2016/06/16 14:20		
COC Number		495921-01-01		495921-01-01		495921-01-01		
	UNITS	KZ-9 WEST SEEP	QC Batch	KZ-9 EAST SEEP	QC Batch	SEEP 4	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	251	8303851	834	8303851	156	0.50	8303851
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8307542	<0.0000020	8307542	<0.0000020	0.0000020	8307542
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00094	8307256	0.0586	8307256	0.00155	0.00050	8307256
Dissolved Antimony (Sb)	mg/L	0.000024	8307256	<0.000020	8307256	<0.000020	0.000020	8307256
Dissolved Arsenic (As)	mg/L	0.000109	8307256	0.000781	8307256	0.000062	0.000020	8307256
Dissolved Barium (Ba)	mg/L	0.176	8307256	0.132	8307256	0.115	0.000020	8307256
Dissolved Beryllium (Be)	mg/L	<0.000010	8307256	0.000244	8307256	<0.000010	0.000010	8307256
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8307256	<0.0000050	8307256	<0.0000050	0.0000050	8307256
Dissolved Boron (B)	mg/L	<0.010	8307256	<0.010	8307256	<0.010	0.010	8307256
Dissolved Cadmium (Cd)	mg/L	0.0000410	8307256	0.0000610	8307256	0.0000100	0.0000050	8307256
Dissolved Chromium (Cr)	mg/L	0.00015	8307256	<0.00010	8307256	0.00094 (1)	0.00010	8308675
Dissolved Cobalt (Co)	mg/L	<0.0000050	8307256	0.00228	8307256	0.0000190	0.0000050	8307256
Dissolved Copper (Cu)	mg/L	0.000095	8307256	<0.000050	8307256	0.000352 (1)	0.000050	8308675
Dissolved Iron (Fe)	mg/L	<0.0010	8307256	3.13	8307256	0.0070 (1)	0.0010	8308675
Dissolved Lead (Pb)	mg/L	<0.0000050	8307256	<0.0000050	8307256	<0.0000050	0.0000050	8307256
Dissolved Lithium (Li)	mg/L	0.00197	8307256	0.0726	8307256	0.00061	0.00050	8307256
Dissolved Manganese (Mn)	mg/L	<0.000050	8307256	2.04	8307256	0.000175	0.000050	8307256
Dissolved Molybdenum (Mo)	mg/L	0.00155	8307256	0.000405	8307256	0.000603	0.000050	8308675
Dissolved Nickel (Ni)	mg/L	0.000101	8307256	0.00698	8307256	0.000597 (1)	0.000020	8308675
Dissolved Phosphorus (P)	mg/L	0.0041	8307256	0.0086	8307256	0.0048	0.0020	8307256
Dissolved Selenium (Se)	mg/L	0.00240	8307256	<0.000040	8307256	0.000833	0.000040	8307256
Dissolved Silicon (Si)	mg/L	3.43	8307256	15.9	8307256	2.61	0.050	8307256
Dissolved Silver (Ag)	mg/L	<0.0000050	8307256	<0.0000050	8307256	<0.0000050	0.0000050	8307256
Dissolved Strontium (Sr)	mg/L	0.268	8307256	1.25	8307256	0.222	0.000050	8307256
Dissolved Thallium (Tl)	mg/L	0.0000050	8307256	0.0000040	8308675	0.0000030	0.0000020	8307256
Dissolved Tin (Sn)	mg/L	<0.00020	8307256	<0.00020	8307256	<0.00020	0.00020	8307256
Dissolved Titanium (Ti)	mg/L	<0.00050	8307256	<0.00050	8307256	<0.00050	0.00050	8307256
Dissolved Uranium (U)	mg/L	0.00311	8307256	0.00149	8307256	0.00131	0.0000020	8307256

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OW2120		OW2136		OW2137		
Sampling Date		2016/06/14 09:52		2016/06/16 11:30		2016/06/16 14:20		
COC Number		495921-01-01		495921-01-01		495921-01-01		
	UNITS	**KZ-9 WEST SEEP**	**QC Batch**	**KZ-9 EAST SEEP**	**QC Batch**	**SEEP 4**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.00020	8307256	<0.00020	8307256	<0.00020	0.00020	8307256
Dissolved Zinc (Zn)	mg/L	0.00038	8307256	0.0266	8307256	0.00037	0.00010	8307256
Dissolved Zirconium (Zr)	mg/L	<0.00010	8307256	0.00029	8307256	<0.00010	0.00010	8307256
Dissolved Calcium (Ca)	mg/L	85.0	8303852	282	8303852	58.1	0.050	8303852
Dissolved Magnesium (Mg)	mg/L	9.32	8303852	31.5	8303852	2.75	0.050	8303852
Dissolved Potassium (K)	mg/L	1.08	8303852	5.18	8303852	1.84	0.050	8303852
Dissolved Sodium (Na)	mg/L	1.04	8303852	8.53	8303852	0.663	0.050	8303852
Dissolved Sulphur (S)	mg/L	14.3	8303852	6.2	8303852	11.9	3.0	8303852
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OW2138		
Sampling Date		2016/06/16 12:20		
COC Number		495921-01-01		
	UNITS	SEEP 5	RDL	QC Batch
Misc. Inorganics				
Dissolved Hardness (CaCO3)	mg/L	255	0.50	8303851
Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000020	8307542
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	0.00102	0.00050	8307256
Dissolved Antimony (Sb)	mg/L	0.000022	0.000020	8307256
Dissolved Arsenic (As)	mg/L	0.000277	0.000020	8307256
Dissolved Barium (Ba)	mg/L	0.158	0.000020	8307256
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000010	8307256
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8307256
Dissolved Boron (B)	mg/L	<0.010	0.010	8307256
Dissolved Cadmium (Cd)	mg/L	0.0000380	0.0000050	8307256
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00010	8307256
Dissolved Cobalt (Co)	mg/L	0.0000190	0.0000050	8307256
Dissolved Copper (Cu)	mg/L	0.000432	0.000050	8307256
Dissolved Iron (Fe)	mg/L	0.0373	0.0010	8307256
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000050	8307256
Dissolved Lithium (Li)	mg/L	0.0169	0.00050	8307256
Dissolved Manganese (Mn)	mg/L	0.103	0.000050	8307256
Dissolved Molybdenum (Mo)	mg/L	0.000078	0.000050	8307256
Dissolved Nickel (Ni)	mg/L	0.00119	0.000020	8307256
Dissolved Phosphorus (P)	mg/L	0.0166	0.0020	8307256
Dissolved Selenium (Se)	mg/L	0.000099	0.000040	8307256
Dissolved Silicon (Si)	mg/L	6.32	0.050	8307256
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	8307256
Dissolved Strontium (Sr)	mg/L	0.330	0.000050	8307256
Dissolved Thallium (Tl)	mg/L	0.0000050	0.0000020	8307256
Dissolved Tin (Sn)	mg/L	<0.00020	0.00020	8307256
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00050	8307256
Dissolved Uranium (U)	mg/L	0.000287	0.0000020	8307256
Dissolved Vanadium (V)	mg/L	<0.00020	0.00020	8307256
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OW2138		
Sampling Date		2016/06/16 12:20		
COC Number		495921-01-01		
	UNITS	**SEEP 5**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.0105	0.00010	8307256
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00010	8307256
Dissolved Calcium (Ca)	mg/L	85.2	0.050	8303852
Dissolved Magnesium (Mg)	mg/L	10.3	0.050	8303852
Dissolved Potassium (K)	mg/L	2.06	0.050	8303852
Dissolved Sodium (Na)	mg/L	9.52	0.050	8303852
Dissolved Sulphur (S)	mg/L	3.5	3.0	8303852
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OW2137		
Sampling Date		2016/06/16 14:20		
COC Number		495921-01-01		
	UNITS	SEEP 4	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	166	0.50	8308597
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8307502
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.00510	0.00050	8310129
Total Antimony (Sb)	mg/L	<0.000020	0.000020	8310129
Total Arsenic (As)	mg/L	0.000066	0.000020	8310129
Total Barium (Ba)	mg/L	0.120	0.000020	8310129
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8310129
Total Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8310129
Total Boron (B)	mg/L	<0.010	0.010	8310129
Total Cadmium (Cd)	mg/L	0.0000120	0.0000050	8310129
Total Chromium (Cr)	mg/L	<0.00010	0.00010	8310129
Total Cobalt (Co)	mg/L	0.0000060	0.0000050	8310129
Total Copper (Cu)	mg/L	0.000268	0.000050	8310129
Total Iron (Fe)	mg/L	0.0048	0.0010	8310129
Total Lead (Pb)	mg/L	0.0000080	0.0000050	8310129
Total Lithium (Li)	mg/L	0.00061	0.00050	8310129
Total Manganese (Mn)	mg/L	0.000150	0.000050	8310129
Total Molybdenum (Mo)	mg/L	0.000569	0.000050	8306148
Total Nickel (Ni)	mg/L	0.000161	0.000020	8310129
Total Phosphorus (P)	mg/L	0.0039	0.0020	8310129
Total Selenium (Se)	mg/L	0.000920	0.000040	8310129
Total Silicon (Si)	mg/L	2.84	0.050	8310129
Total Silver (Ag)	mg/L	<0.0000050	0.0000050	8310129
Total Strontium (Sr)	mg/L	0.229	0.000050	8310129
Total Thallium (Tl)	mg/L	<0.0000020	0.0000020	8310129
Total Tin (Sn)	mg/L	<0.00020	0.00020	8310129
Total Titanium (Ti)	mg/L	<0.00050	0.00050	8310129
Total Uranium (U)	mg/L	0.00144	0.0000020	8310129
Total Vanadium (V)	mg/L	<0.00020	0.00020	8310129
Total Zinc (Zn)	mg/L	0.00055	0.00010	8310129
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OW2137		
Sampling Date		2016/06/16 14:20		
COC Number		495921-01-01		
	UNITS	**SEEP 4**	**RDL**	**QC Batch**
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8310129
Total Calcium (Ca)	mg/L	61.7	0.050	8308937
Total Magnesium (Mg)	mg/L	2.86	0.050	8308937
Total Potassium (K)	mg/L	1.89	0.050	8308937
Total Sodium (Na)	mg/L	0.676	0.050	8308937
Total Sulphur (S)	mg/L	13.1	3.0	8308937
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OW2120		OW2136	OW2138		
Sampling Date		2016/06/14 09:52		2016/06/16 11:30	2016/06/16 12:20		
COC Number		495921-01-01		495921-01-01	495921-01-01		
	UNITS	KZ-9 WEST SEEP	QC Batch	KZ-9 EAST SEEP	SEEP 5	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	242	8303881	848	262	0.50	8303881
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	8307502	<0.0000020	<0.0000020	0.0000020	8307502
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0203	8306504	0.180	0.0202	0.0030	8307302
Total Antimony (Sb)	mg/L	<0.000050	8306504	<0.000050	0.000064	0.000050	8307302
Total Arsenic (As)	mg/L	0.000171	8306504	0.0143	0.000690	0.000020	8307302
Total Barium (Ba)	mg/L	0.169	8306504	0.174	0.163	0.00010	8307302
Total Beryllium (Be)	mg/L	<0.000010	8306504	0.000357	0.000017	0.000010	8307302
Total Bismuth (Bi)	mg/L	<0.000020	8306504	<0.000020	<0.000020	0.000020	8307302
Total Boron (B)	mg/L	<0.050	8306504	<0.050	<0.050	0.050	8307302
Total Cadmium (Cd)	mg/L	0.0000650	8306504	0.0000570	0.0000920	0.0000050	8307302
Total Chromium (Cr)	mg/L	<0.00050	8306504	<0.00050	<0.00050	0.00050	8307302
Total Cobalt (Co)	mg/L	0.000025	8306504	0.00206	0.000466	0.000010	8307302
Total Copper (Cu)	mg/L	0.00038	8306504	0.00021	0.00171	0.00020	8307302
Total Iron (Fe)	mg/L	0.0447	8306504	13.0	3.92	0.0050	8307302
Total Lead (Pb)	mg/L	0.000063	8306504	0.000075	0.000391	0.000050	8307302
Total Lithium (Li)	mg/L	0.00190	8306504	0.0827	0.0177	0.00050	8307302
Total Manganese (Mn)	mg/L	0.00747	8306504	1.80	0.444	0.00010	8307302
Total Molybdenum (Mo)	mg/L	0.00156	8306504	0.000466	0.000106	0.000050	8307302
Total Nickel (Ni)	mg/L	0.00021	8306504	0.00652	0.00171	0.00010	8307302
Total Phosphorus (P)	mg/L	<0.010	8306504	0.023	0.103	0.010	8307302
Total Selenium (Se)	mg/L	0.00233	8306504	<0.000040	0.000108	0.000040	8307302
Total Silicon (Si)	mg/L	3.35	8306504	18.1	7.05	0.10	8307302
Total Silver (Ag)	mg/L	0.000038	8306504	0.000052	0.000014	0.000010	8307302
Total Strontium (Sr)	mg/L	0.281	8306504	1.23	0.404	0.000050	8307302
Total Thallium (Tl)	mg/L	<0.0000020	8306504	0.0000040	0.0000020	0.0000020	8307302
Total Tin (Sn)	mg/L	<0.00020	8306504	<0.00020	<0.00020	0.00020	8307302
Total Titanium (Ti)	mg/L	<0.0050	8306504	<0.0050	<0.0050	0.0050	8307302
Total Uranium (U)	mg/L	0.00287	8306504	0.00174	0.000295	0.0000050	8307302
Total Vanadium (V)	mg/L	<0.00050	8306504	<0.00050	<0.00050	0.00050	8307302
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OW2120		OW2136	OW2138		
Sampling Date		2016/06/14 09:52		2016/06/16 11:30	2016/06/16 12:20		
COC Number		495921-01-01		495921-01-01	495921-01-01		
	UNITS	KZ-9 WEST SEEP	QC Batch	KZ-9 EAST SEEP	SEEP 5	RDL	QC Batch
Total Zinc (Zn)	mg/L	<0.0010	8306504	0.0235	0.0231	0.0010	8307302
Total Zirconium (Zr)	mg/L	0.00011	8306504	0.00059	0.00020	0.00010	8307302
Total Calcium (Ca)	mg/L	81.4	8304042	288	84.2	0.25	8304042
Total Magnesium (Mg)	mg/L	9.45	8304042	31.5	12.6	0.25	8304042
Total Potassium (K)	mg/L	1.09	8304042	4.94	2.71	0.25	8304042
Total Sodium (Na)	mg/L	1.06	8304042	8.51	11.8	0.25	8304042
Total Sulphur (S)	mg/L	16	8304042	<15	<15	15	8304042
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW2120
Sample ID: KZ-9 WEST SEEP
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8305190	N/A	2016/06/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8305343	2016/06/20	2016/06/20	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8305558	N/A	2016/06/20	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8307163	N/A	2016/06/22	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8307200	N/A	2016/06/22	Wilson Au Yueng
COD by Colorimeter	M/COL	8306226	2016/06/21	2016/06/22	Vanessa Tso
Colour (True) by Kone Lab	KONE	8305542	N/A	2016/06/20	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8306429	N/A	2016/06/20	Isabel Choi
Conductance - water	AT/ALK	8305346	N/A	2016/06/20	Wilson Au Yueng
Fluoride	ISE/ISE	8306756	N/A	2016/06/21	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8303881	N/A	2016/06/22	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8303851	N/A	2016/06/22	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8307542	N/A	2016/06/22	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8307502	2016/06/22	2016/06/22	Rob Mcclelland
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8305166	N/A	2016/06/20	Adnan Dzebic
Ion Balance	CALC	8304168	N/A	2016/06/22	Automated Statchk
Sum of cations, anions	CALC	8304169	N/A	2016/06/22	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8303852	N/A	2016/06/22	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8307256	N/A	2016/06/22	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8306504	2016/06/21	2016/06/22	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8304042	N/A	2016/06/22	Automated Statchk
Nitrogen (Total)	TRAA/COL	8306042	2016/06/21	2016/06/21	Diana Cruz
Ammonia-N (Preserved)	KONE/COL	8305698	N/A	2016/06/21	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8306263	N/A	2016/06/19	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8306266	N/A	2016/06/19	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8304029	N/A	2016/06/21	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8304808	N/A	2016/06/20	Lucy Luo
pH Water	AT/ALK	8305345	N/A	2016/06/20	Wilson Au Yueng
Orthophosphate by Konelab (low level)	KONE/COL	8305544	N/A	2016/06/20	Isabel Choi
Sulphate by Automated Colourimetry	KONE/COL	8305561	N/A	2016/06/20	Balwinder Bassi
Total Dissolved Solids - Low Level	BAL/BAL	8306095	N/A	2016/06/22	Coco Guo
TKN (Calc. TN, N/N) total	CALC	8304130	N/A	2016/06/22	Automated Statchk
Carbon (Total Organic)	TRAA/COL	8306431	N/A	2016/06/20	Isabel Choi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306812	2016/06/21	2016/06/21	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8306889	N/A	2016/06/21	Isabel Choi
Turbidity	TURB	8303918	N/A	2016/06/18	Coco Guo

Maxxam ID: OW2136
Sample ID: KZ-9 EAST SEEP
Matrix: Water

Collected: 2016/06/16
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8305190	N/A	2016/06/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8305343	2016/06/20	2016/06/20	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8305558	N/A	2016/06/20	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW2136
Sample ID: KZ-9 EAST SEEP
Matrix: Water

Collected: 2016/06/16
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8307163	N/A	2016/06/22	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8307200	N/A	2016/06/22	Wilson Au Yueng
COD by Colorimeter	M/COL	8306226	2016/06/21	2016/06/22	Vanessa Tso
Colour (True) by Kone Lab	KONE	8305542	N/A	2016/06/20	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8306429	N/A	2016/06/20	Isabel Choi
Conductance - water	AT/ALK	8305346	N/A	2016/06/20	Wilson Au Yueng
Fluoride	ISE/ISE	8306756	N/A	2016/06/21	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8303881	N/A	2016/06/22	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8303851	N/A	2016/06/22	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8307542	N/A	2016/06/22	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8307502	2016/06/22	2016/06/22	Rob Mcclelland
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8305166	N/A	2016/06/20	Adnan Dzebic
Ion Balance	CALC	8304168	N/A	2016/06/22	Automated Statchk
Sum of cations, anions	CALC	8304169	N/A	2016/06/22	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8303852	N/A	2016/06/22	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8307256	N/A	2016/06/22	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8307302	2016/06/22	2016/06/22	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8304042	N/A	2016/06/22	Automated Statchk
Nitrogen (Total)	TRAA/COL	8306042	2016/06/21	2016/06/21	Diana Cruz
Ammonia-N (Preserved)	KONE/COL	8305698	N/A	2016/06/21	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8306263	N/A	2016/06/19	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8306266	N/A	2016/06/19	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8304029	N/A	2016/06/21	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8304808	N/A	2016/06/20	Lucy Luo
pH Water	AT/ALK	8305345	N/A	2016/06/20	Wilson Au Yueng
Orthophosphate by Konelab (low level)	KONE/COL	8305544	N/A	2016/06/20	Isabel Choi
Sulphate by Automated Colourimetry	KONE/COL	8305561	N/A	2016/06/20	Balwinder Bassi
Total Dissolved Solids - Low Level	BAL/BAL	8306095	N/A	2016/06/22	Coco Guo
TKN (Calc. TN, N/N) total	CALC	8304130	N/A	2016/06/22	Automated Statchk
Carbon (Total Organic)	TRAA/COL	8306431	N/A	2016/06/20	Isabel Choi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306812	2016/06/21	2016/06/21	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8306889	N/A	2016/06/21	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8305103	2016/06/20	2016/06/21	Prabhleen Sodhi
Turbidity	TURB	8303918	N/A	2016/06/18	Coco Guo

Maxxam ID: OW2136 Dup
Sample ID: KZ-9 EAST SEEP
Matrix: Water

Collected: 2016/06/16
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8305558	N/A	2016/06/20	Balwinder Bassi
Sulphate by Automated Colourimetry	KONE/COL	8305561	N/A	2016/06/20	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW2137
Sample ID: SEEP 4
Matrix: Water

Collected: 2016/06/16
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8305190	N/A	2016/06/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8305343	2016/06/20	2016/06/20	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8305558	N/A	2016/06/20	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8307163	N/A	2016/06/22	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8307200	N/A	2016/06/22	Wilson Au Yueng
COD by Colorimeter	M/COL	8306226	2016/06/21	2016/06/22	Vanessa Tso
Colour (True) by Kone Lab	KONE	8305542	N/A	2016/06/20	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8306429	N/A	2016/06/20	Isabel Choi
Conductance - water	AT/ALK	8305346	N/A	2016/06/20	Wilson Au Yueng
Fluoride	ISE/ISE	8306756	N/A	2016/06/21	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8308597	N/A	2016/06/24	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8303851	N/A	2016/06/22	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8307542	N/A	2016/06/22	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8307502	2016/06/22	2016/06/22	Rob Mcclelland
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8305166	N/A	2016/06/20	Adnan Dzebic
Ion Balance	CALC	8304168	N/A	2016/06/22	Automated Statchk
Sum of cations, anions	CALC	8304169	N/A	2016/06/22	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8303852	N/A	2016/06/22	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8307256	N/A	2016/06/22	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8308937	N/A	2016/06/24	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8310129	N/A	2016/06/24	Andrew An
Nitrogen (Total)	TRAA/COL	8306042	2016/06/21	2016/06/21	Diana Cruz
Ammonia-N (Preserved)	KONE/COL	8305698	N/A	2016/06/21	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8306263	N/A	2016/06/19	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8306266	N/A	2016/06/19	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8304029	N/A	2016/06/21	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8304808	N/A	2016/06/20	Lucy Luo
pH Water	AT/ALK	8305345	N/A	2016/06/20	Wilson Au Yueng
Orthophosphate by Konelab (low level)	KONE/COL	8305544	N/A	2016/06/20	Isabel Choi
Sulphate by Automated Colourimetry	KONE/COL	8305561	N/A	2016/06/20	Balwinder Bassi
Total Dissolved Solids - Low Level	BAL/BAL	8306095	N/A	2016/06/22	Coco Guo
TKN (Calc. TN, N/N) total	CALC	8304130	N/A	2016/06/22	Automated Statchk
Carbon (Total Organic)	TRAA/COL	8306431	N/A	2016/06/20	Isabel Choi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306812	2016/06/21	2016/06/21	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8306889	N/A	2016/06/21	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8305103	2016/06/20	2016/06/21	Prabhleen Sodhi
Turbidity	TURB	8303918	N/A	2016/06/18	Coco Guo

Maxxam ID: OW2137 Dup
Sample ID: SEEP 4
Matrix: Water

Collected: 2016/06/16
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8306429	N/A	2016/06/20	Isabel Choi
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8305166	N/A	2016/06/20	Adnan Dzebic

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW2137 Dup
Sample ID: SEEP 4
Matrix: Water

Collected: 2016/06/16
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Dissolved Solids - Low Level	BAL/BAL	8306095	N/A	2016/06/22	Coco Guo
Carbon (Total Organic)	TRAA/COL	8306431	N/A	2016/06/20	Isabel Choi

Maxxam ID: OW2138
Sample ID: SEEP 5
Matrix: Water

Collected: 2016/06/16
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8305190	N/A	2016/06/20	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8305343	2016/06/20	2016/06/20	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8305558	N/A	2016/06/20	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8307163	N/A	2016/06/22	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8307200	N/A	2016/06/22	Wilson Au Yueng
COD by Colorimeter	M/COL	8306226	2016/06/21	2016/06/22	Vanessa Tso
Colour (True) by Kone Lab	KONE	8305542	N/A	2016/06/20	Isabel Choi
Carbon (DOC) - field filtered/preserved	TRAA/COL	8306429	N/A	2016/06/20	Isabel Choi
Conductance - water	AT/ALK	8305346	N/A	2016/06/20	Wilson Au Yueng
Fluoride	ISE/ISE	8306756	N/A	2016/06/21	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8303881	N/A	2016/06/22	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8303851	N/A	2016/06/22	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8307542	N/A	2016/06/22	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8307502	2016/06/22	2016/06/22	Rob Mcclelland
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8305166	N/A	2016/06/20	Adnan Dzebic
Ion Balance	CALC	8304168	N/A	2016/06/22	Automated Statchk
Sum of cations, anions	CALC	8304169	N/A	2016/06/22	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8303852	N/A	2016/06/22	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8307256	N/A	2016/06/22	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8307302	2016/06/22	2016/06/22	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8304042	N/A	2016/06/22	Automated Statchk
Nitrogen (Total)	TRAA/COL	8306042	2016/06/21	2016/06/21	Diana Cruz
Ammonia-N (Preserved)	KONE/COL	8305698	N/A	2016/06/21	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8306263	N/A	2016/06/19	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8306266	N/A	2016/06/19	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8304029	N/A	2016/06/21	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8304808	N/A	2016/06/20	Lucy Luo
pH Water	AT/ALK	8305345	N/A	2016/06/20	Wilson Au Yueng
Orthophosphate by Konelab (low level)	KONE/COL	8305544	N/A	2016/06/20	Isabel Choi
Sulphate by Automated Colourimetry	KONE/COL	8305561	N/A	2016/06/20	Balwinder Bassi
Total Dissolved Solids - Low Level	BAL/BAL	8306095	N/A	2016/06/22	Coco Guo
TKN (Calc. TN, N/N) total	CALC	8304130	N/A	2016/06/22	Automated Statchk
Carbon (Total Organic)	TRAA/COL	8306431	N/A	2016/06/20	Isabel Choi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306812	2016/06/21	2016/06/21	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8306889	N/A	2016/06/21	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8305103	2016/06/20	2016/06/21	Prabhleen Sodhi
Turbidity	TURB	8303918	N/A	2016/06/18	Coco Guo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW2138 Dup
Sample ID: SEEP 5
Matrix: Water

Collected: 2016/06/16
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8307502	2016/06/22	2016/06/22	Rob Mcclelland

Maxxam ID: OY8575
Sample ID: KZ-9 WEST SEEP
Matrix: Water

Collected: 2016/06/16
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Suspended Solids-Low Level	BAL/BAL	8305103	2016/06/20	2016/06/21	Prabhleen Sodhi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	11.0°C

Revised Report V2 (M_S, 2016/07/05): Sample KZ-9 West Seep sampling date and time amended, TSS reported as a separate sample due to different sampling date.

Sample OW2120-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OW2136-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OW2138-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OW2136, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample OW2137, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample OW2137, Elements by ICPMS Low Level (total): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8303918	Turbidity	2016/06/18			101	80 - 120	<0.10	NTU	0.45	20
8305103	Total Suspended Solids	2016/06/21			92	80 - 120	<1.0	mg/L		
8305166	Bromide (Br)	2016/06/20	100	78 - 120	96	80 - 120	<0.010	mg/L	NC	20
8305190	Acidity (pH 4.5)	2016/06/20					<0.50	mg/L	NC	20
8305190	Acidity (pH 8.3)	2016/06/20			100	80 - 120	<0.50	mg/L	13	20
8305343	Alkalinity (PP as CaCO3)	2016/06/20					<0.50	mg/L	NC	20
8305343	Alkalinity (Total as CaCO3)	2016/06/20	NC	80 - 120	98	80 - 120	0.61, RDL=0.50	mg/L	0.30	20
8305343	Bicarbonate (HCO3)	2016/06/20					0.74, RDL=0.50	mg/L	0.30	20
8305343	Carbonate (CO3)	2016/06/20					<0.50	mg/L	NC	20
8305343	Hydroxide (OH)	2016/06/20					<0.50	mg/L	NC	20
8305345	pH	2016/06/20			101	97 - 103			0.36	N/A
8305346	Conductivity	2016/06/20			100	80 - 120	<1.0	uS/cm	1.4	20
8305542	True Colour	2016/06/20			100	80 - 120	<5.0	Col. Unit	NC	20
8305544	Orthophosphate (P)	2016/06/20	97	80 - 120	90	80 - 120	<0.0010	mg/L	1.3	20
8305558	Dissolved Chloride (Cl)	2016/06/20	95	80 - 120	100	80 - 120	<0.50	mg/L	NC	20
8305561	Dissolved Sulphate (SO4)	2016/06/20	NC	80 - 120	98	80 - 120	<0.50	mg/L	1.9	20
8305698	Total Ammonia (N)	2016/06/21	105	80 - 120	101	80 - 120	<0.0050	mg/L	NC	20
8306042	Total Nitrogen (N)	2016/06/21	NC	80 - 120	97	80 - 120	<0.020	mg/L	0.73	20
8306095	Total Dissolved Solids	2016/06/22	102	80 - 120	112	80 - 120	<1.0	mg/L	2.0	20
8306148	Total Molybdenum (Mo)	2016/06/21	92	80 - 120	95	80 - 120	<0.000050	mg/L		
8306226	Chemical Oxygen Demand	2016/06/22	103	80 - 120	108	80 - 120	<10	mg/L	NC	20
8306263	Nitrate plus Nitrite (N)	2016/06/19	100	80 - 120	95	80 - 120	<0.0020	mg/L	NC	25
8306266	Nitrite (N)	2016/06/19	97	80 - 120	98	80 - 120	<0.0020	mg/L	NC	25
8306429	Dissolved Organic Carbon (C)	2016/06/20	102	80 - 120	106	80 - 120	<0.50	mg/L	NC	20
8306431	Total Organic Carbon (C)	2016/06/20	93	80 - 120	101	80 - 120	<0.50	mg/L	NC	20
8306504	Total Aluminum (Al)	2016/06/22	NC	80 - 120	114	80 - 120	<0.0030	mg/L	3.2	20
8306504	Total Antimony (Sb)	2016/06/22	98	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8306504	Total Arsenic (As)	2016/06/22	96	80 - 120	104	80 - 120	<0.000020	mg/L	1.2	20
8306504	Total Barium (Ba)	2016/06/22	NC	80 - 120	102	80 - 120	<0.00010	mg/L	0.50	20
8306504	Total Beryllium (Be)	2016/06/22	96	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8306504	Total Bismuth (Bi)	2016/06/22	98	80 - 120	96	80 - 120	<0.000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8306504	Total Boron (B)	2016/06/22	99	80 - 120	101	80 - 120	<0.050	mg/L	NC	20
8306504	Total Cadmium (Cd)	2016/06/22	92	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8306504	Total Chromium (Cr)	2016/06/22	94	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8306504	Total Cobalt (Co)	2016/06/22	90	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8306504	Total Copper (Cu)	2016/06/22	85	80 - 120	100	80 - 120	<0.00020	mg/L	2.2	20
8306504	Total Iron (Fe)	2016/06/22	NC	80 - 120	103	80 - 120	<0.0050	mg/L	3.5	20
8306504	Total Lead (Pb)	2016/06/22	101	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8306504	Total Lithium (Li)	2016/06/22	96	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8306504	Total Manganese (Mn)	2016/06/22	NC	80 - 120	100	80 - 120	<0.00010	mg/L	1.8	20
8306504	Total Molybdenum (Mo)	2016/06/22	NC	80 - 120	99	80 - 120	<0.000050	mg/L	0.63	20
8306504	Total Nickel (Ni)	2016/06/22	89	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
8306504	Total Phosphorus (P)	2016/06/22					<0.010	mg/L	NC	20
8306504	Total Selenium (Se)	2016/06/22	NC	80 - 120	95	80 - 120	<0.000040	mg/L	0.46	20
8306504	Total Silicon (Si)	2016/06/22					<0.10	mg/L	0.38	20
8306504	Total Silver (Ag)	2016/06/22	116	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8306504	Total Strontium (Sr)	2016/06/22	NC	80 - 120	104	80 - 120	<0.000050	mg/L	3.6	20
8306504	Total Thallium (Tl)	2016/06/22	108	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8306504	Total Tin (Sn)	2016/06/22	104	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8306504	Total Titanium (Ti)	2016/06/22	101	80 - 120	100	80 - 120	<0.0050	mg/L	NC	20
8306504	Total Uranium (U)	2016/06/22	103	80 - 120	96	80 - 120	<0.0000050	mg/L	0.43	20
8306504	Total Vanadium (V)	2016/06/22	97	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8306504	Total Zinc (Zn)	2016/06/22	90	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
8306504	Total Zirconium (Zr)	2016/06/22					<0.00010	mg/L	NC	20
8306756	Fluoride (F)	2016/06/21	96	80 - 120	92	80 - 120	<0.010	mg/L	4.7	20
8306812	Dissolved Phosphorus (P)	2016/06/21	100	80 - 120	108	80 - 120	<0.0020	mg/L	NC	20
8306889	Total Phosphorus (P)	2016/06/21	99	80 - 120	105	80 - 120	<0.0020	mg/L	NC	20
8307163	Strong Acid Dissoc. Cyanide (CN)	2016/06/22	NC	80 - 120	103	80 - 120	0.00076, RDL=0.00050	mg/L	0.46	20
8307200	Weak Acid Dissoc. Cyanide (CN)	2016/06/22	49 (1)	80 - 120	98	80 - 120	0.00074, RDL=0.00050	mg/L	NC	20
8307256	Dissolved Aluminum (Al)	2016/06/22	113	80 - 120	109	80 - 120	<0.00050	mg/L		
8307256	Dissolved Antimony (Sb)	2016/06/22	100	80 - 120	97	80 - 120	<0.000020	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8307256	Dissolved Arsenic (As)	2016/06/22	103	80 - 120	102	80 - 120	<0.000020	mg/L		
8307256	Dissolved Barium (Ba)	2016/06/22	105	80 - 120	99	80 - 120	<0.000020	mg/L		
8307256	Dissolved Beryllium (Be)	2016/06/22	101	80 - 120	97	80 - 120	<0.000010	mg/L		
8307256	Dissolved Bismuth (Bi)	2016/06/22	105	80 - 120	105	80 - 120	<0.0000050	mg/L		
8307256	Dissolved Boron (B)	2016/06/22	104	80 - 120	98	80 - 120	<0.010	mg/L		
8307256	Dissolved Cadmium (Cd)	2016/06/22	100	80 - 120	96	80 - 120	<0.0000050	mg/L		
8307256	Dissolved Chromium (Cr)	2016/06/22	101	80 - 120	97	80 - 120	<0.00010	mg/L		
8307256	Dissolved Cobalt (Co)	2016/06/22	100	80 - 120	98	80 - 120	<0.0000050	mg/L		
8307256	Dissolved Copper (Cu)	2016/06/22	101	80 - 120	98	80 - 120	<0.000050	mg/L		
8307256	Dissolved Iron (Fe)	2016/06/22	101	80 - 120	103	80 - 120	<0.0010	mg/L		
8307256	Dissolved Lead (Pb)	2016/06/22	104	80 - 120	105	80 - 120	<0.0000050	mg/L		
8307256	Dissolved Lithium (Li)	2016/06/22	99	80 - 120	97	80 - 120	<0.00050	mg/L		
8307256	Dissolved Manganese (Mn)	2016/06/22	102	80 - 120	99	80 - 120	<0.000050	mg/L		
8307256	Dissolved Molybdenum (Mo)	2016/06/22	99	80 - 120	97	80 - 120	<0.000050	mg/L		
8307256	Dissolved Nickel (Ni)	2016/06/22	100	80 - 120	96	80 - 120	<0.000020	mg/L		
8307256	Dissolved Phosphorus (P)	2016/06/22					<0.0020	mg/L		
8307256	Dissolved Selenium (Se)	2016/06/22	99	80 - 120	97	80 - 120	<0.000040	mg/L		
8307256	Dissolved Silicon (Si)	2016/06/22					<0.050	mg/L		
8307256	Dissolved Silver (Ag)	2016/06/22	101	80 - 120	99	80 - 120	<0.0000050	mg/L		
8307256	Dissolved Strontium (Sr)	2016/06/22	97	80 - 120	99	80 - 120	<0.000050	mg/L		
8307256	Dissolved Thallium (Tl)	2016/06/22	111	80 - 120	112	80 - 120	<0.0000020	mg/L		
8307256	Dissolved Tin (Sn)	2016/06/22	105	80 - 120	100	80 - 120	<0.00020	mg/L		
8307256	Dissolved Titanium (Ti)	2016/06/22	101	80 - 120	107	80 - 120	<0.00050	mg/L		
8307256	Dissolved Uranium (U)	2016/06/22	103	80 - 120	103	80 - 120	<0.0000020	mg/L		
8307256	Dissolved Vanadium (V)	2016/06/22	101	80 - 120	100	80 - 120	<0.00020	mg/L		
8307256	Dissolved Zinc (Zn)	2016/06/22	106	80 - 120	118	80 - 120	<0.00010	mg/L		
8307256	Dissolved Zirconium (Zr)	2016/06/22					<0.00010	mg/L		
8307302	Total Aluminum (Al)	2016/06/22	NC	80 - 120	116	80 - 120	<0.0030	mg/L	2.5	20
8307302	Total Antimony (Sb)	2016/06/22	NC	80 - 120	103	80 - 120	<0.000050	mg/L	2.0	20
8307302	Total Arsenic (As)	2016/06/22	NC	80 - 120	108	80 - 120	<0.000020	mg/L	13	20
8307302	Total Barium (Ba)	2016/06/22	NC	80 - 120	105	80 - 120	<0.00010	mg/L	0.62	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8307302	Total Beryllium (Be)	2016/06/22	100	80 - 120	100	80 - 120	0.000013, RDL=0.000010	mg/L	NC	20
8307302	Total Bismuth (Bi)	2016/06/22	102	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
8307302	Total Boron (B)	2016/06/22	104	80 - 120	99	80 - 120	<0.050	mg/L	NC	20
8307302	Total Cadmium (Cd)	2016/06/22	95	80 - 120	102	80 - 120	<0.0000050	mg/L	3.2	20
8307302	Total Chromium (Cr)	2016/06/22	100	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8307302	Total Cobalt (Co)	2016/06/22	95	80 - 120	99	80 - 120	<0.000010	mg/L	10	20
8307302	Total Copper (Cu)	2016/06/22	104	80 - 120	102	80 - 120	0.00025, RDL=0.00020	mg/L	11	20
8307302	Total Iron (Fe)	2016/06/22	NC	80 - 120	99	80 - 120	<0.0050	mg/L	2.4	20
8307302	Total Lead (Pb)	2016/06/22	NC	80 - 120	108	80 - 120	<0.000050	mg/L	2.6	20
8307302	Total Lithium (Li)	2016/06/22	NC	80 - 120	100	80 - 120	<0.00050	mg/L	0.76	20
8307302	Total Manganese (Mn)	2016/06/22	NC	80 - 120	102	80 - 120	<0.00010	mg/L	14	20
8307302	Total Molybdenum (Mo)	2016/06/22	111	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8307302	Total Nickel (Ni)	2016/06/22	91	80 - 120	99	80 - 120	<0.00010	mg/L	8.6	20
8307302	Total Phosphorus (P)	2016/06/22					<0.010	mg/L	12	20
8307302	Total Selenium (Se)	2016/06/22	96	80 - 120	102	80 - 120	<0.000040	mg/L	NC	20
8307302	Total Silicon (Si)	2016/06/22					<0.10	mg/L	0.38	20
8307302	Total Silver (Ag)	2016/06/22	125 (1)	80 - 120	104	80 - 120	<0.000010	mg/L	0.33	20
8307302	Total Strontium (Sr)	2016/06/22	NC	80 - 120	107	80 - 120	<0.000050	mg/L	19	20
8307302	Total Thallium (Tl)	2016/06/22	96	80 - 120	110	80 - 120	<0.0000020	mg/L	12	20
8307302	Total Tin (Sn)	2016/06/22	NC	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8307302	Total Titanium (Ti)	2016/06/22	NC	80 - 120	112	80 - 120	<0.0050	mg/L	NC	20
8307302	Total Uranium (U)	2016/06/22	NC	80 - 120	104	80 - 120	<0.0000050	mg/L	0.014	20
8307302	Total Vanadium (V)	2016/06/22	101	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8307302	Total Zinc (Zn)	2016/06/22	NC	80 - 120	104	80 - 120	<0.0010	mg/L	13	20
8307302	Total Zirconium (Zr)	2016/06/22					<0.00010	mg/L	14	20
8307502	Total Mercury (Hg)	2016/06/22	94	80 - 120	119	80 - 120	<0.0000020	mg/L	NC	20
8307542	Dissolved Mercury (Hg)	2016/06/22	101	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8308675	Dissolved Chromium (Cr)	2016/06/23			101	80 - 120	<0.00010	mg/L		
8308675	Dissolved Copper (Cu)	2016/06/23			102	80 - 120	<0.000050	mg/L		
8308675	Dissolved Iron (Fe)	2016/06/23			106	80 - 120	<0.0010	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8308675	Dissolved Molybdenum (Mo)	2016/06/23			93	80 - 120	<0.000050	mg/L		
8308675	Dissolved Nickel (Ni)	2016/06/23			100	80 - 120	<0.000020	mg/L		
8308675	Dissolved Thallium (Tl)	2016/06/23			104	80 - 120	<0.0000020	mg/L		
8310129	Total Aluminum (Al)	2016/06/24			108	80 - 120	<0.00050	mg/L		
8310129	Total Antimony (Sb)	2016/06/24			99	80 - 120	<0.000020	mg/L		
8310129	Total Arsenic (As)	2016/06/24			101	80 - 120	<0.000020	mg/L		
8310129	Total Barium (Ba)	2016/06/24			100	80 - 120	<0.000020	mg/L		
8310129	Total Beryllium (Be)	2016/06/24			97	80 - 120	<0.000010	mg/L		
8310129	Total Bismuth (Bi)	2016/06/24			100	80 - 120	<0.0000050	mg/L		
8310129	Total Boron (B)	2016/06/24			94	80 - 120	<0.010	mg/L		
8310129	Total Cadmium (Cd)	2016/06/24			97	80 - 120	<0.0000050	mg/L		
8310129	Total Chromium (Cr)	2016/06/24			100	80 - 120	<0.00010	mg/L		
8310129	Total Cobalt (Co)	2016/06/24			100	80 - 120	<0.0000050	mg/L		
8310129	Total Copper (Cu)	2016/06/24			100	80 - 120	<0.000050	mg/L		
8310129	Total Iron (Fe)	2016/06/24			99	80 - 120	<0.0010	mg/L		
8310129	Total Lead (Pb)	2016/06/24			100	80 - 120	<0.0000050	mg/L		
8310129	Total Lithium (Li)	2016/06/24			95	80 - 120	<0.00050	mg/L		
8310129	Total Manganese (Mn)	2016/06/24			99	80 - 120	<0.000050	mg/L		
8310129	Total Nickel (Ni)	2016/06/24			100	80 - 120	<0.000020	mg/L		
8310129	Total Phosphorus (P)	2016/06/24					<0.0020	mg/L		
8310129	Total Selenium (Se)	2016/06/24			92	80 - 120	<0.000040	mg/L		
8310129	Total Silicon (Si)	2016/06/24					<0.050	mg/L		
8310129	Total Silver (Ag)	2016/06/24			96	80 - 120	<0.0000050	mg/L		
8310129	Total Strontium (Sr)	2016/06/24			98	80 - 120	<0.000050	mg/L		
8310129	Total Thallium (Tl)	2016/06/24			109	80 - 120	<0.0000020	mg/L		
8310129	Total Tin (Sn)	2016/06/24			101	80 - 120	<0.00020	mg/L		
8310129	Total Titanium (Ti)	2016/06/24			108	80 - 120	<0.00050	mg/L		
8310129	Total Uranium (U)	2016/06/24			100	80 - 120	<0.0000020	mg/L		
8310129	Total Vanadium (V)	2016/06/24			100	80 - 120	<0.00020	mg/L		
8310129	Total Zinc (Zn)	2016/06/24			100	80 - 120	<0.00010	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8310129	Total Zirconium (Zr)	2016/06/24					<0.00010	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

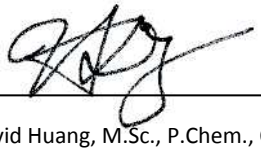
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

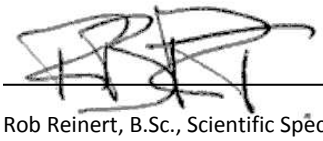
ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



David Huang, M.Sc., P.Chem., QP, Scientific Services Manager



Rob Reinert, B.Sc., Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Analytics International Corporation o/a Maxxam Analytics
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-Free:800-563-6266 Fax:(604) 731 2386 www.maxxam.ca

Chain Of Custody Record

Page 1 of 1

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#11954 BMC MINERAL (NO. 1) LTD.	Company Name	#31132 ALEXCO ENVIRONMENTAL GROUP INC.	Quotation #	B60751	Maxxam Job #	Bottle Order #:
Contact Name	ACCOUNTS PAYABLE	Contact Name	KAI WOLOSHYN	P.O. #		B649116	495921
Address	530-1130 West Pender Street, Vancouver BC V6E 4A4	Address	Unit 3 Calcite Business Centre 151 Industrial Road WHITEHORSE BC Y1A 2V3	Project #	BMC-16-01	Chain Of Custody Record	Project Manager
Phone	(778) 233-7058 x Fax:	Phone	(867) 668-6463 Fax:	Project Name		C#495921-01-01	Morgan Melnychuk
Email	accounts@bmcminerals.com	Email	kwoloshyn@alexcoresource.com	Site #			
				Sampled By			

Regulatory Criteria:
- [ ] CSR
- [ ] CCME
- [ ] BC Water Quality
- [ ] Other _____

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified): [X]
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
1 DAY [ ] 2 Day [ ] 3 Day [ ] Date Required: _____ [ ]
Rush Confirmation Number: _____ (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Acidity, Alkalinity, Conductivity, pH, Color, Turbidity, TDS LL	Chloride, Fluoride, Sulphate, Nitrate, Nitrite, Orthophos, Bromide	Cyanide SAD & WAD	COD, TN, NH4, TOC, TKN	Carbon (DOC) - field filtered/preserved	Phosphorus (LL Total & Dissolved) - UF/UP	Total Suspended Solids-Low Level	Low Level Total & Dissolved Metals with CV Hg			# of Bottles	Comments
1		KZ-9 West Seep	14-June-16	9:52			X	X	X	X	X	X	X	X			13	TSS filled on 16-June-16
2		KZ-9 East Seep	16-June-16	11:30			X	X	X	X	X	X	X	X			13	
3		Seep 3	[illegible]	[illegible]			X	X	X	X	X	X	X	X			[illegible]	
4		Seep 4	16-June-16	14:20			X	X	X	X	X	X	X	X			13	
5		Seep					X	X	X	X	X	X	X	X			[illegible]	
6		Seep 5	16-June-16	12:20			X	X	X	X	X	X	X	X			13	
7																	[illegible]	
8																		
9																		
10																		

B649116_COC

RECEIVED IN WHITEHORSE
BY: Shuno @ 1530
2016 -06- 17
TEMP: 11 / 11 / 11 cooler 8

* * RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Andrew MacPhail [signature]	16/06/17		[signature] KEVIN CHOWG 2016/06/18	~~12:30~~ KC 2016/06/18 2016/06/18	12:30	N/A	✓	3, 4, 3	[ ] Yes [ ] No

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Maxxam Yellow: Client

N/A

Maxxam Analytics International Corporation o/a Maxxam Analytics

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08425770

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/08/04
Report #: R2229192
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B661912
Received: 2016/07/26, 16:00

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	3	N/A	2016/07/28	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	2	2016/07/28	2016/07/28	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	1	2016/07/28	2016/07/29	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	3	N/A	2016/07/28	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	3	N/A	2016/07/29	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	3	N/A	2016/07/29	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	3	N/A	2016/07/28	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	2	N/A	2016/07/28	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	1	N/A	2016/07/29	BBY6SOP-00026	SM 22 2510 B m
Fluoride	3	N/A	2016/07/28	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	3	N/A	2016/08/03	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	3	N/A	2016/08/03	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	3	N/A	2016/07/29	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	3	2016/07/28	2016/07/28	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	3	N/A	2016/08/03	BBY WI-00033	SM 22 1030E
Sum of cations, anions	3	N/A	2016/08/03	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	3	N/A	2016/08/03	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	3	N/A	2016/08/03	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	3	2016/07/28	2016/08/02	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	3	N/A	2016/08/03	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	3	N/A	2016/07/28	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	3	N/A	2016/07/28	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	3	N/A	2016/07/28	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	3	N/A	2016/07/29	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	3	N/A	2016/07/28	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	2	N/A	2016/07/28	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	1	N/A	2016/07/29	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	3	N/A	2016/07/28	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	3	2016/07/28	2016/07/28	BBY6SOP-00013	SM 22 4500-P E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08425770

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/08/04
Report #: R2229192
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B661912
Received: 2016/07/26, 16:00

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Phosphorus - unpreserved	3	N/A	2016/07/28	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	3	2016/07/28	2016/07/29	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.

(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Megan Smith, Project Manager
Email: msmith@maxxam.ca
Phone# (604) 734 7276

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PC7450	PC7451		PC7452		
Sampling Date		2016/07/25 16:40	2016/07/25 15:30		2016/07/25 13:00		
COC Number		08425770	08425770		08425770		
	UNITS	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	4.2	3.7	8342951	3.9	N/A	8342951
Cation Sum	meq/L	4.5	3.9	8342951	4.1	N/A	8342951
Filter and HNO3 Preservation	N/A	LAB	LAB	8343607	LAB	N/A	8343607
Ion Balance	N/A	1.1	1.1	8342811	1.0	0.010	8342811
Nitrate (N)	mg/L	0.0041	0.0074	8342621	0.0166	0.0020	8342621
Misc. Inorganics							
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00054	<0.00050	8345770	<0.00050	0.00050	8345770
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	8345773	0.00055	0.00050	8345773
Fluoride (F)	mg/L	0.160	0.120	8345456	0.110	0.010	8345926
Dissolved Organic Carbon (C)	mg/L	10.3	6.29	8343769	7.49	0.50	8343769
Acidity (pH 4.5)	mg/L	<0.50	<0.50	8343742	<0.50	0.50	8343742
Alkalinity (Total as CaCO3)	mg/L	168	148	8344200	157	0.50	8344217
Acidity (pH 8.3)	mg/L	<0.50	<0.50	8343742	<0.50	0.50	8343742
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	8344200	<0.50	0.50	8344217
Bicarbonate (HCO3)	mg/L	205	181	8344200	192	0.50	8344217
Carbonate (CO3)	mg/L	<0.50	<0.50	8344200	<0.50	0.50	8344217
Hydroxide (OH)	mg/L	<0.50	<0.50	8344200	<0.50	0.50	8344217
Anions							
Dissolved Sulphate (SO4)	mg/L	40.3	34.9	8345016	36.4	0.50	8345018
Dissolved Chloride (Cl)	mg/L	1.0	0.74	8345010	<0.50	0.50	8345017
Nutrients							
Dissolved Phosphorus (P)	mg/L	0.0297	0.0195	8343791	0.0366	0.0020	8343791
Total Ammonia (N)	mg/L	0.040	0.029	8343384	0.028	0.0050	8343384
Nitrate plus Nitrite (N)	mg/L	0.0072	0.0074	8344417	0.0166	0.0020	8344420
Nitrite (N)	mg/L	0.0031	<0.0020	8344419	<0.0020	0.0020	8344423
Total Phosphorus (P)	mg/L	0.0288	0.0185	8343799	0.0357	0.0020	8343799
Physical Properties							
Conductivity	uS/cm	375	335	8344201	344	1.0	8344218
pH	pH	8.19	8.25	8344205	8.27		8344221

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PC7450	PC7451		PC7452		
Sampling Date		2016/07/25 16:40	2016/07/25 15:30		2016/07/25 13:00		
COC Number		08425770	08425770		08425770		
	UNITS	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Physical Properties							
Total Suspended Solids	mg/L	7.1	3.8	8343061	24.2	1.0	8343061
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PC7450	PC7451	PC7452		
Sampling Date		2016/07/25 16:40	2016/07/25 15:30	2016/07/25 13:00		
COC Number		08425770	08425770	08425770		
	UNITS	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	223	192	201	0.50	8341845
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8344654
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.00713	0.00410	0.00576	0.00050	8343783
Dissolved Antimony (Sb)	mg/L	0.000216	0.000116	0.000139	0.000020	8343783
Dissolved Arsenic (As)	mg/L	0.00192	0.00114	0.000931	0.000020	8343783
Dissolved Barium (Ba)	mg/L	0.0516	0.0570	0.0648	0.000020	8343783
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8343783
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8343783
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8343783
Dissolved Cadmium (Cd)	mg/L	0.0000090	0.0000100	0.0000100	0.0000050	8343783
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8343783
Dissolved Cobalt (Co)	mg/L	0.0000630	0.0000430	0.0000450	0.0000050	8343783
Dissolved Copper (Cu)	mg/L	0.000898	0.000687	0.000977	0.000050	8343783
Dissolved Iron (Fe)	mg/L	0.185	0.0897	0.0509	0.0010	8343783
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000120	0.0000050	8343783
Dissolved Lithium (Li)	mg/L	0.00378	0.00334	0.00416	0.00050	8343783
Dissolved Manganese (Mn)	mg/L	0.0327	0.0210	0.00862	0.000050	8343783
Dissolved Molybdenum (Mo)	mg/L	0.00154	0.00111	0.00102	0.000050	8343783
Dissolved Nickel (Ni)	mg/L	0.00356	0.00179	0.00168	0.000020	8343783
Dissolved Phosphorus (P)	mg/L	0.0049	<0.0020	0.0026	0.0020	8343783
Dissolved Selenium (Se)	mg/L	0.000565	0.000470	0.000442	0.000040	8343783
Dissolved Silicon (Si)	mg/L	5.27	4.19	4.63	0.050	8343783
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8343783
Dissolved Strontium (Sr)	mg/L	0.159	0.149	0.161	0.000050	8343783
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8343783
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8343783
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8343783
Dissolved Uranium (U)	mg/L	0.00221	0.00183	0.00182	0.0000020	8343783
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8343783
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PC7450	PC7451	PC7452		
Sampling Date		2016/07/25 16:40	2016/07/25 15:30	2016/07/25 13:00		
COC Number		08425770	08425770	08425770		
	UNITS	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00145	0.00097	0.00053	0.00010	8343783
Dissolved Zirconium (Zr)	mg/L	0.00011	<0.00010	<0.00010	0.00010	8343783
Dissolved Calcium (Ca)	mg/L	54.9	52.1	53.7	0.050	8341847
Dissolved Magnesium (Mg)	mg/L	20.8	15.1	16.2	0.050	8341847
Dissolved Potassium (K)	mg/L	0.805	0.900	0.864	0.050	8341847
Dissolved Sodium (Na)	mg/L	1.34	1.18	1.32	0.050	8341847
Dissolved Sulphur (S)	mg/L	13.2	10.8	10.4	3.0	8341847
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PC7450		PC7451	PC7452		
Sampling Date		2016/07/25 16:40		2016/07/25 15:30	2016/07/25 13:00		
COC Number		08425770		08425770	08425770		
	UNITS	KZ-21	QC Batch	KZ-22	KZ-26	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	225	8341901	188	210	0.50	8341901
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	8343423	<0.0000020	<0.0000020	0.0000020	8343416
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0387	8343616	0.0195	0.0793	0.0030	8343616
Total Antimony (Sb)	mg/L	0.000222	8343616	0.000119	0.000159	0.000020	8343616
Total Arsenic (As)	mg/L	0.00430	8343616	0.00223	0.00139	0.000020	8343616
Total Barium (Ba)	mg/L	0.0575	8343616	0.0590	0.0691	0.000050	8343616
Total Beryllium (Be)	mg/L	<0.000010	8343616	<0.000010	<0.000010	0.000010	8343616
Total Bismuth (Bi)	mg/L	<0.000010	8343616	<0.000010	<0.000010	0.000010	8343616
Total Boron (B)	mg/L	0.017	8343616	0.013	0.012	0.010	8343616
Total Cadmium (Cd)	mg/L	0.0000280	8343616	0.0000230	0.0000250	0.0000050	8343616
Total Chromium (Cr)	mg/L	0.00018	8343616	0.00010	0.00022	0.00010	8343616
Total Cobalt (Co)	mg/L	0.000203	8343616	0.000101	0.000119	0.000010	8343616
Total Copper (Cu)	mg/L	0.00125	8343616	0.00096	0.00141	0.00020	8343616
Total Iron (Fe)	mg/L	0.955	8343616	0.472	0.309	0.0050	8343616
Total Lead (Pb)	mg/L	0.000051	8343616	0.000027	0.000153	0.000020	8343616
Total Lithium (Li)	mg/L	0.00386	8343616	0.00329	0.00427	0.00050	8343616
Total Manganese (Mn)	mg/L	0.122	8343616	0.0582	0.0219	0.00010	8343616
Total Molybdenum (Mo)	mg/L	0.00157	8343616	0.00111	0.00107	0.000050	8343616
Total Nickel (Ni)	mg/L	0.00412	8343616	0.00205	0.00211	0.00010	8343616
Total Phosphorus (P)	mg/L	0.0295	8343616	0.0133	0.0115	0.0050	8343616
Total Selenium (Se)	mg/L	0.000600	8343616	0.000497	0.000489	0.000040	8343616
Total Silicon (Si)	mg/L	5.08	8343616	3.95	4.63	0.050	8343616
Total Silver (Ag)	mg/L	<0.000010	8343616	<0.000010	<0.000010	0.000010	8343616
Total Strontium (Sr)	mg/L	0.158	8343616	0.147	0.162	0.000050	8343616
Total Thallium (Tl)	mg/L	<0.0000020	8343616	<0.0000020	0.0000020	0.0000020	8343616
Total Tin (Sn)	mg/L	<0.00020	8343616	<0.00020	<0.00020	0.00020	8343616
Total Titanium (Ti)	mg/L	<0.0020	8343616	<0.0020	<0.0020	0.0020	8343616
Total Uranium (U)	mg/L	0.00224	8343616	0.00181	0.00190	0.0000050	8343616
Total Vanadium (V)	mg/L	0.00022	8343616	<0.00020	0.00037	0.00020	8343616
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PC7450		PC7451	PC7452		
Sampling Date		2016/07/25 16:40		2016/07/25 15:30	2016/07/25 13:00		
COC Number		08425770		08425770	08425770		
	UNITS	KZ-21	QC Batch	KZ-22	KZ-26	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0038	8343616	0.0022	0.0017	0.0010	8343616
Total Zirconium (Zr)	mg/L	0.00019	8343616	<0.00010	0.00024	0.00010	8343616
Total Calcium (Ca)	mg/L	54.7	8341902	50.5	55.6	0.25	8341902
Total Magnesium (Mg)	mg/L	21.4	8341902	15.0	17.2	0.25	8341902
Total Potassium (K)	mg/L	0.83	8341902	0.89	0.92	0.25	8341902
Total Sodium (Na)	mg/L	1.49	8341902	1.32	1.59	0.25	8341902
Total Sulphur (S)	mg/L	13.4	8341902	10.8	10.9	3.0	8341902
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PC7450
Sample ID: KZ-21
Matrix: Water

Collected: 2016/07/25
Shipped:
Received: 2016/07/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8343742	N/A	2016/07/28	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8344200	2016/07/28	2016/07/28	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8345010	N/A	2016/07/28	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8345770	N/A	2016/07/29	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8345773	N/A	2016/07/29	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8343769	N/A	2016/07/28	Isabel Choi
Conductance - water	AT/ALK	8344201	N/A	2016/07/28	Maria Maclean
Fluoride	ISE/ISE	8345456	N/A	2016/07/28	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8341901	N/A	2016/08/03	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8341845	N/A	2016/08/03	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8344654	N/A	2016/07/29	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8343423	2016/07/28	2016/07/28	Edwin Lamigo
Ion Balance	CALC	8342811	N/A	2016/08/03	Automated Statchk
Sum of cations, anions	CALC	8342951	N/A	2016/08/03	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8341847	N/A	2016/08/03	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8343783	N/A	2016/08/03	Greg Sparrow
Elements by ICPMS Digested LL (total)	ICP/CRCM	8343616	2016/07/28	2016/08/02	Greg Sparrow
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8341902	N/A	2016/08/03	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8343384	N/A	2016/07/28	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8344417	N/A	2016/07/28	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8344419	N/A	2016/07/28	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8342621	N/A	2016/07/29	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8343607	N/A	2016/07/28	Lucy Luo
pH Water	AT/ALK	8344205	N/A	2016/07/28	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8345016	N/A	2016/07/28	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8343791	2016/07/28	2016/07/28	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8343799	N/A	2016/07/28	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8343061	2016/07/28	2016/07/29	Wendy Fong

Maxxam ID: PC7451
Sample ID: KZ-22
Matrix: Water

Collected: 2016/07/25
Shipped:
Received: 2016/07/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8343742	N/A	2016/07/28	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8344200	2016/07/28	2016/07/28	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8345010	N/A	2016/07/28	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8345770	N/A	2016/07/29	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8345773	N/A	2016/07/29	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8343769	N/A	2016/07/28	Isabel Choi
Conductance - water	AT/ALK	8344201	N/A	2016/07/28	Maria Maclean
Fluoride	ISE/ISE	8345456	N/A	2016/07/28	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8341901	N/A	2016/08/03	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8341845	N/A	2016/08/03	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PC7451
Sample ID: KZ-22
Matrix: Water

Collected: 2016/07/25
Shipped:
Received: 2016/07/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8344654	N/A	2016/07/29	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8343416	2016/07/28	2016/07/28	Edwin Lamigo
Ion Balance	CALC	8342811	N/A	2016/08/03	Automated Statchk
Sum of cations, anions	CALC	8342951	N/A	2016/08/03	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8341847	N/A	2016/08/03	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8343783	N/A	2016/08/03	Greg Sparrow
Elements by ICPMS Digested LL (total)	ICP/CRCM	8343616	2016/07/28	2016/08/02	Greg Sparrow
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8341902	N/A	2016/08/03	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8343384	N/A	2016/07/28	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8344417	N/A	2016/07/28	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8344419	N/A	2016/07/28	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8342621	N/A	2016/07/29	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8343607	N/A	2016/07/28	Lucy Luo
pH Water	AT/ALK	8344205	N/A	2016/07/28	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8345016	N/A	2016/07/28	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8343791	2016/07/28	2016/07/28	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8343799	N/A	2016/07/28	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8343061	2016/07/28	2016/07/29	Wendy Fong

Maxxam ID: PC7451 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2016/07/25
Shipped:
Received: 2016/07/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8344417	N/A	2016/07/28	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8344419	N/A	2016/07/28	Isaac Wang
Total Phosphorus - unpreserved	KONE/COL	8343799	N/A	2016/07/28	Diana Cruz

Maxxam ID: PC7452
Sample ID: KZ-26
Matrix: Water

Collected: 2016/07/25
Shipped:
Received: 2016/07/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8343742	N/A	2016/07/28	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8344217	2016/07/28	2016/07/29	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8345017	N/A	2016/07/28	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8345770	N/A	2016/07/29	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8345773	N/A	2016/07/29	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8343769	N/A	2016/07/28	Isabel Choi
Conductance - water	AT/ALK	8344218	N/A	2016/07/29	Maria Maclean
Fluoride	ISE/ISE	8345926	N/A	2016/07/28	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8341901	N/A	2016/08/03	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8341845	N/A	2016/08/03	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8344654	N/A	2016/07/29	Edwin Lamigo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PC7452
Sample ID: KZ-26
Matrix: Water

Collected: 2016/07/25
Shipped:
Received: 2016/07/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8343416	2016/07/28	2016/07/28	Edwin Lamigo
Ion Balance	CALC	8342811	N/A	2016/08/03	Automated Statchk
Sum of cations, anions	CALC	8342951	N/A	2016/08/03	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8341847	N/A	2016/08/03	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8343783	N/A	2016/08/03	Greg Sparrow
Elements by ICPMS Digested LL (total)	ICP/CRCM	8343616	2016/07/28	2016/08/02	Greg Sparrow
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8341902	N/A	2016/08/03	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8343384	N/A	2016/07/28	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8344420	N/A	2016/07/28	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8344423	N/A	2016/07/28	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8342621	N/A	2016/07/29	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8343607	N/A	2016/07/28	Lucy Luo
pH Water	AT/ALK	8344221	N/A	2016/07/29	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8345018	N/A	2016/07/28	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8343791	2016/07/28	2016/07/28	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8343799	N/A	2016/07/28	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8343061	2016/07/28	2016/07/29	Wendy Fong

Maxxam ID: PC7452 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2016/07/25
Shipped:
Received: 2016/07/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8345770	N/A	2016/07/29	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8345773	N/A	2016/07/29	Wilson Au Yueng

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.7°C

Sample PC7450-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PC7451-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PC7452-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8343061	Total Suspended Solids	2016/07/29			104	80 - 120	<1.0	mg/L		
8343384	Total Ammonia (N)	2016/07/28	106	80 - 120	97	80 - 120	<0.0050	mg/L	NC	20
8343416	Total Mercury (Hg)	2016/07/28	98	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8343423	Total Mercury (Hg)	2016/07/28	101	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8343616	Total Aluminum (Al)	2016/08/02	NC	80 - 120	123 (1)	80 - 120	<0.0030	mg/L		
8343616	Total Antimony (Sb)	2016/08/02	107	80 - 120	106	80 - 120	<0.000020	mg/L		
8343616	Total Arsenic (As)	2016/08/02	110	80 - 120	105	80 - 120	<0.000020	mg/L		
8343616	Total Barium (Ba)	2016/08/02	NC	80 - 120	112	80 - 120	<0.000050	mg/L		
8343616	Total Beryllium (Be)	2016/08/02	117	80 - 120	116	80 - 120	<0.000010	mg/L		
8343616	Total Bismuth (Bi)	2016/08/02	100	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8343616	Total Boron (B)	2016/08/02	NC	80 - 120	112	80 - 120	<0.010	mg/L		
8343616	Total Cadmium (Cd)	2016/08/02	103	80 - 120	103	80 - 120	<0.0000050	mg/L		
8343616	Total Chromium (Cr)	2016/08/02	100	80 - 120	100	80 - 120	<0.00010	mg/L		
8343616	Total Cobalt (Co)	2016/08/02	101	80 - 120	102	80 - 120	<0.000010	mg/L		
8343616	Total Copper (Cu)	2016/08/02	97	80 - 120	105	80 - 120	0.00029, RDL=0.00020 (2)	mg/L		
8343616	Total Iron (Fe)	2016/08/02	NC	80 - 120	107	80 - 120	<0.0050	mg/L		
8343616	Total Lead (Pb)	2016/08/02	102	80 - 120	103	80 - 120	<0.000020	mg/L		
8343616	Total Lithium (Li)	2016/08/02	NC	80 - 120	117	80 - 120	<0.00050	mg/L		
8343616	Total Manganese (Mn)	2016/08/02	NC	80 - 120	106	80 - 120	<0.00010	mg/L		
8343616	Total Molybdenum (Mo)	2016/08/02	NC	80 - 120	101	80 - 120	<0.000050	mg/L		
8343616	Total Nickel (Ni)	2016/08/02	100	80 - 120	105	80 - 120	<0.00010	mg/L		
8343616	Total Phosphorus (P)	2016/08/02					<0.0050	mg/L		
8343616	Total Selenium (Se)	2016/08/02	110	80 - 120	109	80 - 120	<0.000040	mg/L		
8343616	Total Silicon (Si)	2016/08/02					<0.050	mg/L		
8343616	Total Silver (Ag)	2016/08/02	109	80 - 120	105	80 - 120	<0.000010	mg/L		
8343616	Total Strontium (Sr)	2016/08/02	NC	80 - 120	102	80 - 120	<0.000050	mg/L		
8343616	Total Thallium (Tl)	2016/08/02	106	80 - 120	103	80 - 120	<0.0000020	mg/L		
8343616	Total Tin (Sn)	2016/08/02	82	80 - 120	100	80 - 120	<0.00020	mg/L		
8343616	Total Titanium (Ti)	2016/08/02	119	80 - 120	100	80 - 120	<0.0020	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8343616	Total Uranium (U)	2016/08/02	114	80 - 120	110	80 - 120	<0.0000050	mg/L		
8343616	Total Vanadium (V)	2016/08/02	NC	80 - 120	106	80 - 120	<0.00020	mg/L		
8343616	Total Zinc (Zn)	2016/08/02	NC	80 - 120	105	80 - 120	<0.0010	mg/L		
8343616	Total Zirconium (Zr)	2016/08/02					<0.00010	mg/L		
8343742	Acidity (pH 4.5)	2016/07/28					<0.50	mg/L	NC	20
8343742	Acidity (pH 8.3)	2016/07/28			99	80 - 120	<0.50	mg/L	NC	20
8343769	Dissolved Organic Carbon (C)	2016/07/28	108	80 - 120	114	80 - 120	<0.50	mg/L	1.4	20
8343783	Dissolved Aluminum (Al)	2016/08/03	109	80 - 120	118	80 - 120	<0.00050	mg/L	NC	20
8343783	Dissolved Antimony (Sb)	2016/08/03	101	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8343783	Dissolved Arsenic (As)	2016/08/03	102	80 - 120	101	80 - 120	<0.000020	mg/L	0.66	20
8343783	Dissolved Barium (Ba)	2016/08/03	NC	80 - 120	108	80 - 120	<0.000020	mg/L	0.033	20
8343783	Dissolved Beryllium (Be)	2016/08/03	104	80 - 120	118	80 - 120	<0.000010	mg/L	NC	20
8343783	Dissolved Bismuth (Bi)	2016/08/03	98	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8343783	Dissolved Boron (B)	2016/08/03	101	80 - 120	122 (1)	80 - 120	<0.010	mg/L	NC	20
8343783	Dissolved Cadmium (Cd)	2016/08/03	98	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8343783	Dissolved Chromium (Cr)	2016/08/03	99	80 - 120	99	80 - 120	0.00015, RDL=0.00010	mg/L	NC	20
8343783	Dissolved Cobalt (Co)	2016/08/03	93	80 - 120	101	80 - 120	<0.0000050	mg/L	2.7	20
8343783	Dissolved Copper (Cu)	2016/08/03	91	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8343783	Dissolved Iron (Fe)	2016/08/03	109	80 - 120	111	80 - 120	0.0012, RDL=0.0010	mg/L	NC	20
8343783	Dissolved Lead (Pb)	2016/08/03	100	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8343783	Dissolved Lithium (Li)	2016/08/03	NC	80 - 120	121 (1)	80 - 120	<0.00050	mg/L	0.87	20
8343783	Dissolved Manganese (Mn)	2016/08/03	NC	80 - 120	105	80 - 120	<0.000050	mg/L	0.36	20
8343783	Dissolved Molybdenum (Mo)	2016/08/03	NC	80 - 120	103	80 - 120	<0.000050	mg/L		
8343783	Dissolved Nickel (Ni)	2016/08/03	95	80 - 120	105	80 - 120	<0.000020	mg/L	0	20
8343783	Dissolved Phosphorus (P)	2016/08/03					0.0035, RDL=0.0020	mg/L	NC	20
8343783	Dissolved Selenium (Se)	2016/08/03	104	80 - 120	104	80 - 120	<0.000040	mg/L	NC	20
8343783	Dissolved Silicon (Si)	2016/08/03					<0.050	mg/L	2.5	20
8343783	Dissolved Silver (Ag)	2016/08/03	100	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8343783	Dissolved Strontium (Sr)	2016/08/03	NC	80 - 120	98	80 - 120	<0.000050	mg/L	2.0	20
8343783	Dissolved Thallium (Tl)	2016/08/03	101	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8343783	Dissolved Tin (Sn)	2016/08/03	100	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
8343783	Dissolved Titanium (Ti)	2016/08/03	98	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8343783	Dissolved Uranium (U)	2016/08/03	103	80 - 120	111	80 - 120	<0.0000020	mg/L	0.27	20
8343783	Dissolved Vanadium (V)	2016/08/03	99	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
8343783	Dissolved Zinc (Zn)	2016/08/03	99	80 - 120	101	80 - 120	<0.00010	mg/L	3.5	20
8343783	Dissolved Zirconium (Zr)	2016/08/03					<0.00010	mg/L	NC	20
8343791	Dissolved Phosphorus (P)	2016/07/28	101	80 - 120	111	80 - 120	<0.0020	mg/L	6.3	20
8343799	Total Phosphorus (P)	2016/07/28			111	80 - 120	0.0022, RDL=0.0020	mg/L	0.76	20
8344200	Alkalinity (PP as CaCO3)	2016/07/28					<0.50	mg/L	24 (3)	20
8344200	Alkalinity (Total as CaCO3)	2016/07/28	NC	80 - 120	101	80 - 120	0.69, RDL=0.50	mg/L	5.4	20
8344200	Bicarbonate (HCO3)	2016/07/28					0.84, RDL=0.50	mg/L	7.1	20
8344200	Carbonate (CO3)	2016/07/28					<0.50	mg/L	24 (3)	20
8344200	Hydroxide (OH)	2016/07/28					<0.50	mg/L	NC	20
8344201	Conductivity	2016/07/28			101	80 - 120	<1.0	uS/cm	0.20	20
8344205	pH	2016/07/28			101	97 - 103			1.7	N/A
8344217	Alkalinity (PP as CaCO3)	2016/07/29					<0.50	mg/L	NC	20
8344217	Alkalinity (Total as CaCO3)	2016/07/29	NC	80 - 120	96	80 - 120	<0.50	mg/L	NC	20
8344217	Bicarbonate (HCO3)	2016/07/29					<0.50	mg/L		
8344217	Carbonate (CO3)	2016/07/29					<0.50	mg/L		
8344217	Hydroxide (OH)	2016/07/29					<0.50	mg/L		
8344218	Conductivity	2016/07/29			101	80 - 120	<1.0	uS/cm		
8344221	pH	2016/07/29			101	97 - 103			6.3	N/A
8344417	Nitrate plus Nitrite (N)	2016/07/28	105	80 - 120	106	80 - 120	<0.0020	mg/L	NC	25
8344419	Nitrite (N)	2016/07/28	97	80 - 120	93	80 - 120	<0.0020	mg/L	NC	25
8344420	Nitrate plus Nitrite (N)	2016/07/28	108	80 - 120	103	80 - 120	<0.0020	mg/L	4.2	25
8344423	Nitrite (N)	2016/07/28	99	80 - 120	95	80 - 120	<0.0020	mg/L	NC	25
8344654	Dissolved Mercury (Hg)	2016/07/29	91	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8345010	Dissolved Chloride (Cl)	2016/07/28	96	80 - 120	101	80 - 120	<0.50	mg/L	NC	20

Maxxam Job #: B661912
Report Date: 2016/08/04

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8345016	Dissolved Sulphate (SO4)	2016/07/28	NC	80 - 120	107	80 - 120	<0.50	mg/L	1.2	20
8345017	Dissolved Chloride (Cl)	2016/07/28	97	80 - 120	102	80 - 120	<0.50	mg/L	NC	20
8345018	Dissolved Sulphate (SO4)	2016/07/28	100	80 - 120	105	80 - 120	<0.50	mg/L	NC	20
8345456	Fluoride (F)	2016/07/28	101	80 - 120	98	80 - 120	0.010, RDL=0.010	mg/L	0	20
8345770	Strong Acid Dissoc. Cyanide (CN)	2016/07/29	100	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8345773	Weak Acid Dissoc. Cyanide (CN)	2016/07/29	99	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8345926	Fluoride (F)	2016/07/28	102	80 - 120	102	80 - 120	<0.010	mg/L	0	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Blank Spike outside acceptance criteria (10% of analytes failure allowed)

(2) RDL raised due to background artifacts detected in analysis

(3) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

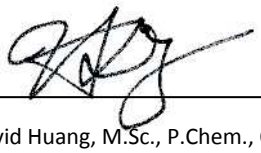
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC # 08425770

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	~~Andrew Mackenzie~~ C. Henry	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-21		2016/07/25	16:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
2	KZ-22		2016/07/25	15:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-26		2016/07/25	13.00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	~~KZ-28~~				Water	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~11~~	
5	~~Trip Blank~~				Water	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~11~~	
6																			
7																			
8																			
9																			
10																			

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
[x]		3.4
		1.1

COOLING MEDIA PRESENT (Y) / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Laurel@16:00
2016 07 26
TEMP: 8 / 6 / 6

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
C. Henry / Catherine Henry	2016/07/26	8:00	Laurel Heather	2016/07/27	14:40

B661912_COC

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08425837, 08425838, 08425833

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/08/08
Report #: R2231772
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B662843
Received: 2016/07/28, 10:15

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	4	N/A	2016/08/01	BBY6SOP-00037	SM 22 2310 B m
Acidity pH 4.5 & pH 8.3 (as CaCO3)	11	N/A	2016/08/02	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	4	2016/07/29	2016/07/30	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	3	2016/07/30	2016/07/30	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	8	2016/07/30	2016/07/31	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	11	N/A	2016/08/02	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	11	N/A	2016/08/02	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	11	N/A	2016/08/02	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	10	N/A	2016/08/02	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2016/08/02	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	7	N/A	2016/07/30	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	8	N/A	2016/07/31	BBY6SOP-00026	SM 22 2510 B m
Fluoride	11	N/A	2016/08/02	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	6	N/A	2016/08/05	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	5	N/A	2016/08/06	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	15	N/A	2016/08/04	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	15	N/A	2016/08/03	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	11	2016/08/03	2016/08/03	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	11	N/A	2016/08/04	BBY WI-00033	SM 22 1030E
Sum of cations, anions	11	N/A	2016/08/04	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	15	N/A	2016/08/04	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	15	N/A	2016/08/04	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	6	2016/08/03	2016/08/05	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	6	N/A	2016/08/05	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	5	N/A	2016/08/06	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	2	N/A	2016/08/05	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	3	N/A	2016/08/06	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Unpreserved)	1	N/A	2016/08/02	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	9	N/A	2016/08/02	BBY6SOP-00009	SM 22 4500-NH3- G m

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08425837, 08425838, 08425833

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/08/08
Report #: R2231772
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B662843
Received: 2016/07/28, 10:15

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Ammonia-N (Preserved)	1	N/A	2016/08/08	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	11	N/A	2016/07/30	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	11	N/A	2016/07/30	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	11	N/A	2016/08/03	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	4	N/A	2016/07/29	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	10	N/A	2016/08/02	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	7	N/A	2016/07/30	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	8	N/A	2016/07/31	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	11	N/A	2016/08/02	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	11	2016/08/02	2016/08/02	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	10	N/A	2016/08/02	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	1	N/A	2016/08/03	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	11	2016/08/02	2016/08/03	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Megan Smith, Project Manager
Email: msmith@maxxam.ca
Phone# (604) 734 7276

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PD1443	PD1444	PD1445	PD1446		PD2289		
Sampling Date		2016/07/27 09:00	2016/07/27 08:50	2016/07/27 10:35	2016/07/27 09:30		2016/07/26 08:30		
COC Number		08425838	08425838	08425838	08425838		08425837		
	UNITS	KZ-9_E-SEEP	KZ-9_W-SEEP	SEEP-3	SEEP-5	QC Batch	KZ-2	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L					8345465	1.7	N/A	8345465
Cation Sum	meq/L					8345465	1.7	N/A	8345465
Filter and HNO3 Preservation	N/A	LAB	LAB	LAB	LAB	8345300	LAB	N/A	8348252
Ion Balance	N/A						1.0	0.010	8345464
Nitrate (N)	mg/L						0.0743	0.0020	8344863
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L						<0.00050	0.00050	8348144
Weak Acid Dissoc. Cyanide (CN)	mg/L						0.00064	0.00050	8348171
Fluoride (F)	mg/L						0.035	0.010	8348716
Dissolved Organic Carbon (C)	mg/L						1.87	0.50	8348801
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50	8346037	<0.50	0.50	8350392
Alkalinity (Total as CaCO3)	mg/L	798	204	149	70.7	8345820	48.0	0.50	8346401
Acidity (pH 8.3)	mg/L	296	1.70	2.55	3.44	8346037	<0.50	0.50	8350392
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	<0.50	8345820	<0.50	0.50	8346401
Bicarbonate (HCO3)	mg/L	974	248	182	86.3	8345820	58.5	0.50	8346401
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	<0.50	8345820	<0.50	0.50	8346401
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	<0.50	8345820	<0.50	0.50	8346401
Anions									
Dissolved Sulphate (SO4)	mg/L						37.3	0.50	8348772
Dissolved Chloride (Cl)	mg/L						<0.50	0.50	8348761
Nutrients									
Dissolved Phosphorus (P)	mg/L						<0.0020 (1)	0.0020	8348728
Total Ammonia (N)	mg/L						0.020	0.0050	8348574
Nitrate plus Nitrite (N)	mg/L						0.0743 (2)	0.0020	8349465
Nitrite (N)	mg/L						<0.0020 (2)	0.0020	8349466
Total Phosphorus (P)	mg/L						0.0022 (1)	0.0020	8348720
Physical Properties									
Conductivity	uS/cm	1530	468	355	222	8345821	178	1.0	8346404
pH	pH	6.52	8.24	8.25	7.68	8345822	7.92		8346405

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.
(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PD1443	PD1444	PD1445	PD1446		PD2289		
Sampling Date		2016/07/27 09:00	2016/07/27 08:50	2016/07/27 10:35	2016/07/27 09:30		2016/07/26 08:30		
COC Number		08425838	08425838	08425838	08425838		08425837		
	UNITS	KZ-9_E-SEEP	KZ-9_W-SEEP	SEEP-3	SEEP-5	QC Batch	KZ-2	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L						<1.0	1.0	8345978
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PD2290	PD2291		PD2292		PD2293		
Sampling Date		2016/07/27 14:35	2016/07/27 12:00		2016/07/27 08:10		2016/07/26 13:25		
COC Number		08425837	08425837		08425837		08425837		
	UNITS	KZ-6	KZ-7	QC Batch	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	3.2	2.7	8345465	3.0	8345465	1.5	N/A	8345465
Cation Sum	meq/L	3.2	2.6	8345465	3.0	8345465	1.5	N/A	8345465
Filter and HNO3 Preservation	N/A	LAB	LAB	8348252	LAB	8348252	LAB	N/A	8348252
Ion Balance	N/A	1.0	0.99	8345464	1.0	8345464	1.0	0.010	8345464
Nitrate (N)	mg/L	0.0119	0.0105	8344863	0.0274	8344863	0.0287	0.0020	8344863
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00051	8348144	<0.00050	8348144	<0.00050	0.00050	8348144
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00065	8348171	0.00057	8348171	0.00055	0.00050	8348171
Fluoride (F)	mg/L	0.060	0.050	8348716	0.050	8348751	0.043	0.010	8348751
Dissolved Organic Carbon (C)	mg/L	2.20	2.54	8348802	2.62	8348802	3.90	0.50	8348802
Acidity (pH 4.5)	mg/L	<0.50	<0.50	8350392	<0.50	8350392	<0.50	0.50	8348731
Alkalinity (Total as CaCO3)	mg/L	139	93.4	8346406	114	8346406	60.3	0.50	8346406
Acidity (pH 8.3)	mg/L	<0.50	<0.50	8350392	<0.50	8350392	<0.50	0.50	8348731
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	8346406	<0.50	8346406	<0.50	0.50	8346406
Bicarbonate (HCO3)	mg/L	170	114	8346406	139	8346406	73.6	0.50	8346406
Carbonate (CO3)	mg/L	<0.50	<0.50	8346406	<0.50	8346406	<0.50	0.50	8346406
Hydroxide (OH)	mg/L	<0.50	<0.50	8346406	<0.50	8346406	<0.50	0.50	8346406
Anions									
Dissolved Sulphate (SO4)	mg/L	20.0	36.8	8348772	33.3	8348772	12.8	0.50	8348772
Dissolved Chloride (Cl)	mg/L	0.51	0.53	8348761	0.54	8348761	<0.50	0.50	8348761
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0027 (1)	0.0030 (1)	8348728	0.0031 (1)	8348728	0.0049 (1)	0.0020	8348728
Total Ammonia (N)	mg/L	0.022	0.018	8348574	0.035	8348574	0.024	0.0050	8348574
Nitrate plus Nitrite (N)	mg/L	0.0119	0.0105	8349465	0.0274	8349465	0.0287 (2)	0.0020	8349465
Nitrite (N)	mg/L	<0.0020	<0.0020	8349466	<0.0020	8349466	<0.0020 (2)	0.0020	8349466
Total Phosphorus (P)	mg/L	0.0029 (1)	0.0053 (1)	8348720	0.0040 (1)	8348720	0.0053 (1)	0.0020	8348720
Physical Properties									
Conductivity	uS/cm	294	250	8346408	283	8346408	148	1.0	8346408
pH	pH	8.27	8.16	8346409	8.22	8346409	7.98		8346409

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.
(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PD2290	PD2291		PD2292		PD2293		
Sampling Date		2016/07/27 14:35	2016/07/27 12:00		2016/07/27 08:10		2016/07/26 13:25		
COC Number		08425837	08425837		08425837		08425837		
	UNITS	**KZ-6**	**KZ-7**	**QC Batch**	**KZ-9**	**QC Batch**	**KZ-13**	**RDL**	**QC Batch**
Physical Properties									
Total Suspended Solids	mg/L	<1.0	<1.0	8345978	1.1	8345978	1.4	1.0	8345978
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PD2294		PD2295		PD2296		
Sampling Date		2016/07/26 09:45		2016/07/26 10:35		2016/07/26 11:25		
COC Number		08425837		08425837		08425837		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.7	8345465	2.3	8345465	3.6	N/A	8345465
Cation Sum	meq/L	2.8	8345465	2.4	8345465	3.6	N/A	8345465
Filter and HNO3 Preservation	N/A	LAB	8348252	LAB	8348252	LAB	N/A	8348252
Ion Balance	N/A	1.0	8345464	1.0	8345464	0.99	0.010	8345464
Nitrate (N)	mg/L	0.0119	8344863	0.0087	8344863	0.0227	0.0020	8344863
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8348144	<0.00050	8348144	<0.00050	0.00050	8348144
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00069	8348171	0.00077	8348171	0.00054	0.00050	8348171
Fluoride (F)	mg/L	0.066	8348751	0.053	8348716	0.098	0.010	8348716
Dissolved Organic Carbon (C)	mg/L	2.54	8348802	2.34	8348802	2.60	0.50	8348801
Acidity (pH 4.5)	mg/L	<0.50	8348731	<0.50	8350392	<0.50	0.50	8348731
Alkalinity (Total as CaCO3)	mg/L	111	8346406	96.0	8346401	146	0.50	8346401
Acidity (pH 8.3)	mg/L	<0.50	8348731	<0.50	8350392	<0.50	0.50	8348731
Alkalinity (PP as CaCO3)	mg/L	<0.50	8346406	<0.50	8346401	<0.50	0.50	8346401
Bicarbonate (HCO3)	mg/L	136	8346406	117	8346401	178	0.50	8346401
Carbonate (CO3)	mg/L	<0.50	8346406	<0.50	8346401	<0.50	0.50	8346401
Hydroxide (OH)	mg/L	<0.50	8346406	<0.50	8346401	<0.50	0.50	8346401
Anions								
Dissolved Sulphate (SO4)	mg/L	23.2	8348772	19.9	8348772	32.3	0.50	8348772
Dissolved Chloride (Cl)	mg/L	<0.50	8348761	<0.50	8348761	<0.50	0.50	8348761
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0024 (1)	8348732	<0.0020 (1)	8348728	0.0040 (1)	0.0020	8348728
Total Ammonia (N)	mg/L	0.030	8348574	0.029	8348574	0.014	0.0050	8348574
Nitrate plus Nitrite (N)	mg/L	0.0119 (2)	8349465	0.0087 (2)	8349465	0.0227 (2)	0.0020	8349465
Nitrite (N)	mg/L	<0.0020 (2)	8349466	<0.0020 (2)	8349466	<0.0020 (2)	0.0020	8349466
Total Phosphorus (P)	mg/L	0.0031 (1)	8348720	<0.0020 (2)	8350000	0.0046 (1)	0.0020	8348720
Physical Properties								
Conductivity	uS/cm	254	8346408	221	8346404	326	1.0	8346404
pH	pH	8.20	8346409	8.17	8346405	8.27		8346405

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.
(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PD2294		PD2295		PD2296		
Sampling Date		2016/07/26 09:45		2016/07/26 10:35		2016/07/26 11:25		
COC Number		08425837		08425837		08425837		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8345978	<1.0	8345978	<1.0	1.0	8345978
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PD2297		PD2298		PD2299		
Sampling Date						2016/07/28 10:15		
COC Number		08425837		08425833		08425833		
	UNITS	KZ-19	QC Batch	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	1.5	8345465	0.014	8345465	0.00010	N/A	8345465
Cation Sum	meq/L	1.5	8345465	0.0050	8345465	0.0018	N/A	8345465
Filter and HNO3 Preservation	N/A	LAB	8348252	LAB	8348252		N/A	8348252
Ion Balance	N/A	1.0	8345464	0.37 (1)	8345464	NC	0.010	8345464
Nitrate (N)	mg/L	0.0263	8344863	<0.0020	8344863	0.0021	0.0020	8344863
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00064	8348144	<0.00050	8348144	<0.00050	0.00050	8348144
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00079	8348171	<0.00050	8348171	<0.00050	0.00050	8348171
Fluoride (F)	mg/L	0.048	8348751	<0.010	8348751	<0.010	0.010	8348751
Dissolved Organic Carbon (C)	mg/L	3.81	8348801	0.67	8348801	<0.50 (2)	0.50	8346758
Acidity (pH 4.5)	mg/L	<0.50	8348731	<0.50	8348731	<0.50	0.50	8348731
Alkalinity (Total as CaCO3)	mg/L	61.6	8346406	0.68	8346406	<0.50	0.50	8346406
Acidity (pH 8.3)	mg/L	<0.50	8348731	<0.50	8348731	<0.50	0.50	8348731
Alkalinity (PP as CaCO3)	mg/L	<0.50	8346406	<0.50	8346406	<0.50	0.50	8346406
Bicarbonate (HCO3)	mg/L	75.1	8346406	0.83	8346406	<0.50	0.50	8346406
Carbonate (CO3)	mg/L	<0.50	8346406	<0.50	8346406	<0.50	0.50	8346406
Hydroxide (OH)	mg/L	<0.50	8346406	<0.50	8346406	<0.50	0.50	8346406
Anions								
Dissolved Sulphate (SO4)	mg/L	13.4	8348772	<0.50	8348772	<0.50	0.50	8348772
Dissolved Chloride (Cl)	mg/L	<0.50	8348761	<0.50	8348761	<0.50	0.50	8348761
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0045	8348728	<0.0020	8348728	<0.0020 (2)	0.0020	8348728
Total Ammonia (N)	mg/L	0.024	8348574	0.0060	8355226	<0.0050 (2)	0.0050	8346036
Nitrate plus Nitrite (N)	mg/L	0.0263	8349465	<0.0020	8349465	0.0021	0.0020	8349465
Nitrite (N)	mg/L	<0.0020	8349466	<0.0020	8349466	<0.0020	0.0020	8349466
Total Phosphorus (P)	mg/L	0.0049	8348720	<0.0020	8348720	<0.0020 (2)	0.0020	8348720
Physical Properties								
Conductivity	uS/cm	149	8346408	1.2	8346408	1.0	1.0	8346408

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).
(2) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PD2297		PD2298		PD2299		
Sampling Date						2016/07/28 10:15		
COC Number		08425837		08425833		08425833		
	UNITS	**KZ-19**	**QC Batch**	**KZ-28**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**
pH	pH	8.06	8346409	5.34	8346409	5.75		8346409
Physical Properties								
Total Suspended Solids	mg/L	1.8	8345978	<1.0	8345978	<1.0	1.0	8345978
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PD1443	PD1444	PD1445	PD1446	PD2289		
Sampling Date		2016/07/27 09:00	2016/07/27 08:50	2016/07/27 10:35	2016/07/27 09:30	2016/07/26 08:30		
COC Number		08425838	08425838	08425838	08425838	08425837		
	UNITS	KZ-9_E-SEEP	KZ-9_W-SEEP	SEEP-3	SEEP-5	KZ-2	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	921	259	193	72.6	84.4	0.50	8344822
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8349728
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0489	0.00121	0.00422	0.0147	0.00429	0.00050	8350070
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000021	<0.000020	0.000073	0.000026	0.000020	8350070
Dissolved Arsenic (As)	mg/L	0.000605	0.000085	0.000096	0.000676	0.000071	0.000020	8350070
Dissolved Barium (Ba)	mg/L	0.143	0.168	0.129	0.0674	0.0454	0.000020	8350070
Dissolved Beryllium (Be)	mg/L	0.000247	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8350070
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8350070
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8350070
Dissolved Cadmium (Cd)	mg/L	0.0000700	0.0000400	0.0000070	0.000185	0.000274	0.0000050	8350070
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00016	<0.00010	0.00017	<0.00010	0.00010	8350070
Dissolved Cobalt (Co)	mg/L	0.00225	<0.0000050	0.0000070	0.0000340	0.0000080	0.0000050	8350070
Dissolved Copper (Cu)	mg/L	0.000066	0.000084	0.000167	0.00239	0.000748	0.000050	8350070
Dissolved Iron (Fe)	mg/L	1.85	<0.0010	0.0011	0.681	0.0012	0.0010	8350070
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000250	0.0000090	0.0000050	8350070
Dissolved Lithium (Li)	mg/L	0.0779	0.00181	0.00063	0.00260	0.00076	0.00050	8350070
Dissolved Manganese (Mn)	mg/L	2.04	0.000083	<0.000050	0.0155	0.000133	0.000050	8350070
Dissolved Molybdenum (Mo)	mg/L	0.000442	0.00148	0.000602	0.000536	0.000583	0.000050	8350070
Dissolved Nickel (Ni)	mg/L	0.00712	0.000111	0.000095	0.00334	0.000363	0.000020	8350070
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020	<0.0020	0.0043	<0.0020	0.0020	8350070
Dissolved Selenium (Se)	mg/L	<0.000040	0.00237	0.000732	0.000183	0.000522	0.000040	8350070
Dissolved Silicon (Si)	mg/L	19.7	3.85	3.18	6.41	2.27	0.050	8350070
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8350070
Dissolved Strontium (Sr)	mg/L	1.22	0.247	0.226	0.0834	0.0812	0.000050	8350070
Dissolved Thallium (Tl)	mg/L	0.0000020	<0.0000020	<0.0000020	0.0000050	0.0000040	0.0000020	8350070
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8350070
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8350070
Dissolved Uranium (U)	mg/L	0.00179	0.00285	0.00112	0.0000690	0.00130	0.0000020	8350070
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8350070

RDL = Reportable Detection Limit

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PD1443	PD1444	PD1445	PD1446	PD2289		
Sampling Date		2016/07/27 09:00	2016/07/27 08:50	2016/07/27 10:35	2016/07/27 09:30	2016/07/26 08:30		
COC Number		08425838	08425838	08425838	08425838	08425837		
	UNITS	KZ-9_E-SEEP	KZ-9_W-SEEP	SEEP-3	SEEP-5	KZ-2	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0263	<0.00010	<0.00010	0.0233	0.0385	0.00010	8350070
Dissolved Zirconium (Zr)	mg/L	0.00018	<0.00010	<0.00010	0.00026	<0.00010	0.00010	8350070
Dissolved Calcium (Ca)	mg/L	315	88.0	73.1	23.1	29.7	0.050	8344823
Dissolved Magnesium (Mg)	mg/L	32.5	9.47	2.52	3.64	2.49	0.050	8344823
Dissolved Potassium (K)	mg/L	4.65	0.922	1.19	0.710	1.18	0.050	8344823
Dissolved Sodium (Na)	mg/L	8.48	1.04	0.875	18.4	0.539	0.050	8344823
Dissolved Sulphur (S)	mg/L	7.6	14.8	10.9	3.2	12.5	3.0	8344823

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PD2290	PD2291	PD2292	PD2293	PD2294		
Sampling Date		2016/07/27 14:35	2016/07/27 12:00	2016/07/27 08:10	2016/07/26 13:25	2016/07/26 09:45		
COC Number		08425837	08425837	08425837	08425837	08425837		
	UNITS	KZ-6	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	159	127	147	72.6	135	0.50	8344822
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8349728
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00288	0.00263	0.00169	0.00754	0.00172	0.00050	8350070
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000081	0.000064	0.000032	0.000030	0.000020	8350070
Dissolved Arsenic (As)	mg/L	0.000075	0.000249	0.000197	0.000226	0.000288	0.000020	8350070
Dissolved Barium (Ba)	mg/L	0.0436	0.0621	0.0732	0.0982	0.0523	0.000020	8350070
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8350070
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8350070
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8350070
Dissolved Cadmium (Cd)	mg/L	0.0000100	0.000122	0.0000460	0.0000080	0.0000140	0.0000050	8350070
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8350070
Dissolved Cobalt (Co)	mg/L	0.0000060	<0.0000050	0.0000160	0.0000110	0.0000100	0.0000050	8350070
Dissolved Copper (Cu)	mg/L	0.000205	0.000699	0.000499	0.000472	0.000424	0.000050	8350070
Dissolved Iron (Fe)	mg/L	0.0080	0.0605	0.0710	0.0171	0.0077	0.0010	8350070
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000240	0.0000060	<0.0000050	<0.0000050	0.0000050	8350070
Dissolved Lithium (Li)	mg/L	0.00070	0.00131	0.00196	0.00133	0.00165	0.00050	8350070
Dissolved Manganese (Mn)	mg/L	<0.000050	0.00147	0.0266	0.000187	0.00559	0.000050	8350070
Dissolved Molybdenum (Mo)	mg/L	0.000419	0.000496	0.000521	0.000549	0.000702	0.000050	8350070
Dissolved Nickel (Ni)	mg/L	0.000193	0.000368	0.000299	0.000358	0.000358	0.000020	8350070
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8350070
Dissolved Selenium (Se)	mg/L	0.000511	0.000687	0.000622	0.000120	0.000359	0.000040	8350070
Dissolved Silicon (Si)	mg/L	2.90	2.83	3.04	2.52	2.87	0.050	8350070
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8350070
Dissolved Strontium (Sr)	mg/L	0.146	0.122	0.150	0.0684	0.127	0.000050	8350070
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000020	0.0000020	0.0000020	<0.0000020	0.0000020	8350070
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8350070
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8350070
Dissolved Uranium (U)	mg/L	0.000774	0.000718	0.000760	0.000593	0.00114	0.0000020	8350070
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8350070

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PD2290	PD2291	PD2292	PD2293	PD2294		
Sampling Date		2016/07/27 14:35	2016/07/27 12:00	2016/07/27 08:10	2016/07/26 13:25	2016/07/26 09:45		
COC Number		08425837	08425837	08425837	08425837	08425837		
	UNITS	KZ-6	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	<0.00010	0.0241	0.00624	0.00096	<0.00010	0.00010	8350070
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8350070
Dissolved Calcium (Ca)	mg/L	53.3	42.4	49.5	24.8	43.1	0.050	8344823
Dissolved Magnesium (Mg)	mg/L	6.16	5.17	5.72	2.60	6.73	0.050	8344823
Dissolved Potassium (K)	mg/L	0.587	1.16	1.19	1.29	0.957	0.050	8344823
Dissolved Sodium (Na)	mg/L	0.686	0.797	0.918	0.917	0.840	0.050	8344823
Dissolved Sulphur (S)	mg/L	6.4	12.1	11.4	4.3	7.9	3.0	8344823

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PD2295		PD2296	PD2297	PD2298		
Sampling Date		2016/07/26 10:35		2016/07/26 11:25				
COC Number		08425837		08425837	08425837	08425833		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-19	KZ-28	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	118	8344822	175	72.2	<0.50	0.50	8344822
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8349728	<0.0000020	<0.0000020	<0.0000020	0.0000020	8349766
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00189	8350070	0.00156	0.00777	<0.00050	0.00050	8350070
Dissolved Antimony (Sb)	mg/L	<0.000020	8350070	0.000054	0.000027	<0.000020	0.000020	8350070
Dissolved Arsenic (As)	mg/L	0.000211	8350070	0.000411	0.000228	<0.000020	0.000020	8350070
Dissolved Barium (Ba)	mg/L	0.0460	8350070	0.0661	0.0967	0.000024	0.000020	8350070
Dissolved Beryllium (Be)	mg/L	<0.000010	8350070	<0.000010	<0.000010	<0.000010	0.000010	8350070
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8350070	<0.0000050	<0.0000050	<0.0000050	0.0000050	8350070
Dissolved Boron (B)	mg/L	<0.010	8350070	<0.010	<0.010	<0.010	0.010	8350070
Dissolved Cadmium (Cd)	mg/L	0.0000090	8350070	0.0000180	0.0000090	<0.0000050	0.0000050	8350070
Dissolved Chromium (Cr)	mg/L	<0.00010	8350070	<0.00010	<0.00010	<0.00010	0.00010	8350070
Dissolved Cobalt (Co)	mg/L	0.0000090	8350070	0.0000060	0.0000100	<0.0000050	0.0000050	8350070
Dissolved Copper (Cu)	mg/L	0.000427	8350070	0.000459	0.000543	<0.000050	0.000050	8350070
Dissolved Iron (Fe)	mg/L	0.0032	8350070	0.0116	0.0175	<0.0010	0.0010	8350070
Dissolved Lead (Pb)	mg/L	<0.0000050	8350070	<0.0000050	<0.0000050	<0.0000050	0.0000050	8350070
Dissolved Lithium (Li)	mg/L	0.00121	8350070	0.00272	0.00129	<0.00050	0.00050	8350070
Dissolved Manganese (Mn)	mg/L	0.00131	8350070	0.00540	0.000329	<0.000050	0.000050	8350070
Dissolved Molybdenum (Mo)	mg/L	0.000411	8350070	0.00140	0.000541	0.000078	0.000050	8350070
Dissolved Nickel (Ni)	mg/L	0.000253	8350070	0.000484	0.000372	<0.000020	0.000020	8350070
Dissolved Phosphorus (P)	mg/L	<0.0020	8350070	<0.0020	<0.0020	<0.0020	0.0020	8350070
Dissolved Selenium (Se)	mg/L	0.000299	8350070	0.000490	0.000131	<0.000040	0.000040	8350070
Dissolved Silicon (Si)	mg/L	2.74	8350070	3.57	2.41	<0.050	0.050	8350070
Dissolved Silver (Ag)	mg/L	<0.0000050	8350070	<0.0000050	<0.0000050	<0.0000050	0.0000050	8350070
Dissolved Strontium (Sr)	mg/L	0.112	8350070	0.164	0.0690	<0.000050	0.000050	8350070
Dissolved Thallium (Tl)	mg/L	<0.0000020	8350070	<0.0000020	0.0000020	<0.0000020	0.0000020	8350070
Dissolved Tin (Sn)	mg/L	<0.00020	8350070	<0.00020	<0.00020	<0.00020	0.00020	8350070
Dissolved Titanium (Ti)	mg/L	<0.00050	8350070	<0.00050	<0.00050	<0.00050	0.00050	8350070
Dissolved Uranium (U)	mg/L	0.000647	8350070	0.00225	0.000572	<0.0000020	0.0000020	8350070
Dissolved Vanadium (V)	mg/L	<0.00020	8350070	<0.00020	<0.00020	<0.00020	0.00020	8350070

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PD2295		PD2296	PD2297	PD2298		
Sampling Date		2016/07/26 10:35		2016/07/26 11:25				
COC Number		08425837		08425837	08425837	08425833		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-19	KZ-28	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	<0.00010	8350070	0.00095	0.00036	<0.00010	0.00010	8350070
Dissolved Zirconium (Zr)	mg/L	<0.00010	8350070	<0.00010	<0.00010	<0.00010	0.00010	8350070
Dissolved Calcium (Ca)	mg/L	38.4	8344823	53.2	24.8	<0.050	0.050	8344823
Dissolved Magnesium (Mg)	mg/L	5.28	8344823	10.2	2.53	<0.050	0.050	8344823
Dissolved Potassium (K)	mg/L	0.878	8344823	1.17	1.26	<0.050	0.050	8344823
Dissolved Sodium (Na)	mg/L	0.763	8344823	1.03	0.878	<0.050	0.050	8344823
Dissolved Sulphur (S)	mg/L	6.3	8344823	10.3	4.4	<3.0	3.0	8344823
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PD2299		
Sampling Date		2016/07/28 10:15		
COC Number		08425833		
	UNITS	TRIP BLANK	RDL	QC Batch
Misc. Inorganics				
Dissolved Hardness (CaCO3)	mg/L	<0.50	0.50	8344822
Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000020	8349766
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	<0.00050	0.00050	8350070
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000020	8350070
Dissolved Arsenic (As)	mg/L	<0.000020	0.000020	8350070
Dissolved Barium (Ba)	mg/L	<0.000020	0.000020	8350070
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000010	8350070
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8350070
Dissolved Boron (B)	mg/L	<0.010	0.010	8350070
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000050	8350070
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00010	8350070
Dissolved Cobalt (Co)	mg/L	<0.0000050	0.0000050	8350070
Dissolved Copper (Cu)	mg/L	<0.000050	0.000050	8350070
Dissolved Iron (Fe)	mg/L	<0.0010	0.0010	8350070
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000050	8350070
Dissolved Lithium (Li)	mg/L	<0.00050	0.00050	8350070
Dissolved Manganese (Mn)	mg/L	<0.000050	0.000050	8350070
Dissolved Molybdenum (Mo)	mg/L	<0.000050	0.000050	8350070
Dissolved Nickel (Ni)	mg/L	<0.000020	0.000020	8350070
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8350070
Dissolved Selenium (Se)	mg/L	<0.000040	0.000040	8350070
Dissolved Silicon (Si)	mg/L	<0.050	0.050	8350070
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	8350070
Dissolved Strontium (Sr)	mg/L	<0.000050	0.000050	8350070
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000020	8350070
Dissolved Tin (Sn)	mg/L	<0.00020	0.00020	8350070
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00050	8350070
Dissolved Uranium (U)	mg/L	<0.0000020	0.0000020	8350070
Dissolved Vanadium (V)	mg/L	<0.00020	0.00020	8350070
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PD2299		
Sampling Date		2016/07/28 10:15		
COC Number		08425833		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	<0.00010	0.00010	8350070
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00010	8350070
Dissolved Calcium (Ca)	mg/L	<0.050	0.050	8344823
Dissolved Magnesium (Mg)	mg/L	<0.050	0.050	8344823
Dissolved Potassium (K)	mg/L	<0.050	0.050	8344823
Dissolved Sodium (Na)	mg/L	<0.050	0.050	8344823
Dissolved Sulphur (S)	mg/L	<3.0	3.0	8344823
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PD2289	PD2294	PD2295	PD2298	PD2299		
Sampling Date		2016/07/26 08:30	2016/07/26 09:45	2016/07/26 10:35		2016/07/28 10:15		
COC Number		08425837	08425837	08425837	08425833	08425833		
	UNITS	KZ-2	KZ-15	KZ-16	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	85.8	137	118	<0.50	<0.50	0.50	8344964
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8349989
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0222	0.00423	0.00288	0.00067	<0.00050	0.00050	8349895
Total Antimony (Sb)	mg/L	0.000026	0.000030	<0.000020	<0.000020	<0.000020	0.000020	8349895
Total Arsenic (As)	mg/L	0.000074	0.000338	0.000246	<0.000020	<0.000020	0.000020	8349895
Total Barium (Ba)	mg/L	0.0470	0.0544	0.0479	<0.000020	<0.000020	0.000020	8349895
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8349895
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8349895
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8349895
Total Cadmium (Cd)	mg/L	0.000280	0.0000200	0.0000130	<0.0000050	<0.0000050	0.0000050	8349895
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8349895
Total Cobalt (Co)	mg/L	0.0000240	0.0000250	0.0000150	<0.0000050	<0.0000050	0.0000050	8349895
Total Copper (Cu)	mg/L	0.000813	0.000501	0.000460	<0.000050	<0.000050	0.000050	8349895
Total Iron (Fe)	mg/L	0.0325	0.0411	0.0089	<0.0010	<0.0010	0.0010	8349895
Total Lead (Pb)	mg/L	0.000115	0.0000160	<0.0000050	<0.0000050	<0.0000050	0.0000050	8349895
Total Lithium (Li)	mg/L	0.00076	0.00175	0.00123	<0.00050	<0.00050	0.00050	8349895
Total Manganese (Mn)	mg/L	0.000920	0.0153	0.00344	<0.000050	<0.000050	0.000050	8349895
Total Molybdenum (Mo)	mg/L	0.000604	0.000756	0.000423	<0.000050	<0.000050	0.000050	8349895
Total Nickel (Ni)	mg/L	0.000398	0.000364	0.000260	<0.000020	<0.000020	0.000020	8349895
Total Phosphorus (P)	mg/L	0.0029	0.0029	0.0026	<0.0020	<0.0020	0.0020	8349895
Total Selenium (Se)	mg/L	0.000496	0.000389	0.000296	<0.000040	<0.000040	0.000040	8349895
Total Silicon (Si)	mg/L	2.11	2.88	2.63	<0.050	<0.050	0.050	8349895
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8349895
Total Strontium (Sr)	mg/L	0.0864	0.137	0.121	<0.000050	<0.000050	0.000050	8349895
Total Thallium (Tl)	mg/L	0.0000040	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8349895
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8349895
Total Titanium (Ti)	mg/L	0.00115	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8349895
Total Uranium (U)	mg/L	0.00133	0.00121	0.000667	<0.0000020	<0.0000020	0.0000020	8349895
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8349895

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PD2289	PD2294	PD2295	PD2298	PD2299		
Sampling Date		2016/07/26 08:30	2016/07/26 09:45	2016/07/26 10:35		2016/07/28 10:15		
COC Number		08425837	08425837	08425837	08425833	08425833		
	UNITS	KZ-2	KZ-15	KZ-16	KZ-28	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0422	0.00165	0.00047	0.00022	<0.00010	0.00010	8349895
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8349895
Total Calcium (Ca)	mg/L	30.2	43.5	39.1	<0.050	<0.050	0.050	8345216
Total Magnesium (Mg)	mg/L	2.49	6.76	4.97	<0.050	<0.050	0.050	8345216
Total Potassium (K)	mg/L	1.35	1.06	0.950	<0.050	<0.050	0.050	8345216
Total Sodium (Na)	mg/L	0.515	0.842	0.732	<0.050	<0.050	0.050	8345216
Total Sulphur (S)	mg/L	11.9	8.1	6.4	<3.0	<3.0	3.0	8345216

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PD2290		PD2291	PD2292	PD2293		
Sampling Date		2016/07/27 14:35		2016/07/27 12:00	2016/07/27 08:10	2016/07/26 13:25		
COC Number		08425837		08425837	08425837	08425837		
	UNITS	KZ-6	RDL	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	155	0.50	127	145	71.2	0.50	8344964
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8349989
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	<0.015	0.015	0.0173	0.0139	0.0343	0.0030	8350125
Total Antimony (Sb)	mg/L	<0.00010	0.00010	0.000079	0.000064	0.000028	0.000020	8350125
Total Arsenic (As)	mg/L	<0.00010	0.00010	0.000395	0.000256	0.000260	0.000020	8350125
Total Barium (Ba)	mg/L	0.0475	0.00025	0.0651	0.0738	0.0988	0.000050	8350125
Total Beryllium (Be)	mg/L	<0.000050	0.000050	0.000010	0.000011	0.000015	0.000010	8350125
Total Bismuth (Bi)	mg/L	<0.000050	0.000050	<0.000010	<0.000010	<0.000010	0.000010	8350125
Total Boron (B)	mg/L	<0.050	0.050	<0.010	<0.010	<0.010	0.010	8350125
Total Cadmium (Cd)	mg/L	0.000029	0.000025	0.000201	0.0000620	0.0000330	0.0000050	8350125
Total Chromium (Cr)	mg/L	<0.00050	0.00050	<0.00010	<0.00010	0.00012	0.00010	8350125
Total Cobalt (Co)	mg/L	<0.000050	0.000050	0.000037	0.000058	0.000055	0.000010	8350125
Total Copper (Cu)	mg/L	0.00062	0.00050	0.00109	0.00078	0.00088	0.00010	8350125
Total Iron (Fe)	mg/L	0.060	0.025	0.264	0.287	0.119	0.0050	8350125
Total Lead (Pb)	mg/L	<0.00010	0.00010	0.000177	0.000076	0.000065	0.000020	8350125
Total Lithium (Li)	mg/L	<0.0025	0.0025	0.00171	0.00235	0.00144	0.00050	8350125
Total Manganese (Mn)	mg/L	0.00447	0.00050	0.0254	0.0414	0.0382	0.00010	8350125
Total Molybdenum (Mo)	mg/L	0.00044	0.00025	0.000484	0.000517	0.000570	0.000050	8350125
Total Nickel (Ni)	mg/L	<0.00050	0.00050	0.00044	0.00035	0.00049	0.00010	8350125
Total Phosphorus (P)	mg/L	<0.025	0.025	0.0056	0.0053	0.0074	0.0050	8350125
Total Selenium (Se)	mg/L	0.00051	0.00020	0.000700	0.000615	0.000147	0.000040	8350125
Total Silicon (Si)	mg/L	2.75	0.25	2.80	3.03	2.31	0.050	8350125
Total Silver (Ag)	mg/L	<0.000050	0.000050	<0.000010	<0.000010	<0.000010	0.000010	8350125
Total Strontium (Sr)	mg/L	0.158	0.00025	0.134	0.152	0.0698	0.000050	8350125
Total Thallium (Tl)	mg/L	<0.000010	0.000010	0.0000030	0.0000020	0.0000030	0.0000020	8350125
Total Tin (Sn)	mg/L	<0.0010	0.0010	<0.00020	<0.00020	<0.00020	0.00020	8350125
Total Titanium (Ti)	mg/L	<0.010	0.010	<0.0020	<0.0020	<0.0020	0.0020	8350125
Total Uranium (U)	mg/L	0.000785	0.000025	0.000735	0.000778	0.000605	0.0000050	8350125
Total Vanadium (V)	mg/L	<0.0010	0.0010	<0.00020	<0.00020	0.00024	0.00020	8350125
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PD2290		PD2291	PD2292	PD2293		
Sampling Date		2016/07/27 14:35		2016/07/27 12:00	2016/07/27 08:10	2016/07/26 13:25		
COC Number		08425837		08425837	08425837	08425837		
	UNITS	KZ-6	RDL	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Total Zinc (Zn)	mg/L	<0.0050	0.0050	0.0392	0.0106	0.0038	0.0010	8350125
Total Zirconium (Zr)	mg/L	<0.00050	0.00050	<0.00010	<0.00010	<0.00010	0.00010	8350125
Total Calcium (Ca)	mg/L	51.4	1.3	42.1	48.4	24.1	0.25	8345216
Total Magnesium (Mg)	mg/L	6.4	1.3	5.37	5.83	2.66	0.25	8345216
Total Potassium (K)	mg/L	<1.3	1.3	1.19	1.19	1.27	0.25	8345216
Total Sodium (Na)	mg/L	<1.3	1.3	0.84	0.95	0.92	0.25	8345216
Total Sulphur (S)	mg/L	<15	15	12.2	11.4	4.3	3.0	8345216
RDL = Reportable Detection Limit								

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PD2296	PD2297		
Sampling Date		2016/07/26 11:25			
COC Number		08425837	08425837		
	UNITS	KZ-17	KZ-19	RDL	QC Batch
Calculated Parameters					
Total Hardness (CaCO3)	mg/L	174	71.7	0.50	8344964
Elements					
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8349989
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	0.0077	0.0286	0.0030	8350125
Total Antimony (Sb)	mg/L	0.000056	0.000033	0.000020	8350125
Total Arsenic (As)	mg/L	0.000540	0.000269	0.000020	8350125
Total Barium (Ba)	mg/L	0.0686	0.103	0.000050	8350125
Total Beryllium (Be)	mg/L	0.000010	0.000014	0.000010	8350125
Total Bismuth (Bi)	mg/L	<0.000010	<0.000010	0.000010	8350125
Total Boron (B)	mg/L	<0.010	<0.010	0.010	8350125
Total Cadmium (Cd)	mg/L	0.0000350	0.0000280	0.0000050	8350125
Total Chromium (Cr)	mg/L	<0.00010	0.00014	0.00010	8350125
Total Cobalt (Co)	mg/L	0.000028	0.000040	0.000010	8350125
Total Copper (Cu)	mg/L	0.00079	0.00086	0.00010	8350125
Total Iron (Fe)	mg/L	0.0941	0.103	0.0050	8350125
Total Lead (Pb)	mg/L	0.000032	0.000125	0.000020	8350125
Total Lithium (Li)	mg/L	0.00325	0.00143	0.00050	8350125
Total Manganese (Mn)	mg/L	0.0254	0.0237	0.00010	8350125
Total Molybdenum (Mo)	mg/L	0.00142	0.000563	0.000050	8350125
Total Nickel (Ni)	mg/L	0.00059	0.00047	0.00010	8350125
Total Phosphorus (P)	mg/L	<0.0050	0.0065	0.0050	8350125
Total Selenium (Se)	mg/L	0.000541	0.000167	0.000040	8350125
Total Silicon (Si)	mg/L	3.43	2.40	0.050	8350125
Total Silver (Ag)	mg/L	<0.000010	<0.000010	0.000010	8350125
Total Strontium (Sr)	mg/L	0.170	0.0718	0.000050	8350125
Total Thallium (Tl)	mg/L	<0.0000020	0.0000030	0.0000020	8350125
Total Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8350125
Total Titanium (Ti)	mg/L	<0.0020	<0.0020	0.0020	8350125
Total Uranium (U)	mg/L	0.00226	0.000622	0.0000050	8350125
Total Vanadium (V)	mg/L	<0.00020	0.00024	0.00020	8350125
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PD2296	PD2297		
Sampling Date		2016/07/26 11:25			
COC Number		08425837	08425837		
	UNITS	KZ-17	KZ-19	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0036	0.0031	0.0010	8350125
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8350125
Total Calcium (Ca)	mg/L	53.0	24.1	0.25	8345216
Total Magnesium (Mg)	mg/L	10.0	2.78	0.25	8345216
Total Potassium (K)	mg/L	1.17	1.32	0.25	8345216
Total Sodium (Na)	mg/L	1.06	0.97	0.25	8345216
Total Sulphur (S)	mg/L	10.6	4.6	3.0	8345216
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD1443
Sample ID: KZ-9_E-SEEP
Matrix: Water

Collected: 2016/07/27
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8346037	N/A	2016/08/01	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8345820	2016/07/29	2016/07/30	Maria Maclean
Conductance - water	AT/ALK	8345821	N/A	2016/07/30	Maria Maclean
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	Edwin Lamigo
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	Greg Sparrow
Filter and HNO3 Preserve for Metals	ICP	8345300	N/A	2016/07/29	Bonnie Tsang
pH Water	AT/ALK	8345822	N/A	2016/07/30	Maria Maclean

Maxxam ID: PD1444
Sample ID: KZ-9_W-SEEP
Matrix: Water

Collected: 2016/07/27
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8346037	N/A	2016/08/01	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8345820	2016/07/29	2016/07/30	Maria Maclean
Conductance - water	AT/ALK	8345821	N/A	2016/07/30	Maria Maclean
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	Edwin Lamigo
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	Greg Sparrow
Filter and HNO3 Preserve for Metals	ICP	8345300	N/A	2016/07/29	Bonnie Tsang
pH Water	AT/ALK	8345822	N/A	2016/07/30	Maria Maclean

Maxxam ID: PD1445
Sample ID: SEEP-3
Matrix: Water

Collected: 2016/07/27
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8346037	N/A	2016/08/01	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8345820	2016/07/29	2016/07/30	Maria Maclean
Conductance - water	AT/ALK	8345821	N/A	2016/07/30	Maria Maclean
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	Edwin Lamigo
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	Greg Sparrow
Filter and HNO3 Preserve for Metals	ICP	8345300	N/A	2016/07/29	Bonnie Tsang
pH Water	AT/ALK	8345822	N/A	2016/07/30	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD1446
Sample ID: SEEP-5
Matrix: Water

Collected: 2016/07/27
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8346037	N/A	2016/08/01	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8345820	2016/07/29	2016/07/30	Maria Maclean
Conductance - water	AT/ALK	8345821	N/A	2016/07/30	Maria Maclean
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	Edwin Lamigo
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	Greg Sparrow
Filter and HNO3 Preserve for Metals	ICP	8345300	N/A	2016/07/29	Bonnie Tsang
pH Water	AT/ALK	8345822	N/A	2016/07/30	Maria Maclean

Maxxam ID: PD2289
Sample ID: KZ-2
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8350392	N/A	2016/08/02	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8346401	2016/07/30	2016/07/30	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348801	N/A	2016/08/02	Isabel Choi
Conductance - water	AT/ALK	8346404	N/A	2016/07/30	Maria Maclean
Fluoride	ISE/ISE	8348716	N/A	2016/08/02	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	Edwin Lamigo
Ion Balance	CALC	8345464	N/A	2016/08/04	Automated Statchk
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	Greg Sparrow
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/06	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8349895	N/A	2016/08/06	Greg Sparrow
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	Lucy Luo
pH Water	AT/ALK	8346405	N/A	2016/07/30	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	Wendy Fong

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD2289 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	Greg Sparrow

Maxxam ID: PD2290
Sample ID: KZ-6
Matrix: Water

Collected: 2016/07/27
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8350392	N/A	2016/08/02	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8346406	2016/07/30	2016/07/31	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348802	N/A	2016/08/02	Isabel Choi
Conductance - water	AT/ALK	8346408	N/A	2016/07/31	Maria Maclean
Fluoride	ISE/ISE	8348716	N/A	2016/08/02	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/05	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	Edwin Lamigo
Ion Balance	CALC	8345464	N/A	2016/08/04	Automated Statchk
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	Greg Sparrow
Elements by ICPMS Digested LL (total)	ICP/CRCM	8350125	2016/08/03	2016/08/05	John Choo
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/05	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	Lucy Luo
pH Water	AT/ALK	8346409	N/A	2016/07/31	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	Wendy Fong

Maxxam ID: PD2290 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2016/07/27
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8346406	2016/07/30	2016/07/31	Maria Maclean
Conductance - water	AT/ALK	8346408	N/A	2016/07/31	Maria Maclean
pH Water	AT/ALK	8346409	N/A	2016/07/31	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD2291
Sample ID: KZ-7
Matrix: Water

Collected: 2016/07/27
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8350392	N/A	2016/08/02	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8346406	2016/07/30	2016/07/31	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348802	N/A	2016/08/02	Isabel Choi
Conductance - water	AT/ALK	8346408	N/A	2016/07/31	Maria Maclean
Fluoride	ISE/ISE	8348716	N/A	2016/08/02	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/05	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	Edwin Lamigo
Ion Balance	CALC	8345464	N/A	2016/08/04	Automated Statchk
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	Greg Sparrow
Elements by ICPMS Digested LL (total)	ICP/CRCM	8350125	2016/08/03	2016/08/05	John Choo
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/05	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	Lucy Luo
pH Water	AT/ALK	8346409	N/A	2016/07/31	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	Wendy Fong

Maxxam ID: PD2292
Sample ID: KZ-9
Matrix: Water

Collected: 2016/07/27
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8350392	N/A	2016/08/02	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8346406	2016/07/30	2016/07/31	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348802	N/A	2016/08/02	Isabel Choi
Conductance - water	AT/ALK	8346408	N/A	2016/07/31	Maria Maclean
Fluoride	ISE/ISE	8348751	N/A	2016/08/02	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/05	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD2292
Sample ID: KZ-9
Matrix: Water

Collected: 2016/07/27
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	Edwin Lamigo
Ion Balance	CALC	8345464	N/A	2016/08/04	Automated Statchk
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	Greg Sparrow
Elements by ICPMS Digested LL (total)	ICP/CRCM	8350125	2016/08/03	2016/08/05	John Choo
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/05	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	Lucy Luo
pH Water	AT/ALK	8346409	N/A	2016/07/31	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	Wendy Fong

Maxxam ID: PD2293
Sample ID: KZ-13
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8348731	N/A	2016/08/02	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8346406	2016/07/30	2016/07/31	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348802	N/A	2016/08/02	Isabel Choi
Conductance - water	AT/ALK	8346408	N/A	2016/07/31	Maria Maclean
Fluoride	ISE/ISE	8348751	N/A	2016/08/02	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/05	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	Edwin Lamigo
Ion Balance	CALC	8345464	N/A	2016/08/04	Automated Statchk
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	Greg Sparrow
Elements by ICPMS Digested LL (total)	ICP/CRCM	8350125	2016/08/03	2016/08/05	John Choo
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/05	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD2293
Sample ID: KZ-13
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	Lucy Luo
pH Water	AT/ALK	8346409	N/A	2016/07/31	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	Wendy Fong

Maxxam ID: PD2293 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	Wilson Au Yueng
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	Diana Cruz

Maxxam ID: PD2294
Sample ID: KZ-15
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8348731	N/A	2016/08/02	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8346406	2016/07/30	2016/07/31	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348802	N/A	2016/08/02	Isabel Choi
Conductance - water	AT/ALK	8346408	N/A	2016/07/31	Maria Maclean
Fluoride	ISE/ISE	8348751	N/A	2016/08/02	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	Edwin Lamigo
Ion Balance	CALC	8345464	N/A	2016/08/04	Automated Statchk
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	Greg Sparrow
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/06	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8349895	N/A	2016/08/06	Greg Sparrow
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD2294
Sample ID: KZ-15
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	Lucy Luo
pH Water	AT/ALK	8346409	N/A	2016/07/31	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348732	2016/08/02	2016/08/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	Wendy Fong

Maxxam ID: PD2294 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348802	N/A	2016/08/02	Isabel Choi

Maxxam ID: PD2295
Sample ID: KZ-16
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8350392	N/A	2016/08/02	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8346401	2016/07/30	2016/07/30	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348802	N/A	2016/08/02	Isabel Choi
Conductance - water	AT/ALK	8346404	N/A	2016/07/30	Maria Maclean
Fluoride	ISE/ISE	8348716	N/A	2016/08/02	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	Edwin Lamigo
Ion Balance	CALC	8345464	N/A	2016/08/04	Automated Statchk
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	Greg Sparrow
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/06	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8349895	N/A	2016/08/05	Greg Sparrow
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	Lucy Luo
pH Water	AT/ALK	8346405	N/A	2016/07/30	Maria Maclean

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD2295
Sample ID: KZ-16
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8350000	N/A	2016/08/03	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	Wendy Fong

Maxxam ID: PD2295 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	Balwinder Bassi
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	Isaac Wang
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	Balwinder Bassi
Total Phosphorus - unpreserved	KONE/COL	8350000	N/A	2016/08/03	Isabel Choi

Maxxam ID: PD2296
Sample ID: KZ-17
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8348731	N/A	2016/08/02	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8346401	2016/07/30	2016/07/30	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348801	N/A	2016/08/02	Isabel Choi
Conductance - water	AT/ALK	8346404	N/A	2016/07/30	Maria Maclean
Fluoride	ISE/ISE	8348716	N/A	2016/08/02	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/05	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349766	N/A	2016/08/03	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	Edwin Lamigo
Ion Balance	CALC	8345464	N/A	2016/08/04	Automated Statchk
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	Greg Sparrow
Elements by ICPMS Digested LL (total)	ICP/CRCM	8350125	2016/08/03	2016/08/05	John Choo
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/05	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	Lucy Luo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD2296 **Collected:** 2016/07/26
Sample ID: KZ-17 **Shipped:**
Matrix: Water **Received:** 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH Water	AT/ALK	8346405	N/A	2016/07/30	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	Wendy Fong

Maxxam ID: PD2296 Dup **Collected:** 2016/07/26
Sample ID: KZ-17 **Shipped:**
Matrix: Water **Received:** 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349766	N/A	2016/08/03	Edwin Lamigo

Maxxam ID: PD2297 **Collected:**
Sample ID: KZ-19 **Shipped:**
Matrix: Water **Received:** 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8348731	N/A	2016/08/02	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8346406	2016/07/30	2016/07/31	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348801	N/A	2016/08/02	Isabel Choi
Conductance - water	AT/ALK	8346408	N/A	2016/07/31	Maria Maclean
Fluoride	ISE/ISE	8348751	N/A	2016/08/02	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/05	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349766	N/A	2016/08/03	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	Edwin Lamigo
Ion Balance	CALC	8345464	N/A	2016/08/04	Automated Statchk
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	Greg Sparrow
Elements by ICPMS Digested LL (total)	ICP/CRCM	8350125	2016/08/03	2016/08/05	John Choo
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/05	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	Lucy Luo
pH Water	AT/ALK	8346409	N/A	2016/07/31	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	Diana Cruz

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD2297
Sample ID: KZ-19
Matrix: Water

Collected:
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	Wendy Fong

Maxxam ID: PD2297 Dup
Sample ID: KZ-19
Matrix: Water

Collected:
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	Clare Kwok

Maxxam ID: PD2298
Sample ID: KZ-28
Matrix: Water

Collected:
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8348731	N/A	2016/08/02	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8346406	2016/07/30	2016/07/31	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	Wilson Au Yueng
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348801	N/A	2016/08/02	Isabel Choi
Conductance - water	AT/ALK	8346408	N/A	2016/07/31	Maria Maclean
Fluoride	ISE/ISE	8348751	N/A	2016/08/02	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349766	N/A	2016/08/03	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	Edwin Lamigo
Ion Balance	CALC	8345464	N/A	2016/08/04	Automated Statchk
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	Greg Sparrow
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/06	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8349895	N/A	2016/08/06	Greg Sparrow
Ammonia-N (Preserved)	KONE/COL	8355226	N/A	2016/08/08	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	Lucy Luo
pH Water	AT/ALK	8346409	N/A	2016/07/31	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	Wendy Fong

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD2298 Dup
Sample ID: KZ-28
Matrix: Water

Collected:
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8355226	N/A	2016/08/08	Diana Cruz

Maxxam ID: PD2299
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/07/28
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8348731	N/A	2016/08/02	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8346406	2016/07/30	2016/07/31	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	Wilson Au Yueng
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	Wilson Au Yueng
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8346758	N/A	2016/08/02	Isabel Choi
Conductance - water	AT/ALK	8346408	N/A	2016/07/31	Maria Maclean
Fluoride	ISE/ISE	8348751	N/A	2016/08/02	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349766	N/A	2016/08/03	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	Edwin Lamigo
Ion Balance	CALC	8345464	N/A	2016/08/04	Automated Statchk
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	Greg Sparrow
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/06	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8349895	N/A	2016/08/05	Greg Sparrow
Ammonia-N (Unpreserved)	KONE/COL	8346036	N/A	2016/08/02	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	Automated Statchk
pH Water	AT/ALK	8346409	N/A	2016/07/31	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	Wendy Fong

Maxxam ID: PD2299 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/07/28
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8348731	N/A	2016/08/02	Wilson Au Yueng
Fluoride	ISE/ISE	8348751	N/A	2016/08/02	Balwinder Bassi
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	Edwin Lamigo
Ammonia-N (Unpreserved)	KONE/COL	8346036	N/A	2016/08/02	Clare Kwok

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	9.0°C
Package 2	7.0°C
Package 3	9.0°C

Sample PD2290-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PD2291-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PD2292-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PD2293-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PD2296-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PD2297-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PD2299-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

LL TOTAL METALS (DIGESTED) WITH CV HG Comments

Sample PD2290-07 Elements by ICPMS Digested LL (total): RDL raised due to sample matrix interference.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8345820	Alkalinity (PP as CaCO3)	2016/07/30					<0.50	mg/L	NC	20
8345820	Alkalinity (Total as CaCO3)	2016/07/30	NC	80 - 120	99	80 - 120	<0.50	mg/L	0.79	20
8345820	Bicarbonate (HCO3)	2016/07/30					<0.50	mg/L	0.79	20
8345820	Carbonate (CO3)	2016/07/30					<0.50	mg/L	NC	20
8345820	Hydroxide (OH)	2016/07/30					<0.50	mg/L	NC	20
8345821	Conductivity	2016/07/30			102	80 - 120	<1.0	uS/cm		
8345822	pH	2016/07/30			102	97 - 103			0.69	N/A
8345978	Total Suspended Solids	2016/08/03			101	80 - 120	<1.0	mg/L		
8346036	Total Ammonia (N)	2016/08/02	97	80 - 120	102	80 - 120	<0.0050	mg/L	NC	20
8346037	Acidity (pH 4.5)	2016/07/29					<0.50	mg/L		
8346037	Acidity (pH 8.3)	2016/07/29			100	80 - 120	<0.50	mg/L		
8346401	Alkalinity (PP as CaCO3)	2016/07/30					<0.50	mg/L	NC	20
8346401	Alkalinity (Total as CaCO3)	2016/07/30	92	80 - 120	102	80 - 120	<0.50	mg/L	1.8	20
8346401	Bicarbonate (HCO3)	2016/07/30					<0.50	mg/L	1.8	20
8346401	Carbonate (CO3)	2016/07/30					<0.50	mg/L	NC	20
8346401	Hydroxide (OH)	2016/07/30					<0.50	mg/L	NC	20
8346404	Conductivity	2016/07/30			102	80 - 120	1.2, RDL=1.0	uS/cm	0.97	20
8346405	pH	2016/07/30			101	97 - 103			0.38	N/A
8346406	Alkalinity (PP as CaCO3)	2016/07/31					<0.50	mg/L	NC	20
8346406	Alkalinity (Total as CaCO3)	2016/07/31	NC	80 - 120	99	80 - 120	<0.50	mg/L	1.5	20
8346406	Bicarbonate (HCO3)	2016/07/31					<0.50	mg/L	1.5	20
8346406	Carbonate (CO3)	2016/07/31					<0.50	mg/L	NC	20
8346406	Hydroxide (OH)	2016/07/31					<0.50	mg/L	NC	20
8346408	Conductivity	2016/07/31			101	80 - 120	<1.0	uS/cm	0.34	20
8346409	pH	2016/07/31			101	97 - 103			0.73	N/A
8346758	Dissolved Organic Carbon (C)	2016/08/02	109	80 - 120	104	80 - 120	<0.50	mg/L	NC	20
8348144	Strong Acid Dissoc. Cyanide (CN)	2016/08/02	99	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8348171	Weak Acid Dissoc. Cyanide (CN)	2016/08/02	99	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8348574	Total Ammonia (N)	2016/08/02	98	80 - 120	99	80 - 120	<0.0050	mg/L	NC	20
8348716	Fluoride (F)	2016/08/02	96	80 - 120	100	80 - 120	0.013, RDL=0.010	mg/L	1.1	20

Maxxam Job #: B662843
Report Date: 2016/08/08

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8348720	Total Phosphorus (P)	2016/08/02			109	80 - 120	<0.0020	mg/L		
8348728	Dissolved Phosphorus (P)	2016/08/02	104	80 - 120	104	80 - 120	<0.0020	mg/L	NC	20
8348731	Acidity (pH 4.5)	2016/08/02					<0.50	mg/L	NC	20
8348731	Acidity (pH 8.3)	2016/08/02			102	80 - 120	<0.50	mg/L	NC	20
8348732	Dissolved Phosphorus (P)	2016/08/02			110	80 - 120	<0.0020	mg/L		
8348751	Fluoride (F)	2016/08/02	93	80 - 120	96	80 - 120	<0.010	mg/L	0	20
8348761	Dissolved Chloride (Cl)	2016/08/02	102	80 - 120	101	80 - 120	<0.50	mg/L	NC	20
8348772	Dissolved Sulphate (SO4)	2016/08/02	NC	80 - 120	99	80 - 120	<0.50	mg/L	0.91	20
8348801	Dissolved Organic Carbon (C)	2016/08/02	105	80 - 120	109	80 - 120	<0.50	mg/L	NC	20
8348802	Dissolved Organic Carbon (C)	2016/08/02	110	80 - 120	111	80 - 120	<0.50	mg/L	NC	20
8349465	Nitrate plus Nitrite (N)	2016/07/30	101	80 - 120	99	80 - 120	<0.0020	mg/L	NC	25
8349466	Nitrite (N)	2016/07/30	96	80 - 120	95	80 - 120	<0.0020	mg/L	NC	25
8349728	Dissolved Mercury (Hg)	2016/08/03	100	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8349766	Dissolved Mercury (Hg)	2016/08/03	95	80 - 120	92	80 - 120	<0.0000020	mg/L	NC	20
8349895	Total Aluminum (Al)	2016/08/05	111	80 - 120	116	80 - 120	<0.00050	mg/L	NC	20
8349895	Total Antimony (Sb)	2016/08/05	102	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8349895	Total Arsenic (As)	2016/08/05	101	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8349895	Total Barium (Ba)	2016/08/05	105	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
8349895	Total Beryllium (Be)	2016/08/05	100	80 - 120	105	80 - 120	<0.000010	mg/L	NC	20
8349895	Total Bismuth (Bi)	2016/08/05	100	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8349895	Total Boron (B)	2016/08/05	102	80 - 120	110	80 - 120	<0.010	mg/L	NC	20
8349895	Total Cadmium (Cd)	2016/08/05	102	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8349895	Total Chromium (Cr)	2016/08/05	100	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
8349895	Total Cobalt (Co)	2016/08/05	94	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8349895	Total Copper (Cu)	2016/08/05	98	80 - 120	105	80 - 120	<0.000050	mg/L	NC	20
8349895	Total Iron (Fe)	2016/08/05	106	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
8349895	Total Lead (Pb)	2016/08/05	104	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8349895	Total Lithium (Li)	2016/08/05	106	80 - 120	109	80 - 120	<0.00050	mg/L	NC	20
8349895	Total Manganese (Mn)	2016/08/05	101	80 - 120	106	80 - 120	<0.000050	mg/L	NC	20
8349895	Total Molybdenum (Mo)	2016/08/05	103	80 - 120	106	80 - 120	<0.000050	mg/L	NC	20
8349895	Total Nickel (Ni)	2016/08/05	100	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8349895	Total Phosphorus (P)	2016/08/06					<0.0020	mg/L		
8349895	Total Selenium (Se)	2016/08/05	102	80 - 120	108	80 - 120	<0.000040	mg/L	NC	20
8349895	Total Silicon (Si)	2016/08/05					<0.050	mg/L	NC	20
8349895	Total Silver (Ag)	2016/08/05	100	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8349895	Total Strontium (Sr)	2016/08/05	103	80 - 120	105	80 - 120	<0.000050	mg/L	NC	20
8349895	Total Thallium (Tl)	2016/08/05	101	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8349895	Total Tin (Sn)	2016/08/05	94	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
8349895	Total Titanium (Ti)	2016/08/05	95	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8349895	Total Uranium (U)	2016/08/05	103	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8349895	Total Vanadium (V)	2016/08/05	100	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
8349895	Total Zinc (Zn)	2016/08/05	100	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
8349895	Total Zirconium (Zr)	2016/08/05					<0.00010	mg/L	NC	20
8349989	Total Mercury (Hg)	2016/08/03	92	80 - 120	90	80 - 120	<0.0000020	mg/L	NC	20
8350000	Total Phosphorus (P)	2016/08/03	93	80 - 120	100	80 - 120	<0.0020	mg/L	NC	20
8350070	Dissolved Aluminum (Al)	2016/08/04	107	80 - 120	116	80 - 120	<0.00050	mg/L	1.6	20
8350070	Dissolved Antimony (Sb)	2016/08/04	100	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
8350070	Dissolved Arsenic (As)	2016/08/04	99	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8350070	Dissolved Barium (Ba)	2016/08/04	NC	80 - 120	110	80 - 120	<0.000020	mg/L	0.046	20
8350070	Dissolved Beryllium (Be)	2016/08/04	101	80 - 120	106	80 - 120	<0.000010	mg/L	NC	20
8350070	Dissolved Bismuth (Bi)	2016/08/04	103	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8350070	Dissolved Boron (B)	2016/08/04	96	80 - 120	107	80 - 120	<0.010	mg/L	NC	20
8350070	Dissolved Cadmium (Cd)	2016/08/04	100	80 - 120	109	80 - 120	<0.0000050	mg/L	2.2	20
8350070	Dissolved Chromium (Cr)	2016/08/04	97	80 - 120	108	80 - 120	<0.00010	mg/L	NC	20
8350070	Dissolved Cobalt (Co)	2016/08/04	94	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8350070	Dissolved Copper (Cu)	2016/08/04	91	80 - 120	102	80 - 120	<0.000050	mg/L	1.2	20
8350070	Dissolved Iron (Fe)	2016/08/04	111	80 - 120	112	80 - 120	<0.0010	mg/L	NC	20
8350070	Dissolved Lead (Pb)	2016/08/04	102	80 - 120	109	80 - 120	<0.0000050	mg/L	NC	20
8350070	Dissolved Lithium (Li)	2016/08/04	100	80 - 120	109	80 - 120	<0.00050	mg/L	NC	20
8350070	Dissolved Manganese (Mn)	2016/08/04	96	80 - 120	109	80 - 120	<0.000050	mg/L	NC	20
8350070	Dissolved Molybdenum (Mo)	2016/08/04	NC	80 - 120	108	80 - 120	<0.000050	mg/L	2.9	20
8350070	Dissolved Nickel (Ni)	2016/08/04	95	80 - 120	107	80 - 120	<0.000020	mg/L	1.6	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8350070	Dissolved Phosphorus (P)	2016/08/04					<0.0020	mg/L	NC	20
8350070	Dissolved Selenium (Se)	2016/08/04	103	80 - 120	105	80 - 120	<0.000040	mg/L	2.8	20
8350070	Dissolved Silicon (Si)	2016/08/04					<0.050	mg/L	2.6	20
8350070	Dissolved Silver (Ag)	2016/08/04	101	80 - 120	109	80 - 120	<0.0000050	mg/L	NC	20
8350070	Dissolved Strontium (Sr)	2016/08/04	NC	80 - 120	101	80 - 120	<0.000050	mg/L	0.036	20
8350070	Dissolved Thallium (Tl)	2016/08/04	99	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8350070	Dissolved Tin (Sn)	2016/08/04	101	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
8350070	Dissolved Titanium (Ti)	2016/08/04	96	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8350070	Dissolved Uranium (U)	2016/08/04	106	80 - 120	111	80 - 120	<0.0000020	mg/L	1.6	20
8350070	Dissolved Vanadium (V)	2016/08/04	98	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
8350070	Dissolved Zinc (Zn)	2016/08/04	NC	80 - 120	95	80 - 120	<0.00010	mg/L	0.21	20
8350070	Dissolved Zirconium (Zr)	2016/08/04					<0.00010	mg/L	NC	20
8350125	Total Aluminum (Al)	2016/08/05	104	80 - 120	110	80 - 120	<0.0030	mg/L	2.5	20
8350125	Total Antimony (Sb)	2016/08/05	103	80 - 120	99	80 - 120	<0.000020	mg/L	4.8	20
8350125	Total Arsenic (As)	2016/08/05	107	80 - 120	101	80 - 120	<0.000020	mg/L	5.5	20
8350125	Total Barium (Ba)	2016/08/05	NC	80 - 120	102	80 - 120	<0.000050	mg/L	0.53	20
8350125	Total Beryllium (Be)	2016/08/05	105	80 - 120	107	80 - 120	<0.000010	mg/L	NC	20
8350125	Total Bismuth (Bi)	2016/08/05	105	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
8350125	Total Boron (B)	2016/08/05	97	80 - 120	102	80 - 120	<0.010	mg/L	NC	20
8350125	Total Cadmium (Cd)	2016/08/05	99	80 - 120	103	80 - 120	<0.0000050	mg/L	9.2	20
8350125	Total Chromium (Cr)	2016/08/05	103	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8350125	Total Cobalt (Co)	2016/08/05	99	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
8350125	Total Copper (Cu)	2016/08/05	97	80 - 120	107	80 - 120	<0.00010	mg/L	NC	20
8350125	Total Iron (Fe)	2016/08/05	NC	80 - 120	105	80 - 120	<0.0050	mg/L	2.1	20
8350125	Total Lead (Pb)	2016/08/05	105	80 - 120	103	80 - 120	<0.000020	mg/L	0.29	20
8350125	Total Lithium (Li)	2016/08/05	NC	80 - 120	106	80 - 120	<0.00050	mg/L	1.2	20
8350125	Total Manganese (Mn)	2016/08/05	NC	80 - 120	103	80 - 120	<0.00010	mg/L	2.3	20
8350125	Total Molybdenum (Mo)	2016/08/05	106	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8350125	Total Nickel (Ni)	2016/08/05	99	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
8350125	Total Phosphorus (P)	2016/08/05					<0.0050	mg/L	NC	20
8350125	Total Selenium (Se)	2016/08/05	109	80 - 120	110	80 - 120	<0.000040	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8350125	Total Silicon (Si)	2016/08/05					<0.050	mg/L	1.3	20
8350125	Total Silver (Ag)	2016/08/05	102	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8350125	Total Strontium (Sr)	2016/08/05	NC	80 - 120	99	80 - 120	<0.000050	mg/L	2.8	20
8350125	Total Thallium (Tl)	2016/08/05	98	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8350125	Total Tin (Sn)	2016/08/05	100	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8350125	Total Titanium (Ti)	2016/08/05	93	80 - 120	96	80 - 120	<0.0020	mg/L	NC	20
8350125	Total Uranium (U)	2016/08/05	110	80 - 120	104	80 - 120	<0.0000050	mg/L	0.14	20
8350125	Total Vanadium (V)	2016/08/05	104	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8350125	Total Zinc (Zn)	2016/08/05	NC	80 - 120	107	80 - 120	<0.0010	mg/L	3.8	20
8350125	Total Zirconium (Zr)	2016/08/05					<0.00010	mg/L	NC	20
8350392	Acidity (pH 4.5)	2016/08/02					<0.50	mg/L	NC	20
8350392	Acidity (pH 8.3)	2016/08/02			104	80 - 120	<0.50	mg/L	NC	20
8355226	Total Ammonia (N)	2016/08/08	82	80 - 120	98	80 - 120	<0.0050	mg/L	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

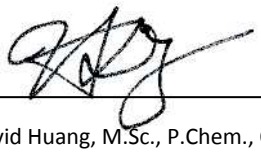
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY

COC #: 08425837

BBY FCD-00077/05

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: BMC MINERALS LTD.	Company Name: ALEXCO ENVIRONMENTAL	Quotation #: B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:	Contact Name: KAI WOLOSHYN	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 530-1130 WEST PENDER ST	Address: UNIT 3 151 INDUSTRIAL RD	Project #: BMC-15-01	Rush TAT (Surcharges will be applied)
Vancouver, BC PC: V6E 4A4	Whitehorse, YK PC: V1A 2V3	Site Location: Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:	Phone: (867) 668-6463	Site #:	[ ] 1 Day [ ] 3 Days
Email:	Email: kwoloshyn@alexcoresource.com	Sampled By: C. Henry	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Y / N (Present / Intact) | COOLER TEMPERATURES

COOLING MEDIA PRESENT Y / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	Present	Intact	COOLER TEMPERATURES
1	KZ-2		2016/07/26	8:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11			N/A	3,6,7
3	KZ-6		2016/07/27	14:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	11				8,7
4	KZ-7		2016/07/27	12:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11				4,5,5
5	KZ-9		2016/07/27	8:10	Water	x	x	x	x	x	x	x	x	x	x	x	x	11				
6	KZ-13		2016/07/26	13:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	11				
7	KZ-15		2016/07/26	9:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	11				
8	KZ-16		2016/07/26	10:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	11				
9	KZ-17		2016/07/26	11:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	11				
10	KZ-19		—	—	Water	x	x	x	x	x	x	x	x	x	x	x	x	11				

B662843_COC

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Catherine Henry	2016/07/28	8:00	Veronica de Guzman	2016/07/29	09:20	B662843

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY I

COC #: 08425833

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	~~Andrew MacPhail~~ C Henry	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	~~KZ-21~~				Water	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~				~~11~~	
2	~~KZ-22~~				Water	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~				~~11~~	
3	~~KZ-26~~				Water	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~				~~11~~	
4	KZ-28		—	—	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	Trip Blank		—	—	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
6																						
7																						
8																						
9																						
10																						

B662843_COC

LABORATORY USE ONLY		
CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
N/A		3,6,7
		8,7,7
		4,5,5
COOLING MEDIA PRESENT Y / N		

COMMENTS

RECEIVED IN WHITEHORSE
BY: Luyma @ 1015
2016-07-28
TEMP: 9.1 7.4 9
cooler # 2 3 4

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Catherine Henry	2016/07/28	8:00	Veronica deGuzman	2016/07/28	09:20	

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY

COC #: 08425838

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Xudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	C. Henry	Date Required:

Regulatory Criteria		Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil	[ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify)	[ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water	[ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	DISSOLVED LOW LEVEL METALS INCL. MERCURY	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-9_E-SEEP		2016/07/27	9:00	Water	x	x	x	x	5	
3	KZ-9_W-SEEP		2016/07/27	8:50	Water	x	x	x	x	5	
4	SEEP-3		2016/07/27	10:35	Water	x	x	x	x	5	
5	~~SEEP-4~~				Water	x	x	x	x		
6	SEEP-5		2016/07/27	9:30	Water	x	x	x	x	4	
7											
8											
9											
10											

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
N/A		1.1.1

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE BY: Lyndia@aios 2016-07-28 cooler# 9 9 1 TEMP: 9 1 9

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Catherine Henry	2016/07/28	8:00	Veronica de Guzman VD	2016/07/29	09:20	B662693

Success Through Science®

Your Project #: BMC-16-01

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Your C.O.C. #: 502942-01-01, 502942-02-01, 503657-01-01

Report Date: 2016/09/09
Report #: R2257543
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B674606
Received: 2016/08/30, 10:35

Sample Matrix: Water
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	10	N/A	2016/08/31	BBY6SOP-00037	SM 22 2310 B m
Acidity pH 4.5 & pH 8.3 (as CaCO3)	5	N/A	2016/09/01	BBY6SOP-00037	SM 22 2310 B m
Acidity pH 4.5 & pH 8.3 (as CaCO3)	5	N/A	2016/09/02	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	19	2016/09/01	2016/09/01	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	1	2016/09/01	2016/09/02	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	15	N/A	2016/08/31	BBY6SOP-00011	SM 22 4500-Cl- E m
Chloride by Automated Colourimetry	5	N/A	2016/09/06	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	20	N/A	2016/09/01	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	20	N/A	2016/09/01	BBY6SOP-00004	SM 22 4500-CN O m
COD by Colorimeter	5	2016/09/01	2016/09/02	BBY6SOP-00024	SM 22 5220 D m
Colour (True) by Kone Lab	20	N/A	2016/09/01	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	19	N/A	2016/09/07	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2016/09/07	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	19	N/A	2016/09/01	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	1	N/A	2016/09/02	BBY6SOP-00026	SM 22 2510 B m
Fluoride	20	N/A	2016/09/01	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	11	N/A	2016/09/02	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	1	N/A	2016/09/04	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	7	N/A	2016/09/06	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	1	N/A	2016/09/08	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	18	N/A	2016/09/02	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2016/09/08	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2016/09/09	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	20	N/A	2016/09/02	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	20	2016/09/02	2016/09/02	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Bromide as Bromine (Br) by ICPMS	5	N/A	2016/09/08	BBY7SOP-00002	EPA 6020B R2 m
Ion Balance	15	N/A	2016/09/02	BBY WI-00033	Auto Calc

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-16-01

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Your C.O.C. #: 502942-01-01, 502942-02-01, 503657-01-01

Report Date: 2016/09/09
Report #: R2257543
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B674606
Received: 2016/08/30, 10:35

Sample Matrix: Water
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Ion Balance	3	N/A	2016/09/07	BBY WI-00033	Auto Calc
Ion Balance	1	N/A	2016/09/08	BBY WI-00033	Auto Calc
Ion Balance	1	N/A	2016/09/09	BBY WI-00033	Auto Calc
Sum of cations, anions	18	N/A	2016/09/02	Calc	
Sum of cations, anions	1	N/A	2016/09/08	Calc	
Sum of cations, anions	1	N/A	2016/09/09	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	18	N/A	2016/09/02	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2016/09/08	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2016/09/09	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	18	N/A	2016/09/02	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	2	N/A	2016/09/08	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	6	2016/09/01	2016/09/02	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Digested LL (total)	1	2016/09/01	2016/09/04	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Digested LL (total)	1	2016/09/02	2016/09/02	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	11	N/A	2016/09/02	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2016/09/04	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	7	N/A	2016/09/06	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2016/09/08	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	7	N/A	2016/09/01	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	4	N/A	2016/09/02	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	1	N/A	2016/09/08	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Nitrogen (Total)	5	2016/09/06	2016/09/06	BBY6SOP-00016	SM 22 4500-N C m
Ammonia-N (Unpreserved)	1	N/A	2016/08/31	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N Dissolved ((FF/FP)	1	N/A	2016/09/03	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	17	N/A	2016/09/03	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	1	N/A	2016/09/09	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	20	N/A	2016/09/01	BBY6SOP-00010	SM 22 4500-NO3- I m

Your Project #: BMC-16-01

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Your C.O.C. #: 502942-01-01, 502942-02-01, 503657-01-01

Report Date: 2016/09/09
Report #: R2257543
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B674606
Received: 2016/08/30, 10:35

Sample Matrix: Water
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrite (N) (low level)	20	N/A	2016/09/01	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	20	N/A	2016/09/02	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	19	N/A	2016/09/01	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	19	N/A	2016/09/01	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	1	N/A	2016/09/02	BBY6SOP-00026	SM 22 4500-H+ B m
Orthophosphate by Konelab (low level)	5	N/A	2016/09/01	BBY6SOP-00013	SM 22 4500-P E m
Sulphate by Automated Colourimetry	15	N/A	2016/08/31	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	5	N/A	2016/09/06	BBY6SOP-00017	SM 22 4500-SO42- E m
Total Dissolved Solids - Low Level	5	N/A	2016/09/02	BBY6SOP-00033	SM 22 2540 C m
TKN (Calc. TN, N/N) total	5	N/A	2016/09/06	BBY WI-00033	Calculation
Carbon (Total Organic) (3)	5	N/A	2016/09/07	BBY6SOP-00003	SM 22 5310 C m
Phosphorus-P (LL Tot, dissolved) - UF/UP	19	2016/09/02	2016/09/02	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2016/09/08	2016/09/08	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	18	N/A	2016/09/02	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	2	N/A	2016/09/08	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	4	2016/08/31	2016/09/01	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	16	2016/09/01	2016/09/02	BBY6SOP-00034	SM 22 2540 D
Turbidity	5	N/A	2016/09/01	BBY6SOP-00027	SM 22 2130 B m

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.
(3) TOC present in the sample should be considered as non-purgeable TOC.

Your Project #: BMC-16-01

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Your C.O.C. #: 502942-01-01, 502942-02-01, 503657-01-01

Report Date: 2016/09/09
Report #: R2257543
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B674606
Received: 2016/08/30, 10:35

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Megan Smith, Project Manager
Email: msmith@maxxam.ca
Phone# (604) 734 7276
==========
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1911		PK1912		PK1913		
Sampling Date		2016/08/27 16:50		2016/08/26 15:00		2016/08/26 14:00		
COC Number		502942-01-01		502942-01-01		502942-01-01		
	UNITS	KZ-19	QC Batch	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	0.018	8383492	4.1	8383492	3.6	N/A	8383492
Cation Sum	meq/L	0.0019	8383492	4.5	8383492	3.7	N/A	8383492
Filter and HNO3 Preservation	N/A	LAB	8384538	LAB	8384538	LAB	N/A	8384538
Ion Balance	N/A	0.11 (1)	8383480	1.1	8383480	1.0	0.010	8383480
Nitrate (N)	mg/L	<0.0020	8383493	0.0044	8383493	0.0118	0.0020	8383493
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384775	<0.00050	8384775	<0.00050	0.00050	8384775
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384787	<0.00050	8384787	<0.00050	0.00050	8384787
Fluoride (F)	mg/L	0.011	8384568	0.130	8384568	0.096	0.010	8384568
Dissolved Organic Carbon (C)	mg/L	<0.50	8390300	11.1	8390300	5.14	0.50	8390296
Acidity (pH 4.5)	mg/L	<0.50	8383764	<0.50	8383764	<0.50	0.50	8383764
Alkalinity (Total as CaCO3)	mg/L	<0.50	8384947	169	8384947	147	0.50	8384947
Acidity (pH 8.3)	mg/L	<0.50	8383764	<0.50	8383764	<0.50	0.50	8383764
Alkalinity (PP as CaCO3)	mg/L	<0.50	8384947	<0.50	8384947	<0.50	0.50	8384947
Bicarbonate (HCO3)	mg/L	<0.50	8384947	207	8384947	179	0.50	8384947
Carbonate (CO3)	mg/L	<0.50	8384947	<0.50	8384947	<0.50	0.50	8384947
Hydroxide (OH)	mg/L	<0.50	8384947	<0.50	8384947	<0.50	0.50	8384947
Anions								
Dissolved Sulphate (SO4)	mg/L	<0.50	8384797	32.4	8384797	29.7	0.50	8384797
Dissolved Chloride (Cl)	mg/L	0.60	8384796	0.97	8384796	0.75	0.50	8384796
MISCELLANEOUS								
True Colour	Col. Unit	<5.0 (2)	8384556	42.4 (3)	8384556	18.3 (3)	5.0	8384556
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020 (2)	8386949	0.191 (3)	8386949	0.0726 (3)	0.0020	8386949
Total Ammonia (N)	mg/L	<0.0050	8392042	0.039	8387304	0.030	0.0050	8387298

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(3) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1911		PK1912		PK1913		
Sampling Date		2016/08/27 16:50		2016/08/26 15:00		2016/08/26 14:00		
COC Number		502942-01-01		502942-01-01		502942-01-01		
	UNITS	KZ-19	QC Batch	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Nitrate plus Nitrite (N)	mg/L	<0.0020 (1)	8385360	0.0044 (2)	8385360	0.0118 (2)	0.0020	8385360
Nitrite (N)	mg/L	<0.0020 (1)	8385384	<0.0020 (2)	8385384	<0.0020 (2)	0.0020	8385384
Total Phosphorus (P)	mg/L	<0.0020 (1)	8386952	0.194 (2)	8386952	0.0683 (2)	0.0020	8386952
Physical Properties								
Conductivity	uS/cm	1.2	8384957	389	8384957	333	1.0	8384957
pH	pH	5.71	8384956	8.18	8384956	8.21		8384956
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8383802	81.5	8383802	33.8 (3)	1.0	8383802

RDL = Reportable Detection Limit

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample arrived to laboratory past recommended hold time.

(3) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1914			PK1915		PK1916		
Sampling Date		2016/08/26 14:15			2016/08/27 15:33		2016/08/30 10:35		
COC Number		502942-01-01			502942-01-01		502942-01-01		
	UNITS	KZ-28	RDL	QC Batch	KZ-6	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	3.6	N/A	8383492	2.7	8383492	0.00060	N/A	8383492
Cation Sum	meq/L	3.6	N/A	8383492	2.4	8383492	0.0036	N/A	8383492
Filter and HNO3 Preservation	N/A	LAB	N/A	8384538	LAB	8384538		N/A	8384538
Ion Balance	N/A	1.0	0.010	8383480	0.88	8383480	NC	0.010	8383480
Nitrate (N)	mg/L	0.0138	0.0020	8383493	0.0046	8383493	<0.0020	0.0020	8383493
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8384775	<0.00050	8384775	<0.00050	0.00050	8384775
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8384787	<0.00050	8384787	<0.00050	0.00050	8384787
Fluoride (F)	mg/L	0.095	0.010	8384568	0.051	8384568	0.011	0.010	8384568
Dissolved Organic Carbon (C)	mg/L	5.50	0.50	8390300	3.67	8390296	<0.50 (1)	0.50	8390148
Acidity (pH 4.5)	mg/L	<0.50	0.50	8383764	<0.50	8383764	<0.50	0.50	8383764
Alkalinity (Total as CaCO3)	mg/L	147	0.50	8384947	120	8384947	<0.50	0.50	8384947
Acidity (pH 8.3)	mg/L	<0.50	0.50	8383764	<0.50	8383764	<0.50	0.50	8383764
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8384947	<0.50	8384947	<0.50	0.50	8384947
Bicarbonate (HCO3)	mg/L	179	0.50	8384947	147	8384947	<0.50	0.50	8384947
Carbonate (CO3)	mg/L	<0.50	0.50	8384947	<0.50	8384947	<0.50	0.50	8384947
Hydroxide (OH)	mg/L	<0.50	0.50	8384947	<0.50	8384947	<0.50	0.50	8384947
Anions									
Dissolved Sulphate (SO4)	mg/L	29.5	0.50	8384797	13.8	8384797	<0.50	0.50	8384797
Dissolved Chloride (Cl)	mg/L	0.79	0.50	8384796	0.98	8384796	<0.50	0.50	8384796
MISCELLANEOUS									
True Colour	Col. Unit	17.8 (2)	5.0	8384556	19.7 (3)	8384556	<5.0	5.0	8384556
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0472 (2)	0.0020	8386949	0.0071 (3)	8386949	<0.0020	0.0020	8386949
Total Ammonia (N)	mg/L	0.045	0.0050	8387298	0.015	8387303	<0.0050	0.0050	8382961
Nitrate plus Nitrite (N)	mg/L	0.0138 (2)	0.0020	8385360	0.0046 (3)	8385360	<0.0020	0.0020	8385360

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.
(2) Sample arrived to laboratory past recommended hold time.
(3) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1914			PK1915		PK1916		
Sampling Date		2016/08/26 14:15			2016/08/27 15:33		2016/08/30 10:35		
COC Number		502942-01-01			502942-01-01		502942-01-01		
	UNITS	KZ-28	RDL	QC Batch	KZ-6	QC Batch	TRIP BLANK	RDL	QC Batch
Nitrite (N)	mg/L	<0.0020 (1)	0.0020	8385384	<0.0020 (2)	8385384	<0.0020	0.0020	8385384
Total Phosphorus (P)	mg/L	0.0498 (1)	0.0020	8386952	0.0065 (2)	8386952	<0.0020	0.0020	8386952
Physical Properties									
Conductivity	uS/cm	331	1.0	8384957	229	8384957	1.2	1.0	8384957
pH	pH	8.21		8384956	8.17	8384956	5.44		8384956
Physical Properties									
Total Suspended Solids	mg/L	43.4 (3)	1.1	8383802	1.5	8383845	<1.0	1.0	8383845

RDL = Reportable Detection Limit

(1) Sample arrived to laboratory past recommended hold time.

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(3) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1917		PK1918		PK1919		
Sampling Date		2016/08/27 16:30		2016/08/26 12:15		2016/08/27 14:32		
COC Number		502942-01-01		502942-01-01		502942-01-01		
	UNITS	KZ-2	QC Batch	KZ-26	QC Batch	KZ-7	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	1.7	8383492	4.0	8383492	2.4	N/A	8383492
Cation Sum	meq/L	1.7	8383492	4.1	8383492	2.6	N/A	8383492
Filter and HNO3 Preservation	N/A	LAB	8384538	LAB	8384538	LAB	N/A	8384538
Ion Balance	N/A	1.0	8383480	1.0	8383480	1.1	0.010	8383480
Nitrate (N)	mg/L	0.105	8383493	0.0124	8383493	0.0157	0.0020	8383493
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384775	<0.00050	8384775	<0.00050	0.00050	8384775
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384787	<0.00050	8384787	<0.00050	0.00050	8384787
Fluoride (F)	mg/L	0.033	8384568	0.099	8384568	0.047	0.010	8384568
Dissolved Organic Carbon (C)	mg/L	2.07	8390300	5.08	8390296	2.92	0.50	8390296
Acidity (pH 4.5)	mg/L	<0.50	8383764	<0.50	8383764	<0.50	0.50	8383764
Alkalinity (Total as CaCO3)	mg/L	38.9	8384947	166	8384947	85.6	0.50	8385000
Acidity (pH 8.3)	mg/L	<0.50	8383764	<0.50	8383764	<0.50	0.50	8383764
Alkalinity (PP as CaCO3)	mg/L	<0.50	8384947	<0.50	8384947	<0.50	0.50	8385000
Bicarbonate (HCO3)	mg/L	47.4	8384947	203	8384947	104	0.50	8385000
Carbonate (CO3)	mg/L	<0.50	8384947	<0.50	8384947	<0.50	0.50	8385000
Hydroxide (OH)	mg/L	<0.50	8384947	<0.50	8384947	<0.50	0.50	8385000
Anions								
Dissolved Sulphate (SO4)	mg/L	42.2	8384797	31.9	8384797	33.6	0.50	8384797
Dissolved Chloride (Cl)	mg/L	0.60	8384796	0.96	8384796	0.90	0.50	8384796
MISCELLANEOUS								
True Colour	Col. Unit	<5.0 (1)	8384556	14.6 (2)	8384556	15.9 (1)	5.0	8384556
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0081 (1)	8386947	0.0354 (2)	8386949	0.0175 (1)	0.0020	8386947
Total Ammonia (N)	mg/L	0.015	8387303	0.011	8387303	0.052	0.0050	8387298
Nitrate plus Nitrite (N)	mg/L	0.105 (1)	8385360	0.0124 (2)	8385360	0.0187 (1)	0.0020	8385360
Nitrite (N)	mg/L	<0.0020 (1)	8385384	<0.0020 (2)	8385384	0.0030 (1)	0.0020	8385384

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1917		PK1918		PK1919		
Sampling Date		2016/08/27 16:30		2016/08/26 12:15		2016/08/27 14:32		
COC Number		502942-01-01		502942-01-01		502942-01-01		
	UNITS	KZ-2	QC Batch	KZ-26	QC Batch	KZ-7	RDL	QC Batch
Total Phosphorus (P)	mg/L	0.0069 (1)	8386952	0.0371 (2)	8386952	0.0180 (1)	0.0020	8386952
Physical Properties								
Conductivity	uS/cm	179	8384957	368	8384957	248	1.0	8385004
pH	pH	7.76	8384956	8.29	8384956	8.11		8385003
Physical Properties								
Total Suspended Solids	mg/L	9.9	8383845	29.0	8383845	8.8	1.0	8383845

RDL = Reportable Detection Limit

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1920		PK1921		PK1922		
Sampling Date		2016/08/27 11:55		2016/08/28 07:35		2016/08/27 07:30		
COC Number		502942-01-01		502942-02-01		502942-02-01		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-15	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.5	8383492	1.4	8383492	2.1	N/A	8383492
Cation Sum	meq/L	2.6	8383492	1.4	8383492	2.2	N/A	8383492
Filter and HNO3 Preservation	N/A	LAB	8384538	LAB	8384538	LAB	N/A	8384538
Ion Balance	N/A	1.1	8383480	1.0	8383480	1.0	0.010	8383480
Nitrate (N)	mg/L	0.0197	8383493	0.0452	8383493	0.0221	0.0020	8383493
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384775	<0.00050	8384775	<0.00050	0.00050	8384775
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384787	<0.00050	8384787	<0.00050	0.00050	8384787
Fluoride (F)	mg/L	0.054	8384568	0.042	8384568	0.052	0.010	8384568
Dissolved Organic Carbon (C)	mg/L	3.93	8390296	4.63	8390296	4.13	0.50	8390296
Acidity (pH 4.5)	mg/L	<0.50	8383764	<0.50	8383764	<0.50	0.50	8383764
Alkalinity (Total as CaCO3)	mg/L	92.9	8384947	54.4	8384947	81.6	0.50	8384947
Acidity (pH 8.3)	mg/L	<0.50	8383764	<0.50	8383764	<0.50	0.50	8383764
Alkalinity (PP as CaCO3)	mg/L	<0.50	8384947	<0.50	8384947	<0.50	0.50	8384947
Bicarbonate (HCO3)	mg/L	113	8384947	66.4	8384947	99.6	0.50	8384947
Carbonate (CO3)	mg/L	<0.50	8384947	<0.50	8384947	<0.50	0.50	8384947
Hydroxide (OH)	mg/L	<0.50	8384947	<0.50	8384947	<0.50	0.50	8384947
Anions								
Dissolved Sulphate (SO4)	mg/L	30.3	8384797	11.5	8384797	22.6	0.50	8384797
Dissolved Chloride (Cl)	mg/L	0.71	8384796	0.72	8384796	0.96	0.50	8384796
MISCELLANEOUS								
True Colour	Col. Unit	15.5 (1)	8384556	11.8 (2)	8384556	18.0 (1)	5.0	8384556
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0231 (1)	8386949	0.0088 (3)	8386949	0.0062 (1)	0.0020	8386949
Total Ammonia (N)	mg/L	0.10	8387304	0.030	8387299	0.11	0.0050	8387304
Nitrate plus Nitrite (N)	mg/L	0.0220 (1)	8385360	0.0452 (2)	8385360	0.0221 (1)	0.0020	8385360

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.
(2) Sample analysed past recommended hold time.
(3) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1920		PK1921		PK1922		
Sampling Date		2016/08/27 11:55		2016/08/28 07:35		2016/08/27 07:30		
COC Number		502942-01-01		502942-02-01		502942-02-01		
	UNITS	**KZ-9**	**QC Batch**	**KZ-13**	**QC Batch**	**KZ-15**	**RDL**	**QC Batch**
Nitrite (N)	mg/L	0.0023 (1)	8385384	<0.0020 (2)	8385384	<0.0020 (1)	0.0020	8385384
Total Phosphorus (P)	mg/L	0.0308 (3)	8391524	<0.0020 (4)	8386952	0.0069 (1)	0.0020	8386952
Physical Properties								
Conductivity	uS/cm	251	8384957	135	8384957	208	1.0	8384957
pH	pH	8.05	8384956	7.95	8384956	8.05		8384956
Physical Properties								
Total Suspended Solids	mg/L	19.1	8383845	3.0	8383845	4.7	1.0	8383845

RDL = Reportable Detection Limit

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample analysed past recommended hold time.

(3) Sample arrived to laboratory past recommended hold time.

(4) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1923		PK1924			PK1925		
Sampling Date		2016/08/27 08:20		2016/08/27 09:04			2016/08/27 12:07		
COC Number		502942-02-01		502942-02-01			502942-02-01		
	UNITS	KZ-16	QC Batch	KZ-17	RDL	QC Batch	KZ-18	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	1.8	8383492	3.0	N/A	8383492	3.6	N/A	8383492
Cation Sum	meq/L	1.8	8383492	3.0	N/A	8383492	3.8	N/A	8383492
Filter and HNO3 Preservation	N/A	LAB	8384538	LAB	N/A	8384538	LAB	N/A	8384538
Ion Balance	N/A	1.0	8383480	1.0	0.010	8383480	1.0	0.010	8383480
Nitrate (N)	mg/L	0.0248	8383493	0.0189	0.0020	8383493	0.0415	0.0020	8383493
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384775	<0.00050	0.00050	8384775	<0.00050	0.00050	8384775
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384787	<0.00050	0.00050	8384787	<0.00050	0.00050	8384787
Fluoride (F)	mg/L	0.042	8384568	0.082	0.010	8384568	0.061	0.010	8384568
Dissolved Organic Carbon (C)	mg/L	3.62	8390296	4.79	0.50	8390296	3.14	0.50	8390294
Acidity (pH 4.5)	mg/L	<0.50	8383764	<0.50	0.50	8383764	<0.50	0.50	8383764
Alkalinity (Total as CaCO3)	mg/L	68.0	8384947	118	0.50	8384947	161	0.50	8384947
Acidity (pH 8.3)	mg/L	<0.50	8383764	<0.50	0.50	8383764	1.13	0.50	8383764
Alkalinity (PP as CaCO3)	mg/L	<0.50	8384947	<0.50	0.50	8384947	<0.50	0.50	8384947
Bicarbonate (HCO3)	mg/L	83.0	8384947	144	0.50	8384947	196	0.50	8384947
Carbonate (CO3)	mg/L	<0.50	8384947	<0.50	0.50	8384947	<0.50	0.50	8384947
Hydroxide (OH)	mg/L	<0.50	8384947	<0.50	0.50	8384947	<0.50	0.50	8384947
Anions									
Dissolved Sulphate (SO4)	mg/L	21.2	8384797	26.6	0.50	8384797	17.9	0.50	8384797
Dissolved Chloride (Cl)	mg/L	0.95	8384796	1.1	0.50	8384796	0.72	0.50	8384796
MISCELLANEOUS									
True Colour	Col. Unit	15.5 (1)	8384556	16.0 (1)	5.0	8384556	12.3 (1)	5.0	8384556
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0046 (1)	8386949	0.0096 (1)	0.0020	8386949	0.0206 (1)	0.0020	8386949
Total Ammonia (N)	mg/L	0.033	8387299	0.028	0.0050	8387304	0.014	0.0050	8387304
Nitrate plus Nitrite (N)	mg/L	0.0248 (1)	8385360	0.0189 (1)	0.0020	8385360	0.0415 (1)	0.0020	8385360
Nitrite (N)	mg/L	<0.0020 (1)	8385384	<0.0020 (1)	0.0020	8385384	<0.0020 (1)	0.0020	8385384
Total Phosphorus (P)	mg/L	0.0040 (1)	8386952	0.0096 (1)	0.0020	8386952	0.0206 (1)	0.0020	8386952

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1923		PK1924			PK1925		
Sampling Date		2016/08/27 08:20		2016/08/27 09:04			2016/08/27 12:07		
COC Number		502942-02-01		502942-02-01			502942-02-01		
	UNITS	KZ-16	QC Batch	KZ-17	RDL	QC Batch	KZ-18	RDL	QC Batch
Physical Properties									
Conductivity	uS/cm	183	8384957	282	1.0	8384957	339	1.0	8384957
pH	pH	8.00	8384956	8.14		8384956	8.04		8384956
Physical Properties									
Total Suspended Solids	mg/L	2.1	8383845	5.6	1.0	8383845	1.3 (1)	1.2	8383845

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK2591			PK2592		
Sampling Date		2016/08/27 11:20			2016/08/27 12:30		
COC Number		503657-01-01			503657-01-01		
	UNITS	KZ-9 WEST SEEP	RDL	QC Batch	KZ-9 EAST SEEP	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	4.9	N/A	8383492	14	N/A	8390534
Cation Sum	meq/L	4.8	N/A	8383492	18	N/A	8390534
Filter and HNO3 Preservation	N/A	LAB	N/A	8384538	LAB	N/A	8384538
Ion Balance	N/A	1.0	0.010	8383480	1.3 (1)	0.010	8390533
Nitrate (N)	mg/L	0.390	0.0020	8383918	0.0489	0.0020	8383918
Demand Parameters							
Chemical Oxygen Demand	mg/L	<10	10	8384442	<10	10	8384442
Misc. Inorganics							
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8384775	<0.00050	0.00050	8384775
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8384787	<0.00050	0.00050	8384787
Fluoride (F)	mg/L	0.067	0.010	8384579	0.970	0.010	8384579
Dissolved Organic Carbon (C)	mg/L	0.91	0.50	8390296	<0.50	0.50	8390296
Acidity (pH 4.5)	mg/L	<0.50	0.50	8386197	<0.50	0.50	8386197
Alkalinity (Total as CaCO3)	mg/L	213	0.50	8384980	686	0.50	8384980
Total Organic Carbon (C)	mg/L	1.03	0.50	8390286	2.71	0.50	8390286
Acidity (pH 8.3)	mg/L	1.50	0.50	8386197	131	0.50	8386197
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8384980	<0.50	0.50	8384980
Bicarbonate (HCO3)	mg/L	260	0.50	8384980	836	0.50	8384980
Carbonate (CO3)	mg/L	<0.50	0.50	8384980	<0.50	0.50	8384980
Hydroxide (OH)	mg/L	<0.50	0.50	8384980	<0.50	0.50	8384980
Anions							
Orthophosphate (P)	mg/L	<0.0010 (2)	0.0010	8384843	0.0022 (2)	0.0010	8384843
Dissolved Sulphate (SO4)	mg/L	26.0	0.50	8389104	16.2	0.50	8389104
Dissolved Chloride (Cl)	mg/L	0.77	0.50	8389102	1.4	0.50	8389102
MISCELLANEOUS							
True Colour	Col. Unit	<5.0	5.0	8384569	80.5 (2)	5.0	8384569

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Anion - Cation balance exceeds normal acceptance limits, major ions reanalyzed, possible matrix interference

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK2591			PK2592		
Sampling Date		2016/08/27 11:20			2016/08/27 12:30		
COC Number		503657-01-01			503657-01-01		
	UNITS	KZ-9 WEST SEEP	RDL	QC Batch	KZ-9 EAST SEEP	RDL	QC Batch
Nutrients							
Dissolved Ammonia (N)	mg/L		0.0050		0.079	0.0050	8387315
Dissolved Phosphorus (P)	mg/L	0.0071 (1)	0.0020	8391522	0.0138 (2)	0.0020	8386948
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.078	0.020	8383315	0.148	0.020	8383315
Total Ammonia (N)	mg/L	0.070	0.0050	8387300		0.0050	
Nitrate plus Nitrite (N)	mg/L	0.392 (2)	0.0020	8385393	0.0489 (2)	0.0020	8385393
Nitrite (N)	mg/L	0.0024 (2)	0.0020	8385394	<0.0020 (2)	0.0020	8385394
Total Nitrogen (N)	mg/L	0.470	0.020	8389177	0.197	0.020	8389177
Total Phosphorus (P)	mg/L	0.0081 (1)	0.0020	8391524	0.0116 (2)	0.0020	8386952
Physical Properties							
Conductivity	uS/cm	457	1.0	8384985	1260	1.0	8384985
pH	pH	8.14		8384984	6.70		8384984
Physical Properties							
Total Suspended Solids	mg/L	2.1	1.0	8385244	68.6 (3)	1.1	8385244
Total Dissolved Solids	mg/L	262	1.0	8384591	700	1.0	8384591
Turbidity	NTU	0.49 (2)	0.10	8384575	9.49 (2)	0.10	8384575

RDL = Reportable Detection Limit

(1) Sample arrived to laboratory past recommended hold time.

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(3) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK2593		PK2594		PK2595		
Sampling Date		2016/08/28 18:05		2016/08/27 15:55		2016/08/27 14:13		
COC Number		503657-01-01		503657-01-01		503657-01-01		
	UNITS	SEEP 3	QC Batch	SEEP 4	QC Batch	SEEP 5	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	3.3	8392851	3.2	8383492	2.3	N/A	8383492
Cation Sum	meq/L	3.3	8392851	3.3	8383492	2.4	N/A	8383492
Filter and HNO3 Preservation	N/A	LAB	8384538	LAB	8384538	LAB	N/A	8384538
Ion Balance	N/A	0.98	8392850	1.0	8383480	1.1	0.010	8383480
Nitrate (N)	mg/L	0.587	8383918	0.378	8383918	<0.0020	0.0020	8383918
Demand Parameters								
Chemical Oxygen Demand	mg/L	<10	8384442	10	8384442	18	10	8384442
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384775	<0.00050	8384775	0.00113	0.00050	8384775
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384787	<0.00050	8384787	0.00115	0.00050	8384787
Fluoride (F)	mg/L	0.032	8384579	0.038	8384579	0.084	0.010	8384572
Dissolved Organic Carbon (C)	mg/L	1.43	8390296	1.80	8390296	9.67	0.50	8390296
Acidity (pH 4.5)	mg/L	<0.50	8386197	<0.50	8386197	<0.50	0.50	8386197
Alkalinity (Total as CaCO3)	mg/L	133	8384980	118	8384980	92.8	0.50	8384980
Total Organic Carbon (C)	mg/L	1.28	8390286	5.40	8390286	9.70	0.50	8390286
Acidity (pH 8.3)	mg/L	<0.50	8386197	0.67	8386197	6.37	0.50	8386197
Alkalinity (PP as CaCO3)	mg/L	<0.50	8384980	<0.50	8384980	<0.50	0.50	8384980
Bicarbonate (HCO3)	mg/L	163	8384980	144	8384980	113	0.50	8384980
Carbonate (CO3)	mg/L	<0.50	8384980	<0.50	8384980	<0.50	0.50	8384980
Hydroxide (OH)	mg/L	<0.50	8384980	<0.50	8384980	<0.50	0.50	8384980
Anions								
Orthophosphate (P)	mg/L	<0.0010 (1)	8384843	<0.0010 (2)	8384843	0.0052 (2)	0.0010	8384843
Dissolved Sulphate (SO4)	mg/L	27.7	8389104	38.4	8389104	17.7	0.50	8389104
Dissolved Chloride (Cl)	mg/L	0.75	8389102	<0.50	8389102	2.6	0.50	8389102
MISCELLANEOUS								
True Colour	Col. Unit	5.2 (1)	8384569	6.9 (2)	8384569	64.6 (2)	5.0	8384569
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	8386948	0.0031 (2)	8386948	0.0227 (2)	0.0020	8386948

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Sample analysed past recommended hold time.

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK2593		PK2594		PK2595		
Sampling Date		2016/08/28 18:05		2016/08/27 15:55		2016/08/27 14:13		
COC Number		503657-01-01		503657-01-01		503657-01-01		
	UNITS	SEEP 3	QC Batch	SEEP 4	QC Batch	SEEP 5	RDL	QC Batch
Total Total Kjeldahl Nitrogen (Calc)	mg/L	<0.020	8383315	0.145	8383315	0.439	0.020	8383315
Total Ammonia (N)	mg/L	0.017	8387300	0.036	8387300	0.16	0.0050	8387300
Nitrate plus Nitrite (N)	mg/L	0.587 (1)	8385393	0.378 (2)	8385393	0.0025 (2)	0.0020	8385385
Nitrite (N)	mg/L	<0.0020 (1)	8385394	<0.0020 (2)	8385394	0.0030 (2)	0.0020	8385386
Total Nitrogen (N)	mg/L	0.603	8389177	0.523	8389177	0.442	0.020	8389177
Total Phosphorus (P)	mg/L	<0.0020 (1)	8386951	0.0061 (2)	8386951	0.0223 (2)	0.0020	8386951
Physical Properties								
Conductivity	uS/cm	319	8384985	320	8384985	233	1.0	8384985
pH	pH	8.19	8384984	8.06	8384984	7.56		8384984
Physical Properties								
Total Suspended Solids	mg/L	1.4	8385244	8.4	8385244	3.1	1.0	8385244
Total Dissolved Solids	mg/L	190	8384591	198	8384591	132	1.0	8384591
Turbidity	NTU	0.19 (1)	8384575	0.25 (2)	8384575	7.29 (2)	0.10	8384575

RDL = Reportable Detection Limit

(1) Sample analysed past recommended hold time.

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		PK2591	PK2592	PK2593	PK2594	PK2595		
Sampling Date		2016/08/27 11:20	2016/08/27 12:30	2016/08/28 18:05	2016/08/27 15:55	2016/08/27 14:13		
COC Number		503657-01-01	503657-01-01	503657-01-01	503657-01-01	503657-01-01		
	UNITS	KZ-9 WEST SEEP	KZ-9 EAST SEEP	SEEP 3	SEEP 4	SEEP 5	RDL	QC Batch
ANIONS								
Bromide (Br)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8390650
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK1911		PK1912	PK1913	PK1914		
Sampling Date		2016/08/27 16:50		2016/08/26 15:00	2016/08/26 14:00	2016/08/26 14:15		
COC Number		502942-01-01		502942-01-01	502942-01-01	502942-01-01		
	UNITS	KZ-19	QC Batch	KZ-21	KZ-22	KZ-28	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	<0.50	8383209	219	183	178	0.50	8383209
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8386342	<0.0000020	<0.0000020	<0.0000020	0.0000020	8386342
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	<0.00050	8385058	0.00349	0.00163	0.00191	0.00050	8385058
Dissolved Antimony (Sb)	mg/L	<0.000020	8385058	0.000134	0.000064	0.000069	0.000020	8385058
Dissolved Arsenic (As)	mg/L	<0.000020	8385058	0.00169	0.00102	0.000996	0.000020	8385058
Dissolved Barium (Ba)	mg/L	<0.000020	8392434	0.0529	0.0554	0.0562	0.000020	8385058
Dissolved Beryllium (Be)	mg/L	<0.000010	8385058	<0.000010	<0.000010	<0.000010	0.000010	8385058
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8385058	<0.0000050	<0.0000050	<0.0000050	0.0000050	8385058
Dissolved Boron (B)	mg/L	<0.010	8385058	<0.010	<0.010	<0.010	0.010	8385058
Dissolved Cadmium (Cd)	mg/L	<0.0000050	8385058	0.0000060	0.0000050	0.0000060	0.0000050	8385058
Dissolved Chromium (Cr)	mg/L	<0.00010	8385058	<0.00010	<0.00010	<0.00010	0.00010	8385058
Dissolved Cobalt (Co)	mg/L	<0.0000050	8385058	0.0000210	0.0000100	0.0000150	0.0000050	8385058
Dissolved Copper (Cu)	mg/L	<0.000050	8385058	0.000792	0.000545	0.000571	0.000050	8385058
Dissolved Iron (Fe)	mg/L	<0.0010	8385058	0.156	0.0559	0.0591	0.0010	8385058
Dissolved Lead (Pb)	mg/L	<0.0000050	8385058	0.0000110	<0.0000050	0.0000170	0.0000050	8385058
Dissolved Lithium (Li)	mg/L	<0.00050	8385058	0.00342	0.00303	0.00274	0.00050	8385058
Dissolved Manganese (Mn)	mg/L	<0.000050	8385058	0.00195	0.000612	0.00118	0.000050	8385058
Dissolved Molybdenum (Mo)	mg/L	<0.000050	8385058	0.00135	0.000939	0.000927	0.000050	8385058
Dissolved Nickel (Ni)	mg/L	<0.000020	8385058	0.00296	0.00126	0.00129	0.000020	8385058
Dissolved Phosphorus (P)	mg/L	<0.0020	8385058	0.0082	0.0065	0.0028	0.0020	8385058
Dissolved Selenium (Se)	mg/L	<0.000040	8385058	0.000414	0.000417	0.000410	0.000040	8385058
Dissolved Silicon (Si)	mg/L	<0.050	8385058	4.12	3.22	3.22	0.050	8385058
Dissolved Silver (Ag)	mg/L	<0.0000050	8385058	<0.0000050	<0.0000050	<0.0000050	0.0000050	8385058
Dissolved Strontium (Sr)	mg/L	<0.000050	8392434	0.162	0.165	0.159	0.000050	8385058
Dissolved Thallium (Tl)	mg/L	<0.0000020	8385058	<0.0000020	<0.0000020	<0.0000020	0.0000020	8385058
Dissolved Tin (Sn)	mg/L	<0.00020	8385058	<0.00020	<0.00020	<0.00020	0.00020	8385058
Dissolved Titanium (Ti)	mg/L	<0.00050	8385058	<0.00050	<0.00050	<0.00050	0.00050	8385058
Dissolved Uranium (U)	mg/L	<0.0000020	8385058	0.00231	0.00177	0.00172	0.0000020	8385058
Dissolved Vanadium (V)	mg/L	<0.00020	8385058	<0.00020	<0.00020	<0.00020	0.00020	8385058

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK1911		PK1912	PK1913	PK1914		
Sampling Date		2016/08/27 16:50		2016/08/26 15:00	2016/08/26 14:00	2016/08/26 14:15		
COC Number		502942-01-01		502942-01-01	502942-01-01	502942-01-01		
	UNITS	KZ-19	QC Batch	KZ-21	KZ-22	KZ-28	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	<0.00010	8385058	0.00089	0.00052	0.00079	0.00010	8385058
Dissolved Zirconium (Zr)	mg/L	<0.00010	8385058	0.00013	<0.00010	<0.00010	0.00010	8385058
Dissolved Calcium (Ca)	mg/L	<0.050	8383437	54.2	51.2	48.0	0.050	8383437
Dissolved Magnesium (Mg)	mg/L	<0.050	8383437	20.3	13.5	14.0	0.050	8383437
Dissolved Potassium (K)	mg/L	<0.050	8383437	1.03	1.11	1.10	0.050	8383437
Dissolved Sodium (Na)	mg/L	<0.050	8383437	1.27	1.07	1.09	0.050	8383437
Dissolved Sulphur (S)	mg/L	<3.0	8383437	11.8	9.5	9.8	3.0	8383437
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK1915	PK1916	PK1917	PK1918	PK1919		
Sampling Date		2016/08/27 15:33	2016/08/30 10:35	2016/08/27 16:30	2016/08/26 12:15	2016/08/27 14:32		
COC Number		502942-01-01	502942-01-01	502942-01-01	502942-01-01	502942-01-01		
	UNITS	KZ-6	TRIP BLANK	KZ-2	KZ-26	KZ-7	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	118	<0.50	80.9	202	125	0.50	8383209
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8386342
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00465	<0.00050	0.0221	0.00304	0.00748	0.00050	8385058
Dissolved Antimony (Sb)	mg/L	<0.000020	<0.000020	0.000032	0.000091	0.000072	0.000020	8385058
Dissolved Arsenic (As)	mg/L	0.000093	<0.000020	0.000109	0.000863	0.000288	0.000020	8385058
Dissolved Barium (Ba)	mg/L	0.0340	<0.000020	0.0455	0.0663	0.0555	0.000020	8385058
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8385058
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8385058
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8385058
Dissolved Cadmium (Cd)	mg/L	0.0000120	<0.0000050	0.000542	0.0000080	0.000151	0.0000050	8385058
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8385058
Dissolved Cobalt (Co)	mg/L	0.0000150	<0.0000050	0.000106	0.0000170	0.0000240	0.0000050	8385058
Dissolved Copper (Cu)	mg/L	0.000345	<0.000050	0.00150	0.000711	0.00165	0.000050	8385058
Dissolved Iron (Fe)	mg/L	0.0193	<0.0010	0.0042	0.0335	0.0372	0.0010	8385058
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000580	0.0000060	0.000155	0.0000050	8385058
Dissolved Lithium (Li)	mg/L	<0.00050	<0.00050	0.00080	0.00378	0.00070	0.00050	8385058
Dissolved Manganese (Mn)	mg/L	0.000677	<0.000050	0.00594	0.000673	0.0128	0.000050	8385058
Dissolved Molybdenum (Mo)	mg/L	0.000300	<0.000050	0.000555	0.00102	0.000396	0.000050	8385058
Dissolved Nickel (Ni)	mg/L	0.000270	<0.000020	0.000848	0.00119	0.000472	0.000020	8385058
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020	0.0032	0.0029	<0.0020	0.0020	8385058
Dissolved Selenium (Se)	mg/L	0.000301	<0.000040	0.000427	0.000388	0.000638	0.000040	8385058
Dissolved Silicon (Si)	mg/L	2.47	<0.050	1.73	3.36	2.51	0.050	8385058
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8385058
Dissolved Strontium (Sr)	mg/L	0.120	<0.000050	0.0767	0.178	0.122	0.000050	8385058
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000060	<0.0000020	0.0000030	0.0000020	8385058
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8385058
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8385058
Dissolved Uranium (U)	mg/L	0.000424	<0.0000020	0.00132	0.00194	0.000679	0.0000020	8385058
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8385058
RDL = Reportable Detection Limit								

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK1915	PK1916	PK1917	PK1918	PK1919		
Sampling Date		2016/08/27 15:33	2016/08/30 10:35	2016/08/27 16:30	2016/08/26 12:15	2016/08/27 14:32		
COC Number		502942-01-01	502942-01-01	502942-01-01	502942-01-01	502942-01-01		
	UNITS	KZ-6	TRIP BLANK	KZ-2	KZ-26	KZ-7	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00036	<0.00010	0.0974	0.00034	0.0281	0.00010	8385058
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8385058
Dissolved Calcium (Ca)	mg/L	39.2	<0.050	28.4	54.5	40.8	0.050	8383437
Dissolved Magnesium (Mg)	mg/L	4.76	<0.050	2.45	15.9	5.53	0.050	8383437
Dissolved Potassium (K)	mg/L	0.738	<0.050	1.09	1.14	1.21	0.050	8383437
Dissolved Sodium (Na)	mg/L	0.607	<0.050	0.508	1.30	0.753	0.050	8383437
Dissolved Sulphur (S)	mg/L	4.6	<3.0	14.1	10.8	11.9	3.0	8383437

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK1920	PK1921	PK1922	PK1923	PK1924		
Sampling Date		2016/08/27 11:55	2016/08/28 07:35	2016/08/27 07:30	2016/08/27 08:20	2016/08/27 09:04		
COC Number		502942-01-01	502942-02-01	502942-02-01	502942-02-01	502942-02-01		
	UNITS	KZ-9	KZ-13	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	128	64.0	108	88.9	147	0.50	8383209
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8386342
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00581	0.00879	0.00556	0.00510	0.00488	0.00050	8385058
Dissolved Antimony (Sb)	mg/L	0.000070	0.000028	0.000031	0.000020	0.000062	0.000020	8385058
Dissolved Arsenic (As)	mg/L	0.000250	0.000202	0.000316	0.000221	0.000441	0.000020	8385058
Dissolved Barium (Ba)	mg/L	0.0597	0.0920	0.0446	0.0407	0.0572	0.000020	8385058
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8385058
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8385058
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8385058
Dissolved Cadmium (Cd)	mg/L	0.0000630	0.0000150	0.0000210	0.0000160	0.0000220	0.0000050	8385058
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8385058
Dissolved Cobalt (Co)	mg/L	0.0000300	0.0000180	0.0000170	0.0000180	0.0000180	0.0000050	8385058
Dissolved Copper (Cu)	mg/L	0.00141	0.000558	0.000962	0.000851	0.00105	0.000050	8385058
Dissolved Iron (Fe)	mg/L	0.0475	0.0215	0.0208	0.0089	0.0298	0.0010	8385058
Dissolved Lead (Pb)	mg/L	0.000153	0.0000190	0.0000340	<0.0000050	0.0000720	0.0000050	8385058
Dissolved Lithium (Li)	mg/L	0.00150	0.00115	0.00106	0.00103	0.00170	0.00050	8385058
Dissolved Manganese (Mn)	mg/L	0.0153	0.00566	0.00608	0.00179	0.0111	0.000050	8385058
Dissolved Molybdenum (Mo)	mg/L	0.000443	0.000463	0.000496	0.000265	0.00106	0.000050	8385058
Dissolved Nickel (Ni)	mg/L	0.000435	0.000439	0.000512	0.000390	0.000756	0.000020	8385058
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0029	0.0044	0.0024	0.0035	0.0020	8385058
Dissolved Selenium (Se)	mg/L	0.000638	0.000128	0.000346	0.000255	0.000533	0.000040	8385058
Dissolved Silicon (Si)	mg/L	2.86	2.24	2.51	2.13	3.05	0.050	8385058
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8385058
Dissolved Strontium (Sr)	mg/L	0.127	0.0660	0.109	0.0937	0.143	0.000050	8385058
Dissolved Thallium (Tl)	mg/L	0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8385058
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8385058
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8385058
Dissolved Uranium (U)	mg/L	0.000661	0.000473	0.000682	0.000360	0.00159	0.0000020	8385058
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8385058

RDL = Reportable Detection Limit

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK1920	PK1921	PK1922	PK1923	PK1924		
Sampling Date		2016/08/27 11:55	2016/08/28 07:35	2016/08/27 07:30	2016/08/27 08:20	2016/08/27 09:04		
COC Number		502942-01-01	502942-02-01	502942-02-01	502942-02-01	502942-02-01		
	UNITS	KZ-9	KZ-13	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0126	0.00315	0.00176	0.00077	0.00315	0.00010	8385058
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00011	<0.00010	<0.00010	0.00010	8385058
Dissolved Calcium (Ca)	mg/L	43.0	21.5	34.4	28.9	44.4	0.050	8383437
Dissolved Magnesium (Mg)	mg/L	5.09	2.52	5.42	4.03	8.68	0.050	8383437
Dissolved Potassium (K)	mg/L	1.22	1.22	1.05	1.01	1.14	0.050	8383437
Dissolved Sodium (Na)	mg/L	0.837	0.914	0.725	0.641	0.919	0.050	8383437
Dissolved Sulphur (S)	mg/L	9.9	3.8	7.6	7.1	8.5	3.0	8383437
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK1925		PK2591		PK2592		
Sampling Date		2016/08/27 12:07		2016/08/27 11:20		2016/08/27 12:30		
COC Number		502942-02-01		503657-01-01		503657-01-01		
	UNITS	KZ-18	QC Batch	KZ-9 WEST SEEP	QC Batch	KZ-9 EAST SEEP	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	186	8383209	238	8383917	852	0.50	8390478
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8386342	<0.0000020	8385941	<0.0000020	0.0000020	8385941
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00725	8385058	0.00107	8385098	0.0952	0.00050	8390612
Dissolved Antimony (Sb)	mg/L	0.000029	8385058	0.000021	8385098	<0.000020	0.000020	8390612
Dissolved Arsenic (As)	mg/L	0.000493	8385058	0.000085	8385098	0.000579	0.000020	8390612
Dissolved Barium (Ba)	mg/L	0.0435	8385058	0.161	8385098	0.147	0.000020	8390612
Dissolved Beryllium (Be)	mg/L	<0.000010	8385058	<0.000010	8385098	0.000279	0.000010	8390612
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8385058	<0.0000050	8385098	<0.0000050	0.0000050	8390612
Dissolved Boron (B)	mg/L	<0.010	8385058	<0.010	8385098	<0.010	0.010	8390612
Dissolved Cadmium (Cd)	mg/L	0.0000230	8385058	0.0000550	8385098	0.0000620	0.0000050	8390612
Dissolved Chromium (Cr)	mg/L	<0.00010	8385058	0.00015	8385098	<0.00010	0.00010	8390612
Dissolved Cobalt (Co)	mg/L	0.0000140	8385058	0.0000060	8385098	0.00230	0.0000050	8390612
Dissolved Copper (Cu)	mg/L	0.000306	8385058	0.000157	8385098	0.000052	0.000050	8390612
Dissolved Iron (Fe)	mg/L	0.0089	8385058	0.0027	8385098	6.64	0.0010	8390612
Dissolved Lead (Pb)	mg/L	0.0000410	8385058	<0.0000050	8385098	<0.0000050	0.0000050	8390612
Dissolved Lithium (Li)	mg/L	0.00158	8385058	0.00171	8385098	0.0806	0.00050	8390612
Dissolved Manganese (Mn)	mg/L	0.00411	8385058	0.000533	8385098	1.96	0.000050	8390612
Dissolved Molybdenum (Mo)	mg/L	0.00104	8385058	0.00157	8385098	0.000459	0.000050	8390612
Dissolved Nickel (Ni)	mg/L	0.000568	8385058	0.000094	8385098	0.00718	0.000020	8390612
Dissolved Phosphorus (P)	mg/L	0.0183	8385058	<0.0020	8385098	<0.0020	0.0020	8390612
Dissolved Selenium (Se)	mg/L	0.000712	8385058	0.00343	8385098	<0.000040	0.000040	8390612
Dissolved Silicon (Si)	mg/L	2.98	8385058	3.46	8385098	19.3	0.050	8390612
Dissolved Silver (Ag)	mg/L	<0.0000050	8385058	<0.0000050	8385098	<0.0000050	0.0000050	8390612
Dissolved Strontium (Sr)	mg/L	0.162	8385058	0.249	8385098	1.28	0.000050	8390612
Dissolved Thallium (Tl)	mg/L	<0.0000020	8385058	<0.0000020	8385098	0.0000020	0.0000020	8390612
Dissolved Tin (Sn)	mg/L	<0.00020	8385058	<0.00020	8385098	<0.00020	0.00020	8390612
Dissolved Titanium (Ti)	mg/L	<0.00050	8385058	<0.00050	8385098	<0.00050	0.00050	8390612
Dissolved Uranium (U)	mg/L	0.00165	8385058	0.00279	8385098	0.00183	0.0000020	8390612
Dissolved Vanadium (V)	mg/L	<0.00020	8385058	<0.00020	8385098	<0.00020	0.00020	8390612
RDL = Reportable Detection Limit								

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK1925		PK2591		PK2592		
Sampling Date		2016/08/27 12:07		2016/08/27 11:20		2016/08/27 12:30		
COC Number		502942-02-01		503657-01-01		503657-01-01		
	UNITS	**KZ-18**	**QC Batch**	**KZ-9 WEST SEEP**	**QC Batch**	**KZ-9 EAST SEEP**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.00095	8385058	0.00115	8390612	0.0282	0.00010	8390612
Dissolved Zirconium (Zr)	mg/L	<0.00010	8385058	<0.00010	8385098	0.00040	0.00010	8390612
Dissolved Calcium (Ca)	mg/L	48.1	8383437	78.2	8383437	290	0.050	8389462
Dissolved Magnesium (Mg)	mg/L	16.0	8383437	10.4	8383437	30.8	0.050	8389462
Dissolved Potassium (K)	mg/L	0.506	8383437	1.08	8383437	4.89	0.050	8389462
Dissolved Sodium (Na)	mg/L	0.839	8383437	0.994	8383437	8.18	0.050	8389462
Dissolved Sulphur (S)	mg/L	6.0	8383437	9.3	8383437	7.2	3.0	8389462
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK2593		PK2594	PK2595		
Sampling Date		2016/08/28 18:05		2016/08/27 15:55	2016/08/27 14:13		
COC Number		503657-01-01		503657-01-01	503657-01-01		
	UNITS	SEEP 3	QC Batch	SEEP 4	SEEP 5	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	163	8392311	159	110	0.50	8383917
Elements							
Dissolved Mercury (Hg)	mg/L	0.0000020	8385941	<0.0000020	<0.0000020	0.0000020	8385941
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00217	8390612	0.00234	0.0126	0.00050	8385098
Dissolved Antimony (Sb)	mg/L	<0.000020	8390612	<0.000020	0.000064	0.000020	8385098
Dissolved Arsenic (As)	mg/L	0.000125	8390612	0.000052	0.000308	0.000020	8385098
Dissolved Barium (Ba)	mg/L	0.120	8390612	0.122	0.0693	0.000020	8385098
Dissolved Beryllium (Be)	mg/L	<0.000010	8390612	<0.000010	<0.000010	0.000010	8385098
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8390612	<0.0000050	<0.0000050	0.0000050	8385098
Dissolved Boron (B)	mg/L	<0.010	8390612	<0.010	<0.010	0.010	8385098
Dissolved Cadmium (Cd)	mg/L	0.0000080	8390612	0.0000130	0.000345	0.0000050	8385098
Dissolved Chromium (Cr)	mg/L	<0.00010	8390612	<0.00010	0.00014	0.00010	8385098
Dissolved Cobalt (Co)	mg/L	0.0000070	8390612	0.0000100	0.000366	0.0000050	8385098
Dissolved Copper (Cu)	mg/L	0.000131	8390612	0.000347	0.00235	0.000050	8385098
Dissolved Iron (Fe)	mg/L	<0.0010	8390612	0.0025	1.11	0.0010	8385098
Dissolved Lead (Pb)	mg/L	<0.0000050	8390612	0.0000060	0.0000350	0.0000050	8385098
Dissolved Lithium (Li)	mg/L	<0.00050	8390612	<0.00050	0.00359	0.00050	8385098
Dissolved Manganese (Mn)	mg/L	<0.000050	8390612	0.000073	0.131	0.000050	8385098
Dissolved Molybdenum (Mo)	mg/L	0.000506	8390612	0.000537	0.000538	0.000050	8385098
Dissolved Nickel (Ni)	mg/L	0.000042	8390612	0.000133	0.00275	0.000020	8385098
Dissolved Phosphorus (P)	mg/L	<0.0020	8390612	<0.0020	0.0086	0.0020	8385098
Dissolved Selenium (Se)	mg/L	0.000765	8390612	0.000860	0.000237	0.000040	8385098
Dissolved Silicon (Si)	mg/L	2.43	8390612	3.01	5.42	0.050	8385098
Dissolved Silver (Ag)	mg/L	<0.0000050	8390612	<0.0000050	<0.0000050	0.0000050	8385098
Dissolved Strontium (Sr)	mg/L	0.223	8390612	0.237	0.139	0.000050	8385098
Dissolved Thallium (Tl)	mg/L	<0.0000020	8390612	<0.0000020	0.0000030	0.0000020	8385098
Dissolved Tin (Sn)	mg/L	<0.00020	8390612	<0.00020	<0.00020	0.00020	8385098
Dissolved Titanium (Ti)	mg/L	<0.00050	8390612	<0.00050	<0.00050	0.00050	8385098
Dissolved Uranium (U)	mg/L	0.000923	8390612	0.00119	0.000218	0.0000020	8385098
Dissolved Vanadium (V)	mg/L	<0.00020	8390612	<0.00020	<0.00020	0.00020	8385098
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK2593		PK2594	PK2595		
Sampling Date		2016/08/28 18:05		2016/08/27 15:55	2016/08/27 14:13		
COC Number		503657-01-01		503657-01-01	503657-01-01		
	UNITS	**SEEP 3**	**QC Batch**	**SEEP 4**	**SEEP 5**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.00064	8390612	0.00084	0.0681	0.00010	8385098
Dissolved Zirconium (Zr)	mg/L	<0.00010	8390612	<0.00010	0.00016	0.00010	8385098
Dissolved Calcium (Ca)	mg/L	61.7	8392503	59.1	36.1	0.050	8383437
Dissolved Magnesium (Mg)	mg/L	2.14	8392503	2.81	4.81	0.050	8383437
Dissolved Potassium (K)	mg/L	1.25	8392503	1.79	0.830	0.050	8383437
Dissolved Sodium (Na)	mg/L	0.713	8392503	0.687	3.73	0.050	8383437
Dissolved Sulphur (S)	mg/L	9.4	8392503	14.2	5.9	3.0	8383437
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PK1911		PK1915	PK1916	PK1921		
Sampling Date		2016/08/27 16:50		2016/08/27 15:33	2016/08/30 10:35	2016/08/28 07:35		
COC Number		502942-01-01		502942-01-01	502942-01-01	502942-02-01		
	UNITS	KZ-19	QC Batch	KZ-6	TRIP BLANK	KZ-13	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	<0.50	8383182	123	<0.50	68.0	0.50	8383182
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	8386318	<0.0000020	<0.0000020	<0.0000020	0.0000020	8386318
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	<0.00050	8385137	0.00837	<0.00050	0.0261	0.00050	8385137
Total Antimony (Sb)	mg/L	<0.000020	8385137	<0.000020	<0.000020	0.000023	0.000020	8385137
Total Arsenic (As)	mg/L	<0.000020	8385137	0.000101	<0.000020	0.000231	0.000020	8385137
Total Barium (Ba)	mg/L	<0.000020	8385137	0.0350	<0.000020	0.0930	0.000020	8385137
Total Beryllium (Be)	mg/L	<0.000010	8385137	<0.000010	<0.000010	<0.000010	0.000010	8385137
Total Bismuth (Bi)	mg/L	<0.0000050	8385137	<0.0000050	<0.0000050	<0.0000050	0.0000050	8385137
Total Boron (B)	mg/L	<0.010	8385137	<0.010	<0.010	<0.010	0.010	8385137
Total Cadmium (Cd)	mg/L	<0.0000050	8385137	0.0000200	<0.0000050	0.0000340	0.0000050	8385137
Total Chromium (Cr)	mg/L	<0.00010	8385137	<0.00010	<0.00010	<0.00010	0.00010	8385137
Total Cobalt (Co)	mg/L	<0.0000050	8385137	0.0000200	<0.0000050	0.0000370	0.0000050	8385137
Total Copper (Cu)	mg/L	<0.000050	8385137	0.000392	<0.000050	0.000596	0.000050	8385137
Total Iron (Fe)	mg/L	<0.0010	8385137	0.0805	<0.0010	0.0877	0.0010	8385137
Total Lead (Pb)	mg/L	<0.0000050	8391299	0.0000150	<0.0000050	0.0000560	0.0000050	8385137
Total Lithium (Li)	mg/L	<0.00050	8385137	0.00060	0.00076	0.00137	0.00050	8385137
Total Manganese (Mn)	mg/L	<0.000050	8385137	0.00957	<0.000050	0.0175	0.000050	8385137
Total Molybdenum (Mo)	mg/L	<0.000050	8385137	0.000304	<0.000050	0.000462	0.000050	8385137
Total Nickel (Ni)	mg/L	<0.000020	8385137	0.000315	<0.000020	0.000498	0.000020	8385137
Total Phosphorus (P)	mg/L	<0.0020	8385137	0.0033	<0.0020	0.0055	0.0020	8385137
Total Selenium (Se)	mg/L	<0.000040	8385137	0.000333	<0.000040	0.000143	0.000040	8385137
Total Silicon (Si)	mg/L	<0.050	8385137	2.54	<0.050	2.31	0.050	8385137
Total Silver (Ag)	mg/L	<0.0000050	8385137	<0.0000050	<0.0000050	<0.0000050	0.0000050	8385137
Total Strontium (Sr)	mg/L	<0.000050	8385137	0.124	<0.000050	0.0700	0.000050	8385137
Total Thallium (Tl)	mg/L	<0.0000020	8385137	<0.0000020	<0.0000020	<0.0000020	0.0000020	8385137
Total Tin (Sn)	mg/L	<0.00020	8385137	<0.00020	<0.00020	<0.00020	0.00020	8385137
Total Titanium (Ti)	mg/L	<0.00050	8385137	<0.00050	<0.00050	0.00111	0.00050	8385137
Total Uranium (U)	mg/L	<0.0000020	8385137	0.000439	<0.0000020	0.000490	0.0000020	8385137
Total Vanadium (V)	mg/L	<0.00020	8385137	<0.00020	<0.00020	<0.00020	0.00020	8385137

RDL = Reportable Detection Limit

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PK1911		PK1915	PK1916	PK1921		
Sampling Date		2016/08/27 16:50		2016/08/27 15:33	2016/08/30 10:35	2016/08/28 07:35		
COC Number		502942-01-01		502942-01-01	502942-01-01	502942-02-01		
	UNITS	**KZ-19**	**QC Batch**	**KZ-6**	**TRIP BLANK**	**KZ-13**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.00014	8385137	0.00089	0.00011	0.00461	0.00010	8385137
Total Zirconium (Zr)	mg/L	<0.00010	8385137	<0.00010	<0.00010	<0.00010	0.00010	8385137
Total Calcium (Ca)	mg/L	<0.050	8383438	41.2	<0.050	23.1	0.050	8383438
Total Magnesium (Mg)	mg/L	<0.050	8383438	4.99	<0.050	2.50	0.050	8383438
Total Potassium (K)	mg/L	<0.050	8383438	0.754	<0.050	1.22	0.050	8383438
Total Sodium (Na)	mg/L	<0.050	8383438	0.606	<0.050	0.871	0.050	8383438
Total Sulphur (S)	mg/L	<3.0	8383438	4.8	<3.0	4.1	3.0	8383438
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PK1922	PK1923	PK1925		PK2591		
Sampling Date		2016/08/27 07:30	2016/08/27 08:20	2016/08/27 12:07		2016/08/27 11:20		
COC Number		502942-02-01	502942-02-01	502942-02-01		503657-01-01		
	UNITS	KZ-15	KZ-16	KZ-18	QC Batch	KZ-9 WEST SEEP	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	109	94.2	187	8383182	241	0.50	8383916
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8386318	<0.0000020	0.0000020	8386276
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0271	0.00981	0.0113	8385137	0.00473	0.00050	8386259
Total Antimony (Sb)	mg/L	0.000030	<0.000020	0.000025	8385137	0.000020	0.000020	8386259
Total Arsenic (As)	mg/L	0.000473	0.000260	0.000468	8385137	0.000093	0.000020	8386259
Total Barium (Ba)	mg/L	0.0477	0.0413	0.0450	8385137	0.156	0.000020	8386259
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8385137	<0.000010	0.000010	8386259
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8385137	<0.0000050	0.0000050	8386259
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	8385137	<0.010	0.010	8386259
Total Cadmium (Cd)	mg/L	0.0000360	0.0000300	0.0000720	8385137	0.0000890	0.0000050	8386259
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8385137	0.00018	0.00010	8386259
Total Cobalt (Co)	mg/L	0.0000560	0.0000320	0.0000210	8385137	0.0000100	0.0000050	8386259
Total Copper (Cu)	mg/L	0.00110	0.000903	0.000325	8385137	0.000203	0.000050	8386259
Total Iron (Fe)	mg/L	0.126	0.0301	0.0174	8385137	0.0134	0.0010	8386259
Total Lead (Pb)	mg/L	0.000324	0.0000190	0.000132	8385137	0.0000140	0.0000050	8386259
Total Lithium (Li)	mg/L	0.00138	0.00099	0.00172	8385137	0.00130	0.00050	8386259
Total Manganese (Mn)	mg/L	0.0251	0.00651	0.00648	8385137	0.00211	0.000050	8386259
Total Molybdenum (Mo)	mg/L	0.000474	0.000274	0.00107	8385137	0.00151	0.000050	8386259
Total Nickel (Ni)	mg/L	0.000614	0.000426	0.000584	8385137	0.000117	0.000020	8386259
Total Phosphorus (P)	mg/L	0.0068	0.0040	0.0243	8385137	0.0053	0.0020	8386259
Total Selenium (Se)	mg/L	0.000335	0.000267	0.000729	8385137	0.00308	0.000040	8386259
Total Silicon (Si)	mg/L	2.72	2.30	3.28	8385137	3.25	0.050	8386259
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8385137	<0.0000050	0.0000050	8386259
Total Strontium (Sr)	mg/L	0.113	0.0989	0.167	8385137	0.238	0.000050	8386259
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8385137	<0.0000020	0.0000020	8386259
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8385137	<0.00020	0.00020	8386259
Total Titanium (Ti)	mg/L	0.00089	<0.00050	<0.00050	8385137	<0.00050	0.00050	8386259
Total Uranium (U)	mg/L	0.000713	0.000389	0.00166	8385137	0.00272	0.0000020	8386259
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8385137	<0.00020	0.00020	8386259
RDL = Reportable Detection Limit								

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PK1922	PK1923	PK1925		PK2591		
Sampling Date		2016/08/27 07:30	2016/08/27 08:20	2016/08/27 12:07		2016/08/27 11:20		
COC Number		502942-02-01	502942-02-01	502942-02-01		503657-01-01		
	UNITS	**KZ-15**	**KZ-16**	**KZ-18**	**QC Batch**	**KZ-9 WEST SEEP**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.00341	0.00091	0.00376	8385137	0.00132	0.00010	8386259
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8385137	<0.00010	0.00010	8386259
Total Calcium (Ca)	mg/L	34.6	31.0	49.6	8383438	79.2	0.050	8383438
Total Magnesium (Mg)	mg/L	5.40	4.10	15.4	8383438	10.4	0.050	8383438
Total Potassium (K)	mg/L	1.07	1.02	0.545	8383438	1.08	0.050	8383438
Total Sodium (Na)	mg/L	0.709	0.640	0.800	8383438	0.990	0.050	8383438
Total Sulphur (S)	mg/L	7.8	7.7	6.2	8383438	8.5	3.0	8383438
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PK2592		PK2593	PK2594	PK2595		
Sampling Date		2016/08/27 12:30		2016/08/28 18:05	2016/08/27 15:55	2016/08/27 14:13		
COC Number		503657-01-01		503657-01-01	503657-01-01	503657-01-01		
	UNITS	KZ-9 EAST SEEP	QC Batch	SEEP 3	SEEP 4	SEEP 5	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	818	8389856	159	156	109	0.50	8383916
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	8386276	<0.0000020	<0.0000020	<0.0000020	0.0000020	8386276
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.148	8390508	0.00784	0.0129	0.0334	0.00050	8386259
Total Antimony (Sb)	mg/L	<0.000020	8390508	<0.000020	<0.000020	0.000065	0.000020	8386259
Total Arsenic (As)	mg/L	0.0141	8390508	0.000148	0.000069	0.000423	0.000020	8386259
Total Barium (Ba)	mg/L	0.160	8390508	0.118	0.124	0.0737	0.000020	8386259
Total Beryllium (Be)	mg/L	0.000339	8390508	<0.000010	<0.000010	<0.000010	0.000010	8386259
Total Bismuth (Bi)	mg/L	<0.0000050	8390508	<0.0000050	<0.0000050	<0.0000050	0.0000050	8386259
Total Boron (B)	mg/L	<0.010	8390508	<0.010	<0.010	<0.010	0.010	8386259
Total Cadmium (Cd)	mg/L	0.0000760	8390508	0.0000110	0.0000130	0.000352	0.0000050	8386259
Total Chromium (Cr)	mg/L	<0.00010	8390508	<0.00010	<0.00010	0.00017	0.00010	8386259
Total Cobalt (Co)	mg/L	0.00226	8390508	0.0000140	0.0000220	0.000374	0.0000050	8386259
Total Copper (Cu)	mg/L	0.000071	8390508	0.000158	0.000494	0.00298	0.000050	8386259
Total Iron (Fe)	mg/L	13.3	8390508	0.0084	0.0178	1.96	0.0010	8386259
Total Lead (Pb)	mg/L	0.0000560	8390508	0.0000370	0.0000570	0.000238	0.0000050	8386259
Total Lithium (Li)	mg/L	0.0761	8390508	0.00060	<0.00050	0.00401	0.00050	8386259
Total Manganese (Mn)	mg/L	1.93	8390508	0.000522	0.00272	0.124	0.000050	8386259
Total Molybdenum (Mo)	mg/L	0.000483	8390508	0.000477	0.000545	0.000587	0.000050	8386259
Total Nickel (Ni)	mg/L	0.00692	8390508	0.000062	0.000216	0.00283	0.000020	8386259
Total Phosphorus (P)	mg/L	0.0153	8390508	0.0048	0.0104	0.0223	0.0020	8386259
Total Selenium (Se)	mg/L	<0.000040	8390508	0.000734	0.000839	0.000291	0.000040	8386259
Total Silicon (Si)	mg/L	18.6	8390508	2.24	2.82	5.59	0.050	8386259
Total Silver (Ag)	mg/L	<0.0000050	8390508	<0.0000050	<0.0000050	0.0000050	0.0000050	8386259
Total Strontium (Sr)	mg/L	1.17	8390508	0.204	0.222	0.135	0.000050	8386259
Total Thallium (Tl)	mg/L	0.0000030	8390508	<0.0000020	<0.0000020	0.0000030	0.0000020	8386259
Total Tin (Sn)	mg/L	<0.00020	8390508	<0.00020	<0.00020	<0.00020	0.00020	8386259
Total Titanium (Ti)	mg/L	0.00072	8390508	<0.00050	<0.00050	0.00125	0.00050	8386259
Total Uranium (U)	mg/L	0.00185	8390508	0.000838	0.00125	0.000251	0.0000020	8386259
Total Vanadium (V)	mg/L	<0.00020	8390508	<0.00020	<0.00020	<0.00020	0.00020	8386259
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PK2592		PK2593	PK2594	PK2595		
Sampling Date		2016/08/27 12:30		2016/08/28 18:05	2016/08/27 15:55	2016/08/27 14:13		
COC Number		503657-01-01		503657-01-01	503657-01-01	503657-01-01		
	UNITS	**KZ-9 EAST SEEP**	**QC Batch**	**SEEP 3**	**SEEP 4**	**SEEP 5**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.0279	8390508	0.00056	0.00165	0.0710	0.00010	8386259
Total Zirconium (Zr)	mg/L	0.00063	8390508	<0.00010	<0.00010	0.00017	0.00010	8386259
Total Calcium (Ca)	mg/L	278	8389482	60.2	57.7	35.6	0.050	8383438
Total Magnesium (Mg)	mg/L	30.2	8389482	2.23	2.87	4.88	0.050	8383438
Total Potassium (K)	mg/L	4.80	8389482	1.17	1.78	0.823	0.050	8383438
Total Sodium (Na)	mg/L	7.85	8389482	0.726	0.663	3.49	0.050	8383438
Total Sulphur (S)	mg/L	7.5	8389482	9.4	13.4	6.5	3.0	8383438
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PK1912	PK1913	PK1914	PK1917	PK1918		
Sampling Date		2016/08/26 15:00	2016/08/26 14:00	2016/08/26 14:15	2016/08/27 16:30	2016/08/26 12:15		
COC Number		502942-01-01	502942-01-01	502942-01-01	502942-01-01	502942-01-01		
	UNITS	KZ-21	KZ-22	KZ-28	KZ-2	KZ-26	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	209	174	177	78.6	194	0.50	8383182
Elements								
Total Mercury (Hg)	mg/L	0.0000021	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8386318
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.538	0.200	0.153	0.168	0.193	0.0030	8385343
Total Antimony (Sb)	mg/L	0.000262	0.000097	0.000095	0.000039	0.000125	0.000020	8385343
Total Arsenic (As)	mg/L	0.0331	0.00906	0.00752	0.000322	0.00211	0.000020	8385343
Total Barium (Ba)	mg/L	0.140	0.0875	0.0795	0.0493	0.0766	0.000050	8385343
Total Beryllium (Be)	mg/L	0.000045	0.000018	0.000014	0.000015	0.000020	0.000010	8385343
Total Bismuth (Bi)	mg/L	0.000013	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8385343
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8385343
Total Cadmium (Cd)	mg/L	0.000200	0.000144	0.000102	0.000597	0.0000410	0.0000050	8385343
Total Chromium (Cr)	mg/L	0.00180	0.00067	0.00054	0.00026	0.00054	0.00010	8385343
Total Cobalt (Co)	mg/L	0.00271	0.000990	0.000732	0.000193	0.000302	0.000010	8385343
Total Copper (Cu)	mg/L	0.00310	0.00182	0.00161	0.00225	0.00182	0.00010	8385343
Total Iron (Fe)	mg/L	9.98	3.05	2.38	0.228	0.692	0.0050	8385343
Total Lead (Pb)	mg/L	0.000841	0.000449	0.000443	0.000983	0.000338	0.000020	8385343
Total Lithium (Li)	mg/L	0.00410	0.00319	0.00288	<0.00050	0.00379	0.00050	8385343
Total Manganese (Mn)	mg/L	1.84	0.552	0.428	0.0125	0.0555	0.00010	8385343
Total Molybdenum (Mo)	mg/L	0.00171	0.00100	0.000995	0.000559	0.000982	0.000050	8385343
Total Nickel (Ni)	mg/L	0.0113	0.00417	0.00347	0.00107	0.00250	0.00010	8385343
Total Phosphorus (P)	mg/L	0.251	0.0795	0.0532	0.0084	0.0255	0.0050	8385343
Total Selenium (Se)	mg/L	0.000836	0.000519	0.000532	0.000443	0.000401	0.000040	8385343
Total Silicon (Si)	mg/L	5.34	4.05	3.95	2.06	3.93	0.050	8385343
Total Silver (Ag)	mg/L	0.000016	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8385343
Total Strontium (Sr)	mg/L	0.180	0.162	0.162	0.0779	0.182	0.000050	8385343
Total Thallium (Tl)	mg/L	0.0000100	0.0000050	0.0000040	0.0000090	0.0000030	0.0000020	8385343
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8385343
Total Titanium (Ti)	mg/L	0.0212	0.0096	0.0067	0.0063	0.0045	0.0020	8385343
Total Uranium (U)	mg/L	0.00252	0.00170	0.00173	0.00139	0.00179	0.0000050	8385343
Total Vanadium (V)	mg/L	0.00220	0.00088	0.00068	0.00030	0.00063	0.00020	8385343
Total Zinc (Zn)	mg/L	0.0317	0.0153	0.0122	0.118	0.0045	0.0010	8385343
RDL = Reportable Detection Limit								

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PK1912	PK1913	PK1914	PK1917	PK1918		
Sampling Date		2016/08/26 15:00	2016/08/26 14:00	2016/08/26 14:15	2016/08/27 16:30	2016/08/26 12:15		
COC Number		502942-01-01	502942-01-01	502942-01-01	502942-01-01	502942-01-01		
	UNITS	KZ-21	KZ-22	KZ-28	KZ-2	KZ-26	RDL	QC Batch
Total Zirconium (Zr)	mg/L	0.00106	0.00022	0.00022	<0.00010	0.00017	0.00010	8385343
Total Calcium (Ca)	mg/L	54.7	48.4	49.2	27.6	52.2	0.25	8383438
Total Magnesium (Mg)	mg/L	17.7	13.0	13.1	2.34	15.3	0.25	8383438
Total Potassium (K)	mg/L	1.11	1.17	1.15	1.14	1.19	0.25	8383438
Total Sodium (Na)	mg/L	1.14	1.04	1.06	0.48	1.25	0.25	8383438
Total Sulphur (S)	mg/L	10.6	10.3	10.3	14.5	11.0	3.0	8383438

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PK1919	PK1920		PK1924		
Sampling Date		2016/08/27 14:32	2016/08/27 11:55		2016/08/27 09:04		
COC Number		502942-01-01	502942-01-01		502942-02-01		
	UNITS	KZ-7	KZ-9	QC Batch	KZ-17	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	121	123	8383182	152	0.50	8383182
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8386318	<0.0000020	0.0000020	8386318
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.333	0.216	8385343	0.0612	0.0030	8386114
Total Antimony (Sb)	mg/L	0.000124	0.000117	8385343	0.000079	0.000020	8386114
Total Arsenic (As)	mg/L	0.00105	0.000925	8385343	0.000805	0.000020	8386114
Total Barium (Ba)	mg/L	0.0629	0.0682	8385343	0.0628	0.000050	8386114
Total Beryllium (Be)	mg/L	0.000022	0.000014	8385343	<0.000010	0.000010	8386114
Total Bismuth (Bi)	mg/L	0.000012	0.000010	8385343	<0.000010	0.000010	8386114
Total Boron (B)	mg/L	<0.010	<0.010	8385343	<0.010	0.010	8386114
Total Cadmium (Cd)	mg/L	0.000319	0.000145	8385343	0.0000530	0.0000050	8386114
Total Chromium (Cr)	mg/L	0.00063	0.00044	8385343	0.00018	0.00010	8386114
Total Cobalt (Co)	mg/L	0.000301	0.000239	8385343	0.000090	0.000010	8386114
Total Copper (Cu)	mg/L	0.00358	0.00291	8385343	0.00158	0.00010	8386114
Total Iron (Fe)	mg/L	0.890	0.804	8385343	0.234	0.0050	8386114
Total Lead (Pb)	mg/L	0.00275	0.00233	8385343	0.000669	0.000020	8386114
Total Lithium (Li)	mg/L	0.00131	0.00195	8385343	0.00241	0.00050	8386114
Total Manganese (Mn)	mg/L	0.0617	0.0487	8385343	0.0453	0.00010	8386114
Total Molybdenum (Mo)	mg/L	0.000405	0.000438	8385343	0.00110	0.000050	8386114
Total Nickel (Ni)	mg/L	0.00111	0.00089	8385343	0.00092	0.00010	8386114
Total Phosphorus (P)	mg/L	0.0145	0.0168	8385343	0.0109	0.0050	8386114
Total Selenium (Se)	mg/L	0.000645	0.000655	8385343	0.000544	0.000040	8386114
Total Silicon (Si)	mg/L	3.13	3.44	8385343	3.43	0.050	8386114
Total Silver (Ag)	mg/L	0.000020	0.000017	8385343	<0.000010	0.000010	8386114
Total Strontium (Sr)	mg/L	0.119	0.134	8385343	0.151	0.000050	8386114
Total Thallium (Tl)	mg/L	0.0000090	0.0000060	8385343	0.0000040	0.0000020	8386114
Total Tin (Sn)	mg/L	<0.00020	<0.00020	8385343	<0.00020	0.00020	8386114
Total Titanium (Ti)	mg/L	0.0170	0.0122	8385343	0.0029	0.0020	8386114
Total Uranium (U)	mg/L	0.000647	0.000657	8385343	0.00148	0.0000050	8386114
Total Vanadium (V)	mg/L	0.00080	0.00062	8385343	<0.00020	0.00020	8386114
Total Zinc (Zn)	mg/L	0.0642	0.0343	8385343	0.0079	0.0010	8386114
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PK1919	PK1920		PK1924		
Sampling Date		2016/08/27 14:32	2016/08/27 11:55		2016/08/27 09:04		
COC Number		502942-01-01	502942-01-01		502942-02-01		
	UNITS	**KZ-7**	**KZ-9**	**QC Batch**	**KZ-17**	**RDL**	**QC Batch**
Total Zirconium (Zr)	mg/L	0.00014	0.00015	8385343	0.00011	0.00010	8386114
Total Calcium (Ca)	mg/L	39.7	41.1	8383438	47.0	0.25	8383438
Total Magnesium (Mg)	mg/L	5.27	4.94	8383438	8.31	0.25	8383438
Total Potassium (K)	mg/L	1.27	1.28	8383438	1.16	0.25	8383438
Total Sodium (Na)	mg/L	0.71	0.81	8383438	0.89	0.25	8383438
Total Sulphur (S)	mg/L	11.8	10.3	8383438	9.2	3.0	8383438
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1911
Sample ID: KZ-19
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/09/01	Maria Maclean
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	Diana Cruz
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390300	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/02	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	Rob Mcclelland
Ion Balance	CALC	8383480	N/A	2016/09/02	Automated Statchk
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	David Huang
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8385137	N/A	2016/09/01	Andrew An
Ammonia-N (Preserved)	KONE/COL	8392042	N/A	2016/09/09	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo
pH Water	AT/ALK	8384956	N/A	2016/09/01	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8383802	2016/08/31	2016/09/01	Jamie Sun

Maxxam ID: PK1911 Dup
Sample ID: KZ-19
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	Diana Cruz

Maxxam ID: PK1912
Sample ID: KZ-21
Matrix: Water

Collected: 2016/08/26
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1912
Sample ID: KZ-21
Matrix: Water

Collected: 2016/08/26
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	Diana Cruz
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390300	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	Rob Mcclelland
Ion Balance	CALC	8383480	N/A	2016/09/02	Automated Statchk
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8385343	2016/09/01	2016/09/04	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/06	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8387304	N/A	2016/09/03	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo
pH Water	AT/ALK	8384956	N/A	2016/09/01	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8383802	2016/08/31	2016/09/01	Jamie Sun

Maxxam ID: PK1913
Sample ID: KZ-22
Matrix: Water

Collected: 2016/08/26
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/09/01	Maria Maclean
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	Diana Cruz
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1913
Sample ID: KZ-22
Matrix: Water

Collected: 2016/08/26
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	Rob Mcclelland
Ion Balance	CALC	8383480	N/A	2016/09/02	Automated Statchk
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8385343	2016/09/01	2016/09/02	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/06	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8387298	N/A	2016/09/03	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo
pH Water	AT/ALK	8384956	N/A	2016/09/01	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8383802	2016/08/31	2016/09/01	Jamie Sun

Maxxam ID: PK1914
Sample ID: KZ-28
Matrix: Water

Collected: 2016/08/26
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Maria Maclean
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	Diana Cruz
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390300	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	Rob Mcclelland
Ion Balance	CALC	8383480	N/A	2016/09/02	Automated Statchk
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8385343	2016/09/01	2016/09/02	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/06	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8387298	N/A	2016/09/03	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1914
Sample ID: KZ-28
Matrix: Water

Collected: 2016/08/26
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo
pH Water	AT/ALK	8384956	N/A	2016/09/01	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8383802	2016/08/31	2016/09/01	Jamie Sun

Maxxam ID: PK1915
Sample ID: KZ-6
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Maria Maclean
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	Diana Cruz
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/02	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	Rob Mcclelland
Ion Balance	CALC	8383480	N/A	2016/09/02	Automated Statchk
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8385137	N/A	2016/09/01	Andrew An
Ammonia-N (Preserved)	KONE/COL	8387303	N/A	2016/09/03	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo
pH Water	AT/ALK	8384956	N/A	2016/09/01	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	Jamie Sun

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1915 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Maria Maclean
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	Diana Cruz

Maxxam ID: PK1916
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/08/30
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Maria Maclean
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	Diana Cruz
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8390148	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/02	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	Rob Mcclelland
Ion Balance	CALC	8383480	N/A	2016/09/02	Automated Statchk
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8385137	N/A	2016/09/01	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8382961	N/A	2016/08/31	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	Automated Statchk
pH Water	AT/ALK	8384956	N/A	2016/09/01	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	Jamie Sun

Maxxam ID: PK1916 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/08/30
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	Andrew An
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1917
Sample ID: KZ-2
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Maria Maclean
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	Diana Cruz
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390300	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	Rob Mcclelland
Ion Balance	CALC	8383480	N/A	2016/09/02	Automated Statchk
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8385343	2016/09/01	2016/09/02	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/06	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8387303	N/A	2016/09/03	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo
pH Water	AT/ALK	8384956	N/A	2016/09/01	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386947	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	Jamie Sun

Maxxam ID: PK1917 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	Isaac Wang

Maxxam ID: PK1918
Sample ID: KZ-26
Matrix: Water

Collected: 2016/08/26
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Maria Maclean
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	Diana Cruz

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1918
Sample ID: KZ-26
Matrix: Water

Collected: 2016/08/26
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	Rob Mcclelland
Ion Balance	CALC	8383480	N/A	2016/09/02	Automated Statchk
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8385343	2016/09/01	2016/09/02	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/06	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8387303	N/A	2016/09/03	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo
pH Water	AT/ALK	8384956	N/A	2016/09/01	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	Jamie Sun

Maxxam ID: PK1919
Sample ID: KZ-7
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Maria Maclean
Alkalinity - Water	AT/ALK	8385000	2016/09/01	2016/09/02	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	Diana Cruz
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8385004	N/A	2016/09/02	Wilson Au Yueng
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	Rob Mcclelland

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1919
Sample ID: KZ-7
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance	CALC	8383480	N/A	2016/09/02	Automated Statchk
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8385343	2016/09/01	2016/09/02	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/06	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8387298	N/A	2016/09/03	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo
pH Water	AT/ALK	8385003	N/A	2016/09/02	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386947	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	Jamie Sun

Maxxam ID: PK1920
Sample ID: KZ-9
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/09/01	Maria Maclean
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	Diana Cruz
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	Rob Mcclelland
Ion Balance	CALC	8383480	N/A	2016/09/02	Automated Statchk
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8385343	2016/09/01	2016/09/02	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/06	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8387304	N/A	2016/09/03	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1920
Sample ID: KZ-9
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo
pH Water	AT/ALK	8384956	N/A	2016/09/01	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8391524	N/A	2016/09/08	Clare Kwok
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	Jamie Sun

Maxxam ID: PK1921
Sample ID: KZ-13
Matrix: Water

Collected: 2016/08/28
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/09/01	Maria Maclean
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	Diana Cruz
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/02	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	Rob Mcclelland
Ion Balance	CALC	8383480	N/A	2016/09/02	Automated Statchk
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8385137	N/A	2016/09/01	Andrew An
Ammonia-N (Preserved)	KONE/COL	8387299	N/A	2016/09/03	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo
pH Water	AT/ALK	8384956	N/A	2016/09/01	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	Jamie Sun

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1921 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2016/08/28
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	Diana Cruz
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	Diana Cruz

Maxxam ID: PK1922
Sample ID: KZ-15
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Maria Maclean
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	Diana Cruz
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/02	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	Rob Mcclelland
Ion Balance	CALC	8383480	N/A	2016/09/02	Automated Statchk
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8385137	N/A	2016/09/01	Andrew An
Ammonia-N (Preserved)	KONE/COL	8387304	N/A	2016/09/03	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo
pH Water	AT/ALK	8384956	N/A	2016/09/01	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	Jamie Sun

Maxxam ID: PK1923
Sample ID: KZ-16
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1923
Sample ID: KZ-16
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	Diana Cruz
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/02	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	Rob Mcclelland
Ion Balance	CALC	8383480	N/A	2016/09/02	Automated Statchk
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8385137	N/A	2016/09/01	Andrew An
Ammonia-N (Preserved)	KONE/COL	8387299	N/A	2016/09/03	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo
pH Water	AT/ALK	8384956	N/A	2016/09/01	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	Jamie Sun

Maxxam ID: PK1924
Sample ID: KZ-17
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Maria Maclean
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	Diana Cruz
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/04	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1924
Sample ID: KZ-17
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	Rob Mcclelland
Ion Balance	CALC	8383480	N/A	2016/09/02	Automated Statchk
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8386114	2016/09/02	2016/09/02	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/04	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8387304	N/A	2016/09/03	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo
pH Water	AT/ALK	8384956	N/A	2016/09/01	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	Jamie Sun

Maxxam ID: PK1925
Sample ID: KZ-18
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/09/01	Maria Maclean
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	Diana Cruz
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390294	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/02	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	Rob Mcclelland
Ion Balance	CALC	8383480	N/A	2016/09/02	Automated Statchk
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8385137	N/A	2016/09/01	Andrew An
Ammonia-N (Preserved)	KONE/COL	8387304	N/A	2016/09/03	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1925
Sample ID: KZ-18
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo
pH Water	AT/ALK	8384956	N/A	2016/09/01	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	Jamie Sun

Maxxam ID: PK2591
Sample ID: KZ-9 WEST SEEP
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8386197	N/A	2016/09/02	Maria Maclean
Alkalinity - Water	AT/ALK	8384980	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8389102	N/A	2016/09/06	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
COD by Colorimeter	M/COL	8384442	2016/09/01	2016/09/02	Clare Kwok
Colour (True) by Kone Lab	KONE	8384569	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384985	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384579	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383916	N/A	2016/09/02	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8383917	N/A	2016/09/02	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8385941	N/A	2016/09/02	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8386276	2016/09/02	2016/09/02	Rob Mcclelland
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8390650	N/A	2016/09/08	Adnan Dzebic
Ion Balance	CALC	8383480	N/A	2016/09/07	Automated Statchk
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	David Huang
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385098	N/A	2016/09/02	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8386259	N/A	2016/09/02	Andrew An
Nitrogen (Total)	TRAA/COL	8389177	2016/09/06	2016/09/06	Diana Cruz
Ammonia-N (Preserved)	KONE/COL	8387300	N/A	2016/09/03	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385393	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385394	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383918	N/A	2016/09/02	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo
pH Water	AT/ALK	8384984	N/A	2016/09/01	Wilson Au Yueng
Orthophosphate by Konelab (low level)	KONE/COL	8384843	N/A	2016/09/01	Beatriz Ortega
Sulphate by Automated Colourimetry	KONE/COL	8389104	N/A	2016/09/06	Balwinder Bassi
Total Dissolved Solids - Low Level	BAL/BAL	8384591	N/A	2016/09/02	Coco Guo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK2591
Sample ID: KZ-9 WEST SEEP
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TKN (Calc. TN, N/N) total	CALC	8383315	N/A	2016/09/06	Automated Statchk
Carbon (Total Organic)	TRAA/COL	8390286	N/A	2016/09/07	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8391522	2016/09/08	2016/09/08	Clare Kwok
Total Phosphorus - unpreserved	KONE/COL	8391524	N/A	2016/09/08	Clare Kwok
Total Suspended Solids-Low Level	BAL/BAL	8385244	2016/09/01	2016/09/02	Jamie Sun
Turbidity	TURB	8384575	N/A	2016/09/01	Coco Guo

Maxxam ID: PK2592
Sample ID: KZ-9 EAST SEEP
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8386197	N/A	2016/09/02	Maria Maclean
Alkalinity - Water	AT/ALK	8384980	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8389102	N/A	2016/09/06	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
COD by Colorimeter	M/COL	8384442	2016/09/01	2016/09/02	Clare Kwok
Colour (True) by Kone Lab	KONE	8384569	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384985	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384579	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8389856	N/A	2016/09/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8390478	N/A	2016/09/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8385941	N/A	2016/09/02	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8386276	2016/09/02	2016/09/02	Rob Mcclelland
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8390650	N/A	2016/09/08	Adnan Dzebic
Ion Balance	CALC	8390533	N/A	2016/09/08	Automated Statchk
Sum of cations, anions	CALC	8390534	N/A	2016/09/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8389462	N/A	2016/09/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8390612	N/A	2016/09/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8389482	N/A	2016/09/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8390508	N/A	2016/09/08	Andrew An
Nitrogen (Total)	TRAA/COL	8389177	2016/09/06	2016/09/06	Diana Cruz
Ammonia-N Dissolved ((FF/FP)	KONE/COL	8387315	N/A	2016/09/03	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385393	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385394	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383918	N/A	2016/09/02	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo
pH Water	AT/ALK	8384984	N/A	2016/09/01	Wilson Au Yueng
Orthophosphate by Konelab (low level)	KONE/COL	8384843	N/A	2016/09/01	Beatriz Ortega
Sulphate by Automated Colourimetry	KONE/COL	8389104	N/A	2016/09/06	Balwinder Bassi
Total Dissolved Solids - Low Level	BAL/BAL	8384591	N/A	2016/09/02	Coco Guo
TKN (Calc. TN, N/N) total	CALC	8383315	N/A	2016/09/06	Automated Statchk
Carbon (Total Organic)	TRAA/COL	8390286	N/A	2016/09/07	Diana Cruz

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK2592
Sample ID: KZ-9 EAST SEEP
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386948	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8385244	2016/09/01	2016/09/02	Jamie Sun
Turbidity	TURB	8384575	N/A	2016/09/01	Coco Guo

Maxxam ID: PK2592 Dup
Sample ID: KZ-9 EAST SEEP
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
COD by Colorimeter	M/COL	8384442	2016/09/01	2016/09/02	Clare Kwok
Ammonia-N Dissolved ((FF/FP)	KONE/COL	8387315	N/A	2016/09/03	Clare Kwok

Maxxam ID: PK2593
Sample ID: SEEP 3
Matrix: Water

Collected: 2016/08/28
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8386197	N/A	2016/09/02	Maria Maclean
Alkalinity - Water	AT/ALK	8384980	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8389102	N/A	2016/09/06	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
COD by Colorimeter	M/COL	8384442	2016/09/01	2016/09/02	Clare Kwok
Colour (True) by Kone Lab	KONE	8384569	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384985	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384579	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383916	N/A	2016/09/02	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8392311	N/A	2016/09/09	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8385941	N/A	2016/09/02	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8386276	2016/09/02	2016/09/02	Rob Mcclelland
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8390650	N/A	2016/09/08	Adnan Dzebic
Ion Balance	CALC	8392850	N/A	2016/09/09	David Huang
Sum of cations, anions	CALC	8392851	N/A	2016/09/09	David Huang
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/09	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8390612	N/A	2016/09/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8386259	N/A	2016/09/02	Andrew An
Nitrogen (Total)	TRAA/COL	8389177	2016/09/06	2016/09/06	Diana Cruz
Ammonia-N (Preserved)	KONE/COL	8387300	N/A	2016/09/03	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385393	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385394	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383918	N/A	2016/09/02	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK2593
Sample ID: SEEP 3
Matrix: Water

Collected: 2016/08/28
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH Water	AT/ALK	8384984	N/A	2016/09/01	Wilson Au Yueng
Orthophosphate by Konelab (low level)	KONE/COL	8384843	N/A	2016/09/01	Beatriz Ortega
Sulphate by Automated Colourimetry	KONE/COL	8389104	N/A	2016/09/06	Balwinder Bassi
Total Dissolved Solids - Low Level	BAL/BAL	8384591	N/A	2016/09/02	Coco Guo
TKN (Calc. TN, N/N) total	CALC	8383315	N/A	2016/09/06	Automated Statchk
Carbon (Total Organic)	TRAA/COL	8390286	N/A	2016/09/07	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386948	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8386951	N/A	2016/09/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8385244	2016/09/01	2016/09/02	Jamie Sun
Turbidity	TURB	8384575	N/A	2016/09/01	Coco Guo

Maxxam ID: PK2593 Dup
Sample ID: SEEP 3
Matrix: Water

Collected: 2016/08/28
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8384579	N/A	2016/09/01	Isaac Wang

Maxxam ID: PK2594
Sample ID: SEEP 4
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8386197	N/A	2016/09/02	Maria Maclean
Alkalinity - Water	AT/ALK	8384980	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8389102	N/A	2016/09/06	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
COD by Colorimeter	M/COL	8384442	2016/09/01	2016/09/02	Clare Kwok
Colour (True) by Kone Lab	KONE	8384569	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384985	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384579	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383916	N/A	2016/09/02	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8383917	N/A	2016/09/02	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8385941	N/A	2016/09/02	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8386276	2016/09/02	2016/09/02	Rob Mcclelland
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8390650	N/A	2016/09/08	Adnan Dzebic
Ion Balance	CALC	8383480	N/A	2016/09/07	Automated Statchk
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385098	N/A	2016/09/02	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8386259	N/A	2016/09/02	Andrew An
Nitrogen (Total)	TRAA/COL	8389177	2016/09/06	2016/09/06	Diana Cruz

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK2594
Sample ID: SEEP 4
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8387300	N/A	2016/09/03	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385393	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385394	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383918	N/A	2016/09/02	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo
pH Water	AT/ALK	8384984	N/A	2016/09/01	Wilson Au Yueng
Orthophosphate by Konelab (low level)	KONE/COL	8384843	N/A	2016/09/01	Beatriz Ortega
Sulphate by Automated Colourimetry	KONE/COL	8389104	N/A	2016/09/06	Balwinder Bassi
Total Dissolved Solids - Low Level	BAL/BAL	8384591	N/A	2016/09/02	Coco Guo
TKN (Calc. TN, N/N) total	CALC	8383315	N/A	2016/09/06	Automated Statchk
Carbon (Total Organic)	TRAA/COL	8390286	N/A	2016/09/07	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386948	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8386951	N/A	2016/09/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8385244	2016/09/01	2016/09/02	Jamie Sun
Turbidity	TURB	8384575	N/A	2016/09/01	Coco Guo

Maxxam ID: PK2594 Dup
Sample ID: SEEP 4
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Dissolved Solids - Low Level	BAL/BAL	8384591	N/A	2016/09/02	Coco Guo

Maxxam ID: PK2595
Sample ID: SEEP 5
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8386197	N/A	2016/09/02	Maria Maclean
Alkalinity - Water	AT/ALK	8384980	2016/09/01	2016/09/01	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8389102	N/A	2016/09/06	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	Tatyana Serzhanova
COD by Colorimeter	M/COL	8384442	2016/09/01	2016/09/02	Clare Kwok
Colour (True) by Kone Lab	KONE	8384569	N/A	2016/09/01	Beatriz Ortega
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	Diana Cruz
Conductance - water	AT/ALK	8384985	N/A	2016/09/01	Wilson Au Yueng
Fluoride	ISE/ISE	8384572	N/A	2016/09/01	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8383916	N/A	2016/09/02	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8383917	N/A	2016/09/02	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8385941	N/A	2016/09/02	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8386276	2016/09/02	2016/09/02	Rob Mcclelland
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8390650	N/A	2016/09/08	Adnan Dzebic
Ion Balance	CALC	8383480	N/A	2016/09/07	Automated Statchk
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK2595
Sample ID: SEEP 5
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385098	N/A	2016/09/02	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8386259	N/A	2016/09/02	Andrew An
Nitrogen (Total)	TRAA/COL	8389177	2016/09/06	2016/09/06	Diana Cruz
Ammonia-N (Preserved)	KONE/COL	8387300	N/A	2016/09/03	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385385	N/A	2016/09/01	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8385386	N/A	2016/09/01	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8383918	N/A	2016/09/02	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Lucy Luo
pH Water	AT/ALK	8384984	N/A	2016/09/01	Wilson Au Yueng
Orthophosphate by Konelab (low level)	KONE/COL	8384843	N/A	2016/09/01	Beatriz Ortega
Sulphate by Automated Colourimetry	KONE/COL	8389104	N/A	2016/09/06	Balwinder Bassi
Total Dissolved Solids - Low Level	BAL/BAL	8384591	N/A	2016/09/02	Coco Guo
TKN (Calc. TN, N/N) total	CALC	8383315	N/A	2016/09/06	Automated Statchk
Carbon (Total Organic)	TRAA/COL	8390286	N/A	2016/09/07	Diana Cruz
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386948	2016/09/02	2016/09/02	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8386951	N/A	2016/09/02	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8385244	2016/09/01	2016/09/02	Jamie Sun
Turbidity	TURB	8384575	N/A	2016/09/01	Coco Guo

Maxxam ID: PK2595 Dup
Sample ID: SEEP 5
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Orthophosphate by Konelab (low level)	KONE/COL	8384843	N/A	2016/09/01	Beatriz Ortega

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.7°C
Package 2	4.0°C
Package 3	3.3°C
Package 4	4.0°C
Package 5	2.3°C
Package 6	4.3°C
Package 7	2.0°C
Package 8	2.3°C
Package 9	2.0°C
Package 10	2.7°C

Sample PK1912-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK1913-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK1914-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK1916-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample PK1917-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK1918-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK1919-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK1920-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK1924-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK2591-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK2592-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK2593-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK2594-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK2595-01 : Cyanide bottle was field filtered by sampler. Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

GENERAL COMMENTS

Sample PK1911, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample PK2591, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample PK1911, Elements by ICPMS Low Level (total): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8382961	Total Ammonia (N)	2016/08/31	NC	80 - 120	101	80 - 120	<0.0050	mg/L	0.56	20
8383764	Acidity (pH 4.5)	2016/08/31					<0.50	mg/L	NC	20
8383764	Acidity (pH 8.3)	2016/08/31			100	80 - 120	<0.50	mg/L	NC	20
8383802	Total Suspended Solids	2016/09/01			102	80 - 120	<1.0	mg/L		
8383845	Total Suspended Solids	2016/09/02			101	80 - 120	<1.0	mg/L		
8384442	Chemical Oxygen Demand	2016/09/02	105	80 - 120	99	80 - 120	<10	mg/L	NC	20
8384556	True Colour	2016/09/01			110	80 - 120	<5.0	Col. Unit	NC	20
8384568	Fluoride (F)	2016/09/01	100	80 - 120	100	80 - 120	0.014, RDL=0.010	mg/L	0	20
8384569	True Colour	2016/09/01			103	80 - 120	<5.0	Col. Unit	NC	20
8384572	Fluoride (F)	2016/09/01	101	80 - 120	100	80 - 120	0.013, RDL=0.010	mg/L	NC	20
8384575	Turbidity	2016/09/01			103	80 - 120	<0.10	NTU	NC	20
8384579	Fluoride (F)	2016/09/01	101	80 - 120	100	80 - 120	0.012, RDL=0.010	mg/L	NC	20
8384591	Total Dissolved Solids	2016/09/02	103	80 - 120	104	80 - 120	<1.0	mg/L	2.0	20
8384775	Strong Acid Dissoc. Cyanide (CN)	2016/09/01	101	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8384787	Weak Acid Dissoc. Cyanide (CN)	2016/09/01	97	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8384796	Dissolved Chloride (Cl)	2016/08/31	86	80 - 120	96	80 - 120	<0.50	mg/L	NC	20
8384797	Dissolved Sulphate (SO4)	2016/08/31	NC	80 - 120	89	80 - 120	<0.50	mg/L	0.41	20
8384843	Orthophosphate (P)	2016/09/01	111	80 - 120	93	80 - 120	<0.0010	mg/L	NC	20
8384947	Alkalinity (PP as CaCO3)	2016/09/01					<0.50	mg/L	NC	20
8384947	Alkalinity (Total as CaCO3)	2016/09/01	NC	80 - 120	91	80 - 120	<0.50	mg/L	0.22	20
8384947	Bicarbonate (HCO3)	2016/09/01					<0.50	mg/L	0.36	20
8384947	Carbonate (CO3)	2016/09/01					<0.50	mg/L	NC	20
8384947	Hydroxide (OH)	2016/09/01					<0.50	mg/L	NC	20
8384956	pH	2016/09/01			102	97 - 103			0	N/A
8384957	Conductivity	2016/09/01			99	80 - 120	<1.0	uS/cm	0.14	20
8384980	Alkalinity (PP as CaCO3)	2016/09/01					<0.50	mg/L	NC	20
8384980	Alkalinity (Total as CaCO3)	2016/09/01	102	80 - 120	94	80 - 120	<0.50	mg/L	NC	20
8384980	Bicarbonate (HCO3)	2016/09/01					<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8384980	Carbonate (CO3)	2016/09/01					<0.50	mg/L	NC	20
8384980	Hydroxide (OH)	2016/09/01					<0.50	mg/L	NC	20
8384984	pH	2016/09/01			102	97 - 103			0.75	N/A
8384985	Conductivity	2016/09/01			101	80 - 120	1.1, RDL=1.0	uS/cm	NC	20
8385000	Alkalinity (PP as CaCO3)	2016/09/02					<0.50	mg/L	NC	20
8385000	Alkalinity (Total as CaCO3)	2016/09/02	NC	80 - 120	101	80 - 120	<0.50	mg/L	0.89	20
8385000	Bicarbonate (HCO3)	2016/09/02					<0.50	mg/L	0.25	20
8385000	Carbonate (CO3)	2016/09/02					<0.50	mg/L	NC	20
8385000	Hydroxide (OH)	2016/09/02					<0.50	mg/L	NC	20
8385003	pH	2016/09/02			102	97 - 103			0	N/A
8385004	Conductivity	2016/09/02			101	80 - 120	1.2, RDL=1.0	uS/cm	0.24	20
8385058	Dissolved Aluminum (Al)	2016/09/02	107	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8385058	Dissolved Antimony (Sb)	2016/09/02	101	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8385058	Dissolved Arsenic (As)	2016/09/02	106	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
8385058	Dissolved Barium (Ba)	2016/09/02	104	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8385058	Dissolved Beryllium (Be)	2016/09/02	100	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8385058	Dissolved Bismuth (Bi)	2016/09/02	99	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8385058	Dissolved Boron (B)	2016/09/02	98	80 - 120	98	80 - 120	<0.010	mg/L	NC	20
8385058	Dissolved Cadmium (Cd)	2016/09/02	106	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8385058	Dissolved Chromium (Cr)	2016/09/02	109	80 - 120	111	80 - 120	<0.00010	mg/L	NC	20
8385058	Dissolved Cobalt (Co)	2016/09/02	108	80 - 120	109	80 - 120	<0.0000050	mg/L	NC	20
8385058	Dissolved Copper (Cu)	2016/09/02	110	80 - 120	110	80 - 120	<0.000050	mg/L	NC	20
8385058	Dissolved Iron (Fe)	2016/09/02	108	80 - 120	111	80 - 120	<0.0010	mg/L	NC	20
8385058	Dissolved Lead (Pb)	2016/09/02	100	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8385058	Dissolved Lithium (Li)	2016/09/02	90	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8385058	Dissolved Manganese (Mn)	2016/09/02	108	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20
8385058	Dissolved Molybdenum (Mo)	2016/09/02	101	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8385058	Dissolved Nickel (Ni)	2016/09/02	110	80 - 120	110	80 - 120	<0.000020	mg/L	NC	20
8385058	Dissolved Phosphorus (P)	2016/09/02					<0.0020	mg/L	NC	20
8385058	Dissolved Selenium (Se)	2016/09/02	109	80 - 120	103	80 - 120	<0.000040	mg/L	NC	20
8385058	Dissolved Silicon (Si)	2016/09/02					<0.050	mg/L	NC	20

Maxxam Job #: B674606
Report Date: 2016/09/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8385058	Dissolved Silver (Ag)	2016/09/02	98	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8385058	Dissolved Strontium (Sr)	2016/09/02	105	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8385058	Dissolved Thallium (Tl)	2016/09/02	96	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8385058	Dissolved Tin (Sn)	2016/09/02	102	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8385058	Dissolved Titanium (Ti)	2016/09/02	107	80 - 120	111	80 - 120	<0.00050	mg/L	NC	20
8385058	Dissolved Uranium (U)	2016/09/02	101	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8385058	Dissolved Vanadium (V)	2016/09/02	107	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
8385058	Dissolved Zinc (Zn)	2016/09/02	119	80 - 120	121 (1)	80 - 120	<0.00010	mg/L	NC	20
8385058	Dissolved Zirconium (Zr)	2016/09/02					<0.00010	mg/L	NC	20
8385098	Dissolved Aluminum (Al)	2016/09/02	109	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8385098	Dissolved Antimony (Sb)	2016/09/02	102	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8385098	Dissolved Arsenic (As)	2016/09/02	109	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8385098	Dissolved Barium (Ba)	2016/09/02	NC	80 - 120	101	80 - 120	<0.000020	mg/L	3.2	20
8385098	Dissolved Beryllium (Be)	2016/09/02	103	80 - 120	92	80 - 120	<0.000010	mg/L	NC	20
8385098	Dissolved Bismuth (Bi)	2016/09/02	100	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8385098	Dissolved Boron (B)	2016/09/02	99	80 - 120	94	80 - 120	<0.010	mg/L	NC	20
8385098	Dissolved Cadmium (Cd)	2016/09/02	98	80 - 120	94	80 - 120	<0.0000050	mg/L	0	20
8385098	Dissolved Chromium (Cr)	2016/09/02	105	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8385098	Dissolved Cobalt (Co)	2016/09/02	102	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8385098	Dissolved Copper (Cu)	2016/09/02	97	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8385098	Dissolved Iron (Fe)	2016/09/02	106	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
8385098	Dissolved Lead (Pb)	2016/09/02	101	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8385098	Dissolved Lithium (Li)	2016/09/02	89	80 - 120	88	80 - 120	<0.00050	mg/L	NC	20
8385098	Dissolved Manganese (Mn)	2016/09/02	104	80 - 120	101	80 - 120	<0.000050	mg/L	1.2	20
8385098	Dissolved Molybdenum (Mo)	2016/09/02	NC	80 - 120	98	80 - 120	<0.000050	mg/L	4.5	20
8385098	Dissolved Nickel (Ni)	2016/09/02	100	80 - 120	100	80 - 120	<0.000020	mg/L	2.3	20
8385098	Dissolved Phosphorus (P)	2016/09/02					<0.0020	mg/L	NC	20
8385098	Dissolved Selenium (Se)	2016/09/02	107	80 - 120	100	80 - 120	<0.000040	mg/L	0.12	20
8385098	Dissolved Silicon (Si)	2016/09/02					<0.050	mg/L	2.5	20
8385098	Dissolved Silver (Ag)	2016/09/02	106	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8385098	Dissolved Strontium (Sr)	2016/09/02	NC	80 - 120	99	80 - 120	<0.000050	mg/L	1.2	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8385098	Dissolved Thallium (Tl)	2016/09/02	97	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8385098	Dissolved Tin (Sn)	2016/09/02	104	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8385098	Dissolved Titanium (Ti)	2016/09/02	110	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20
8385098	Dissolved Uranium (U)	2016/09/02	108	80 - 120	98	80 - 120	<0.0000020	mg/L	0.12	20
8385098	Dissolved Vanadium (V)	2016/09/02	104	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8385098	Dissolved Zinc (Zn)	2016/09/02	107	80 - 120	100	80 - 120	<0.00010	mg/L	5.6	20
8385098	Dissolved Zirconium (Zr)	2016/09/02					<0.00010	mg/L	NC	20
8385137	Total Aluminum (Al)	2016/09/01	106	80 - 120	110	80 - 120	<0.00050	mg/L	NC	20
8385137	Total Antimony (Sb)	2016/09/01	98	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8385137	Total Arsenic (As)	2016/09/01	102	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8385137	Total Barium (Ba)	2016/09/01	102	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8385137	Total Beryllium (Be)	2016/09/01	99	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
8385137	Total Bismuth (Bi)	2016/09/01	99	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8385137	Total Boron (B)	2016/09/01	97	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
8385137	Total Cadmium (Cd)	2016/09/01	99	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8385137	Total Chromium (Cr)	2016/09/01	104	80 - 120	111	80 - 120	<0.00010	mg/L	NC	20
8385137	Total Cobalt (Co)	2016/09/01	103	80 - 120	109	80 - 120	<0.0000050	mg/L	NC	20
8385137	Total Copper (Cu)	2016/09/01	105	80 - 120	111	80 - 120	<0.000050	mg/L	NC	20
8385137	Total Iron (Fe)	2016/09/01	103	80 - 120	110	80 - 120	<0.0010	mg/L	NC	20
8385137	Total Lead (Pb)	2016/09/01	99	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8385137	Total Lithium (Li)	2016/09/01	90	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8385137	Total Manganese (Mn)	2016/09/01	104	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20
8385137	Total Molybdenum (Mo)	2016/09/01	99	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8385137	Total Nickel (Ni)	2016/09/01	106	80 - 120	110	80 - 120	<0.000020	mg/L	NC	20
8385137	Total Phosphorus (P)	2016/09/01					<0.0020	mg/L	NC	20
8385137	Total Selenium (Se)	2016/09/01	105	80 - 120	106	80 - 120	<0.000040	mg/L	NC	20
8385137	Total Silicon (Si)	2016/09/01					<0.050	mg/L	NC	20
8385137	Total Silver (Ag)	2016/09/01	99	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8385137	Total Strontium (Sr)	2016/09/01	101	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8385137	Total Thallium (Tl)	2016/09/01	98	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8385137	Total Tin (Sn)	2016/09/01	102	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8385137	Total Titanium (Ti)	2016/09/01	97	80 - 120	114	80 - 120	<0.00050	mg/L	NC	20
8385137	Total Uranium (U)	2016/09/01	100	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8385137	Total Vanadium (V)	2016/09/01	103	80 - 120	107	80 - 120	<0.00020	mg/L	NC	20
8385137	Total Zinc (Zn)	2016/09/01	110	80 - 120	118	80 - 120	<0.00010	mg/L	NC	20
8385137	Total Zirconium (Zr)	2016/09/01					<0.00010	mg/L	NC	20
8385244	Total Suspended Solids	2016/09/02			99	80 - 120	<1.0	mg/L		
8385343	Total Aluminum (Al)	2016/09/02	NC	80 - 120	109	80 - 120	<0.0030	mg/L	NC	20
8385343	Total Antimony (Sb)	2016/09/02	115	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8385343	Total Arsenic (As)	2016/09/02	105	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8385343	Total Barium (Ba)	2016/09/02	NC	80 - 120	101	80 - 120	<0.000050	mg/L	0.23	20
8385343	Total Beryllium (Be)	2016/09/02	89	80 - 120	93	80 - 120	<0.000010	mg/L	NC	20
8385343	Total Bismuth (Bi)	2016/09/02	89	80 - 120	93	80 - 120	<0.000010	mg/L	NC	20
8385343	Total Boron (B)	2016/09/02	NC	80 - 120	94	80 - 120	<0.010	mg/L	NC	20
8385343	Total Cadmium (Cd)	2016/09/02	97	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8385343	Total Chromium (Cr)	2016/09/02	106	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
8385343	Total Cobalt (Co)	2016/09/02	98	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8385343	Total Copper (Cu)	2016/09/02	90	80 - 120	107	80 - 120	<0.00010	mg/L	NC	20
8385343	Total Iron (Fe)	2016/09/02	108	80 - 120	102	80 - 120	<0.0050	mg/L	NC	20
8385343	Total Lead (Pb)	2016/09/02	93	80 - 120	96	80 - 120	<0.000020	mg/L	NC	20
8385343	Total Lithium (Li)	2016/09/02	NC	80 - 120	93	80 - 120	<0.00050	mg/L	8.3	20
8385343	Total Manganese (Mn)	2016/09/02	NC	80 - 120	104	80 - 120	<0.00010	mg/L	5.3	20
8385343	Total Molybdenum (Mo)	2016/09/02	NC	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8385343	Total Nickel (Ni)	2016/09/02	NC	80 - 120	102	80 - 120	<0.00010	mg/L	2.6	20
8385343	Total Phosphorus (P)	2016/09/02					<0.0050	mg/L		
8385343	Total Selenium (Se)	2016/09/02	101	80 - 120	101	80 - 120	<0.000040	mg/L	NC	20
8385343	Total Silicon (Si)	2016/09/02					<0.050	mg/L	NC	20
8385343	Total Silver (Ag)	2016/09/02	104	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8385343	Total Strontium (Sr)	2016/09/02	NC	80 - 120	100	80 - 120	<0.000050	mg/L	3.0	20
8385343	Total Thallium (Tl)	2016/09/02	80	80 - 120	86	80 - 120	<0.0000020	mg/L	NC	20
8385343	Total Tin (Sn)	2016/09/02	114	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8385343	Total Titanium (Ti)	2016/09/02	128 (2)	80 - 120	102	80 - 120	<0.0020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8385343	Total Uranium (U)	2016/09/02	93	80 - 120	92	80 - 120	<0.0000050	mg/L	5.3	20
8385343	Total Vanadium (V)	2016/09/02	105	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8385343	Total Zinc (Zn)	2016/09/02	87	80 - 120	115	80 - 120	<0.0010	mg/L	NC	20
8385343	Total Zirconium (Zr)	2016/09/02					<0.00010	mg/L	NC	20
8385360	Nitrate plus Nitrite (N)	2016/09/01	107	80 - 120	104	80 - 120	<0.0020	mg/L	NC	25
8385384	Nitrite (N)	2016/09/01	100	80 - 120	98	80 - 120	<0.0020	mg/L	NC	25
8385385	Nitrate plus Nitrite (N)	2016/09/01	105	80 - 120	104	80 - 120	<0.0020	mg/L	NC	25
8385386	Nitrite (N)	2016/09/01	97	80 - 120	99	80 - 120	<0.0020	mg/L	NC	25
8385393	Nitrate plus Nitrite (N)	2016/09/01	NC	80 - 120	104	80 - 120	<0.0020	mg/L	NC	25
8385394	Nitrite (N)	2016/09/01	NC	80 - 120	99	80 - 120	<0.0020	mg/L	NC	25
8385941	Dissolved Mercury (Hg)	2016/09/02	95	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8386114	Total Aluminum (Al)	2016/09/02	109	80 - 120	106	80 - 120	<0.0030	mg/L	8.8	20
8386114	Total Antimony (Sb)	2016/09/02	100	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8386114	Total Arsenic (As)	2016/09/02	106	80 - 120	101	80 - 120	<0.000020	mg/L	15	20
8386114	Total Barium (Ba)	2016/09/02	NC	80 - 120	100	80 - 120	<0.000050	mg/L	0.38	20
8386114	Total Beryllium (Be)	2016/09/02	99	80 - 120	95	80 - 120	<0.000010	mg/L	NC	20
8386114	Total Bismuth (Bi)	2016/09/02	93	80 - 120	93	80 - 120	<0.000010	mg/L	NC	20
8386114	Total Boron (B)	2016/09/02	99	80 - 120	94	80 - 120	<0.010	mg/L	NC	20
8386114	Total Cadmium (Cd)	2016/09/02	100	80 - 120	103	80 - 120	<0.0000050	mg/L	17	20
8386114	Total Chromium (Cr)	2016/09/02	105	80 - 120	105	80 - 120	<0.00010	mg/L	NC	20
8386114	Total Cobalt (Co)	2016/09/02	102	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
8386114	Total Copper (Cu)	2016/09/02	100	80 - 120	109	80 - 120	<0.00010	mg/L	NC	20
8386114	Total Iron (Fe)	2016/09/02	NC	80 - 120	101	80 - 120	<0.0050	mg/L	5.7	20
8386114	Total Lead (Pb)	2016/09/02	97	80 - 120	95	80 - 120	<0.000020	mg/L	4.1	20
8386114	Total Lithium (Li)	2016/09/02	100	80 - 120	96	80 - 120	0.00052, RDL=0.00050	mg/L	NC	20
8386114	Total Manganese (Mn)	2016/09/02	NC	80 - 120	104	80 - 120	<0.00010	mg/L	7.6	20
8386114	Total Molybdenum (Mo)	2016/09/02	102	80 - 120	97	80 - 120	<0.000050	mg/L	1.9	20
8386114	Total Nickel (Ni)	2016/09/02	99	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
8386114	Total Phosphorus (P)	2016/09/02					<0.0050	mg/L	NC	20
8386114	Total Selenium (Se)	2016/09/02	102	80 - 120	102	80 - 120	<0.000040	mg/L	5.5	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8386114	Total Silicon (Si)	2016/09/02					<0.050	mg/L	3.0	20
8386114	Total Silver (Ag)	2016/09/02	105	80 - 120	101	80 - 120	<0.000010	mg/L	NC	20
8386114	Total Strontium (Sr)	2016/09/02	NC	80 - 120	96	80 - 120	<0.000050	mg/L	1.1	20
8386114	Total Thallium (Tl)	2016/09/02	93	80 - 120	88	80 - 120	<0.0000020	mg/L	NC	20
8386114	Total Tin (Sn)	2016/09/02	98	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8386114	Total Titanium (Ti)	2016/09/02	118	80 - 120	104	80 - 120	<0.0020	mg/L	NC	20
8386114	Total Uranium (U)	2016/09/02	104	80 - 120	92	80 - 120	<0.0000050	mg/L	0.47	20
8386114	Total Vanadium (V)	2016/09/02	106	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8386114	Total Zinc (Zn)	2016/09/02	106	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20
8386114	Total Zirconium (Zr)	2016/09/02					<0.00010	mg/L	NC	20
8386197	Acidity (pH 4.5)	2016/09/02			0	N/A	<0.50	mg/L	NC	20
8386197	Acidity (pH 8.3)	2016/09/02			100	80 - 120	<0.50	mg/L	NC	20
8386259	Total Aluminum (Al)	2016/09/02	100	80 - 120	104	80 - 120	<0.00050	mg/L	5.6	20
8386259	Total Antimony (Sb)	2016/09/02	97	80 - 120	94	80 - 120	<0.000020	mg/L	NC	20
8386259	Total Arsenic (As)	2016/09/02	101	80 - 120	95	80 - 120	<0.000020	mg/L	17	20
8386259	Total Barium (Ba)	2016/09/02	NC	80 - 120	98	80 - 120	<0.000020	mg/L	0.63	20
8386259	Total Beryllium (Be)	2016/09/02	99	80 - 120	91	80 - 120	<0.000010	mg/L	NC	20
8386259	Total Bismuth (Bi)	2016/09/02	94	80 - 120	89	80 - 120	<0.0000050	mg/L	NC	20
8386259	Total Boron (B)	2016/09/02	98	80 - 120	92	80 - 120	<0.010	mg/L	NC	20
8386259	Total Cadmium (Cd)	2016/09/02	102	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8386259	Total Chromium (Cr)	2016/09/02	103	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8386259	Total Cobalt (Co)	2016/09/02	104	80 - 120	101	80 - 120	<0.0000050	mg/L	3.0	20
8386259	Total Copper (Cu)	2016/09/02	103	80 - 120	100	80 - 120	<0.000050	mg/L	2.7	20
8386259	Total Iron (Fe)	2016/09/02	NC	80 - 120	102	80 - 120	<0.0010	mg/L	0.32	20
8386259	Total Lead (Pb)	2016/09/02	96	80 - 120	92	80 - 120	<0.0000050	mg/L	3.6	20
8386259	Total Lithium (Li)	2016/09/02	102	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8386259	Total Manganese (Mn)	2016/09/02	104	80 - 120	101	80 - 120	<0.000050	mg/L	1.7	20
8386259	Total Molybdenum (Mo)	2016/09/02	NC	80 - 120	98	80 - 120	<0.000050	mg/L	1.9	20
8386259	Total Nickel (Ni)	2016/09/02	103	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8386259	Total Phosphorus (P)	2016/09/02					<0.0020	mg/L		
8386259	Total Selenium (Se)	2016/09/02	99	80 - 120	96	80 - 120	<0.000040	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8386259	Total Silicon (Si)	2016/09/02					<0.050	mg/L	3.6	20
8386259	Total Silver (Ag)	2016/09/02	97	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8386259	Total Strontium (Sr)	2016/09/02	NC	80 - 120	90	80 - 120	<0.000050	mg/L	0.76	20
8386259	Total Thallium (Tl)	2016/09/02	91	80 - 120	89	80 - 120	<0.0000020	mg/L	NC	20
8386259	Total Tin (Sn)	2016/09/02	100	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8386259	Total Titanium (Ti)	2016/09/02	104	80 - 120	108	80 - 120	<0.00050	mg/L	NC	20
8386259	Total Uranium (U)	2016/09/02	99	80 - 120	90	80 - 120	<0.0000020	mg/L	NC	20
8386259	Total Vanadium (V)	2016/09/02	104	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8386259	Total Zinc (Zn)	2016/09/02	108	80 - 120	98	80 - 120	<0.00010	mg/L	4.2	20
8386259	Total Zirconium (Zr)	2016/09/02					<0.00010	mg/L	NC	20
8386276	Total Mercury (Hg)	2016/09/02	101	80 - 120	92	80 - 120	<0.0000020	mg/L	NC	20
8386318	Total Mercury (Hg)	2016/09/02	96	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8386342	Dissolved Mercury (Hg)	2016/09/02	95	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8386947	Dissolved Phosphorus (P)	2016/09/02	NC	80 - 120	92	80 - 120	<0.0020	mg/L	13	20
8386948	Dissolved Phosphorus (P)	2016/09/02	92	80 - 120	108	80 - 120	<0.0020	mg/L	NC	20
8386949	Dissolved Phosphorus (P)	2016/09/02	86	80 - 120	100	80 - 120	<0.0020	mg/L	NC	20
8386951	Total Phosphorus (P)	2016/09/02	89	80 - 120	108	80 - 120	<0.0020	mg/L		
8386952	Total Phosphorus (P)	2016/09/02	94	80 - 120	110	80 - 120	<0.0020	mg/L	NC	20
8387298	Total Ammonia (N)	2016/09/03	102	80 - 120	99	80 - 120	<0.0050	mg/L	NC	20
8387299	Total Ammonia (N)	2016/09/03	102	80 - 120	99	80 - 120	<0.0050	mg/L	NC	20
8387300	Total Ammonia (N)	2016/09/03	NC	80 - 120	96	80 - 120	<0.0050	mg/L	4.6	20
8387303	Total Ammonia (N)	2016/09/03	NC	80 - 120	98	80 - 120	<0.0050	mg/L	3.9	20
8387304	Total Ammonia (N)	2016/09/03	NC	80 - 120	104	80 - 120	<0.0050	mg/L	7.3	20
8387315	Dissolved Ammonia (N)	2016/09/03	NC	80 - 120	98	80 - 120	<0.0050	mg/L	2.9	25
8389102	Dissolved Chloride (Cl)	2016/09/06	114	80 - 120	94	80 - 120	<0.50	mg/L	NC	20
8389104	Dissolved Sulphate (SO4)	2016/09/06			92	80 - 120	0.51, RDL=0.50	mg/L		
8389177	Total Nitrogen (N)	2016/09/06	NC	80 - 120	95	80 - 120	<0.020	mg/L	1.1	20
8390148	Dissolved Organic Carbon (C)	2016/09/07	107	80 - 120	83	80 - 120	<0.50	mg/L	NC	20
8390286	Total Organic Carbon (C)	2016/09/07			113	80 - 120	<0.50	mg/L		
8390294	Dissolved Organic Carbon (C)	2016/09/07	114	80 - 120	111	80 - 120	<0.50	mg/L	NC	20
8390296	Dissolved Organic Carbon (C)	2016/09/07	116	80 - 120	109	80 - 120	<0.50	mg/L	3.0	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8390300	Dissolved Organic Carbon (C)	2016/09/07	106	80 - 120	108	80 - 120	<0.50	mg/L	NC	20
8390508	Total Aluminum (Al)	2016/09/07	96	80 - 120	100	80 - 120	<0.00050	mg/L	1.7	20
8390508	Total Antimony (Sb)	2016/09/07	94	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8390508	Total Arsenic (As)	2016/09/07	98	80 - 120	98	80 - 120	<0.000020	mg/L	5.2	20
8390508	Total Barium (Ba)	2016/09/07	NC	80 - 120	97	80 - 120	<0.000020	mg/L	3.1	20
8390508	Total Beryllium (Be)	2016/09/07	96	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8390508	Total Bismuth (Bi)	2016/09/07	95	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8390508	Total Boron (B)	2016/09/07	97	80 - 120	94	80 - 120	<0.010	mg/L	NC	20
8390508	Total Cadmium (Cd)	2016/09/07	95	80 - 120	97	80 - 120	<0.0000050	mg/L	3.3	20
8390508	Total Chromium (Cr)	2016/09/07	96	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
8390508	Total Cobalt (Co)	2016/09/07	93	80 - 120	97	80 - 120	<0.0000050	mg/L	0.25	20
8390508	Total Copper (Cu)	2016/09/07	92	80 - 120	97	80 - 120	<0.000050	mg/L	8.1	20
8390508	Total Iron (Fe)	2016/09/07	NC	80 - 120	97	80 - 120	<0.0010	mg/L	2.3	20
8390508	Total Lead (Pb)	2016/09/07	96	80 - 120	98	80 - 120	<0.0000050	mg/L	2.1	20
8390508	Total Lithium (Li)	2016/09/07	NC	80 - 120	97	80 - 120	<0.00050	mg/L	0.065	20
8390508	Total Manganese (Mn)	2016/09/07	NC	80 - 120	95	80 - 120	<0.000050	mg/L	0.35	20
8390508	Total Molybdenum (Mo)	2016/09/07	99	80 - 120	97	80 - 120	<0.000050	mg/L	2.2	20
8390508	Total Nickel (Ni)	2016/09/07	92	80 - 120	98	80 - 120	0.000035, RDL=0.000020	mg/L	1.3	20
8390508	Total Phosphorus (P)	2016/09/07					0.0028, RDL=0.0020	mg/L		
8390508	Total Selenium (Se)	2016/09/07	96	80 - 120	97	80 - 120	<0.000040	mg/L	NC	20
8390508	Total Silicon (Si)	2016/09/07					<0.050	mg/L	0.63	20
8390508	Total Silver (Ag)	2016/09/07	99	80 - 120	82	80 - 120	<0.0000050	mg/L	NC	20
8390508	Total Strontium (Sr)	2016/09/07	NC	80 - 120	97	80 - 120	<0.000050	mg/L	0.040	20
8390508	Total Thallium (Tl)	2016/09/07	85	80 - 120	97	80 - 120	<0.0000020	mg/L	13	20
8390508	Total Tin (Sn)	2016/09/07	99	80 - 120	107	80 - 120	<0.00020	mg/L	NC	20
8390508	Total Titanium (Ti)	2016/09/07	93	80 - 120	90	80 - 120	<0.00050	mg/L	NC	20
8390508	Total Uranium (U)	2016/09/07	101	80 - 120	99	80 - 120	<0.0000020	mg/L	1.2	20
8390508	Total Vanadium (V)	2016/09/07	96	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8390508	Total Zinc (Zn)	2016/09/07	NC	80 - 120	97	80 - 120	<0.00010	mg/L	0.39	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8390508	Total Zirconium (Zr)	2016/09/07					<0.00010	mg/L	NC	20
8390612	Dissolved Aluminum (Al)	2016/09/08			102	80 - 120	<0.00050	mg/L		
8390612	Dissolved Antimony (Sb)	2016/09/08			95	80 - 120	<0.000020	mg/L		
8390612	Dissolved Arsenic (As)	2016/09/08			96	80 - 120	<0.000020	mg/L		
8390612	Dissolved Barium (Ba)	2016/09/08			98	80 - 120	<0.000020	mg/L		
8390612	Dissolved Beryllium (Be)	2016/09/08			93	80 - 120	<0.000010	mg/L		
8390612	Dissolved Bismuth (Bi)	2016/09/08			96	80 - 120	<0.0000050	mg/L		
8390612	Dissolved Boron (B)	2016/09/08			90	80 - 120	<0.010	mg/L		
8390612	Dissolved Cadmium (Cd)	2016/09/08			97	80 - 120	<0.0000050	mg/L		
8390612	Dissolved Chromium (Cr)	2016/09/08			97	80 - 120	<0.00010	mg/L		
8390612	Dissolved Cobalt (Co)	2016/09/08			96	80 - 120	<0.0000050	mg/L		
8390612	Dissolved Copper (Cu)	2016/09/08			96	80 - 120	<0.000050	mg/L		
8390612	Dissolved Iron (Fe)	2016/09/08			97	80 - 120	<0.0010	mg/L		
8390612	Dissolved Lead (Pb)	2016/09/08			98	80 - 120	<0.0000050	mg/L		
8390612	Dissolved Lithium (Li)	2016/09/08			89	80 - 120	<0.00050	mg/L		
8390612	Dissolved Manganese (Mn)	2016/09/08			96	80 - 120	<0.000050	mg/L		
8390612	Dissolved Molybdenum (Mo)	2016/09/08			98	80 - 120	<0.000050	mg/L		
8390612	Dissolved Nickel (Ni)	2016/09/08			96	80 - 120	<0.000020	mg/L		
8390612	Dissolved Phosphorus (P)	2016/09/08					<0.0020	mg/L		
8390612	Dissolved Selenium (Se)	2016/09/08			97	80 - 120	<0.000040	mg/L		
8390612	Dissolved Silicon (Si)	2016/09/08					<0.050	mg/L		
8390612	Dissolved Silver (Ag)	2016/09/08			93	80 - 120	<0.0000050	mg/L		
8390612	Dissolved Strontium (Sr)	2016/09/08			100	80 - 120	<0.000050	mg/L		
8390612	Dissolved Thallium (Tl)	2016/09/08			97	80 - 120	0.0000020, RDL=0.0000020	mg/L		
8390612	Dissolved Tin (Sn)	2016/09/08			103	80 - 120	<0.00020	mg/L		
8390612	Dissolved Titanium (Ti)	2016/09/08			101	80 - 120	<0.00050	mg/L		
8390612	Dissolved Uranium (U)	2016/09/08			100	80 - 120	<0.0000020	mg/L		
8390612	Dissolved Vanadium (V)	2016/09/08			96	80 - 120	<0.00020	mg/L		
8390612	Dissolved Zinc (Zn)	2016/09/08			99	80 - 120	<0.00010	mg/L		
8390612	Dissolved Zirconium (Zr)	2016/09/08					<0.00010	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8390650	Bromide (Br)	2016/09/08	102	78 - 120	97	80 - 120	<0.010	mg/L	NC	20
8391299	Total Lead (Pb)	2016/09/09	103	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8391522	Dissolved Phosphorus (P)	2016/09/08	100	80 - 120	97	80 - 120	<0.0020	mg/L	NC	20
8391524	Total Phosphorus (P)	2016/09/08	106	80 - 120	101	80 - 120	0.0023, RDL=0.0020	mg/L	NC	20
8392042	Total Ammonia (N)	2016/09/09	NC	80 - 120	98	80 - 120	<0.0050	mg/L	1.9	20
8392434	Dissolved Barium (Ba)	2016/09/09	NC	80 - 120	98	80 - 120	<0.000020	mg/L	2.5	20
8392434	Dissolved Strontium (Sr)	2016/09/09	NC	80 - 120	95	80 - 120	<0.000050	mg/L	0.63	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Blank Spike outside acceptance criteria (10% of analytes failure allowed).

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

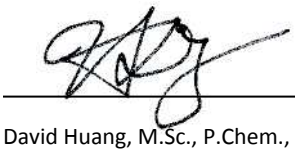
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Analytics International Corporation o/a Maxxam Analytics
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-free:800-563-6266 Fax:(604) 731 2386 www.maxxam.ca

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#11954 BMC MINERAL (NO. 1) LTD.	Company Name	#31132 ALEXCO ENVIRONMENTAL GROUP INC.	Quotation #	B60751	Maxxam Job #	Bottle Order #:
Contact Name	ACCOUNTS PAYABLE	Contact Name	KAI WOLOSHYN	P.O. #		B674606	502942
Address	530-1130 West Pender Street, Vancouver BC V6E 4A4	Address	Unit 3 Calcite Business Centre 151 Industrial Road WHITEHORSE BC Y1A 2V3	Project #	BMC-16-01	Chain Of Custody Record	Project Manager
Phone	(778) 233-7058 x Fax:	Phone	(867) 668-6463 Fax:	Project Name		C#502942-01-01	Megan Smith
Email	accounts@bmcminerals.com	Email	kwoloshyn@alexcoresource.com	Site #			
				Sampled By	Andrew MacPhail		

Regulatory Criteria:
- [ ] CSR
- [ ] CCME
- [ ] BC Water Quality
- [ ] Other

Special Instructions:

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [X]

(will be applied if Rush TAT is not specified):

Standard TAT = 5-7 Working days for most tests..

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)

1 DAY [ ] 2 Day [ ] 3 Day [ ] Date Required: _____ [ ]

Rush Confirmation Number: _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	SURFACE WATER QUALITY	# of Bottles	Comments
1	SID#160227	KZ-19	27/Aug/16	16:50	SW	N	X	11	RECEIVED IN WHITEHORSE BY: J. Villacro. 2016-08-30 @10:35
2	SID#160228	KZ-21	26/Aug/16	15:00	SW	N	X	11	
3	SID#160229	KZ-22	26/Aug/16	14:00	SW	N	X	11	TEMP: 6 / 3 / 5 @10:35
4	SID#160230	KZ-28	26/Aug/16	14:15	SW	N	X	11	4/3/5 2/4/2
5	SID#160231	KZ-6	27/Aug/16	15:33	SW	N	X	11	5/4/0 2/3/1
6	SID#160232	TRIP BLANK			SW	N	X	11	4/3/5 3/3/1
7	SID#160219	KZ-2	27-Aug-16	16:30	SW	N	X	11	3/3/1 1/4/1 5/3/5
8	SID#160220	KZ-26	26/Aug/16	12:15	SW	N	X	11	
9	SID#160221	KZ-7	27-Aug-16	14:32	SW	N	X	11	
10	SID#160222	KZ-9	27-Aug-16	11:55	SW	N	X	11	

B674606_COC

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Andrew MacPhail	16/09/30	10:30		2016/08/31	09:30		[ ]	1,1 / 1,2 / 1,1 / 1,1	[ ] Yes [ ] No

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

2,2 / 1,1 / 1,1 / 1,2 / 2,1 / 2,2 / 1,2 / 1

Maxxam Analytics International Corporation o/a Maxxam Analytics
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-free:800-563-6266 Fax:(604) 731 2386 www.maxxam.ca

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#11954 BMC MINERAL (NO. 1) LTD.	Company Name	#31132 ALEXCO ENVIRONMENTAL GROUP INC.	Quotation #	B60751	Maxxam Job #	Bottle Order #:
Contact Name	ACCOUNTS PAYABLE	Contact Name	KAI WOLOSHYN	P.O. #		B674606	502942
Address	530-1130 West Pender Street, Vancouver BC V6E 4A4	Address	Unit 3 Calcite Business Centre 151 Industrial Road WHITEHORSE BC Y1A 2V3	Project #	BMC-16-01	Chain Of Custody Record	Project Manager
Phone	(778) 233-7058 x Fax:	Phone	(867) 668-6463 Fax:	Project Name		C#502942-02-01	Megan Smith
Email	accounts@bmcminerals.com	Email	kwoloshyn@alexcoresource.com	Site # / Sampled By	Andrew MacPhail		

Regulatory Criteria:
- [ ] CSR
- [ ] CCME
- [ ] BC Water Quality
- [ ] Other

Special Instructions:

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: (will be applied if Rush TAT is not specified) X

Standard TAT = 5-7 Working days for most tests.

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)

1 DAY ☐ 2 Day ☐ 3 Day ☐ Date Required: _____ ☐

Rush Confirmation Number: _____ (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	SURFACE WATER QUALITY	# of Bottles	Comments
1	SID#160223	KZ-13	28-Aug-16	7:35	SW	N	X	11	RECEIVED IN WHITEHORSE BY: 2016-08-30 @ 10:35
2	SID#160224	KZ-15	27-Aug-16	7:30	SW	N	X	11	
3	SID#160225	KZ-16	27-Aug-16	8:20	SW	N	X	11	
4	SID#160226	KZ-17	27-Aug-16	9:04	SW	N	X	11	TEMP: 6 / 3 / 5 4/3/5
5		KZ-18	27-Aug-16	12:07	SW	N	X	11	2/4/2 1/4/1
6									5/4/0
7									4/3/5 3/3/1 JY 2016/08/30
8									3/3/1
9									5/3/5
10									2/3/1 3/3/1

B674606_COC

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Andrew MacPhail	16/09/30			2016/08/31	09:30	

Lab Use Only: Time Sensitive ☐ | Temperature (°C) on Receipt: 1,1 / 1,2 / 1,1 / 1,1 | Custody Seal Intact on Cooler? ☐ Yes ☐ No

221/111/112/211/222/121

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

Maxxam
A Bureau Veritas Group Company

Maxxam Analytics International Corporation o/a Maxxam Analytics
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-free:800-563-6266 Fax:(604) 731 2386 www.maxxam.ca

B674717_COC

INVOICE TO:		Report Information		Project Information	
Company Name	#11954 BMC MINERAL (NO. 1) LTD.	Company Name	#31132 ALEXCO ENVIRONMENTAL GROUP INC.	Quotation #	B60751
Contact Name	ACCOUNTS PAYABLE	Contact Name	KAI WOLOSHYN	P.O. #	
Address	530-1130 West Pender Street, Vancouver BC V6E 4A4	Address	Unit 3 Calcite Business Centre 151 Industrial Road WHITEHORSE BC Y1A 2V3	Project #	BMC-16-01
Phone	(778) 233-7058 x Fax:	Phone	(867) 668-6463 Fax:	Project Name	
Email	accounts@bmcminerals.com	Email	kwoloshyn@alexcoresource.com	Site #	
				Sampled By	Andrew MacNeil

Lab Use Only
Bottle Order #: 503657
Chain Of Custody Record: C#503657-01-01
Project Manager: Megan Smith

Regulatory Criteria:
- [ ] CSR
- [ ] CCME
- [ ] BC Water Quality
- [ ] Other

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Acidity, Alkalinity, Conductivity, pH, Color, Turbidity, TDS LL	Chloride, Fluoride, Sulphate, Nitrate, Nitrite, Orthophos, Bromide	Cyanide SAD & WAD	COD, TN, NH4, TOC, TKN	Carbon (DOC) - field filtered/preserved	Phosphorus (LL Total & Dissolved) - UF/UP	Total Suspended Solids-Low Level	Low Level Total & Dissolved Metals with CV Hg			# of Bottles	Comments
1		KZ-9 West Seep	27-Aug-16	11:20	SW	N	X	X	X	X	X	X	X	X				
2		KZ-9 East Seep	27-Aug-16	12:30	SW	N	X	X	X	X	X	X	X	X				
3		Seep 3	28-Aug-16	18:05	SW	N	X	X	X	X	X	X	X	X				
4		Seep 4	27-Aug-16	15:55	SW	N	X	X	X	X	X	X	X	X				
5		Seep			SW		X	X	X	X	X	X	X	X				
6		Seep 5	27-Aug-16	14:13	SW	N	X	X	X	X	X	X	X	X				
7																		
8																		
9																		
10																		

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
[X]

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
1 DAY [ ] 2 Day [ ] 3 Day [ ] Date Required: _____ [ ]
Rush Confirmation Number: _____ *(call lab for #)*

RECEIVED IN WHITEHORSE
BY: [signature]
2016-08-30 @10:35
TEMP: 6 1 3 5
4/3/5 4/3/5 2/3/1
2/4/2 3/3/1 3/3/1
5/4/0 5/5/3 1/4/1
Cyanide filtered, Metals filtered but not preserved

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Andrew MacNeil	16/09/30	10:30	Maureen Berthier	2016/08/31	09:30	

Lab Use Only: Time Sensitive [ ] | Temperature (°C) on Receipt: 1/1/1/2/1/1/1/1/1 | Custody Seal Intact on Cooler? [ ] Yes [ ] No

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Maxxam Yellow: Client

2 2 1 / 1 1 1 / 1 1 2 / 2 1 1 / 2 2 2 / 1 2 1

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08427197, 08427191, 08427198

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/09/23
Report #: R2267090
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B677977
Received: 2016/09/08, 13:10

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	14	N/A	2016/09/10	BBY6SOP-00037	SM 22 2310 B m
Acidity pH 4.5 & pH 8.3 (as CaCO3)	1	N/A	2016/09/14	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	4	2016/09/09	2016/09/10	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	10	2016/09/10	2016/09/10	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	1	2016/09/12	2016/09/12	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	14	N/A	2016/09/12	BBY6SOP-00011	SM 22 4500-Cl- E m
Chloride by Automated Colourimetry	1	N/A	2016/09/13	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	10	N/A	2016/09/13	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	10	N/A	2016/09/13	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	10	N/A	2016/09/12	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	14	N/A	2016/09/10	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	1	N/A	2016/09/12	BBY6SOP-00026	SM 22 2510 B m
Fluoride	14	N/A	2016/09/12	BBY6SOP-00048	SM 22 4500-F C m
Fluoride	1	N/A	2016/09/13	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	9	N/A	2016/09/14	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	1	N/A	2016/09/15	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	14	N/A	2016/09/15	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2016/09/16	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	15	N/A	2016/09/14	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	10	2016/09/14	2016/09/14	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	13	N/A	2016/09/15	BBY WI-00033	Auto Calc
Ion Balance	2	N/A	2016/09/16	BBY WI-00033	Auto Calc
Sum of cations, anions	9	N/A	2016/09/14	Calc	
Sum of cations, anions	4	N/A	2016/09/15	Calc	
Sum of cations, anions	2	N/A	2016/09/16	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	14	N/A	2016/09/15	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2016/09/16	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	14	N/A	2016/09/14	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	1	N/A	2016/09/16	BBY7SOP-00002	EPA 6020B R2 m

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08427197, 08427191, 08427198

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/09/23
Report #: R2267090
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B677977
Received: 2016/09/08, 13:10

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Elements by ICPMS Digested LL (total)	1	2016/09/14	2016/09/15	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	9	N/A	2016/09/14	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2016/09/15	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	9	N/A	2016/09/14	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	10	N/A	2016/09/14	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	14	N/A	2016/09/10	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrate+Nitrite (N) (low level)	1	N/A	2016/09/13	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	14	N/A	2016/09/10	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	1	N/A	2016/09/13	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	15	N/A	2016/09/14	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	15	N/A	2016/09/12	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	14	N/A	2016/09/10	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	1	N/A	2016/09/12	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	13	N/A	2016/09/12	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	1	N/A	2016/09/13	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	1	N/A	2016/09/16	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	9	2016/09/10	2016/09/10	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2016/09/16	2016/09/16	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	10	N/A	2016/09/10	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	10	2016/09/13	2016/09/14	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08427197, 08427191, 08427198

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/09/23
Report #: R2267090
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B677977
Received: 2016/09/08, 13:10

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Megan Smith, Project Manager
Email: msmith@maxxam.ca
Phone# (604) 734 7276

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PL9534		PL9535		PL9536	PL9537		
Sampling Date		2016/09/07 16:05		2016/09/07 15:52		2016/09/07 15:08	2016/09/07 15:33		
COC Number		08427191		08427191		08427191	08427191		
	UNITS	KZ-9_E-SEEP	QC Batch	KZ-9_W-SEEP	QC Batch	SEEP-3	SEEP-5	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	16	8398814	5.1	8398814	3.1	1.5	N/A	8392851
Cation Sum	meq/L	19	8398814	5.2	8398814	3.1	1.6	N/A	8392851
Filter and HNO3 Preservation	N/A	LAB	8394726	LAB	8394726	LAB	LAB	N/A	8394726
Ion Balance	N/A	1.2 (1)	8398813	1.0	8398813	1.0	1.0	0.010	8392850
Nitrate (N)	mg/L	0.0161	8392522	0.486	8392522	0.509	<0.0020	0.0020	8392522
Misc. Inorganics									
Fluoride (F)	mg/L	0.920	8395425	0.056	8395425	0.036	0.074	0.010	8395425
Acidity (pH 4.5)	mg/L	<0.50	8393635	<0.50	8393635	<0.50	<0.50	0.50	8393635
Alkalinity (Total as CaCO3)	mg/L	771	8393294	210	8393294	131	65.0	0.50	8393294
Acidity (pH 8.3)	mg/L	169	8393635	<0.50	8393635	<0.50	2.74	0.50	8393635
Alkalinity (PP as CaCO3)	mg/L	<0.50	8393294	<0.50	8393294	<0.50	<0.50	0.50	8393294
Bicarbonate (HCO3)	mg/L	941	8393294	256	8393294	160	79.3	0.50	8393294
Carbonate (CO3)	mg/L	<0.50	8393294	<0.50	8393294	<0.50	<0.50	0.50	8393294
Hydroxide (OH)	mg/L	<0.50	8393294	<0.50	8393294	<0.50	<0.50	0.50	8393294
Anions									
Dissolved Sulphate (SO4)	mg/L	24.6	8401043	40.9	8395390	18.2	7.51	0.50	8395390
Dissolved Chloride (Cl)	mg/L	2.0	8395388	0.75	8395388	0.73	2.6	0.50	8395388
Nutrients									
Nitrate plus Nitrite (N)	mg/L	0.0161	8396330	0.486	8396330	0.509	<0.0020	0.0020	8396330
Nitrite (N)	mg/L	<0.0020	8396331	<0.0020	8396331	<0.0020	<0.0020	0.0020	8396331
Physical Properties									
Conductivity	uS/cm	1560	8393330	464	8393330	290	154	1.0	8393330
pH	pH	6.61	8393327	8.25	8393327	8.11	7.32		8393327

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Anion - Cation balance exceeds normal acceptance limits, major ions reanalyzed, possible matrix interference

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PL9577		PL9609		PL9610	PL9611		
Sampling Date		2016/09/07 13:08		2016/09/06 16:30		2016/09/07 08:12	2016/09/07 09:26		
COC Number		08427197		08427197		08427197	08427197		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-15	KZ-16	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	3.2	8392851	1.4	8392851	2.9	2.5	N/A	8392851
Cation Sum	meq/L	3.2	8392851	1.3	8392851	2.9	2.5	N/A	8392851
Filter and HNO3 Preservation	N/A	LAB	8394726	LAB	8394726	LAB	LAB	N/A	8394726
Ion Balance	N/A	1.0	8392850	0.97	8392850	1.0	0.99	0.010	8392850
Nitrate (N)	mg/L	0.0902	8392522	0.0412	8392522	0.0722	0.0811	0.0020	8392522
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00065	8396387	0.00071	8396387	0.00067	0.00058	0.00050	8396387
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00070	8396389	0.00073	8396389	0.00069	0.00076	0.00050	8396389
Fluoride (F)	mg/L	0.062	8395414	0.046	8395451	0.060	0.047	0.010	8395414
Dissolved Organic Carbon (C)	mg/L	3.08	8395368	4.11	8395368	2.39	2.76	0.50	8395368
Acidity (pH 4.5)	mg/L	<0.50	8393635	<0.50	8393635	<0.50	<0.50	0.50	8393635
Alkalinity (Total as CaCO3)	mg/L	120	8393707	55.9	8393707	116	100	0.50	8393707
Acidity (pH 8.3)	mg/L	<0.50	8393635	<0.50	8393635	<0.50	<0.50	0.50	8393635
Alkalinity (PP as CaCO3)	mg/L	<0.50	8393707	<0.50	8393707	<0.50	<0.50	0.50	8393707
Bicarbonate (HCO3)	mg/L	147	8393707	68.2	8393707	141	123	0.50	8393707
Carbonate (CO3)	mg/L	<0.50	8393707	<0.50	8393707	<0.50	<0.50	0.50	8393707
Hydroxide (OH)	mg/L	<0.50	8393707	<0.50	8393707	<0.50	<0.50	0.50	8393707
Anions									
Dissolved Sulphate (SO4)	mg/L	35.7	8395386	12.8	8395309	26.6	21.9	0.50	8395386
Dissolved Chloride (Cl)	mg/L	0.77	8395384	<0.50	8395304	0.70	<0.50	0.50	8395384
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0048	8393989	0.0068 (1)	8393989	0.0051	0.0039	0.0020	8393989
Total Ammonia (N)	mg/L	0.036	8396820	0.012	8396820	0.015	0.016	0.0050	8396820
Nitrate plus Nitrite (N)	mg/L	0.0902	8396330	0.0412 (1)	8396330	0.0722	0.0811	0.0020	8396330
Nitrite (N)	mg/L	<0.0020	8396331	<0.0020 (1)	8396331	<0.0020	<0.0020	0.0020	8396331
Total Phosphorus (P)	mg/L	0.0045	8394016	0.0053 (1)	8394016	0.0080	0.0050 (1)	0.0020	8394016
Physical Properties									
Conductivity	uS/cm	298	8393704	136	8393704	268	231	1.0	8393704
pH	pH	7.97	8393699	7.96	8393699	8.13	8.07		8393699

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PL9577		PL9609		PL9610	PL9611		
Sampling Date		2016/09/07 13:08		2016/09/06 16:30		2016/09/07 08:12	2016/09/07 09:26		
COC Number		08427197		08427197		08427197	08427197		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-15	KZ-16	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	5.9	8395901	1.4	8395901	10.1	<1.0	1.0	8395901
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PL9612		PL9613		PL9619		PL9620		
Sampling Date		2016/09/07 10:58		2016/09/06 12:00		2016/09/06 15:00		2016/09/06 13:36		
COC Number		08427197		08427197		08427198		08427198		
	UNITS	KZ-17	QC Batch	KZ-19	QC Batch	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	3.2	8392851	3.9	8392851	4.7	8392851	3.7	N/A	8392851
Cation Sum	meq/L	3.1	8392851	3.9	8392851	4.8	8392851	3.7	N/A	8392851
Filter and HNO3 Preservation	N/A	LAB	8394726	LAB	8394726	LAB	8394726	LAB	N/A	8394726
Ion Balance	N/A	0.99	8392850	0.99	8392850	1.0	8392850	1.0	0.010	8392850
Nitrate (N)	mg/L	0.0913	8392522	0.0390	8392522	0.0108	8392522	0.0361	0.0020	8392522
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00067	8396387	0.00079	8396387	0.00084	8396387	0.00083	0.00050	8396387
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00070	8396389	0.00060	8396389	0.00103	8396389	0.00101	0.00050	8396389
Fluoride (F)	mg/L	0.099	8395425	0.096	8395414	0.130	8395414	0.090	0.010	8395414
Dissolved Organic Carbon (C)	mg/L	1.58	8395377	5.20	8395368	7.13	8395368	5.02	0.50	8395377
Acidity (pH 4.5)	mg/L	<0.50	8393635	<0.50	8393635	<0.50	8393635	<0.50	0.50	8393635
Alkalinity (Total as CaCO3)	mg/L	128	8393707	163	8393707	188	8393707	151	0.50	8393707
Acidity (pH 8.3)	mg/L	0.53	8393635	<0.50	8393635	<0.50	8393635	<0.50	0.50	8393635
Alkalinity (PP as CaCO3)	mg/L	<0.50	8393707	<0.50	8393707	<0.50	8393707	<0.50	0.50	8393707
Bicarbonate (HCO3)	mg/L	157	8393707	198	8393707	229	8393707	184	0.50	8393707
Carbonate (CO3)	mg/L	<0.50	8393707	<0.50	8393707	<0.50	8393707	<0.50	0.50	8393707
Hydroxide (OH)	mg/L	<0.50	8393707	<0.50	8393707	<0.50	8393707	<0.50	0.50	8393707
Anions										
Dissolved Sulphate (SO4)	mg/L	26.8	8395390	31.9	8395386	41.2	8395390	33.1	0.50	8395386
Dissolved Chloride (Cl)	mg/L	0.95	8395388	0.87	8395384	1.3	8395388	1.0	0.50	8395384
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0054	8393989	0.0174 (1)	8393989	0.0186 (1)	8393989	0.0077 (1)	0.0020	8400667
Total Ammonia (N)	mg/L	0.018	8396820	0.014	8396820	0.026	8396820	0.024	0.0050	8396820
Nitrate plus Nitrite (N)	mg/L	0.0913	8396330	0.0390 (1)	8396330	0.0108 (1)	8396330	0.0361 (1)	0.0020	8396330
Nitrite (N)	mg/L	<0.0020	8396331	<0.0020 (1)	8396331	<0.0020 (1)	8396331	<0.0020 (1)	0.0020	8396331
Total Phosphorus (P)	mg/L	0.0047	8394016	0.0180 (1)	8394016	0.0171	8394016	0.0091 (1)	0.0020	8394016
Physical Properties										
Conductivity	uS/cm	291	8393704	353	8393704	418	8393704	340	1.0	8393704
pH	pH	7.96	8393699	8.24	8393699	8.18	8393699	8.18		8393699

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PL9612		PL9613		PL9619		PL9620		
Sampling Date		2016/09/07 10:58		2016/09/06 12:00		2016/09/06 15:00		2016/09/06 13:36		
COC Number		08427197		08427197		08427198		08427198		
	UNITS	KZ-17	QC Batch	KZ-19	QC Batch	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Physical Properties										
Total Suspended Solids	mg/L	<1.0 (1)	8395901	9.5	8395901	2.5	8395901	1.8	1.0	8395901

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PL9621		PL9622		PM2358		
Sampling Date		2016/09/06 10:45		2016/09/07 14:10		2016/09/08 13:00		
COC Number		08427198		08427198		08427197		
	UNITS	KZ-26	QC Batch	KZ-18	QC Batch	SEEP-4	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	4.0	8392851	3.8	8392851	3.1	N/A	8395084
Cation Sum	meq/L	4.0	8392851	3.8	8392851	3.1	N/A	8395084
Filter and HNO3 Preservation	N/A	LAB	8394726	LAB	8394726	LAB	N/A	8394726
Ion Balance	N/A	1.0	8392850	1.0	8392850	0.99	0.010	8395083
Nitrate (N)	mg/L	0.0375	8392522	0.0601	8392522	0.495	0.0020	8395085
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00077	8396387	0.00070	8396387		0.00050	
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00083	8396389	0.00071	8396389		0.00050	
Fluoride (F)	mg/L	0.091	8395414	0.059	8395425	0.047	0.010	8396631
Dissolved Organic Carbon (C)	mg/L	5.53	8395368	2.10	8395368		0.50	
Acidity (pH 4.5)	mg/L	<0.50	8393635	<0.50	8393635	<0.50	0.50	8397076
Alkalinity (Total as CaCO3)	mg/L	162	8393707	168	8393707	112	0.50	8395219
Acidity (pH 8.3)	mg/L	<0.50	8393635	<0.50	8393635	0.83	0.50	8397076
Alkalinity (PP as CaCO3)	mg/L	<0.50	8393707	<0.50	8393707	<0.50	0.50	8395219
Bicarbonate (HCO3)	mg/L	198	8393707	205	8393707	137	0.50	8395219
Carbonate (CO3)	mg/L	<0.50	8393707	<0.50	8393707	<0.50	0.50	8395219
Hydroxide (OH)	mg/L	<0.50	8393707	<0.50	8393707	<0.50	0.50	8395219
Anions								
Dissolved Sulphate (SO4)	mg/L	32.4	8395386	22.1	8395390	39.2	0.50	8397094
Dissolved Chloride (Cl)	mg/L	1.1	8395384	1.0	8395388	0.64	0.50	8397091
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0187 (1)	8393989	0.0194	8393989		0.0020	
Total Ammonia (N)	mg/L	0.018	8396820	0.013	8396820		0.0050	
Nitrate plus Nitrite (N)	mg/L	0.0375 (1)	8396330	0.0601	8396330	0.495	0.0020	8397401
Nitrite (N)	mg/L	<0.0020 (1)	8396331	<0.0020	8396331	<0.0020	0.0020	8397405
Total Phosphorus (P)	mg/L	0.0176 (1)	8394016	0.0223	8394016		0.0020	
Physical Properties								
Conductivity	uS/cm	355	8393704	350	8393704	291	1.0	8395222
pH	pH	8.25	8393699	8.06	8393699	7.91		8395221

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PL9621		PL9622		PM2358		
Sampling Date		2016/09/06 10:45		2016/09/07 14:10		2016/09/08 13:00		
COC Number		08427198		08427198		08427197		
	UNITS	KZ-26	QC Batch	KZ-18	QC Batch	SEEP-4	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	8.7	8395901	<1.0	8395901		1.0	
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PL9534		PL9535		PL9536		
Sampling Date		2016/09/07 16:05		2016/09/07 15:52		2016/09/07 15:08		
COC Number		08427191		08427191		08427191		
	UNITS	KZ-9_E-SEEP	QC Batch	KZ-9_W-SEEP	QC Batch	SEEP-3	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	895	8392954	257	8399253	152	0.50	8392954
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8397352	<0.0000020	8397352	<0.0000020	0.0000020	8397352
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0793	8396743	0.00129	8400769	0.00328	0.00050	8396743
Dissolved Antimony (Sb)	mg/L	<0.000020	8396743	0.000027	8400769	<0.000020	0.000020	8396743
Dissolved Arsenic (As)	mg/L	0.000649	8396743	0.000098	8400769	0.000074	0.000020	8396743
Dissolved Barium (Ba)	mg/L	0.145	8396743	0.233	8400769	0.0997	0.000020	8396743
Dissolved Beryllium (Be)	mg/L	0.000293	8396743	<0.000010	8400769	<0.000010	0.000010	8396743
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8396743	<0.0000050	8400769	<0.0000050	0.0000050	8396743
Dissolved Boron (B)	mg/L	<0.010	8396743	<0.010	8400769	<0.010	0.010	8396743
Dissolved Cadmium (Cd)	mg/L	0.0000690	8396743	0.0000120	8400769	0.0000120	0.0000050	8396743
Dissolved Chromium (Cr)	mg/L	<0.00010	8396743	0.00027	8400769	<0.00010	0.00010	8396743
Dissolved Cobalt (Co)	mg/L	0.00226	8396743	<0.0000050	8400769	0.0000080	0.0000050	8396743
Dissolved Copper (Cu)	mg/L	<0.000050	8396743	0.000112	8400769	0.000234	0.000050	8396743
Dissolved Iron (Fe)	mg/L	4.44	8396743	<0.0010	8400769	<0.0010	0.0010	8396743
Dissolved Lead (Pb)	mg/L	<0.0000050	8396743	0.0000070	8400769	<0.0000050	0.0000050	8396743
Dissolved Lithium (Li)	mg/L	0.0831	8396743	0.00193	8400769	<0.00050	0.00050	8396743
Dissolved Manganese (Mn)	mg/L	2.02	8396743	0.000191	8400769	0.000108	0.000050	8396743
Dissolved Molybdenum (Mo)	mg/L	0.000444	8396743	0.00103	8400769	0.000556	0.000050	8396743
Dissolved Nickel (Ni)	mg/L	0.00713	8396743	0.000087	8400769	0.000112	0.000020	8396743
Dissolved Phosphorus (P)	mg/L	<0.0020	8396743	<0.0020	8400769	0.0022	0.0020	8396743
Dissolved Selenium (Se)	mg/L	<0.000040	8396743	0.00261	8400769	0.000627	0.000040	8396743
Dissolved Silicon (Si)	mg/L	20.1	8396743	3.47	8400769	2.80	0.050	8396743
Dissolved Silver (Ag)	mg/L	<0.0000050	8396743	<0.0000050	8400769	<0.0000050	0.0000050	8396743
Dissolved Strontium (Sr)	mg/L	1.21	8396743	0.253	8400769	0.195	0.000050	8396743
Dissolved Thallium (Tl)	mg/L	0.0000040	8396743	<0.0000020	8400769	<0.0000020	0.0000020	8396743
Dissolved Tin (Sn)	mg/L	<0.00020	8396743	0.00033	8400769	<0.00020	0.00020	8396743
Dissolved Titanium (Ti)	mg/L	<0.00050	8396743	<0.00050	8400769	<0.00050	0.00050	8396743
Dissolved Uranium (U)	mg/L	0.00185	8396743	0.00208	8400769	0.000702	0.0000020	8396743
Dissolved Vanadium (V)	mg/L	<0.00020	8396743	<0.00020	8400769	<0.00020	0.00020	8396743

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PL9534		PL9535		PL9536		
Sampling Date		2016/09/07 16:05		2016/09/07 15:52		2016/09/07 15:08		
COC Number		08427191		08427191		08427191		
	UNITS	KZ-9_E-SEEP	QC Batch	KZ-9_W-SEEP	QC Batch	SEEP-3	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0287	8396743	0.00128	8400769	0.00043	0.00010	8396743
Dissolved Zirconium (Zr)	mg/L	0.00027	8396743	<0.00010	8400769	<0.00010	0.00010	8396743
Dissolved Calcium (Ca)	mg/L	305	8392503	87.5	8398893	58.0	0.050	8392503
Dissolved Magnesium (Mg)	mg/L	32.3	8392503	9.36	8398893	1.83	0.050	8392503
Dissolved Potassium (K)	mg/L	5.02	8392503	1.04	8398893	1.07	0.050	8392503
Dissolved Sodium (Na)	mg/L	8.41	8392503	1.05	8398893	0.644	0.050	8392503
Dissolved Sulphur (S)	mg/L	8.1	8392503	13.7	8398893	5.2	3.0	8392503
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PL9537	PL9577	PL9609	PL9610	PL9611		
Sampling Date		2016/09/07 15:33	2016/09/07 13:08	2016/09/06 16:30	2016/09/07 08:12	2016/09/07 09:26		
COC Number		08427191	08427197	08427197	08427197	08427197		
	UNITS	SEEP-5	KZ-9	KZ-13	KZ-15	KZ-16	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	47.8	157	63.4	141	120	0.50	8392954
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8397352
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0228	0.00321	0.00853	0.00199	0.00198	0.00050	8396743
Dissolved Antimony (Sb)	mg/L	0.000069	0.000054	0.000027	0.000032	<0.000020	0.000020	8396743
Dissolved Arsenic (As)	mg/L	0.000274	0.000170	0.000160	0.000337	0.000202	0.000020	8396743
Dissolved Barium (Ba)	mg/L	0.0489	0.0704	0.0904	0.0581	0.0508	0.000020	8396743
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8396743
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396743
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8396743
Dissolved Cadmium (Cd)	mg/L	0.000518	0.0000790	0.0000190	0.0000160	0.0000150	0.0000050	8396743
Dissolved Chromium (Cr)	mg/L	0.00019	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8396743
Dissolved Cobalt (Co)	mg/L	0.000546	0.0000240	0.0000150	0.0000160	0.0000130	0.0000050	8396743
Dissolved Copper (Cu)	mg/L	0.00358	0.000740	0.000537	0.000474	0.000427	0.000050	8396743
Dissolved Iron (Fe)	mg/L	0.513	0.0620	0.0153	0.0097	0.0044	0.0010	8396743
Dissolved Lead (Pb)	mg/L	0.0000340	0.0000430	0.0000050	0.0000050	<0.0000050	0.0000050	8396743
Dissolved Lithium (Li)	mg/L	0.00168	0.00153	0.00114	0.00142	0.00108	0.00050	8396743
Dissolved Manganese (Mn)	mg/L	0.0379	0.0149	0.00269	0.00834	0.00190	0.000050	8396743
Dissolved Molybdenum (Mo)	mg/L	0.000799	0.000500	0.000457	0.000603	0.000354	0.000050	8396743
Dissolved Nickel (Ni)	mg/L	0.00494	0.000346	0.000438	0.000386	0.000254	0.000020	8396743
Dissolved Phosphorus (P)	mg/L	0.0101	<0.0020	0.0051	0.0030	0.0063	0.0020	8396743
Dissolved Selenium (Se)	mg/L	0.000207	0.000970	0.000131	0.000597	0.000401	0.000040	8396743
Dissolved Silicon (Si)	mg/L	5.82	3.07	2.73	2.93	2.72	0.050	8396743
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396743
Dissolved Strontium (Sr)	mg/L	0.0589	0.160	0.0680	0.142	0.120	0.000050	8396743
Dissolved Thallium (Tl)	mg/L	0.0000030	0.0000020	0.0000020	<0.0000020	<0.0000020	0.0000020	8396743
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8396743
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8396743
Dissolved Uranium (U)	mg/L	0.0000890	0.00109	0.000478	0.00125	0.000827	0.0000020	8396743
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8396743
RDL = Reportable Detection Limit								

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PL9537	PL9577	PL9609	PL9610	PL9611		
Sampling Date		2016/09/07 15:33	2016/09/07 13:08	2016/09/06 16:30	2016/09/07 08:12	2016/09/07 09:26		
COC Number		08427191	08427197	08427197	08427197	08427197		
	UNITS	SEEP-5	KZ-9	KZ-13	KZ-15	KZ-16	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.100	0.0166	0.00309	0.00222	0.00081	0.00010	8396743
Dissolved Zirconium (Zr)	mg/L	0.00027	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8396743
Dissolved Calcium (Ca)	mg/L	14.4	53.1	21.4	45.1	39.5	0.050	8392503
Dissolved Magnesium (Mg)	mg/L	2.87	5.92	2.44	6.89	5.15	0.050	8392503
Dissolved Potassium (K)	mg/L	0.316	1.30	1.32	1.15	1.00	0.050	8392503
Dissolved Sodium (Na)	mg/L	13.0	0.873	0.900	0.869	0.790	0.050	8392503
Dissolved Sulphur (S)	mg/L	<3.0	11.2	3.7	8.6	7.1	3.0	8392503

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PL9612	PL9613	PL9619		PL9620		
Sampling Date		2016/09/07 10:58	2016/09/06 12:00	2016/09/06 15:00		2016/09/06 13:36		
COC Number		08427197	08427197	08427198		08427198		
	UNITS	KZ-17	KZ-19	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	154	191	233	8392954	183	0.50	8392954
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8397352	<0.0000020	0.0000020	8397352
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00088	0.00349	0.00422	8396743	0.00266	0.00050	8396743
Dissolved Antimony (Sb)	mg/L	0.000045	0.000096	0.000137	8396743	0.000071	0.000020	8396743
Dissolved Arsenic (As)	mg/L	0.000241	0.000795	0.00153	8396743	0.000882	0.000020	8396743
Dissolved Barium (Ba)	mg/L	0.0559	0.0615	0.0560	8396743	0.0584	0.000020	8396743
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8396743	<0.000010	0.000010	8396743
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8396743	<0.0000050	0.0000050	8396743
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8396743	<0.010	0.010	8396743
Dissolved Cadmium (Cd)	mg/L	0.0000180	0.0000100	<0.0000050	8396743	0.0000140	0.0000050	8396743
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8396743	<0.00010	0.00010	8396743
Dissolved Cobalt (Co)	mg/L	0.0000060	0.0000250	0.0000200	8396743	0.0000270	0.0000050	8396743
Dissolved Copper (Cu)	mg/L	0.000606	0.000726	0.000581	8396743	0.000535	0.000050	8396743
Dissolved Iron (Fe)	mg/L	<0.0010	0.0313	0.107	8396743	0.0468	0.0010	8396743
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000110	<0.0000050	8396743	0.0000050	0.0000050	8396743
Dissolved Lithium (Li)	mg/L	0.00256	0.00323	0.00355	8396743	0.00238 (1)	0.00050	8400769
Dissolved Manganese (Mn)	mg/L	0.000293	0.00226	0.00208	8396743	0.00627	0.000050	8396743
Dissolved Molybdenum (Mo)	mg/L	0.00138	0.000895	0.00136	8396743	0.000886	0.000050	8396743
Dissolved Nickel (Ni)	mg/L	0.000379	0.00112	0.00250	8396743	0.00118	0.000020	8396743
Dissolved Phosphorus (P)	mg/L	0.0046	0.0064	0.0082	8396743	0.0049	0.0020	8396743
Dissolved Selenium (Se)	mg/L	0.000493	0.000578	0.000632	8396743	0.000614	0.000040	8396743
Dissolved Silicon (Si)	mg/L	3.19	4.00	4.66	8396743	3.74	0.050	8396743
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8396743	<0.0000050	0.0000050	8396743
Dissolved Strontium (Sr)	mg/L	0.148	0.170	0.179	8396743	0.162	0.000050	8396743
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000030	<0.0000020	8396743	<0.0000020	0.0000020	8396743
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8396743	<0.00020	0.00020	8396743
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8396743	<0.00050	0.00050	8396743
Dissolved Uranium (U)	mg/L	0.00196	0.00179	0.00261	8396743	0.00184	0.0000020	8396743

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PL9612	PL9613	PL9619		PL9620		
Sampling Date		2016/09/07 10:58	2016/09/06 12:00	2016/09/06 15:00		2016/09/06 13:36		
COC Number		08427197	08427197	08427198		08427198		
	UNITS	KZ-17	KZ-19	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8396743	<0.00020	0.00020	8396743
Dissolved Zinc (Zn)	mg/L	0.00093	0.00053	0.00161	8396743	0.00112	0.00010	8396743
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00011	8396743	<0.00010	0.00010	8396743
Dissolved Calcium (Ca)	mg/L	47.1	52.1	58.8	8392503	51.2	0.050	8392503
Dissolved Magnesium (Mg)	mg/L	8.77	14.8	21.0	8392503	13.4	0.050	8392503
Dissolved Potassium (K)	mg/L	1.17	1.14	1.26	8392503	1.19	0.050	8392503
Dissolved Sodium (Na)	mg/L	0.934	1.17	1.22	8392503	1.05	0.050	8392503
Dissolved Sulphur (S)	mg/L	8.1	10.1	12.7	8392503	10.5	3.0	8392503
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PL9621	PL9622		PM2358		
Sampling Date		2016/09/06 10:45	2016/09/07 14:10		2016/09/08 13:00		
COC Number		08427198	08427198		08427197		
	UNITS	KZ-26	KZ-18	QC Batch	SEEP-4	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	194	190	8392954	151	0.50	8394879
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8397352	<0.0000020	0.0000020	8397352
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00341	0.00694	8396743	0.00159	0.00050	8396427
Dissolved Antimony (Sb)	mg/L	0.000092	0.000023	8396743	<0.000020	0.000020	8396427
Dissolved Arsenic (As)	mg/L	0.000789	0.000352	8396743	0.000062	0.000020	8396427
Dissolved Barium (Ba)	mg/L	0.0616	0.0448	8396743	0.108	0.000020	8396427
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	8396743	<0.000010	0.000010	8396427
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8396743	<0.0000050	0.0000050	8396427
Dissolved Boron (B)	mg/L	<0.010	<0.010	8396743	<0.010	0.010	8396427
Dissolved Cadmium (Cd)	mg/L	0.0000090	0.0000210	8396743	0.0000130	0.0000050	8396427
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	8396743	<0.00010	0.00010	8396427
Dissolved Cobalt (Co)	mg/L	0.0000250	0.0000060	8396743	0.0000080	0.0000050	8396427
Dissolved Copper (Cu)	mg/L	0.000721	0.000178	8396743	0.000319	0.000050	8396427
Dissolved Iron (Fe)	mg/L	0.0331	0.0047	8396743	<0.0010	0.0010	8396427
Dissolved Lead (Pb)	mg/L	0.0000090	<0.0000050	8396743	<0.0000050	0.0000050	8396427
Dissolved Lithium (Li)	mg/L	0.00323	0.00138	8396743	0.00067	0.00050	8396427
Dissolved Manganese (Mn)	mg/L	0.00372	0.00205	8396743	0.000155	0.000050	8396427
Dissolved Molybdenum (Mo)	mg/L	0.000887	0.000969	8396743	0.000526	0.000050	8396427
Dissolved Nickel (Ni)	mg/L	0.00125	0.000349	8396743	0.000146	0.000020	8396427
Dissolved Phosphorus (P)	mg/L	0.0046	0.0120	8396743	0.0034	0.0020	8396427
Dissolved Selenium (Se)	mg/L	0.000543	0.000962	8396743	0.000826	0.000040	8396427
Dissolved Silicon (Si)	mg/L	4.02	3.23	8396743	2.82	0.050	8396427
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8396743	<0.0000050	0.0000050	8396427
Dissolved Strontium (Sr)	mg/L	0.171	0.169	8396743	0.202	0.000050	8396427
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8396743	<0.0000020	0.0000020	8396427
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8396743	<0.00020	0.00020	8396427
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8396743	<0.00050	0.00050	8396427
Dissolved Uranium (U)	mg/L	0.00186	0.00193	8396743	0.000879	0.0000020	8396427
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8396743	<0.00020	0.00020	8396427

RDL = Reportable Detection Limit

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PL9621	PL9622		PM2358		
Sampling Date		2016/09/06 10:45	2016/09/07 14:10		2016/09/08 13:00		
COC Number		08427198	08427198		08427197		
	UNITS	KZ-26	KZ-18	QC Batch	SEEP-4	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00057	0.00092	8396743	0.00014	0.00010	8396427
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	8396743	<0.00010	0.00010	8396427
Dissolved Calcium (Ca)	mg/L	53.2	50.1	8392503	56.7	0.050	8395071
Dissolved Magnesium (Mg)	mg/L	14.8	15.8	8392503	2.32	0.050	8395071
Dissolved Potassium (K)	mg/L	1.15	0.550	8392503	1.76	0.050	8395071
Dissolved Sodium (Na)	mg/L	1.16	0.776	8392503	0.616	0.050	8395071
Dissolved Sulphur (S)	mg/L	10.0	6.2	8392503	11.3	3.0	8395071
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PL9577	PL9609	PL9610	PL9611	PL9612		
Sampling Date		2016/09/07 13:08	2016/09/06 16:30	2016/09/07 08:12	2016/09/07 09:26	2016/09/07 10:58		
COC Number		08427197	08427197	08427197	08427197	08427197		
	UNITS	KZ-9	KZ-13	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	150	60.6	140	114	151	0.50	8392870
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8397309
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0357	0.0251	0.0265	0.00362	0.00233	0.00050	8396010
Total Antimony (Sb)	mg/L	0.000051	0.000026	0.000031	<0.000020	0.000043	0.000020	8396010
Total Arsenic (As)	mg/L	0.000268	0.000199	0.000473	0.000212	0.000239	0.000020	8396010
Total Barium (Ba)	mg/L	0.0694	0.0839	0.0556	0.0491	0.0521	0.000020	8396010
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8396010
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396010
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8396010
Total Cadmium (Cd)	mg/L	0.000104	0.0000300	0.0000380	0.0000150	0.0000160	0.0000050	8396010
Total Chromium (Cr)	mg/L	0.00011	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8396010
Total Cobalt (Co)	mg/L	0.0000820	0.0000370	0.0000820	0.0000200	0.0000110	0.0000050	8396010
Total Copper (Cu)	mg/L	0.00108	0.000583	0.000657	0.000423	0.000611	0.000050	8396010
Total Iron (Fe)	mg/L	0.265	0.0675	0.149	0.0090	0.0053	0.0010	8396010
Total Lead (Pb)	mg/L	0.000229	0.0000380	0.000110	0.0000070	0.0000070	0.0000050	8396010
Total Lithium (Li)	mg/L	0.00138	0.00113	0.00166	0.00097	0.00211	0.00050	8396010
Total Manganese (Mn)	mg/L	0.0290	0.0144	0.0360	0.00287	0.00147	0.000050	8396010
Total Molybdenum (Mo)	mg/L	0.000496	0.000448	0.000607	0.000368	0.00133	0.000050	8396010
Total Nickel (Ni)	mg/L	0.000489	0.000462	0.000573	0.000250	0.000411	0.000020	8396010
Total Phosphorus (P)	mg/L	0.0084	0.0048	0.0024	<0.0020	0.0025	0.0020	8396010
Total Selenium (Se)	mg/L	0.00104	0.000142	0.000643	0.000454	0.000546	0.000040	8396010
Total Silicon (Si)	mg/L	2.88	2.43	2.71	2.34	2.98	0.050	8396010
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396010
Total Strontium (Sr)	mg/L	0.160	0.0593	0.121	0.106	0.133	0.000050	8396010
Total Thallium (Tl)	mg/L	0.0000020	0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8396010
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8396010
Total Titanium (Ti)	mg/L	0.00219	0.00092	0.00148	<0.00050	<0.00050	0.00050	8396010
Total Uranium (U)	mg/L	0.00109	0.000494	0.00124	0.000854	0.00187	0.0000020	8396010
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8396010

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PL9577	PL9609	PL9610	PL9611	PL9612		
Sampling Date		2016/09/07 13:08	2016/09/06 16:30	2016/09/07 08:12	2016/09/07 09:26	2016/09/07 10:58		
COC Number		08427197	08427197	08427197	08427197	08427197		
	UNITS	KZ-9	KZ-13	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0260	0.00490	0.00496	0.00070	0.00127	0.00010	8396010
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8396010
Total Calcium (Ca)	mg/L	49.6	20.2	44.6	37.0	45.2	0.050	8392232
Total Magnesium (Mg)	mg/L	6.46	2.51	6.90	5.18	9.11	0.050	8392232
Total Potassium (K)	mg/L	1.34	1.17	1.04	0.928	1.08	0.050	8392232
Total Sodium (Na)	mg/L	0.946	0.879	0.834	0.773	0.944	0.050	8392232
Total Sulphur (S)	mg/L	12.5	3.7	8.5	6.9	8.6	3.0	8392232

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PL9619	PL9620	PL9621	PL9622		
Sampling Date		2016/09/06 15:00	2016/09/06 13:36	2016/09/06 10:45	2016/09/07 14:10		
COC Number		08427198	08427198	08427198	08427198		
	UNITS	KZ-21	KZ-22	KZ-26	KZ-18	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	224	177	186	184	0.50	8392870
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8397372
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0208	0.0166	0.0817	0.0108	0.00050	8396010
Total Antimony (Sb)	mg/L	0.000143	0.000070	0.000103	0.000021	0.000020	8396010
Total Arsenic (As)	mg/L	0.00242	0.00124	0.00127	0.000340	0.000020	8396010
Total Barium (Ba)	mg/L	0.0566	0.0569	0.0655	0.0411	0.000020	8396010
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8396010
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396010
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8396010
Total Cadmium (Cd)	mg/L	0.0000150	0.0000250	0.0000280	0.0000240	0.0000050	8396010
Total Chromium (Cr)	mg/L	0.00012	<0.00010	0.00023	<0.00010	0.00010	8396010
Total Cobalt (Co)	mg/L	0.000137	0.0000910	0.000178	0.0000130	0.0000050	8396010
Total Copper (Cu)	mg/L	0.000660	0.000684	0.00109	0.000182	0.000050	8396010
Total Iron (Fe)	mg/L	0.448	0.227	0.339	0.0108	0.0010	8396010
Total Lead (Pb)	mg/L	0.0000410	0.0000570	0.000199	0.0000060	0.0000050	8396010
Total Lithium (Li)	mg/L	0.00393	0.00206	0.00331	0.00144	0.00050	8396010
Total Manganese (Mn)	mg/L	0.0729	0.0436	0.0367	0.00342	0.000050	8396010
Total Molybdenum (Mo)	mg/L	0.00139	0.000903	0.000912	0.000991	0.000050	8396010
Total Nickel (Ni)	mg/L	0.00280	0.00137	0.00179	0.000373	0.000020	8396010
Total Phosphorus (P)	mg/L	0.0105	0.0085	0.0108	0.0116	0.0020	8396010
Total Selenium (Se)	mg/L	0.000650	0.000625	0.000569	0.000996	0.000040	8396010
Total Silicon (Si)	mg/L	4.22	3.41	3.74	2.90	0.050	8396010
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396010
Total Strontium (Sr)	mg/L	0.156	0.142	0.154	0.145	0.000050	8396010
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	<0.0000020	0.0000020	8396010
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8396010
Total Titanium (Ti)	mg/L	0.00076	0.00071	0.00212	<0.00050	0.00050	8396010
Total Uranium (U)	mg/L	0.00253	0.00183	0.00182	0.00192	0.0000020	8396010
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00034	<0.00020	0.00020	8396010
RDL = Reportable Detection Limit							

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PL9619	PL9620	PL9621	PL9622		
Sampling Date		2016/09/06 15:00	2016/09/06 13:36	2016/09/06 10:45	2016/09/07 14:10		
COC Number		08427198	08427198	08427198	08427198		
	UNITS	KZ-21	KZ-22	KZ-26	KZ-18	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00694	0.00244	0.00252	0.00133	0.00010	8396010
Total Zirconium (Zr)	mg/L	0.00011	<0.00010	<0.00010	<0.00010	0.00010	8396010
Total Calcium (Ca)	mg/L	55.0	48.6	50.5	47.2	0.050	8392232
Total Magnesium (Mg)	mg/L	21.1	13.6	14.6	16.0	0.050	8392232
Total Potassium (K)	mg/L	1.13	1.06	1.04	0.497	0.050	8392232
Total Sodium (Na)	mg/L	1.20	1.03	1.14	0.781	0.050	8392232
Total Sulphur (S)	mg/L	13.2	10.7	10.2	7.2	3.0	8392232
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PL9613		
Sampling Date		2016/09/06 12:00		
COC Number		08427197		
	UNITS	KZ-19	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	194	0.50	8392870
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8397309
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.0815	0.0030	8397515
Total Antimony (Sb)	mg/L	0.000112	0.000020	8397515
Total Arsenic (As)	mg/L	0.00126	0.000020	8397515
Total Barium (Ba)	mg/L	0.0658	0.000050	8397515
Total Beryllium (Be)	mg/L	0.000011	0.000010	8397515
Total Bismuth (Bi)	mg/L	<0.000010	0.000010	8397515
Total Boron (B)	mg/L	<0.010	0.010	8397515
Total Cadmium (Cd)	mg/L	0.0000290	0.0000050	8397515
Total Chromium (Cr)	mg/L	0.00024	0.00010	8397515
Total Cobalt (Co)	mg/L	0.000144	0.000010	8397515
Total Copper (Cu)	mg/L	0.00149	0.00010	8397515
Total Iron (Fe)	mg/L	0.311	0.0050	8397515
Total Lead (Pb)	mg/L	0.000176	0.000020	8397515
Total Lithium (Li)	mg/L	0.00308	0.00050	8397515
Total Manganese (Mn)	mg/L	0.0301	0.00010	8397515
Total Molybdenum (Mo)	mg/L	0.000917	0.000050	8397515
Total Nickel (Ni)	mg/L	0.00165	0.00010	8397515
Total Phosphorus (P)	mg/L	0.0156	0.0050	8397515
Total Selenium (Se)	mg/L	0.000574	0.000040	8397515
Total Silicon (Si)	mg/L	4.05	0.050	8397515
Total Silver (Ag)	mg/L	<0.000010	0.000010	8397515
Total Strontium (Sr)	mg/L	0.168	0.000050	8397515
Total Thallium (Tl)	mg/L	0.0000020	0.0000020	8397515
Total Tin (Sn)	mg/L	<0.00020	0.00020	8397515
Total Titanium (Ti)	mg/L	0.0024	0.0020	8397515
Total Uranium (U)	mg/L	0.00168	0.0000050	8397515
Total Vanadium (V)	mg/L	0.00035	0.00020	8397515
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PL9613		
Sampling Date		2016/09/06 12:00		
COC Number		08427197		
	UNITS	**KZ-19**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.0023	0.0010	8397515
Total Zirconium (Zr)	mg/L	0.00011	0.00010	8397515
Total Calcium (Ca)	mg/L	53.3	0.25	8392232
Total Magnesium (Mg)	mg/L	14.8	0.25	8392232
Total Potassium (K)	mg/L	1.13	0.25	8392232
Total Sodium (Na)	mg/L	1.17	0.25	8392232
Total Sulphur (S)	mg/L	10.7	3.0	8392232
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9534
Sample ID: KZ-9_E-SEEP
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Maria Maclean
Alkalinity - Water	AT/ALK	8393294	2016/09/09	2016/09/10	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8395388	N/A	2016/09/12	Balwinder Bassi
Conductance - water	AT/ALK	8393330	N/A	2016/09/10	Wilson Au Yueng
Fluoride	ISE/ISE	8395425	N/A	2016/09/12	Balwinder Bassi
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8398813	N/A	2016/09/16	David Huang
Sum of cations, anions	CALC	8398814	N/A	2016/09/16	David Huang
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	Adnan Dzebic
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	Lucy Luo
pH Water	AT/ALK	8393327	N/A	2016/09/10	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8401043	N/A	2016/09/16	Balwinder Bassi

Maxxam ID: PL9534 Dup
Sample ID: KZ-9_E-SEEP
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	Adnan Dzebic

Maxxam ID: PL9535
Sample ID: KZ-9_W-SEEP
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Maria Maclean
Alkalinity - Water	AT/ALK	8393294	2016/09/09	2016/09/10	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8395388	N/A	2016/09/12	Balwinder Bassi
Conductance - water	AT/ALK	8393330	N/A	2016/09/10	Wilson Au Yueng
Fluoride	ISE/ISE	8395425	N/A	2016/09/12	Balwinder Bassi
Hardness (calculated as CaCO3)	CALC	8399253	N/A	2016/09/16	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8398813	N/A	2016/09/16	David Huang
Sum of cations, anions	CALC	8398814	N/A	2016/09/16	David Huang
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8398893	N/A	2016/09/16	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8400769	N/A	2016/09/16	Andrew An
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9535 **Collected:** 2016/09/07
Sample ID: KZ-9_W-SEEP **Shipped:**
Matrix: Water **Received:** 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	Lucy Luo
pH Water	AT/ALK	8393327	N/A	2016/09/10	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8395390	N/A	2016/09/12	Balwinder Bassi

Maxxam ID: PL9535 Dup **Collected:** 2016/09/07
Sample ID: KZ-9_W-SEEP **Shipped:**
Matrix: Water **Received:** 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8395425	N/A	2016/09/12	Balwinder Bassi

Maxxam ID: PL9536 **Collected:** 2016/09/07
Sample ID: SEEP-3 **Shipped:**
Matrix: Water **Received:** 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Maria Maclean
Alkalinity - Water	AT/ALK	8393294	2016/09/09	2016/09/10	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8395388	N/A	2016/09/12	Balwinder Bassi
Conductance - water	AT/ALK	8393330	N/A	2016/09/10	Wilson Au Yueng
Fluoride	ISE/ISE	8395425	N/A	2016/09/12	Balwinder Bassi
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8392850	N/A	2016/09/15	Automated Statchk
Sum of cations, anions	CALC	8392851	N/A	2016/09/15	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	Adnan Dzebic
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	Lucy Luo
pH Water	AT/ALK	8393327	N/A	2016/09/10	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8395390	N/A	2016/09/12	Balwinder Bassi

Maxxam ID: PL9537 **Collected:** 2016/09/07
Sample ID: SEEP-5 **Shipped:**
Matrix: Water **Received:** 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Maria Maclean
Alkalinity - Water	AT/ALK	8393294	2016/09/09	2016/09/10	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8395388	N/A	2016/09/12	Balwinder Bassi
Conductance - water	AT/ALK	8393330	N/A	2016/09/10	Wilson Au Yueng
Fluoride	ISE/ISE	8395425	N/A	2016/09/12	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9537
Sample ID: SEEP-5
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8392850	N/A	2016/09/15	Automated Statchk
Sum of cations, anions	CALC	8392851	N/A	2016/09/15	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	Adnan Dzebic
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	Lucy Luo
pH Water	AT/ALK	8393327	N/A	2016/09/10	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8395390	N/A	2016/09/12	Balwinder Bassi

Maxxam ID: PL9577
Sample ID: KZ-9
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Maria Maclean
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8395384	N/A	2016/09/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395368	N/A	2016/09/12	Isabel Choi
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	Maria Maclean
Fluoride	ISE/ISE	8395414	N/A	2016/09/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/14	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8392850	N/A	2016/09/15	Automated Statchk
Sum of cations, anions	CALC	8392851	N/A	2016/09/14	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	Adnan Dzebic
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/14	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	Andrew An
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	Lucy Luo
pH Water	AT/ALK	8393699	N/A	2016/09/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8395386	N/A	2016/09/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8393989	2016/09/10	2016/09/10	Beatriz Ortega

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9577
Sample ID: KZ-9
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	Wendy Fong

Maxxam ID: PL9577 Dup
Sample ID: KZ-9
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	Tatyana Serzhanova
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	Isaac Wang
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	Beatriz Ortega

Maxxam ID: PL9609
Sample ID: KZ-13
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Maria Maclean
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8395304	N/A	2016/09/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395368	N/A	2016/09/12	Isabel Choi
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	Maria Maclean
Fluoride	ISE/ISE	8395451	N/A	2016/09/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/14	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8392850	N/A	2016/09/15	Automated Statchk
Sum of cations, anions	CALC	8392851	N/A	2016/09/14	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	Adnan Dzebic
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/14	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	Andrew An
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	Lucy Luo
pH Water	AT/ALK	8393699	N/A	2016/09/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8395309	N/A	2016/09/12	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9609
Sample ID: KZ-13
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8393989	2016/09/10	2016/09/10	Beatriz Ortega
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	Wendy Fong

Maxxam ID: PL9610
Sample ID: KZ-15
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Maria Maclean
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8395384	N/A	2016/09/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395368	N/A	2016/09/12	Isabel Choi
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	Maria Maclean
Fluoride	ISE/ISE	8395414	N/A	2016/09/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/14	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8392850	N/A	2016/09/15	Automated Statchk
Sum of cations, anions	CALC	8392851	N/A	2016/09/14	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	Adnan Dzebic
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/14	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	Andrew An
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	Lucy Luo
pH Water	AT/ALK	8393699	N/A	2016/09/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8395386	N/A	2016/09/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8393989	2016/09/10	2016/09/10	Beatriz Ortega
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	Wendy Fong

Maxxam ID: PL9611
Sample ID: KZ-16
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9611
Sample ID: KZ-16
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8395384	N/A	2016/09/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395368	N/A	2016/09/12	Isabel Choi
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	Maria Maclean
Fluoride	ISE/ISE	8395414	N/A	2016/09/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/14	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8392850	N/A	2016/09/15	Automated Statchk
Sum of cations, anions	CALC	8392851	N/A	2016/09/14	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	Adnan Dzebic
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/14	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	Andrew An
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	Lucy Luo
pH Water	AT/ALK	8393699	N/A	2016/09/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8395386	N/A	2016/09/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8393989	2016/09/10	2016/09/10	Beatriz Ortega
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	Wendy Fong

Maxxam ID: PL9612
Sample ID: KZ-17
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Maria Maclean
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8395388	N/A	2016/09/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395377	N/A	2016/09/12	Isabel Choi
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	Maria Maclean
Fluoride	ISE/ISE	8395425	N/A	2016/09/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/14	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	Edwin Lamigo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9612
Sample ID: KZ-17
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8392850	N/A	2016/09/15	Automated Statchk
Sum of cations, anions	CALC	8392851	N/A	2016/09/14	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	Adnan Dzebic
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/14	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	Andrew An
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	Lucy Luo
pH Water	AT/ALK	8393699	N/A	2016/09/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8395390	N/A	2016/09/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8393989	2016/09/10	2016/09/10	Beatriz Ortega
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	Wendy Fong

Maxxam ID: PL9613
Sample ID: KZ-19
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Maria Maclean
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8395384	N/A	2016/09/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395368	N/A	2016/09/12	Isabel Choi
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	Maria Maclean
Fluoride	ISE/ISE	8395414	N/A	2016/09/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/15	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8392850	N/A	2016/09/15	Automated Statchk
Sum of cations, anions	CALC	8392851	N/A	2016/09/15	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	Adnan Dzebic
Elements by ICPMS Digested LL (total)	ICP/CRCM	8397515	2016/09/14	2016/09/15	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/15	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	Isaac Wang

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9613
Sample ID: KZ-19
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	Lucy Luo
pH Water	AT/ALK	8393699	N/A	2016/09/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8395386	N/A	2016/09/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8393989	2016/09/10	2016/09/10	Beatriz Ortega
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	Wendy Fong

Maxxam ID: PL9619
Sample ID: KZ-21
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Maria Maclean
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8395388	N/A	2016/09/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395368	N/A	2016/09/12	Isabel Choi
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	Maria Maclean
Fluoride	ISE/ISE	8395414	N/A	2016/09/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/14	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8397372	2016/09/14	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8392850	N/A	2016/09/15	Automated Statchk
Sum of cations, anions	CALC	8392851	N/A	2016/09/14	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	Adnan Dzebic
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/14	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	Andrew An
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	Lucy Luo
pH Water	AT/ALK	8393699	N/A	2016/09/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8395390	N/A	2016/09/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8393989	2016/09/10	2016/09/10	Beatriz Ortega
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	Wendy Fong

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9620
Sample ID: KZ-22
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Maria Maclean
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8395384	N/A	2016/09/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395377	N/A	2016/09/12	Isabel Choi
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	Maria Maclean
Fluoride	ISE/ISE	8395414	N/A	2016/09/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/14	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8397372	2016/09/14	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8392850	N/A	2016/09/15	Automated Statchk
Sum of cations, anions	CALC	8392851	N/A	2016/09/14	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	Adnan Dzebic
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/14	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	Andrew An
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	Lucy Luo
pH Water	AT/ALK	8393699	N/A	2016/09/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8395386	N/A	2016/09/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8400667	2016/09/16	2016/09/16	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	Wendy Fong

Maxxam ID: PL9620 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8400769	N/A	2016/09/16	Andrew An

Maxxam ID: PL9621
Sample ID: KZ-26
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Maria Maclean
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8395384	N/A	2016/09/12	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9621
Sample ID: KZ-26
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395368	N/A	2016/09/12	Isabel Choi
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	Maria Maclean
Fluoride	ISE/ISE	8395414	N/A	2016/09/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/14	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8397372	2016/09/14	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8392850	N/A	2016/09/15	Automated Statchk
Sum of cations, anions	CALC	8392851	N/A	2016/09/14	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	Adnan Dzebic
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/14	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	Andrew An
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	Lucy Luo
pH Water	AT/ALK	8393699	N/A	2016/09/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8395386	N/A	2016/09/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8393989	2016/09/10	2016/09/10	Beatriz Ortega
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	Wendy Fong

Maxxam ID: PL9621 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395368	N/A	2016/09/12	Isabel Choi

Maxxam ID: PL9622
Sample ID: KZ-18
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Maria Maclean
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8395388	N/A	2016/09/12	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395368	N/A	2016/09/12	Isabel Choi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9622
Sample ID: KZ-18
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	Maria Maclean
Fluoride	ISE/ISE	8395425	N/A	2016/09/12	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/14	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8397372	2016/09/14	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8392850	N/A	2016/09/15	Automated Statchk
Sum of cations, anions	CALC	8392851	N/A	2016/09/14	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	Adnan Dzebic
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/14	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	Andrew An
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	Lucy Luo
pH Water	AT/ALK	8393699	N/A	2016/09/10	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8395390	N/A	2016/09/12	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8393989	2016/09/10	2016/09/10	Beatriz Ortega
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	Wendy Fong

Maxxam ID: PM2358
Sample ID: SEEP-4
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8397076	N/A	2016/09/14	Maria Maclean
Alkalinity - Water	AT/ALK	8395219	2016/09/12	2016/09/12	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8397091	N/A	2016/09/13	Balwinder Bassi
Conductance - water	AT/ALK	8395222	N/A	2016/09/12	Wilson Au Yueng
Fluoride	ISE/ISE	8396631	N/A	2016/09/13	Balwinder Bassi
Hardness (calculated as CaCO3)	CALC	8394879	N/A	2016/09/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8395083	N/A	2016/09/15	Automated Statchk
Sum of cations, anions	CALC	8395084	N/A	2016/09/15	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8395071	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396427	N/A	2016/09/14	Andrew An
Nitrate+Nitrite (N) (low level)	TRAA/COL	8397401	N/A	2016/09/13	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8397405	N/A	2016/09/13	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8395085	N/A	2016/09/14	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	Lucy Luo
pH Water	AT/ALK	8395221	N/A	2016/09/12	Wilson Au Yueng

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PM2358
Sample ID: SEEP-4
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8397094	N/A	2016/09/13	Balwinder Bassi

Maxxam ID: PM2358 Dup
Sample ID: SEEP-4
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8397076	N/A	2016/09/14	Maria Maclean
Nitrate+Nitrite (N) (low level)	TRAA/COL	8397401	N/A	2016/09/13	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8397405	N/A	2016/09/13	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.0°C
Package 2	6.3°C

Revised report V2 (2016/09/23): Updated to include sampling date for Maxxam sample PM2358 (MM4).

Sample PL9613-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PL9620, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8393294	Alkalinity (PP as CaCO3)	2016/09/09					<0.50	mg/L	NC	20
8393294	Alkalinity (Total as CaCO3)	2016/09/09	NC	80 - 120	96	80 - 120	<0.50	mg/L	0.074	20
8393294	Bicarbonate (HCO3)	2016/09/09					<0.50	mg/L	1.7	20
8393294	Carbonate (CO3)	2016/09/09					<0.50	mg/L	NC	20
8393294	Hydroxide (OH)	2016/09/09					<0.50	mg/L	NC	20
8393327	pH	2016/09/09			102	97 - 103			0.48	N/A
8393330	Conductivity	2016/09/09			101	80 - 120	<1.0	uS/cm	0	20
8393635	Acidity (pH 4.5)	2016/09/10					<0.50	mg/L	NC	20
8393635	Acidity (pH 8.3)	2016/09/10			96	80 - 120	<0.50	mg/L	2.5	20
8393699	pH	2016/09/10			102	97 - 103				
8393704	Conductivity	2016/09/10			98	80 - 120	<1.0	uS/cm		
8393707	Alkalinity (PP as CaCO3)	2016/09/10					<0.50	mg/L	NC	20
8393707	Alkalinity (Total as CaCO3)	2016/09/10	NC	80 - 120	95	80 - 120	<0.50	mg/L	0.92	20
8393707	Bicarbonate (HCO3)	2016/09/10					<0.50	mg/L	0.92	20
8393707	Carbonate (CO3)	2016/09/10					<0.50	mg/L	NC	20
8393707	Hydroxide (OH)	2016/09/10					<0.50	mg/L	NC	20
8393989	Dissolved Phosphorus (P)	2016/09/10	92	80 - 120	97	80 - 120	<0.0020	mg/L	NC	20
8394016	Total Phosphorus (P)	2016/09/10	91	80 - 120	97	80 - 120	<0.0020	mg/L	NC	20
8395219	Alkalinity (PP as CaCO3)	2016/09/12					<0.50	mg/L		
8395219	Alkalinity (Total as CaCO3)	2016/09/12			100	80 - 120	<0.50	mg/L		
8395219	Bicarbonate (HCO3)	2016/09/12					<0.50	mg/L		
8395219	Carbonate (CO3)	2016/09/12					<0.50	mg/L		
8395219	Hydroxide (OH)	2016/09/12					<0.50	mg/L		
8395221	pH	2016/09/12			101	97 - 103				
8395222	Conductivity	2016/09/12			100	80 - 120	<1.0	uS/cm		
8395304	Dissolved Chloride (Cl)	2016/09/12	NC	80 - 120	98	80 - 120	<0.50	mg/L	0.34	20
8395309	Dissolved Sulphate (SO4)	2016/09/12			95	80 - 120	0.57, RDL=0.50	mg/L		
8395368	Dissolved Organic Carbon (C)	2016/09/12	103	80 - 120	109	80 - 120	<0.50	mg/L	5.5	20
8395377	Dissolved Organic Carbon (C)	2016/09/12	104	80 - 120	115	80 - 120	<0.50	mg/L	NC	20
8395384	Dissolved Chloride (Cl)	2016/09/12	111	80 - 120	95	80 - 120	<0.50	mg/L	NC	20
8395386	Dissolved Sulphate (SO4)	2016/09/12			93	80 - 120	<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8395388	Dissolved Chloride (Cl)	2016/09/12	112	80 - 120	95	80 - 120	0.62, RDL=0.50	mg/L	4.2	20
8395390	Dissolved Sulphate (SO4)	2016/09/12			94	80 - 120	<0.50	mg/L	NC	20
8395414	Fluoride (F)	2016/09/12	100	80 - 120	100	80 - 120	0.013, RDL=0.010	mg/L	1.6	20
8395425	Fluoride (F)	2016/09/12			98	80 - 120	0.014, RDL=0.010	mg/L	1.8	20
8395451	Fluoride (F)	2016/09/12			102	80 - 120	0.012, RDL=0.010	mg/L		
8395901	Total Suspended Solids	2016/09/14			103	80 - 120	<1.0	mg/L		
8396010	Total Aluminum (Al)	2016/09/14	107	80 - 120	119	80 - 120	<0.00050	mg/L	NC	20
8396010	Total Antimony (Sb)	2016/09/14	95	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8396010	Total Arsenic (As)	2016/09/14	94	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8396010	Total Barium (Ba)	2016/09/14	NC	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
8396010	Total Beryllium (Be)	2016/09/14	97	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8396010	Total Bismuth (Bi)	2016/09/14	94	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Boron (B)	2016/09/14	94	80 - 120	101	80 - 120	<0.010	mg/L	NC	20
8396010	Total Cadmium (Cd)	2016/09/14	90	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Chromium (Cr)	2016/09/14	99	80 - 120	106	80 - 120	<0.00010	mg/L	NC	20
8396010	Total Cobalt (Co)	2016/09/14	98	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Copper (Cu)	2016/09/14	97	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20
8396010	Total Iron (Fe)	2016/09/14	NC	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
8396010	Total Lead (Pb)	2016/09/14	98	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Lithium (Li)	2016/09/14	93	80 - 120	94	80 - 120	<0.00050	mg/L	NC	20
8396010	Total Manganese (Mn)	2016/09/14	96	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8396010	Total Molybdenum (Mo)	2016/09/14	NC	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8396010	Total Nickel (Ni)	2016/09/14	98	80 - 120	108	80 - 120	<0.000020	mg/L	NC	20
8396010	Total Phosphorus (P)	2016/09/14					<0.0020	mg/L	NC	20
8396010	Total Selenium (Se)	2016/09/14	96	80 - 120	106	80 - 120	<0.000040	mg/L	NC	20
8396010	Total Silicon (Si)	2016/09/14					<0.050	mg/L	NC	20
8396010	Total Silver (Ag)	2016/09/14	98	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Strontium (Sr)	2016/09/14	NC	80 - 120	95	80 - 120	<0.000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8396010	Total Thallium (Tl)	2016/09/14	97	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8396010	Total Tin (Sn)	2016/09/14	96	80 - 120	109	80 - 120	<0.00020	mg/L	NC	20
8396010	Total Titanium (Ti)	2016/09/14	93	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8396010	Total Uranium (U)	2016/09/14	99	80 - 120	110	80 - 120	<0.0000020	mg/L	NC	20
8396010	Total Vanadium (V)	2016/09/14	97	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8396010	Total Zinc (Zn)	2016/09/14	99	80 - 120	110	80 - 120	<0.00010	mg/L	NC	20
8396010	Total Zirconium (Zr)	2016/09/14					<0.00010	mg/L	NC	20
8396330	Nitrate plus Nitrite (N)	2016/09/10	104	80 - 120	102	80 - 120	<0.0020	mg/L	1.1	25
8396331	Nitrite (N)	2016/09/10	98	80 - 120	92	80 - 120	<0.0020	mg/L	NC	25
8396387	Strong Acid Dissoc. Cyanide (CN)	2016/09/13	102	80 - 120	100	80 - 120	0.00051, RDL=0.00050	mg/L	NC	20
8396389	Weak Acid Dissoc. Cyanide (CN)	2016/09/13	103	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8396427	Dissolved Aluminum (Al)	2016/09/14	105	80 - 120	101	80 - 120	<0.00050	mg/L	0.88	20
8396427	Dissolved Antimony (Sb)	2016/09/14	97	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8396427	Dissolved Arsenic (As)	2016/09/14	102	80 - 120	98	80 - 120	<0.000020	mg/L	9.5	20
8396427	Dissolved Barium (Ba)	2016/09/14	NC	80 - 120	104	80 - 120	<0.000020	mg/L	0.55	20
8396427	Dissolved Beryllium (Be)	2016/09/14	101	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8396427	Dissolved Bismuth (Bi)	2016/09/14	97	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Boron (B)	2016/09/14	105	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
8396427	Dissolved Cadmium (Cd)	2016/09/14	96	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Chromium (Cr)	2016/09/14	100	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
8396427	Dissolved Cobalt (Co)	2016/09/14	96	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Copper (Cu)	2016/09/14	95	80 - 120	97	80 - 120	<0.000050	mg/L	0.68	20
8396427	Dissolved Iron (Fe)	2016/09/14	102	80 - 120	102	80 - 120	<0.0010	mg/L	4.1	20
8396427	Dissolved Lead (Pb)	2016/09/14	99	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Lithium (Li)	2016/09/14	92	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8396427	Dissolved Manganese (Mn)	2016/09/14	100	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20
8396427	Dissolved Molybdenum (Mo)	2016/09/14	NC	80 - 120	100	80 - 120	<0.000050	mg/L	1.4	20
8396427	Dissolved Nickel (Ni)	2016/09/14	96	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8396427	Dissolved Phosphorus (P)	2016/09/14					<0.0020	mg/L	NC	20
8396427	Dissolved Selenium (Se)	2016/09/14	98	80 - 120	101	80 - 120	<0.000040	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8396427	Dissolved Silicon (Si)	2016/09/14					<0.050	mg/L	2.9	20
8396427	Dissolved Silver (Ag)	2016/09/14	105	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Strontium (Sr)	2016/09/14	NC	80 - 120	98	80 - 120	<0.000050	mg/L	3.2	20
8396427	Dissolved Thallium (Tl)	2016/09/14	96	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8396427	Dissolved Tin (Sn)	2016/09/14	100	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
8396427	Dissolved Titanium (Ti)	2016/09/14	101	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8396427	Dissolved Uranium (U)	2016/09/14	97	80 - 120	97	80 - 120	<0.0000020	mg/L	2.7	20
8396427	Dissolved Vanadium (V)	2016/09/14	99	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
8396427	Dissolved Zinc (Zn)	2016/09/14	101	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8396427	Dissolved Zirconium (Zr)	2016/09/14					<0.00010	mg/L	NC	20
8396631	Fluoride (F)	2016/09/13	101	80 - 120	104	80 - 120	0.016, RDL=0.010	mg/L	0	20
8396743	Dissolved Aluminum (Al)	2016/09/14	NC	80 - 120	110	80 - 120	<0.00050	mg/L	0.92	20
8396743	Dissolved Antimony (Sb)	2016/09/14	100	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8396743	Dissolved Arsenic (As)	2016/09/14	98	80 - 120	98	80 - 120	<0.000020	mg/L	1.1	20
8396743	Dissolved Barium (Ba)	2016/09/14	NC	80 - 120	100	80 - 120	<0.000020	mg/L	0.58	20
8396743	Dissolved Beryllium (Be)	2016/09/14	91	80 - 120	99	80 - 120	<0.000010	mg/L	6.0	20
8396743	Dissolved Bismuth (Bi)	2016/09/14	98	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8396743	Dissolved Boron (B)	2016/09/14	93	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
8396743	Dissolved Cadmium (Cd)	2016/09/14	93	80 - 120	101	80 - 120	<0.0000050	mg/L	4.3	20
8396743	Dissolved Chromium (Cr)	2016/09/14	93	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8396743	Dissolved Cobalt (Co)	2016/09/14	88	80 - 120	99	80 - 120	<0.0000050	mg/L	1.7	20
8396743	Dissolved Copper (Cu)	2016/09/14	84	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8396743	Dissolved Iron (Fe)	2016/09/14	NC	80 - 120	104	80 - 120	<0.0010	mg/L	0.98	20
8396743	Dissolved Lead (Pb)	2016/09/14	98	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8396743	Dissolved Lithium (Li)	2016/09/14	NC	80 - 120	102	80 - 120	<0.00050	mg/L	0.72	20
8396743	Dissolved Manganese (Mn)	2016/09/14	NC	80 - 120	101	80 - 120	<0.000050	mg/L	1.8	20
8396743	Dissolved Molybdenum (Mo)	2016/09/14	103	80 - 120	99	80 - 120	<0.000050	mg/L	1.8	20
8396743	Dissolved Nickel (Ni)	2016/09/14	NC	80 - 120	101	80 - 120	<0.000020	mg/L	0.37	20
8396743	Dissolved Phosphorus (P)	2016/09/14					<0.0020	mg/L	NC	20
8396743	Dissolved Selenium (Se)	2016/09/14	98	80 - 120	102	80 - 120	<0.000040	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8396743	Dissolved Silicon (Si)	2016/09/14					<0.050	mg/L	0.79	20
8396743	Dissolved Silver (Ag)	2016/09/14	96	80 - 120	94	80 - 120	<0.0000050	mg/L	NC	20
8396743	Dissolved Strontium (Sr)	2016/09/14	NC	80 - 120	91	80 - 120	<0.000050	mg/L	2.7	20
8396743	Dissolved Thallium (Tl)	2016/09/14	101	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8396743	Dissolved Tin (Sn)	2016/09/14	99	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8396743	Dissolved Titanium (Ti)	2016/09/14	91	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8396743	Dissolved Uranium (U)	2016/09/14	106	80 - 120	100	80 - 120	<0.0000020	mg/L	0.54	20
8396743	Dissolved Vanadium (V)	2016/09/14	93	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8396743	Dissolved Zinc (Zn)	2016/09/14	NC	80 - 120	99	80 - 120	<0.00010	mg/L	0.75	20
8396743	Dissolved Zirconium (Zr)	2016/09/14					<0.00010	mg/L	NC	20
8396820	Total Ammonia (N)	2016/09/14	117	80 - 120	97	80 - 120	<0.0050	mg/L	NC	20
8397076	Acidity (pH 4.5)	2016/09/14					<0.50	mg/L	NC	20
8397076	Acidity (pH 8.3)	2016/09/14			96	80 - 120	<0.50	mg/L	NC	20
8397091	Dissolved Chloride (Cl)	2016/09/13	NC	80 - 120	103	80 - 120	0.51, RDL=0.50	mg/L	0.52	20
8397094	Dissolved Sulphate (SO4)	2016/09/13	NC	80 - 120	98	80 - 120	<0.50	mg/L	3.5	20
8397309	Total Mercury (Hg)	2016/09/14	101	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8397352	Dissolved Mercury (Hg)	2016/09/14	110	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8397372	Total Mercury (Hg)	2016/09/14	99	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20
8397401	Nitrate plus Nitrite (N)	2016/09/13	NC	80 - 120	109	80 - 120	<0.0020	mg/L	0.87	25
8397405	Nitrite (N)	2016/09/13	99	80 - 120	102	80 - 120	<0.0020	mg/L	NC	25
8397515	Total Aluminum (Al)	2016/09/15	109	80 - 120	109	80 - 120	<0.0030	mg/L		
8397515	Total Antimony (Sb)	2016/09/15	104	80 - 120	103	80 - 120	<0.000020	mg/L		
8397515	Total Arsenic (As)	2016/09/15	113	80 - 120	101	80 - 120	<0.000020	mg/L		
8397515	Total Barium (Ba)	2016/09/15	NC	80 - 120	101	80 - 120	<0.000050	mg/L		
8397515	Total Beryllium (Be)	2016/09/15	101	80 - 120	100	80 - 120	<0.000010	mg/L		
8397515	Total Bismuth (Bi)	2016/09/15	101	80 - 120	101	80 - 120	<0.000010	mg/L		
8397515	Total Boron (B)	2016/09/15	101	80 - 120	96	80 - 120	<0.010	mg/L		
8397515	Total Cadmium (Cd)	2016/09/15	105	80 - 120	107	80 - 120	<0.0000050	mg/L		
8397515	Total Chromium (Cr)	2016/09/15	114	80 - 120	100	80 - 120	<0.00010	mg/L		
8397515	Total Cobalt (Co)	2016/09/15	112	80 - 120	101	80 - 120	<0.000010	mg/L		
8397515	Total Copper (Cu)	2016/09/15	110	80 - 120	104	80 - 120	<0.00010	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8397515	Total Iron (Fe)	2016/09/15	NC	80 - 120	107	80 - 120	<0.0050	mg/L		
8397515	Total Lead (Pb)	2016/09/15	103	80 - 120	103	80 - 120	<0.000020	mg/L		
8397515	Total Lithium (Li)	2016/09/15	95	80 - 120	100	80 - 120	<0.00050	mg/L		
8397515	Total Manganese (Mn)	2016/09/15	NC	80 - 120	100	80 - 120	<0.00010	mg/L		
8397515	Total Molybdenum (Mo)	2016/09/15	107	80 - 120	102	80 - 120	<0.000050	mg/L		
8397515	Total Nickel (Ni)	2016/09/15	108	80 - 120	102	80 - 120	<0.00010	mg/L		
8397515	Total Phosphorus (P)	2016/09/15					<0.0050	mg/L		
8397515	Total Selenium (Se)	2016/09/15	104	80 - 120	108	80 - 120	<0.000040	mg/L		
8397515	Total Silicon (Si)	2016/09/15					<0.050	mg/L		
8397515	Total Silver (Ag)	2016/09/15	109	80 - 120	104	80 - 120	<0.000010	mg/L		
8397515	Total Strontium (Sr)	2016/09/15	NC	80 - 120	93	80 - 120	<0.000050	mg/L		
8397515	Total Thallium (Tl)	2016/09/15	98	80 - 120	92	80 - 120	<0.0000020	mg/L		
8397515	Total Tin (Sn)	2016/09/15	99	80 - 120	103	80 - 120	<0.00020	mg/L		
8397515	Total Titanium (Ti)	2016/09/15	114	80 - 120	100	80 - 120	<0.0020	mg/L		
8397515	Total Uranium (U)	2016/09/15	101	80 - 120	97	80 - 120	<0.0000050	mg/L		
8397515	Total Vanadium (V)	2016/09/15	112	80 - 120	99	80 - 120	<0.00020	mg/L		
8397515	Total Zinc (Zn)	2016/09/15	99	80 - 120	107	80 - 120	<0.0010	mg/L		
8397515	Total Zirconium (Zr)	2016/09/15					<0.00010	mg/L		
8400667	Dissolved Phosphorus (P)	2016/09/16			88	80 - 120	<0.0020	mg/L		
8400769	Dissolved Aluminum (Al)	2016/09/16	102	80 - 120	104	80 - 120	<0.00050	mg/L		
8400769	Dissolved Antimony (Sb)	2016/09/16	98	80 - 120	100	80 - 120	<0.000020	mg/L		
8400769	Dissolved Arsenic (As)	2016/09/16	98	80 - 120	99	80 - 120	<0.000020	mg/L		
8400769	Dissolved Barium (Ba)	2016/09/16	NC	80 - 120	100	80 - 120	<0.000020	mg/L		
8400769	Dissolved Beryllium (Be)	2016/09/16	103	80 - 120	104	80 - 120	<0.000010	mg/L		
8400769	Dissolved Bismuth (Bi)	2016/09/16	94	80 - 120	96	80 - 120	<0.0000050	mg/L		
8400769	Dissolved Boron (B)	2016/09/16	102	80 - 120	103	80 - 120	<0.010	mg/L		
8400769	Dissolved Cadmium (Cd)	2016/09/16	95	80 - 120	99	80 - 120	<0.0000050	mg/L		
8400769	Dissolved Chromium (Cr)	2016/09/16	96	80 - 120	98	80 - 120	<0.00010	mg/L		
8400769	Dissolved Cobalt (Co)	2016/09/16	94	80 - 120	99	80 - 120	<0.0000050	mg/L		
8400769	Dissolved Copper (Cu)	2016/09/16	92	80 - 120	99	80 - 120	<0.000050	mg/L		
8400769	Dissolved Iron (Fe)	2016/09/16	107	80 - 120	99	80 - 120	<0.0010	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8400769	Dissolved Lead (Pb)	2016/09/16	97	80 - 120	100	80 - 120	<0.0000050	mg/L		
8400769	Dissolved Lithium (Li)	2016/09/16	100	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8400769	Dissolved Manganese (Mn)	2016/09/16	NC	80 - 120	97	80 - 120	<0.000050	mg/L		
8400769	Dissolved Molybdenum (Mo)	2016/09/16	NC	80 - 120	98	80 - 120	<0.000050	mg/L		
8400769	Dissolved Nickel (Ni)	2016/09/16	95	80 - 120	98	80 - 120	<0.000020	mg/L		
8400769	Dissolved Phosphorus (P)	2016/09/16					<0.0020	mg/L		
8400769	Dissolved Selenium (Se)	2016/09/16	100	80 - 120	99	80 - 120	<0.000040	mg/L		
8400769	Dissolved Silicon (Si)	2016/09/16					<0.050	mg/L		
8400769	Dissolved Silver (Ag)	2016/09/16	106	80 - 120	96	80 - 120	<0.0000050	mg/L		
8400769	Dissolved Strontium (Sr)	2016/09/16	NC	80 - 120	98	80 - 120	<0.000050	mg/L		
8400769	Dissolved Thallium (Tl)	2016/09/16	95	80 - 120	98	80 - 120	<0.0000020	mg/L		
8400769	Dissolved Tin (Sn)	2016/09/16	102	80 - 120	101	80 - 120	<0.00020	mg/L		
8400769	Dissolved Titanium (Ti)	2016/09/16	91	80 - 120	88	80 - 120	<0.00050	mg/L		
8400769	Dissolved Uranium (U)	2016/09/16	102	80 - 120	100	80 - 120	<0.0000020	mg/L		
8400769	Dissolved Vanadium (V)	2016/09/16	95	80 - 120	98	80 - 120	<0.00020	mg/L		
8400769	Dissolved Zinc (Zn)	2016/09/16	97	80 - 120	97	80 - 120	<0.00010	mg/L		
8400769	Dissolved Zirconium (Zr)	2016/09/16					<0.00010	mg/L		
8401043	Dissolved Sulphate (SO4)	2016/09/16	NC	80 - 120	97	80 - 120	0.60, RDL=0.50	mg/L	4.8	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

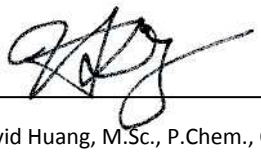
NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC : 08427197

BBY FCD-00077/05

Page 1 2

Invoice Information

Company Name: BMC MINERALS LTD.
Contact Name:
Address: 530-1130 WEST PENDER ST
Vancouver, BC PC: V6E 4A4
Phone:
Email:

Report Information (if differs from invoice)

Company Name: ALEXCO ENVIRONMENTAL
Contact Name: KAI WOLOSHYN
Address: UNIT 3 151 INDUSTRIAL RD
Whitehorse, YK PC: V1A 2V3
Phone: (867) 668-6463
Email: kwoloshyn@alexcoresource.com

Project Information (where applicable)

Quotation #: B50743
P.O. #/ AFE#:
Project #: BMC-15-01
Site Location: Kudz Ze Kayah
Site #:
Sampled By: Catherine Henry

Turnaround Time (TAT) Required

[x] Regular TAT 5 days (Most analyses)

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Rush TAT (Surcharges will be applied)
[ ] Same Day [ ] 2 Days
[ ] 1 Day [ ] 3 Days

Date Required:
Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water
[ ] CCME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)
USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	~~KZ-2~~				~~Water~~	x	x	x	x	x	x	x	x	x	x	x	x	~~11~~	
3	~~KZ-6~~				~~Water~~	x	x	x	x	x	x	x	x	x	x	x	x	~~11~~	
4	~~KZ-7~~				~~Water~~	x	x	x	x	x	x	x	x	x	x	x	x	~~11~~	
5	KZ-9		2016/09/07	13:08	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	KZ-13		2016/09/06	16:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7	KZ-15		2016/09/07	8:12	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
8	KZ-16		2016/09/07	9:26	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
9	KZ-17		2016/09/07	10:58	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
10	KZ-19		2016/09/06	12:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	

LABORATORY USE ONLY

CUSTODY SEAL Y / (N)

Present	Intact	COOLER TEMPERATURES
NA		1 1 1
NA		1 1 1
		1 1

COOLING MEDIA PRESENT (Y) / N

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Catherine Henry	2016/09/08	7:30	Laurel Berthier	2016/09/09	13:45

MAXXAM JOB #

B677977

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08427198

BBY FCD-00077/05
Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (wher		nd Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	~~Andrew MacPhail~~ C. Henry	Date Required:
						Rush Confirmation #:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-21		2016/09/06	15:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11		
2	KZ-22		2016/09/06	13:36	Water	x	x	x	x	x	x	x	x	x	x	x	x				11		
3	KZ-26		2016/09/06	10:45	Water	x	x	x	x	x	x	x	x	x	x	x	x				11		
4	~~KZ-28~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~				~~11~~		
5	~~Trip Blank~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~				~~11~~		
6	KZ-18		2016/09/07	14:10	Water	x	x	x	x	x	x	x	x	x	x	x	x				11		
7																							
8																							
9																							
10																							

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		111
NA		111
		111

COOLING MEDIA PRESENT Y / N

RECEIVED IN WHITEHORSE
BY: Sayno @ 1310
2016 -09- 08
TEMP: 6 / 6 / 6 → 1
6 / 7 / 6 → 2
cooler #

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Catherine Henry	2016/09/08	7:30	Laurel Berthier	2016/09/09	13:45	B677977

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

CO 08427227

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (w		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	X Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	Same Day / 2 Days / 1 Day / 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		Date Required:
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	C. Henry	Rush Confirmation #:

Regulatory Criteria	Special Instructions
BC CSR Soil / BC CSR Water	Return Cooler
CCME (Specify) / Other (Specify)	Ship Sample Bottles (Please Specify)
Drinking Water / BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	DISSOLVED LOW LEVEL METALS INCL. MERCURY	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	~~KZ-9_E-SEEP~~				~~Water~~	X	X	X	X	~~4~~	
3	~~KZ-9_W-SEEP~~				~~Water~~	X	X	X	X	~~4~~	
4	~~SEEP-3~~				~~Water~~	X	X	~~X~~	~~X~~	~~4~~	
5	SEEP-4		2016/09/08	13:00	Water	X	X	X	X	4	
6	~~SEEP-5~~				~~Water~~	X	X	X	~~X~~	~~4~~	
7											
8											
9											
10											

LABORATORY USE ONLY

CUSTODY SEAL Y (N) Present	Intact	COOLER TEMPERATURES
NA		4.4.5

COOLING MEDIA PRESENT (Y) / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Byron @ 0900
2016-09-09
TEMP: 6 / 7 / 6

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Catherine Henry	2016/09/08	15:30	Laurel Berthier	2016/09/12	10:20

B677977_COC

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC 08427191

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (wh		ound Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	X Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	Same Day / 1 Day / 2 Days / 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Catherine Henry	Date Required:
						Rush Confirmation #:

Regulatory Criteria		Special Instructions
BC CSR Soil	BC CSR Water	Return Cooler
CCME (Specify)	Other (Specify)	Ship Sample Bottles (Please Specify)
Drinking Water	BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

RECEIVED IN WHITEHORSE
BY: Suzana @ 13:10
2016-09-08
TEMP: 2 / 3 / 3

LABORATORY USE ONLY

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	DISSOLVED LOW LEVEL METALS INCL. MERCURY	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-9_E-SEEP		2016/09/07	16:05	Water	x	x	x	x	4	
3	KZ-9_W-SEEP		2016/09/07	15:52	Water	x	x	x	x	4	
4	SEEP-3		2016/09/07	15:08	Water	x	x	x	x	4	
5	~~SEEP-4~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~4~~	
6	SEEP-5		2016/09/07	15:33	Water	x	x	x	x	4	
7											
8											
9											
10											

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		3.3 3.4

COOLING MEDIA PRESENT Y / N

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Catherine Henry	2016/09/08	7:30	Laurel Berthier	2016/09/09	13:45

B677968_COC

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08427228

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/09/19
Report #: R2263554
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B678454
Received: 2016/09/09, 09:00

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	5	N/A	2016/09/14	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	5	2016/09/13	2016/09/13	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	4	N/A	2016/09/13	BBY6SOP-00011	SM 22 4500-Cl- E m
Chloride by Automated Colourimetry	1	N/A	2016/09/16	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	5	N/A	2016/09/13	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	5	N/A	2016/09/13	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	4	N/A	2016/09/14	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2016/09/14	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	5	N/A	2016/09/13	BBY6SOP-00026	SM 22 2510 B m
Fluoride	5	N/A	2016/09/13	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	5	N/A	2016/09/14	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	5	N/A	2016/09/15	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	5	N/A	2016/09/14	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	5	2016/09/14	2016/09/14	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	4	N/A	2016/09/15	BBY WI-00033	Auto Calc
Ion Balance	1	N/A	2016/09/16	BBY WI-00033	Auto Calc
Sum of cations, anions	4	N/A	2016/09/14	Calc	
Sum of cations, anions	1	N/A	2016/09/15	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	5	N/A	2016/09/15	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	5	N/A	2016/09/14	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	5	N/A	2016/09/14	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	5	N/A	2016/09/14	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Unpreserved)	1	N/A	2016/09/14	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	4	N/A	2016/09/14	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	5	N/A	2016/09/13	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	5	N/A	2016/09/13	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	5	N/A	2016/09/14	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	4	N/A	2016/09/13	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	5	N/A	2016/09/13	BBY6SOP-00026	SM 22 4500-H+ B m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08427228

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/09/19
Report #: R2263554
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B678454
Received: 2016/09/09, 09:00

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Sulphate by Automated Colourimetry	4	N/A	2016/09/13	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	1	N/A	2016/09/16	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	5	2016/09/15	2016/09/15	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	5	N/A	2016/09/15	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	5	2016/09/13	2016/09/14	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Megan Smith, Project Manager
Email: msmith@maxxam.ca
Phone# (604) 734 7276

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PM2543		PM2544		PM2545	PM2546		
Sampling Date		2016/09/08 13:30		2016/09/08 12:25		2016/09/08 09:10	2016/09/08 12:00		
COC Number		08427228		08427228		08427228	08427228		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	KZ-28	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	2.2	8395084	3.0	8398814	3.1	0.00080	N/A	8395084
Cation Sum	meq/L	2.1	8395084	3.1	8398814	3.0	0.0013	N/A	8395084
Filter and HNO3 Preservation	N/A	LAB	8395928	LAB	8395928	LAB	LAB	N/A	8395928
Ion Balance	N/A	0.95	8395083	1.0	8398813	0.97	NC	0.010	8395083
Nitrate (N)	mg/L	0.129	8395085	0.0248	8395085	0.0381	<0.0020	0.0020	8395085
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00073	8396387	0.00077	8396387	0.00075	0.00070	0.00050	8396387
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00081	8396389	0.00087	8396389	0.00077	0.00077	0.00050	8396389
Fluoride (F)	mg/L	0.043	8396631	0.060	8396631	0.058	0.015	0.010	8396631
Dissolved Organic Carbon (C)	mg/L	<0.50	8398194	2.13	8398194	2.49	<0.50	0.50	8398194
Acidity (pH 4.5)	mg/L	<0.50	8397076	<0.50	8397076	<0.50	<0.50	0.50	8397076
Alkalinity (Total as CaCO3)	mg/L	52.9	8396062	124	8396062	99.9	<0.50	0.50	8396062
Acidity (pH 8.3)	mg/L	<0.50	8397076	<0.50	8397076	<0.50	<0.50	0.50	8397076
Alkalinity (PP as CaCO3)	mg/L	<0.50	8396062	<0.50	8396062	<0.50	<0.50	0.50	8396062
Bicarbonate (HCO3)	mg/L	64.6	8396062	151	8396062	122	<0.50	0.50	8396062
Carbonate (CO3)	mg/L	<0.50	8396062	<0.50	8396062	<0.50	<0.50	0.50	8396062
Hydroxide (OH)	mg/L	<0.50	8396062	<0.50	8396062	<0.50	<0.50	0.50	8396062
Anions									
Dissolved Sulphate (SO4)	mg/L	53.2	8397100	25.0	8401043	52.3	<0.50	0.50	8397100
Dissolved Chloride (Cl)	mg/L	0.78	8397097	0.67	8401041	0.82	<0.50	0.50	8397097
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	8399287	0.0024 (1)	8399287	0.0030 (1)	<0.0020 (1)	0.0020	8399287
Total Ammonia (N)	mg/L	0.014	8396825	0.011	8396825	0.011	<0.0050	0.0050	8396825
Nitrate plus Nitrite (N)	mg/L	0.129 (1)	8397401	0.0248 (1)	8397401	0.0381 (1)	<0.0020 (1)	0.0020	8397401
Nitrite (N)	mg/L	<0.0020 (1)	8397405	<0.0020 (1)	8397405	<0.0020 (1)	<0.0020 (1)	0.0020	8397405
Total Phosphorus (P)	mg/L	<0.0020 (1)	8399308	0.0039 (1)	8399308	0.0041 (1)	<0.0020 (1)	0.0020	8399308
Physical Properties									
Conductivity	uS/cm	209	8396075	281	8396075	274	1.1	1.0	8396075
pH	pH	7.93	8396074	8.26	8396074	8.06	5.89		8396074

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PM2543		PM2544		PM2545	PM2546		
Sampling Date		2016/09/08 13:30		2016/09/08 12:25		2016/09/08 09:10	2016/09/08 12:00		
COC Number		08427228		08427228		08427228	08427228		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	KZ-28	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	<1.0 (1)	8395901	3.9	8395901	1.7	<1.0	1.0	8395901

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PM2547		
Sampling Date		2016/09/12 10:20		
COC Number		08427228		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	0.00080	N/A	8395084
Cation Sum	meq/L	0.0018	N/A	8395084
Ion Balance	N/A	NC	0.010	8395083
Nitrate (N)	mg/L	<0.0020	0.0020	8395085
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8396387
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8396389
Fluoride (F)	mg/L	0.015	0.010	8396631
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8398189
Acidity (pH 4.5)	mg/L	<0.50	0.50	8397076
Alkalinity (Total as CaCO3)	mg/L	<0.50	0.50	8396062
Acidity (pH 8.3)	mg/L	<0.50	0.50	8397076
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8396062
Bicarbonate (HCO3)	mg/L	<0.50	0.50	8396062
Carbonate (CO3)	mg/L	<0.50	0.50	8396062
Hydroxide (OH)	mg/L	<0.50	0.50	8396062
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8397100
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8397097
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8399287
Total Ammonia (N)	mg/L	<0.0050	0.0050	8396827
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8397401
Nitrite (N)	mg/L	<0.0020	0.0020	8397405
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8399308
Physical Properties				
Conductivity	uS/cm	1.1	1.0	8396075
pH	pH	5.75		8396074
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8395901

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PM2543	PM2544	PM2545	PM2546	PM2547		
Sampling Date		2016/09/08 13:30	2016/09/08 12:25	2016/09/08 09:10	2016/09/08 12:00	2016/09/12 10:20		
COC Number		08427228	08427228	08427228	08427228	08427228		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-28	TRIP BLANK	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	101	147	147	<0.50	<0.50	0.50	8394879
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8397363
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00476	0.00347	0.00498	<0.00050	<0.00050	0.00050	8396427
Dissolved Antimony (Sb)	mg/L	0.000026	<0.000020	0.000069	<0.000020	<0.000020	0.000020	8396427
Dissolved Arsenic (As)	mg/L	0.000072	0.000087	0.000279	<0.000020	<0.000020	0.000020	8396427
Dissolved Barium (Ba)	mg/L	0.0548	0.0403	0.0646	<0.000020	<0.000020	0.000020	8396427
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8396427
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396427
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8396427
Dissolved Cadmium (Cd)	mg/L	0.000385	0.0000080	0.000323	<0.0000050	<0.0000050	0.0000050	8396427
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8396427
Dissolved Cobalt (Co)	mg/L	0.0000110	0.0000110	0.0000250	<0.0000050	<0.0000050	0.0000050	8396427
Dissolved Copper (Cu)	mg/L	0.000648	0.000199	0.00119	<0.000050	<0.000050	0.000050	8396427
Dissolved Iron (Fe)	mg/L	0.0011	0.0110	0.0684	<0.0010	<0.0010	0.0010	8396427
Dissolved Lead (Pb)	mg/L	0.0000140	<0.0000050	0.000115	<0.0000050	<0.0000050	0.0000050	8396427
Dissolved Lithium (Li)	mg/L	0.00094	0.00104	0.00119	<0.00050	<0.00050	0.00050	8396427
Dissolved Manganese (Mn)	mg/L	0.000170	0.00162	0.0166	<0.000050	<0.000050	0.000050	8396427
Dissolved Molybdenum (Mo)	mg/L	0.000597	0.000372	0.000404	<0.000050	<0.000050	0.000050	8396427
Dissolved Nickel (Ni)	mg/L	0.000498	0.000189	0.000469	<0.000020	<0.000020	0.000020	8396427
Dissolved Phosphorus (P)	mg/L	0.0030	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8396427
Dissolved Selenium (Se)	mg/L	0.000837	0.000551	0.000894	<0.000040	<0.000040	0.000040	8396427
Dissolved Silicon (Si)	mg/L	2.35	2.73	2.80	<0.050	<0.050	0.050	8396427
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396427
Dissolved Strontium (Sr)	mg/L	0.0998	0.150	0.147	0.000052	<0.000050	0.000050	8396427
Dissolved Thallium (Tl)	mg/L	0.0000020	<0.0000020	0.0000020	<0.0000020	<0.0000020	0.0000020	8396427
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8396427
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8396427
Dissolved Uranium (U)	mg/L	0.00181	0.000675	0.000948	<0.0000020	<0.0000020	0.0000020	8396427
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8396427

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PM2543	PM2544	PM2545	PM2546	PM2547		
Sampling Date		2016/09/08 13:30	2016/09/08 12:25	2016/09/08 09:10	2016/09/08 12:00	2016/09/12 10:20		
COC Number		08427228	08427228	08427228	08427228	08427228		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-28	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0589	0.00031	0.0560	<0.00010	<0.00010	0.00010	8396427
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8396427
Dissolved Calcium (Ca)	mg/L	35.3	49.5	49.9	<0.050	<0.050	0.050	8395071
Dissolved Magnesium (Mg)	mg/L	3.00	5.69	5.40	<0.050	<0.050	0.050	8395071
Dissolved Potassium (K)	mg/L	1.48	0.749	1.40	<0.050	<0.050	0.050	8395071
Dissolved Sodium (Na)	mg/L	0.633	2.45	0.798	<0.050	<0.050	0.050	8395071
Dissolved Sulphur (S)	mg/L	16.3	7.8	12.9	<3.0	<3.0	3.0	8395071

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PM2543	PM2544	PM2545	PM2546	PM2547		
Sampling Date		2016/09/08 13:30	2016/09/08 12:25	2016/09/08 09:10	2016/09/08 12:00	2016/09/12 10:20		
COC Number		08427228	08427228	08427228	08427228	08427228		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	92.0	138	128	<0.50	<0.50	0.50	8394715
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8397309
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00947	0.00510	0.0347	0.00059	<0.00050	0.00050	8396010
Total Antimony (Sb)	mg/L	0.000021	<0.000020	0.000071	<0.000020	<0.000020	0.000020	8396010
Total Arsenic (As)	mg/L	0.000073	0.000077	0.000351	<0.000020	<0.000020	0.000020	8396010
Total Barium (Ba)	mg/L	0.0517	0.0365	0.0622	<0.000020	<0.000020	0.000020	8396010
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8396010
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396010
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8396010
Total Cadmium (Cd)	mg/L	0.000382	0.0000150	0.000366	<0.0000050	<0.0000050	0.0000050	8396010
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8396010
Total Cobalt (Co)	mg/L	0.0000170	0.0000150	0.0000580	<0.0000050	<0.0000050	0.0000050	8396010
Total Copper (Cu)	mg/L	0.000724	0.000214	0.00157	<0.000050	<0.000050	0.000050	8396010
Total Iron (Fe)	mg/L	0.0096	0.0414	0.212	<0.0010	<0.0010	0.0010	8396010
Total Lead (Pb)	mg/L	0.0000720	0.0000080	0.000479	0.0000110	<0.0000050	0.0000050	8396010
Total Lithium (Li)	mg/L	0.00070	0.00090	0.00101	<0.00050	<0.00050	0.00050	8396010
Total Manganese (Mn)	mg/L	0.000537	0.00556	0.0245	<0.000050	<0.000050	0.000050	8396010
Total Molybdenum (Mo)	mg/L	0.000568	0.000362	0.000418	<0.000050	<0.000050	0.000050	8396010
Total Nickel (Ni)	mg/L	0.000515	0.000195	0.000566	<0.000020	<0.000020	0.000020	8396010
Total Phosphorus (P)	mg/L	<0.0020	0.0026	0.0039	<0.0020	<0.0020	0.0020	8396010
Total Selenium (Se)	mg/L	0.000795	0.000619	0.000851	<0.000040	<0.000040	0.000040	8396010
Total Silicon (Si)	mg/L	2.07	2.55	2.76	<0.050	<0.050	0.050	8396010
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396010
Total Strontium (Sr)	mg/L	0.0878	0.127	0.126	<0.000050	<0.000050	0.000050	8396010
Total Thallium (Tl)	mg/L	0.0000030	<0.0000020	0.0000030	<0.0000020	<0.0000020	0.0000020	8396010
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8396010
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00174	<0.00050	<0.00050	0.00050	8396010
Total Uranium (U)	mg/L	0.00193	0.000676	0.000973	<0.0000020	<0.0000020	0.0000020	8396010
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8396010

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PM2543	PM2544	PM2545	PM2546	PM2547		
Sampling Date		2016/09/08 13:30	2016/09/08 12:25	2016/09/08 09:10	2016/09/08 12:00	2016/09/12 10:20		
COC Number		08427228	08427228	08427228	08427228	08427228		
	UNITS	**KZ-2**	**KZ-6**	**KZ-7**	**KZ-28**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.0591	0.00058	0.0652	0.00023	<0.00010	0.00010	8396010
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8396010
Total Calcium (Ca)	mg/L	31.7	45.5	42.0	<0.050	<0.050	0.050	8395072
Total Magnesium (Mg)	mg/L	3.11	5.98	5.62	<0.050	<0.050	0.050	8395072
Total Potassium (K)	mg/L	1.39	0.691	1.27	<0.050	<0.050	0.050	8395072
Total Sodium (Na)	mg/L	0.654	0.665	0.795	<0.050	<0.050	0.050	8395072
Total Sulphur (S)	mg/L	14.9	7.8	12.4	<3.0	<3.0	3.0	8395072

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PM2543
Sample ID: KZ-2
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8397076	N/A	2016/09/14	Maria Maclean
Alkalinity - Water	AT/ALK	8396062	2016/09/13	2016/09/13	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8397097	N/A	2016/09/13	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8398194	N/A	2016/09/14	Isabel Choi
Conductance - water	AT/ALK	8396075	N/A	2016/09/13	Wilson Au Yueng
Fluoride	ISE/ISE	8396631	N/A	2016/09/13	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8394715	N/A	2016/09/14	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8394879	N/A	2016/09/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397363	N/A	2016/09/14	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8395083	N/A	2016/09/15	Automated Statchk
Sum of cations, anions	CALC	8395084	N/A	2016/09/14	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8395071	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396427	N/A	2016/09/14	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8395072	N/A	2016/09/14	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	Andrew An
Ammonia-N (Preserved)	KONE/COL	8396825	N/A	2016/09/14	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8397401	N/A	2016/09/13	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8397405	N/A	2016/09/13	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8395085	N/A	2016/09/14	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8395928	N/A	2016/09/13	Lucy Luo
pH Water	AT/ALK	8396074	N/A	2016/09/13	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8397100	N/A	2016/09/13	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8399287	2016/09/15	2016/09/15	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8399308	N/A	2016/09/15	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	Wendy Fong

Maxxam ID: PM2544
Sample ID: KZ-6
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8397076	N/A	2016/09/14	Maria Maclean
Alkalinity - Water	AT/ALK	8396062	2016/09/13	2016/09/13	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8401041	N/A	2016/09/16	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8398194	N/A	2016/09/14	Isabel Choi
Conductance - water	AT/ALK	8396075	N/A	2016/09/13	Wilson Au Yueng
Fluoride	ISE/ISE	8396631	N/A	2016/09/13	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8394715	N/A	2016/09/14	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8394879	N/A	2016/09/15	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PM2544
Sample ID: KZ-6
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397363	N/A	2016/09/14	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8398813	N/A	2016/09/16	Automated Statchk
Sum of cations, anions	CALC	8398814	N/A	2016/09/15	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8395071	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396427	N/A	2016/09/14	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8395072	N/A	2016/09/14	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	Andrew An
Ammonia-N (Preserved)	KONE/COL	8396825	N/A	2016/09/14	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8397401	N/A	2016/09/13	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8397405	N/A	2016/09/13	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8395085	N/A	2016/09/14	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8395928	N/A	2016/09/13	Lucy Luo
pH Water	AT/ALK	8396074	N/A	2016/09/13	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8401043	N/A	2016/09/16	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8399287	2016/09/15	2016/09/15	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8399308	N/A	2016/09/15	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	Wendy Fong

Maxxam ID: PM2545
Sample ID: KZ-7
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8397076	N/A	2016/09/14	Maria Maclean
Alkalinity - Water	AT/ALK	8396062	2016/09/13	2016/09/13	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8397097	N/A	2016/09/13	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8398194	N/A	2016/09/14	Isabel Choi
Conductance - water	AT/ALK	8396075	N/A	2016/09/13	Wilson Au Yueng
Fluoride	ISE/ISE	8396631	N/A	2016/09/13	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8394715	N/A	2016/09/14	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8394879	N/A	2016/09/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397363	N/A	2016/09/14	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8395083	N/A	2016/09/15	Automated Statchk
Sum of cations, anions	CALC	8395084	N/A	2016/09/14	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8395071	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396427	N/A	2016/09/14	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8395072	N/A	2016/09/14	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	Andrew An
Ammonia-N (Preserved)	KONE/COL	8396825	N/A	2016/09/14	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8397401	N/A	2016/09/13	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PM2545
Sample ID: KZ-7
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8397405	N/A	2016/09/13	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8395085	N/A	2016/09/14	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8395928	N/A	2016/09/13	Lucy Luo
pH Water	AT/ALK	8396074	N/A	2016/09/13	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8397100	N/A	2016/09/13	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8399287	2016/09/15	2016/09/15	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8399308	N/A	2016/09/15	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	Wendy Fong

Maxxam ID: PM2545 Dup
Sample ID: KZ-7
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8396825	N/A	2016/09/14	Clare Kwok
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8399287	2016/09/15	2016/09/15	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8399308	N/A	2016/09/15	Diana Cruz

Maxxam ID: PM2546
Sample ID: KZ-28
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8397076	N/A	2016/09/14	Maria Maclean
Alkalinity - Water	AT/ALK	8396062	2016/09/13	2016/09/13	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8397097	N/A	2016/09/13	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8398194	N/A	2016/09/14	Isabel Choi
Conductance - water	AT/ALK	8396075	N/A	2016/09/13	Wilson Au Yueng
Fluoride	ISE/ISE	8396631	N/A	2016/09/13	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8394715	N/A	2016/09/14	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8394879	N/A	2016/09/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397363	N/A	2016/09/14	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8395083	N/A	2016/09/15	Automated Statchk
Sum of cations, anions	CALC	8395084	N/A	2016/09/14	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8395071	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396427	N/A	2016/09/14	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8395072	N/A	2016/09/14	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	Andrew An
Ammonia-N (Preserved)	KONE/COL	8396825	N/A	2016/09/14	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8397401	N/A	2016/09/13	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8397405	N/A	2016/09/13	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PM2546
Sample ID: KZ-28
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8395085	N/A	2016/09/14	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8395928	N/A	2016/09/13	Lucy Luo
pH Water	AT/ALK	8396074	N/A	2016/09/13	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8397100	N/A	2016/09/13	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8399287	2016/09/15	2016/09/15	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8399308	N/A	2016/09/15	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	Wendy Fong

Maxxam ID: PM2546 Dup
Sample ID: KZ-28
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	Andrew An

Maxxam ID: PM2547
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/09/12
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8397076	N/A	2016/09/14	Maria Maclean
Alkalinity - Water	AT/ALK	8396062	2016/09/13	2016/09/13	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8397097	N/A	2016/09/13	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	Tatyana Serzhanova
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8398189	N/A	2016/09/14	Isabel Choi
Conductance - water	AT/ALK	8396075	N/A	2016/09/13	Wilson Au Yueng
Fluoride	ISE/ISE	8396631	N/A	2016/09/13	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8394715	N/A	2016/09/14	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8394879	N/A	2016/09/15	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397363	N/A	2016/09/14	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	Edwin Lamigo
Ion Balance	CALC	8395083	N/A	2016/09/15	Automated Statchk
Sum of cations, anions	CALC	8395084	N/A	2016/09/14	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8395071	N/A	2016/09/15	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396427	N/A	2016/09/14	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8395072	N/A	2016/09/14	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	Andrew An
Ammonia-N (Unpreserved)	KONE/COL	8396827	N/A	2016/09/14	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8397401	N/A	2016/09/13	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8397405	N/A	2016/09/13	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8395085	N/A	2016/09/14	Automated Statchk
pH Water	AT/ALK	8396074	N/A	2016/09/13	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8397100	N/A	2016/09/13	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PM2547 **Collected:** 2016/09/12
Sample ID: TRIP BLANK **Shipped:**
Matrix: Water **Received:** 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8399287	2016/09/15	2016/09/15	Diana Cruz
Total Phosphorus - unpreserved	KONE/COL	8399308	N/A	2016/09/15	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	Wendy Fong

Maxxam ID: PM2547 Dup **Collected:** 2016/09/12
Sample ID: TRIP BLANK **Shipped:**
Matrix: Water **Received:** 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	Edwin Lamigo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.7°C

Sample PM2546-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample PM2547-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8395901	Total Suspended Solids	2016/09/14			103	80 - 120	<1.0	mg/L		
8396010	Total Aluminum (Al)	2016/09/14	107	80 - 120	119	80 - 120	<0.00050	mg/L	NC	20
8396010	Total Antimony (Sb)	2016/09/14	95	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8396010	Total Arsenic (As)	2016/09/14	94	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8396010	Total Barium (Ba)	2016/09/14	NC	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
8396010	Total Beryllium (Be)	2016/09/14	97	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8396010	Total Bismuth (Bi)	2016/09/14	94	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Boron (B)	2016/09/14	94	80 - 120	101	80 - 120	<0.010	mg/L	NC	20
8396010	Total Cadmium (Cd)	2016/09/14	90	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Chromium (Cr)	2016/09/14	99	80 - 120	106	80 - 120	<0.00010	mg/L	NC	20
8396010	Total Cobalt (Co)	2016/09/14	98	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Copper (Cu)	2016/09/14	97	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20
8396010	Total Iron (Fe)	2016/09/14	NC	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
8396010	Total Lead (Pb)	2016/09/14	98	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Lithium (Li)	2016/09/14	93	80 - 120	94	80 - 120	<0.00050	mg/L	NC	20
8396010	Total Manganese (Mn)	2016/09/14	96	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8396010	Total Molybdenum (Mo)	2016/09/14	NC	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8396010	Total Nickel (Ni)	2016/09/14	98	80 - 120	108	80 - 120	<0.000020	mg/L	NC	20
8396010	Total Phosphorus (P)	2016/09/14					<0.0020	mg/L	NC	20
8396010	Total Selenium (Se)	2016/09/14	96	80 - 120	106	80 - 120	<0.000040	mg/L	NC	20
8396010	Total Silicon (Si)	2016/09/14					<0.050	mg/L	NC	20
8396010	Total Silver (Ag)	2016/09/14	98	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Strontium (Sr)	2016/09/14	NC	80 - 120	95	80 - 120	<0.000050	mg/L	NC	20
8396010	Total Thallium (Tl)	2016/09/14	97	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8396010	Total Tin (Sn)	2016/09/14	96	80 - 120	109	80 - 120	<0.00020	mg/L	NC	20
8396010	Total Titanium (Ti)	2016/09/14	93	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8396010	Total Uranium (U)	2016/09/14	99	80 - 120	110	80 - 120	<0.0000020	mg/L	NC	20
8396010	Total Vanadium (V)	2016/09/14	97	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8396010	Total Zinc (Zn)	2016/09/14	99	80 - 120	110	80 - 120	<0.00010	mg/L	NC	20
8396010	Total Zirconium (Zr)	2016/09/14					<0.00010	mg/L	NC	20
8396062	Alkalinity (PP as CaCO3)	2016/09/13					<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8396062	Alkalinity (Total as CaCO3)	2016/09/13	NC	80 - 120	102	80 - 120	<0.50	mg/L	0.65	20
8396062	Bicarbonate (HCO3)	2016/09/13					<0.50	mg/L	0.65	20
8396062	Carbonate (CO3)	2016/09/13					<0.50	mg/L	NC	20
8396062	Hydroxide (OH)	2016/09/13					<0.50	mg/L	NC	20
8396074	pH	2016/09/13			101	97 - 103			0.12	N/A
8396075	Conductivity	2016/09/13			100	80 - 120	<1.0	uS/cm	3.8	20
8396387	Strong Acid Dissoc. Cyanide (CN)	2016/09/13	102	80 - 120	100	80 - 120	0.00051, RDL=0.00050	mg/L	NC	20
8396389	Weak Acid Dissoc. Cyanide (CN)	2016/09/13	103	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8396427	Dissolved Aluminum (Al)	2016/09/14	105	80 - 120	101	80 - 120	<0.00050	mg/L	0.88	20
8396427	Dissolved Antimony (Sb)	2016/09/14	97	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8396427	Dissolved Arsenic (As)	2016/09/14	102	80 - 120	98	80 - 120	<0.000020	mg/L	9.5	20
8396427	Dissolved Barium (Ba)	2016/09/14	NC	80 - 120	104	80 - 120	<0.000020	mg/L	0.55	20
8396427	Dissolved Beryllium (Be)	2016/09/14	101	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8396427	Dissolved Bismuth (Bi)	2016/09/14	97	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Boron (B)	2016/09/14	105	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
8396427	Dissolved Cadmium (Cd)	2016/09/14	96	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Chromium (Cr)	2016/09/14	100	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
8396427	Dissolved Cobalt (Co)	2016/09/14	96	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Copper (Cu)	2016/09/14	95	80 - 120	97	80 - 120	<0.000050	mg/L	0.68	20
8396427	Dissolved Iron (Fe)	2016/09/14	102	80 - 120	102	80 - 120	<0.0010	mg/L	4.1	20
8396427	Dissolved Lead (Pb)	2016/09/14	99	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Lithium (Li)	2016/09/14	92	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8396427	Dissolved Manganese (Mn)	2016/09/14	100	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20
8396427	Dissolved Molybdenum (Mo)	2016/09/14	NC	80 - 120	100	80 - 120	<0.000050	mg/L	1.4	20
8396427	Dissolved Nickel (Ni)	2016/09/14	96	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8396427	Dissolved Phosphorus (P)	2016/09/14					<0.0020	mg/L	NC	20
8396427	Dissolved Selenium (Se)	2016/09/14	98	80 - 120	101	80 - 120	<0.000040	mg/L	NC	20
8396427	Dissolved Silicon (Si)	2016/09/14					<0.050	mg/L	2.9	20
8396427	Dissolved Silver (Ag)	2016/09/14	105	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Strontium (Sr)	2016/09/14	NC	80 - 120	98	80 - 120	<0.000050	mg/L	3.2	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8396427	Dissolved Thallium (Tl)	2016/09/14	96	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8396427	Dissolved Tin (Sn)	2016/09/14	100	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
8396427	Dissolved Titanium (Ti)	2016/09/14	101	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8396427	Dissolved Uranium (U)	2016/09/14	97	80 - 120	97	80 - 120	<0.0000020	mg/L	2.7	20
8396427	Dissolved Vanadium (V)	2016/09/14	99	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
8396427	Dissolved Zinc (Zn)	2016/09/14	101	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8396427	Dissolved Zirconium (Zr)	2016/09/14					<0.00010	mg/L	NC	20
8396631	Fluoride (F)	2016/09/13	101	80 - 120	104	80 - 120	0.016, RDL=0.010	mg/L	0	20
8396825	Total Ammonia (N)	2016/09/14	110	80 - 120	104	80 - 120	<0.0050	mg/L	NC	20
8396827	Total Ammonia (N)	2016/09/14	96	80 - 120	102	80 - 120	<0.0050	mg/L	NC	20
8397076	Acidity (pH 4.5)	2016/09/14					<0.50	mg/L	NC	20
8397076	Acidity (pH 8.3)	2016/09/14			96	80 - 120	<0.50	mg/L	NC	20
8397097	Dissolved Chloride (Cl)	2016/09/13	NC	80 - 120	106	80 - 120	<0.50	mg/L		
8397100	Dissolved Sulphate (SO4)	2016/09/13	NC	80 - 120	93	80 - 120	<0.50	mg/L	0.50	20
8397309	Total Mercury (Hg)	2016/09/14	101	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8397363	Dissolved Mercury (Hg)	2016/09/14	102	80 - 120	106	80 - 120	<0.0000020	mg/L	NC	20
8397401	Nitrate plus Nitrite (N)	2016/09/13	NC	80 - 120	109	80 - 120	<0.0020	mg/L	0.87	25
8397405	Nitrite (N)	2016/09/13	99	80 - 120	102	80 - 120	<0.0020	mg/L	NC	25
8398189	Dissolved Organic Carbon (C)	2016/09/14			109	80 - 120	<0.50	mg/L		
8398194	Dissolved Organic Carbon (C)	2016/09/14	105	80 - 120	106	80 - 120	<0.50	mg/L	12	20
8399287	Dissolved Phosphorus (P)	2016/09/15	98	80 - 120	104	80 - 120	<0.0020	mg/L	NC	20
8399308	Total Phosphorus (P)	2016/09/15	94	80 - 120	111	80 - 120	<0.0020	mg/L	NC	20
8401041	Dissolved Chloride (Cl)	2016/09/16	NC	80 - 120	100	80 - 120	<0.50	mg/L	0.16	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8401043	Dissolved Sulphate (SO4)	2016/09/16	NC	80 - 120	97	80 - 120	0.60, RDL=0.50	mg/L	4.8	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

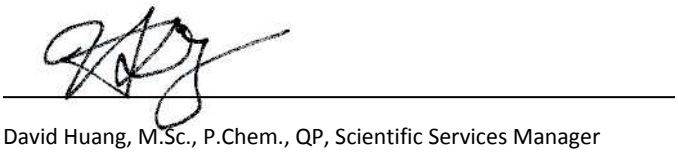
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC # 08427228

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Catherine Henry	Date Required:
						Rush Confirmation #:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		2016/09/08	13:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-6		2016/09/08	12:25	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-7		2016/09/08	9:10	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	~~KZ-9~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~				~~11~~	
6	~~KZ-13~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~				~~11~~	
7	~~KZ-15~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~				~~11~~	
8	~~KZ-16~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~				~~11~~	
9	~~KZ-17~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~				~~11~~	
10	~~KZ-19~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~				~~11~~	

LABORATORY USE ONLY

CUSTODY SEAL Y / N (N circled)		COOLER TEMPERATURES
Present	Intact	
NA		111
		11

COOLING MEDIA PRESENT Y / N (Y circled)

COMMENTS

RECEIVED IN WHITEHORSE
BY: Siyono @ 09:02
2016 -09- 09
TEMP: 5 / 6 / 6

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Catherine Henry	2016/09/08	15:30	Laurel Berthier	2016/09/12	10:20

B678454_COC

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC # 08427229

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	~~Andrew MacPhail~~ C Henry	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	~~KZ-21~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~11~~	
2	~~KZ-22~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~11~~	
3	~~KZ-26~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~11~~	
4	KZ-28		2016/09/08	~~12:00~~	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	Trip Blank		n/a	n/a	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6																			
7																			
8																			
9																			
10																			

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		11.1
		11

COOLING MEDIA PRESENT Y / N

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Catherine Henry	2016/09/08	15:30	Laurel Bethune	2016/09/12	10:20

B678454_COC

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08428034

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/10/11
Report #: R2279622
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B687189
Received: 2016/10/03, 15:15

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	7	N/A	2016/10/06	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	7	2016/10/05	2016/10/05	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	7	N/A	2016/10/06	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	7	N/A	2016/10/05	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	7	N/A	2016/10/05	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	7	N/A	2016/10/06	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	7	N/A	2016/10/05	BBY6SOP-00026	SM 22 2510 B m
Fluoride	7	N/A	2016/10/05	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	7	N/A	2016/10/06	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	7	N/A	2016/10/06	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	7	N/A	2016/10/06	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	7	2016/10/06	2016/10/06	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	7	N/A	2016/10/06	BBY WI-00033	Auto Calc
Sum of cations, anions	7	N/A	2016/10/06	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	7	N/A	2016/10/06	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	7	N/A	2016/10/06	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	3	2016/10/05	2016/10/06	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	7	N/A	2016/10/06	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	4	N/A	2016/10/06	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	7	N/A	2016/10/06	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	7	N/A	2016/10/05	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	7	N/A	2016/10/05	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	7	N/A	2016/10/06	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	7	N/A	2016/10/05	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	7	N/A	2016/10/05	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	7	N/A	2016/10/06	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	7	2016/10/05	2016/10/05	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	7	N/A	2016/10/05	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	7	2016/10/05	2016/10/06	BBY6SOP-00034	SM 22 2540 D

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08428034

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/10/11
Report #: R2279622
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B687189
Received: 2016/10/03, 15:15

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Megan Smith, Project Manager
Email: msmith@maxxam.ca
Phone# (604) 734 7276

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PR5139		PR5140		PR5141	PR5142		
Sampling Date		2016/09/30 15:30		2016/09/30 17:05		2016/09/30 12:15	2016/10/01 09:10		
COC Number		08428034		08428034		08428034	08428034		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	KZ-15	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	4.8	8422093	4.1	8422093	4.3	3.7	N/A	8422093
Cation Sum	meq/L	4.6	8422093	4.1	8422093	4.3	3.6	N/A	8422093
Filter and HNO3 Preservation	N/A	LAB	8422689	LAB	8422689	LAB	LAB	N/A	8422689
Ion Balance	N/A	0.97	8422092	1.0	8422092	0.99	0.98	0.010	8422092
Nitrate (N)	mg/L	0.0122	8421618	0.0898	8421618	0.0812	0.164	0.0020	8421618
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00076	8423260	0.00070	8423260	0.00065	0.00054	0.00050	8423260
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00077	8423271	0.00074	8423271	0.00079	0.00084	0.00050	8423271
Fluoride (F)	mg/L	0.140	8423457	0.099	8423457	0.110	0.078	0.010	8423457
Dissolved Organic Carbon (C)	mg/L	4.86	8424813	2.95	8424812	3.99	2.02	0.50	8424813
Acidity (pH 4.5)	mg/L	<0.50	8423014	<0.50	8423018	<0.50	<0.50	0.50	8423018
Alkalinity (Total as CaCO3)	mg/L	195	8423400	166	8423403	177	151	0.50	8423403
Acidity (pH 8.3)	mg/L	<0.50	8423014	<0.50	8423018	<0.50	<0.50	0.50	8423018
Alkalinity (PP as CaCO3)	mg/L	<0.50	8423400	<0.50	8423403	1.85	<0.50	0.50	8423403
Bicarbonate (HCO3)	mg/L	237	8423400	203	8423403	211	185	0.50	8423403
Carbonate (CO3)	mg/L	<0.50	8423400	<0.50	8423403	2.22	<0.50	0.50	8423403
Hydroxide (OH)	mg/L	<0.50	8423400	<0.50	8423403	<0.50	<0.50	0.50	8423403
Anions									
Dissolved Sulphate (SO4)	mg/L	42.0	8424715	35.0	8424715	36.5	32.1	0.50	8424715
Dissolved Chloride (Cl)	mg/L	0.59	8424712	0.66	8424712	0.59	0.59	0.50	8424712
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0109 (1)	8423101	0.0057 (1)	8423101	0.0067 (1)	0.0035 (1)	0.0020	8423101
Total Ammonia (N)	mg/L	0.052	8424854	0.20	8424854	0.17	0.099	0.0050	8424854
Nitrate plus Nitrite (N)	mg/L	0.0122 (1)	8424477	0.0898 (1)	8424488	0.0812 (1)	0.164 (1)	0.0020	8424488
Nitrite (N)	mg/L	<0.0020 (1)	8424483	<0.0020 (1)	8424495	<0.0020 (1)	<0.0020 (1)	0.0020	8424495
Total Phosphorus (P)	mg/L	0.0148 (1)	8423108	0.0063 (1)	8423112	0.0049 (1)	0.0036 (1)	0.0020	8423108
Physical Properties									
Conductivity	uS/cm	439	8423402	379	8423411	399	347	1.0	8423411
pH	pH	8.22	8423401	8.28	8423410	8.36	8.25		8423410

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PR5139		PR5140		PR5141	PR5142		
Sampling Date		2016/09/30 15:30		2016/09/30 17:05		2016/09/30 12:15	2016/10/01 09:10		
COC Number		08428034		08428034		08428034	08428034		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	KZ-15	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	1.9	8422714	1.5	8422714	4.0	3.6	1.0	8422714
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PR5143		PR5144	PR5145		
Sampling Date		2016/10/01 11:05		2016/10/01 11:50	2016/10/02 09:30		
COC Number		08428034		08428034	08428034		
	UNITS	KZ-16	QC Batch	KZ-17	KZ16B	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	3.4	8422093	3.0	3.1	N/A	8422093
Cation Sum	meq/L	3.4	8422093	3.1	3.1	N/A	8422093
Filter and HNO3 Preservation	N/A	LAB	8422689	LAB	LAB	N/A	8422689
Ion Balance	N/A	0.98	8422092	1.0	1.0	0.010	8422092
Nitrate (N)	mg/L	0.175	8421618	0.158	0.178	0.0020	8421618
Misc. Inorganics							
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00068	8423260	0.00056	0.00052	0.00050	8423260
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00078	8423271	0.00072	0.00063	0.00050	8423271
Fluoride (F)	mg/L	0.059	8423457	0.100	0.053	0.010	8423457
Dissolved Organic Carbon (C)	mg/L	0.99	8424813	1.19	1.65	0.50	8424812
Acidity (pH 4.5)	mg/L	<0.50	8423018	<0.50	<0.50	0.50	8423018
Alkalinity (Total as CaCO3)	mg/L	140	8423403	123	126	0.50	8423403
Acidity (pH 8.3)	mg/L	<0.50	8423018	<0.50	<0.50	0.50	8423018
Alkalinity (PP as CaCO3)	mg/L	<0.50	8423403	<0.50	<0.50	0.50	8423403
Bicarbonate (HCO3)	mg/L	170	8423403	150	154	0.50	8423403
Carbonate (CO3)	mg/L	<0.50	8423403	<0.50	<0.50	0.50	8423403
Hydroxide (OH)	mg/L	<0.50	8423403	<0.50	<0.50	0.50	8423403
Anions							
Dissolved Sulphate (SO4)	mg/L	28.5	8424715	25.1	26.9	0.50	8424715
Dissolved Chloride (Cl)	mg/L	0.62	8424712	0.58	0.57	0.50	8424712
Nutrients							
Dissolved Phosphorus (P)	mg/L	0.0022 (1)	8423101	0.0027 (1)	0.0023	0.0020	8423101
Total Ammonia (N)	mg/L	0.10	8424857	0.29	0.011	0.0050	8424854
Nitrate plus Nitrite (N)	mg/L	0.175 (1)	8424488	0.158 (1)	0.178	0.0020	8424488
Nitrite (N)	mg/L	<0.0020 (1)	8424495	<0.0020 (1)	<0.0020	0.0020	8424495
Total Phosphorus (P)	mg/L	0.0050 (1)	8423112	0.0036 (1)	0.0027	0.0020	8423112
Physical Properties							
Conductivity	uS/cm	323	8423411	288	297	1.0	8423411
pH	pH	8.19	8423410	8.06	8.15		8423410

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PR5143		PR5144	PR5145		
Sampling Date		2016/10/01 11:05		2016/10/01 11:50	2016/10/02 09:30		
COC Number		08428034		08428034	08428034		
	UNITS	KZ-16	QC Batch	KZ-17	KZ16B	RDL	QC Batch
Physical Properties							
Total Suspended Solids	mg/L	<1.0	8422714	<1.0	<1.0	1.0	8422714
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PR5139		PR5140	PR5141		
Sampling Date		2016/09/30 15:30		2016/09/30 17:05	2016/09/30 12:15		
COC Number		08428034		08428034	08428034		
	UNITS	KZ-21	QC Batch	KZ-22	KZ-26	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	227	8422091	199	210	0.50	8422091
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	8424135	<0.0000020	<0.0000020	0.0000020	8424150
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00238	8423304	0.00179	0.00193	0.00050	8423304
Dissolved Antimony (Sb)	mg/L	0.000098	8423304	0.000056	0.000071	0.000020	8423304
Dissolved Arsenic (As)	mg/L	0.00141	8423304	0.000989	0.000907	0.000020	8423304
Dissolved Barium (Ba)	mg/L	0.0565	8423304	0.0595	0.0639	0.000020	8423304
Dissolved Beryllium (Be)	mg/L	<0.000010	8423304	<0.000010	<0.000010	0.000010	8423304
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8423304	<0.0000050	<0.0000050	0.0000050	8423304
Dissolved Boron (B)	mg/L	<0.010	8423304	<0.010	<0.010	0.010	8423304
Dissolved Cadmium (Cd)	mg/L	<0.0000050	8423304	0.0000090	0.0000080	0.0000050	8423304
Dissolved Chromium (Cr)	mg/L	<0.00010	8423304	<0.00010	<0.00010	0.00010	8423304
Dissolved Cobalt (Co)	mg/L	0.0000610	8423304	0.0000380	0.0000290	0.0000050	8423304
Dissolved Copper (Cu)	mg/L	0.000367	8423304	0.000348	0.000438	0.000050	8423304
Dissolved Iron (Fe)	mg/L	0.0432	8423304	0.0532	0.0363	0.0010	8423304
Dissolved Lead (Pb)	mg/L	<0.0000050	8423304	<0.0000050	<0.0000050	0.0000050	8423304
Dissolved Lithium (Li)	mg/L	0.00376	8423304	0.00264	0.00360 (1)	0.00050	8423304
Dissolved Manganese (Mn)	mg/L	0.0549	8423304	0.0237	0.0119	0.000050	8423304
Dissolved Molybdenum (Mo)	mg/L	0.00142	8423304	0.00104	0.00105	0.000050	8423304
Dissolved Nickel (Ni)	mg/L	0.00193	8423304	0.000955	0.000974	0.000020	8423304
Dissolved Phosphorus (P)	mg/L	0.0056	8423304	0.0020	0.0022	0.0020	8423304
Dissolved Selenium (Se)	mg/L	0.000910	8425639	0.00114	0.000968	0.000040	8425639
Dissolved Silicon (Si)	mg/L	4.60	8423304	3.84	4.11	0.050	8423304
Dissolved Silver (Ag)	mg/L	<0.0000050	8423304	<0.0000050	<0.0000050	0.0000050	8423304
Dissolved Strontium (Sr)	mg/L	0.194	8423304	0.185	0.195	0.000050	8423304
Dissolved Thallium (Tl)	mg/L	<0.0000020	8423304	<0.0000020	<0.0000020	0.0000020	8423304
Dissolved Tin (Sn)	mg/L	<0.00020	8423304	<0.00020	<0.00020	0.00020	8423304
Dissolved Titanium (Ti)	mg/L	<0.00050	8423304	<0.00050	<0.00050	0.00050	8423304
Dissolved Uranium (U)	mg/L	0.00279	8423304	0.00238	0.00233	0.0000020	8423304

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PR5139		PR5140	PR5141		
Sampling Date		2016/09/30 15:30		2016/09/30 17:05	2016/09/30 12:15		
COC Number		08428034		08428034	08428034		
	UNITS	KZ-21	QC Batch	KZ-22	KZ-26	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	8423304	<0.00020	<0.00020	0.00020	8423304
Dissolved Zinc (Zn)	mg/L	0.00043	8423304	0.00076	0.00060	0.00010	8423304
Dissolved Zirconium (Zr)	mg/L	0.00010	8423304	<0.00010	<0.00010	0.00010	8423304
Dissolved Calcium (Ca)	mg/L	58.1	8421359	55.7	56.9	0.050	8421359
Dissolved Magnesium (Mg)	mg/L	20.0	8421359	14.5	16.4	0.050	8421359
Dissolved Potassium (K)	mg/L	1.34	8421359	1.19	1.21	0.050	8421359
Dissolved Sodium (Na)	mg/L	1.16	8421359	1.09	1.20	0.050	8421359
Dissolved Sulphur (S)	mg/L	14.1	8421359	12.5	12.4	3.0	8421359
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PR5142	PR5143	PR5144		PR5145		
Sampling Date		2016/10/01 09:10	2016/10/01 11:05	2016/10/01 11:50		2016/10/02 09:30		
COC Number		08428034	08428034	08428034		08428034		
	UNITS	KZ-15	KZ-16	KZ-17	QC Batch	KZ16B	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	178	164	148	8422091	154	0.50	8422091
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8424135	<0.0000020	0.0000020	8424150
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00156	0.00124	0.00082	8423304	0.00159	0.00050	8423304
Dissolved Antimony (Sb)	mg/L	0.000030	<0.000020	0.000036	8423304	<0.000020	0.000020	8423304
Dissolved Arsenic (As)	mg/L	0.000458	0.000299	0.000271	8423304	0.000326	0.000020	8423304
Dissolved Barium (Ba)	mg/L	0.0659	0.0626	0.0547	8423304	0.0625	0.000020	8423304
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8423304	<0.000010	0.000010	8423304
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8423304	<0.0000050	0.0000050	8423304
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8423304	<0.010	0.010	8423304
Dissolved Cadmium (Cd)	mg/L	0.0000220	0.0000090	0.0000110	8423304	0.0000150	0.0000050	8423304
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8423304	<0.00010	0.00010	8423304
Dissolved Cobalt (Co)	mg/L	0.0000210	0.0000150	0.0000090	8423304	0.0000230	0.0000050	8423304
Dissolved Copper (Cu)	mg/L	0.000345	0.000288	0.000342	8423304	0.000275	0.000050	8423304
Dissolved Iron (Fe)	mg/L	0.0127	0.0043	<0.0010	8423304	0.0116	0.0010	8423304
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	8423304	<0.0000050	0.0000050	8423304
Dissolved Lithium (Li)	mg/L	0.00198	0.00177	0.00225	8423304	0.00088	0.00050	8423304
Dissolved Manganese (Mn)	mg/L	0.0160	0.00450	0.000328	8423304	0.00503	0.000050	8423304
Dissolved Molybdenum (Mo)	mg/L	0.000944	0.000466	0.00121	8423304	0.000464	0.000050	8423304
Dissolved Nickel (Ni)	mg/L	0.000409	0.000250	0.000285	8423304	0.000190	0.000020	8423304
Dissolved Phosphorus (P)	mg/L	0.0026	<0.0020	<0.0020	8423304	<0.0020	0.0020	8423304
Dissolved Selenium (Se)	mg/L	0.00151	0.00109	0.000772	8425639	0.00109	0.000040	8425639
Dissolved Silicon (Si)	mg/L	3.26	3.16	3.33	8423304	3.01	0.050	8423304
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8423304	<0.0000050	0.0000050	8423304
Dissolved Strontium (Sr)	mg/L	0.184	0.176	0.154	8423304	0.161	0.000050	8423304
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8423304	<0.0000020	0.0000020	8423304
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8423304	<0.00020	0.00020	8423304
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8423304	<0.00050	0.00050	8423304
Dissolved Uranium (U)	mg/L	0.00222	0.00165	0.00173	8423304	0.00153	0.0000020	8423304
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8423304	<0.00020	0.00020	8423304

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PR5142	PR5143	PR5144		PR5145		
Sampling Date		2016/10/01 09:10	2016/10/01 11:05	2016/10/01 11:50		2016/10/02 09:30		
COC Number		08428034	08428034	08428034		08428034		
	UNITS	KZ-15	KZ-16	KZ-17	QC Batch	KZ16B	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00213	0.00020	0.00040	8423304	0.00029	0.00010	8423304
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8423304	<0.00010	0.00010	8423304
Dissolved Calcium (Ca)	mg/L	54.9	51.9	45.8	8421359	50.0	0.050	8421359
Dissolved Magnesium (Mg)	mg/L	9.89	8.40	8.31	8421359	7.08	0.050	8421359
Dissolved Potassium (K)	mg/L	1.12	1.07	1.14	8421359	0.982	0.050	8421359
Dissolved Sodium (Na)	mg/L	1.21	0.952	0.897	8421359	0.853	0.050	8421359
Dissolved Sulphur (S)	mg/L	11.0	10.0	8.8	8421359	9.4	3.0	8421359
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PR5142	PR5143	PR5144	PR5145		
Sampling Date		2016/10/01 09:10	2016/10/01 11:05	2016/10/01 11:50	2016/10/02 09:30		
COC Number		08428034	08428034	08428034	08428034		
	UNITS	KZ-15	KZ-16	KZ-17	KZ16B	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	174	158	141	147	0.50	8422169
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8424144
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0118	0.00352	0.00137	0.00270	0.00050	8422961
Total Antimony (Sb)	mg/L	0.000033	<0.000020	0.000033	<0.000020	0.000020	8422961
Total Arsenic (As)	mg/L	0.000481	0.000253	0.000236	0.000306	0.000020	8422961
Total Barium (Ba)	mg/L	0.0648	0.0629	0.0543	0.0622	0.000020	8422961
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8422961
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8422961
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8422961
Total Cadmium (Cd)	mg/L	0.0000380	0.0000150	0.0000130	0.0000220	0.0000050	8422961
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8422961
Total Cobalt (Co)	mg/L	0.0000470	0.0000310	0.0000070	0.0000270	0.0000050	8422961
Total Copper (Cu)	mg/L	0.000432	0.000301	0.000384	0.000284	0.000050	8422961
Total Iron (Fe)	mg/L	0.0844	0.0207	0.0037	0.0218	0.0010	8422961
Total Lead (Pb)	mg/L	0.0000490	0.0000140	0.0000350	<0.0000050	0.0000050	8422961
Total Lithium (Li)	mg/L	0.00187	0.00152	0.00220	0.00076	0.00050	8422961
Total Manganese (Mn)	mg/L	0.0292	0.00773	0.000661	0.00535	0.000050	8422961
Total Molybdenum (Mo)	mg/L	0.000928	0.000456	0.00121	0.000429	0.000050	8422961
Total Nickel (Ni)	mg/L	0.000485	0.000313	0.000317	0.000218	0.000020	8422961
Total Phosphorus (P)	mg/L	0.0078	<0.0020	0.0066	<0.0020	0.0020	8422961
Total Selenium (Se)	mg/L	0.00131	0.000981	0.000711	0.000921	0.000040	8422961
Total Silicon (Si)	mg/L	3.03	2.86	2.91	2.74	0.050	8422961
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8422961
Total Strontium (Sr)	mg/L	0.177	0.163	0.146	0.149	0.000050	8422961
Total Thallium (Tl)	mg/L	0.0000030	<0.0000020	<0.0000020	<0.0000020	0.0000020	8422961
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8422961
Total Titanium (Ti)	mg/L	0.00093	<0.00050	<0.00050	<0.00050	0.00050	8422961
Total Uranium (U)	mg/L	0.00220	0.00161	0.00170	0.00149	0.0000020	8422961
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8422961
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PR5142	PR5143	PR5144	PR5145		
Sampling Date		2016/10/01 09:10	2016/10/01 11:05	2016/10/01 11:50	2016/10/02 09:30		
COC Number		08428034	08428034	08428034	08428034		
	UNITS	KZ-15	KZ-16	KZ-17	KZ16B	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00563	0.00064	0.00103	0.00080	0.00010	8422961
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8422961
Total Calcium (Ca)	mg/L	53.4	49.9	43.4	47.5	0.050	8421360
Total Magnesium (Mg)	mg/L	9.98	8.08	7.86	6.97	0.050	8421360
Total Potassium (K)	mg/L	1.11	1.03	1.09	0.957	0.050	8421360
Total Sodium (Na)	mg/L	1.02	0.939	0.880	0.842	0.050	8421360
Total Sulphur (S)	mg/L	10.1	8.7	7.8	8.3	3.0	8421360
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PR5139	PR5140	PR5141		
Sampling Date		2016/09/30 15:30	2016/09/30 17:05	2016/09/30 12:15		
COC Number		08428034	08428034	08428034		
	UNITS	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	228	202	199	0.50	8422169
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000023	0.0000020	8424144
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.0128	0.0178	0.0360	0.0030	8423005
Total Antimony (Sb)	mg/L	0.000091	0.000051	0.000077	0.000020	8423005
Total Arsenic (As)	mg/L	0.00220	0.00143	0.00107	0.000020	8423005
Total Barium (Ba)	mg/L	0.0581	0.0639	0.0640	0.000050	8423005
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8423005
Total Bismuth (Bi)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8423005
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8423005
Total Cadmium (Cd)	mg/L	0.0000100	0.0000190	0.0000220	0.0000050	8423005
Total Chromium (Cr)	mg/L	0.00013	0.00013	0.00015	0.00010	8423005
Total Cobalt (Co)	mg/L	0.000089	0.000079	0.000086	0.000010	8423005
Total Copper (Cu)	mg/L	0.00060	0.00069	0.00084	0.00010	8423005
Total Iron (Fe)	mg/L	0.429	0.243	0.229	0.0050	8423005
Total Lead (Pb)	mg/L	0.000023	0.000036	0.000069	0.000020	8423005
Total Lithium (Li)	mg/L	0.00338	0.00277	0.00289	0.00050	8423005
Total Manganese (Mn)	mg/L	0.0724	0.0504	0.0255	0.00010	8423005
Total Molybdenum (Mo)	mg/L	0.00140	0.00103	0.000982	0.000050	8423005
Total Nickel (Ni)	mg/L	0.00208	0.00125	0.00121	0.00010	8423005
Total Phosphorus (P)	mg/L	0.0156	0.0141	0.0124	0.0050	8423005
Total Selenium (Se)	mg/L	0.000811	0.00104	0.000846	0.000040	8423005
Total Silicon (Si)	mg/L	4.26	3.53	3.83	0.050	8423005
Total Silver (Ag)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8423005
Total Strontium (Sr)	mg/L	0.177	0.209	0.187	0.000050	8423005
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8423005
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8423005
Total Titanium (Ti)	mg/L	<0.0020	<0.0020	<0.0020	0.0020	8423005
Total Uranium (U)	mg/L	0.00276	0.00225	0.00229	0.0000050	8423005
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8423005
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PR5139	PR5140	PR5141		
Sampling Date		2016/09/30 15:30	2016/09/30 17:05	2016/09/30 12:15		
COC Number		08428034	08428034	08428034		
	UNITS	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0020	0.0033	0.0019	0.0010	8423005
Total Zirconium (Zr)	mg/L	0.00011	<0.00010	<0.00010	0.00010	8423005
Total Calcium (Ca)	mg/L	57.4	53.0	54.3	0.25	8421360
Total Magnesium (Mg)	mg/L	20.5	16.9	15.4	0.25	8421360
Total Potassium (K)	mg/L	1.34	1.44	1.17	0.25	8421360
Total Sodium (Na)	mg/L	1.18	1.28	1.15	0.25	8421360
Total Sulphur (S)	mg/L	12.9	14.6	11.5	3.0	8421360
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PR5139
Sample ID: KZ-21
Matrix: Water

Collected: 2016/09/30
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8423014	N/A	2016/10/06	Maria Maclean
Alkalinity - Water	AT/ALK	8423400	2016/10/05	2016/10/05	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8424712	N/A	2016/10/06	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8423260	N/A	2016/10/05	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8423271	N/A	2016/10/05	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8424813	N/A	2016/10/06	Isabel Choi
Conductance - water	AT/ALK	8423402	N/A	2016/10/05	Wilson Au Yueng
Fluoride	ISE/ISE	8423457	N/A	2016/10/05	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8422169	N/A	2016/10/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8422091	N/A	2016/10/06	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8424135	N/A	2016/10/06	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8424144	2016/10/06	2016/10/06	Edwin Lamigo
Ion Balance	CALC	8422092	N/A	2016/10/06	David Huang
Sum of cations, anions	CALC	8422093	N/A	2016/10/06	David Huang
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8421359	N/A	2016/10/06	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8423304	N/A	2016/10/06	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8423005	2016/10/05	2016/10/06	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8421360	N/A	2016/10/06	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8424854	N/A	2016/10/06	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8424477	N/A	2016/10/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8424483	N/A	2016/10/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8421618	N/A	2016/10/06	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8422689	N/A	2016/10/05	Lucy Luo
pH Water	AT/ALK	8423401	N/A	2016/10/05	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8424715	N/A	2016/10/06	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8423101	2016/10/05	2016/10/05	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8423108	N/A	2016/10/05	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8422714	2016/10/05	2016/10/06	Wendy Fong

Maxxam ID: PR5139 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2016/09/30
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8423260	N/A	2016/10/05	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8423271	N/A	2016/10/05	Tatyana Serzhanova
Fluoride	ISE/ISE	8423457	N/A	2016/10/05	Balwinder Bassi
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8423304	N/A	2016/10/06	Andrew An

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PR5140
Sample ID: KZ-22
Matrix: Water

Collected: 2016/09/30
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8423018	N/A	2016/10/06	Maria Maclean
Alkalinity - Water	AT/ALK	8423403	2016/10/05	2016/10/05	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8424712	N/A	2016/10/06	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8423260	N/A	2016/10/05	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8423271	N/A	2016/10/05	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8424812	N/A	2016/10/06	Isabel Choi
Conductance - water	AT/ALK	8423411	N/A	2016/10/05	Wilson Au Yueng
Fluoride	ISE/ISE	8423457	N/A	2016/10/05	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8422169	N/A	2016/10/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8422091	N/A	2016/10/06	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8424150	N/A	2016/10/06	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8424144	2016/10/06	2016/10/06	Edwin Lamigo
Ion Balance	CALC	8422092	N/A	2016/10/06	David Huang
Sum of cations, anions	CALC	8422093	N/A	2016/10/06	David Huang
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8421359	N/A	2016/10/06	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8423304	N/A	2016/10/06	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8423005	2016/10/05	2016/10/06	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8421360	N/A	2016/10/06	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8424854	N/A	2016/10/06	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8424488	N/A	2016/10/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8424495	N/A	2016/10/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8421618	N/A	2016/10/06	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8422689	N/A	2016/10/05	Lucy Luo
pH Water	AT/ALK	8423410	N/A	2016/10/05	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8424715	N/A	2016/10/06	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8423101	2016/10/05	2016/10/05	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8423112	N/A	2016/10/05	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8422714	2016/10/05	2016/10/06	Wendy Fong

Maxxam ID: PR5140 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2016/09/30
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8423112	N/A	2016/10/05	Isabel Choi

Maxxam ID: PR5141
Sample ID: KZ-26
Matrix: Water

Collected: 2016/09/30
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8423018	N/A	2016/10/06	Maria Maclean
Alkalinity - Water	AT/ALK	8423403	2016/10/05	2016/10/05	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8424712	N/A	2016/10/06	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PR5141
Sample ID: KZ-26
Matrix: Water

Collected: 2016/09/30
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8423260	N/A	2016/10/05	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8423271	N/A	2016/10/05	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8424813	N/A	2016/10/06	Isabel Choi
Conductance - water	AT/ALK	8423411	N/A	2016/10/05	Wilson Au Yueng
Fluoride	ISE/ISE	8423457	N/A	2016/10/05	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8422169	N/A	2016/10/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8422091	N/A	2016/10/06	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8424150	N/A	2016/10/06	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8424144	2016/10/06	2016/10/06	Edwin Lamigo
Ion Balance	CALC	8422092	N/A	2016/10/06	David Huang
Sum of cations, anions	CALC	8422093	N/A	2016/10/06	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8421359	N/A	2016/10/06	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8423304	N/A	2016/10/06	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8423005	2016/10/05	2016/10/06	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8421360	N/A	2016/10/06	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8424854	N/A	2016/10/06	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8424488	N/A	2016/10/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8424495	N/A	2016/10/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8421618	N/A	2016/10/06	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8422689	N/A	2016/10/05	Lucy Luo
pH Water	AT/ALK	8423410	N/A	2016/10/05	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8424715	N/A	2016/10/06	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8423101	2016/10/05	2016/10/05	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8423108	N/A	2016/10/05	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8422714	2016/10/05	2016/10/06	Wendy Fong

Maxxam ID: PR5141 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2016/09/30
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8423101	2016/10/05	2016/10/05	Isabel Choi

Maxxam ID: PR5142
Sample ID: KZ-15
Matrix: Water

Collected: 2016/10/01
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8423018	N/A	2016/10/06	Maria Maclean
Alkalinity - Water	AT/ALK	8423403	2016/10/05	2016/10/05	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8424712	N/A	2016/10/06	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8423260	N/A	2016/10/05	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8423271	N/A	2016/10/05	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8424813	N/A	2016/10/06	Isabel Choi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PR5142
Sample ID: KZ-15
Matrix: Water

Collected: 2016/10/01
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductance - water	AT/ALK	8423411	N/A	2016/10/05	Wilson Au Yueng
Fluoride	ISE/ISE	8423457	N/A	2016/10/05	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8422169	N/A	2016/10/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8422091	N/A	2016/10/06	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8424135	N/A	2016/10/06	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8424144	2016/10/06	2016/10/06	Edwin Lamigo
Ion Balance	CALC	8422092	N/A	2016/10/06	David Huang
Sum of cations, anions	CALC	8422093	N/A	2016/10/06	David Huang
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8421359	N/A	2016/10/06	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8423304	N/A	2016/10/06	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8421360	N/A	2016/10/06	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8422961	N/A	2016/10/06	Andrew An
Ammonia-N (Preserved)	KONE/COL	8424854	N/A	2016/10/06	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8424488	N/A	2016/10/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8424495	N/A	2016/10/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8421618	N/A	2016/10/06	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8422689	N/A	2016/10/05	Lucy Luo
pH Water	AT/ALK	8423410	N/A	2016/10/05	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8424715	N/A	2016/10/06	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8423101	2016/10/05	2016/10/05	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8423108	N/A	2016/10/05	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8422714	2016/10/05	2016/10/06	Wendy Fong

Maxxam ID: PR5142 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2016/10/01
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8423403	2016/10/05	2016/10/05	Wilson Au Yueng
Conductance - water	AT/ALK	8423411	N/A	2016/10/05	Wilson Au Yueng
Elements by ICPMS Low Level (total)	ICP/CRCM	8422961	N/A	2016/10/06	Andrew An
pH Water	AT/ALK	8423410	N/A	2016/10/05	Wilson Au Yueng

Maxxam ID: PR5143
Sample ID: KZ-16
Matrix: Water

Collected: 2016/10/01
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8423018	N/A	2016/10/06	Maria Maclean
Alkalinity - Water	AT/ALK	8423403	2016/10/05	2016/10/05	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8424712	N/A	2016/10/06	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8423260	N/A	2016/10/05	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8423271	N/A	2016/10/05	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8424813	N/A	2016/10/06	Isabel Choi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PR5143
Sample ID: KZ-16
Matrix: Water

Collected: 2016/10/01
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductance - water	AT/ALK	8423411	N/A	2016/10/05	Wilson Au Yueng
Fluoride	ISE/ISE	8423457	N/A	2016/10/05	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8422169	N/A	2016/10/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8422091	N/A	2016/10/06	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8424135	N/A	2016/10/06	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8424144	2016/10/06	2016/10/06	Edwin Lamigo
Ion Balance	CALC	8422092	N/A	2016/10/06	David Huang
Sum of cations, anions	CALC	8422093	N/A	2016/10/06	David Huang
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8421359	N/A	2016/10/06	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8423304	N/A	2016/10/06	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8421360	N/A	2016/10/06	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8422961	N/A	2016/10/06	Andrew An
Ammonia-N (Preserved)	KONE/COL	8424857	N/A	2016/10/06	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8424488	N/A	2016/10/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8424495	N/A	2016/10/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8421618	N/A	2016/10/06	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8422689	N/A	2016/10/05	Lucy Luo
pH Water	AT/ALK	8423410	N/A	2016/10/05	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8424715	N/A	2016/10/06	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8423101	2016/10/05	2016/10/05	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8423112	N/A	2016/10/05	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8422714	2016/10/05	2016/10/06	Wendy Fong

Maxxam ID: PR5143 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2016/10/01
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8424813	N/A	2016/10/06	Isabel Choi
Ammonia-N (Preserved)	KONE/COL	8424857	N/A	2016/10/06	Diana Cruz

Maxxam ID: PR5144
Sample ID: KZ-17
Matrix: Water

Collected: 2016/10/01
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8423018	N/A	2016/10/06	Maria Maclean
Alkalinity - Water	AT/ALK	8423403	2016/10/05	2016/10/05	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8424712	N/A	2016/10/06	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8423260	N/A	2016/10/05	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8423271	N/A	2016/10/05	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8424812	N/A	2016/10/06	Isabel Choi
Conductance - water	AT/ALK	8423411	N/A	2016/10/05	Wilson Au Yueng
Fluoride	ISE/ISE	8423457	N/A	2016/10/05	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PR5144
Sample ID: KZ-17
Matrix: Water

Collected: 2016/10/01
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness Total (calculated as CaCO3)	CALC	8422169	N/A	2016/10/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8422091	N/A	2016/10/06	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8424135	N/A	2016/10/06	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8424144	2016/10/06	2016/10/06	Edwin Lamigo
Ion Balance	CALC	8422092	N/A	2016/10/06	David Huang
Sum of cations, anions	CALC	8422093	N/A	2016/10/06	David Huang
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8421359	N/A	2016/10/06	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8423304	N/A	2016/10/06	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8421360	N/A	2016/10/06	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8422961	N/A	2016/10/06	Andrew An
Ammonia-N (Preserved)	KONE/COL	8424854	N/A	2016/10/06	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8424488	N/A	2016/10/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8424495	N/A	2016/10/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8421618	N/A	2016/10/06	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8422689	N/A	2016/10/05	Lucy Luo
pH Water	AT/ALK	8423410	N/A	2016/10/05	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8424715	N/A	2016/10/06	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8423101	2016/10/05	2016/10/05	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8423112	N/A	2016/10/05	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8422714	2016/10/05	2016/10/06	Wendy Fong

Maxxam ID: PR5144 Dup
Sample ID: KZ-17
Matrix: Water

Collected: 2016/10/01
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8424812	N/A	2016/10/06	Isabel Choi

Maxxam ID: PR5145
Sample ID: KZ16B
Matrix: Water

Collected: 2016/10/02
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8423018	N/A	2016/10/06	Maria Maclean
Alkalinity - Water	AT/ALK	8423403	2016/10/05	2016/10/05	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8424712	N/A	2016/10/06	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8423260	N/A	2016/10/05	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8423271	N/A	2016/10/05	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8424812	N/A	2016/10/06	Isabel Choi
Conductance - water	AT/ALK	8423411	N/A	2016/10/05	Wilson Au Yueng
Fluoride	ISE/ISE	8423457	N/A	2016/10/05	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8422169	N/A	2016/10/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8422091	N/A	2016/10/06	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8424150	N/A	2016/10/06	Edwin Lamigo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PR5145
Sample ID: KZ16B
Matrix: Water

Collected: 2016/10/02
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8424144	2016/10/06	2016/10/06	Edwin Lamigo
Ion Balance	CALC	8422092	N/A	2016/10/06	David Huang
Sum of cations, anions	CALC	8422093	N/A	2016/10/06	David Huang
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8421359	N/A	2016/10/06	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8423304	N/A	2016/10/06	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8421360	N/A	2016/10/06	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8422961	N/A	2016/10/06	Andrew An
Ammonia-N (Preserved)	KONE/COL	8424854	N/A	2016/10/06	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8424488	N/A	2016/10/05	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8424495	N/A	2016/10/05	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8421618	N/A	2016/10/06	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8422689	N/A	2016/10/05	Lucy Luo
pH Water	AT/ALK	8423410	N/A	2016/10/05	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8424715	N/A	2016/10/06	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8423101	2016/10/05	2016/10/05	Isabel Choi
Total Phosphorus - unpreserved	KONE/COL	8423112	N/A	2016/10/05	Isabel Choi
Total Suspended Solids-Low Level	BAL/BAL	8422714	2016/10/05	2016/10/06	Wendy Fong

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.3°C
Package 2	6.0°C

Samples KZ-21, KZ-22 and KZ-26 were received at the analytical lab past recommended hold time for Nitrate, Nitrite, Total Phosphorus and Dissolved Phosphorus: Samples KZ-15, KZ-16, and KZ-17 were received at the analytical labon the hold time expiry date which did not allow sufficient time for preparation and analysis for Nitrate, Nitrite, Total Phosphorus and Dissolved Phosphorus.

Sample PR5139-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PR5140-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PR5141-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PR5139, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample PR5140, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample PR5141, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample PR5142, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample PR5143, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample PR5144, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample PR5145, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8422714	Total Suspended Solids	2016/10/06			102	80 - 120	<1.0	mg/L		
8422961	Total Aluminum (Al)	2016/10/06	99	80 - 120	111	80 - 120	<0.00050	mg/L	4.2	20
8422961	Total Antimony (Sb)	2016/10/06	103	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8422961	Total Arsenic (As)	2016/10/06	106	80 - 120	95	80 - 120	<0.000020	mg/L	8.6	20
8422961	Total Barium (Ba)	2016/10/06	NC	80 - 120	100	80 - 120	<0.000020	mg/L	2.3	20
8422961	Total Beryllium (Be)	2016/10/06	102	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
8422961	Total Bismuth (Bi)	2016/10/06	96	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8422961	Total Boron (B)	2016/10/06	101	80 - 120	98	80 - 120	<0.010	mg/L	NC	20
8422961	Total Cadmium (Cd)	2016/10/06	100	80 - 120	99	80 - 120	<0.0000050	mg/L	2.7	20
8422961	Total Chromium (Cr)	2016/10/06	100	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
8422961	Total Cobalt (Co)	2016/10/06	98	80 - 120	98	80 - 120	<0.0000050	mg/L	12	20
8422961	Total Copper (Cu)	2016/10/06	94	80 - 120	96	80 - 120	<0.000050	mg/L	1.6	20
8422961	Total Iron (Fe)	2016/10/06	NC	80 - 120	97	80 - 120	<0.0010	mg/L	1.1	20
8422961	Total Lead (Pb)	2016/10/06	98	80 - 120	98	80 - 120	<0.0000050	mg/L	2.0	20
8422961	Total Lithium (Li)	2016/10/06	101	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8422961	Total Manganese (Mn)	2016/10/06	NC	80 - 120	98	80 - 120	<0.000050	mg/L	0.82	20
8422961	Total Molybdenum (Mo)	2016/10/06	NC	80 - 120	97	80 - 120	<0.000050	mg/L	0.11	20
8422961	Total Nickel (Ni)	2016/10/06	97	80 - 120	98	80 - 120	<0.000020	mg/L	6.0	20
8422961	Total Phosphorus (P)	2016/10/06					0.0023, RDL=0.0020	mg/L	NC	20
8422961	Total Selenium (Se)	2016/10/06	106	80 - 120	95	80 - 120	<0.000040	mg/L	5.6	20
8422961	Total Silicon (Si)	2016/10/06					<0.050	mg/L	0.098	20
8422961	Total Silver (Ag)	2016/10/06	109	80 - 120	91	80 - 120	<0.0000050	mg/L	NC	20
8422961	Total Strontium (Sr)	2016/10/06	NC	80 - 120	90	80 - 120	<0.000050	mg/L	1.7	20
8422961	Total Thallium (Tl)	2016/10/06	88	80 - 120	99	80 - 120	0.0000020, RDL=0.0000020	mg/L	NC	20
8422961	Total Tin (Sn)	2016/10/06	107	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8422961	Total Titanium (Ti)	2016/10/06	91	80 - 120	81	80 - 120	<0.00050	mg/L	NC	20
8422961	Total Uranium (U)	2016/10/06	102	80 - 120	97	80 - 120	<0.0000020	mg/L	0.91	20
8422961	Total Vanadium (V)	2016/10/06	102	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
8422961	Total Zinc (Zn)	2016/10/06	NC	80 - 120	96	80 - 120	<0.00010	mg/L	0.16	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8422961	Total Zirconium (Zr)	2016/10/06					<0.00010	mg/L	NC	20
8423005	Total Aluminum (Al)	2016/10/06	103	80 - 120	113	80 - 120	<0.0030	mg/L	NC	20
8423005	Total Antimony (Sb)	2016/10/06	100	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8423005	Total Arsenic (As)	2016/10/06	108	80 - 120	108	80 - 120	<0.000020	mg/L	2.8	20
8423005	Total Barium (Ba)	2016/10/06	NC	80 - 120	103	80 - 120	<0.000050	mg/L	1.2	20
8423005	Total Beryllium (Be)	2016/10/06	105	80 - 120	108	80 - 120	<0.000010	mg/L	NC	20
8423005	Total Bismuth (Bi)	2016/10/06	92	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8423005	Total Boron (B)	2016/10/06	NC	80 - 120	102	80 - 120	<0.010	mg/L	2.4	20
8423005	Total Cadmium (Cd)	2016/10/06	101	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8423005	Total Chromium (Cr)	2016/10/06	100	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8423005	Total Cobalt (Co)	2016/10/06	98	80 - 120	98	80 - 120	<0.000010	mg/L	2.9	20
8423005	Total Copper (Cu)	2016/10/06	95	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8423005	Total Iron (Fe)	2016/10/06	NC	80 - 120	99	80 - 120	<0.0050	mg/L	0.024	20
8423005	Total Lead (Pb)	2016/10/06	96	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8423005	Total Lithium (Li)	2016/10/06	NC	80 - 120	96	80 - 120	<0.00050	mg/L	1.8	20
8423005	Total Manganese (Mn)	2016/10/06	NC	80 - 120	100	80 - 120	<0.00010	mg/L	3.2	20
8423005	Total Molybdenum (Mo)	2016/10/06	103	80 - 120	99	80 - 120	<0.000050	mg/L	2.5	20
8423005	Total Nickel (Ni)	2016/10/06	95	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8423005	Total Phosphorus (P)	2016/10/06					<0.0050	mg/L		
8423005	Total Selenium (Se)	2016/10/06	110	80 - 120	114	80 - 120	<0.000040	mg/L	NC	20
8423005	Total Silicon (Si)	2016/10/06					<0.050	mg/L	2.7	20
8423005	Total Silver (Ag)	2016/10/06	110	80 - 120	101	80 - 120	<0.000010	mg/L	NC	20
8423005	Total Strontium (Sr)	2016/10/06	NC	80 - 120	95	80 - 120	<0.000050	mg/L	1.0	20
8423005	Total Thallium (Tl)	2016/10/06	92	80 - 120	81	80 - 120	<0.0000020	mg/L	NC	20
8423005	Total Tin (Sn)	2016/10/06	107	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8423005	Total Titanium (Ti)	2016/10/06	84	80 - 120	96	80 - 120	<0.0020	mg/L	NC	20
8423005	Total Uranium (U)	2016/10/06	102	80 - 120	94	80 - 120	<0.0000050	mg/L	4.1	20
8423005	Total Vanadium (V)	2016/10/06	103	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8423005	Total Zinc (Zn)	2016/10/06	95	80 - 120	117	80 - 120	<0.0010	mg/L	NC	20
8423005	Total Zirconium (Zr)	2016/10/06					<0.00010	mg/L	NC	20
8423014	Acidity (pH 4.5)	2016/10/06					<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8423014	Acidity (pH 8.3)	2016/10/06			98	80 - 120	<0.50	mg/L	NC	20
8423018	Acidity (pH 4.5)	2016/10/06					<0.50	mg/L	NC	20
8423018	Acidity (pH 8.3)	2016/10/06			99	80 - 120	<0.50	mg/L	NC	20
8423101	Dissolved Phosphorus (P)	2016/10/05	101	80 - 120	102	80 - 120	<0.0020	mg/L	NC	20
8423108	Total Phosphorus (P)	2016/10/05	95	80 - 120	101	80 - 120	<0.0020	mg/L	6.6	20
8423112	Total Phosphorus (P)	2016/10/05	107	80 - 120	99	80 - 120	<0.0020	mg/L	NC	20
8423260	Strong Acid Dissoc. Cyanide (CN)	2016/10/05	99	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8423271	Weak Acid Dissoc. Cyanide (CN)	2016/10/05	101	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8423304	Dissolved Aluminum (Al)	2016/10/06	106	80 - 120	113	80 - 120	<0.00050	mg/L	NC	20
8423304	Dissolved Antimony (Sb)	2016/10/06	102	80 - 120	95	80 - 120	<0.000020	mg/L	NC	20
8423304	Dissolved Arsenic (As)	2016/10/06	108	80 - 120	97	80 - 120	<0.000020	mg/L	0.071	20
8423304	Dissolved Barium (Ba)	2016/10/06	NC	80 - 120	98	80 - 120	<0.000020	mg/L	1.9	20
8423304	Dissolved Beryllium (Be)	2016/10/06	106	80 - 120	95	80 - 120	<0.000010	mg/L	NC	20
8423304	Dissolved Bismuth (Bi)	2016/10/06	89	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8423304	Dissolved Boron (B)	2016/10/06	98	80 - 120	95	80 - 120	<0.010	mg/L	NC	20
8423304	Dissolved Cadmium (Cd)	2016/10/06	103	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8423304	Dissolved Chromium (Cr)	2016/10/06	92	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
8423304	Dissolved Cobalt (Co)	2016/10/06	89	80 - 120	97	80 - 120	<0.0000050	mg/L	18	20
8423304	Dissolved Copper (Cu)	2016/10/06	86	80 - 120	98	80 - 120	<0.000050	mg/L	3.9	20
8423304	Dissolved Iron (Fe)	2016/10/06	97	80 - 120	99	80 - 120	<0.0010	mg/L	0.51	20
8423304	Dissolved Lead (Pb)	2016/10/06	90	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8423304	Dissolved Lithium (Li)	2016/10/06	98	80 - 120	96	80 - 120	<0.00050	mg/L	5.9	20
8423304	Dissolved Manganese (Mn)	2016/10/06	NC	80 - 120	97	80 - 120	<0.000050	mg/L	1.1	20
8423304	Dissolved Molybdenum (Mo)	2016/10/06	NC	80 - 120	99	80 - 120	<0.000050	mg/L	0.35	20
8423304	Dissolved Nickel (Ni)	2016/10/06	88	80 - 120	98	80 - 120	<0.000020	mg/L	4.4	20
8423304	Dissolved Phosphorus (P)	2016/10/06					<0.0020	mg/L	NC	20
8423304	Dissolved Silicon (Si)	2016/10/06					<0.050	mg/L	1.0	20
8423304	Dissolved Silver (Ag)	2016/10/06	109	80 - 120	77 (1)	80 - 120	<0.0000050	mg/L	NC	20
8423304	Dissolved Strontium (Sr)	2016/10/06	NC	80 - 120	100	80 - 120	<0.000050	mg/L	4.0	20
8423304	Dissolved Thallium (Tl)	2016/10/06	81	80 - 120	99	80 - 120	0.0000020, RDL=0.0000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8423304	Dissolved Tin (Sn)	2016/10/06	97	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8423304	Dissolved Titanium (Ti)	2016/10/06	91	80 - 120	82	80 - 120	<0.00050	mg/L	NC	20
8423304	Dissolved Uranium (U)	2016/10/06	92	80 - 120	97	80 - 120	<0.0000020	mg/L	1.6	20
8423304	Dissolved Vanadium (V)	2016/10/06	95	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
8423304	Dissolved Zinc (Zn)	2016/10/06	115	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8423304	Dissolved Zirconium (Zr)	2016/10/06					<0.00010	mg/L	NC	20
8423400	Alkalinity (PP as CaCO3)	2016/10/05					<0.50	mg/L	NC	20
8423400	Alkalinity (Total as CaCO3)	2016/10/05	NC	80 - 120	97	80 - 120	<0.50	mg/L	0.91	20
8423400	Bicarbonate (HCO3)	2016/10/05					<0.50	mg/L	0.91	20
8423400	Carbonate (CO3)	2016/10/05					<0.50	mg/L	NC	20
8423400	Hydroxide (OH)	2016/10/05					<0.50	mg/L	NC	20
8423401	pH	2016/10/05			102	97 - 103			0.97	N/A
8423402	Conductivity	2016/10/05			99	80 - 120	<1.0	uS/cm		
8423403	Alkalinity (PP as CaCO3)	2016/10/05					<0.50	mg/L	NC	20
8423403	Alkalinity (Total as CaCO3)	2016/10/05	NC	80 - 120	96	80 - 120	<0.50	mg/L	0.31	20
8423403	Bicarbonate (HCO3)	2016/10/05					<0.50	mg/L	0.31	20
8423403	Carbonate (CO3)	2016/10/05					<0.50	mg/L	NC	20
8423403	Hydroxide (OH)	2016/10/05					<0.50	mg/L	NC	20
8423410	pH	2016/10/05			101	97 - 103			0.24	N/A
8423411	Conductivity	2016/10/05			100	80 - 120	<1.0	uS/cm	0.87	20
8423457	Fluoride (F)	2016/10/05			102	80 - 120	0.010, RDL=0.010	mg/L	0	20
8424135	Dissolved Mercury (Hg)	2016/10/06	90	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8424144	Total Mercury (Hg)	2016/10/06	92	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
8424150	Dissolved Mercury (Hg)	2016/10/06	92	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8424477	Nitrate plus Nitrite (N)	2016/10/05	106	80 - 120	103	80 - 120	<0.0020	mg/L	NC	25
8424483	Nitrite (N)	2016/10/05	99	80 - 120	93	80 - 120	<0.0020	mg/L	NC	25
8424488	Nitrate plus Nitrite (N)	2016/10/05	NC	80 - 120	103	80 - 120	<0.0020	mg/L	0.30	25
8424495	Nitrite (N)	2016/10/05	99	80 - 120	95	80 - 120	<0.0020	mg/L	NC	25
8424712	Dissolved Chloride (Cl)	2016/10/06	99	80 - 120	94	80 - 120	<0.50	mg/L	0.77	20
8424715	Dissolved Sulphate (SO4)	2016/10/06	104	80 - 120	92	80 - 120	<0.50	mg/L	2.4	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8424812	Dissolved Organic Carbon (C)	2016/10/06	105	80 - 120	113	80 - 120	<0.50	mg/L	NC	20
8424813	Dissolved Organic Carbon (C)	2016/10/06	107	80 - 120	115	80 - 120	<0.50	mg/L	NC	20
8424854	Total Ammonia (N)	2016/10/06	NC	80 - 120	100	80 - 120	<0.0050	mg/L	2.5	20
8424857	Total Ammonia (N)	2016/10/06	NC	80 - 120	101	80 - 120	<0.0050	mg/L	1.4	20
8425639	Dissolved Selenium (Se)	2016/10/07	108	80 - 120	95	80 - 120	<0.000040	mg/L	0	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Blank Spike outside acceptance criteria (10% of analytes failure allowed).

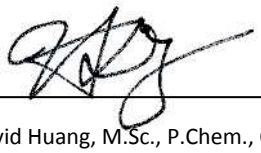
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC: 08428034

BBY FCD-00077/05

Page 1 of 1

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Catherine Henry	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-21		30-Sep-15	15:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-22		30-Sep-16	17:05	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-26		30-Sep-16	12:15	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5																						
6																						
7	KZ-15		01-Oct-16	9:10	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
8	KZ-16		01-Oct-16	11:05	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
9	KZ-17		01-Oct-16	11:50	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
10	KZ-16B		02-Oct-16	9:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		11.2
NA		13.1

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Symo @ 15:15
2016-10-03

TEMP: 6 / 5 / 5 → 1 (cock #)
7 6 5 → 2

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Catherine Henry	2016/10/03	11:30	Laurel Berthier	2016/10/04	13:35

B687189_COC

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08428205, 08428206, 08428211

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/10/26
Report #: R2289955
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B688838
Received: 2016/10/06, 09:50

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	5	N/A	2016/10/08	BBY6SOP-00037	SM 22 2310 B m
Acidity pH 4.5 & pH 8.3 (as CaCO3)	10	N/A	2016/10/13	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	15	2016/10/08	2016/10/08	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	10	N/A	2016/10/11	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	10	N/A	2016/10/12	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	10	N/A	2016/10/12	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	10	N/A	2016/10/12	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	15	N/A	2016/10/08	BBY6SOP-00026	SM 22 2510 B m
Fluoride	10	N/A	2016/10/11	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	9	N/A	2016/10/12	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	1	N/A	2016/10/13	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	14	N/A	2016/10/12	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2016/10/13	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	10	N/A	2016/10/11	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Dissolved-LowLevel) by CVAF	5	N/A	2016/10/12	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	6	2016/10/11	2016/10/11	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	3	2016/10/12	2016/10/12	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	1	2016/10/26	2016/10/26	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	9	N/A	2016/10/12	BBY WI-00033	Auto Calc
Ion Balance	1	N/A	2016/10/13	BBY WI-00033	Auto Calc
Sum of cations, anions	9	N/A	2016/10/12	Calc	
Sum of cations, anions	1	N/A	2016/10/13	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	14	N/A	2016/10/12	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2016/10/13	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	15	N/A	2016/10/12	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	9	N/A	2016/10/12	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2016/10/13	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	10	N/A	2016/10/12	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	10	N/A	2016/10/11	BBY6SOP-00009	SM 22 4500-NH3- G m

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08428205, 08428206, 08428211

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/10/26
Report #: R2289955
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B688838
Received: 2016/10/06, 09:50

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrate+Nitrite (N) (low level)	10	N/A	2016/10/08	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	10	N/A	2016/10/08	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	10	N/A	2016/10/12	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	14	N/A	2016/10/11	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	15	N/A	2016/10/08	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	10	N/A	2016/10/11	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	10	2016/10/11	2016/10/12	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	10	N/A	2016/10/12	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	10	2016/10/08	2016/10/11	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Megan Smith, Project Manager
Email: msmith@maxxam.ca
Phone# (604) 734 7276

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PS4994		PS4995		PS4996		
Sampling Date		2016/10/04 13:47		2016/10/03 13:30		2016/10/03 12:50		
COC Number		08428205		08428205		08428205		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.3	8426132	3.2	8432218	3.0	N/A	8426132
Cation Sum	meq/L	2.2	8426132	3.2	8432218	2.9	N/A	8426132
Filter and HNO3 Preservation	N/A	LAB	8428543	LAB	8428543	LAB	N/A	8428543
Ion Balance	N/A	0.98	8426418	1.0	8432217	0.98	0.010	8426418
Nitrate (N)	mg/L	0.147	8426133	0.0813	8426133	0.0897	0.0020	8426133
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8430883	<0.00050	8430883	<0.00050	0.00050	8430883
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8430891	<0.00050	8430891	<0.00050	0.00050	8430891
Fluoride (F)	mg/L	0.039	8429543	0.060	8429543	0.057	0.010	8429543
Dissolved Organic Carbon (C)	mg/L	1.13	8430899	1.55	8430899	2.22	0.50	8430899
Acidity (pH 4.5)	mg/L	<0.50	8427488	<0.50	8427488	<0.50	0.50	8427498
Alkalinity (Total as CaCO3)	mg/L	56.5	8427378	132	8427378	108	0.50	8427378
Acidity (pH 8.3)	mg/L	<0.50	8427488	<0.50	8427488	<0.50	0.50	8427498
Alkalinity (PP as CaCO3)	mg/L	<0.50	8427378	<0.50	8427378	<0.50	0.50	8427378
Bicarbonate (HCO3)	mg/L	68.9	8427378	161	8427378	132	0.50	8427378
Carbonate (CO3)	mg/L	<0.50	8427378	<0.50	8427378	<0.50	0.50	8427378
Hydroxide (OH)	mg/L	<0.50	8427378	<0.50	8427378	<0.50	0.50	8427378
Anions								
Dissolved Sulphate (SO4)	mg/L	53.7	8429141	23.5	8429141	38.9	0.50	8429141
Dissolved Chloride (Cl)	mg/L	0.56	8429138	0.71	8429138	<0.50	0.50	8429138
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0023 (1)	8429710	0.0023 (1)	8429710	0.0035 (1)	0.0020	8429713
Total Ammonia (N)	mg/L	0.0079	8429663	0.011	8429663	0.0091	0.0050	8429663
Nitrate plus Nitrite (N)	mg/L	0.147 (1)	8430715	0.0813 (1)	8430715	0.0897 (1)	0.0020	8430715
Nitrite (N)	mg/L	<0.0020 (1)	8430717	<0.0020 (1)	8430717	<0.0020 (1)	0.0020	8430717
Total Phosphorus (P)	mg/L	0.0027 (1)	8429711	0.0045 (1)	8429711	0.0039 (1)	0.0020	8429714
Physical Properties								
Conductivity	uS/cm	236	8427379	298	8427379	292	1.0	8427379
pH	pH	7.59	8427380	7.99	8427380	7.96		8427380

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PS4994		PS4995		PS4996		
Sampling Date		2016/10/04 13:47		2016/10/03 13:30		2016/10/03 12:50		
COC Number		08428205		08428205		08428205		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8427448	<1.0	8427448	<1.0	1.0	8427448
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PS4997			PS4998			PS4999		
Sampling Date		2016/10/04 08:50			2016/10/03 11:49			2016/10/04 09:50		
COC Number		08428205			08428205			08428205		
	UNITS	KZ-9	RDL	QC Batch	KZ-13	RDL	QC Batch	KZ-18	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	3.4	N/A	8426132	1.5	N/A	8426132	3.8	N/A	8426132
Cation Sum	meq/L	3.3	N/A	8426132	1.5	N/A	8426132	3.7	N/A	8426132
Filter and HNO3 Preservation	N/A	LAB	N/A	8428543	LAB	N/A	8428543	LAB	N/A	8428543
Ion Balance	N/A	0.97	0.010	8426418	0.97	0.010	8426418	0.98	0.010	8426418
Nitrate (N)	mg/L	0.173	0.0020	8426133	0.0618	0.0020	8426133	0.133	0.0020	8426133
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8430883	<0.00050	0.00050	8430883	<0.00050	0.00050	8430883
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8430891	<0.00050	0.00050	8430891	<0.00050	0.00050	8430891
Fluoride (F)	mg/L	0.067	0.010	8429549	0.044	0.010	8429543	0.059	0.010	8429549
Dissolved Organic Carbon (C)	mg/L	1.64	0.50	8430899	4.80	0.50	8430899	1.84	0.50	8430899
Acidity (pH 4.5)	mg/L	<0.50	0.50	8427498	<0.50	0.50	8427498	<0.50	0.50	8427498
Alkalinity (Total as CaCO3)	mg/L	135	0.50	8427378	59.9	0.50	8427378	159	0.50	8427378
Acidity (pH 8.3)	mg/L	<0.50	0.50	8427498	<0.50	0.50	8427498	<0.50	0.50	8427498
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8427378	<0.50	0.50	8427378	<0.50	0.50	8427378
Bicarbonate (HCO3)	mg/L	164	0.50	8427378	73.1	0.50	8427378	194	0.50	8427378
Carbonate (CO3)	mg/L	<0.50	0.50	8427378	<0.50	0.50	8427378	<0.50	0.50	8427378
Hydroxide (OH)	mg/L	<0.50	0.50	8427378	<0.50	0.50	8427378	<0.50	0.50	8427378
Anions										
Dissolved Sulphate (SO4)	mg/L	33.3	0.50	8429141	13.8	0.50	8429141	25.8	0.50	8429141
Dissolved Chloride (Cl)	mg/L	0.92	0.50	8429138	0.57	0.50	8429138	0.91	0.50	8429138
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0045 (1)	0.0020	8429713	0.0056 (1)	0.0020	8429713	0.0175 (1)	0.0020	8429713
Total Ammonia (N)	mg/L	0.017	0.0050	8429663	0.010	0.0050	8429663	0.0085	0.0050	8429663
Nitrate plus Nitrite (N)	mg/L	0.173 (1)	0.0020	8430715	0.0618 (1)	0.0020	8430715	0.133 (1)	0.0020	8430715
Nitrite (N)	mg/L	<0.0020 (1)	0.0020	8430717	<0.0020 (1)	0.0020	8430717	<0.0020 (1)	0.0020	8430717
Total Phosphorus (P)	mg/L	0.0062 (1)	0.0020	8429714	0.0060 (1)	0.0020	8429714	0.0284 (1)	0.0020	8429714
Physical Properties										
Conductivity	uS/cm	331	1.0	8427379	151	1.0	8427379	349	1.0	8427379
pH	pH	7.95		8427380	7.66		8427380	8.03		8427380

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PS4997			PS4998			PS4999		
Sampling Date		2016/10/04 08:50			2016/10/03 11:49			2016/10/04 09:50		
COC Number		08428205			08428205			08428205		
	UNITS	KZ-9	RDL	QC Batch	KZ-13	RDL	QC Batch	KZ-18	RDL	QC Batch
Physical Properties										
Total Suspended Solids	mg/L	2.7	1.0	8427448	1.1	1.1	8427448	1.4	1.0	8427448
RDL = Reportable Detection Limit										

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PS5000		PS5001	PS5002		PS5003		
Sampling Date		2016/10/03 10:30		2016/10/04 14:00	2016/10/03		2016/10/06 09:50		
COC Number		08428205		08428205	08428206		08428206		
	UNITS	KZ-27	QC Batch	KZ-19	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	1.5	8426132	2.3	0.0000	8426132	0.00020	N/A	8426132
Cation Sum	meq/L	1.4	8426132	2.2	0.0037	8426132	0.0060	N/A	8426132
Filter and HNO3 Preservation	N/A	LAB	8428543	LAB	LAB	8428543		N/A	8428543
Ion Balance	N/A	0.98	8426418	0.98	NC	8426418	NC	0.010	8426418
Nitrate (N)	mg/L	0.0029	8426133	0.148	<0.0020	8426133	0.0025	0.0020	8426133
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8430883	<0.00050	<0.00050	8430883	<0.00050	0.00050	8430883
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8430891	<0.00050	<0.00050	8430891	<0.00050	0.00050	8430891
Fluoride (F)	mg/L	0.082	8429549	0.039	<0.010	8429543	<0.010	0.010	8429543
Dissolved Organic Carbon (C)	mg/L	3.56	8430899	1.20	<0.50	8430899	<0.50	0.50	8430899
Acidity (pH 4.5)	mg/L	<0.50	8427498	<0.50	<0.50	8427488	<0.50	0.50	8427498
Alkalinity (Total as CaCO3)	mg/L	55.3	8427378	56.9	<0.50	8427378	<0.50	0.50	8427378
Acidity (pH 8.3)	mg/L	<0.50	8427498	<0.50	0.62	8427488	<0.50	0.50	8427498
Alkalinity (PP as CaCO3)	mg/L	<0.50	8427378	<0.50	<0.50	8427378	<0.50	0.50	8427378
Bicarbonate (HCO3)	mg/L	67.4	8427378	69.4	<0.50	8427378	<0.50	0.50	8427378
Carbonate (CO3)	mg/L	<0.50	8427378	<0.50	<0.50	8427378	<0.50	0.50	8427378
Hydroxide (OH)	mg/L	<0.50	8427378	<0.50	<0.50	8427378	<0.50	0.50	8427378
Anions									
Dissolved Sulphate (SO4)	mg/L	15.7	8429141	53.0	<0.50	8429141	<0.50	0.50	8429141
Dissolved Chloride (Cl)	mg/L	0.52	8429138	<0.50	<0.50	8429138	<0.50	0.50	8429138
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0066 (1)	8429713	<0.0020 (1)	<0.0020 (1)	8429710	<0.0020 (2)	0.0020	8429713
Total Ammonia (N)	mg/L	0.010	8429663	0.011	0.013	8429663	0.0090	0.0050	8429663
Nitrate plus Nitrite (N)	mg/L	0.0029 (1)	8430715	0.148 (1)	<0.0020 (1)	8430715	0.0025	0.0020	8430715
Nitrite (N)	mg/L	<0.0020 (1)	8430717	<0.0020 (1)	<0.0020 (1)	8430717	<0.0020	0.0020	8430717
Total Phosphorus (P)	mg/L	0.0222 (1)	8429714	0.0030 (1)	<0.0020 (1)	8429711	0.0024 (2)	0.0020	8429714
Physical Properties									
Conductivity	uS/cm	148	8427379	236	1.3	8427379	1.1	1.0	8427379
pH	pH	7.70	8427380	7.63	5.57	8427380	5.27		8427380

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PS5000		PS5001	PS5002		PS5003		
Sampling Date		2016/10/03 10:30		2016/10/04 14:00	2016/10/03		2016/10/06 09:50		
COC Number		08428205		08428205	08428206		08428206		
	UNITS	KZ-27	QC Batch	KZ-19	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8427448	<1.0	<1.0	8427448	<1.0	1.0	8427448
RDL = Reportable Detection Limit									

Maxxam ID		PS5241	PS5242	PS5243		PS5244		PS5245		
Sampling Date		2016/10/04 10:40	2016/10/04 10:52	2016/10/04 11:30		2016/10/04 11:56		2016/10/03 15:23		
COC Number		08428211	08428211	08428211		08428211		08428211		
	UNITS	KZ-9_E-SEEP	KZ-9_W-SEEP	SEEP-3	QC Batch	SEEP-5	QC Batch	SEEP-4	RDL	QC Batch
Calculated Parameters										
Filter and HNO3 Preservation	N/A	LAB	LAB	LAB	8428543	LAB	8428543	LAB	N/A	8428543
Misc. Inorganics										
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	8427482	<0.50	8427482	<0.50	0.50	8427482
Alkalinity (Total as CaCO3)	mg/L	804	227	145	8427355	208	8427376	120	0.50	8427355
Acidity (pH 8.3)	mg/L	199	2.76	<0.50	8427482	25.1	8427482	2.21	0.50	8427482
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	8427355	<0.50	8427376	<0.50	0.50	8427355
Bicarbonate (HCO3)	mg/L	981	277	177	8427355	254	8427376	146	0.50	8427355
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	8427355	<0.50	8427376	<0.50	0.50	8427355
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	8427355	<0.50	8427376	<0.50	0.50	8427355
Physical Properties										
Conductivity	uS/cm	1560	506	335	8427359	424	8427375	311	1.0	8427359
pH	pH	6.61	7.99	8.03	8427360	6.74	8427374	7.67		8427360
RDL = Reportable Detection Limit										
N/A = Not Applicable										

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PS4994		PS4995		PS4996		
Sampling Date		2016/10/04 13:47		2016/10/03 13:30		2016/10/03 12:50		
COC Number		08428205		08428205		08428205		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	108	8425828	155	8431585	143	0.50	8425828
Elements								
Dissolved Mercury (Hg)	mg/L	0.0000023	8429105	<0.0000020	8429105	<0.0000020	0.0000020	8429105
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00281	8429179	0.00244	8429179	0.00314	0.00050	8429179
Dissolved Antimony (Sb)	mg/L	0.000023	8429179	<0.000020	8429179	0.000058	0.000020	8429179
Dissolved Arsenic (As)	mg/L	0.000076	8429179	0.000059	8429179	0.000175	0.000020	8429179
Dissolved Barium (Ba)	mg/L	0.0612	8429179	0.0387	8429179	0.0681	0.000020	8429179
Dissolved Beryllium (Be)	mg/L	<0.000010	8429179	<0.000010	8429179	<0.000010	0.000010	8429179
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8429179	<0.0000050	8429179	<0.0000050	0.0000050	8429179
Dissolved Boron (B)	mg/L	<0.010	8429179	<0.010	8429179	<0.010	0.010	8429179
Dissolved Cadmium (Cd)	mg/L	0.000261	8429179	0.0000090	8429179	0.000357	0.0000050	8429179
Dissolved Chromium (Cr)	mg/L	<0.00010	8429179	<0.00010	8429179	<0.00010	0.00010	8429179
Dissolved Cobalt (Co)	mg/L	0.0000080	8429179	0.0000090	8429179	0.0000340	0.0000050	8429179
Dissolved Copper (Cu)	mg/L	0.000501	8429179	0.000115	8429179	0.000657	0.000050	8429179
Dissolved Iron (Fe)	mg/L	<0.0010	8429179	0.0084	8429179	0.0661	0.0010	8429179
Dissolved Lead (Pb)	mg/L	0.0000180	8429179	<0.0000050	8429179	0.0000440	0.0000050	8429179
Dissolved Lithium (Li)	mg/L	0.00053	8429179	<0.00050	8429179	0.00079	0.00050	8429179
Dissolved Manganese (Mn)	mg/L	<0.000050	8429179	0.000729	8429179	0.0245	0.000050	8429179
Dissolved Molybdenum (Mo)	mg/L	0.000581	8429179	0.000442	8429179	0.000461	0.000050	8429179
Dissolved Nickel (Ni)	mg/L	0.000401	8429179	0.000144	8429179	0.000431	0.000020	8429179
Dissolved Phosphorus (P)	mg/L	0.0027	8429179	0.0031	8429179	<0.0020	0.0020	8429179
Dissolved Selenium (Se)	mg/L	0.00110	8429179	0.000651	8429179	0.00123	0.000040	8429179
Dissolved Silicon (Si)	mg/L	2.16	8429179	2.57	8429179	2.73	0.050	8429179
Dissolved Silver (Ag)	mg/L	0.0000140	8429179	<0.0000050	8429179	<0.0000050	0.0000050	8429179
Dissolved Strontium (Sr)	mg/L	0.113	8429179	0.141	8429179	0.146	0.000050	8429179
Dissolved Thallium (Tl)	mg/L	0.0000070	8429179	0.0000020	8429179	0.0000030	0.0000020	8429179
Dissolved Tin (Sn)	mg/L	<0.00020	8429179	<0.00020	8429179	<0.00020	0.00020	8429179
Dissolved Titanium (Ti)	mg/L	<0.00050	8429179	<0.00050	8429179	<0.00050	0.00050	8429179
Dissolved Uranium (U)	mg/L	0.00251	8429179	0.000873	8429179	0.00110	0.0000020	8429179
Dissolved Vanadium (V)	mg/L	<0.00020	8429179	<0.00020	8429179	<0.00020	0.00020	8429179
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PS4994		PS4995		PS4996		
Sampling Date		2016/10/04 13:47		2016/10/03 13:30		2016/10/03 12:50		
COC Number		08428205		08428205		08428205		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0381	8429179	0.00030	8429179	0.0669	0.00010	8429179
Dissolved Zirconium (Zr)	mg/L	<0.00010	8429179	<0.00010	8429179	<0.00010	0.00010	8429179
Dissolved Calcium (Ca)	mg/L	36.8	8425829	51.4	8431904	47.8	0.050	8425829
Dissolved Magnesium (Mg)	mg/L	3.83	8425829	6.40	8431904	5.80	0.050	8425829
Dissolved Potassium (K)	mg/L	1.62	8425829	0.705	8431904	1.29	0.050	8425829
Dissolved Sodium (Na)	mg/L	0.744	8425829	1.26 (1)	8431904	0.851	0.050	8425829
Dissolved Sulphur (S)	mg/L	17.1	8425829	8.0	8431904	13.0	3.0	8425829

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PS4997		PS4998		PS4999		
Sampling Date		2016/10/04 08:50		2016/10/03 11:49		2016/10/04 09:50		
COC Number		08428205		08428205		08428205		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-18	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	162	8425828	69.0	8425828	182	0.50	8425828
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8429105	<0.0000020	8429105	<0.0000020	0.0000020	8429108
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00227	8429179	0.00789	8429179	0.00632	0.00050	8429179
Dissolved Antimony (Sb)	mg/L	0.000053	8429179	0.000030	8429179	<0.000020	0.000020	8429179
Dissolved Arsenic (As)	mg/L	0.000155	8429179	0.000188	8429179	0.000298	0.000020	8429179
Dissolved Barium (Ba)	mg/L	0.0903	8429179	0.0945	8429179	0.0374	0.000020	8429179
Dissolved Beryllium (Be)	mg/L	<0.000010	8429179	<0.000010	8429179	<0.000010	0.000010	8429179
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8429179	<0.0000050	8429179	<0.0000050	0.0000050	8429179
Dissolved Boron (B)	mg/L	<0.010	8429179	<0.010	8429179	<0.010	0.010	8429179
Dissolved Cadmium (Cd)	mg/L	0.0000950	8429179	0.0000210	8429179	0.0000160	0.0000050	8429179
Dissolved Chromium (Cr)	mg/L	<0.00010	8429179	<0.00010	8429179	<0.00010	0.00010	8429179
Dissolved Cobalt (Co)	mg/L	0.0000380	8429179	0.0000140	8429179	0.0000080	0.0000050	8429179
Dissolved Copper (Cu)	mg/L	0.000394	8429179	0.000455	8429179	0.000090	0.000050	8429179
Dissolved Iron (Fe)	mg/L	0.0666	8429179	0.0195	8429179	0.0025	0.0010	8429179
Dissolved Lead (Pb)	mg/L	0.0000120	8429179	0.0000050	8429179	<0.0000050	0.0000050	8429179
Dissolved Lithium (Li)	mg/L	0.00169	8429179	0.00057	8429179	0.00066	0.00050	8429179
Dissolved Manganese (Mn)	mg/L	0.0313	8429179	0.00288	8429179	0.00185	0.000050	8429179
Dissolved Molybdenum (Mo)	mg/L	0.000631	8431837	0.000544	8429179	0.000857	0.000050	8429179
Dissolved Nickel (Ni)	mg/L	0.000323	8429179	0.000390	8429179	0.000300	0.000020	8429179
Dissolved Phosphorus (P)	mg/L	<0.0020	8429179	0.0034	8429179	0.0062	0.0020	8429179
Dissolved Selenium (Se)	mg/L	0.00133	8429179	0.000148	8429179	0.00110	0.000040	8429179
Dissolved Silicon (Si)	mg/L	2.87	8429179	2.82	8429179	2.81	0.050	8429179
Dissolved Silver (Ag)	mg/L	0.0000050	8429179	<0.0000050	8429179	<0.0000050	0.0000050	8429179
Dissolved Strontium (Sr)	mg/L	0.168	8429179	0.0650	8429179	0.150	0.000050	8429179
Dissolved Thallium (Tl)	mg/L	0.0000030	8429179	0.0000020	8429179	<0.0000020	0.0000020	8429179
Dissolved Tin (Sn)	mg/L	<0.00020	8429179	<0.00020	8429179	<0.00020	0.00020	8429179
Dissolved Titanium (Ti)	mg/L	<0.00050	8429179	<0.00050	8429179	<0.00050	0.00050	8429179
Dissolved Uranium (U)	mg/L	0.00151	8429179	0.000604	8429179	0.00171	0.0000020	8429179
Dissolved Vanadium (V)	mg/L	<0.00020	8429179	<0.00020	8429179	<0.00020	0.00020	8429179
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PS4997		PS4998		PS4999		
Sampling Date		2016/10/04 08:50		2016/10/03 11:49		2016/10/04 09:50		
COC Number		08428205		08428205		08428205		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-18	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0211	8429179	0.00277	8429179	0.00074	0.00010	8429179
Dissolved Zirconium (Zr)	mg/L	<0.00010	8429179	<0.00010	8429179	<0.00010	0.00010	8429179
Dissolved Calcium (Ca)	mg/L	54.3	8425829	23.4	8425829	48.2	0.050	8425829
Dissolved Magnesium (Mg)	mg/L	6.33	8425829	2.56	8425829	15.0	0.050	8425829
Dissolved Potassium (K)	mg/L	1.25	8425829	1.30	8425829	0.423	0.050	8425829
Dissolved Sodium (Na)	mg/L	0.952	8425829	0.923	8425829	0.737	0.050	8425829
Dissolved Sulphur (S)	mg/L	11.2	8425829	4.1	8425829	8.4	3.0	8425829
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PS5000	PS5001	PS5002	PS5003		
Sampling Date		2016/10/03 10:30	2016/10/04 14:00	2016/10/03	2016/10/06 09:50		
COC Number		08428205	08428205	08428206	08428206		
	UNITS	KZ-27	KZ-19	KZ-28	TRIP BLANK	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	68.0	107	<0.50	<0.50	0.50	8425828
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8429108
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00223	0.00377	<0.00050	<0.00050	0.00050	8429179
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000027	<0.000020	<0.000020	0.000020	8429179
Dissolved Arsenic (As)	mg/L	0.000168	0.000065	<0.000020	<0.000020	0.000020	8429179
Dissolved Barium (Ba)	mg/L	0.0284	0.0658	0.000024	<0.000020	0.000020	8429179
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8429179
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8429179
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8429179
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.000262	<0.0000050	<0.0000050	0.0000050	8429179
Dissolved Chromium (Cr)	mg/L	0.00014	<0.00010	<0.00010	<0.00010	0.00010	8429179
Dissolved Cobalt (Co)	mg/L	0.0000110	0.0000060	<0.0000050	<0.0000050	0.0000050	8429179
Dissolved Copper (Cu)	mg/L	0.000238	0.000487	<0.000050	<0.000050	0.000050	8429179
Dissolved Iron (Fe)	mg/L	0.0093	<0.0010	<0.0010	<0.0010	0.0010	8429179
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000130	<0.0000050	<0.0000050	0.0000050	8429179
Dissolved Lithium (Li)	mg/L	0.00255	0.00053	<0.00050	<0.00050	0.00050	8429179
Dissolved Manganese (Mn)	mg/L	0.000136	<0.000050	<0.000050	<0.000050	0.000050	8429179
Dissolved Molybdenum (Mo)	mg/L	0.000433	0.000610	<0.000050	<0.000050	0.000050	8429179
Dissolved Nickel (Ni)	mg/L	0.00187	0.000375	<0.000020	<0.000020	0.000020	8429179
Dissolved Phosphorus (P)	mg/L	0.0039	<0.0020	0.0020	<0.0020	0.0020	8429179
Dissolved Selenium (Se)	mg/L	0.000074	0.00115	<0.000040	<0.000040	0.000040	8429179
Dissolved Silicon (Si)	mg/L	2.44	2.23	<0.050	<0.050	0.050	8429179
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8429179
Dissolved Strontium (Sr)	mg/L	0.0569	0.111	<0.000050	<0.000050	0.000050	8429179
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000030	<0.0000020	<0.0000020	0.0000020	8429179
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8429179
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8429179
Dissolved Uranium (U)	mg/L	0.00190	0.00262	<0.0000020	<0.0000020	0.0000020	8429179
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8429179
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PS5000	PS5001	PS5002	PS5003		
Sampling Date		2016/10/03 10:30	2016/10/04 14:00	2016/10/03	2016/10/06 09:50		
COC Number		08428205	08428205	08428206	08428206		
	UNITS	KZ-27	KZ-19	KZ-28	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00016	0.0374	<0.00010	<0.00010	0.00010	8429179
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8429179
Dissolved Calcium (Ca)	mg/L	15.0	36.6	<0.050	<0.050	0.050	8425829
Dissolved Magnesium (Mg)	mg/L	7.41	3.84	<0.050	<0.050	0.050	8425829
Dissolved Potassium (K)	mg/L	0.844	1.59	<0.050	<0.050	0.050	8425829
Dissolved Sodium (Na)	mg/L	0.991	0.734	<0.050	<0.050	0.050	8425829
Dissolved Sulphur (S)	mg/L	5.2	17.5	<3.0	<3.0	3.0	8425829
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PS5241	PS5242	PS5243	PS5244	PS5245		
Sampling Date		2016/10/04 10:40	2016/10/04 10:52	2016/10/04 11:30	2016/10/04 11:56	2016/10/03 15:23		
COC Number		08428211	08428211	08428211	08428211	08428211		
	UNITS	KZ-9_E-SEEP	KZ-9_W-SEEP	SEEP-3	SEEP-5	SEEP-4	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	952	258	172	220	152	0.50	8427077
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000031	<0.0000020	<0.0000020	0.0000020	8430230
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0276	0.00060	0.00122	0.00097	0.00103	0.00050	8429706
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000021	<0.000020	0.000039	<0.000020	0.000020	8429706
Dissolved Arsenic (As)	mg/L	0.00115	0.000077	0.000149	0.000292	0.000044	0.000020	8429706
Dissolved Barium (Ba)	mg/L	0.0750	0.184	0.119	0.104	0.118	0.000020	8429706
Dissolved Beryllium (Be)	mg/L	0.000122	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8429706
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8429706
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8429706
Dissolved Cadmium (Cd)	mg/L	0.0000390	0.0000390	0.0000070	0.0000300	0.0000150	0.0000050	8429706
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00028	<0.00010	<0.00010	<0.00010	0.00010	8429706
Dissolved Cobalt (Co)	mg/L	0.00223	<0.0000050	0.0000080	0.000263	0.0000070	0.0000050	8429706
Dissolved Copper (Cu)	mg/L	0.000085	<0.000050	0.000080	0.000204	0.000210	0.000050	8429706
Dissolved Iron (Fe)	mg/L	0.497	<0.0010	<0.0010	0.240	<0.0010	0.0010	8429706
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000270	0.0000050	<0.0000050	0.0000050	8429706
Dissolved Lithium (Li)	mg/L	0.0525	0.00141	<0.00050	0.00731	<0.00050	0.00050	8429706
Dissolved Manganese (Mn)	mg/L	1.82	0.000468	0.000146	0.458	0.000107	0.000050	8429706
Dissolved Molybdenum (Mo)	mg/L	0.000161	0.00135	0.000563	0.000081	0.000515	0.000050	8429706
Dissolved Nickel (Ni)	mg/L	0.00735	0.000054	0.000038	0.00113	0.000136	0.000020	8429706
Dissolved Phosphorus (P)	mg/L	0.0060	<0.0020	<0.0020	0.0192	0.0024	0.0020	8429706
Dissolved Selenium (Se)	mg/L	<0.000040	0.00362	0.000798	0.000363	0.000814	0.000040	8429706
Dissolved Silicon (Si)	mg/L	14.6	3.61	2.32	6.99	2.82	0.050	8429706
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8429706
Dissolved Strontium (Sr)	mg/L	1.23	0.257	0.200	0.244	0.205	0.000050	8429706
Dissolved Thallium (Tl)	mg/L	0.0000050	0.0000020	0.0000020	0.0000050	0.0000020	0.0000020	8429706
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8429706
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8429706
Dissolved Uranium (U)	mg/L	0.00107	0.00289	0.00101	0.000666	0.00106	0.0000020	8429706
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8429706

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PS5241	PS5242	PS5243	PS5244	PS5245		
Sampling Date		2016/10/04 10:40	2016/10/04 10:52	2016/10/04 11:30	2016/10/04 11:56	2016/10/03 15:23		
COC Number		08428211	08428211	08428211	08428211	08428211		
	UNITS	KZ-9_E-SEEP	KZ-9_W-SEEP	SEEP-3	SEEP-5	SEEP-4	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0269	0.00052	0.00052	0.0139	0.00027	0.00010	8429706
Dissolved Zirconium (Zr)	mg/L	0.00019	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8429706
Dissolved Calcium (Ca)	mg/L	325	83.8	65.3	74.0	56.7	0.050	8425829
Dissolved Magnesium (Mg)	mg/L	34.3	11.7	2.31	8.56	2.53	0.050	8425829
Dissolved Potassium (K)	mg/L	5.10	1.09	1.17	1.60	1.77	0.050	8425829
Dissolved Sodium (Na)	mg/L	9.10	1.20	0.787	2.57	0.683	0.050	8425829
Dissolved Sulphur (S)	mg/L	8.1	15.1	8.5	3.8	12.6	3.0	8425829

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PS4994		PS4995		PS4996		
Sampling Date		2016/10/04 13:47		2016/10/03 13:30		2016/10/03 12:50		
COC Number		08428205		08428205		08428205		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	112	8425781	154	8431584	149	0.50	8425781
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	8429284	<0.0000020	8429284	<0.0000020	0.0000020	8429284
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00637	8429745	0.00504	8429745	0.0331	0.00050	8429745
Total Antimony (Sb)	mg/L	0.000020	8429745	<0.000020	8429745	0.000055	0.000020	8429745
Total Arsenic (As)	mg/L	0.000067	8429745	0.000077	8429745	0.000414	0.000020	8429745
Total Barium (Ba)	mg/L	0.0623	8429745	0.0388	8429745	0.0688	0.000020	8429745
Total Beryllium (Be)	mg/L	<0.000010	8429745	<0.000010	8429745	<0.000010	0.000010	8429745
Total Bismuth (Bi)	mg/L	<0.0000050	8429745	<0.0000050	8429745	<0.0000050	0.0000050	8429745
Total Boron (B)	mg/L	<0.010	8429745	<0.010	8429745	<0.010	0.010	8429745
Total Cadmium (Cd)	mg/L	0.000272	8429745	0.0000130	8429745	0.000528	0.0000050	8429745
Total Chromium (Cr)	mg/L	<0.00010	8429745	<0.00010	8429745	0.00011	0.00010	8429745
Total Cobalt (Co)	mg/L	0.0000110	8429745	0.0000140	8429745	0.000132	0.0000050	8429745
Total Copper (Cu)	mg/L	0.000592	8429745	0.000147	8429745	0.00124	0.000050	8429745
Total Iron (Fe)	mg/L	0.0070	8429745	0.0578	8429745	0.456	0.0010	8429745
Total Lead (Pb)	mg/L	0.0000650	8429745	0.0000110	8429745	0.000438	0.0000050	8429745
Total Lithium (Li)	mg/L	0.00113	8429745	0.00065	8429745	0.00129	0.00050	8429745
Total Manganese (Mn)	mg/L	0.000312	8429745	0.0107	8429745	0.0597	0.000050	8429745
Total Molybdenum (Mo)	mg/L	0.000595	8429745	0.000431	8429745	0.000475	0.000050	8429745
Total Nickel (Ni)	mg/L	0.000407	8429745	0.000171	8429745	0.000625	0.000020	8429745
Total Phosphorus (P)	mg/L	0.0041	8429745	0.0021	8429745	0.0041	0.0020	8429745
Total Selenium (Se)	mg/L	0.00116	8429745	0.000699	8429745	0.00126	0.000040	8429745
Total Silicon (Si)	mg/L	2.17	8429745	2.57	8429745	2.72	0.050	8429745
Total Silver (Ag)	mg/L	<0.0000050	8429745	<0.0000050	8429745	<0.0000050	0.0000050	8429745
Total Strontium (Sr)	mg/L	0.120	8429745	0.152	8429745	0.156	0.000050	8429745
Total Thallium (Tl)	mg/L	0.0000030	8429745	<0.0000020	8429745	0.0000030	0.0000020	8429745
Total Tin (Sn)	mg/L	<0.00020	8429745	<0.00020	8429745	<0.00020	0.00020	8429745
Total Titanium (Ti)	mg/L	<0.00050	8429745	<0.00050	8429745	0.00147	0.00050	8429745
Total Uranium (U)	mg/L	0.00261	8429745	0.000891	8429745	0.00114	0.0000020	8429745
Total Vanadium (V)	mg/L	<0.00020	8429745	<0.00020	8429745	<0.00020	0.00020	8429745

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PS4994		PS4995		PS4996		
Sampling Date		2016/10/04 13:47		2016/10/03 13:30		2016/10/03 12:50		
COC Number		08428205		08428205		08428205		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0391	8429745	0.00067	8429745	0.0910	0.00010	8429745
Total Zirconium (Zr)	mg/L	<0.00010	8429745	<0.00010	8429745	<0.00010	0.00010	8429745
Total Calcium (Ca)	mg/L	38.4	8425830	51.1	8431906	50.0	0.050	8425830
Total Magnesium (Mg)	mg/L	3.87	8425830	6.35	8431906	5.87	0.050	8425830
Total Potassium (K)	mg/L	1.64	8425830	0.728	8431906	1.34	0.050	8425830
Total Sodium (Na)	mg/L	0.724	8425830	0.676	8431906	0.857	0.050	8425830
Total Sulphur (S)	mg/L	17.3	8425830	8.3	8431906	13.2	3.0	8425830
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PS4997	PS4998	PS4999		PS5000		
Sampling Date		2016/10/04 08:50	2016/10/03 11:49	2016/10/04 09:50		2016/10/03 10:30		
COC Number		08428205	08428205	08428205		08428205		
	UNITS	KZ-9	KZ-13	KZ-18	QC Batch	KZ-27	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	172	70.9	184	8425781	68.3	0.50	8425781
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8429284	<0.0000020	0.0000020	8430078
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0405	0.0182	0.0115	8429745	0.00563	0.00050	8429745
Total Antimony (Sb)	mg/L	0.000040	0.000028	<0.000020	8429745	<0.000020	0.000020	8429745
Total Arsenic (As)	mg/L	0.000371	0.000207	0.000291	8429745	0.000197	0.000020	8429745
Total Barium (Ba)	mg/L	0.0764	0.0918	0.0381	8429745	0.0284	0.000020	8429745
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8429745	<0.000010	0.000010	8429745
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8429745	<0.0000050	0.0000050	8429745
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	8429745	<0.010	0.010	8429745
Total Cadmium (Cd)	mg/L	0.000155	0.0000270	0.0000180	8429745	<0.0000050	0.0000050	8429745
Total Chromium (Cr)	mg/L	0.00013	0.00010	<0.00010	8429745	0.00018	0.00010	8429745
Total Cobalt (Co)	mg/L	0.000133	0.0000320	0.0000160	8429745	0.0000200	0.0000050	8429745
Total Copper (Cu)	mg/L	0.000789	0.00196	0.000172	8429745	0.000286	0.000050	8429745
Total Iron (Fe)	mg/L	0.583	0.0747	0.0138	8429745	0.0404	0.0010	8429745
Total Lead (Pb)	mg/L	0.000266	0.0000580	0.0000090	8429745	0.0000120	0.0000050	8429745
Total Lithium (Li)	mg/L	0.00160	0.00105	0.00100	8429745	0.00265	0.00050	8429745
Total Manganese (Mn)	mg/L	0.0600	0.0187	0.00338	8429745	0.00371	0.000050	8429745
Total Molybdenum (Mo)	mg/L	0.000572	0.000552	0.000879	8429745	0.000448	0.000050	8429745
Total Nickel (Ni)	mg/L	0.000504	0.000972	0.000319	8429745	0.00198	0.000020	8429745
Total Phosphorus (P)	mg/L	0.0057	0.0070	0.0078	8429745	0.0041	0.0020	8429745
Total Selenium (Se)	mg/L	0.00138	0.000164	0.00115	8429745	0.000086	0.000040	8429745
Total Silicon (Si)	mg/L	3.01	2.88	2.94	8429745	2.54	0.050	8429745
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8429745	<0.0000050	0.0000050	8429745
Total Strontium (Sr)	mg/L	0.183	0.0701	0.159	8429745	0.0589	0.000050	8429745
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8429745	<0.0000020	0.0000020	8429745
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8429745	<0.00020	0.00020	8429745
Total Titanium (Ti)	mg/L	0.00274	0.00066	0.00060	8429745	<0.00050	0.00050	8429745
Total Uranium (U)	mg/L	0.00134	0.000606	0.00174	8429745	0.00197	0.0000020	8429745
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8429745	<0.00020	0.00020	8429745
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PS4997	PS4998	PS4999		PS5000		
Sampling Date		2016/10/04 08:50	2016/10/03 11:49	2016/10/04 09:50		2016/10/03 10:30		
COC Number		08428205	08428205	08428205		08428205		
	UNITS	KZ-9	KZ-13	KZ-18	QC Batch	KZ-27	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0332	0.00425	0.00102	8429745	0.00024	0.00010	8429745
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8429745	<0.00010	0.00010	8429745
Total Calcium (Ca)	mg/L	57.9	24.1	47.9	8425830	15.2	0.050	8425830
Total Magnesium (Mg)	mg/L	6.67	2.61	15.5	8425830	7.36	0.050	8425830
Total Potassium (K)	mg/L	1.31	1.33	0.434	8425830	0.847	0.050	8425830
Total Sodium (Na)	mg/L	0.964	0.917	0.751	8425830	0.965	0.050	8425830
Total Sulphur (S)	mg/L	11.5	4.3	8.7	8425830	5.4	3.0	8425830

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PS5001	PS5002		PS5003		
Sampling Date		2016/10/04 14:00	2016/10/03		2016/10/06 09:50		
COC Number		08428205	08428206		08428206		
	UNITS	KZ-19	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	109	<0.50	8425781	<0.50	0.50	8425781
Elements							
Total Mercury (Hg)	mg/L	0.0000021	<0.0000020	8430078	<0.0000020	0.0000020	8448430
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00814	<0.00050	8429745	<0.00050	0.00050	8429745
Total Antimony (Sb)	mg/L	<0.000020	<0.000020	8429745	<0.000020	0.000020	8429745
Total Arsenic (As)	mg/L	0.000065	<0.000020	8429745	<0.000020	0.000020	8429745
Total Barium (Ba)	mg/L	0.0624	<0.000020	8429745	<0.000020	0.000020	8429745
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	8429745	<0.000010	0.000010	8429745
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8429745	<0.0000050	0.0000050	8429745
Total Boron (B)	mg/L	<0.010	<0.010	8429745	<0.010	0.010	8429745
Total Cadmium (Cd)	mg/L	0.000275	<0.0000050	8429745	<0.0000050	0.0000050	8429745
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	8429745	<0.00010	0.00010	8429745
Total Cobalt (Co)	mg/L	0.0000130	<0.0000050	8429745	<0.0000050	0.0000050	8429745
Total Copper (Cu)	mg/L	0.000607	<0.000050	8429745	<0.000050	0.000050	8429745
Total Iron (Fe)	mg/L	0.0087	<0.0010	8429745	<0.0010	0.0010	8429745
Total Lead (Pb)	mg/L	0.0000370	<0.0000050	8429745	<0.0000050	0.0000050	8429745
Total Lithium (Li)	mg/L	0.00086	<0.00050	8429745	<0.00050	0.00050	8429745
Total Manganese (Mn)	mg/L	0.000363	<0.000050	8429745	<0.000050	0.000050	8429745
Total Molybdenum (Mo)	mg/L	0.000577	<0.000050	8429745	<0.000050	0.000050	8429745
Total Nickel (Ni)	mg/L	0.000407	<0.000020	8429745	<0.000020	0.000020	8429745
Total Phosphorus (P)	mg/L	0.0051	<0.0020	8429745	<0.0020	0.0020	8429745
Total Selenium (Se)	mg/L	0.00119	<0.000040	8429745	<0.000040	0.000040	8429745
Total Silicon (Si)	mg/L	2.22	<0.050	8429745	<0.050	0.050	8429745
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	8429745	<0.0000050	0.0000050	8429745
Total Strontium (Sr)	mg/L	0.120	<0.000050	8429745	<0.000050	0.000050	8429745
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8429745	<0.0000020	0.0000020	8429745
Total Tin (Sn)	mg/L	<0.00020	<0.00020	8429745	<0.00020	0.00020	8429745
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	8429745	<0.00050	0.00050	8429745
Total Uranium (U)	mg/L	0.00248	<0.0000020	8429745	<0.0000020	0.0000020	8429745
Total Vanadium (V)	mg/L	<0.00020	<0.00020	8429745	<0.00020	0.00020	8429745
RDL = Reportable Detection Limit							

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PS5001	PS5002		PS5003		
Sampling Date		2016/10/04 14:00	2016/10/03		2016/10/06 09:50		
COC Number		08428205	08428206		08428206		
	UNITS	KZ-19	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0397	<0.00010	8429745	<0.00010	0.00010	8429745
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	8429745	<0.00010	0.00010	8429745
Total Calcium (Ca)	mg/L	37.2	<0.050	8425830	<0.050	0.050	8425830
Total Magnesium (Mg)	mg/L	3.88	<0.050	8425830	<0.050	0.050	8425830
Total Potassium (K)	mg/L	1.61	<0.050	8425830	<0.050	0.050	8425830
Total Sodium (Na)	mg/L	0.740	<0.050	8425830	<0.050	0.050	8425830
Total Sulphur (S)	mg/L	17.9	<3.0	8425830	<3.0	3.0	8425830
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS4994
Sample ID: KZ-2
Matrix: Water

Collected: 2016/10/04
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427488	N/A	2016/10/13	Maria Maclean
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	Diana Cruz
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	Maria Maclean
Fluoride	ISE/ISE	8429543	N/A	2016/10/11	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8425781	N/A	2016/10/12	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8425828	N/A	2016/10/12	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429105	N/A	2016/10/11	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8429284	2016/10/11	2016/10/11	Rob Mcclelland
Ion Balance	CALC	8426418	N/A	2016/10/12	Automated Statchk
Sum of cations, anions	CALC	8426132	N/A	2016/10/12	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8425830	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	Andrew An
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	Lucy Luo
pH Water	AT/ALK	8427380	N/A	2016/10/08	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429710	2016/10/11	2016/10/12	Clare Kwok
Total Phosphorus - unpreserved	KONE/COL	8429711	N/A	2016/10/12	Clare Kwok
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	Wendy Fong

Maxxam ID: PS4994 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2016/10/04
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	Diana Cruz
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	Andrew An

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS4995
Sample ID: KZ-6
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427488	N/A	2016/10/13	Maria Maclean
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	Diana Cruz
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	Maria Maclean
Fluoride	ISE/ISE	8429543	N/A	2016/10/11	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8431584	N/A	2016/10/13	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8431585	N/A	2016/10/13	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429105	N/A	2016/10/11	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8429284	2016/10/11	2016/10/11	Rob Mcclelland
Ion Balance	CALC	8432217	N/A	2016/10/13	David Huang
Sum of cations, anions	CALC	8432218	N/A	2016/10/13	Andy Lu
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8431904	N/A	2016/10/13	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8431906	N/A	2016/10/13	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	Andrew An
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	Lucy Luo
pH Water	AT/ALK	8427380	N/A	2016/10/08	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429710	2016/10/11	2016/10/12	Clare Kwok
Total Phosphorus - unpreserved	KONE/COL	8429711	N/A	2016/10/12	Clare Kwok
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	Wendy Fong

Maxxam ID: PS4996
Sample ID: KZ-7
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427498	N/A	2016/10/13	Tatyana Serzhanova
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	Diana Cruz
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	Maria Maclean
Fluoride	ISE/ISE	8429543	N/A	2016/10/11	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8425781	N/A	2016/10/12	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8425828	N/A	2016/10/12	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS4996
Sample ID: KZ-7
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429105	N/A	2016/10/11	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8429284	2016/10/11	2016/10/11	Rob Mcclelland
Ion Balance	CALC	8426418	N/A	2016/10/12	Automated Statchk
Sum of cations, anions	CALC	8426132	N/A	2016/10/12	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8425830	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	Andrew An
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	Lucy Luo
pH Water	AT/ALK	8427380	N/A	2016/10/08	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429713	2016/10/12	2016/10/12	Clare Kwok
Total Phosphorus - unpreserved	KONE/COL	8429714	N/A	2016/10/12	Clare Kwok
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	Wendy Fong

Maxxam ID: PS4997
Sample ID: KZ-9
Matrix: Water

Collected: 2016/10/04
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427498	N/A	2016/10/13	Tatyana Serzhanova
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	Diana Cruz
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	Maria Maclean
Fluoride	ISE/ISE	8429549	N/A	2016/10/11	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8425781	N/A	2016/10/12	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8425828	N/A	2016/10/12	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429105	N/A	2016/10/11	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8429284	2016/10/11	2016/10/11	Rob Mcclelland
Ion Balance	CALC	8426418	N/A	2016/10/12	Automated Statchk
Sum of cations, anions	CALC	8426132	N/A	2016/10/12	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8425830	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	Andrew An
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS4997
Sample ID: KZ-9
Matrix: Water

Collected: 2016/10/04
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	Lucy Luo
pH Water	AT/ALK	8427380	N/A	2016/10/08	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429713	2016/10/12	2016/10/12	Clare Kwok
Total Phosphorus - unpreserved	KONE/COL	8429714	N/A	2016/10/12	Clare Kwok
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	Wendy Fong

Maxxam ID: PS4998
Sample ID: KZ-13
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427498	N/A	2016/10/13	Tatyana Serzhanova
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	Diana Cruz
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	Maria Maclean
Fluoride	ISE/ISE	8429543	N/A	2016/10/11	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8425781	N/A	2016/10/12	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8425828	N/A	2016/10/12	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429105	N/A	2016/10/11	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8429284	2016/10/11	2016/10/11	Rob Mcclelland
Ion Balance	CALC	8426418	N/A	2016/10/12	Automated Statchk
Sum of cations, anions	CALC	8426132	N/A	2016/10/12	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8425830	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	Andrew An
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	Lucy Luo
pH Water	AT/ALK	8427380	N/A	2016/10/08	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429713	2016/10/12	2016/10/12	Clare Kwok
Total Phosphorus - unpreserved	KONE/COL	8429714	N/A	2016/10/12	Clare Kwok
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	Wendy Fong

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS4998 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427498	N/A	2016/10/13	Tatyana Serzhanova

Maxxam ID: PS4999
Sample ID: KZ-18
Matrix: Water

Collected: 2016/10/04
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427498	N/A	2016/10/13	Tatyana Serzhanova
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	Diana Cruz
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	Maria Maclean
Fluoride	ISE/ISE	8429549	N/A	2016/10/11	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8425781	N/A	2016/10/12	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8425828	N/A	2016/10/12	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429108	N/A	2016/10/11	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8429284	2016/10/11	2016/10/11	Rob Mcclelland
Ion Balance	CALC	8426418	N/A	2016/10/12	Automated Statchk
Sum of cations, anions	CALC	8426132	N/A	2016/10/12	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8425830	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	Andrew An
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	Lucy Luo
pH Water	AT/ALK	8427380	N/A	2016/10/08	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429713	2016/10/12	2016/10/12	Clare Kwok
Total Phosphorus - unpreserved	KONE/COL	8429714	N/A	2016/10/12	Clare Kwok
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	Wendy Fong

Maxxam ID: PS5000
Sample ID: KZ-27
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427498	N/A	2016/10/13	Tatyana Serzhanova
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS5000
Sample ID: KZ-27
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	Diana Cruz
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	Maria Maclean
Fluoride	ISE/ISE	8429549	N/A	2016/10/11	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8425781	N/A	2016/10/12	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8425828	N/A	2016/10/12	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429108	N/A	2016/10/11	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8430078	2016/10/12	2016/10/12	Edwin Lamigo
Ion Balance	CALC	8426418	N/A	2016/10/12	Automated Statchk
Sum of cations, anions	CALC	8426132	N/A	2016/10/12	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8425830	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	Andrew An
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	Lucy Luo
pH Water	AT/ALK	8427380	N/A	2016/10/08	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429713	2016/10/12	2016/10/12	Clare Kwok
Total Phosphorus - unpreserved	KONE/COL	8429714	N/A	2016/10/12	Clare Kwok
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	Wendy Fong

Maxxam ID: PS5000 Dup
Sample ID: KZ-27
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	Balwinder Bassi
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	Balwinder Bassi

Maxxam ID: PS5001
Sample ID: KZ-19
Matrix: Water

Collected: 2016/10/04
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427488	N/A	2016/10/13	Maria Maclean
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	Tatyana Serzhanova

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS5001
Sample ID: KZ-19
Matrix: Water

Collected: 2016/10/04
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	Diana Cruz
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	Maria Maclean
Fluoride	ISE/ISE	8429543	N/A	2016/10/11	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8425781	N/A	2016/10/12	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8425828	N/A	2016/10/12	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429108	N/A	2016/10/11	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8430078	2016/10/12	2016/10/12	Edwin Lamigo
Ion Balance	CALC	8426418	N/A	2016/10/12	Automated Statchk
Sum of cations, anions	CALC	8426132	N/A	2016/10/12	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8425830	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	Andrew An
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	Lucy Luo
pH Water	AT/ALK	8427380	N/A	2016/10/08	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429710	2016/10/11	2016/10/12	Clare Kwok
Total Phosphorus - unpreserved	KONE/COL	8429711	N/A	2016/10/12	Clare Kwok
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	Wendy Fong

Maxxam ID: PS5002
Sample ID: KZ-28
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427488	N/A	2016/10/13	Maria Maclean
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	Diana Cruz
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	Maria Maclean
Fluoride	ISE/ISE	8429543	N/A	2016/10/11	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8425781	N/A	2016/10/12	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8425828	N/A	2016/10/12	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429108	N/A	2016/10/11	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8430078	2016/10/12	2016/10/12	Edwin Lamigo
Ion Balance	CALC	8426418	N/A	2016/10/12	Automated Statchk
Sum of cations, anions	CALC	8426132	N/A	2016/10/12	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS5002
Sample ID: KZ-28
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8425830	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	Andrew An
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	Lucy Luo
pH Water	AT/ALK	8427380	N/A	2016/10/08	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429710	2016/10/11	2016/10/12	Clare Kwok
Total Phosphorus - unpreserved	KONE/COL	8429711	N/A	2016/10/12	Clare Kwok
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	Wendy Fong

Maxxam ID: PS5002 Dup
Sample ID: KZ-28
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	Maria Maclean
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	Maria Maclean
pH Water	AT/ALK	8427380	N/A	2016/10/08	Maria Maclean

Maxxam ID: PS5003
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/10/06
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427498	N/A	2016/10/13	Tatyana Serzhanova
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	Diana Cruz
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	Maria Maclean
Fluoride	ISE/ISE	8429543	N/A	2016/10/11	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8425781	N/A	2016/10/12	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8425828	N/A	2016/10/12	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429108	N/A	2016/10/11	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8448430	2016/10/26	2016/10/26	Edwin Lamigo
Ion Balance	CALC	8426418	N/A	2016/10/12	Automated Statchk
Sum of cations, anions	CALC	8426132	N/A	2016/10/12	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	Andrew An

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS5003 **Collected:** 2016/10/06
Sample ID: TRIP BLANK **Shipped:**
Matrix: Water **Received:** 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8425830	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	Andrew An
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	Diana Cruz
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	Isaac Wang
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	Automated Statchk
pH Water	AT/ALK	8427380	N/A	2016/10/08	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429713	2016/10/12	2016/10/12	Clare Kwok
Total Phosphorus - unpreserved	KONE/COL	8429714	N/A	2016/10/12	Clare Kwok
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	Wendy Fong

Maxxam ID: PS5003 Dup **Collected:** 2016/10/06
Sample ID: TRIP BLANK **Shipped:**
Matrix: Water **Received:** 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429108	N/A	2016/10/11	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8448430	2016/10/26	2016/10/26	Edwin Lamigo
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429713	2016/10/12	2016/10/12	Clare Kwok
Total Phosphorus - unpreserved	KONE/COL	8429714	N/A	2016/10/12	Clare Kwok

Maxxam ID: PS5241 **Collected:** 2016/10/04
Sample ID: KZ-9_E-SEEP **Shipped:**
Matrix: Water **Received:** 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427482	N/A	2016/10/08	Maria Maclean
Alkalinity - Water	AT/ALK	8427355	2016/10/08	2016/10/08	Maria Maclean
Conductance - water	AT/ALK	8427359	N/A	2016/10/08	Maria Maclean
Hardness (calculated as CaCO3)	CALC	8427077	N/A	2016/10/12	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8430230	N/A	2016/10/12	Rob Mcclelland
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429706	N/A	2016/10/12	Andrew An
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	Lucy Luo
pH Water	AT/ALK	8427360	N/A	2016/10/08	Maria Maclean

Maxxam ID: PS5242 **Collected:** 2016/10/04
Sample ID: KZ-9_W-SEEP **Shipped:**
Matrix: Water **Received:** 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427482	N/A	2016/10/08	Maria Maclean
Alkalinity - Water	AT/ALK	8427355	2016/10/08	2016/10/08	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS5242 **Collected:** 2016/10/04
Sample ID: KZ-9_W-SEEP **Shipped:**
Matrix: Water **Received:** 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductance - water	AT/ALK	8427359	N/A	2016/10/08	Maria Maclean
Hardness (calculated as CaCO3)	CALC	8427077	N/A	2016/10/12	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8430230	N/A	2016/10/12	Rob Mcclelland
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429706	N/A	2016/10/12	Andrew An
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	Lucy Luo
pH Water	AT/ALK	8427360	N/A	2016/10/08	Maria Maclean

Maxxam ID: PS5243 **Collected:** 2016/10/04
Sample ID: SEEP-3 **Shipped:**
Matrix: Water **Received:** 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427482	N/A	2016/10/08	Maria Maclean
Alkalinity - Water	AT/ALK	8427355	2016/10/08	2016/10/08	Maria Maclean
Conductance - water	AT/ALK	8427359	N/A	2016/10/08	Maria Maclean
Hardness (calculated as CaCO3)	CALC	8427077	N/A	2016/10/12	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8430230	N/A	2016/10/12	Rob Mcclelland
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429706	N/A	2016/10/12	Andrew An
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	Lucy Luo
pH Water	AT/ALK	8427360	N/A	2016/10/08	Maria Maclean

Maxxam ID: PS5244 **Collected:** 2016/10/04
Sample ID: SEEP-5 **Shipped:**
Matrix: Water **Received:** 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427482	N/A	2016/10/08	Maria Maclean
Alkalinity - Water	AT/ALK	8427376	2016/10/08	2016/10/08	Maria Maclean
Conductance - water	AT/ALK	8427375	N/A	2016/10/08	Maria Maclean
Hardness (calculated as CaCO3)	CALC	8427077	N/A	2016/10/12	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8430230	N/A	2016/10/12	Rob Mcclelland
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429706	N/A	2016/10/12	Andrew An
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	Lucy Luo
pH Water	AT/ALK	8427374	N/A	2016/10/08	Maria Maclean

Maxxam ID: PS5244 Dup **Collected:** 2016/10/04
Sample ID: SEEP-5 **Shipped:**
Matrix: Water **Received:** 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8427376	2016/10/08	2016/10/08	Maria Maclean

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS5244 Dup
Sample ID: SEEP-5
Matrix: Water

Collected: 2016/10/04
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductance - water	AT/ALK	8427375	N/A	2016/10/08	Maria Maclean
pH Water	AT/ALK	8427374	N/A	2016/10/08	Maria Maclean

Maxxam ID: PS5245
Sample ID: SEEP-4
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427482	N/A	2016/10/08	Maria Maclean
Alkalinity - Water	AT/ALK	8427355	2016/10/08	2016/10/08	Maria Maclean
Conductance - water	AT/ALK	8427359	N/A	2016/10/08	Maria Maclean
Hardness (calculated as CaCO3)	CALC	8427077	N/A	2016/10/12	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8430230	N/A	2016/10/12	Rob Mcclelland
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429706	N/A	2016/10/12	Andrew An
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	Lucy Luo
pH Water	AT/ALK	8427360	N/A	2016/10/08	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.7°C
Package 2	3.3°C

Revised Report V2 (M_S, 2016/10/26): Revised mercury result for sample TRIP BLANK due to re-analysis.

Samples collected on October 3rd were received at analytical lab past hold time for Nitrate, Nitrite, Total Phosphorus, and Dissolved Phosphorus. Samples collected on October 4th were received at analytical lab on date of hold time expiry, samples were analyzed past hold time for Nitrate, Nitrite, Total Phosphorus, and Dissolved Phosphorus.

Sample PS5002-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample PS5003-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample PS4997, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8427355	Alkalinity (PP as CaCO3)	2016/10/08					<0.50	mg/L	NC	20
8427355	Alkalinity (Total as CaCO3)	2016/10/08	97	80 - 120	94	80 - 120	<0.50	mg/L	4.9	20
8427355	Bicarbonate (HCO3)	2016/10/08					<0.50	mg/L	4.9	20
8427355	Carbonate (CO3)	2016/10/08					<0.50	mg/L	NC	20
8427355	Hydroxide (OH)	2016/10/08					<0.50	mg/L	NC	20
8427359	Conductivity	2016/10/08			100	80 - 120	<1.0	uS/cm	0	20
8427360	pH	2016/10/08			101	97 - 103			0.41	N/A
8427374	pH	2016/10/08			101	97 - 103			2.1	N/A
8427375	Conductivity	2016/10/08			100	80 - 120	<1.0	uS/cm	0.24	20
8427376	Alkalinity (PP as CaCO3)	2016/10/08					<0.50	mg/L	NC	20
8427376	Alkalinity (Total as CaCO3)	2016/10/08	NC	80 - 120	97	80 - 120	<0.50	mg/L	0.082	20
8427376	Bicarbonate (HCO3)	2016/10/08					<0.50	mg/L	0.082	20
8427376	Carbonate (CO3)	2016/10/08					<0.50	mg/L	NC	20
8427376	Hydroxide (OH)	2016/10/08					<0.50	mg/L	NC	20
8427378	Alkalinity (PP as CaCO3)	2016/10/08					<0.50	mg/L	NC	20
8427378	Alkalinity (Total as CaCO3)	2016/10/08	NC	80 - 120	96	80 - 120	<0.50	mg/L	1.0	20
8427378	Bicarbonate (HCO3)	2016/10/08					<0.50	mg/L	1.0	20
8427378	Carbonate (CO3)	2016/10/08					<0.50	mg/L	NC	20
8427378	Hydroxide (OH)	2016/10/08					<0.50	mg/L	NC	20
8427379	Conductivity	2016/10/08			102	80 - 120	<1.0	uS/cm	0.84	20
8427380	pH	2016/10/08			101	97 - 103			1.8	N/A
8427448	Total Suspended Solids	2016/10/11			94	80 - 120	<1.0	mg/L		
8427482	Acidity (pH 4.5)	2016/10/08					<0.50	mg/L	NC	20
8427482	Acidity (pH 8.3)	2016/10/08			100	80 - 120	<0.50	mg/L	NC	20
8427488	Acidity (pH 4.5)	2016/10/13			0	N/A	<0.50	mg/L	NC	20
8427488	Acidity (pH 8.3)	2016/10/13			99	80 - 120	<0.50	mg/L	NC	20
8427498	Acidity (pH 4.5)	2016/10/13					<0.50	mg/L	NC	20
8427498	Acidity (pH 8.3)	2016/10/13			101	80 - 120	<0.50	mg/L	NC	20
8429105	Dissolved Mercury (Hg)	2016/10/11	83	80 - 120	84	80 - 120	<0.0000020	mg/L	NC	20
8429108	Dissolved Mercury (Hg)	2016/10/11	101	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8429138	Dissolved Chloride (Cl)	2016/10/11	106	80 - 120	94	80 - 120	<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8429141	Dissolved Sulphate (SO4)	2016/10/11	NC	80 - 120	91	80 - 120	<0.50	mg/L	0.69	20
8429179	Dissolved Aluminum (Al)	2016/10/12	108	80 - 120	103	80 - 120	<0.00050	mg/L	0.50	20
8429179	Dissolved Antimony (Sb)	2016/10/12	99	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8429179	Dissolved Arsenic (As)	2016/10/12	102	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8429179	Dissolved Barium (Ba)	2016/10/12	NC	80 - 120	99	80 - 120	<0.000020	mg/L	1.1	20
8429179	Dissolved Beryllium (Be)	2016/10/12	100	80 - 120	99	80 - 120	<0.000010	mg/L	NC	20
8429179	Dissolved Bismuth (Bi)	2016/10/12	98	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8429179	Dissolved Boron (B)	2016/10/12	99	80 - 120	99	80 - 120	<0.010	mg/L	NC	20
8429179	Dissolved Cadmium (Cd)	2016/10/12	100	80 - 120	96	80 - 120	<0.0000050	mg/L	0.77	20
8429179	Dissolved Chromium (Cr)	2016/10/12	102	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8429179	Dissolved Cobalt (Co)	2016/10/12	100	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8429179	Dissolved Copper (Cu)	2016/10/12	98	80 - 120	100	80 - 120	<0.000050	mg/L	2.2	20
8429179	Dissolved Iron (Fe)	2016/10/12	108	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
8429179	Dissolved Lead (Pb)	2016/10/12	99	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8429179	Dissolved Lithium (Li)	2016/10/12	102	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8429179	Dissolved Manganese (Mn)	2016/10/12	102	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8429179	Dissolved Molybdenum (Mo)	2016/10/12	NC	80 - 120	101	80 - 120	<0.000050	mg/L	0.34	20
8429179	Dissolved Nickel (Ni)	2016/10/12	99	80 - 120	101	80 - 120	<0.000020	mg/L	5.6	20
8429179	Dissolved Phosphorus (P)	2016/10/12					<0.0020	mg/L	NC	20
8429179	Dissolved Selenium (Se)	2016/10/12	102	80 - 120	99	80 - 120	<0.000040	mg/L	0.55	20
8429179	Dissolved Silicon (Si)	2016/10/12					<0.050	mg/L	1.6	20
8429179	Dissolved Silver (Ag)	2016/10/12	99	80 - 120	86	80 - 120	<0.0000050	mg/L	NC	20
8429179	Dissolved Strontium (Sr)	2016/10/12	NC	80 - 120	96	80 - 120	<0.000050	mg/L	1.6	20
8429179	Dissolved Thallium (Tl)	2016/10/12	86	80 - 120	97	80 - 120	0.0000020, RDL=0.0000020	mg/L	NC	20
8429179	Dissolved Tin (Sn)	2016/10/12	100	80 - 120	113	80 - 120	<0.00020	mg/L	NC	20
8429179	Dissolved Titanium (Ti)	2016/10/12	99	80 - 120	91	80 - 120	<0.00050	mg/L	NC	20
8429179	Dissolved Uranium (U)	2016/10/12	99	80 - 120	98	80 - 120	<0.0000020	mg/L	0.87	20
8429179	Dissolved Vanadium (V)	2016/10/12	101	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8429179	Dissolved Zinc (Zn)	2016/10/12	NC	80 - 120	99	80 - 120	<0.00010	mg/L	0.48	20
8429179	Dissolved Zirconium (Zr)	2016/10/12					<0.00010	mg/L	NC	20

Maxxam Job #: B688838
Report Date: 2016/10/26

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8429284	Total Mercury (Hg)	2016/10/11	97	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8429543	Fluoride (F)	2016/10/11	102	80 - 120	100	80 - 120	<0.010	mg/L	0	20
8429549	Fluoride (F)	2016/10/11	104	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
8429663	Total Ammonia (N)	2016/10/11	NC	80 - 120	103	80 - 120	<0.0050	mg/L	0.34	20
8429706	Dissolved Aluminum (Al)	2016/10/12	105	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8429706	Dissolved Antimony (Sb)	2016/10/12	104	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8429706	Dissolved Arsenic (As)	2016/10/12	105	80 - 120	98	80 - 120	<0.000020	mg/L	3.3	20
8429706	Dissolved Barium (Ba)	2016/10/12	NC	80 - 120	100	80 - 120	<0.000020	mg/L	1.5	20
8429706	Dissolved Beryllium (Be)	2016/10/12	101	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
8429706	Dissolved Bismuth (Bi)	2016/10/12	100	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8429706	Dissolved Boron (B)	2016/10/12	98	80 - 120	97	80 - 120	<0.010	mg/L	NC	20
8429706	Dissolved Cadmium (Cd)	2016/10/12	99	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8429706	Dissolved Chromium (Cr)	2016/10/12	101	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8429706	Dissolved Cobalt (Co)	2016/10/12	98	80 - 120	100	80 - 120	<0.0000050	mg/L	0	20
8429706	Dissolved Copper (Cu)	2016/10/12	95	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8429706	Dissolved Iron (Fe)	2016/10/12	109	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
8429706	Dissolved Lead (Pb)	2016/10/12	102	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8429706	Dissolved Lithium (Li)	2016/10/12	100	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8429706	Dissolved Manganese (Mn)	2016/10/12	100	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8429706	Dissolved Molybdenum (Mo)	2016/10/12	NC	80 - 120	100	80 - 120	<0.000050	mg/L	2.8	20
8429706	Dissolved Nickel (Ni)	2016/10/12	97	80 - 120	99	80 - 120	<0.000020	mg/L	5.0	20
8429706	Dissolved Phosphorus (P)	2016/10/12					<0.0020	mg/L	NC	20
8429706	Dissolved Selenium (Se)	2016/10/12	103	80 - 120	98	80 - 120	<0.000040	mg/L	1.8	20
8429706	Dissolved Silicon (Si)	2016/10/12					<0.050	mg/L	0.43	20
8429706	Dissolved Silver (Ag)	2016/10/12	90	80 - 120	83	80 - 120	<0.0000050	mg/L	NC	20
8429706	Dissolved Strontium (Sr)	2016/10/12	NC	80 - 120	94	80 - 120	<0.000050	mg/L	1.2	20
8429706	Dissolved Thallium (Tl)	2016/10/12	88	80 - 120	101	80 - 120	0.0000030, RDL=0.0000020	mg/L	NC	20
8429706	Dissolved Tin (Sn)	2016/10/12	105	80 - 120	114	80 - 120	<0.00020	mg/L	NC	20
8429706	Dissolved Titanium (Ti)	2016/10/12	101	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8429706	Dissolved Uranium (U)	2016/10/12	107	80 - 120	102	80 - 120	<0.0000020	mg/L	2.1	20

Maxxam Job #: B688838
Report Date: 2016/10/26

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8429706	Dissolved Vanadium (V)	2016/10/12	102	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8429706	Dissolved Zinc (Zn)	2016/10/12	108	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8429706	Dissolved Zirconium (Zr)	2016/10/12					<0.00010	mg/L	NC	20
8429710	Dissolved Phosphorus (P)	2016/10/12	NC	80 - 120	106	80 - 120	<0.0020	mg/L	0.099	20
8429711	Total Phosphorus (P)	2016/10/12	NC	80 - 120	102	80 - 120	<0.0020	mg/L	0.11	20
8429713	Dissolved Phosphorus (P)	2016/10/12	104	80 - 120	92	80 - 120	<0.0020	mg/L	NC	20
8429714	Total Phosphorus (P)	2016/10/12	100	80 - 120	92	80 - 120	<0.0020	mg/L	NC	20
8429745	Total Aluminum (Al)	2016/10/12	103	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8429745	Total Antimony (Sb)	2016/10/12	98	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8429745	Total Arsenic (As)	2016/10/12	105	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8429745	Total Barium (Ba)	2016/10/12	94	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8429745	Total Beryllium (Be)	2016/10/12	102	80 - 120	101	80 - 120	<0.000010	mg/L	NC	20
8429745	Total Bismuth (Bi)	2016/10/12	97	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8429745	Total Boron (B)	2016/10/12	98	80 - 120	101	80 - 120	<0.010	mg/L	NC	20
8429745	Total Cadmium (Cd)	2016/10/12	103	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8429745	Total Chromium (Cr)	2016/10/12	99	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8429745	Total Cobalt (Co)	2016/10/12	100	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8429745	Total Copper (Cu)	2016/10/12	100	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8429745	Total Iron (Fe)	2016/10/12	103	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
8429745	Total Lead (Pb)	2016/10/12	93	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8429745	Total Lithium (Li)	2016/10/12	98	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8429745	Total Manganese (Mn)	2016/10/12	98	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8429745	Total Molybdenum (Mo)	2016/10/12	99	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8429745	Total Nickel (Ni)	2016/10/12	99	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8429745	Total Phosphorus (P)	2016/10/12					<0.0020	mg/L	NC	20
8429745	Total Selenium (Se)	2016/10/12	107	80 - 120	100	80 - 120	<0.000040	mg/L	NC	20
8429745	Total Silicon (Si)	2016/10/12					<0.050	mg/L	NC	20
8429745	Total Silver (Ag)	2016/10/12	81	80 - 120	92	80 - 120	<0.0000050	mg/L	NC	20
8429745	Total Strontium (Sr)	2016/10/12	99	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8429745	Total Thallium (Tl)	2016/10/12	96	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8429745	Total Tin (Sn)	2016/10/12	93	80 - 120	114	80 - 120	<0.00020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8429745	Total Titanium (Ti)	2016/10/12	100	80 - 120	92	80 - 120	<0.00050	mg/L	NC	20
8429745	Total Uranium (U)	2016/10/12	95	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8429745	Total Vanadium (V)	2016/10/12	99	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8429745	Total Zinc (Zn)	2016/10/12	114	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8429745	Total Zirconium (Zr)	2016/10/12					<0.00010	mg/L	NC	20
8430078	Total Mercury (Hg)	2016/10/12	85	80 - 120	97	80 - 120	<0.0000020	mg/L		
8430230	Dissolved Mercury (Hg)	2016/10/12	94	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8430715	Nitrate plus Nitrite (N)	2016/10/08	103	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25
8430717	Nitrite (N)	2016/10/08	97	80 - 120	95	80 - 120	<0.0020	mg/L	NC	25
8430883	Strong Acid Dissoc. Cyanide (CN)	2016/10/12	103	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8430891	Weak Acid Dissoc. Cyanide (CN)	2016/10/12	105	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8430899	Dissolved Organic Carbon (C)	2016/10/12	106	80 - 120	113	80 - 120	<0.50	mg/L	NC	20
8431837	Dissolved Molybdenum (Mo)	2016/10/13	100	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8448430	Total Mercury (Hg)	2016/10/26							NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

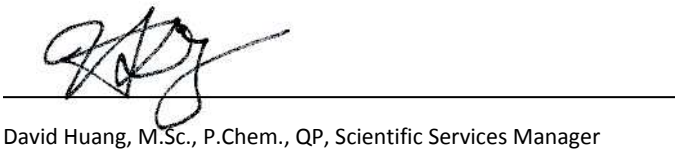
Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC # 08428205

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (wh	
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:	
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah
Phone:		Phone:	(867) 668-6463	Site #:	
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Andrew MacPhail

und Time (TAT) Required

[X] Regular TAT 5 days (Most analyses)

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Rush TAT (Surcharges will be applied)

[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days

Date Required:

Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water
[ ] CCME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)
USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		04-Oct-16	13:47	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-6		03-Oct-16	13:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-7		03-Oct-16	12:50	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	KZ-9		04-Oct-16	8:50	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
6	KZ-13		03-Oct-16	11:49	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
7	KZ-18		04-Oct-16	9:50	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
8	KZ-27		03-Oct-16	10:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
9	KZ-19		04-Oct-16	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		11 1
NA		12 1 1
		1 1

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE

BY: Sayan @ 0950

2016-10-06

TEMP: 4 / 3 / 4 → cooler # 1
4 3 3 → 2

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Andrew MacPhail	06/10/2016	11:00	Laurel Bethier	2016/10/07	13:35

B688838_COC

CHAIN OF CUSTODY RECORD

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08428206

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where	
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:	
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah
Phone:		Phone:	(867) 668-6463	Site #:	
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Andrew MacPhail

Time (TAT) Required

[x] Regular TAT 5 days (Most analyses)

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Rush TAT (Surcharges will be applied)

[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days

Date Required:

Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water
[ ] CCME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1																			
2																			
3																			
4	KZ-28		03-Oct-16		Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6																			
7																			
8																			
9																			
10																			

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		11.1
NA		12.1

COOLING MEDIA PRESENT Y / N

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Andrew MacPhail	06/10/2016	11:00	Laurel Beattie	2016/10/07	13:35

B688838_COC

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC 08428211

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Andrew MacPhail	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

Rush Confirmation #:

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

RECEIVED IN WHITEHORSE
BY: [signature] 0958
2016-10-06
TEMP: 3 / 3 / 3

LABORATORY USE ONLY

CUSTODY SEAL Y / N (0)

COOLER TEMPERATURES

Present	Intact	
NA		2.3
		1.1

COOLING MEDIA PRESENT Y / N (0)

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	DISSOLVED LOW LEVEL METALS INCL. MERCURY	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-9_E-SEEP		04-Oct-16	10:40	Water	x	x	x	x	4		Metals vials unpreserved and unfiltered, merc vials preserved but not filtered
3	KZ-9_W-SEEP		04-Oct-16	10:52	Water	x	x	x	x	4		Metals vials unpreserved and unfiltered, merc vials preserved but not filtered
4	SEEP-3		04-Oct-16	11:30	Water	x	x	x	x	4		Metals vials unpreserved and unfiltered, merc vials preserved but not filtered
5	SEEP-5		04-Oct-16	11:56	Water	x	x	x	x	4		Metals vials unpreserved and unfiltered, merc vials preserved but not filtered
6	SEEP-4		03-Oct-16	15:23	Water	x	x	x	x	4		Metals vials unpreserved and unfiltered, merc vials preserved but not filtered
7												
8												
9												
10												

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Andrew MacPhail	October 6th, 2016	11:00	Laurel Bethune	2016/10/07	13:35

B688875_COC