

SUMMARY REPORT FOR:

PELLY RIVER AQUATIC ECOSYSTEM

MONITORING PLAN, OCTOBER 2012

For



Erik Pit
Assessment and Abandoned Mines

Submitted by



December 31st, 2012

1.0 BACKGROUND

In early August of 2012, a request was made of Laberge Environmental Services (LES) to provide a proposal to Assessment and Abandoned Mines (AAM) to conduct the Pelly River Aquatics Water Monitoring Program at the Faro Mine Complex (FMC) for the months of August and October.

The provided lists indicate that 22 sites are to be sampled under the monitoring program for a suite of analytical and in-situ parameters. Specifically the parameters are as follows:

In-situ

- pH
- conductivity
- temperature

Analytical

- alkalinity
- chloride
- ammonia
- nitrate
- dissolved and total organic carbon
- conductivity
- pH
- sulphate
- total suspended solids
- total dissolved solids
- turbidity
- hardness
- low level total and dissolved metals (30 element suite)

LES signed a contract on August 17th, 2012 to complete the receiving water monitoring programs. This summary report presents the data for the October 2012 monitoring program.

2.0 STUDY AREA

The study area encompasses reference sites, impacted sites, and receiving water sites and has generally been divided into three main areas: the Vangorda watershed, the Faro mine site and Rose and Anvil watersheds, and the Pelly River. The table below lists the sites and their

PELLY RIVER ECOSYSTEM MONITORING, OCTOBER 2012

descriptions. The sites are listed by area from upstream to downstream in all of the tables of this report, to aid in interpretation of the data.

TABLE 1 LIST OF SITES AND DESCRIPTIONS		
Vangorda Watershed	VR	West Fork of Vangorda upstream of Haul Road.
	V17A	AEX Cr upstream of Haul Road
	VW3	West Fork of Vangorda downstream of AEX Creek
	VW1	West Fork of Vangorda downstream of landslide but u/s of VW2
	VW2	Tributary to West Vangorda Cr which drains Grum west lobe, upstream of Mine Access Road
	V20A	Dixon Cr upstream of mine workings, tributary to Vangorda Cr.
	VGMAIN	Vangorda Cr downstream of mine but upstream of West Vangorda Creek.
	V8	Vangorda Cr downstream all inputs but u/s Pelly River.
Faro Sites and Rose & Anvil Watersheds	USFR	South Fork Rose Creek upstream Haul Road
	GCULV	South Fork Rose Creek downstream Haul Road and u/s Mine Access Road
	K8	Reservoir Creek upstream Mine Access Road
	R1	Rose Creek upstream pumphouse pond and tailings system
	FC	Faro Cr upstream diversion
	W10	Upper Guardhouse Creek upstream NW Dump
	NWID	Northwest interceptor ditch upstream of diversion point
	X14	Rose Creek downstream of all mining inputs
	R4	Rose Creek upstream confluence with Anvil Creek
	R6	Anvil Creek upstream confluence with Rose Creek
	R5	Anvil Cr downstream of Rose Cr after full mixing.
A1	Anvil Creek near confluence with Pelly River	
Pelly	P1	Pelly River upstream Vangorda Cr
	P4	Pelly River downstream Anvil Creek

The only site where samples were not collected in August was R5, Anvil Creek downstream of the confluence with Rose Creek. This site can not be sampled until a helipad is constructed here.

3.0 METHODS

Surface water quality sampling followed AAM's water sampling protocols, a copy of which was provided to LES. Maxxam Analytics Ltd supplied LES with the necessary sample kits prior to the field trip of October 22nd to 25th, 2012. Each sample bottle was rinsed three times with the sample waters and then filled and preserved as specified by the laboratory's protocols. Samples that required filtering (dissolved metals), were filtered in the field prior to preservation. Samples were kept cool then shipped as soon as possible to the Maxxam laboratory in Burnaby, BC.

In-situ measurements of water temperature, conductivity and pH were taken at each site. The in-situ meters were calibrated daily. Photographs were also taken to document the current conditions at each location.

As measures of quality assurance and quality control (QA/QC), two blind duplicates were collected during the survey. In addition, one field blank, labelled FB, was submitted. A travel blank was supplied with the sample kits which was also analyzed as a measure of QA/QC. The lab ran their own QA/QC and their report is included with their analytical report (see Appendix C).

Six of the sampling sites are remote and can be accessed by helicopter only. AAM provided Trans North with a separate contract to conduct the aerial portion of the program.

4.0 RESULTS

Unseasonable cold temperatures were experienced during the sampling period. All streams had some degree of ice cover. Snow depth throughout the study area varied from 3 cm to 9 cm.

Due to the location of the study area and the location of the analytical laboratory, it is inevitable that some of the time sensitive parameters will not be analyzed within the recommended hold time. When reviewing Table 3 in Appendix B, it will be noted that depending on the date and time certain samples were collected, the analyses for Nitrate plus Nitrite and Nitrite were completed past the recommended hold time. The hold time for these two analyses is 72 hours, which is based on the hold time for nitrite. The nitrate samples were received within time. All of the analyses for nitrite are below the method detection limit of 0.0020 mg/L. It is probably safe to assume that the samples that were analyzed after the holding time were likely below detection as well. The CCME guideline for the protection of fresh water aquatic life is 0.060 mg/L, so it is likely that concentrations of nitrite, if detected, would not exceed this value. If AAM deems it necessary to guarantee that samples that are to be analyzed for nitrite are to be received in time, careful planning for timing of sampling and shipping would be required. There would be additional shipping costs as more than one shipment would be required to ensure that the earlier collected samples make it to the Lab in time.

4.1 Photographs

Photographs of each site can be found in Appendix A.

4.2 In-Situ Results

The in-situ data is presented in Table 2, Appendix B. The table also includes a comment section where the locations of the duplicate samples are indicated and any observations are recorded.

4.3 Analytical Data

Anions, Nutrients and Physical Data

Table 3 in Appendix B, presents the compiled anion, nutrient and physical attributes of the samples collected in the study area.

Total and Dissolved Metals

The dissolved metals data is presented in Table 4, and the total metals data is included in Table 5, both in Appendix B.

5.0 DISCUSSION AND RECOMMENDATIONS

It is beyond our scope of work to provide any discussion or interpretation of the results for the October 2012 water quality collected under this monitoring program. This letter report includes all the specified deliverables in the provided scope of work.

Respectively submitted,



Bonnie Burns
Laberge Environmental Services

APPENDIX A
PHOTOGRAPHS, OCTOBER 2012



Photo #1; VR sample site, October 23rd, 2012.



Photo #2; Looking upstream from V17A, October 23rd, 2012.



Photo #3; VW3, looking upstream from culvert, October 24th, 2012.



Photo #4; VW1, October 22nd, 2012.



Photo #6; V20A, sampled from pool upstream trail. Oct 23rd, 2012.



Photo #5; VW2, open water just upstream of culvert, Oct 22nd, 2012.



Photo #7; V20A, October 23rd, 2012.



Photo #8; VGMAIN looking downstream, October 22nd, 2012.



Photo #9; V8, slush ice forming, October 22nd, 2012.



Photo #10; USFR, October 24th, 2012.



Photo #11; GCULV looking downstream to culvert, Oct 24th, 2012.



Photo #12; K8 looking upstream from the culvert, October 24th, 2012.



Photo #13; Sampling R1 on October 24th, 2012.



Photo #15; Sampling W10 on October 24th, 2012.



Photo # 14; FC, October 24th, 2012.



Photo #16; NWID on October 24th, 2012.



Photo #17; X14 looking upstream from the gauge, Oct 24th, 2012.



Photo #19; R6 looking upstream, October 23rd, 2012.



Photo #18; R4 looking upstream, October 23rd, 2012.



Photo #20; A1 was sampled at the mouth due to ice cover, Oct 23/12



Photo #21; P1 looking upstream on October 23rd, 2012.



Photo #22; P4 on October 23rd, 2012.

APPENDIX B
WATER QUALITY TABLES
OCTOBER 2012

TABLE 2 INSITU DATA FOR THE PELLY RIVER AQUATIC MONITORING PROGRAM AT AND NEAR THE FMC, OCTOBER 2012

Site #	Site Description	Date Sampled 2012	Time Sampled	NAD 27 Zone 8V		Water Temp °C	pH	Conductivity uS/cm	Comments
				Easting	Northing				
VR	West Fork of Vangorda u/s of Haul Road.	October 23	16:30	590801	6906722	0.2	7.54	59	Iced over, ice thickness 13 cm, snow depth 5 cm. Air temp -9°C.
V17A	AEX Cr u/s of Haul Road	October 23	16:00	591380	6906066	0.2	7.35	188	Iced over, ice thickness 6 cm, snow depth 6 cm. Air temp -10°C
VW3	West Fork of Vangorda d/s of AEX Creek	October 24	14:20	590508	6906424	0.3	7.75	197	Snow depth 9 cm, collected blind duplicate - BD-2.
VW1	West Fork of Vangorda d/s of landslide but u/s of VW2	October 22	16:35	587050	6904547	0.3	8.03	312	Water clear, glaciation but some open water, snow depth - 6 cm..
VW2	Tributary to West Vangorda Cr which drains Grum west lobe	October 22	16:10	587407	6903555	0.2	8.27	560	Water very clear, creek glaciating, open u/s of culvert, snow depth - 5 cm.
V20A	Dixon Cr u/s of mine workings, trib to Vangorda Cr.	October 23	15:00	595269	6902053	0.3	7.43	498	Walked in, sampled pooled water, ice thickness 9cm, snow depth 8 cm, wolf tracks in area. Air temp - 11°C.
VGMAIN	Vangorda Cr d/s mine but u/s West Vangorda Creek.	October 22	15:20	585794	6901321	0.2	8.26	469	Clear water, stream glaciating, snow depth: 3 cm.
V8	Vangorda Cr d/s all inputs but u/s Pelly River.	October 22	17:15	584951	6900458	0.4	8.16	625	Major glaciation, had to use pole sampler to get to water without slush, snow depth 3cm.
USFR	South Fork Rose Creek u/s Haul Road	October 24	9:05	590363	6907200	0.0	7.97	69	Creek glaciating plus has shelf ice, snow depth 8 cm, air temp 18°C.
GCULV	South Fork Rose Creek d/s Haul Road and u/s Mine Access Road	October 24	14:00	589930	6907206	0.4	7.77	63	Major glaciation extends over bank, sampled open lead, snow depth 7 cm, air temp -12°C.
K8	Reservoir Creek u/s Mine Access Road	October 24	13:30	586530	6910570	0.2	7.90	115	Sampled open lead, snow depth 7 cm, air temp -12°C. Sunny
R1	Rose Creek u/s pumphouse pond and tailings system	October 24	12:45	583733	6912159	0.4	7.56	258	Sampled open lead. Air temp 13°C.
FC	Faro Cr u/s diversion	October 24	9:45	585473	6916553	0.1	7.70	26	Shelf ice, open water d/s of gauge.
W10	Upper Guardhouse Creek u/s NW Dump	October 24	10:25	583400	6915392	0.3	7.68	114	Sunny, calm, sparkling, snow depth 9cm, ice thickness 3 cm. Air temp - 15°C.
NWID	Northwest interceptor ditch u/s of diversion point	October 24	11:00	582508	6914540	0.2	8.06	295	Iced over and glaciating, sampled from an open hole. Air temp - 15°C.
X14	Rose Creek d/s of all mining inputs	October 24	11:40	579299	6914803	0.7	7.81	434	Sampled open lead at site, snow depth 7 cm, air temp -16°C.
R4	Rose Creek u/s confluence with Anvil Creek	October 23	10:15	567655	6921163	0.0	7.97	414	Lots of anchor ice. Air temp -19°C.
R6	Anvil Creek u/s confluence with Rose Creek	October 23	10:05	568197	6921432	0.0	8.15	345	Lots of anchor ice, weasel on ice. Air temp -19°C.
R5	Anvil Cr d/s of Rose Cr after full mixing.	October 23		567432	6922324				No suitable landing location.
A1	Anvil Creek near confluence with Pelly River	October 23	10:50	545855	6924017	0.0	8.03	365	Most of creek is frozen so sampled very close to the confluence.
P1	Pelly River u/s Vangorda Cr	October 23	9:25	585384	6898429	0.5	8.20	422	Lots of ice cover and pan ice. Sampled near an open section.
P4	Pelly River d/s Anvil Creek	October 23	11:20	543435	6925496	0.4	8.46	420	Blind duplicate collected here: BD-1.

TABLE 3

ANIONS, NUTRIENTS AND PHYSICAL PROPERTIES FOR THE PELLY RIVER AQUATIC MONITORING PROGRAM, FMC, OCTOBER 2012

		Miscellaneous Inorganics								Anions		Nutrients			Physical Properties				
	Sampling Date	Nitrate (N)	Dissolved Organic Carbon (C)	Alkalinity (Total as CaCO ₃)	Total Organic Carbon (C)	Alkalinity (PP as CaCO ₃)	Bicarbonate (HCO ₃)	Carbonate (CO ₃)	Hydroxide (OH)	Dissolved Sulphate (SO ₄)	Dissolved Chloride (Cl)	Ammonia (N)	Nitrate plus Nitrite (N)	Nitrite (N)	Conductivity	pH	Total Suspended Solids	Total Dissolved Solids	Turbidity
UNITS		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	uS/cm	pH Units	mg/L	mg/L	NTU
VR	10/23/2012 16:30	0.0154	2.26	29.9	3.34	<0.50	36.5	<0.50	<0.50	5.96	<0.50	0.013	0.0154 (1)	<0.0020 (1)	71.0	7.62	<1.0	54	0.30
V17A	10/23/2012 16:00	0.245	3.07	53.9	3.19	<0.50	65.7	<0.50	<0.50	38.5	<0.50	0.026	0.245 (1)	<0.0020 (1)	188	7.67	5.0	158	1.45
VW3	10/24/2012 14:20	0.183	2.49	64.9	2.66	<0.50	79.1	<0.50	<0.50	33.2	<0.50	0.016	0.183	<0.0020	199	7.97	1.6	140	0.54
VW1	10/22/2012 16:35	0.124	3.42	154	3.88	<0.50	187	<0.50	<0.50	45.3	1.9	0.020	0.124 (1)	<0.0020 (1)	376	8.18	6.3	248	0.46 (2)
VW2	10/22/2012 16:10	0.146	2.28	298	3.00	5.23	351	6.28	<0.50	95.6	0.58	0.011	0.146 (2)	<0.0020 (2)	681	8.40	1.4	454	0.13 (2)
V20A	10/23/2012 15:00	0.0955	3.36	268	3.69	<0.50	326	<0.50	<0.50	13.5	0.67	0.018	0.0955	<0.0020 (1)	498	8.29	1.0	296	<0.10
VGMAIN	10/22/2012 15:20	0.255	2.56	161	3.04	<0.50	197	<0.50	<0.50	144	0.67	0.011	0.255 (2)	<0.0020 (2)	570	8.19	<1.0	388	<0.10 (2)
V8	10/22/2012 17:15	0.154	3.36	202	3.73	<0.50	246	<0.50	<0.50	127	1.4	0.013	0.154 (2)	<0.0020 (2)	600	8.25	2.0	418	0.41
USFR	10/24/2012 9:05	0.0157	2.35	26.3	1.63	<0.50	32.1	<0.50	<0.50	7.38	<0.50	0.016	0.0157	<0.0020	67.9	7.54	<1.0	42	0.21
GCULV	10/24/2012 14:00	0.0326	2.50	28.2	2.47	<0.50	34.4	<0.50	<0.50	7.69	<0.50	0.015	0.0326	<0.0020	71.4	7.63	<1.0	64	0.18
K8	10/24/2012 13:30	0.0649	1.53	46.9	1.14	<0.50	57.2	<0.50	<0.50	11.5	<0.50	0.013	0.0649	<0.0020	118	7.84	<1.0	86	0.11
R1	10/24/2012 12:45	0.0955	2.19	103	2.72	<0.50	125	<0.50	<0.50	20.6	<0.50	0.023	0.0955	<0.0020	236	8.03	<1.0	144	0.46
FC	10/24/2012 9:45	0.0115	2.40	16.4	2.38	<0.50	20.0	<0.50	<0.50	1.51	<0.50	0.013	0.0115	<0.0020	38.9	7.36	1.2	46	0.45
W10	10/24/2012 10:25	<0.0020	3.04	57.5	3.08	<0.50	70.2	<0.50	<0.50	3.98	<0.50	0.019	<0.0020	<0.0020	119	7.84	<1.0	80	0.24
NW1D	10/24/2012 11:00	0.0354	2.35	124	2.38	<0.50	151	<0.50	<0.50	25.9	<0.50	0.020	0.0354	<0.0020	284	8.20	<1.0	180	<0.10
X14	10/24/2012 11:40	0.0928	1.70	129	2.57	<0.50	158	<0.50	<0.50	87.0	0.83	0.040	0.0928	<0.0020	418	8.03	<1.0	288	1.52
R4	10/23/2012 10:15	0.152	2.43	133	2.28	<0.50	162	<0.50	<0.50	63.4	0.53	0.018	0.152 (1)	<0.0020 (1)	375	8.11	<1.0	244	0.51
R6	10/23/2012 10:05	0.175	2.11	147	2.17	<0.50	179	<0.50	<0.50	22.7	0.55	0.030	0.175 (1)	<0.0020 (1)	313	8.24	<1.0	192	0.52
A1	10/23/2012 10:50	0.125	3.75	140	3.92	<0.50	171	<0.50	<0.50	43.5	0.51	0.026	0.125 (1)	<0.0020 (1)	347	8.05	1.7	228	1.17
P1	10/23/2012 9:25	0.0295	2.74	145	3.04	<0.50	177	<0.50	<0.50	77.1	0.60	0.019	0.0295 (1)	<0.0020 (1)	419	8.23	6.9	288	1.42
P4	10/23/2012 11:20	0.0377	3.42	147	3.27	<0.50	180	<0.50	<0.50	67.9	0.51	0.020	0.0377 (1)	<0.0020 (1)	407	8.12	1.9	292	1.11
BD-1		0.0394	3.52	149	3.65	<0.50	181	<0.50	<0.50	69.1	0.52	0.017	0.0394	<0.0020	408	8.16	2.1	270	1.18
BD-2		0.193	1.59	64.8	2.83	<0.50	79.1	<0.50	<0.50	33.6	0.68	0.014	0.193	<0.0020	203	8.00	1.9	124	0.48
FB		<0.0020	0.61	1.08	<0.50	<0.50	1.32	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.0020	<0.0020	<1.0	6.18	<1.0	<10	<0.10
TRIP BLANK		0.0035	0.62	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	0.0035	<0.0020	1.2	5.73	<1.0	<10	<0.10

(1) Sample analysed past recommended hold time.

(2) Sample arrived to laboratory past recommended hold time.

APPENDIX C

**ANALYTICAL REPORT FROM MAXXAM
OCTOBER 2012**

Attention: Bonnie Burns

 LABERGE ENVIRONMENTAL SERVICES
 WHITEHORSE
 405 Ogilvie Street
 PO Box 21072
 Whitehorse, YT
 CANADA Y1A 6P7

Report Date: 2012/11/05

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B297397
Received: 2012/10/26, 10:00

Sample Matrix: Water

Samples Received: 25

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
Alkalinity - Water	21	2012/10/27	2012/10/27	BBY6SOP-00026	SM2320B
Alkalinity - Water	2	2012/10/27	2012/10/28	BBY6SOP-00026	SM2320B
Alkalinity - Water	1	2012/10/30	2012/10/31	BBY6SOP-00026	SM2320B
Alkalinity - Water	1	2012/11/01	2012/11/01	BBY6SOP-00026	SM2320B
Chloride by Automated Colourimetry	24	N/A	2012/10/29	BBY6SOP-00011	SM-4500-Cl-
Chloride by Automated Colourimetry	1	N/A	2012/10/30	BBY6SOP-00011	SM-4500-Cl-
Carbon (DOC)	25	N/A	2012/10/30	BBY6SOP-00003	SM-5310C
Conductance - water	20	N/A	2012/10/27	BBY6SOP-00026	SM-2510B
Conductance - water	2	N/A	2012/10/28	BBY6SOP-00026	SM-2510B
Conductance - water	1	N/A	2012/10/31	BBY6SOP-00026	SM-2510B
Conductance - water	2	N/A	2012/11/01	BBY6SOP-00026	SM-2510B
Hardness Total (calculated as CaCO3)	25	N/A	2012/11/02	BBY WI-00033	Calculated Parameter
Hardness (calculated as CaCO3)	25	N/A	2012/11/02	BBY WI-00033	Calculated Parameter
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	25	N/A	2012/10/26	BBY7SOP-00002	EPA 6020A
Elements by ICPMS Low Level (dissolved)	25	N/A	2012/11/02	BBY7SOP-00002	EPA 6020A
Na, K, Ca, Mg, S by CRC ICPMS (total)	24	N/A	2012/10/26	BBY7SOP-00002	EPA 6020A
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2012/11/03	BBY7SOP-00002	EPA 6020A
Elements by ICPMS Low Level (total)	25	N/A	2012/11/02	BBY7SOP-00002	EPA 6020A
Ammonia-N (Preserved)	25	N/A	2012/10/29	BBY6SOP-00009	SM-4500NH3G
Nitrate+Nitrite (N) (low level)	25	N/A	2012/10/27	BBY6SOP-00010	EPA 353.2
Nitrite (N) (low level)	25	N/A	2012/10/27	BBY6SOP-00010	EPA 353.2
Nitrogen - Nitrate (as N)	25	N/A	2012/10/29		
Filter and HNO3 Preserve for Metals	24	N/A	2012/10/26	BBY6WI-00001	EPA 200.2
Filter and HNO3 Preserve for Metals	1	N/A	2012/11/02	BBY6WI-00001	EPA 200.2
pH Water	20	N/A	2012/10/27	BBY6SOP-00026	SM-4500H+B
pH Water	2	N/A	2012/10/28	BBY6SOP-00026	SM-4500H+B
pH Water	1	N/A	2012/10/31	BBY6SOP-00026	SM-4500H+B
pH Water	2	N/A	2012/11/01	BBY6SOP-00026	SM-4500H+B
Sulphate by Automated Colourimetry	25	N/A	2012/10/29	BBY6SOP-00017	SM4500-SO42
Total Dissolved Solids (Filt. Residue)	5	2012/10/29	2012/10/29	BBY6SOP-00033	SM 2540C
Total Dissolved Solids (Filt. Residue)	20	2012/10/30	2012/10/30	BBY6SOP-00033	SM 2540C
Carbon (Total Organic)	25	N/A	2012/10/30	BBY6SOP-00003	SM-5310C
Total Suspended Solids-LowLevel	25	2012/10/27	2012/10/27	BBY6SOP-00034	SM-2540 D
Turbidity	8	N/A	2012/10/26	BBY6SOP-00027	SM - 2130B
Turbidity	17	N/A	2012/10/27	BBY6SOP-00027	SM - 2130B

* Results relate only to the items tested.

Maxxam Job #: B297397
Report Date: 2012/11/05

-2-

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Tabitha Rudkin, Burnaby Project Manager
Email: TRudkin@maxxam.ca
Phone# (604) 638-2639

=====
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.

Total cover pages: 2

Maxxam Job #: B297397
 Report Date: 2012/11/05

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		EV7294		EV7295		EV7296		EV7297		EV7298		
Sampling Date		2012/10/23 16:30		2012/10/23 16:00		2012/10/24 14:20		2012/10/22 16:35		2012/10/22 16:10		
COC#		33400401		33400401		33400401		33400401		33400401		
	UNITS	VR	QC Batch	V17A	QC Batch	VW3	QC Batch	VW1	QC Batch	VW2	RDL	QC Batch
Calculated Parameters												
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	ONSITE	FIELD	ONSITE	FIELD	N/A	ONSITE
Total Hardness (CaCO3)	mg/L	31.2	6291496	92.4	6291496	95.2	6291496	191	6291496	373	0.50	6291496
Nitrate (N)	mg/L	0.0154	6291728	0.245	6291728	0.183	6291728	0.124	6291728	0.146	0.0020	6291728
Misc. Inorganics												
Dissolved Hardness (CaCO3)	mg/L	31.5	6291497	92.7	6291497	91.9	6291497	190	6291497	369	0.50	6291497
Dissolved Organic Carbon (C)	mg/L	2.26	6302816	3.07	6302816	2.49	6302816	3.42	6302816	2.28	0.50	6302816
Alkalinity (Total as CaCO3)	mg/L	29.9	6295413	53.9	6309354	64.9	6295413	154	6295413	298	0.50	6295413
Total Organic Carbon (C)	mg/L	3.34	6302818	3.19	6302818	2.66	6302818	3.88	6302818	3.00	0.50	6302818
Alkalinity (PP as CaCO3)	mg/L	<0.50	6295413	<0.50	6309354	<0.50	6295413	<0.50	6295413	5.23	0.50	6295413
Bicarbonate (HCO3)	mg/L	36.5	6295413	65.7	6309354	79.1	6295413	187	6295413	351	0.50	6295413
Carbonate (CO3)	mg/L	<0.50	6295413	<0.50	6309354	<0.50	6295413	<0.50	6295413	6.28	0.50	6295413
Hydroxide (OH)	mg/L	<0.50	6295413	<0.50	6309354	<0.50	6295413	<0.50	6295413	<0.50	0.50	6295413
Anions												
Dissolved Sulphate (SO4)	mg/L	5.96	6299000	38.5	6299000	33.2	6299000	45.3	6299000	95.6	0.50	6299000
Dissolved Chloride (Cl)	mg/L	<0.50	6298612	<0.50	6298612	<0.50	6298612	1.9	6298612	0.58	0.50	6302294
Nutrients												
Ammonia (N)	mg/L	0.013	6296648	0.026	6296648	0.016	6296648	0.020	6296648	0.011	0.0050	6296648
Nitrate plus Nitrite (N)	mg/L	0.0154 ⁽¹⁾	6295628	0.245 ⁽¹⁾	6295628	0.183	6295628	0.124 ⁽¹⁾	6295628	0.146 ⁽²⁾	0.0020	6295628
Nitrite (N)	mg/L	<0.0020 ⁽¹⁾	6295629	<0.0020 ⁽¹⁾	6295629	<0.0020	6295629	<0.0020 ⁽¹⁾	6295629	<0.0020 ⁽²⁾	0.0020	6295629
Physical Properties												
Conductivity	uS/cm	71.0	6295419	188	6309363	199	6295419	376	6295419	681	1.0	6295419
pH	pH Units	7.62	6295420	7.67	6309364	7.97	6295420	8.18	6295420	8.40		6295420
Physical Properties												
Total Suspended Solids	mg/L	<1.0	6295047	5.0	6295047	1.6	6295047	6.3	6295047	1.4	1.0	6295047
Total Dissolved Solids	mg/L	54	6302419	158	6302419	140	6302419	248	6299297	454	10	6299297
Turbidity	NTU	0.30	6292853	1.45	6292853	0.54	6295326	0.46 ⁽²⁾	6295326	0.13 ⁽²⁾	0.10	6295326

N/A = Not Applicable

RDL = Reportable Detection Limit

(1) - Sample analysed past recommended hold time.

(2) - Sample arrived to laboratory past recommended hold time.

Maxxam Job #: B297397
 Report Date: 2012/11/05

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		EV7299		EV7300	EV7301		EV7302	EV7303	EV7320	EV7321		
Sampling Date		2012/10/23 15:00		2012/10/22 15:20	2012/10/22 17:15		2012/10/24 09:05	2012/10/24 14:00	2012/10/24 13:30	2012/10/24 12:45		
COC#		33400401		33400401	33400401		33400401	33400401	33400402	33400402		
	UNITS	V20A	QC Batch	VGMAIN	V8	QC Batch	USFR	GCULV	K8	R1	RDL	QC Batch
Calculated Parameters												
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	FIELD	ONSITE	FIELD	FIELD	FIELD	FIELD	N/A	ONSITE
Total Hardness (CaCO3)	mg/L	267	6291496	289	313	6291496	29.0	30.1	53.0	113	0.50	6291496
Nitrate (N)	mg/L	0.0955	6291728	0.255	0.154	6291728	0.0157	0.0326	0.0649	0.0955	0.0020	6291728
Misc. Inorganics												
Dissolved Hardness (CaCO3)	mg/L	262	6291497	292	311	6291497	27.2	29.8	52.4	110	0.50	6291497
Dissolved Organic Carbon (C)	mg/L	3.36	6302816	2.56	3.36	6302816	2.35	2.50	1.53	2.19	0.50	6302816
Alkalinity (Total as CaCO3)	mg/L	268	6295413	161	202	6295413	26.3	28.2	46.9	103	0.50	6295413
Total Organic Carbon (C)	mg/L	3.69	6302818	3.04	3.73	6302818	1.63	2.47	1.14	2.72	0.50	6302818
Alkalinity (PP as CaCO3)	mg/L	<0.50	6295413	<0.50	<0.50	6295413	<0.50	<0.50	<0.50	<0.50	0.50	6295413
Bicarbonate (HCO3)	mg/L	326	6295413	197	246	6295413	32.1	34.4	57.2	125	0.50	6295413
Carbonate (CO3)	mg/L	<0.50	6295413	<0.50	<0.50	6295413	<0.50	<0.50	<0.50	<0.50	0.50	6295413
Hydroxide (OH)	mg/L	<0.50	6295413	<0.50	<0.50	6295413	<0.50	<0.50	<0.50	<0.50	0.50	6295413
Anions												
Dissolved Sulphate (SO4)	mg/L	13.5	6299000	144	127	6299000	7.38	7.69	11.5	20.6	0.50	6299000
Dissolved Chloride (Cl)	mg/L	0.67	6298612	0.67	1.4	6298612	<0.50	<0.50	<0.50	<0.50	0.50	6298612
Nutrients												
Ammonia (N)	mg/L	0.018	6296648	0.011	0.013	6296648	0.016	0.015	0.013	0.023	0.0050	6296648
Nitrate plus Nitrite (N)	mg/L	0.0955	6295628	0.255 ⁽¹⁾	0.154 ⁽¹⁾	6295628	0.0157	0.0326	0.0649	0.0955	0.0020	6295628
Nitrite (N)	mg/L	<0.0020 ⁽²⁾	6295629	<0.0020 ⁽¹⁾	<0.0020 ⁽¹⁾	6295629	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	6295629
Physical Properties												
Conductivity	uS/cm	498	6295419	570	600	6295419	67.9	71.4	118	236	1.0	6295419
pH	pH Units	8.29	6295420	8.19	8.25	6295420	7.54	7.63	7.84	8.03		6295420
Physical Properties												
Total Suspended Solids	mg/L	1.0	6295047	<1.0	2.0	6295047	<1.0	<1.0	<1.0	<1.0	1.0	6295047
Total Dissolved Solids	mg/L	296	6299297	388	418	6299297	42	64	86	144	10	6302419
Turbidity	NTU	<0.10	6292853	<0.10 ⁽¹⁾	0.41	6295326	0.21	0.18	0.11	0.46	0.10	6295326

N/A = Not Applicable

RDL = Reportable Detection Limit

(1) - Sample arrived to laboratory past recommended hold time.

(2) - Sample analysed past recommended hold time.

Maxxam Job #: B297397
 Report Date: 2012/11/05

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		EV7322	EV7323	EV7324	EV7325		EV7326	EV7327	EV7328	EV7329		
Sampling Date		2012/10/24 09:45	2012/10/24 10:25	2012/10/24 11:00	2012/10/24 11:40		2012/10/23 10:15	2012/10/23 10:05	2012/10/23 10:50	2012/10/23 09:25		
COC#		33400402	33400402	33400402	33400402		33400402	33400402	33400402	33400402		
	UNITS	FC	W10	NW1D	X14	QC Batch	R4	R6	A1	P1	RDL	QC Batch
Calculated Parameters												
Filter and HNO3 Preservation	N/A	FIELD	FIELD	FIELD	FIELD	ONSITE	FIELD	FIELD	FIELD	FIELD	N/A	ONSITE
Total Hardness (CaCO3)	mg/L	14.7	55.0	138	202	6291496	182	159	170	209	0.50	6291496
Nitrate (N)	mg/L	0.0115	<0.0020	0.0354	0.0928	6291728	0.152	0.175	0.125	0.0295	0.0020	6291728
Misc. Inorganics												
Dissolved Hardness (CaCO3)	mg/L	14.9	53.7	136	201	6291497	195	170	170	209	0.50	6291497
Dissolved Organic Carbon (C)	mg/L	2.40	3.04	2.35	1.70	6302816	2.43	2.11	3.75	2.74	0.50	6302816
Alkalinity (Total as CaCO3)	mg/L	16.4	57.5	124	129	6295413	133	147	140	145	0.50	6295413
Total Organic Carbon (C)	mg/L	2.38	3.08	2.38	2.57	6302818	2.28	2.17	3.92	3.04	0.50	6302818
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	<0.50	6295413	<0.50	<0.50	<0.50	<0.50	0.50	6295413
Bicarbonate (HCO3)	mg/L	20.0	70.2	151	158	6295413	162	179	171	177	0.50	6295413
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	<0.50	6295413	<0.50	<0.50	<0.50	<0.50	0.50	6295413
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	<0.50	6295413	<0.50	<0.50	<0.50	<0.50	0.50	6295413
Anions												
Dissolved Sulphate (SO4)	mg/L	1.51	3.98	25.9	87.0	6299000	63.4	22.7	43.5	77.1	0.50	6299000
Dissolved Chloride (Cl)	mg/L	<0.50	<0.50	<0.50	0.83	6298612	0.53	0.55	0.51	0.60	0.50	6298612
Nutrients												
Ammonia (N)	mg/L	0.013	0.019	0.020	0.040	6296648	0.018	0.030	0.026	0.019	0.0050	6296648
Nitrate plus Nitrite (N)	mg/L	0.0115	<0.0020	0.0354	0.0928	6295628	0.152 ⁽¹⁾	0.175 ⁽¹⁾	0.125 ⁽¹⁾	0.0295 ⁽¹⁾	0.0020	6295628
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	6295629	<0.0020 ⁽¹⁾	<0.0020 ⁽¹⁾	<0.0020 ⁽¹⁾	<0.0020 ⁽¹⁾	0.0020	6295629
Physical Properties												
Conductivity	uS/cm	38.9	119	284	418	6295419	375	313	347	419	1.0	6295419
pH	pH Units	7.36	7.84	8.20	8.03	6295420	8.11	8.24	8.05	8.23		6295420
Physical Properties												
Total Suspended Solids	mg/L	1.2	<1.0	<1.0	<1.0	6295047	<1.0	<1.0	1.7	6.9	1.0	6295047
Total Dissolved Solids	mg/L	46	80	180	288	6302419	244	192	228	288	10	6302419
Turbidity	NTU	0.45	0.24	<0.10	1.52	6295326	0.51	0.52	1.17	1.42	0.10	6292853

N/A = Not Applicable

RDL = Reportable Detection Limit

(1) - Sample analysed past recommended hold time.

Maxxam Job #: B297397
 Report Date: 2012/11/05

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		EV7333		EV7334	EV7335		EV7336		EV7337		
Sampling Date		2012/10/23 11:20									
COC#		33400403		33400403	33400403		33400403		33400403		
	UNITS	P4	QC Batch	BD-1	BD-2	QC Batch	FB	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters											
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	FIELD	ONSITE	FIELD	ONSITE	LAB	N/A	ONSITE
Total Hardness (CaCO3)	mg/L	204	6291496	203	92.3	6291496	<0.50	6291496	<0.50	0.50	6291496
Nitrate (N)	mg/L	0.0377	6291728	0.0394	0.193	6291728	<0.0020	6291728	0.0035	0.0020	6291728
Misc. Inorganics											
Dissolved Hardness (CaCO3)	mg/L	209	6291497	206	94.9	6291497	<0.50	6291497	<0.50	0.50	6291497
Dissolved Organic Carbon (C)	mg/L	3.42	6302816	3.52	1.59	6302816	0.61	6302816	0.62	0.50	6302816
Alkalinity (Total as CaCO3)	mg/L	147	6295413	149	64.8	6295413	1.08	6295413	<0.50	0.50	6302997
Total Organic Carbon (C)	mg/L	3.27	6302818	3.65	2.83	6302818	<0.50	6302818	<0.50	0.50	6302818
Alkalinity (PP as CaCO3)	mg/L	<0.50	6295413	<0.50	<0.50	6295413	<0.50	6295413	<0.50	0.50	6302997
Bicarbonate (HCO3)	mg/L	180	6295413	181	79.1	6295413	1.32	6295413	<0.50	0.50	6302997
Carbonate (CO3)	mg/L	<0.50	6295413	<0.50	<0.50	6295413	<0.50	6295413	<0.50	0.50	6302997
Hydroxide (OH)	mg/L	<0.50	6295413	<0.50	<0.50	6295413	<0.50	6295413	<0.50	0.50	6302997
Anions											
Dissolved Sulphate (SO4)	mg/L	67.9	6299000	69.1	33.6	6299000	<0.50	6299000	<0.50	0.50	6299000
Dissolved Chloride (Cl)	mg/L	0.51	6298612	0.52	0.68	6298612	<0.50	6298612	<0.50	0.50	6298612
Nutrients											
Ammonia (N)	mg/L	0.020	6296648	0.017	0.014	6296648	<0.0050	6296648	<0.0050	0.0050	6296648
Nitrate plus Nitrite (N)	mg/L	0.0377 ⁽¹⁾	6295628	0.0394	0.193	6295628	<0.0020	6295628	0.0035	0.0020	6295628
Nitrite (N)	mg/L	<0.0020 ⁽¹⁾	6295629	<0.0020	<0.0020	6295629	<0.0020	6295629	<0.0020	0.0020	6295629
Physical Properties											
Conductivity	uS/cm	407	6295419	408	203	6295419	<1.0	6309363	1.2	1.0	6303042
pH	pH Units	8.12	6295420	8.16	8.00	6295420	6.18	6309364	5.73		6303043
Physical Properties											
Total Suspended Solids	mg/L	1.9	6295047	2.1	1.9	6295047	<1.0	6295047	<1.0	1.0	6295047
Total Dissolved Solids	mg/L	292	6302419	270	124	6302419	<10	6302419	<10	10	6302419
Turbidity	NTU	1.11	6292853	1.18	0.48	6295326	<0.10	6295326	<0.10	0.10	6295326

N/A = Not Applicable

RDL = Reportable Detection Limit

(1) - Sample analysed past recommended hold time.

Maxxam Job #: B297397
 Report Date: 2012/11/05

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		EV7294	EV7295		EV7296		EV7297	EV7298		EV7299	EV7300		
Sampling Date		2012/10/23 16:30	2012/10/23 16:00		2012/10/24 14:20		2012/10/22 16:35	2012/10/22 16:10		2012/10/23 15:00	2012/10/22 15:20		
COC#		33400401	33400401		33400401		33400401	33400401		33400401	33400401		
	UNITS	VR	V17A	QC Batch	VW3	QC Batch	VW1	VW2	QC Batch	V20A	VGMAIN	RDL	QC Batch
Dissolved Metals by ICPMS													
Dissolved Aluminum (Al)	ug/L	15.1	16.2	6305760	12.1	6305760	4.30	1.72	6305760	1.43	3.56	0.20	6305760
Dissolved Antimony (Sb)	ug/L	0.030	0.033	6305760	0.038	6305760	0.056	0.189	6305760	0.064	0.119	0.020	6305760
Dissolved Arsenic (As)	ug/L	0.189 ⁽¹⁾	0.761	6305760	0.499	6305760	0.505	0.355	6305760	0.380	0.451	0.020	6305760
Dissolved Barium (Ba)	ug/L	27.1	24.5	6305760	32.2	6305760	64.8	121	6305760	118	55.6	0.020	6305760
Dissolved Beryllium (Be)	ug/L	0.012	0.014	6305760	0.012	6305760	<0.010	<0.010	6305760	<0.010	<0.010	0.010	6305760
Dissolved Bismuth (Bi)	ug/L	<0.0050	<0.0050	6305760	<0.0050	6305760	<0.0050	<0.0050	6305760	<0.0050	<0.0050	0.0050	6305760
Dissolved Boron (B)	ug/L	<50	<50	6305760	<50	6305760	<50	<50	6305760	<50	<50	50	6305760
Dissolved Cadmium (Cd)	ug/L	0.0060	0.0170	6305760	0.0530 ⁽¹⁾	6314274	0.0150	0.0890	6305760	<0.0050	0.0430	0.0050	6305760
Dissolved Chromium (Cr)	ug/L	<0.10	<0.10	6305760	<0.10	6305760	<0.10	<0.10	6305760	<0.10	<0.10	0.10	6305760
Dissolved Cobalt (Co)	ug/L	0.0160	0.0990	6305760	0.0400	6305760	0.0530	0.0120	6305760	0.0080	0.0550	0.0050	6305760
Dissolved Copper (Cu)	ug/L	0.411	0.362	6305760	0.701 ⁽¹⁾	6314274	0.574	0.445	6305760	0.099	0.828	0.050	6305760
Dissolved Iron (Fe)	ug/L	9.6	125	6305760	35.1	6305760	56.9	2.0	6305760	16.8	15.0	1.0	6305760
Dissolved Lead (Pb)	ug/L	0.0490 ⁽²⁾	0.142	6305760	0.139	6305760	0.0220	0.0150	6305760	0.0580	0.0410	0.0050	6305760
Dissolved Lithium (Li)	ug/L	<0.50	0.81	6305760	0.91	6305760	3.04	3.29	6305760	5.66	4.30	0.50	6305760
Dissolved Manganese (Mn)	ug/L	0.411	35.2	6305760	9.83	6305760	41.3	0.089	6305760	2.60	4.96	0.050	6305760
Dissolved Molybdenum (Mo)	ug/L	0.090	0.100	6305760	0.076	6305760	0.446	2.32	6305760	0.451	0.792	0.050	6305760
Dissolved Nickel (Ni)	ug/L	0.145	0.341	6305760	0.326	6305760	0.539	0.957	6305760	0.130	1.20	0.020	6305760
Dissolved Selenium (Se)	ug/L	0.071	<0.040	6305760	0.104	6305760	0.313	3.87	6305760	1.56	0.493	0.040	6305760
Dissolved Silicon (Si)	ug/L	5020	5600	6305760	5220	6305760	5240	4360	6305760	5310	5020	100	6305760
Dissolved Silver (Ag)	ug/L	<0.0050	<0.0050	6305760	<0.0050	6305760	<0.0050	<0.0050	6305760	<0.0050	<0.0050	0.0050	6305760
Dissolved Strontium (Sr)	ug/L	51.0	110	6305760	120	6305760	240	342	6305760	338	284	0.050	6305760
Dissolved Thallium (Tl)	ug/L	0.0020	0.0030	6305760	0.0030	6305760	0.0020	<0.0020	6305760	<0.0020	0.0110	0.0020	6305760
Dissolved Tin (Sn)	ug/L	<0.20	<0.20	6305760	<0.20	6305760	<0.20	<0.20	6305760	<0.20	<0.20	0.20	6305760
Dissolved Titanium (Ti)	ug/L	<0.50	<0.50	6305760	<0.50	6305760	<0.50	<0.50	6305760	<0.50	<0.50	0.50	6305760
Dissolved Uranium (U)	ug/L	0.309	1.31	6305760	1.83	6305760	2.75	6.65	6305760	2.67	6.75	0.0020	6305760
Dissolved Vanadium (V)	ug/L	0.70	0.28	6305760	<0.20	6305760	<0.20	0.47	6305760	<0.20	<0.20	0.20	6305760
Dissolved Zinc (Zn)	ug/L	0.85	29.6	6305760	26.8	6305760	8.71	4.39	6305760	0.70	12.2	0.10	6305760
Dissolved Zirconium (Zr)	ug/L	<0.10	0.12	6305760	<0.10	6305760	<0.10	<0.10	6305760	<0.10	<0.10	0.10	6305760
Dissolved Calcium (Ca)	mg/L	9.49	26.0	6291726	25.7	6291726	48.8	89.9	6291726	68.8	68.7	0.050	6291726
Dissolved Magnesium (Mg)	mg/L	1.88	6.74	6291726	6.72	6291726	16.5	35.0	6291726	22.0	29.3	0.050	6291726
Dissolved Potassium (K)	mg/L	0.359	0.370	6291726	0.410	6291726	0.808	1.04	6291726	0.997	1.09	0.050	6291726
Dissolved Sodium (Na)	mg/L	1.62	1.80	6291726	1.73	6291726	3.34	2.44	6291726	3.06	3.56	0.050	6291726
Dissolved Sulphur (S)	mg/L	<10	15	6291726	12	6291726	17	33	6291726	<10	54	10	6291726

RDL = Reportable Detection Limit

(1) - Dissolved greater than total. Reanalysis yields similar results.

(2) - Duplicate RPD above control limit - (10% of analytes failure allowed).

Maxxam Job #: B297397
 Report Date: 2012/11/05

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		EV7294	EV7295		EV7296		EV7297	EV7298		EV7299	EV7300		
Sampling Date		2012/10/23 16:30	2012/10/23 16:00		2012/10/24 14:20		2012/10/22 16:35	2012/10/22 16:10		2012/10/23 15:00	2012/10/22 15:20		
COC#		33400401	33400401		33400401		33400401	33400401		33400401	33400401		
	UNITS	VR	V17A	QC Batch	VW3	QC Batch	VW1	VW2	QC Batch	V20A	VGMAIN	RDL	QC Batch
Total Metals by ICPMS													
Total Aluminum (Al)	ug/L	24.1	65.8	6305654	32.0	6305654	40.0	8.69	6305654	2.58	3.92	0.20	6305658
Total Antimony (Sb)	ug/L	0.028	0.038	6305654	0.035	6305654	0.054	0.178	6305654	0.076	0.115	0.020	6305658
Total Arsenic (As)	ug/L	0.152	1.13	6305654	0.640	6305654	0.611	0.338	6305654	0.418	0.419	0.020	6305658
Total Barium (Ba)	ug/L	27.1	25.4	6305654	30.3	6305654	66.2	120	6305654	122	53.4	0.020	6305658
Total Beryllium (Be)	ug/L	0.016	0.018	6305654	0.012	6305654	<0.010	<0.010	6305654	<0.010	<0.010	0.010	6305658
Total Bismuth (Bi)	ug/L	<0.0050	<0.0050	6305654	<0.0050	6305654	<0.0050	<0.0050	6305654	<0.0050	<0.0050	0.0050	6305658
Total Boron (B)	ug/L	<50	<50	6305654	<50	6305654	<50	<50	6305654	<50	<50	50	6305658
Total Cadmium (Cd)	ug/L	0.0100	0.0270	6305654	0.0350	6305654	0.0190	0.0980	6305654	0.0050	0.0380	0.0050	6305658
Total Chromium (Cr)	ug/L	<0.10	<0.10	6305654	<0.10	6305654	<0.10	<0.10	6305654	<0.10	<0.10	0.10	6305658
Total Cobalt (Co)	ug/L	0.0190	0.114	6305654	0.0510	6305654	0.106	0.0170	6305654	0.0080	0.0600	0.0050	6305658
Total Copper (Cu)	ug/L	0.445	0.629	6305654	0.534	6305654	0.610	0.434	6305654	0.121	0.746	0.050	6305658
Total Iron (Fe)	ug/L	22.7	254	6305654	103	6305654	143	16.8	6305654	25.9	19.6	1.0	6305658
Total Lead (Pb)	ug/L	0.0810	1.16	6305654	0.482	6305654	0.192	0.0420	6305654	0.0970	0.0560	0.0050	6305658
Total Lithium (Li)	ug/L	<0.50	0.91	6305654	0.92	6305654	3.11	3.28	6305654	5.67	4.17	0.50	6305658
Total Manganese (Mn)	ug/L	1.32	35.4	6305654	12.0	6305654	46.6	0.559	6305654	4.58	5.16	0.050	6305658
Total Molybdenum (Mo)	ug/L	0.105	0.113	6305654	0.067	6305654	0.366	2.21	6305654	0.417	0.762	0.050	6305658
Total Nickel (Ni)	ug/L	0.167	0.396	6305654	0.319	6305654	0.601	0.911	6305654	0.144	1.27	0.020	6305658
Total Selenium (Se)	ug/L	0.063	0.078	6305654	0.087	6305654	0.289	3.92	6305654	1.99	0.619	0.040	6305658
Total Silicon (Si)	ug/L	5040	5670	6305654	5430	6305654	5300	4500	6305654	5520	4950	100	6305658
Total Silver (Ag)	ug/L	<0.0050	0.0050	6305654	<0.0050	6305654	<0.0050	<0.0050	6305654	<0.0050	<0.0050	0.0050	6305658
Total Strontium (Sr)	ug/L	50.5	107	6305654	116	6305654	235	338	6305654	341	271	0.050	6305658
Total Thallium (Tl)	ug/L	0.0020	0.0050	6305654	0.0030	6305654	0.0020	0.0020	6305654	<0.0020	0.0090	0.0020	6305658
Total Tin (Sn)	ug/L	<0.20	<0.20	6305654	<0.20	6305654	<0.20	<0.20	6305654	<0.20	<0.20	0.20	6305658
Total Titanium (Ti)	ug/L	<0.50	1.54	6305654	0.70	6305654	1.06	<0.50	6305654	<0.50	<0.50	0.50	6305658
Total Uranium (U)	ug/L	0.333	1.29	6305654	1.80	6305654	2.79	6.60	6305654	2.70	6.44	0.0020	6305658
Total Vanadium (V)	ug/L	0.44	0.31	6305654	<0.20	6305654	<0.20	0.49	6305654	<0.20	<0.20	0.20	6305658
Total Zinc (Zn)	ug/L	0.91	31.5	6305654	27.6	6305654	9.72	4.06	6305654	0.72	11.0	0.10	6305658
Total Zirconium (Zr)	ug/L	<0.10	0.10	6305654	<0.10	6305654	<0.10	<0.10	6305654	<0.10	<0.10	0.10	6305658
Total Calcium (Ca)	mg/L	9.48	26.2	6291727	27.0	6291727	49.3	92.6	6291727	70.4	68.2	0.050	6291727
Total Magnesium (Mg)	mg/L	1.83	6.56	6291727	6.74	6291727	16.5	34.4	6291727	22.2	28.7	0.050	6291727
Total Potassium (K)	mg/L	0.352	0.350	6291727	0.403	6291727	0.807	1.01	6291727	1.01	1.07	0.050	6291727
Total Sodium (Na)	mg/L	1.60	1.78	6291727	1.71	6291727	3.35	2.41	6291727	3.09	3.48	0.050	6291727
Total Sulphur (S)	mg/L	<10	14	6291727	13	6291727	17	34	6291727	<10	53	10	6291727

RDL = Reportable Detection Limit

Maxxam Job #: B297397
 Report Date: 2012/11/05

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		EV7301		EV7302		EV7303		EV7320	EV7321		EV7322		
Sampling Date		2012/10/22 17:15		2012/10/24 09:05		2012/10/24 14:00		2012/10/24 13:30	2012/10/24 12:45		2012/10/24 09:45		
COC#		33400401		33400401		33400401		33400402	33400402		33400402		
	UNITS	V8	QC Batch	USFR	QC Batch	GCULV	QC Batch	K8	R1	QC Batch	FC	RDL	QC Batch
Dissolved Metals by ICPMS													
Dissolved Aluminum (Al)	ug/L	3.16	6305760	11.5	6305760	10.8	6305760	6.31	3.87	6305760	22.6	0.20	6305760
Dissolved Antimony (Sb)	ug/L	0.138	6305760	0.049	6305760	0.044	6305760	0.046	0.075	6305760	0.030	0.020	6305760
Dissolved Arsenic (As)	ug/L	0.432	6305760	0.200	6305760	0.175	6305760	0.153	0.454	6305760	0.093	0.020	6305760
Dissolved Barium (Ba)	ug/L	62.9	6305760	29.9	6305760	29.0	6305760	27.4	56.5	6305760	17.0	0.020	6305760
Dissolved Beryllium (Be)	ug/L	<0.010	6305760	<0.010	6305760	<0.010	6305760	<0.010	<0.010	6305760	0.013	0.010	6305760
Dissolved Bismuth (Bi)	ug/L	<0.0050	6305760	<0.0050	6305760	<0.0050	6305760	<0.0050	<0.0050	6305760	<0.0050	0.0050	6305760
Dissolved Boron (B)	ug/L	<50	6305760	<50	6305760	<50	6305760	<50	<50	6305760	<50	50	6305760
Dissolved Cadmium (Cd)	ug/L	0.0360	6305760	0.0430 ⁽¹⁾	6305760	0.112 ⁽¹⁾	6305760	0.216 ⁽¹⁾	0.0760 ⁽¹⁾	6305760	0.112 ⁽¹⁾	0.0050	6314274
Dissolved Chromium (Cr)	ug/L	<0.10	6305760	<0.10	6305760	0.19	6305760	0.44	<0.10	6305760	0.15	0.10	6305760
Dissolved Cobalt (Co)	ug/L	0.0400	6305760	0.0160	6305760	0.0140	6305760	0.0210	0.151	6305760	0.0250	0.0050	6305760
Dissolved Copper (Cu)	ug/L	0.815	6305760	0.540 ⁽¹⁾	6314274	0.503 ⁽¹⁾	6314274	0.686 ⁽¹⁾	0.796 ⁽¹⁾	6305760	0.799 ⁽¹⁾	0.050	6314274
Dissolved Iron (Fe)	ug/L	13.3	6305760	29.0	6305760	25.5	6305760	6.6	80.4	6305760	21.7	1.0	6305760
Dissolved Lead (Pb)	ug/L	0.0560	6305760	0.0290	6305760	0.0400	6305760	0.0710	0.678	6305760	0.401	0.0050	6305760
Dissolved Lithium (Li)	ug/L	4.97	6305760	0.98	6305760	0.98	6305760	1.76	4.03	6305760	1.76	0.50	6305760
Dissolved Manganese (Mn)	ug/L	5.51	6305760	1.95	6305760	1.55	6305760	0.603	62.6	6305760	1.46	0.050	6305760
Dissolved Molybdenum (Mo)	ug/L	1.14	6305760	0.294	6305760	0.260	6305760	0.095	0.458	6305760	<0.050	0.050	6305760
Dissolved Nickel (Ni)	ug/L	1.27	6305760	0.195	6305760	0.202	6305760	0.254 ⁽¹⁾	0.688	6305760	0.263	0.020	6314274
Dissolved Selenium (Se)	ug/L	1.46	6305760	<0.040	6305760	0.078	6305760	0.078	0.341	6305760	0.063	0.040	6305760
Dissolved Silicon (Si)	ug/L	5010	6305760	4120	6305760	4480	6305760	5040	5790	6305760	7130	100	6305760
Dissolved Silver (Ag)	ug/L	<0.0050	6305760	<0.0050	6305760	<0.0050	6305760	<0.0050	<0.0050	6305760	<0.0050	0.0050	6305760
Dissolved Strontium (Sr)	ug/L	307	6305760	56.9	6305760	55.4	6305760	109	142	6305760	27.1	0.050	6305760
Dissolved Thallium (Tl)	ug/L	0.0070	6305760	0.0020	6305760	<0.0020	6305760	0.0020	0.0030	6305760	0.0030	0.0020	6305760
Dissolved Tin (Sn)	ug/L	<0.20	6305760	<0.20	6305760	<0.20	6305760	<0.20	<0.20	6305760	0.32	0.20	6305760
Dissolved Titanium (Ti)	ug/L	<0.50	6305760	<0.50	6305760	<0.50	6305760	<0.50	<0.50	6305760	<0.50	0.50	6305760
Dissolved Uranium (U)	ug/L	5.92	6305760	0.509	6305760	0.486	6305760	1.92	1.50	6305760	0.106	0.0020	6305760
Dissolved Vanadium (V)	ug/L	<0.20	6305760	0.49	6305760	0.46	6305760	0.28	<0.20	6305760	0.77	0.20	6305760
Dissolved Zinc (Zn)	ug/L	6.51	6305760	0.91	6305760	2.08 ⁽¹⁾	6314274	4.07 ⁽¹⁾	13.2	6305760	3.27 ⁽¹⁾	0.10	6314274
Dissolved Zirconium (Zr)	ug/L	<0.10	6305760	<0.10	6305760	<0.10	6305760	<0.10	<0.10	6305760	<0.10	0.10	6305760
Dissolved Calcium (Ca)	mg/L	73.1	6291726	8.27	6291726	9.24	6291726	17.0	32.7	6291726	4.39	0.050	6291726
Dissolved Magnesium (Mg)	mg/L	31.2	6291726	1.59	6291726	1.64	6291726	2.42	6.94	6291726	0.945	0.050	6291726
Dissolved Potassium (K)	mg/L	1.23	6291726	0.406	6291726	0.387	6291726	0.485	1.03	6291726	0.167	0.050	6291726
Dissolved Sodium (Na)	mg/L	3.81	6291726	1.71	6291726	1.75	6291726	2.02	2.47	6291726	1.87	0.050	6291726
Dissolved Sulphur (S)	mg/L	45	6291726	<10	6291726	<10	6291726	<10	<10	6291726	<10	10	6291726

RDL = Reportable Detection Limit

(1) - Dissolved greater than total. Reanalysis yields similar results.

Maxxam Job #: B297397
 Report Date: 2012/11/05

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		EV7301		EV7302		EV7303		EV7320	EV7321		EV7322		
Sampling Date		2012/10/22 17:15		2012/10/24 09:05		2012/10/24 14:00		2012/10/24 13:30	2012/10/24 12:45		2012/10/24 09:45		
COC#		33400401		33400401		33400401		33400402	33400402		33400402		
	UNITS	V8	QC Batch	USFR	QC Batch	GCULV	QC Batch	K8	R1	QC Batch	FC	RDL	QC Batch
Total Metals by ICPMS													
Total Aluminum (Al)	ug/L	17.2	6305658	15.0	6305658	16.1	6305658	10.4	10.7	6305658	52.3	0.20	6305658
Total Antimony (Sb)	ug/L	0.136	6305658	0.037	6305658	0.036	6305658	0.029	0.076	6305658	<0.020	0.020	6305658
Total Arsenic (As)	ug/L	0.498	6305658	0.228	6305658	0.176	6305658	0.190	0.502	6305658	0.082	0.020	6305658
Total Barium (Ba)	ug/L	64.0	6305658	28.5	6305658	28.2	6305658	26.9	58.9	6305658	18.2	0.020	6305658
Total Beryllium (Be)	ug/L	<0.010	6305658	<0.010	6305658	0.010	6305658	<0.010	<0.010	6305658	0.012	0.010	6305658
Total Bismuth (Bi)	ug/L	<0.0050	6305658	<0.0050	6305658	<0.0050	6305658	<0.0050	<0.0050	6305658	<0.0050	0.0050	6305658
Total Boron (B)	ug/L	<50	6305658	<50	6305658	<50	6305658	<50	<50	6305658	<50	50	6305658
Total Cadmium (Cd)	ug/L	0.0380	6305658	0.0300	6305658	0.0070	6305658	0.0060	0.0200	6305658	0.0100	0.0050	6305658
Total Chromium (Cr)	ug/L	<0.10	6305658	<0.10	6305658	<0.10	6305658	<0.10	<0.10	6305658	<0.10	0.10	6305658
Total Cobalt (Co)	ug/L	0.0610	6305658	0.0160	6305658	0.0160	6305658	0.0230	0.169	6305658	0.0320	0.0050	6305658
Total Copper (Cu)	ug/L	0.858	6305658	0.362	6305658	0.379	6305658	0.434	0.510	6305658	0.406	0.050	6305658
Total Iron (Fe)	ug/L	41.3	6305658	49.2	6305658	43.7	6305658	14.0	135	6305658	49.9	1.0	6305658
Total Lead (Pb)	ug/L	0.162	6305658	0.0380	6305658	0.0390	6305658	0.0720	1.75	6305658	0.628	0.0050	6305658
Total Lithium (Li)	ug/L	5.15	6305658	0.92	6305658	0.98	6305658	1.83	4.32	6305658	1.81	0.50	6305658
Total Manganese (Mn)	ug/L	6.63	6305658	3.55	6305658	3.31	6305658	1.17	66.9	6305658	1.92	0.050	6305658
Total Molybdenum (Mo)	ug/L	1.05	6305658	0.246	6305658	0.235	6305658	0.077	0.466	6305658	<0.050	0.050	6305658
Total Nickel (Ni)	ug/L	1.36	6305658	0.191	6305658	0.208	6305658	0.173	0.757	6305658	0.255	0.020	6305658
Total Selenium (Se)	ug/L	1.66	6305658	<0.040	6305658	0.063	6305658	0.072	0.333	6305658	<0.040	0.040	6305658
Total Silicon (Si)	ug/L	5140	6305658	4580	6305658	4550	6305658	5060	5740	6305658	7060	100	6305658
Total Silver (Ag)	ug/L	<0.0050	6305658	<0.0050	6305658	<0.0050	6305658	<0.0050	<0.0050	6305658	<0.0050	0.0050	6305658
Total Strontium (Sr)	ug/L	310	6305658	51.1	6305658	55.4	6305658	111	152	6305658	28.0	0.050	6305658
Total Thallium (Tl)	ug/L	0.0070	6305658	<0.0020	6305658	<0.0020	6305658	0.0020	0.0050	6305658	0.0030	0.0020	6305658
Total Tin (Sn)	ug/L	<0.20	6305658	<0.20	6305658	<0.20	6305658	<0.20	<0.20	6305658	<0.20	0.20	6305658
Total Titanium (Ti)	ug/L	0.51	6305658	<0.50	6305658	<0.50	6305658	<0.50	<0.50	6305658	1.02	0.50	6305658
Total Uranium (U)	ug/L	5.80	6305658	0.426	6305658	0.501	6305658	1.94	1.59	6305658	0.113	0.0020	6305658
Total Vanadium (V)	ug/L	<0.20	6305658	0.36	6305658	0.55	6305658	0.45	<0.20	6305658	0.68	0.20	6305658
Total Zinc (Zn)	ug/L	6.88	6305658	0.88	6305658	0.84	6305658	0.90	14.1	6305658	2.33	0.10	6305658
Total Zirconium (Zr)	ug/L	<0.10	6305658	<0.10	6305658	<0.10	6305658	<0.10	<0.10	6305658	<0.10	0.10	6305658
Total Calcium (Ca)	mg/L	73.4	6291727	9.00	6291727	9.32	6291727	17.2	33.3	6291727	4.38	0.050	6291727
Total Magnesium (Mg)	mg/L	31.4	6291727	1.58	6291727	1.66	6291727	2.45	7.20	6291727	0.922	0.050	6291727
Total Potassium (K)	mg/L	1.23	6291727	0.387	6291727	0.379	6291727	0.471	1.06	6291727	0.160	0.050	6291727
Total Sodium (Na)	mg/L	3.80	6291727	1.68	6291727	1.72	6291727	2.00	2.55	6291727	1.79	0.050	6291727
Total Sulphur (S)	mg/L	47	6291727	<10	6291727	<10	6291727	<10	<10	6291727	<10	10	6291727

RDL = Reportable Detection Limit

Maxxam Job #: B297397
 Report Date: 2012/11/05

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		EV7323		EV7324		EV7325	EV7326	EV7327	EV7328	EV7329		
Sampling Date		2012/10/24 10:25		2012/10/24 11:00		2012/10/24 11:40	2012/10/23 10:15	2012/10/23 10:05	2012/10/23 10:50	2012/10/23 09:25		
COC#		33400402		33400402		33400402	33400402	33400402	33400402	33400402		
	UNITS	W10	QC Batch	NW1D	QC Batch	X14	R4	R6	A1	P1	RDL	QC Batch
Dissolved Metals by ICPMS												
Dissolved Aluminum (Al)	ug/L	7.94	6305760	4.76	6305760	3.92	3.10	4.32	4.36	8.65	0.20	6305760
Dissolved Antimony (Sb)	ug/L	0.044	6305760	0.060	6305760	0.084	0.114	0.125	0.129	0.175	0.020	6305760
Dissolved Arsenic (As)	ug/L	0.102	6305760	0.176	6305760	0.284	0.271	0.490	0.630	0.488	0.020	6305760
Dissolved Barium (Ba)	ug/L	16.3	6305760	48.3	6305760	61.1	82.6	93.2	76.7	84.8	0.020	6305760
Dissolved Beryllium (Be)	ug/L	<0.010	6305760	<0.010	6305760	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	6305760
Dissolved Bismuth (Bi)	ug/L	<0.0050	6305760	<0.0050	6305760	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	6305760
Dissolved Boron (B)	ug/L	<50	6305760	<50	6305760	<50	<50	<50	<50	<50	50	6305760
Dissolved Cadmium (Cd)	ug/L	0.201 ⁽¹⁾	6305760	0.213 ⁽¹⁾	6305760	0.118 ⁽¹⁾	0.0300	0.0160	0.0190	0.132	0.0050	6305760
Dissolved Chromium (Cr)	ug/L	<0.10	6305760	0.11	6305760	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	6305760
Dissolved Cobalt (Co)	ug/L	0.0130	6305760	0.0140	6305760	0.947	0.168	0.0500	0.0500	0.0500	0.0050	6305760
Dissolved Copper (Cu)	ug/L	1.02	6305760	1.48 ⁽¹⁾	6314274	0.541	0.614	0.443	0.920	0.752	0.050	6305760
Dissolved Iron (Fe)	ug/L	7.0	6305760	5.9	6305760	306	29.2	67.5	23.6	25.7	1.0	6305760
Dissolved Lead (Pb)	ug/L	0.0650	6305760	0.225	6305760	0.326	0.0470	0.0090	0.0670	0.0290	0.0050	6305760
Dissolved Lithium (Li)	ug/L	0.94	6305760	5.30	6305760	4.46	3.61	2.72	3.57	3.61	0.50	6305760
Dissolved Manganese (Mn)	ug/L	0.148	6305760	0.407	6305760	1220	275	24.7	35.7	23.4	0.050	6305760
Dissolved Molybdenum (Mo)	ug/L	0.174	6305760	0.266	6305760	0.541	0.732	1.23	1.06	1.38	0.050	6305760
Dissolved Nickel (Ni)	ug/L	0.310	6305760	0.466	6305760	2.51	1.17	0.350	0.854	4.32	0.020	6305760
Dissolved Selenium (Se)	ug/L	<0.040	6305760	0.211	6305760	0.388	0.799 ⁽¹⁾	0.814	0.811	1.29	0.040	6305760
Dissolved Silicon (Si)	ug/L	6680	6305760	6550	6305760	5560	5640	5990	5880	3480	100	6305760
Dissolved Silver (Ag)	ug/L	<0.0050	6305760	<0.0050	6305760	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	6305760
Dissolved Strontium (Sr)	ug/L	62.3	6305760	183	6305760	220	211	157	170	235	0.050	6305760
Dissolved Thallium (Tl)	ug/L	0.0020	6305760	0.0030	6305760	0.0040	0.0060	0.0020	0.0050	0.0030	0.0020	6305760
Dissolved Tin (Sn)	ug/L	<0.20	6305760	<0.20	6305760	<0.20	<0.20	<0.20	<0.20	0.23	0.20	6305760
Dissolved Titanium (Ti)	ug/L	<0.50	6305760	<0.50	6305760	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	6305760
Dissolved Uranium (U)	ug/L	0.130	6305760	0.895	6305760	2.09	1.94	2.24	2.16	2.20	0.0020	6305760
Dissolved Vanadium (V)	ug/L	0.38	6305760	<0.20	6305760	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	6305760
Dissolved Zinc (Zn)	ug/L	3.06 ⁽¹⁾	6305760	14.4	6305760	43.5	10.0	0.47	2.38	9.87	0.10	6305760
Dissolved Zirconium (Zr)	ug/L	<0.10	6305760	<0.10	6305760	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	6305760
Dissolved Calcium (Ca)	mg/L	17.6	6291726	44.5	6291726	58.9	57.2	49.1	50.2	53.3	0.050	6291726
Dissolved Magnesium (Mg)	mg/L	2.37	6291726	6.03	6291726	13.1	12.6	11.4	10.9	18.5	0.050	6291726
Dissolved Potassium (K)	mg/L	0.449	6291726	1.49	6291726	1.43	1.50	1.49	1.85	0.866	0.050	6291726
Dissolved Sodium (Na)	mg/L	1.75	6291726	2.64	6291726	3.84	3.25	2.31	2.96	2.24	0.050	6291726
Dissolved Sulphur (S)	mg/L	<10	6291726	<10	6291726	32	25	<10	17	28	10	6291726

RDL = Reportable Detection Limit

(1) - Dissolved greater than total. Reanalysis yields similar results.

Maxxam Job #: B297397
 Report Date: 2012/11/05

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		EV7323		EV7324		EV7325	EV7326	EV7327	EV7328	EV7329		
Sampling Date		2012/10/24 10:25		2012/10/24 11:00		2012/10/24 11:40	2012/10/23 10:15	2012/10/23 10:05	2012/10/23 10:50	2012/10/23 09:25		
COC#		33400402		33400402		33400402	33400402	33400402	33400402	33400402		
	UNITS	W10	QC Batch	NW1D	QC Batch	X14	R4	R6	A1	P1	RDL	QC Batch
Total Metals by ICPMS												
Total Aluminum (Al)	ug/L	15.0	6305658	6.18	6305658	7.50	5.64	19.4	37.1	50.1	0.20	6305658
Total Antimony (Sb)	ug/L	0.028	6305658	0.045	6305658	0.077	0.106	0.122	0.130	0.194	0.020	6305658
Total Arsenic (As)	ug/L	0.135	6305658	0.194	6305658	0.407	0.319	0.476	0.696	0.598	0.020	6305658
Total Barium (Ba)	ug/L	16.4	6305658	47.3	6305658	64.4	79.2	86.0	78.5	87.2	0.020	6305658
Total Beryllium (Be)	ug/L	0.011	6305658	<0.010	6305658	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	6305658
Total Bismuth (Bi)	ug/L	<0.0050	6305658	<0.0050	6305658	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	6305658
Total Boron (B)	ug/L	<50	6305658	<50	6305658	<50	<50	<50	<50	<50	50	6305658
Total Cadmium (Cd)	ug/L	0.0220	6305658	0.0600	6305658	0.0660	0.0310	0.0140	0.0230	0.158	0.0050	6305658
Total Chromium (Cr)	ug/L	<0.10	6305658	<0.10	6305658	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	6305658
Total Cobalt (Co)	ug/L	0.0140	6305658	0.0180	6305658	1.02	0.167	0.0510	0.0710	0.111	0.0050	6305658
Total Copper (Cu)	ug/L	0.902	6305658	0.832	6305658	0.526	0.606	0.650	0.904	0.886	0.050	6305658
Total Iron (Fe)	ug/L	13.9	6305658	7.8	6305658	511	109	133	100	129	1.0	6305658
Total Lead (Pb)	ug/L	0.0730	6305658	0.196	6305658	0.821	0.242	0.199	0.137	0.108	0.0050	6305658
Total Lithium (Li)	ug/L	1.05	6305658	5.38	6305658	4.49	3.46	2.51	3.60	3.62	0.50	6305658
Total Manganese (Mn)	ug/L	0.241	6305658	0.399	6305658	1220	262	23.4	41.1	29.8	0.050	6305658
Total Molybdenum (Mo)	ug/L	0.166	6305658	0.261	6305658	0.579	0.720	1.09	1.05	1.35	0.050	6305658
Total Nickel (Ni)	ug/L	0.301	6305658	0.405	6305658	2.53	1.16	0.372	0.889	4.70	0.020	6305658
Total Selenium (Se)	ug/L	0.054	6305658	0.212	6305658	0.533	0.634	0.826	0.726	1.18	0.040	6305658
Total Silicon (Si)	ug/L	6510	6305658	6580	6305658	5480	5270	5550	5740	3610	100	6305658
Total Silver (Ag)	ug/L	<0.0050	6305658	<0.0050	6305658	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	6305658
Total Strontium (Sr)	ug/L	63.8	6305658	183	6305658	226	200	147	171	235	0.050	6305658
Total Thallium (Tl)	ug/L	0.0020	6305658	0.0030	6305658	0.0040	0.0050	<0.0020	0.0050	0.0040	0.0020	6305658
Total Tin (Sn)	ug/L	<0.20	6305658	<0.20	6305658	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	6305658
Total Titanium (Ti)	ug/L	<0.50	6305658	<0.50	6305658	<0.50	<0.50	<0.50	1.06	0.96	0.50	6305658
Total Uranium (U)	ug/L	0.137	6305658	0.886	6305658	2.18	1.89	2.10	2.10	2.17	0.0020	6305658
Total Vanadium (V)	ug/L	0.41	6305658	<0.20	6305658	<0.20	<0.20	<0.20	0.27	0.27	0.20	6305658
Total Zinc (Zn)	ug/L	1.47	6305658	12.4	6305658	46.6	11.1	0.77	2.85	12.2	0.10	6305658
Total Zirconium (Zr)	ug/L	<0.10	6305658	<0.10	6305658	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	6305658
Total Calcium (Ca)	mg/L	17.9	6291727	45.0	6291727	58.8	53.7	46.1	50.1	53.3	0.050	6291727
Total Magnesium (Mg)	mg/L	2.50	6291727	6.10	6291727	13.5	11.7	10.6	10.9	18.4	0.050	6291727
Total Potassium (K)	mg/L	0.457	6291727	1.48	6291727	1.44	1.37	1.37	1.88	0.840	0.050	6291727
Total Sodium (Na)	mg/L	1.79	6291727	2.67	6291727	3.93	3.02	2.16	2.97	2.21	0.050	6291727
Total Sulphur (S)	mg/L	<10	6291727	<10	6291727	32	23	<10	15	28	10	6291727

RDL = Reportable Detection Limit

Maxxam Job #: B297397
 Report Date: 2012/11/05

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		EV7333	EV7334	EV7335		EV7336		EV7337		
Sampling Date		2012/10/23 11:20								
COC#		33400403	33400403	33400403		33400403		33400403		
	UNITS	P4	BD-1	BD-2	QC Batch	FB	QC Batch	TRIP BLANK	RDL	QC Batch
Dissolved Metals by ICPMS										
Dissolved Aluminum (Al)	ug/L	7.30	7.50	11.9	6307079	0.77	6307079	<0.20	0.20	6307079
Dissolved Antimony (Sb)	ug/L	0.171	0.175	0.038	6307079	<0.020	6307079	<0.020	0.020	6307079
Dissolved Arsenic (As)	ug/L	0.535	0.511	0.531	6307079	<0.020	6307079	<0.020	0.020	6307079
Dissolved Barium (Ba)	ug/L	90.3	89.8	32.1	6307079	0.078	6307079	0.039	0.020	6307079
Dissolved Beryllium (Be)	ug/L	<0.010	<0.010	0.011	6307079	<0.010	6307079	<0.010	0.010	6307079
Dissolved Bismuth (Bi)	ug/L	<0.0050	<0.0050	<0.0050	6307079	<0.0050	6307079	<0.0050	0.0050	6307079
Dissolved Boron (B)	ug/L	<50	<50	<50	6307079	<50	6307079	<50	50	6307079
Dissolved Cadmium (Cd)	ug/L	0.107	0.103	0.0360	6307079	0.0060	6307079	<0.0050	0.0050	6307079
Dissolved Chromium (Cr)	ug/L	<0.10	<0.10	<0.10	6307079	<0.10	6307079	<0.10	0.10	6307079
Dissolved Cobalt (Co)	ug/L	0.0620	0.0590	0.0320	6307079	<0.0050	6307079	<0.0050	0.0050	6307079
Dissolved Copper (Cu)	ug/L	0.724	0.941	0.549	6307079	0.096	6307079	<0.050	0.050	6307079
Dissolved Iron (Fe)	ug/L	27.8	26.3	34.0	6307079	<1.0	6307079	<1.0	1.0	6307079
Dissolved Lead (Pb)	ug/L	0.0260	0.0800	0.0570	6307079	0.0330	6307079	0.0060	0.0050	6307079
Dissolved Lithium (Li)	ug/L	3.75	3.95	0.96	6307079	<0.50	6307079	<0.50	0.50	6307079
Dissolved Manganese (Mn)	ug/L	41.0	40.3	9.96	6307079	<0.050	6307079	<0.050	0.050	6307079
Dissolved Molybdenum (Mo)	ug/L	1.46	1.39	0.152	6307079	<0.050	6307079	<0.050	0.050	6307079
Dissolved Nickel (Ni)	ug/L	3.56	3.54	0.275	6307079	<0.020	6307079	<0.020	0.020	6307079
Dissolved Selenium (Se)	ug/L	1.12	1.08	0.095	6307079	<0.040	6307079	<0.040	0.040	6307079
Dissolved Silicon (Si)	ug/L	4000	3990	5340	6307079	<100	6307079	<100	100	6307079
Dissolved Silver (Ag)	ug/L	<0.0050	<0.0050	<0.0050	6307079	<0.0050	6307079	<0.0050	0.0050	6307079
Dissolved Strontium (Sr)	ug/L	232	234	121	6307079	<0.050	6307079	<0.050	0.050	6307079
Dissolved Thallium (Tl)	ug/L	0.0040	0.0030	0.0030	6307079	<0.0020	6307079	<0.0020	0.0020	6307079
Dissolved Tin (Sn)	ug/L	<0.20	0.31	<0.20	6307079	<0.20	6307079	<0.20	0.20	6307079
Dissolved Titanium (Ti)	ug/L	<0.50	<0.50	<0.50	6307079	<0.50	6307079	<0.50	0.50	6307079
Dissolved Uranium (U)	ug/L	2.18	2.17	1.86	6307079	<0.0020	6307079	<0.0020	0.0020	6307079
Dissolved Vanadium (V)	ug/L	<0.20	<0.20	<0.20	6307079	<0.20	6307079	<0.20	0.20	6307079
Dissolved Zinc (Zn)	ug/L	7.37	7.76	26.0	6307079	0.27	6307079	0.13	0.10	6307079
Dissolved Zirconium (Zr)	ug/L	<0.10	<0.10	<0.10	6307079	<0.10	6307079	<0.10	0.10	6307079
Dissolved Calcium (Ca)	mg/L	54.1	53.6	26.7	6291726	<0.050	6291726	<0.050	0.050	6291726
Dissolved Magnesium (Mg)	mg/L	18.0	17.6	6.84	6291726	<0.050	6291726	<0.050	0.050	6291726
Dissolved Potassium (K)	mg/L	1.13	1.10	0.428	6291726	<0.050	6291726	<0.050	0.050	6291726
Dissolved Sodium (Na)	mg/L	2.60	2.58	1.75	6291726	<0.050	6291726	<0.050	0.050	6291726
Dissolved Sulphur (S)	mg/L	27	25	13	6291726	<10	6291726	<10	10	6291726

RDL = Reportable Detection Limit

Maxxam Job #: B297397
 Report Date: 2012/11/05

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		EV7333	EV7334	EV7335		EV7336		EV7337		
Sampling Date		2012/10/23 11:20								
COC#		33400403	33400403	33400403		33400403		33400403		
	UNITS	P4	BD-1	BD-2	QC Batch	FB	QC Batch	TRIP BLANK	RDL	QC Batch
Total Metals by ICPMS										
Total Aluminum (Al)	ug/L	36.2	33.8	37.2	6305658	0.50	6311389	1.70	0.20	6311389
Total Antimony (Sb)	ug/L	0.167	0.182	0.034	6305658	<0.020	6305658	<0.020	0.020	6305658
Total Arsenic (As)	ug/L	0.601	0.574	0.665	6305658	<0.020	6305658	<0.020	0.020	6305658
Total Barium (Ba)	ug/L	85.9	88.4	30.8	6305658	<0.020	6305658	0.096	0.020	6311389
Total Beryllium (Be)	ug/L	<0.010	<0.010	0.015	6305658	<0.010	6305658	<0.010	0.010	6305658
Total Bismuth (Bi)	ug/L	<0.0050	<0.0050	<0.0050	6305658	<0.0050	6305658	<0.0050	0.0050	6305658
Total Boron (B)	ug/L	<50	<50	<50	6305658	<50	6305658	<50	50	6305658
Total Cadmium (Cd)	ug/L	0.122	0.128	0.0360	6305658	<0.0050	6305658	<0.0050	0.0050	6305658
Total Chromium (Cr)	ug/L	<0.10	<0.10	<0.10	6305658	<0.10	6305658	<0.10	0.10	6305658
Total Cobalt (Co)	ug/L	0.0810	0.0870	0.0570	6305658	<0.0050	6305658	<0.0050	0.0050	6305658
Total Copper (Cu)	ug/L	0.746	0.786	0.521	6305658	<0.050	6305658	0.067	0.050	6305658
Total Iron (Fe)	ug/L	115	107	113	6305658	1.1	6305658	1.8	1.0	6305658
Total Lead (Pb)	ug/L	0.0770	0.0810	0.565	6305658	0.0090	6305658	0.0110	0.0050	6311389
Total Lithium (Li)	ug/L	3.75	3.87	0.91	6305658	<0.50	6305658	<0.50	0.50	6305658
Total Manganese (Mn)	ug/L	43.8	43.8	13.0	6305658	<0.050	6305658	<0.050	0.050	6305658
Total Molybdenum (Mo)	ug/L	1.37	1.39	0.098	6305658	<0.050	6305658	<0.050	0.050	6305658
Total Nickel (Ni)	ug/L	3.69	3.67	0.330	6305658	<0.020	6305658	<0.020	0.020	6311389
Total Selenium (Se)	ug/L	1.04	1.14	0.119	6305658	<0.040	6305658	<0.040	0.040	6305658
Total Silicon (Si)	ug/L	4010	3980	5340	6305658	<100	6305658	<100	100	6305658
Total Silver (Ag)	ug/L	<0.0050	<0.0050	<0.0050	6305658	<0.0050	6305658	<0.0050	0.0050	6305658
Total Strontium (Sr)	ug/L	222	231	116	6305658	<0.050	6305658	0.090	0.050	6311389
Total Thallium (Tl)	ug/L	0.0040	0.0040	0.0040	6305658	<0.0020	6305658	<0.0020	0.0020	6305658
Total Tin (Sn)	ug/L	<0.20	<0.20	<0.20	6305658	<0.20	6305658	0.22	0.20	6305658
Total Titanium (Ti)	ug/L	0.64	0.80	0.97	6305658	<0.50	6305658	<0.50	0.50	6305658
Total Uranium (U)	ug/L	2.07	2.19	1.84	6305658	<0.0020	6305658	<0.0020	0.0020	6305658
Total Vanadium (V)	ug/L	0.23	0.20	<0.20	6305658	<0.20	6305658	<0.20	0.20	6305658
Total Zinc (Zn)	ug/L	8.64	8.64	28.1	6305658	0.14	6305658	0.55	0.10	6311389
Total Zirconium (Zr)	ug/L	<0.10	<0.10	<0.10	6305658	<0.10	6305658	<0.10	0.10	6305658
Total Calcium (Ca)	mg/L	53.3	52.7	26.1	6291727	<0.050	6291727	0.146	0.050	6310821
Total Magnesium (Mg)	mg/L	17.2	17.3	6.62	6291727	<0.050	6291727	<0.050	0.050	6310821
Total Potassium (K)	mg/L	1.05	1.05	0.391	6291727	<0.050	6291727	<0.050	0.050	6310821
Total Sodium (Na)	mg/L	2.53	2.53	1.69	6291727	<0.050	6291727	0.069	0.050	6310821
Total Sulphur (S)	mg/L	25	24	13	6291727	<10	6291727	<10	10	6310821

RDL = Reportable Detection Limit

General Comments

Sample EV7294-01: 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.

Sample EV7295-01: 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.

Sample EV7296-01: 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.

Sample EV7297-01: 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.

Sample EV7298-01: 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.

Sample EV7299-01: 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.

Sample EV7300-01: 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.

Sample EV7301-01: 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.

Sample EV7302-01: 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.

Sample EV7303-01: 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.

Sample EV7320-01: 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.

Sample EV7321-01: 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.

Sample EV7322-01: 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.

Sample EV7323-01: 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.

pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Sample EV7324-01: 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.

Sample EV7325-01: 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.

Sample EV7326-01: 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.

Sample EV7327-01: 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.

Sample EV7328-01: 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.

Sample EV7329-01: 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.

Sample EV7333-01: 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.

Sample EV7334-01: 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.

Sample EV7335-01: 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.

Sample EV7336-01: 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.

Sample EV7337-01: 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.

Sample EV7296, Elements by ICPMS Low Level (dissolved): Test repeated.

Sample EV7302, Elements by ICPMS Low Level (dissolved): Test repeated.

Sample EV7303, Elements by ICPMS Low Level (dissolved): Test repeated.

Sample EV7322, Elements by ICPMS Low Level (dissolved): Test repeated.

Sample EV7324, Elements by ICPMS Low Level (dissolved): Test repeated.

Sample EV7336, Elements by ICPMS Low Level (total): Test repeated.

Sample EV7337, Elements by ICPMS Low Level (total): Test repeated.

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QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
6292853	Turbidity	2012/10/26			103	80 - 120	<0.10	NTU	6.1	20
6295047	Total Suspended Solids	2012/10/27			99	80 - 120	<1.0	mg/L		
6295326	Turbidity	2012/10/27			104	80 - 120	<0.10	NTU	NC	20
6295413	Alkalinity (Total as CaCO ₃)	2012/10/27	NC	80 - 120	97	80 - 120	0.53, RDL=0.50	mg/L	1.2	20
6295413	Alkalinity (PP as CaCO ₃)	2012/10/27					<0.50	mg/L	NC	20
6295413	Bicarbonate (HCO ₃)	2012/10/27					0.65, RDL=0.50	mg/L	1.2	20
6295413	Carbonate (CO ₃)	2012/10/27					<0.50	mg/L	NC	20
6295413	Hydroxide (OH)	2012/10/27					<0.50	mg/L	NC	20
6295419	Conductivity	2012/10/27			101	80 - 120	<1.0	uS/cm	0.5	20
6295628	Nitrate plus Nitrite (N)	2012/10/27	99	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25
6295629	Nitrite (N)	2012/10/27	96	80 - 120	99	80 - 120	<0.0020	mg/L	NC	25
6296648	Ammonia (N)	2012/10/29	97	80 - 120	99	80 - 120	<0.0050	mg/L	NC	20
6298612	Dissolved Chloride (Cl)	2012/10/29	104	80 - 120	104	80 - 120	<0.50	mg/L	NC	20
6299000	Dissolved Sulphate (SO ₄)	2012/10/29	115	80 - 120	99	80 - 120	<0.50	mg/L	1.8	20
6299297	Total Dissolved Solids	2012/10/29	NC	80 - 120	110	80 - 120	<10	mg/L	2.0	20
6302294	Dissolved Chloride (Cl)	2012/10/30			106	80 - 120	<0.50	mg/L	NC	20
6302419	Total Dissolved Solids	2012/10/30	NC	80 - 120	100	80 - 120	<10	mg/L	0.9	20
6302816	Dissolved Organic Carbon (C)	2012/10/30	103	80 - 120	108	80 - 120	<0.50	mg/L	4.8	20
6302818	Total Organic Carbon (C)	2012/10/30	103	80 - 120	108	80 - 120	<0.50	mg/L	NC	20
6302997	Alkalinity (Total as CaCO ₃)	2012/10/30	NC	80 - 120	100	80 - 120	<0.50	mg/L	0.8	20
6302997	Alkalinity (PP as CaCO ₃)	2012/10/30					<0.50	mg/L	NC	20
6302997	Bicarbonate (HCO ₃)	2012/10/30					<0.50	mg/L	0.8	20
6302997	Carbonate (CO ₃)	2012/10/30					<0.50	mg/L	NC	20
6302997	Hydroxide (OH)	2012/10/30					<0.50	mg/L	NC	20
6303042	Conductivity	2012/10/30			101	80 - 120	<1.0	uS/cm	0.5	20
6305654	Total Aluminum (Al)	2012/11/02	102	80 - 120	99	80 - 120	<0.20	ug/L	NC	20
6305654	Total Antimony (Sb)	2012/11/02	100	80 - 120	98	80 - 120	<0.020	ug/L	NC	20
6305654	Total Arsenic (As)	2012/11/02	99	80 - 120	91	80 - 120	<0.020	ug/L	NC	20
6305654	Total Barium (Ba)	2012/11/02	97	80 - 120	95	80 - 120	<0.020	ug/L	NC	20
6305654	Total Beryllium (Be)	2012/11/02	98	80 - 120	95	80 - 120	<0.010	ug/L	NC	20
6305654	Total Bismuth (Bi)	2012/11/02	86	80 - 120	95	80 - 120	<0.0050	ug/L	NC	20
6305654	Total Cadmium (Cd)	2012/11/02	100	80 - 120	96	80 - 120	<0.0050	ug/L	NC	20
6305654	Total Chromium (Cr)	2012/11/02	101	80 - 120	94	80 - 120	<0.10	ug/L	NC	20
6305654	Total Cobalt (Co)	2012/11/02	98	80 - 120	95	80 - 120	<0.0050	ug/L	NC	20
6305654	Total Copper (Cu)	2012/11/02	97	80 - 120	97	80 - 120	<0.050	ug/L	NC	20
6305654	Total Iron (Fe)	2012/11/02	103	80 - 120	104	80 - 120	<1.0	ug/L	NC	20
6305654	Total Lead (Pb)	2012/11/02	98	80 - 120	97	80 - 120	<0.0050	ug/L	NC	20
6305654	Total Lithium (Li)	2012/11/02	97	80 - 120	95	80 - 120	<0.50	ug/L	NC	20
6305654	Total Manganese (Mn)	2012/11/02	97	80 - 120	94	80 - 120	<0.050	ug/L	NC	20
6305654	Total Molybdenum (Mo)	2012/11/02	97	80 - 120	98	80 - 120	<0.050	ug/L	NC	20

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QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
6305654	Total Nickel (Ni)	2012/11/02	96	80 - 120	97	80 - 120	<0.020	ug/L	NC	20
6305654	Total Selenium (Se)	2012/11/02	107	80 - 120	96	80 - 120	<0.040	ug/L	NC	20
6305654	Total Silver (Ag)	2012/11/02	102	80 - 120	104	80 - 120	<0.0050	ug/L	NC	20
6305654	Total Strontium (Sr)	2012/11/02	100	80 - 120	97	80 - 120	<0.050	ug/L	NC	20
6305654	Total Thallium (Tl)	2012/11/02	99	80 - 120	97	80 - 120	<0.0020	ug/L	NC	20
6305654	Total Tin (Sn)	2012/11/02	102	80 - 120	99	80 - 120	<0.20	ug/L	NC	20
6305654	Total Titanium (Ti)	2012/11/02	97	80 - 120	95	80 - 120	<0.50	ug/L	NC	20
6305654	Total Uranium (U)	2012/11/02	97	80 - 120	97	80 - 120	<0.0020	ug/L	NC	20
6305654	Total Vanadium (V)	2012/11/02	98	80 - 120	96	80 - 120	<0.20	ug/L	NC	20
6305654	Total Zinc (Zn)	2012/11/02	109	80 - 120	98	80 - 120	<0.10	ug/L	NC	20
6305654	Total Boron (B)	2012/11/02					<50	ug/L	NC	20
6305654	Total Silicon (Si)	2012/11/02					<100	ug/L	NC	20
6305654	Total Zirconium (Zr)	2012/11/02					<0.10	ug/L	NC	20
6305658	Total Aluminum (Al)	2012/11/02	104	80 - 120	104	80 - 120	<0.20	ug/L		
6305658	Total Antimony (Sb)	2012/11/02	99	80 - 120	98	80 - 120	<0.020	ug/L	NC	20
6305658	Total Arsenic (As)	2012/11/02	103	80 - 120	95	80 - 120	<0.020	ug/L	NC	20
6305658	Total Barium (Ba)	2012/11/02	97	80 - 120	96	80 - 120	<0.020	ug/L	NC	20
6305658	Total Beryllium (Be)	2012/11/02	100	80 - 120	95	80 - 120	<0.010	ug/L	NC	20
6305658	Total Bismuth (Bi)	2012/11/02	87	80 - 120	94	80 - 120	<0.0050	ug/L	NC	20
6305658	Total Cadmium (Cd)	2012/11/02	100	80 - 120	97	80 - 120	<0.0050	ug/L	NC	20
6305658	Total Chromium (Cr)	2012/11/02	101	80 - 120	96	80 - 120	<0.10	ug/L	NC	20
6305658	Total Cobalt (Co)	2012/11/02	100	80 - 120	95	80 - 120	<0.0050	ug/L	NC	20
6305658	Total Copper (Cu)	2012/11/02	98	80 - 120	94	80 - 120	<0.050	ug/L	NC	20
6305658	Total Iron (Fe)	2012/11/02	104	80 - 120	102	80 - 120	<1.0	ug/L	NC	20
6305658	Total Lead (Pb)	2012/11/02	97	80 - 120	96	80 - 120	<0.0050	ug/L	NC	20
6305658	Total Lithium (Li)	2012/11/02	99	80 - 120	95	80 - 120	<0.50	ug/L	NC	20
6305658	Total Manganese (Mn)	2012/11/02	102	80 - 120	96	80 - 120	<0.050	ug/L	NC	20
6305658	Total Molybdenum (Mo)	2012/11/02	95	80 - 120	94	80 - 120	<0.050	ug/L	NC	20
6305658	Total Nickel (Ni)	2012/11/02	102	80 - 120	97	80 - 120	<0.020	ug/L	NC	20
6305658	Total Selenium (Se)	2012/11/02	115	80 - 120	100	80 - 120	<0.040	ug/L	NC	20
6305658	Total Silver (Ag)	2012/11/02	101	80 - 120	104	80 - 120	<0.0050	ug/L	NC	20
6305658	Total Strontium (Sr)	2012/11/02	98	80 - 120	97	80 - 120	<0.050	ug/L	NC	20
6305658	Total Thallium (Tl)	2012/11/02	95	80 - 120	95	80 - 120	<0.0020	ug/L	NC	20
6305658	Total Tin (Sn)	2012/11/02	99	80 - 120	100	80 - 120	<0.20	ug/L	NC	20
6305658	Total Titanium (Ti)	2012/11/02	96	80 - 120	96	80 - 120	<0.50	ug/L	NC	20
6305658	Total Uranium (U)	2012/11/02	95	80 - 120	96	80 - 120	<0.0020	ug/L	NC	20
6305658	Total Vanadium (V)	2012/11/02	99	80 - 120	99	80 - 120	<0.20	ug/L	NC	20
6305658	Total Zinc (Zn)	2012/11/02	110	80 - 120	99	80 - 120	<0.10	ug/L	NC	20
6305658	Total Boron (B)	2012/11/02					<50	ug/L	NC	20
6305658	Total Silicon (Si)	2012/11/02					<100	ug/L	NC	20

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			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
6305658	Total Zirconium (Zr)	2012/11/02					<0.10	ug/L	NC	20
6305760	Dissolved Aluminum (Al)	2012/11/02	98	80 - 120	104	80 - 120	<0.20	ug/L	2.6	20
6305760	Dissolved Antimony (Sb)	2012/11/02	96	80 - 120	100	80 - 120	<0.020	ug/L	NC	20
6305760	Dissolved Arsenic (As)	2012/11/02	96	80 - 120	101	80 - 120	<0.020	ug/L	10.6	20
6305760	Dissolved Barium (Ba)	2012/11/02	NC	80 - 120	98	80 - 120	<0.020	ug/L	2.7	20
6305760	Dissolved Beryllium (Be)	2012/11/02	95	80 - 120	94	80 - 120	<0.010	ug/L	NC	20
6305760	Dissolved Bismuth (Bi)	2012/11/02	87	80 - 120	96	80 - 120	<0.0050	ug/L	NC	20
6305760	Dissolved Cadmium (Cd)	2012/11/02	94	80 - 120	96	80 - 120	<0.0050	ug/L	NC	20
6305760	Dissolved Chromium (Cr)	2012/11/02	91	80 - 120	99	80 - 120	<0.10	ug/L	NC	20
6305760	Dissolved Cobalt (Co)	2012/11/02	91	80 - 120	100	80 - 120	<0.0050	ug/L	NC	20
6305760	Dissolved Copper (Cu)	2012/11/02	91	80 - 120	98	80 - 120	<0.050	ug/L	9.7	20
6305760	Dissolved Iron (Fe)	2012/11/02	96	80 - 120	104	80 - 120	<1.0	ug/L	6.7	20
6305760	Dissolved Lead (Pb)	2012/11/02	93	80 - 120	98	80 - 120	<0.0050	ug/L	54.8 ⁽¹⁾	20
6305760	Dissolved Lithium (Li)	2012/11/02	94	80 - 120	96	80 - 120	<0.50	ug/L	NC	20
6305760	Dissolved Manganese (Mn)	2012/11/02	91	80 - 120	101	80 - 120	<0.050	ug/L	4.0	20
6305760	Dissolved Molybdenum (Mo)	2012/11/02	91	80 - 120	94	80 - 120	<0.050	ug/L	NC	20
6305760	Dissolved Nickel (Ni)	2012/11/02	91	80 - 120	100	80 - 120	<0.020	ug/L	15.3	20
6305760	Dissolved Selenium (Se)	2012/11/02	97	80 - 120	103	80 - 120	<0.040	ug/L	NC	20
6305760	Dissolved Silver (Ag)	2012/11/02	96	80 - 120	104	80 - 120	<0.0050	ug/L	NC	20
6305760	Dissolved Strontium (Sr)	2012/11/02	NC	80 - 120	99	80 - 120	<0.050	ug/L	3.0	20
6305760	Dissolved Thallium (Tl)	2012/11/02	98	80 - 120	99	80 - 120	<0.0020	ug/L	NC	20
6305760	Dissolved Tin (Sn)	2012/11/02	96	80 - 120	103	80 - 120	<0.20	ug/L	NC	20
6305760	Dissolved Titanium (Ti)	2012/11/02	90	80 - 120	94	80 - 120	<0.50	ug/L	NC	20
6305760	Dissolved Uranium (U)	2012/11/02	95	80 - 120	98	80 - 120	<0.0020	ug/L	4.0	20
6305760	Dissolved Vanadium (V)	2012/11/02	89	80 - 120	102	80 - 120	<0.20	ug/L	NC	20
6305760	Dissolved Zinc (Zn)	2012/11/02	101	80 - 120	102	80 - 120	<0.10	ug/L	6.2	20
6305760	Dissolved Boron (B)	2012/11/02					<50	ug/L	NC	20
6305760	Dissolved Silicon (Si)	2012/11/02					<100	ug/L	0.05	20
6305760	Dissolved Zirconium (Zr)	2012/11/02					<0.10	ug/L	NC	20
6307079	Dissolved Aluminum (Al)	2012/11/02	110	80 - 120	100	80 - 120	<0.20	ug/L	NC	20
6307079	Dissolved Antimony (Sb)	2012/11/02	107	80 - 120	95	80 - 120	<0.020	ug/L	NC	20
6307079	Dissolved Arsenic (As)	2012/11/02	106	80 - 120	91	80 - 120	<0.020	ug/L	NC	20
6307079	Dissolved Barium (Ba)	2012/11/02	102	80 - 120	93	80 - 120	<0.020	ug/L	NC	20
6307079	Dissolved Beryllium (Be)	2012/11/02	104	80 - 120	90	80 - 120	<0.010	ug/L	NC	20
6307079	Dissolved Bismuth (Bi)	2012/11/02	91	80 - 120	93	80 - 120	<0.0050	ug/L	NC	20
6307079	Dissolved Cadmium (Cd)	2012/11/02	105	80 - 120	93	80 - 120	<0.0050	ug/L	NC	20
6307079	Dissolved Chromium (Cr)	2012/11/02	102	80 - 120	91	80 - 120	<0.10	ug/L	NC	20
6307079	Dissolved Cobalt (Co)	2012/11/02	99	80 - 120	90	80 - 120	<0.0050	ug/L	NC	20
6307079	Dissolved Copper (Cu)	2012/11/02	99	80 - 120	90	80 - 120	<0.050	ug/L	NC	20
6307079	Dissolved Iron (Fe)	2012/11/02	106	80 - 120	98	80 - 120	<1.0	ug/L	NC	20

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QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
6307079	Dissolved Lead (Pb)	2012/11/02	101	80 - 120	95	80 - 120	<0.0050	ug/L	3.1	20
6307079	Dissolved Lithium (Li)	2012/11/02	101	80 - 120	92	80 - 120	<0.50	ug/L	NC	20
6307079	Dissolved Manganese (Mn)	2012/11/02	104	80 - 120	92	80 - 120	<0.050	ug/L	NC	20
6307079	Dissolved Molybdenum (Mo)	2012/11/02	99	80 - 120	91	80 - 120	<0.050	ug/L	NC	20
6307079	Dissolved Nickel (Ni)	2012/11/02	100	80 - 120	93	80 - 120	<0.020	ug/L	NC	20
6307079	Dissolved Selenium (Se)	2012/11/02	116	80 - 120	92	80 - 120	<0.040	ug/L	NC	20
6307079	Dissolved Silver (Ag)	2012/11/02	108	80 - 120	98	80 - 120	<0.0050	ug/L	NC	20
6307079	Dissolved Strontium (Sr)	2012/11/02	105	80 - 120	96	80 - 120	<0.050	ug/L	NC	20
6307079	Dissolved Thallium (Tl)	2012/11/02	102	80 - 120	97	80 - 120	<0.0020	ug/L	NC	20
6307079	Dissolved Tin (Sn)	2012/11/02	109	80 - 120	97	80 - 120	<0.20	ug/L	NC	20
6307079	Dissolved Titanium (Ti)	2012/11/02	94	80 - 120	96	80 - 120	<0.50	ug/L	NC	20
6307079	Dissolved Uranium (U)	2012/11/02	101	80 - 120	94	80 - 120	<0.0020	ug/L	NC	20
6307079	Dissolved Vanadium (V)	2012/11/02	102	80 - 120	92	80 - 120	<0.20	ug/L	NC	20
6307079	Dissolved Zinc (Zn)	2012/11/02	112	80 - 120	95	80 - 120	<0.10	ug/L	NC	20
6307079	Dissolved Boron (B)	2012/11/02					<50	ug/L	NC	20
6307079	Dissolved Silicon (Si)	2012/11/02					<100	ug/L	NC	20
6307079	Dissolved Zirconium (Zr)	2012/11/02					<0.10	ug/L	NC	20
6309354	Alkalinity (Total as CaCO3)	2012/11/01	NC	80 - 120	98	80 - 120	<0.50	mg/L	0.7	20
6309354	Alkalinity (PP as CaCO3)	2012/11/01					<0.50	mg/L	NC	20
6309354	Bicarbonate (HCO3)	2012/11/01					<0.50	mg/L	0.7	20
6309354	Carbonate (CO3)	2012/11/01					<0.50	mg/L	NC	20
6309354	Hydroxide (OH)	2012/11/01					<0.50	mg/L	NC	20
6309363	Conductivity	2012/11/01			98	80 - 120	<1.0	uS/cm	1.7	20
6311389	Total Aluminum (Al)	2012/11/03	101	80 - 120	103	80 - 120	<0.20	ug/L	3.2	20
6311389	Total Barium (Ba)	2012/11/03	NC	80 - 120	99	80 - 120	<0.020	ug/L	0.03	20
6311389	Total Lead (Pb)	2012/11/03	94	80 - 120	97	80 - 120	<0.0050	ug/L	6.3	20
6311389	Total Nickel (Ni)	2012/11/03	99	80 - 120	102	80 - 120	<0.020	ug/L	15.7	20
6311389	Total Strontium (Sr)	2012/11/03	NC	80 - 120	96	80 - 120	<0.050	ug/L	2.0	20
6311389	Total Zinc (Zn)	2012/11/03	105	80 - 120	104	80 - 120	<0.10	ug/L	7.3	20
6314274	Dissolved Cadmium (Cd)	2012/11/05			104	80 - 120	<0.0050	ug/L		
6314274	Dissolved Copper (Cu)	2012/11/05			89	80 - 120	<0.050	ug/L		

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QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
6314274	Dissolved Nickel (Ni)	2012/11/05			93	80 - 120	<0.020	ug/L		
6314274	Dissolved Zinc (Zn)	2012/11/05			99	80 - 120	<0.10	ug/L		

N/A = Not Applicable

RDL = Reportable Detection Limit

RPD = Relative Percent Difference

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 to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

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 not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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


Validation Signature Page

Maxxam Job #: B297397


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



Jennifer Villocero, Burnaby Sample Logins



David Huang, BBV Scientific Specialist



Andy Lu, Data Validation Coordinator

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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.

INVOICE INFORMATION:		REPORT INFORMATION (if differs from invoice):			PROJECT INFORMATION:		Laboratory Use Only:	
Company Name: #3673 LABERGE ENVIRONMENTAL SERVICES	Company Name:	Company Name:	Quotation #: B20552	MAXXAM JOB #: B297397	BOTTLE ORDER #: 334004		CHAIN OF CUSTODY #: 06334004-01-01	
Contact Name: Bonnie Burns	Contact Name:	Contact Name:	P.O. #:	PROJECT MANAGER: Tabitha Ruckin		PROJECT MANAGER:		
Address: 405 Ogilvie Street PO Box 21072	Address:	Address:	Project #:	PROJECT MANAGER:		PROJECT MANAGER:		
Whitehorse YT Y1A 6P7	Address:	Address:	Project Name:	PROJECT MANAGER:		PROJECT MANAGER:		
Phone: (867)668-6838	Phone:	Phone:	Site #:	PROJECT MANAGER:		PROJECT MANAGER:		
Fac: (867)668-6838	Fac:	Fac:	Sampled By:	PROJECT MANAGER:		PROJECT MANAGER:		
Email: bonnieburns@northwestel.net	Email:	Email:		PROJECT MANAGER:		PROJECT MANAGER:		

REGULATORY CRITERIA:		SPECIAL INSTRUCTIONS:		ANALYSIS REQUESTED (Please be specific):								TURNAROUND TIME (TAT) REQUIRED:	
<input type="checkbox"/> CSR <input type="checkbox"/> CCME <input type="checkbox"/> BC Water Quality <input type="checkbox"/> Other: _____				Metals Field Filtered ? (Y/N) <input type="checkbox"/> pH, Conductivity, Alkalinity <input type="checkbox"/> Anions (Cl, SO4, NH4, NO3) <input type="checkbox"/> TSS/TDS <input type="checkbox"/> Low Level Dissolved Metals plus Hardness <input type="checkbox"/> Low Level Total Metals in Water <input type="checkbox"/> TOC, DOC <input type="checkbox"/> Turbidity <input type="checkbox"/>								PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS Regular (Standard) TAT: <input type="checkbox"/> (will be applied if Rush TAT is not specified) Standard TAT = 5 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) <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> Date Required: _____	

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)	pH, Conductivity, Alkalinity	Anions (Cl, SO4, NH4, NO3)	TSS/TDS	Low Level Dissolved Metals plus Hardness	Low Level Total Metals in Water	TOC, DOC	Turbidity	# of Bottles	Comments
EV7294	VR	Oct 23/12	16:30	H2O	✓	✓	✓	✓	✓	✓	✓	✓	5	
295	V17A	"	16:00	"	✓	✓	✓	✓	✓	✓	✓	✓	5	
296	VW3	Oct 24/12	14:20	"	✓	✓	✓	✓	✓	✓	✓	✓	5	
297	VW1	Oct 22/12	16:35	"	✓	✓	✓	✓	✓	✓	✓	✓	5	
298	VW2	"	16:10	"	✓	✓	✓	✓	✓	✓	✓	✓	5	
299	V20A	Oct 23/12	15:00	"	✓	✓	✓	✓	✓	✓	✓	✓	5	
300	VG MAIN	Oct 22/12	15:20	"	✓	✓	✓	✓	✓	✓	✓	✓	5	B297397
301	V8	"	17:15	"	✓	✓	✓	✓	✓	✓	✓	✓	5	
302	USFR	Oct 24/12	9:05	"	✓	✓	✓	✓	✓	✓	✓	✓	5	
303	GCULV	"	14:00	"	✓	✓	✓	✓	✓	✓	✓	✓	5	

RELINQUISHED BY: (Signature/Print)	Date: (YYMMDD)	Time:	RECEIVED BY: (Signature/Print)	Date: (YYMMDD)	Time:	# Jars Used and Not Submitted	Laboratory Use Only	
			<i>Michelle Beatty</i>	10/24/12	10:00		Time Sensitive <input type="checkbox"/>	Temperature (°C) on Receipt: 22.2/22.2
							Ready for Initial on Cooler? <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

* 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.

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INVOICE INFORMATION:		REPORT INFORMATION (if differs from invoice):			PROJECT INFORMATION:		Laboratory Use Only:	
Company Name: #3673 LABERGE ENVIRONMENTAL SERVICES	Company Name:	Question #: B20552	MAXXAM JOB #:		BOTTLE ORDER #:		PROJECT MANAGER:	
Contact Name: Bonnie Burns	Contact Name:	P.O. #:	CHAIN OF CUSTODY #:		PROJECT MANAGER:		Tabitha Rudin	
Address: 405 Ogilvie Street PO Box 21072	Address:	Project #:	CHAIN OF CUSTODY #:		PROJECT MANAGER:		Tabitha Rudin	
Whitehorse YT Y1A 6P7	Address:	Project Name:	CHAIN OF CUSTODY #:		PROJECT MANAGER:		Tabitha Rudin	
Phone: (867)668-6838 Fax:	Phone:	Site #:	CHAIN OF CUSTODY #:		PROJECT MANAGER:		Tabitha Rudin	
Email: bonnieburns@northwestel.net	Email:	Sampled By:	CHAIN OF CUSTODY #:		PROJECT MANAGER:		Tabitha Rudin	

REGULATORY CRITERIA <input type="checkbox"/> CSR <input type="checkbox"/> CCME <input type="checkbox"/> BC Water Quality <input type="checkbox"/> Other: _____	SPECIAL INSTRUCTIONS 	ANALYSIS REQUESTED (Please be specific) Metals Field Filtered? (Y/N) _____ pH, Conductivity, Alkalinity _____ Anions (Cl, SO4, NH4, NO3) _____ TSS/TDS _____ Low Level Dissolved Metals plus Hardness _____ Low Level Total Metals in Water _____ TOC, DOC _____ Turbidity _____	TURNAROUND TIME (TAT) REQUIRED: PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECT! Regular (Standard) TAT: (will be applied if Rush TAT is not specified) <input type="checkbox"/> Standard TAT = 5 working days for most tests Please note: Standard TAT for certain tests such as BOD and Dissolved Metals are +5 days - contact your Project Manager for details. Job Specific Rush TAT (if applies to entire submission) <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> Date Required: _____
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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)	pH, Conductivity, Alkalinity	Anions (Cl, SO4, NH4, NO3)	TSS/TDS	Low Level Dissolved Metals plus Hardness	Low Level Total Metals in Water	TOC, DOC	Turbidity	# of Bottles	Comments
EV7320	K8	Oct 24/12	13:30	H2O	✓	✓	✓	✓	✓	✓	✓	✓	5	
321	R1	"	12:45	"	✓	✓	✓	✓	✓	✓	✓	✓	5	
322	FC	"	09:45	"	✓	✓	✓	✓	✓	✓	✓	✓	5	
323	W10	"	10:25	"	✓	✓	✓	✓	✓	✓	✓	✓	5	
324	NW1D	"	11:00	"	✓	✓	✓	✓	✓	✓	✓	✓	5	
325	X14	"	11:40	"	✓	✓	✓	✓	✓	✓	✓	✓	5	
326	R4	Oct 23/12	10:15	"	✓	✓	✓	✓	✓	✓	✓	✓	5	
327	R6	"	10:05	"	✓	✓	✓	✓	✓	✓	✓	✓	5	
328	A1	"	10:50	"	✓	✓	✓	✓	✓	✓	✓	✓	5	
329	P1	"	09:25	"	✓	✓	✓	✓	✓	✓	✓	✓	5	

*RELINQUISHED BY: (Signature/Print)	Date: (YYMMDD)	Time:	RECEIVED BY: (Signature/Print)	Date: (YYMMDD)	Time:	# Jars Used and Not Submitted	Laboratory Use Only
			<i>[Signature]</i>	10/24/12	10:00		Time Sampled: <input type="checkbox"/> Temperature (°C) on Receipt: 22.2/22.2 Analytical Test Used on Cooler? <input type="checkbox"/> Yes <input type="checkbox"/> 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.

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INVOICE INFORMATION:		REPORT INFORMATION (if differs from invoice):			PROJECT INFORMATION:		Laboratory Use Only:	
Company Name: #3573 LABERGE ENVIRONMENTAL SERVICES	Company Name:	Quotation #: B20552	MAXXAM JOB #:	Bottle Order #:	P.O. #:		B297397	
Contact Name: Bonnie Burns	Contact Name:	Project #:	CHAIN OF CUSTODY #:		Project Name:		PROJECT MANAGER:	
Address: 405 Ogilvie Street PO Box 21072	Address:	Site #:	PROJECT MANAGER:		Project Name:		Tabitha Rubin	
Phone: (607) 668-8838 Fax:	Phone: Fax:	Sampled by:	PROJECT MANAGER:		Project Name:		PROJECT MANAGER:	
Email: bonnieburns@northwestel.net	Email:		PROJECT MANAGER:		Project Name:		PROJECT MANAGER:	

REGULATORY CRITERIA	SPECIAL INSTRUCTIONS	ANALYSIS REQUESTED (Please be specific)											TURNAROUND TIME (TAT) REQUIRED:	
<input type="checkbox"/> CDR <input type="checkbox"/> CCME <input type="checkbox"/> BC Water Quality <input type="checkbox"/> Other _____													PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS Regular (Standard) TAT: (will be applied if Rush TAT is not specified) <input type="checkbox"/> Standard TAT = 5 working days for most tests Please note: Standard TAT for certain tests such as BOD and Decolor/Forams are > 5 days - contact your Project Manager for details Job Specific Rush TAT (if applies to entire submission) <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> Data Required: _____	

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	Micros Field Filtered? (Y/N)	pH, Conductivity, Alkalinity	Anions (Cl, SO4, NH4, NO3)	TSS/TDS	Low Level Dissolved Metals plus Hardness	Low Level Total Metals in Water	TOC, DOC	Turbidity						# of Bottles	Comments
EV7333	P4	Oct 3/12	11:20	H2O	✓	✓	✓	✓	✓	✓	✓	✓						5	
334	BD-1			"	✓	✓	✓	✓	✓	✓	✓	✓						5	
335	BD-2			"	✓	✓	✓	✓	✓	✓	✓	✓						5	
336	FB			"	✓	✓	✓	✓	✓	✓	✓	✓						5	
337	Trip Blank			"		✓	✓	✓	✓	✓	✓	✓						5	



B297397

RELINQUISHED BY: (Signature/Print) <i>Bonnie Burns</i>	Date: (YY/MM/DD) 12/10/12	Time:	RECEIVED BY: (Signature/Print) <i>Tabitha Rubin</i>	Date: (YY/MM/DD) 10/10/12	Time: 10:00	# Jars Used and Not Submitted	Laboratory Use Only
						<input type="checkbox"/>	Temperature (°C) on Receipt: 22.2/22.2 Only Seal Intact on Cooler? <input type="checkbox"/> Yes <input type="checkbox"/> No

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