TETRA TECH EBA

October 23, 2014

ISSUED FOR USE
FILE: ENVMIN03024-01
Via Email: dave@pdiam.com

Peregrine Diamonds Ltd.
201 - 1250 Homer Street
Vancouver, BC V6B1C6

Attention: David Willis
Lands Administrator

Subject: Chidliak Exploration Site CH6
August 2014 Water Quality Sampling Event

1.0 INTRODUCTION

Peregrine Diamonds Ltd.'s (Peregrine's) Type B Water Licence (#2BE-CHI1218) (the Water Licence) specifies effluent quality criteria for discharged water from trench containment areas on the Chidliak property, Nunavut (Map 1). To ensure that water quality at Peregrine's CH6 exploration trench meets the Water Licence criteria, Tetra Tech EBA Inc. (Tetra Tech EBA) collected water quality samples within and surrounding the trench on August 9, 2014[1]. Results from this water quality sampling event are provided and compared to the Water Licence criteria.

Trenching at CH6 was conducted in the winter of 2013, and the trench is approximately 450 m^2. At the trench site, the landscape is characterized by a mid-slope barren rock habitat with a gentle gradient to the north northwest. The nearest sensitive receiving environment is a creek at least 450 m to the northwest of the CH6 trench. At the time of the sampling event, water overflow from the trench did not reach as far as the creek (Photo 1).

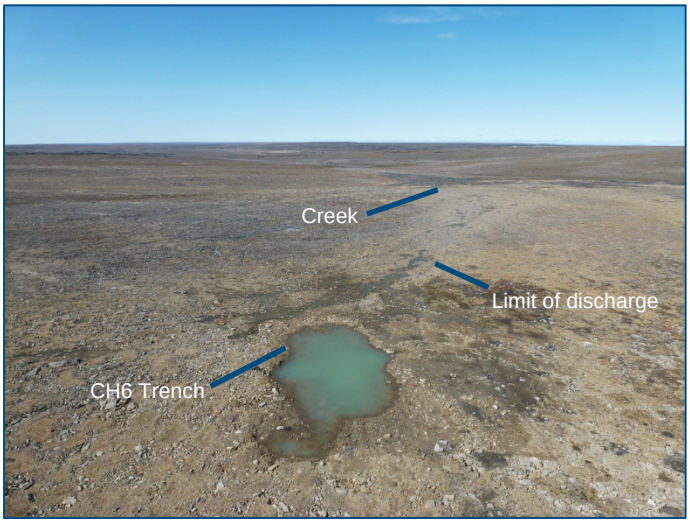

Photo 1: Looking north at the limit of overflow discharged from the CH6 trench and the unnamed creek in the distance.

This sampling program was conducted in conjunction with the 2014 baseline environmental studies that included surface water quality sampling at 28 annual monitoring lakes, rivers, and streams in the regional study area.

[1] During this time, site weather conditions were overcast, approximately 10 degrees Celsius (°C), and high winds (approximately 40 kilometres per hour (km/hr).

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2.0 SAMPLING METHODS

Ms. Karla Langlois, B.Sc., P.Biol., of Tetra Tech EBA, conducted the sampling program following standard grab-sampling methods consistent with those employed during previous baseline programs in the study area since 2009. Grab samples were collected and submitted for laboratory analysis of routine parameters, nutrients, total metals, total organic carbon, and oil and grease. A calibrated handheld Oakton® multi-parameter meter was used to record in situ field parameters such as pH, electrical conductivity (EC), and water temperature.

3.0 EXPLORATION CH6 TRENCH SAMPLING RESULTS

Two water quality samples were collected at the time of the sampling event:

1. along the shoreline of the CH6 trench; and

2. immediately down-gradient of the CH6 trench within a small overflow area.

During this time, the surface water in the trench was slightly turbid and there was no evidence of odour or surface sheen (Photo 2). In situ water chemistry measurements indicated the water was near neutral (pH 6.7), with low EC (14.0 microsiemens per centimetre [µS/cm]), and relatively warm (10.7°C).

Photo 2: Looking across the CH6 trench from its water quality sampling location.

Water in the overflow area was shallow, with a maximum depth 11 cm, and flowing in braided channels across the tundra. The channels wetted width was approximately 25 m and the water appeared slightly turbid with no evidence of odour or surface sheen (Photo 3). In situ water chemistry measurements indicated the water was near neutral (pH 6.9), with low EC (13.8 µS/cm), and relatively warm (10.7°C).

Photo 3: Looking south towards the CH6 trench from the overflow water quality sampling location.

Water quality samples were submitted to ALS Laboratory Group (ALS) in Yellowknife on August 14, 2014, and analyzed for the full suite of parameters required under the Water Licence.

The Water Licence provides effluent quality criteria for water discharged from the trench as the Maximum Concentration of Any Grab Sample (MCAGS) for eight water quality parameters (arsenic, copper, lead, nickel, zinc, total suspended solids, oil and grease, and pH). Analytical results from the water samples collected from the trench and in the trench overflow indicate that all parameters were well below the Water Licence effluent quality criteria (Table 3-1). The laboratory analytical results are provided in Appendix A.

Table 3-1: Water Quality Analytical Results Compared to the Water Licence (#2BE-CHI1218)

Parameter	CH6 Trench	CH6 Trench Overflow	Units	Detection Limit	Water Licence MCAGS* Criteria
Total Arsenic	<0.00040	<0.00040	mg/L	0.00040	0.50
Total Copper	<0.0010	<0.0010	mg/L	0.0010	0.30
Total Lead	0.00013	0.00013	mg/L	0.00010	0.20
Total Nickel	<0.0020	<0.0020	mg/L	0.0020	0.50
Total Zinc	<0.0040	<0.0040	mg/L	0.0040	0.50
Total Suspended Solids	3.8	<3.0	mg/L	3.0	25.0
Oil and Grease	<1.0 (no visible sheen)	<1.0 (no visible sheen)	mg/L	1.0	No visible sheen
pH	6.38	6.56	-	-	6 - 9.5

* MCAGS criteria = Maximum Concentration of Any Grab Sample

Quality control samples were also included as part of the standardized sampling protocol during the baseline environmental studies. These quality control samples included field and travel blanks and three duplicate samples. The duplicate water quality samples and a field blank were collected on site, and a travel blank accompanied the sample bottles to the site, left intact, and returned to the laboratory with the water quality samples. Laboratory analysis of these quality control samples indicate that the sample methods employed during the collection, transportation, and analyses of the samples are considered satisfactory and did not lead to the introduction of potential contaminants for all parameters specified under the Water Licence.

Satisfactory sampling methods are indicated by the travel and field blank results being below their respective laboratory detection limit for parameters specified under the Water Licence (Table 3-2).

Table 3-2: Travel and Field Blank Analytical Results

Parameter	Travel Blank	Field Blank	Units	Detection Limit
Total Arsenic	<0.00040	<0.00040	mg/L	0.00040
Total Copper	<0.0010	<0.0010	mg/L	0.0010
Total Lead	<0.00010	<0.00010	mg/L	0.00010
Total Nickel	<0.0020	<0.0020	mg/L	0.0020
Total Zinc	<0.0040	<0.0040	mg/L	0.0040
Total Suspended Solids	<3.0	<3.0	mg/L	3.0
Oil and Grease	<1.0	<1.0	mg/L	1.0
pH	5.40	5.37	-	-

Similarly, using a relative percent difference assessment between the duplicate sample and the original field samples, all three duplicate samples are considered reliable (Table 3-3).

Table 3-3: Duplicate Sample Assessments

Parameter	Laboratory Results		Units	Detection Limit	RPD*	Reliable Duplicate? Yes or No**
	Field 1 (Hydro9)	Duplicate 1				
Total Arsenic	<0.00040	<0.00040	mg/L	0.00040	-	Yes
Total Copper	<0.0010	<0.0010	mg/L	0.0010	-	Yes
Total Lead	<0.00010	<0.00010	mg/L	0.00010	-	Yes
Total Nickel	<0.0020	<0.0020	mg/L	0.0020	-	Yes
Total Zinc	<0.0040	<0.0040	mg/L	0.0040	-	Yes
Total Suspended Solids	<3.0	<3.0	mg/L	3.0	-	Yes
Oil and Grease	<1.0	<1.0	mg/L	1.0	-	Yes
pH	5.03	5.33	-	-	5.79	Yes
Parameter	**Field 2 (WQ25)**	**Duplicate 2**	**Units**	**Detection Limit**	**RPD***	**Reliable Duplicate? Yes or No****
Total Arsenic	<0.00040	<0.00040	mg/L	0.00040	-	Yes
Total Copper	<0.0010	<0.0010	mg/L	0.0010	-	Yes
Total Lead	<0.00010	<0.00010	mg/L	0.00010	-	Yes
Total Nickel	<0.0020	<0.0020	mg/L	0.0020	-	Yes
Total Zinc	<0.0040	<0.0040	mg/L	0.0040	-	Yes
Total Suspended Solids	<3.0	<3.0	mg/L	3.0	-	Yes
Oil and Grease	<1.0	<1.0	mg/L	1.0	-	Yes
pH	6.10	6.14	-	-	0.65	Yes

Parameter	Field 3 (Hydro11)	Duplicate 3	Units	Detection Limit	RPD*	Reliable Duplicate? Yes or No**
Total Arsenic	<0.00040	<0.00040	mg/L	0.00040	-	Yes
Total Copper	<0.0010	<0.0010	mg/L	0.0010	-	Yes
Total Lead	<0.00010	<0.00010	mg/L	0.00010	-	Yes
Total Nickel	<0.0020	<0.0020	mg/L	0.0020	-	Yes
Total Zinc	<0.0040	<0.0040	mg/L	0.0040	-	Yes
Total Suspended Solids	<3.0	<3.0	mg/L	3.0	-	Yes
Oil and Grease	<1.0	<1.0	mg/L	1.0	-	Yes
pH	5.83	5.54	-	-	5.10	Yes

* RPD = Relative Percent Difference where RPD(%) = 200 x ABS(x - y)/(x + y), where ABS = Absolute difference, x = the analytical result of the original sample, y = the analytical result of the blind field duplicate sample.

** Duplicate samples are considered reliable when their RPD is less than 20%, and both samples are below the laboratory detection limit.

4.0 CONCLUSION

The sampling methods employed were reliable and represent existing water quality conditions in and around the CH6 trench. Water quality in the CH6 trench and its outflow are well within Peregrine's Water Licence effluent quality criteria.

5.0 LIMITATIONS OF REPORT

This report and its contents are intended for the sole use of Peregrine Diamonds Ltd. and their agents. Tetra Tech EBA Inc. (Tetra Tech EBA) does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than Peregrine Diamonds Ltd., or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this report is subject to the terms and conditions stated in Tetra Tech EBA's Services Agreement. Tetra Tech EBA's General Conditions are provided in Appendix B of this report.

6.0 CLOSURE

We trust this report meets your present requirements. If you have any questions or comments, please contact the undersigned.

Respectfully submitted,
Tetra Tech EBA Inc.

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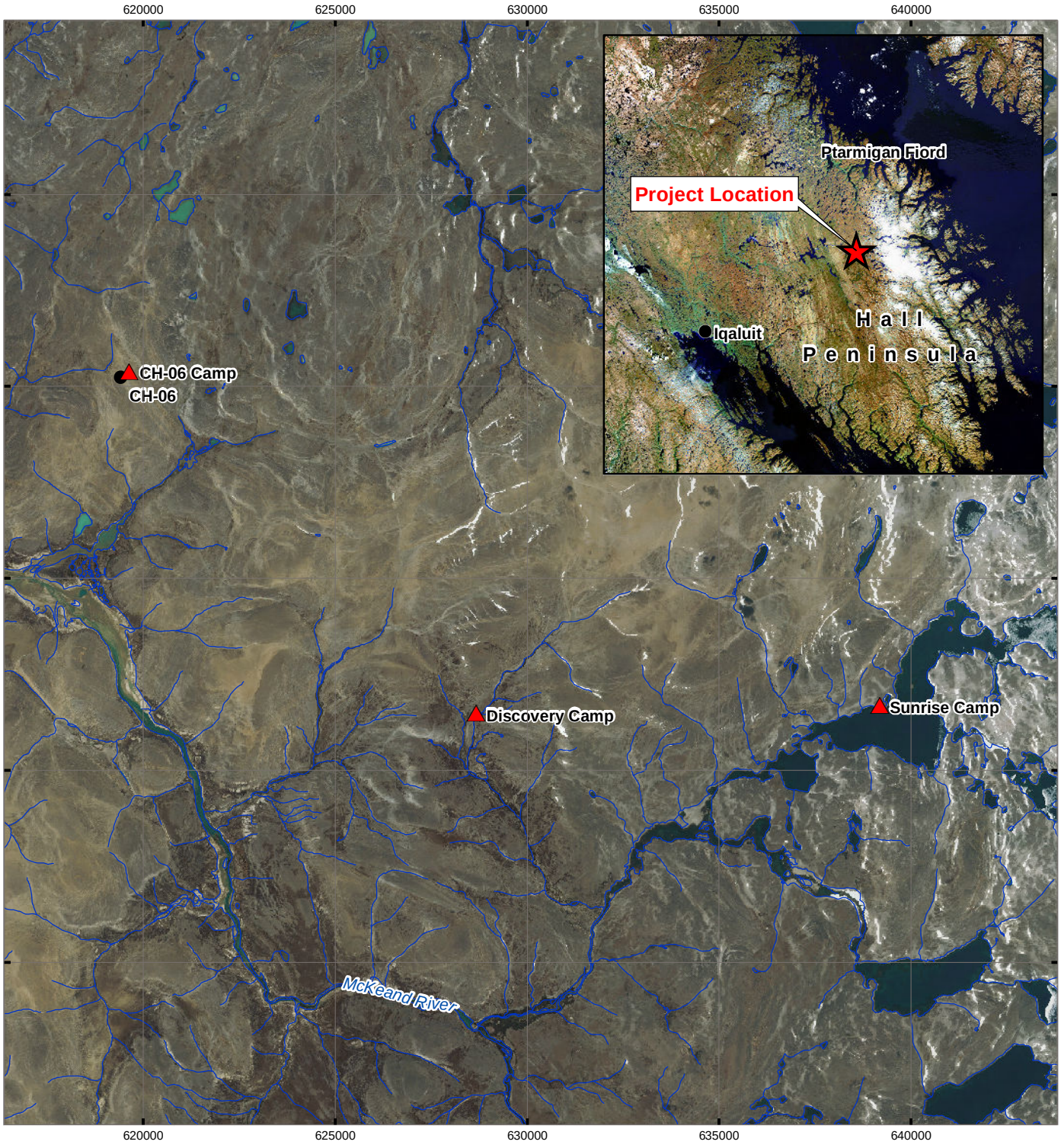
/sy

Attachments: Map (1)
Appendix A – Laboratory Analytical Results
Appendix B – Tetra Tech EBA's General Conditions

MAP

Map 1 Chidliak CH6 Exploration Site Location



LEGEND

- Camp Location
- Important Kimberlite Site
- Watercourse
- Waterbody

N
W E
S
GRID NORTH

NOTES
Base data sources:
Water features from CanVec.
Imagery provided by Peregrine Diamonds.

STATUS
ISSUED FOR USE

CHIDLIAK BASELINE STUDIES 2014

Chidliak CH-06 Exploration Site Location

PROJECTION UTM Zone 19			**DATUM** NAD83		**CLIENT** PEREGRINE DIAMONDS LTD.
Scale: 1:150,000 2 1 0 2 Kilometres					TETRA TECH EBA
FILE NO. MIN03024-01_Map01_CH6SiteLocation.mxd					
PROJECT NO. ENVMIN03024-01	**DWN** SL	**CKD** MEZ	**APVD** KL	**REV** 0	**Map 1**
OFFICE Tt EBA-VANC	**DATE** October 23, 2014				

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APPENDIX A
LABORATORY ANALYTICAL RESULTS

Tetra Tech EBA Inc.
ATTN: Karla Langlois
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201- 4916 49 Street
Yellowknife NT X1A 2P7

Date Received: 12-AUG-14
Report Date: 21-AUG-14 14:07 (MT)
Version: FINAL

Client Phone: 867-920-2287

Certificate of Analysis

Lab Work Order #: L1500733

Project P.O. #: NOT SUBMITTED
Job Reference: ENVMIN03024
C of C Numbers: 1, 2, 3
Legal Site Desc:

Rick Zolkiewski
General Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1500733-8 WQ8							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
Total Metals in Water by CRC ICPMS							
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Copper (Cu)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Iron (Fe)-Total	0.030		0.010	mg/L		17-AUG-14	R2920902
Lead (Pb)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Lithium (Li)-Total	<0.010		0.010	mg/L		17-AUG-14	R2920902
Magnesium (Mg)-Total	0.15		0.10	mg/L		17-AUG-14	R2920902
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		17-AUG-14	R2920902
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Potassium (K)-Total	<0.50		0.50	mg/L		17-AUG-14	R2920902
Selenium (Se)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Silver (Ag)-Total	<0.000020		0.000020	mg/L		17-AUG-14	R2920902
Sodium (Na)-Total	<1.0		1.0	mg/L		17-AUG-14	R2920902
Strontium (Sr)-Total	0.00232		0.00010	mg/L		17-AUG-14	R2920902
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Tin (Sn)-Total	<0.050		0.050	mg/L		17-AUG-14	R2920902
Titanium (Ti)-Total	0.0019		0.0010	mg/L		17-AUG-14	R2920902
Uranium (U)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Vanadium (V)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Zinc (Zn)-Total	<0.0040		0.0040	mg/L		17-AUG-14	R2920902
Miscellaneous Parameters							
Ammonia, Total (as N)	<0.050		0.050	mg/L		18-AUG-14	R2922152
Oil and Grease	<1.0		1.0	mg/L		17-AUG-14	R2921052
Total Organic Carbon	<1.0		1.0	mg/L		19-AUG-14	R2922966
Phosphorus (P)-Total	<0.020		0.020	mg/L	14-AUG-14	15-AUG-14	R2920505
Total Suspended Solids	<3.0		3.0	mg/L		15-AUG-14	R2921185
Turbidity	0.68		0.10	NTU		13-AUG-14	R2917244
pH, Conductivity and Total Alkalinity							
pH	5.42		0.10	pH		13-AUG-14	R2916844
Conductivity (EC)	6.35		0.20	uS/cm		13-AUG-14	R2916844
Bicarbonate (HCO3)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Carbonate (CO3)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Hydroxide (OH)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Alkalinity, Total (as CaCO3)	<2.0		2.0	mg/L		13-AUG-14	R2916844
Total Nitrogen							
Nitrate as N by IC							
Nitrate (as N)	<0.050		0.050	mg/L		13-AUG-14	R2917262
Nitrate+Nitrite							
Nitrate and Nitrite (as N)	<0.054		0.054	mg/L		15-AUG-14	
Nitrite as N by IC							
Nitrite (as N)	<0.020		0.020	mg/L		13-AUG-14	R2917262
TKN in Water by Colour							
Total Kjeldahl Nitrogen	<0.20		0.20	mg/L	19-AUG-14	19-AUG-14	R2923514
Total Nitrogen (Calculation)							
Total Nitrogen	<0.21		0.21	mg/L		19-AUG-14	
L1500733-9 HYDRO 9							
Sampled By: KL on 08-AUG-14 @ 12:00							
Matrix: Surface Water							
TOT Metals CCME Fresh Water Aquatic Life							
Hardness (from Total Ca and Mg)							
Hardness (as CaCO3)	<1.3			mg/L		18-AUG-14	

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1500733-9 HYDRO 9							
Sampled By: KL on 08-AUG-14 @ 12:00							
Matrix: Surface Water							
Mercury (Hg)							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L		19-AUG-14	R2923482
Total Cd in Water by CCMS (CCME - FAL)							
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L		18-AUG-14	R2922386
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.0583		0.0050	mg/L		18-AUG-14	R2922386
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		18-AUG-14	R2922386
Arsenic (As)-Total	<0.00040		0.00040	mg/L		18-AUG-14	R2922386
Barium (Ba)-Total	<0.0030		0.0030	mg/L		18-AUG-14	R2922386
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		18-AUG-14	R2922386
Boron (B)-Total	<0.050		0.050	mg/L		18-AUG-14	R2922386
Calcium (Ca)-Total	<0.50		0.50	mg/L		18-AUG-14	R2922386
Chromium (Cr)-Total	<0.0010		0.0010	mg/L		18-AUG-14	R2922386
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		18-AUG-14	R2922386
Copper (Cu)-Total	<0.0010		0.0010	mg/L		18-AUG-14	R2922386
Iron (Fe)-Total	0.057		0.010	mg/L		18-AUG-14	R2922386
Lead (Pb)-Total	<0.00010		0.00010	mg/L		18-AUG-14	R2922386
Lithium (Li)-Total	<0.010		0.010	mg/L		18-AUG-14	R2922386
Magnesium (Mg)-Total	0.12		0.10	mg/L		18-AUG-14	R2922386
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		18-AUG-14	R2922386
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		18-AUG-14	R2922386
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		18-AUG-14	R2922386
Potassium (K)-Total	<0.50		0.50	mg/L		18-AUG-14	R2922386
Selenium (Se)-Total	<0.00040		0.00040	mg/L		18-AUG-14	R2922386
Silver (Ag)-Total	<0.000020		0.000020	mg/L		18-AUG-14	R2922386
Sodium (Na)-Total	<1.0		1.0	mg/L		18-AUG-14	R2922386
Strontium (Sr)-Total	0.00192		0.00010	mg/L		18-AUG-14	R2922386
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		18-AUG-14	R2922386
Tin (Sn)-Total	<0.050		0.050	mg/L		18-AUG-14	R2922386
Titanium (Ti)-Total	0.0034		0.0010	mg/L		18-AUG-14	R2922386
Uranium (U)-Total	<0.00010		0.00010	mg/L		18-AUG-14	R2922386
Vanadium (V)-Total	<0.0010		0.0010	mg/L		18-AUG-14	R2922386
Zinc (Zn)-Total	<0.0040		0.0040	mg/L		18-AUG-14	R2922386
Miscellaneous Parameters							
Ammonia, Total (as N)	<0.050		0.050	mg/L		18-AUG-14	R2922152
Oil and Grease	<1.0		1.0	mg/L		17-AUG-14	R2921202
Total Organic Carbon	<1.0		1.0	mg/L		19-AUG-14	R2922966
Phosphorus (P)-Total	<0.020		0.020	mg/L	14-AUG-14	15-AUG-14	R2920505
Total Suspended Solids	<3.0		3.0	mg/L		15-AUG-14	R2921185
Turbidity	1.68		0.10	NTU		13-AUG-14	R2917244
pH, Conductivity and Total Alkalinity							
pH	5.03		0.10	pH		13-AUG-14	R2916844
Conductivity (EC)	6.16		0.20	uS/cm		13-AUG-14	R2916844
Bicarbonate (HCO3)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Carbonate (CO3)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Hydroxide (OH)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Alkalinity, Total (as CaCO3)	<2.0		2.0	mg/L		13-AUG-14	R2916844
Total Nitrogen							
Nitrate as N by IC							
Nitrate (as N)	0.223		0.050	mg/L		13-AUG-14	R2917262
Nitrate+Nitrite							
Nitrate and Nitrite (as N)	0.223		0.054	mg/L		15-AUG-14	

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1500733-9 HYDRO 9							
Sampled By: KL on 08-AUG-14 @ 12:00							
Matrix: Surface Water							
Nitrite as N by IC							
Nitrite (as N)	<0.020		0.020	mg/L		13-AUG-14	R2917262
TKN in Water by Colour							
Total Kjeldahl Nitrogen	<0.20		0.20	mg/L	19-AUG-14	19-AUG-14	R2923514
Total Nitrogen (Calculation)							
Total Nitrogen	0.22		0.21	mg/L		19-AUG-14	
L1500733-10 HYDRO 10							
Sampled By: KL on 08-AUG-14 @ 12:00							
Matrix: Surface Water							
TOT Metals CCME Fresh Water Aquatic Life							
Hardness (from Total Ca and Mg)							
Hardness (as CaCO3)	<1.3			mg/L		18-AUG-14	
Mercury (Hg)							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L		19-AUG-14	R2923482
Total Cd in Water by CCMS (CCME - FAL)							
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L		17-AUG-14	R2920902
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.0243		0.0050	mg/L		17-AUG-14	R2920902
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Arsenic (As)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Barium (Ba)-Total	<0.0030		0.0030	mg/L		17-AUG-14	R2920902
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Boron (B)-Total	<0.050		0.050	mg/L		17-AUG-14	R2920902
Calcium (Ca)-Total	<0.50		0.50	mg/L		17-AUG-14	R2920902
Chromium (Cr)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Copper (Cu)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Iron (Fe)-Total	0.014		0.010	mg/L		17-AUG-14	R2920902
Lead (Pb)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Lithium (Li)-Total	<0.010		0.010	mg/L		17-AUG-14	R2920902
Magnesium (Mg)-Total	0.13		0.10	mg/L		17-AUG-14	R2920902
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		17-AUG-14	R2920902
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Potassium (K)-Total	<0.50		0.50	mg/L		17-AUG-14	R2920902
Selenium (Se)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Silver (Ag)-Total	<0.000020		0.000020	mg/L		17-AUG-14	R2920902
Sodium (Na)-Total	<1.0		1.0	mg/L		17-AUG-14	R2920902
Strontium (Sr)-Total	0.00205		0.00010	mg/L		17-AUG-14	R2920902
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Tin (Sn)-Total	<0.050		0.050	mg/L		17-AUG-14	R2920902
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Uranium (U)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Vanadium (V)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Zinc (Zn)-Total	<0.0040		0.0040	mg/L		17-AUG-14	R2920902
Miscellaneous Parameters							
Ammonia, Total (as N)	<0.050		0.050	mg/L		18-AUG-14	R2922152
Oil and Grease	<1.0		1.0	mg/L		17-AUG-14	R2921202
Total Organic Carbon	<1.0		1.0	mg/L		19-AUG-14	R2922966
Phosphorus (P)-Total	<0.020		0.020	mg/L	14-AUG-14	15-AUG-14	R2920505
Total Suspended Solids	<3.0		3.0	mg/L		15-AUG-14	R2921185
Turbidity	0.55		0.10	NTU		13-AUG-14	R2917244

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1500733-10 HYDRO 10							
Sampled By: KL on 08-AUG-14 @ 12:00							
Matrix: Surface Water							
pH, Conductivity and Total Alkalinity							
pH	5.29		0.10	pH		13-AUG-14	R2916844
Conductivity (EC)	5.49		0.20	uS/cm		13-AUG-14	R2916844
Bicarbonate (HCO3)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Carbonate (CO3)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Hydroxide (OH)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Alkalinity, Total (as CaCO3)	<2.0		2.0	mg/L		13-AUG-14	R2916844
Total Nitrogen							
Nitrate as N by IC							
Nitrate (as N)	0.146		0.050	mg/L		13-AUG-14	R2917262
Nitrate+Nitrite							
Nitrate and Nitrite (as N)	0.146		0.054	mg/L		15-AUG-14	
Nitrite as N by IC							
Nitrite (as N)	<0.020		0.020	mg/L		13-AUG-14	R2917262
TKN in Water by Colour							
Total Kjeldahl Nitrogen	<0.20		0.20	mg/L	19-AUG-14	19-AUG-14	R2923514
Total Nitrogen (Calculation)							
Total Nitrogen	<0.21		0.21	mg/L		19-AUG-14	
L1500733-11 HYDRO 11							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
TOT Metals CCME Fresh Water Aquatic Life							
Hardness (from Total Ca and Mg)							
Hardness (as CaCO3)	5.2			mg/L		18-AUG-14	
Mercury (Hg)							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L		19-AUG-14	R2923482
Total Cd in Water by CCMS (CCME - FAL)							
Cadmium (Cd)-Total	0.000015		0.000010	mg/L		17-AUG-14	R2920902
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.0209		0.0050	mg/L		17-AUG-14	R2920902
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Arsenic (As)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Barium (Ba)-Total	0.0037		0.0030	mg/L		17-AUG-14	R2920902
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Boron (B)-Total	<0.050		0.050	mg/L		17-AUG-14	R2920902
Calcium (Ca)-Total	1.03		0.50	mg/L		17-AUG-14	R2920902
Chromium (Cr)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Copper (Cu)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Iron (Fe)-Total	0.012		0.010	mg/L		17-AUG-14	R2920902
Lead (Pb)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Lithium (Li)-Total	<0.010		0.010	mg/L		17-AUG-14	R2920902
Magnesium (Mg)-Total	0.64		0.10	mg/L		17-AUG-14	R2920902
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		17-AUG-14	R2920902
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Potassium (K)-Total	<0.50		0.50	mg/L		17-AUG-14	R2920902
Selenium (Se)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Silver (Ag)-Total	<0.000020		0.000020	mg/L		17-AUG-14	R2920902
Sodium (Na)-Total	<1.0		1.0	mg/L		17-AUG-14	R2920902
Strontium (Sr)-Total	0.00577		0.00010	mg/L		17-AUG-14	R2920902
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1500733-11 HYDRO 11							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
Total Metals in Water by CRC ICPMS							
Tin (Sn)-Total	<0.050		0.050	mg/L		17-AUG-14	R2920902
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Uranium (U)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Vanadium (V)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Zinc (Zn)-Total	<0.0040		0.0040	mg/L		17-AUG-14	R2920902
Miscellaneous Parameters							
Ammonia, Total (as N)	<0.050		0.050	mg/L		18-AUG-14	R2922152
Oil and Grease	<1.0		1.0	mg/L		17-AUG-14	R2921202
Total Organic Carbon	<1.0		1.0	mg/L		19-AUG-14	R2922966
Phosphorus (P)-Total	<0.020		0.020	mg/L	14-AUG-14	15-AUG-14	R2920505
Total Suspended Solids	<3.0		3.0	mg/L		15-AUG-14	R2921185
Turbidity	0.40		0.10	NTU		13-AUG-14	R2917244
pH, Conductivity and Total Alkalinity							
pH	5.83		0.10	pH		13-AUG-14	R2916844
Conductivity (EC)	17.7		0.20	uS/cm		13-AUG-14	R2916844
Bicarbonate (HCO3)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Carbonate (CO3)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Hydroxide (OH)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Alkalinity, Total (as CaCO3)	3.7		2.0	mg/L		13-AUG-14	R2916844
Total Nitrogen							
Nitrate as N by IC							
Nitrate (as N)	<0.050		0.050	mg/L		13-AUG-14	R2917262
Nitrate+Nitrite							
Nitrate and Nitrite (as N)	<0.054		0.054	mg/L		15-AUG-14	
Nitrite as N by IC							
Nitrite (as N)	<0.020		0.020	mg/L		13-AUG-14	R2917262
TKN in Water by Colour							
Total Kjeldahl Nitrogen	<0.20		0.20	mg/L	19-AUG-14	19-AUG-14	R2923514
Total Nitrogen (Calculation)							
Total Nitrogen	<0.21		0.21	mg/L		19-AUG-14	
L1500733-12 WQ12							
Sampled By: KL on 08-AUG-14 @ 12:00							
Matrix: Surface Water							
TOT Metals CCME Fresh Water Aquatic Life							
Hardness (from Total Ca and Mg)							
Hardness (as CaCO3)	1.3			mg/L		18-AUG-14	
Mercury (Hg)							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L		19-AUG-14	R2923482
Total Cd in Water by CCMS (CCME - FAL)							
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L		18-AUG-14	R2922386
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.0725		0.0050	mg/L		18-AUG-14	R2922386
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		18-AUG-14	R2922386
Arsenic (As)-Total	<0.00040		0.00040	mg/L		18-AUG-14	R2922386
Barium (Ba)-Total	0.0041		0.0030	mg/L		18-AUG-14	R2922386
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		18-AUG-14	R2922386
Boron (B)-Total	<0.050		0.050	mg/L		18-AUG-14	R2922386
Calcium (Ca)-Total	<0.50		0.50	mg/L		18-AUG-14	R2922386
Chromium (Cr)-Total	<0.0010		0.0010	mg/L		18-AUG-14	R2922386
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		18-AUG-14	R2922386
Copper (Cu)-Total	<0.0010		0.0010	mg/L		18-AUG-14	R2922386

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1500733-23 WQ24							
Sampled By: KL on 08-AUG-14 @ 12:00							
Matrix: Surface Water							
Total Metals in Water by CRC ICPMS							
Titanium (Ti)-Total	0.0047		0.0010	mg/L		19-AUG-14	R2922386
Uranium (U)-Total	<0.00010		0.00010	mg/L		19-AUG-14	R2922386
Vanadium (V)-Total	<0.0010		0.0010	mg/L		19-AUG-14	R2922386
Zinc (Zn)-Total	<0.0040		0.0040	mg/L		19-AUG-14	R2922386
Miscellaneous Parameters							
Ammonia, Total (as N)	<0.050		0.050	mg/L		18-AUG-14	R2922152
Oil and Grease	<1.0		1.0	mg/L		17-AUG-14	R2921202
Total Organic Carbon	<1.0		1.0	mg/L		19-AUG-14	R2922966
Phosphorus (P)-Total	<0.020		0.020	mg/L	14-AUG-14	15-AUG-14	R2920505
Total Suspended Solids	<3.0		3.0	mg/L		15-AUG-14	R2921185
Turbidity	1.82		0.10	NTU		13-AUG-14	R2917244
pH, Conductivity and Total Alkalinity							
pH	5.46		0.10	pH		13-AUG-14	R2916844
Conductivity (EC)	5.61		0.20	uS/cm		13-AUG-14	R2916844
Bicarbonate (HCO3)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Carbonate (CO3)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Hydroxide (OH)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Alkalinity, Total (as CaCO3)	<2.0		2.0	mg/L		13-AUG-14	R2916844
Total Nitrogen							
Nitrate as N by IC							
Nitrate (as N)	0.123		0.050	mg/L		13-AUG-14	R2917262
Nitrate+Nitrite							
Nitrate and Nitrite (as N)	0.123		0.054	mg/L		15-AUG-14	
Nitrite as N by IC							
Nitrite (as N)	<0.020		0.020	mg/L		13-AUG-14	R2917262
TKN in Water by Colour							
Total Kjeldahl Nitrogen	<0.20		0.20	mg/L	19-AUG-14	19-AUG-14	R2923514
Total Nitrogen (Calculation)							
Total Nitrogen	<0.21		0.21	mg/L		19-AUG-14	
L1500733-24 WQ25							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
TOT Metals CCME Fresh Water Aquatic Life							
Hardness (from Total Ca and Mg)							
Hardness (as CaCO3)	<1.3			mg/L		18-AUG-14	
Mercury (Hg)							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L		19-AUG-14	R2923482
Total Cd in Water by CCMS (CCME - FAL)							
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L		17-AUG-14	R2920902
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.0237		0.0050	mg/L		17-AUG-14	R2920902
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Arsenic (As)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Barium (Ba)-Total	<0.0030		0.0030	mg/L		17-AUG-14	R2920902
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Boron (B)-Total	<0.050		0.050	mg/L		17-AUG-14	R2920902
Calcium (Ca)-Total	<0.50		0.50	mg/L		17-AUG-14	R2920902
Chromium (Cr)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Copper (Cu)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Iron (Fe)-Total	0.024		0.010	mg/L		17-AUG-14	R2920902

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1500733-24 WQ25							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
Total Metals in Water by CRC ICPMS							
Lead (Pb)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Lithium (Li)-Total	<0.010		0.010	mg/L		17-AUG-14	R2920902
Magnesium (Mg)-Total	0.19		0.10	mg/L		17-AUG-14	R2920902
Manganese (Mn)-Total	0.0028		0.0020	mg/L		17-AUG-14	R2920902
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		17-AUG-14	R2920902
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Potassium (K)-Total	<0.50		0.50	mg/L		17-AUG-14	R2920902
Selenium (Se)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Silver (Ag)-Total	<0.000020		0.000020	mg/L		17-AUG-14	R2920902
Sodium (Na)-Total	<1.0		1.0	mg/L		17-AUG-14	R2920902
Strontium (Sr)-Total	0.00250		0.00010	mg/L		17-AUG-14	R2920902
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Tin (Sn)-Total	<0.050		0.050	mg/L		17-AUG-14	R2920902
Titanium (Ti)-Total	0.0013		0.0010	mg/L		17-AUG-14	R2920902
Uranium (U)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Vanadium (V)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Zinc (Zn)-Total	<0.0040		0.0040	mg/L		17-AUG-14	R2920902
Miscellaneous Parameters							
Ammonia, Total (as N)	<0.050		0.050	mg/L		18-AUG-14	R2922152
Oil and Grease	<1.0		1.0	mg/L		17-AUG-14	R2921202
Total Organic Carbon	<1.0		1.0	mg/L		19-AUG-14	R2922966
Phosphorus (P)-Total	<0.020		0.020	mg/L	14-AUG-14	15-AUG-14	R2920505
Total Suspended Solids	<3.0		3.0	mg/L		15-AUG-14	R2921185
Turbidity	0.70		0.10	NTU		13-AUG-14	R2917244
pH, Conductivity and Total Alkalinity							
pH	6.10		0.10	pH		13-AUG-14	R2916844
Conductivity (EC)	5.42		0.20	uS/cm		13-AUG-14	R2916844
Bicarbonate (HCO3)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Carbonate (CO3)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Hydroxide (OH)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Alkalinity, Total (as CaCO3)	<2.0		2.0	mg/L		13-AUG-14	R2916844
Total Nitrogen							
Nitrate as N by IC							
Nitrate (as N)	<0.050		0.050	mg/L		13-AUG-14	R2917262
Nitrate+Nitrite							
Nitrate and Nitrite (as N)	<0.054		0.054	mg/L		15-AUG-14	
Nitrite as N by IC							
Nitrite (as N)	<0.020		0.020	mg/L		13-AUG-14	R2917262
TKN in Water by Colour							
Total Kjeldahl Nitrogen	<0.20		0.20	mg/L	19-AUG-14	19-AUG-14	R2923514
Total Nitrogen (Calculation)							
Total Nitrogen	<0.21		0.21	mg/L		19-AUG-14	
L1500733-25 WQ26							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
TOT Metals CCME Fresh Water Aquatic Life							
Hardness (from Total Ca and Mg)							
Hardness (as CaCO3)	<1.3			mg/L		18-AUG-14	
Mercury (Hg)							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L		19-AUG-14	R2923482
Total Cd in Water by CCMS (CCME - FAL)							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1500733-28 WQ29							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
Total Metals in Water by CRC ICPMS							
Lead (Pb)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Lithium (Li)-Total	<0.010		0.010	mg/L		17-AUG-14	R2920902
Magnesium (Mg)-Total	0.14		0.10	mg/L		17-AUG-14	R2920902
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		17-AUG-14	R2920902
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Potassium (K)-Total	<0.50		0.50	mg/L		17-AUG-14	R2920902
Selenium (Se)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Silver (Ag)-Total	<0.000020		0.000020	mg/L		17-AUG-14	R2920902
Sodium (Na)-Total	<1.0		1.0	mg/L		17-AUG-14	R2920902
Strontium (Sr)-Total	0.00160		0.00010	mg/L		17-AUG-14	R2920902
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Tin (Sn)-Total	<0.050		0.050	mg/L		17-AUG-14	R2920902
Titanium (Ti)-Total	0.0034		0.0010	mg/L		17-AUG-14	R2920902
Uranium (U)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Vanadium (V)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Zinc (Zn)-Total	<0.0040		0.0040	mg/L		17-AUG-14	R2920902
Miscellaneous Parameters							
Ammonia, Total (as N)	<0.050		0.050	mg/L		18-AUG-14	R2922152
Oil and Grease	<1.0		1.0	mg/L		17-AUG-14	R2921202
Total Organic Carbon	<1.0		1.0	mg/L		19-AUG-14	R2922966
Phosphorus (P)-Total	<0.020		0.020	mg/L	14-AUG-14	15-AUG-14	R2920505
Total Suspended Solids	<3.0		3.0	mg/L		15-AUG-14	R2921185
Turbidity	0.74		0.10	NTU		13-AUG-14	R2917244
pH, Conductivity and Total Alkalinity							
pH	5.22		0.10	pH		14-AUG-14	R2916844
Conductivity (EC)	5.43		0.20	uS/cm		14-AUG-14	R2916844
Bicarbonate (HCO3)	<5.0		5.0	mg/L		14-AUG-14	R2916844
Carbonate (CO3)	<5.0		5.0	mg/L		14-AUG-14	R2916844
Hydroxide (OH)	<5.0		5.0	mg/L		14-AUG-14	R2916844
Alkalinity, Total (as CaCO3)	<2.0		2.0	mg/L		14-AUG-14	R2916844
Total Nitrogen							
Nitrate as N by IC							
Nitrate (as N)	0.077		0.050	mg/L		13-AUG-14	R2917262
Nitrate+Nitrite							
Nitrate and Nitrite (as N)	0.077		0.054	mg/L		15-AUG-14	
Nitrite as N by IC							
Nitrite (as N)	<0.020		0.020	mg/L		13-AUG-14	R2917262
TKN in Water by Colour							
Total Kjeldahl Nitrogen	<0.20		0.20	mg/L	19-AUG-14	19-AUG-14	R2923514
Total Nitrogen (Calculation)							
Total Nitrogen	<0.21		0.21	mg/L		19-AUG-14	
L1500733-29 CH6 TRENCH							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
TOT Metals CCME Fresh Water Aquatic Life							
Hardness (from Total Ca and Mg)							
Hardness (as CaCO3)	4.2			mg/L		20-AUG-14	
Mercury (Hg)							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L		19-AUG-14	R2923482
Total Cd in Water by CCMS (CCME - FAL)							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1500733-29 CH6 TRENCH							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
Total Cd in Water by CCMS (CCME - FAL)							
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L		19-AUG-14	R2922386
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.239		0.0050	mg/L		19-AUG-14	R2922386
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		19-AUG-14	R2922386
Arsenic (As)-Total	<0.00040		0.00040	mg/L		19-AUG-14	R2922386
Barium (Ba)-Total	0.0064		0.0030	mg/L		19-AUG-14	R2922386
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		19-AUG-14	R2922386
Boron (B)-Total	<0.050		0.050	mg/L		19-AUG-14	R2922386
Calcium (Ca)-Total	0.68		0.50	mg/L		19-AUG-14	R2922386
Chromium (Cr)-Total	<0.0010		0.0010	mg/L		19-AUG-14	R2922386
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		19-AUG-14	R2922386
Copper (Cu)-Total	<0.0010		0.0010	mg/L		19-AUG-14	R2922386
Iron (Fe)-Total	0.308		0.010	mg/L		19-AUG-14	R2922386
Lead (Pb)-Total	0.00013		0.00010	mg/L		19-AUG-14	R2922386
Lithium (Li)-Total	<0.010		0.010	mg/L		19-AUG-14	R2922386
Magnesium (Mg)-Total	0.61		0.10	mg/L		19-AUG-14	R2922386
Manganese (Mn)-Total	0.0051		0.0020	mg/L		19-AUG-14	R2922386
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		19-AUG-14	R2922386
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		19-AUG-14	R2922386
Potassium (K)-Total	<0.50		0.50	mg/L		19-AUG-14	R2922386
Selenium (Se)-Total	<0.00040		0.00040	mg/L		19-AUG-14	R2922386
Silver (Ag)-Total	<0.000020		0.000020	mg/L		19-AUG-14	R2922386
Sodium (Na)-Total	<1.0		1.0	mg/L		19-AUG-14	R2922386
Strontium (Sr)-Total	0.00712		0.00010	mg/L		19-AUG-14	R2922386
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		19-AUG-14	R2922386
Tin (Sn)-Total	<0.050		0.050	mg/L		19-AUG-14	R2922386
Titanium (Ti)-Total	0.0187		0.0010	mg/L		19-AUG-14	R2923744
Uranium (U)-Total	<0.00010		0.00010	mg/L		19-AUG-14	R2922386
Vanadium (V)-Total	<0.0010		0.0010	mg/L		19-AUG-14	R2922386
Zinc (Zn)-Total	<0.0040		0.0040	mg/L		19-AUG-14	R2922386
Miscellaneous Parameters							
Ammonia, Total (as N)	<0.050		0.050	mg/L		18-AUG-14	R2922152
Oil and Grease	<1.0		1.0	mg/L		18-AUG-14	R2922128
Total Organic Carbon	<1.0		1.0	mg/L		19-AUG-14	R2922966
Phosphorus (P)-Total	<0.020		0.020	mg/L	14-AUG-14	15-AUG-14	R2920505
Total Suspended Solids	3.8		3.0	mg/L		15-AUG-14	R2921185
Turbidity	10.8		0.10	NTU		13-AUG-14	R2917244
pH, Conductivity and Total Alkalinity							
pH	6.38		0.10	pH		14-AUG-14	R2916844
Conductivity (EC)	12.1		0.20	uS/cm		14-AUG-14	R2916844
Bicarbonate (HCO3)	<5.0		5.0	mg/L		14-AUG-14	R2916844
Carbonate (CO3)	<5.0		5.0	mg/L		14-AUG-14	R2916844
Hydroxide (OH)	<5.0		5.0	mg/L		14-AUG-14	R2916844
Alkalinity, Total (as CaCO3)	2.6		2.0	mg/L		14-AUG-14	R2916844
Total Nitrogen							
Nitrate as N by IC							
Nitrate (as N)	0.314		0.050	mg/L		13-AUG-14	R2917262
Nitrate+Nitrite							
Nitrate and Nitrite (as N)	0.314		0.054	mg/L		15-AUG-14	
Nitrite as N by IC							
Nitrite (as N)	<0.020		0.020	mg/L		13-AUG-14	R2917262

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1500733-29 CH6 TRENCH							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
TKN in Water by Colour							
Total Kjeldahl Nitrogen	<0.20		0.20	mg/L	20-AUG-14	20-AUG-14	R2923769
Total Nitrogen (Calculation)							
Total Nitrogen	0.31		0.21	mg/L		20-AUG-14	
L1500733-30 CH6 OUTFLOW							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
TOT Metals CCME Fresh Water Aquatic Life							
Hardness (from Total Ca and Mg)							
Hardness (as CaCO3)	5.7			mg/L		19-AUG-14	
Mercury (Hg)							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L		19-AUG-14	R2923482
Total Cd in Water by CCMS (CCME - FAL)							
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L		19-AUG-14	R2922386
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.287		0.0050	mg/L		19-AUG-14	R2922386
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		19-AUG-14	R2922386
Arsenic (As)-Total	<0.00040		0.00040	mg/L		19-AUG-14	R2922386
Barium (Ba)-Total	0.0078		0.0030	mg/L		19-AUG-14	R2922386
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		19-AUG-14	R2922386
Boron (B)-Total	<0.050		0.050	mg/L		19-AUG-14	R2922386
Calcium (Ca)-Total	0.72		0.50	mg/L		19-AUG-14	R2922386
Chromium (Cr)-Total	<0.0010		0.0010	mg/L		19-AUG-14	R2922386
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		19-AUG-14	R2922386
Copper (Cu)-Total	<0.0010		0.0010	mg/L		19-AUG-14	R2922386
Iron (Fe)-Total	0.360		0.010	mg/L		19-AUG-14	R2922386
Lead (Pb)-Total	0.00013		0.00010	mg/L		19-AUG-14	R2922386
Lithium (Li)-Total	<0.010		0.010	mg/L		19-AUG-14	R2922386
Magnesium (Mg)-Total	0.94		0.10	mg/L		19-AUG-14	R2922386
Manganese (Mn)-Total	0.0066		0.0020	mg/L		19-AUG-14	R2922386
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		19-AUG-14	R2922386
Nickel (Ni)-Total	0.0022		0.0020	mg/L		19-AUG-14	R2922386
Potassium (K)-Total	0.56		0.50	mg/L		19-AUG-14	R2922386
Selenium (Se)-Total	<0.00040		0.00040	mg/L		19-AUG-14	R2922386
Silver (Ag)-Total	<0.000020		0.000020	mg/L		19-AUG-14	R2922386
Sodium (Na)-Total	1.1		1.0	mg/L		19-AUG-14	R2922386
Strontium (Sr)-Total	0.0103		0.00010	mg/L		19-AUG-14	R2922386
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		19-AUG-14	R2922386
Tin (Sn)-Total	<0.050		0.050	mg/L		19-AUG-14	R2922386
Titanium (Ti)-Total	0.0247		0.0010	mg/L		19-AUG-14	R2922386
Uranium (U)-Total	<0.00010		0.00010	mg/L		19-AUG-14	R2922386
Vanadium (V)-Total	0.0011		0.0010	mg/L		19-AUG-14	R2922386
Zinc (Zn)-Total	<0.0040		0.0040	mg/L		19-AUG-14	R2922386
Miscellaneous Parameters							
Ammonia, Total (as N)	<0.050		0.050	mg/L		18-AUG-14	R2922152
Oil and Grease	<1.0		1.0	mg/L		18-AUG-14	R2922128
Total Organic Carbon	1.6		1.0	mg/L		19-AUG-14	R2922966
Phosphorus (P)-Total	<0.020		0.020	mg/L	14-AUG-14	15-AUG-14	R2920505
Total Suspended Solids	<3.0		3.0	mg/L		15-AUG-14	R2921185
Turbidity	13.3		0.10	NTU		13-AUG-14	R2917244
pH, Conductivity and Total Alkalinity							
pH	6.56		0.10	pH		14-AUG-14	R2916844

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1500733-30 CH6 OUTFLOW							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
pH, Conductivity and Total Alkalinity							
Conductivity (EC)	15.8		0.20	uS/cm		14-AUG-14	R2916844
Bicarbonate (HCO3)	<5.0		5.0	mg/L		14-AUG-14	R2916844
Carbonate (CO3)	<5.0		5.0	mg/L		14-AUG-14	R2916844
Hydroxide (OH)	<5.0		5.0	mg/L		14-AUG-14	R2916844
Alkalinity, Total (as CaCO3)	3.4		2.0	mg/L		14-AUG-14	R2916844
Total Nitrogen							
Nitrate as N by IC							
Nitrate (as N)	0.363		0.050	mg/L		13-AUG-14	R2917262
Nitrate+Nitrite							
Nitrate and Nitrite (as N)	0.363		0.054	mg/L		15-AUG-14	
Nitrite as N by IC							
Nitrite (as N)	<0.020		0.020	mg/L		13-AUG-14	R2917262
TKN in Water by Colour							
Total Kjeldahl Nitrogen	<0.20		0.20	mg/L	20-AUG-14	20-AUG-14	R2923769
Total Nitrogen (Calculation)							
Total Nitrogen	0.36		0.21	mg/L		20-AUG-14	
L1500733-31 DUPLICATE 1							
Sampled By: KL on 08-AUG-14 @ 12:00							
Matrix: Surface Water							
TOT Metals CCME Fresh Water Aquatic Life							
Hardness (from Total Ca and Mg)							
Hardness (as CaCO3)	<1.3			mg/L		19-AUG-14	
Mercury (Hg)							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L		19-AUG-14	R2923482
Total Cd in Water by CCMS (CCME - FAL)							
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L		19-AUG-14	R2922386
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.0591		0.0050	mg/L		19-AUG-14	R2922386
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		19-AUG-14	R2922386
Arsenic (As)-Total	<0.00040		0.00040	mg/L		19-AUG-14	R2922386
Barium (Ba)-Total	<0.0030		0.0030	mg/L		19-AUG-14	R2922386
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		19-AUG-14	R2922386
Boron (B)-Total	<0.050		0.050	mg/L		19-AUG-14	R2922386
Calcium (Ca)-Total	<0.50		0.50	mg/L		19-AUG-14	R2922386
Chromium (Cr)-Total	<0.0010		0.0010	mg/L		19-AUG-14	R2922386
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		19-AUG-14	R2922386
Copper (Cu)-Total	<0.0010		0.0010	mg/L		19-AUG-14	R2922386
Iron (Fe)-Total	0.056		0.010	mg/L		19-AUG-14	R2922386
Lead (Pb)-Total	<0.00010		0.00010	mg/L		19-AUG-14	R2922386
Lithium (Li)-Total	<0.010		0.010	mg/L		19-AUG-14	R2922386
Magnesium (Mg)-Total	0.13		0.10	mg/L		19-AUG-14	R2922386
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		19-AUG-14	R2922386
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		19-AUG-14	R2922386
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		19-AUG-14	R2922386
Potassium (K)-Total	<0.50		0.50	mg/L		19-AUG-14	R2922386
Selenium (Se)-Total	<0.00040		0.00040	mg/L		19-AUG-14	R2922386
Silver (Ag)-Total	<0.000020		0.000020	mg/L		19-AUG-14	R2922386
Sodium (Na)-Total	<1.0		1.0	mg/L		19-AUG-14	R2922386
Strontium (Sr)-Total	0.00199		0.00010	mg/L		19-AUG-14	R2922386
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		19-AUG-14	R2922386
Tin (Sn)-Total	<0.050		0.050	mg/L		19-AUG-14	R2922386

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1500733-31 DUPLICATE 1							
Sampled By: KL on 08-AUG-14 @ 12:00							
Matrix: Surface Water							
Total Metals in Water by CRC ICPMS							
Titanium (Ti)-Total	0.0038		0.0010	mg/L		19-AUG-14	R2922386
Uranium (U)-Total	<0.00010		0.00010	mg/L		19-AUG-14	R2922386
Vanadium (V)-Total	<0.0010		0.0010	mg/L		19-AUG-14	R2922386
Zinc (Zn)-Total	<0.0040		0.0040	mg/L		19-AUG-14	R2922386
Miscellaneous Parameters							
Ammonia, Total (as N)	<0.050		0.050	mg/L		18-AUG-14	R2922152
Oil and Grease	<1.0		1.0	mg/L		18-AUG-14	R2922128
Total Organic Carbon	<1.0		1.0	mg/L		19-AUG-14	R2922966
Phosphorus (P)-Total	<0.020		0.020	mg/L	14-AUG-14	15-AUG-14	R2920505
Total Suspended Solids	<3.0		3.0	mg/L		15-AUG-14	R2921185
Turbidity	1.56		0.10	NTU		13-AUG-14	R2917244
pH, Conductivity and Total Alkalinity							
pH	5.33		0.10	pH		14-AUG-14	R2916844
Conductivity (EC)	6.14		0.20	uS/cm		14-AUG-14	R2916844
Bicarbonate (HCO3)	<5.0		5.0	mg/L		14-AUG-14	R2916844
Carbonate (CO3)	<5.0		5.0	mg/L		14-AUG-14	R2916844
Hydroxide (OH)	<5.0		5.0	mg/L		14-AUG-14	R2916844
Alkalinity, Total (as CaCO3)	<2.0		2.0	mg/L		14-AUG-14	R2916844
Total Nitrogen							
Nitrate as N by IC							
Nitrate (as N)	0.216		0.050	mg/L		13-AUG-14	R2917262
Nitrate+Nitrite							
Nitrate and Nitrite (as N)	0.216		0.054	mg/L		15-AUG-14	
Nitrite as N by IC							
Nitrite (as N)	<0.020		0.020	mg/L		13-AUG-14	R2917262
TKN in Water by Colour							
Total Kjeldahl Nitrogen	<0.20		0.20	mg/L	20-AUG-14	20-AUG-14	R2923769
Total Nitrogen (Calculation)							
Total Nitrogen	0.22		0.21	mg/L		20-AUG-14	
L1500733-32 DUPLICATE 2							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
TOT Metals CCME Fresh Water Aquatic Life							
Hardness (from Total Ca and Mg)							
Hardness (as CaCO3)	<1.3			mg/L		18-AUG-14	
Mercury (Hg)							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L		19-AUG-14	R2923482
Total Cd in Water by CCMS (CCME - FAL)							
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L		17-AUG-14	R2920902
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.0221		0.0050	mg/L		17-AUG-14	R2920902
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Arsenic (As)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Barium (Ba)-Total	<0.0030		0.0030	mg/L		17-AUG-14	R2920902
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Boron (B)-Total	<0.050		0.050	mg/L		17-AUG-14	R2920902
Calcium (Ca)-Total	<0.50		0.50	mg/L		17-AUG-14	R2920902
Chromium (Cr)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Copper (Cu)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Iron (Fe)-Total	0.022		0.010	mg/L		17-AUG-14	R2920902

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1500733-32 DUPLICATE 2							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
Total Metals in Water by CRC ICPMS							
Lead (Pb)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Lithium (Li)-Total	<0.010		0.010	mg/L		17-AUG-14	R2920902
Magnesium (Mg)-Total	0.19		0.10	mg/L		17-AUG-14	R2920902
Manganese (Mn)-Total	0.0029		0.0020	mg/L		17-AUG-14	R2920902
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		17-AUG-14	R2920902
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Potassium (K)-Total	<0.50		0.50	mg/L		17-AUG-14	R2920902
Selenium (Se)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Silver (Ag)-Total	<0.000020		0.000020	mg/L		17-AUG-14	R2920902
Sodium (Na)-Total	<1.0		1.0	mg/L		17-AUG-14	R2920902
Strontium (Sr)-Total	0.00241		0.00010	mg/L		17-AUG-14	R2920902
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Tin (Sn)-Total	<0.050		0.050	mg/L		17-AUG-14	R2920902
Titanium (Ti)-Total	0.0016		0.0010	mg/L		17-AUG-14	R2920902
Uranium (U)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Vanadium (V)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Zinc (Zn)-Total	<0.0040		0.0040	mg/L		17-AUG-14	R2920902
Miscellaneous Parameters							
Ammonia, Total (as N)	<0.050		0.050	mg/L		18-AUG-14	R2922152
Oil and Grease	<1.0		1.0	mg/L		18-AUG-14	R2922128
Total Organic Carbon	<1.0		1.0	mg/L		19-AUG-14	R2922966
Phosphorus (P)-Total	<0.020		0.020	mg/L	14-AUG-14	15-AUG-14	R2920505
Total Suspended Solids	<3.0		3.0	mg/L		15-AUG-14	R2921185
Turbidity	0.62		0.10	NTU		13-AUG-14	R2917244
pH, Conductivity and Total Alkalinity							
pH	6.14		0.10	pH		14-AUG-14	R2916844
Conductivity (EC)	5.18		0.20	uS/cm		14-AUG-14	R2916844
Bicarbonate (HCO3)	<5.0		5.0	mg/L		14-AUG-14	R2916844
Carbonate (CO3)	<5.0		5.0	mg/L		14-AUG-14	R2916844
Hydroxide (OH)	<5.0		5.0	mg/L		14-AUG-14	R2916844
Alkalinity, Total (as CaCO3)	<2.0		2.0	mg/L		14-AUG-14	R2916844
Total Nitrogen							
Nitrate as N by IC							
Nitrate (as N)	<0.050		0.050	mg/L		13-AUG-14	R2917262
Nitrate+Nitrite							
Nitrate and Nitrite (as N)	<0.054		0.054	mg/L		15-AUG-14	
Nitrite as N by IC							
Nitrite (as N)	<0.020		0.020	mg/L		13-AUG-14	R2917262
TKN in Water by Colour							
Total Kjeldahl Nitrogen	<0.20		0.20	mg/L	20-AUG-14	20-AUG-14	R2923769
Total Nitrogen (Calculation)							
Total Nitrogen	<0.21		0.21	mg/L		20-AUG-14	
L1500733-33 DUPLICATE 3							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
TOT Metals CCME Fresh Water Aquatic Life							
Hardness (from Total Ca and Mg)							
Hardness (as CaCO3)	5.0			mg/L		18-AUG-14	
Mercury (Hg)							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L		19-AUG-14	R2923482
Total Cd in Water by CCMS (CCME - FAL)							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1500733-33 DUPLICATE 3							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
Total Cd in Water by CCMS (CCME - FAL)							
Cadmium (Cd)-Total	0.000011		0.000010	mg/L		17-AUG-14	R2920902
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.0207		0.0050	mg/L		17-AUG-14	R2920902
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Arsenic (As)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Barium (Ba)-Total	0.0038		0.0030	mg/L		17-AUG-14	R2920902
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Boron (B)-Total	<0.050		0.050	mg/L		17-AUG-14	R2920902
Calcium (Ca)-Total	0.94		0.50	mg/L		17-AUG-14	R2920902
Chromium (Cr)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Copper (Cu)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Iron (Fe)-Total	0.014		0.010	mg/L		17-AUG-14	R2920902
Lead (Pb)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Lithium (Li)-Total	<0.010		0.010	mg/L		17-AUG-14	R2920902
Magnesium (Mg)-Total	0.63		0.10	mg/L		17-AUG-14	R2920902
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		17-AUG-14	R2920902
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Potassium (K)-Total	<0.50		0.50	mg/L		17-AUG-14	R2920902
Selenium (Se)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Silver (Ag)-Total	<0.000020		0.000020	mg/L		17-AUG-14	R2920902
Sodium (Na)-Total	<1.0		1.0	mg/L		17-AUG-14	R2920902
Strontium (Sr)-Total	0.00503		0.00010	mg/L		17-AUG-14	R2920902
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Tin (Sn)-Total	<0.050		0.050	mg/L		17-AUG-14	R2920902
Titanium (Ti)-Total	0.0011		0.0010	mg/L		17-AUG-14	R2920902
Uranium (U)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Vanadium (V)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Zinc (Zn)-Total	<0.0040		0.0040	mg/L		17-AUG-14	R2920902
Miscellaneous Parameters							
Ammonia, Total (as N)	<0.050		0.050	mg/L		18-AUG-14	R2922152
Oil and Grease	<1.0		1.0	mg/L		18-AUG-14	R2922128
Total Organic Carbon	1.9		1.0	mg/L		19-AUG-14	R2922966
Phosphorus (P)-Total	<0.020		0.020	mg/L	14-AUG-14	15-AUG-14	R2920505
Total Suspended Solids	<3.0		3.0	mg/L		15-AUG-14	R2921185
Turbidity	0.46		0.10	NTU		13-AUG-14	R2917244
pH, Conductivity and Total Alkalinity							
pH	5.54		0.10	pH		14-AUG-14	R2916844
Conductivity (EC)	17.6		0.20	uS/cm		14-AUG-14	R2916844
Bicarbonate (HCO3)	<5.0		5.0	mg/L		14-AUG-14	R2916844
Carbonate (CO3)	<5.0		5.0	mg/L		14-AUG-14	R2916844
Hydroxide (OH)	<5.0		5.0	mg/L		14-AUG-14	R2916844
Alkalinity, Total (as CaCO3)	<2.0		2.0	mg/L		14-AUG-14	R2916844
Total Nitrogen							
Nitrate as N by IC							
Nitrate (as N)	<0.050		0.050	mg/L		13-AUG-14	R2917262
Nitrate+Nitrite							
Nitrate and Nitrite (as N)	<0.054		0.054	mg/L		15-AUG-14	
Nitrite as N by IC							
Nitrite (as N)	<0.020		0.020	mg/L		13-AUG-14	R2917262

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1500733-33 DUPLICATE 3							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
TKN in Water by Colour							
Total Kjeldahl Nitrogen	<0.20		0.20	mg/L	20-AUG-14	20-AUG-14	R2923769
Total Nitrogen (Calculation)							
Total Nitrogen	<0.21		0.21	mg/L		20-AUG-14	
L1500733-34 FIELD BLANK							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
TOT Metals CCME Fresh Water Aquatic Life							
Hardness (from Total Ca and Mg)							
Hardness (as CaCO3)	<1.3			mg/L		18-AUG-14	
Mercury (Hg)							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L		19-AUG-14	R2923482
Total Cd in Water by CCMS (CCME - FAL)							
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L		17-AUG-14	R2920902
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L		17-AUG-14	R2920902
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Arsenic (As)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Barium (Ba)-Total	<0.0030		0.0030	mg/L		17-AUG-14	R2920902
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Boron (B)-Total	<0.050		0.050	mg/L		17-AUG-14	R2920902
Calcium (Ca)-Total	<0.50		0.50	mg/L		17-AUG-14	R2920902
Chromium (Cr)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Copper (Cu)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Iron (Fe)-Total	<0.010		0.010	mg/L		17-AUG-14	R2920902
Lead (Pb)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Lithium (Li)-Total	<0.010		0.010	mg/L		17-AUG-14	R2920902
Magnesium (Mg)-Total	<0.10		0.10	mg/L		17-AUG-14	R2920902
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		17-AUG-14	R2920902
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Potassium (K)-Total	<0.50		0.50	mg/L		17-AUG-14	R2920902
Selenium (Se)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Silver (Ag)-Total	<0.000020		0.000020	mg/L		17-AUG-14	R2920902
Sodium (Na)-Total	<1.0		1.0	mg/L		17-AUG-14	R2920902
Strontium (Sr)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Tin (Sn)-Total	<0.050		0.050	mg/L		17-AUG-14	R2920902
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Uranium (U)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Vanadium (V)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Zinc (Zn)-Total	<0.0040		0.0040	mg/L		17-AUG-14	R2920902
Miscellaneous Parameters							
Ammonia, Total (as N)	<0.050		0.050	mg/L		18-AUG-14	R2922152
Oil and Grease	<1.0		1.0	mg/L		18-AUG-14	R2922128
Total Organic Carbon	<1.0		1.0	mg/L		20-AUG-14	R2924042
Phosphorus (P)-Total	<0.020		0.020	mg/L	14-AUG-14	15-AUG-14	R2920505
Total Suspended Solids	<3.0		3.0	mg/L		15-AUG-14	R2921185
Turbidity	<0.10		0.10	NTU		13-AUG-14	R2917244
pH, Conductivity and Total Alkalinity							
pH	5.37	RRV	0.10	pH		13-AUG-14	R2916844

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1500733-34 FIELD BLANK							
Sampled By: KL on 09-AUG-14 @ 12:00							
Matrix: Surface Water							
pH, Conductivity and Total Alkalinity							
Conductivity (EC)	0.98	RRV	0.20	uS/cm		13-AUG-14	R2916844
Bicarbonate (HCO3)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Carbonate (CO3)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Hydroxide (OH)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Alkalinity, Total (as CaCO3)	<2.0		2.0	mg/L		13-AUG-14	R2916844
Total Nitrogen							
Nitrate as N by IC							
Nitrate (as N)	<0.050		0.050	mg/L		13-AUG-14	R2917262
Nitrate+Nitrite							
Nitrate and Nitrite (as N)	<0.054		0.054	mg/L		15-AUG-14	
Nitrite as N by IC							
Nitrite (as N)	<0.020		0.020	mg/L		13-AUG-14	R2917262
TKN in Water by Colour							
Total Kjeldahl Nitrogen	<0.20		0.20	mg/L	20-AUG-14	20-AUG-14	R2923769
Total Nitrogen (Calculation)							
Total Nitrogen	<0.21		0.21	mg/L		20-AUG-14	
L1500733-35 TRAVEL BLANK							
Sampled By: KL on 08-AUG-14 @ 12:00							
Matrix: Surface Water							
TOT Metals CCME Fresh Water Aquatic Life							
Hardness (from Total Ca and Mg)							
Hardness (as CaCO3)	<1.3			mg/L		18-AUG-14	
Mercury (Hg)							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L		19-AUG-14	R2923482
Total Cd in Water by CCMS (CCME - FAL)							
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L		17-AUG-14	R2920902
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L		17-AUG-14	R2920902
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Arsenic (As)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Barium (Ba)-Total	<0.0030		0.0030	mg/L		17-AUG-14	R2920902
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Boron (B)-Total	<0.050		0.050	mg/L		17-AUG-14	R2920902
Calcium (Ca)-Total	<0.50		0.50	mg/L		17-AUG-14	R2920902
Chromium (Cr)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Copper (Cu)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Iron (Fe)-Total	<0.010		0.010	mg/L		17-AUG-14	R2920902
Lead (Pb)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Lithium (Li)-Total	<0.010		0.010	mg/L		17-AUG-14	R2920902
Magnesium (Mg)-Total	<0.10		0.10	mg/L		17-AUG-14	R2920902
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		17-AUG-14	R2920902
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		17-AUG-14	R2920902
Potassium (K)-Total	<0.50		0.50	mg/L		17-AUG-14	R2920902
Selenium (Se)-Total	<0.00040		0.00040	mg/L		17-AUG-14	R2920902
Silver (Ag)-Total	<0.000020		0.000020	mg/L		17-AUG-14	R2920902
Sodium (Na)-Total	<1.0		1.0	mg/L		17-AUG-14	R2920902
Strontium (Sr)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Tin (Sn)-Total	<0.050		0.050	mg/L		17-AUG-14	R2920902

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1500733-35 TRAVEL BLANK							
Sampled By: KL on 08-AUG-14 @ 12:00							
Matrix: Surface Water							
Total Metals in Water by CRC ICPMS							
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Uranium (U)-Total	<0.00010		0.00010	mg/L		17-AUG-14	R2920902
Vanadium (V)-Total	<0.0010		0.0010	mg/L		17-AUG-14	R2920902
Zinc (Zn)-Total	<0.0040		0.0040	mg/L		17-AUG-14	R2920902
Miscellaneous Parameters							
Ammonia, Total (as N)	<0.050		0.050	mg/L		18-AUG-14	R2922152
Oil and Grease	<1.0		1.0	mg/L		18-AUG-14	R2922128
Total Organic Carbon	1.6	RRV	1.0	mg/L		19-AUG-14	R2922966
Phosphorus (P)-Total	<0.020		0.020	mg/L	14-AUG-14	15-AUG-14	R2920505
Total Suspended Solids	<3.0		3.0	mg/L		15-AUG-14	R2921185
Turbidity	<0.10		0.10	NTU		13-AUG-14	R2917244
pH, Conductivity and Total Alkalinity							
pH	5.40	RRV	0.10	pH		13-AUG-14	R2916844
Conductivity (EC)	0.79	RRV	0.20	uS/cm		13-AUG-14	R2916844
Bicarbonate (HCO3)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Carbonate (CO3)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Hydroxide (OH)	<5.0		5.0	mg/L		13-AUG-14	R2916844
Alkalinity, Total (as CaCO3)	<2.0		2.0	mg/L		13-AUG-14	R2916844
Total Nitrogen							
Nitrate as N by IC							
Nitrate (as N)	<0.050		0.050	mg/L		13-AUG-14	R2917262
Nitrate+Nitrite							
Nitrate and Nitrite (as N)	<0.054		0.054	mg/L		15-AUG-14	
Nitrite as N by IC							
Nitrite (as N)	<0.020		0.020	mg/L		13-AUG-14	R2917262
TKN in Water by Colour							
Total Kjeldahl Nitrogen	<0.20		0.20	mg/L	20-AUG-14	20-AUG-14	R2923769
Total Nitrogen (Calculation)							
Total Nitrogen	<0.21		0.21	mg/L		20-AUG-14	

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
C-TOT-ORG-ED	Water	Total Organic Carbon	APHA 5310 B-Instrumental
CD-T-CCMS-FAL-ED	Water	Total Cd in Water by CCMS (CCME - FAL)	APHA 3030 B&E / EPA SW-846 6020A
ETL-HARDNESS-TOT-ED	Water	Hardness (from Total Ca and Mg)	APHA 2340 B-Calculation
HG-T-L-CVAA-ED	Water	Mercury (Hg)	EPA 245.7 / EPA 245.1
MET-T-CCMS-ED	Water	Total Metals in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A
N-T-CALC-ED	Water	Total Nitrogen (Calculation)	APHA 4500 N-Calculated
Total Nitrogen is a calculated parameter. Total Nitrogen = Total Kjeldahl Nitrogen + [Nitrate and Nitrite (as N)]			
NH3-CFA-ED	Water	Ammonia in Water by Colour	APHA 4500 NH3-NITROGEN (AMMONIA)
This analysis is carried out using procedures adapted from APHA Method 4500 NH3 "NITROGEN (AMMONIA)". Ammonia is determined using the automated phenate colourimetric method.			
NO2+NO3-CALC-ED	Water	Nitrate+Nitrite	CALCULATION
NO2-IC-ED	Water	Nitrite as N by IC	APHA 4110 B-ION CHROMATOGRAPHY
This analysis is carried out using procedures adapted from EPA Method 300.0 "Determination of Inorganic Anions by Ion Chromatography".			
NO3-IC-ED	Water	Nitrate as N by IC	APHA 4110 B-ION CHROMATOGRAPHY
This analysis is carried out using procedures adapted from EPA Method 300.0 "Determination of Inorganic Anions by Ion Chromatography".			
OGG-LLE-ED	Water	Oil and Grease-Gra	APHA 5520 B HEXANE MTBE EXT. GRAVIME
P-T-COL-ED	Water	Total P in Water by Colour	APHA 4500-P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorus is determined colourimetrically after persulphate digestion of the sample.			
PH/EC/ALK-ED	Water	pH, Conductivity and Total Alkalinity	APHA 4500-H, 2510, 2320
All samples analyzed by this method for pH will have exceeded the 15 minute recommended hold time from time of sampling (field analysis is recommended for pH where highly accurate results are needed)			
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric
TKN-CFA-ED	Water	TKN in Water by Colour	APHA 4500-NORG (TKN)
This analysis is carried out using procedures adapted from APHA Method 4500-Norg "Nitrogen (Organic)". Total Kjeldahl Nitrogen is determined by sample digestion at 380 celcius with analysis using an automated colourimetric finish.			
TURBIDITY-ED	Water	Turbidity	APHA 2130 B-Nephelometer

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

Chain of Custody Numbers:

1 2 3

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

APPENDIX B
TETRA TECH EBA'S GENERAL CONDITIONS

GENERAL CONDITIONS

GEOENVIRONMENTAL REPORT

This report incorporates and is subject to these “General Conditions”.

1.0 USE OF REPORT AND OWNERSHIP

This report pertains to a specific site, a specific development, and a specific scope of work. It is not applicable to any other sites, nor should it be relied upon for types of development other than those to which it refers. Any variation from the site or proposed development would necessitate a supplementary investigation and assessment.

This report and the assessments and recommendations contained in it are intended for the sole use of Tetra Tech EBA’s client. Tetra Tech EBA does not accept any responsibility for the accuracy of any of the data, the analysis or the recommendations contained or referenced in the report when the report is used or relied upon by any party other than Tetra Tech EBA’s Client unless otherwise authorized in writing by Tetra Tech EBA. Any unauthorized use of the report is at the sole risk of the user.

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