

July 24, 2012

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P.O. Box 119
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Re: June 2012 – Monthly Monitoring Report for Water Licence 2AM-DOH0713

This report is comprised of monitoring requirements as set out in Schedule J of water license 2AM-DOH0713 and additional requirements from AANDC. License items include:

- Part D (Conditions Applying to Construction) Items 7 and 19;
- Part E (Conditions applying to Water Use) Item 1;
- Part G (Conditions Applying to Waste Management and Waste Management Plans) Items 3(e) and 3(b), Item 21 (a) and 22 (e);
- Part J (Conditions Applying to General and Aquatic Effects Monitoring) Items 12 and 14.

Other monitoring requirements stipulated in the license refer to facilities that have not been constructed.

Part D: Conditions Applying to Construction

Item 7. Construction Monitoring

Construction activities did not take place in this month.

Item 19. Surface Runoff Effluent Quality Limits

Surface runoff samples from construction as part of the Waste Rock and Ore, and Quarry Monitoring Management Plans was undertaken by SRK for runoff that has the potential to directly or indirectly enter a waterbody. The results of the SRK sampling program will be included in the annual reports. Turbidity was collected in situ at various seeps from construction areas, and a subset of the seeps were sampled for laboratory analysis of total suspended solids as well (Table 1).

Table 1 – Construction Surface Runoff Sample Results for Turbidity and Total Suspended Solids, June 2012

Sample ID	ALS ID	Date Sampled	Total Suspended Solids (mg/L)*	Turbidity (in situ) (NTU)	Comments
ST10C-1JUN12		6-1-12 14:45		18.5	Pooling runoff at Windy Road branch from Doris Road
ST10C-2JUN12		6-2-12 17:15		12.2	Pooling runoff at Windy Road branch from Doris Road
ST10C-03JUN12		6-3-12 9:10		9.87	Pooling runoff at Windy Road branch from Doris Road

Sample ID	ALS ID	Date Sampled	Total Suspended Solids (mg/L)*	Turbidity (in situ) (NTU)	Comments
ST10C-4JUN12	L1159677-4	4-6-12 17:50	<3.0	23.8	Pooling runoff at Windy Road branch from Doris Road
ST10C-05JUN12		6-5-12 0:00		15.4	Pooling runoff at Windy Road branch from Doris Road
ST10C-06JUN12		6-6-12 13:50		11.9	Pooling runoff at Windy Road branch from Doris Road
ST10C-09JUN12		6-9-12 10:10		12.3	Pooling runoff at Windy Road branch from Doris Road
ST10C-12JUN12		12-6-12 16:55		19.7	Runoff South of Doris Overburden stockpile
ST10D-1JUN12	L1156739-6	3-6-12 14:50	<3.0	5.7	Pooling runoff at Windy Road branch from Doris Road
ST10D-2JUN12	L1156739-5	3-6-12 17:35	<3.0	5.26	Pooling runoff at Windy Road branch from Doris Road
ST10D-3JUN12	L1156739-3	3-6-12 9:22	7	8.78	Pooling runoff at Windy Road branch from Doris Road
ST10D-04JUN12		6-4-12 17:10		1.81	Pooling runoff at Windy Road branch from Doris Road
ST10E-1JUN12		6-1-12 15:00		28.3	Above last coco mat (sump area)
ST10E-02JUN12		6-2-12 16:00		41.3	Above 3rd coco mat (sump area)
ST10E-03JUN12		6-3-12 9:22		8.78	Above last coco mat (sump area)
ST10F-1JUN12	L1156739-8	3-6-12 15:04	24	18.5	Above 3rd coco mat (sump area)
ST10F-2JUN12		6-2-12 17:52		8	Above 3rd coco mat (sump area)
ST10F-03JUN12		6-3-12 9:35		11.2	Above 3rd coco mat (sump area)
ST10G-1JUN12		6-1-12 15:10		10.7	Below turnoff towards pump house
ST10G-2JUN12		6-2-12 17:55		4.5	Below turnoff towards pump house
ST10G-03JUN12		6-3-12 9:40		1.94	Below turnoff towards pump house
ST10I-1JUN12	L1156739-7	3-6-12 13:30	<3.0	0.65	At toe of tail lake dam
ST10I-02JUN12	02-Jun-12	6-2-12 18:07		20	At toe of tail lake dam
ST10I-03JUN12	03-Jun-12	6-3-12 10:00		0.97	At toe of tail lake dam
ST10L-05JUN12	05-Jun-12	6-5-12 0:00		8.27	Across the road from PCP
ST10M-05JUN12	05-Jun-12	6-5-12 0:00		14	Across the road from SCP

*2AM-DOH0713 TSS maximum grab criteria is 100 mg/L and TSS maximum average criteria 50 mg/L for runoff that has the potential to enter a waterbody

Part E: Conditions Applying to Water Use

Item 1: Water Usage

Fresh water used for domestic camp use, portable wash cars, ice road construction, and frozen core production is reported in Table 2.

Table 2: Water Usage for Doris North, June 2012

Parameters	Water Use
Water Source	Doris Lake
Geographical Coordinates	68°8'17.04" N, 106°36'52.68"W
Monthly Cumulative	695 m ³
Annual Cumulative	11,500 m ³
2AM-DOH0713 Permitted Water Volume (Total Annual)	480,000m ³

Schedule J: Water Quality Monitoring at Water Intake

Monthly compliance samples, in accordance with Schedule J requirements of the licence, were taken from monitoring station ST-7 (Table 3).

Table 3: Monthly Compliance Sample Results for SNP Monitoring Station ST-7, June 2012

Parameter	Units	ST7-4JUN12
ALS ID		L1156713-1
Sample Date/Time		6/4/2012 7:43:00 AM
Conductivity (EC)	uS/cm	326
Hardness (as CaCO ₃)	mg/L	58.9 *
pH	pH	7.68
Total Suspended Solids	mg/L	<3.0
Ammonia, Total (as N)	mg/L	<0.050
Nitrate (as N)	mg/L	<0.050
Nitrite (as N)	mg/L	<0.050
Orthophosphate-Dissolved (as P)	mg/L	<0.0010
Phosphorus (P)-Total	mg/L	<0.020
Cyanide, Total	mg/L	<0.0050
Cyanide, Free	mg/L	<0.0050
Aluminum (Al)-Total	mg/L	0.0104
Antimony (Sb)-Total	mg/L	<0.00040
Arsenic (As)-Total	mg/L	<0.00040
Barium (Ba)-Total	mg/L	<0.0030
Beryllium (Be)-Total	mg/L	<0.0010
Boron (B)-Total	mg/L	<0.050
Cadmium (Cd)-Total	mg/L	<0.000010
Calcium (Ca)-Total	mg/L	11.2
Chromium (Cr)-Total	mg/L	<0.0010
Cobalt (Co)-Total	mg/L	<0.0020
Copper (Cu)-Total	mg/L	0.003
Iron (Fe)-Total	mg/L	<0.030
Lead (Pb)-Total	mg/L	0.00019
Lithium (Li)-Total	mg/L	<0.010
Magnesium (Mg)-Total	mg/L	7.86
Manganese (Mn)-Total	mg/L	<0.0050
Mercury (Hg)-Total	mg/L	<0.000020
Molybdenum (Mo)-Total	mg/L	<0.0050
Nickel (Ni)-Total	mg/L	<0.0020
Potassium (K)-Total	mg/L	2.7
Selenium (Se)-Total	mg/L	<0.00040
Silver (Ag)-Total	mg/L	<0.000020
Sodium (Na)-Total	mg/L	37.8
Thallium (Tl)-Total	mg/L	<0.00010
Tin (Sn)-Total	mg/L	<0.050
Titanium (Ti)-Total	mg/L	<0.0010
Uranium (U)-Total	mg/L	<0.00010
Vanadium (V)-Total	mg/L	<0.0010
Zinc (Zn)-Total	mg/L	0.0076
Calcium (Ca)-Dissolved	mg/L	11.3

Parameter	Units	ST7-4JUN12
Magnesium (Mg)-Dissolved	mg/L	7.46
Biochemical Oxygen Demand	mg/L	<2.0
Oil and Grease	mg/L	<1.0
Oil And Grease (Visible Sheen)		no visible sheen
Fecal Coliforms	CFU/100mL	<1
ALS ID		L1160416-1
Sample Date/Time		6/10/2012 5:50:00 PM
Blue-green algae	Cells/100 mL	89,100

Part G: Conditions Applying to Waste Management and Waste Management Plans.

Item 3(b): Conditions applying to sewage effluent quality

Sampling station ST-8 is located within the Doris Camp sewage treatment plant. Effluent samples were collected from ST-8A and were compliant for all parameters (Table 4). Sampling station ST-8B was taken out of service on November 5, 2011 due to insufficient flow and will be brought back on line when necessary.

Table 4: Water Quality Data Summary for Monitoring Station ST-8A, June 2012

Parameter/SNP Sites	Units	ST-8A	Doris: 2AM-DOH0713	
			(Part G: Item 3 (b))	
ALS Lab Reference #		L1156713-2	Maximum Average Concentration	Maximum Allowable Grab Sample Concentration
Sample Date/Time		6/4/2012 8:10:00 AM		
BOD ₅	mg/L	3.6	80	80
TSS (mg/L)	mg/L	<3.0	100	100
Fecal Coliform	CFU/100mL	17	10,000	10,000
pH (pH unit)	pH unit	6.59	6.5 - 9.0	9
Oil & Grease (Visible Sheen)		No Visible Sheen	No Visible Sheen	No Visible Sheen
Oil & Grease (mg/L)	mg/L	<1.0	5	10

Station ST-9 was sampled in June. The water at this station was non-acutely toxic (Table 5).

Table 5: Water Quality Data Summary for Monitoring Station ST-9, June 2012

Parameter/SNP Sites	Units	ST-9
ALS Lab Reference #		L1163247-1
Sample Date/Time		6/14/2012 1:45:00 PM
BOD ₅	mg/L	2.8
TSS (mg/L)	mg/L	<3.0
Fecal Coliform	CFU/100mL	<1
pH (pH unit)	pH unit	7.9
Oil & Grease (Visible Sheen)		No Visible Sheen
Oil & Grease (mg/L)	mg/L	2.7

Item 3(e): Treated Sewage Effluent Release in cubic meters

The volume of treated effluent released at ST-8 and the volume of sludge removed and incinerated are shown in Table 6.

Table 6: Treated Sewage Effluent released in cubic meters (m³) through ST-8 and total sludge volume removed

Parameters	Effluent Released ST-8 (m ³)	Sludge Volume (m ³)
Monthly Cumulative	460	2.27
Annual Cumulative	3424	17.39

Item 21 (a) and Items 22 (c), (e): Sedimentation pond, landfarm, and fuel containment sumps

As described in the 2012 Interim Water Management Plan, the Sedimentation Pond (ST-1) is being used as a collection pond for the water that accumulated in the Pollution Control Pond (ST-2) and the two Underflow Sumps (STS1 and STS2), and occasionally from various berms and containments in the project area. Water that had been stored in the temporary pollution control pond from the 2011 season was also transferred into ST-1. The water in ST-1 is then transferred to the Tailings Impoundment Area (TIA) when the accumulated volume permits. Water was transferred from ST-1 to the TIA beginning in June 2012 (Table 7). The water quality samples collected from ST-1 are summarized in Table 8, which is provided at the end of this report.

Table 7: Water in cubic meters (m³) transferred from ST-1 to the TIA, June 2012

Parameters	Water volume transferred from ST-1 to TIA (m ³)
Monthly Cumulative	5884
Annual Cumulative	5884

Water was not discharged from ST-4 (land farm).

Water from the Doris Tank Farm (ST-5) was sampled on 15 May 2012. A visible sheen was detected in the sample, therefore, the oil-water separator was set up and a compliant sample was collected on 31 May 2012 (Table 9). Discharge began on 8 June 2012 via the oil-water separator; 655 m³ was discharged in June. Daily samples were collected during discharge (Table 10, provided at the end of this report).

Table 9: ST-5 (Doris Tank Farm) Pre-discharge Samples, June 2012

Parameter	Units	ST5-15MAY12	ST5-31MAY12 (treated with oil-water separator)	Maximum Average Concentration (mg/L)	Maximum Concentration in any Grab Sample (mg/L)
ALS ID		L1150080-1	L1156113-2		
Sample Date/Time		5/15/2012 4:25:00 PM	5/31/2012 9:20:00 AM		
pH	pH	8.22	8.08	6.5 – 9.0	9.0
Total Suspended Solids	mg/L	18	<3.0	15	30
Lead (Pb)-Total	mg/L	0.00077	0.00024	0.01	0.02
Oil and Grease	mg/L	<1.0	<1.0	5	10
Oil And Grease (Visible Sheen)		visible sheen present	no visible sheen	-	-
Benzene	mg/L	<0.00050	<0.00050	0.37	-
Ethylbenzene	mg/L	0.00085	<0.00050	0.09	-
Toluene	mg/L	0.00075	<0.00050	0.002	

As reported in the May 2012 report, the Roberts Bay 5 million litre fuel tank berm (ST-6a) was sampled and discharged starting 31 May 2012. In the May report, the total volume removed from the berm in May was reported as 381 m³. This value represented the total volume removed, however, only 269 m³ was removed from the berm on 31 May 2012. The additional 112 m³ was used as dust suppression in June 2012.

Water from the Roberts Bay Bulk Fuel Containment (ST-6b) was sampled on 15 May 2012. A visible sheen was detected in the sample, therefore, the oil-water separator was set up and a compliant sample was collected on 31 May 2012 (Table 11). A total of 971 m³ of water was removed from the berm; the water was used for dust suppression on the roads.

Table 11: ST-6B (Roberts Bay Bulk Fuel Containment) Pre-discharge Samples, June 2012

Parameter	Units	ST6B-14JUN12A	Maximum Average Concentration (mg/L)	Maximum Concentration in any Grab Sample (mg/L)
ALS ID		L1163282-1		
Sample Date/Time		6/14/2012 3:30:00 PM		
pH	pH	8.22	6.5 - 9.0	9
Total Suspended Solids	mg/L	14	15	30
Lead (Pb)-Total	mg/L	0.00027	0.01	0.02
Oil and Grease	mg/L	<1.0	5	10
Oil And Grease (Visible Sheen)		no visible sheen	-	-
Benzene	mg/L	<0.00050	0.37	-
Ethylbenzene	mg/L	<0.00050	0.09	-
Toluene	mg/L	<0.00050	0.002	-
Styrene	mg/L	<0.010	-	-
o-Xylene	mg/L	<0.00050	-	-
m+p-Xylene	mg/L	0.00063	-	-
Xylenes	mg/L	<0.00071	-	-

Item 26, 27, 28 and Part J Item 8: Water Discharged from Tailing Impoundment Area

Water Samples were collected from TL-1 every second day for 2 weeks in May to fulfill the sampling requirement for prior to commencing discharge; an additional sample was collected on 10 June 2012, one day prior to initiating the dewatering activities for the TIA. Note that TL-1 is taken from the intake end and TL-4 is taken from the discharge end of the same pipe; therefore, samples collected as TL-4 during the dewatering program also fulfill the sampling requirements for TL-1. Sample results for TL-1/TL-4 are provided in Table 12, which is provided at the end of this report. As expected, discharged water was well below the discharge criteria in the water licence.

Water from the mine site (ST-1 and ST-2) was discharged into Tail Lake beginning 6 June 2012 (Table 7 and 8).

Water collected from TL-4 was shown to be non-acutely toxic to trout or daphnia (Table 13).

Table 13: Acute Lethality Test Results for TL-4, June 2012

Parameter	TL4-14JUN12	Analyst Comments
ALS ID	L1163245-3	
Sample Date/Time	6/14/2012 11:15:00 AM	
Trout		
LC50	>100%	No effect occurred
LC25	>100%	No effect occurred
Daphnia		
LC50	>100%	No effect occurred
LC25	>100%	No effect occurred
EC50	>100%	No effect occurred
EC25	>100%	No effect occurred

Notes: LC50 = lethal concentration that results in mortality of 50% of the test organisms; LC25 = lethal concentration that results in mortality of 25% of the test organisms; EC50 = effects concentration that results in visible effects (immobility) of 50% of the test organisms; EC25 = effects concentration that results in visible effects (immobility) of 25% of the test organisms.

Sample results for TL-2 (Doris Creek upstream) are presented in Table 14, which is provided at the end of this report. Sample results for TL-3 (Doris Creek downstream) and a comparison of these results to TL-2 sample results is provided in Table 15, which is also provided at the end of this report. As expected, the TL-3 (downstream of discharge) water quality was similar to the TL-2 (upstream Doris Creek background). Water quality samples at TL-3 indicated that cadmium and silver slightly exceeded criteria on June 12, and zinc on June 26.

Item 30: Tailings Impoundment Area Discharge Volume

Dewatering of the Tailings Impoundment Area commenced on 11 June 2012. The daily discharge and maximum permitted discharge volumes are presented in Table 16.

Table 16: Daily Permitted and Actual Discharge Volumes for the TIA Dewatering Program, June 2012

Date	TL-2 Discharge Volume (m ³)	Max. Discharge Volume Allowed - 10% of TL-2 (m ³)†	Total Daily Vol. Discharged (m ³)	Elevation of TIA (m)
June 1, 2012	frozen	0	0.00	29.35
June 2, 2012	frozen	0	0.00	29.36
June 3, 2012	frozen	0	0.00	29.38
June 4, 2012	frozen	0	0.00	29.41
June 5, 2012	frozen	0	0.00	29.43
June 6, 2012	frozen	0	0.00	29.46
June 7, 2012	frozen	0	0.00	29.46
June 8, 2012	frozen	0	0.00	29.47
June 9, 2012	frozen	0	0.00	29.48
June 10, 2012	stream open - no measurement	None Given	0.00	29.49
June 11, 2012	stream open - no measurement	None Given	2767.58	29.48
June 12, 2012	stream open - no measurement	None Given	5843	29.49
June 13, 2012	277460	27746	10068*	29.47
June 14, 2012	294990	29499	8832	29.47
June 15, 2012	312520	31252	8690	29.47
June 16, 2012	276650	27665	8663	29.48

Date	TL-2 Discharge Volume (m³)	Max. Discharge Volume Allowed - 10% of TL-2 (m³)†	Total Daily Vol. Discharged (m³)	Elevation of TIA (m)
June 17, 2012	282320	28232	8693	29.48
June 18, 2012	287420	28742	8327	29.48
June 19, 2012	254880	25488	8842	29.48
June 20, 2012	252290	25229	8539	29.48
June 21, 2012	241060	24106	8745	29.48
June 22, 2012	234140	23414	8831	29.47
June 23, 2012	223780	22378	8698	29.46
June 24, 2012	213410	21341	8615	29.46
June 25, 2012	210820	21082	8837	29.45
June 26, 2012	202180	20218	10321*	29.44
June 27, 2012	195260	19526	8370	29.43
June 28, 2012	188350	18835	8768	29.42
June 29, 2012	177980	17798	8686	29.42
June 30, 2012	170210	17021	8595	29.41
<i>Monthly Total</i>		429572	167731	
<i>Annual Total</i>		429572	167731	

Notes: †Data provided by Rescan from the TL-2 continuously monitoring hydrostation. *Daily volume recording time moved back 4 hours resulting in a greater discharge value on this date.

Schedule J: Tailings Impoundment Area Water Quality (TL-10)

Water quality was not measured at station TL-10 in June due to unsafe ice conditions.

Part J: Conditions Applying to General and Aquatics Effects Monitoring

Item 12d Tonnages of Waste Rock Stored on the Temporary Waste Rock Pad

Underground mining is no longer occurring. Waste rock has not been removed from the pile. The total volume of rock on the temporary waste rock pad is 182 716 tonnes, as per the December 2011 survey.

Item 12g Tail Lake Ice Thickness

The ice thickness on Tail Lake was not measured in this month due to unsafe ice conditions.

Environmental Incident Reporting

There were 2 environmental incidents in this reporting period:

- A megabag of waste materials being transported from a drill contractor shop to the waste management area at Roberts Bay contained an unsealed pail of oil which leaked inside the bag and subsequently dripped out onto the gravel laydown. A trail of drips estimated at 10L leaked on to the ground. The materials were properly contained and the contaminated gravel was cleaned up and removed for disposal. Proper waste management, storage of fluid products and handling protocols were reviewed with contractor.
- A gravity feed overflow of an auxilliary tank on the oil/water separator spilled approx. 2 L of diesel inside the berm into effluent water being treated for discharge. A sorbent boom was deployed to contain the product and sorbent pads were used to absorb the remainder. Oil-water Separator unit was moved to an area of the berm without water and placed on a spill tray. The auxilliary tank on the oil-water separator was swapped out for a different model without a gravity feed mechanism.

Should there be any questions regarding this monthly report, please contact Angela Holzapfel, Manager of Environmental Compliance for Hope Bay Mining Limited at (604) 345-3122 or Angela.Holzapfel@Newmont.com.

Yours sincerely,

Angela Holzapfel

Manager of Environmental Compliance

Hope Bay Mining Limited

Table 8: Water Quality Data Summary for Monitoring Station ST-1, June 2012

Analyte	Units	Maximum Average Concentration (mg/L)	Maximum Concentration in any Grab Sample (mg/L)	ST1-6JUN12	ST1-13JUN12	ST1-20JUN12	ST1-28JUN12
ALS ID				L1159717-8	L1163290-1	L1166912-1	L1170844-1
Date/Time Sampled				6/6/2012 11:10:00 AM	6/13/2012 2:20:00 PM	6/20/2012 3:12:00 PM	6/28/2012 10:00:00 AM
Conductivity (EC)	uS/cm			1260	6150	9470	7480
Hardness (as CaCO ₃)	mg/L			318	1760	2950	2260
pH	pH	6.0 - 9.0	9	7.87	7.77	7.71	7.54
Total Suspended Solids	mg/L	15	30	186	16	32	16
Alkalinity, Total (as CaCO ₃)	mg/L			-	70.3	81.8	66.2
Ammonia, Total (as N)	mg/L	2	4	4.98	39.6	46.9	37.5
Bicarbonate (HCO ₃)	mg/L			-	85.8	99.8	80.8
Carbonate (CO ₃)	mg/L			-	<5.0	<5.0	<5.0
Chloride (Cl)	mg/L			-	1690	2790	2060
Hardness (as CaCO ₃)	mg/L			-	1630	2800	2170
Hydroxide (OH)	mg/L			-	<5.0	<5.0	<5.0
Ion Balance	%			-	93.3	90.4	101
Nitrate and Nitrite (as N)	mg/L			-	95.2	129	107
Nitrate (as N)	mg/L			12.2	95.2	129	105
Nitrite (as N)	mg/L			0.259	<0.50	0.61	1.62
TDS (Calculated)	mg/L			-	3270	5190	4060
Sulfate (SO ₄)	mg/L			40.5	74.5	138	103
Cyanide, Total	mg/L	1	2	<0.0050	0.0392	0.0274	0.0096
Aluminum (Al)-Total	mg/L	1	2	4.62	0.587	0.868	0.707
Antimony (Sb)-Total	mg/L			<0.00040	<0.00080	<0.0016	<0.0016
Arsenic (As)-Total	mg/L	0.05	0.1	0.00141	0.00083	<0.0016	<0.0016
Barium (Ba)-Total	mg/L			0.0946	0.142	0.232	0.202
Beryllium (Be)-Total	mg/L			<0.0010	<0.0020	<0.0040	<0.0040
Boron (B)-Total	mg/L			0.153	0.29	0.29	0.31
Cadmium (Cd)-Total	mg/L			0.000032	0.00009	0.00022	0.00006
Calcium (Ca)-Total	mg/L			102	607	1030	776
Chromium (Cr)-Total	mg/L			0.0104	<0.0020	<0.0040	<0.0040
Cobalt (Co)-Total	mg/L			0.0042	0.0046	0.0091	<0.0080
Copper (Cu)-Total	mg/L	0.02	0.3	0.0133	0.0078	0.0114	0.0078
Iron (Fe)-Total	mg/L	0.3	0.6	5.83	1.03	1.91	3.71
Lead (Pb)-Total	mg/L	0.01	0.02	0.00171	0.00027	0.00101	0.00086
Lithium (Li)-Total	mg/L			0.011	0.076	0.251	0.146
Magnesium (Mg)-Total	mg/L			18.5	58.3	90	79.6
Manganese (Mn)-Total	mg/L			0.324	0.683	2.23	1.23
Mercury (Hg)-Total	mg/L			<0.000020	<0.000020	<0.000020	<0.000020
Molybdenum (Mo)-Total	mg/L			<0.0050	<0.010	<0.020	<0.020
Nickel (Ni)-Total	mg/L	0.05	0.1	0.0077	<0.0040	<0.0080	<0.0080
Potassium (K)-Total	mg/L			10.6	32.1	44.3	38.5
Selenium (Se)-Total	mg/L			0.00099	0.0016	0.0024	0.002
Silver (Ag)-Total	mg/L			0.000025	<0.000040	<0.000080	<0.000080
Sodium (Na)-Total	mg/L			76.1	388	567	502

Analyte	Units	Maximum Average Concentration (mg/L)	Maximum Concentration in any Grab Sample (mg/L)	ST1-6JUN12	ST1-13JUN12	ST1-20JUN12	ST1-28JUN12
ALS ID				L1159717-8	L1163290-1	L1166912-1	L1170844-1
Date/Time Sampled				6/6/2012 11:10:00 AM	6/13/2012 2:20:00 PM	6/20/2012 3:12:00 PM	6/28/2012 10:00:00 AM
Thallium (Tl)-Total	mg/L			<0.00010	<0.00020	<0.00040	<0.00040
Tin (Sn)-Total	mg/L			<0.050	<0.10	<0.20	<0.20
Titanium (Ti)-Total	mg/L			0.242	0.0318	0.0424	0.0202
Uranium (U)-Total	mg/L			0.00069	0.00091	0.00163	0.00119
Vanadium (V)-Total	mg/L			0.0121	0.0021	<0.0040	<0.0040
Zinc (Zn)-Total	mg/L	0.01	0.02	0.0818	0.0531	0.173	0.353
Calcium (Ca)-Dissolved	mg/L			101	548	974	738
Magnesium (Mg)-Dissolved	mg/L			16.2	64.4	89	80.3
Potassium (K)-Dissolved	mg/L			-	32.5	41.9	37.8
Sodium (Na)-Dissolved	mg/L			-	397	535	530
Oil and Grease	mg/L	5	10	<1.0	<1.0	<1.0	<1.0
Oil And Grease (Visible Sheen)		no visible sheen	no visible sheen	no visible sheen	no visible sheen	no visible sheen	no visible sheen

Note: Red text indicates that value is above the discharge criteria when discharging to tundra. All water from ST-1 was discharged to Tail Lake T1A

Table 10: Daily Water Quality Data for Discharge of ST-5 to Tundra, June 2012

Analyte	Units	Max Average Concentration (mg/L)	Max Concentration in any Grab Sample (mg/L)	ST5- 31MAY12	ST5- 08JUN12	ST5- 09JUN12	ST5- 10JUN12	ST5- 11JUN12	ST5- 12JUN12	ST5- 13JUN12	ST5- 14JUN12	ST5- 15JUN12
ALS ID				L1156113-2	L1160620-1	L1160620-3	L1160620-2	L1160620-4	L1163285-1	L1163285-2	L1163285-3	L1164060-1
Sample Date/Time				5/31/2012 9:20:00 AM	6/8/2012 7:15:00 PM	6/9/2012 4:45:00 PM	6/10/2012 5:40:00 PM	6/11/2012 9:00:00 AM	6/12/2012 5:40:00 PM	6/12/2012 3:30:00 PM	6/12/2012 4:05:00 PM	6/15/2012 6:00:00 PM
Conductivity (EC)	uS/cm	-	-	228	265	272	279	287	301	314	332	346
pH	pH	6.0 - 9.0	9	8.08	8.31	8.14	8.11	8.21	8.2	8.24	8.25	8.17
Total Suspended Solids	mg/L	15	30	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Lead (Pb)-Total	mg/L	0.01	0.02	0.00024	0.00011	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Oil and Grease	mg/L	5	10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Oil And Grease (Visible Sheen)		no visible sheen	no visible sheen	no visible sheen	no visible sheen	no visible sheen	no visible sheen	no visible sheen	no visible sheen	no visible sheen	no visible sheen	no visible sheen
Benzene	mg/L	0.37	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.09	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Toluene	mg/L	0.002	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
o-Xylene	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
m+p-Xylene	mg/L	-	-	<0.00050	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Xylenes	mg/L	-	-	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071

Table 10 (cont): Daily Water Quality Data for Discharge of ST-5 to Tundra, June 2012

Analyte	Units	Max Average Concentration (mg/L)	Max Concentration in any Grab Sample (mg/L)	ST5- 16JUN12	ST5- 17JUN12	ST5- 18JUN12	ST5- 19JUN12	ST5- 20JUN12	ST5- 21JUN12	ST5- 22JUN12	ST5- 23JUN12	ST5-01 JUL 12
ALS ID				L1164060-2	L1164060-3	L1166916-1	L1166916-2	L1166916-3	L1166916-4	L1167649-1	L1167649-2	L1171257-1
Sample Date/Time				6/15/2012 7:15:00 PM	6/15/2012 6:45:00 PM	6/18/2012 7:44:00 PM	6/19/2012 4:35:00 PM	6/20/2012 5:45:00 PM	6/21/2012 8:45:00 PM	6/22/2012 7:30:00 PM	6/23/2012 6:45:00 PM	7/1/2012 3:23:00 PM
Conductivity (EC)	uS/cm	-	-	368	403	442	500	639	789	1070	1520	1380
pH	pH	6.0 - 9.0	9	8.19	8.22	8.17	8.2	8.28	8.26	8.18	8.2	8.23
Total Suspended Solids	mg/L	15	30	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Lead (Pb)-Total	mg/L	0.01	0.02	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Oil and Grease	mg/L	5	10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Oil And Grease (Visible Sheen)		no visible sheen	no visible sheen	no visible sheen	no visible sheen	no visible sheen	no visible sheen	no visible sheen	no visible sheen	no visible sheen	no visible sheen	no visible sheen
Benzene	mg/L	0.37	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.09	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Toluene	mg/L	0.002	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
o-Xylene	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
m+p-Xylene	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Xylenes	mg/L	-	-	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071

Table 11: TL-1/TL-4 Sample Results, June 2012

Analyte	Units	TL-4 Max Average (mg/L)	TL-4 Max Grab (mg/L)	TL1-10JUN12	TL4-11JUN12	TL4-12JUN12	TL4-14JUN12	TL4-18JUN12	TL4-16JUN12
ALS ID				L1160661-1	L1162380-1	L1162380-4	L1163245-3	L1166892-3	L1164051-3
Date/Time Sampled				6/10/2012 12:05:00 PM	6/11/2012 12:00:00 AM	6/12/2012 12:00:00 AM	6/14/2012 11:15:00 AM	6/18/2012 1:35:00 PM	6/16/2012 1:30:00 PM
Conductivity (EC)	uS/cm			224	237	237	261	231	291
Hardness (as CaCO3)	mg/L			56.1	58.6	59.5	61.8	57.6	82.2
pH	pH	6.0 - 9.0	9	7.92	7.66	7.85	7.91	7.86	7.83
Total Suspended Solids	mg/L	15	30	<3.0	7	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	mg/L			124	154	158	154	152	192
Ammonia, Total (as N)	mg/L	6	-	<0.050	<0.050	<0.050	<0.050	0.124	0.12
Chloride (Cl)	mg/L			34.5	37.3	37.7	43.4	42.9	53.9
Nitrate (as N)	mg/L			<0.050	<0.050	<0.050	0.148	0.621	0.663
Nitrite (as N)	mg/L			<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Orthophosphate-Dissolved (as P)	mg/L			0.0021	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total	mg/L			0.022	<0.020	<0.020	<0.020	<0.020	<0.020
Cyanide, Total	mg/L	1.0	2.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, Free	mg/L			<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aluminum (Al)-Total	mg/L			0.0971	0.078	0.11	0.12	0.0942	0.0904
Antimony (Sb)-Total	mg/L			<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Arsenic (As)-Total	mg/L	0.5	1	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Barium (Ba)-Total	mg/L			0.0045	0.0043	0.0042	0.0043	0.0039	0.0049
Beryllium (Be)-Total	mg/L			<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total	mg/L			<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Total	mg/L			<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L			11.6	11.5	12	12.9	13.5	15.1
Chromium (Cr)-Total	mg/L			<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L			<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Copper (Cu)-Total	mg/L	0.3	0.6	0.002	0.0019	0.002	0.0021	0.0016	0.0019
Iron (Fe)-Total	mg/L			0.317	0.258	0.357	0.404	0.246	0.342
Lead (Pb)-Total	mg/L	0.2	0.4	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Lithium (Li)-Total	mg/L			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Magnesium (Mg)-Total	mg/L			5.84	6.88	7.32	7.16	4.74	6.66
Manganese (Mn)-Total	mg/L			0.0185	0.016	0.0187	0.0228	0.014	0.0184
Mercury (Hg)-Total	mg/L			<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Molybdenum (Mo)-Total	mg/L			<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Analyte	Units	TL-4 Max Average (mg/L)	TL-4 Max Grab (mg/L)	TL1-10JUN12	TL4-11JUN12	TL4-12JUN12	TL4-14JUN12	TL4-18JUN12	TL4-16JUN12
ALS ID				L1160661-1	L1162380-1	L1162380-4	L1163245-3	L1166892-3	L1164051-3
Date/Time Sampled				6/10/2012 12:05:00 PM	6/11/2012 12:00:00 AM	6/12/2012 12:00:00 AM	6/14/2012 11:15:00 AM	6/18/2012 1:35:00 PM	6/16/2012 1:30:00 PM
Nickel (Ni)-Total	mg/L	0.5	1	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K)-Total	mg/L			1.82	2.14	2.2	2.21	1.86	1.92
Selenium (Se)-Total	mg/L			<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Silver (Ag)-Total	mg/L			<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Sodium (Na)-Total	mg/L			15.8	20.7	20	20.3	16	18.9
Thallium (Tl)-Total	mg/L			<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L			<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Titanium (Ti)-Total	mg/L			0.0026	0.0024	0.0032	0.0041	0.0023	0.0025
Uranium (U)-Total	mg/L			<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Vanadium (V)-Total	mg/L			<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.5	1	0.0084	<0.0040	0.0528	<0.0040	0.0097	0.0193
Calcium (Ca)-Dissolved	mg/L			12.4	11.6	11.9	-	14.7	19.1
Magnesium (Mg)-Dissolved	mg/L			6.12	7.19	7.26	-	5.09	8.37
Biochemical Oxygen Demand	mg/L	80	160	-	-	-	2.7	-	-
Oil and Grease	mg/L			-	-	-	-	-	-
Oil And Grease (Visible Sheen)				-	-	-	-	-	-
Radium-226	Bq/L	0.37	1.11	-	<0.005	<0.005	-		-
Fecal Coliforms	CFU/100mL	10,000	10,000			<1.0			

Note: TL-1/TL-4 is used in the Station ID because TL-1 and TL-4 are taken from opposite ends of the same discharge pipeline

Table 11 (cont.): TL-1/TL-4 Sample Results, June 2012

Analyte	Units	TL-4 Max Average (mg/L)	TL-4 Max Grab (mg/L)	TL4-20JUN12	TL4-22JUN12	TL4-24JUN12	TL4-26JUN12	TL4-28JUN12	TL1/TL4 Monthly Average
ALS ID				L1166892-6	L1168943-3	L1168943-6	L1170838-3	L1170838-6	
Date/Time Sampled				6/20/2012 5:00:00 PM	6/22/2012 4:30:00 PM	6/22/2012 4:10:00 PM	6/26/2012 4:30:00 PM	6/26/2012 4:30:00 PM	
Conductivity (EC)	uS/cm			162	239	203	163	155	218
Hardness (as CaCO3)	mg/L			41	62.7	52.2	46	43.7	56.5
pH	pH	6.0 - 9.0	9	7.84	7.82	7.83	7.81	7.81	7.83
Total Suspended Solids	mg/L	15	30	<3.0	<3.0	<3.0	<3.0	<3.0	2.0
Total Dissolved Solids	mg/L			106	164	135	95	94	139
Ammonia, Total (as N)	mg/L	6	-	<0.050	0.134	<0.050	<0.050	<0.050	0.053
Chloride (Cl)	mg/L			26.9	44.7	36.4	27.5	25.9	37.4
Nitrate (as N)	mg/L			<0.050	0.628	0.347	0.074	0.056	0.240
Nitrite (as N)	mg/L			<0.050	<0.050	<0.050	<0.050	<0.050	0.025
Orthophosphate-Dissolved (as P)	mg/L			<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0006
Phosphorus (P)-Total	mg/L			<0.020	<0.020	<0.020	<0.020	<0.020	0.011
Cyanide, Total	mg/L	1.0	2.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0025
Cyanide, Free	mg/L			<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0025
Aluminum (Al)-Total	mg/L			0.0533	0.152	0.099	0.0555	0.0634	0.0921
Antimony (Sb)-Total	mg/L			<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	0.00020
Arsenic (As)-Total	mg/L	0.5	1	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	0.00020
Barium (Ba)-Total	mg/L			<0.0030	0.0039	0.0034	<0.0030	<0.0030	0.0034
Beryllium (Be)-Total	mg/L			<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0005
Boron (B)-Total	mg/L			<0.050	<0.050	<0.050	<0.050	<0.050	0.025
Cadmium (Cd)-Total	mg/L			<0.000010	<0.000010	0.000012	<0.000010	<0.000010	0.000006
Calcium (Ca)-Total	mg/L			8.14	16.1	13.4	11.4	9.21	12.3
Chromium (Cr)-Total	mg/L			<0.0010	0.0011	<0.0010	<0.0010	<0.0010	0.0006
Cobalt (Co)-Total	mg/L			<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0010
Copper (Cu)-Total	mg/L	0.3	0.6	0.0014	0.0019	0.0017	0.0015	0.0017	0.0018
Iron (Fe)-Total	mg/L			0.168	0.405	0.391	0.244	0.191	0.3021
Lead (Pb)-Total	mg/L	0.2	0.4	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00005
Lithium (Li)-Total	mg/L			<0.010	<0.010	<0.010	<0.010	<0.010	0.0050
Magnesium (Mg)-Total	mg/L			3.93	5.92	5.3	4.95	4.05	5.70
Manganese (Mn)-Total	mg/L			0.0082	0.0211	0.0135	0.0098	0.01	0.02
Mercury (Hg)-Total	mg/L			<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000010
Molybdenum (Mo)-Total	mg/L			<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0025

Analyte	Units	TL-4 Max Average (mg/L)	TL-4 Max Grab (mg/L)	TL4-20JUN12	TL4-22JUN12	TL4-24JUN12	TL4-26JUN12	TL4-28JUN12	TL1/TL4 Monthly Average
ALS ID				L1166892-6	L1168943-3	L1168943-6	L1170838-3	L1170838-6	
Date/Time Sampled				6/20/2012 5:00:00 PM	6/22/2012 4:30:00 PM	6/22/2012 4:10:00 PM	6/26/2012 4:30:00 PM	6/26/2012 4:30:00 PM	
Nickel (Ni)-Total	mg/L	0.5	1	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0010
Potassium (K)-Total	mg/L			1.49	2.01	1.73	1.71	1.38	1.86
Selenium (Se)-Total	mg/L			<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	0.00020
Silver (Ag)-Total	mg/L			<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000010
Sodium (Na)-Total	mg/L			11.7	18.5	16	14.6	11.9	16.8
Thallium (Tl)-Total	mg/L			<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00005
Tin (Sn)-Total	mg/L			<0.050	<0.050	<0.050	<0.050	<0.050	0.025
Titanium (Ti)-Total	mg/L			0.0013	0.0049	0.0031	0.0014	0.0011	0.0026
Uranium (U)-Total	mg/L			<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00005
Vanadium (V)-Total	mg/L			<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0005
Zinc (Zn)-Total	mg/L	0.5	1	0.0128	0.0096	0.0251	0.0161	0.0084	0.0151
Calcium (Ca)-Dissolved	mg/L			9.03	15.9	12.7	10.8	10.2	12.8
Magnesium (Mg)-Dissolved	mg/L			4.48	5.61	4.97	4.61	4.4	5.8
Biochemical Oxygen Demand	mg/L			-	-	-	-	<2.0	1.9
Oil and Grease	mg/L			-	-	-	-	-	
Oil And Grease (Visible Sheen)				-	-	-	-	-	
Radium-226				0.006	-	-	-	0.01	0.01
Fecal Coliforms	CFU/100mL	10,000	10,000					<1	0.005

Note: TL-1/TL-4 is used in the Station ID because TL-1 and TL-4 are taken from opposite ends of the same discharge pipeline

Table 14: TL-2 Sample Results, June 2012

Analyte	Units	Maximum Concentration of Any Grab Sample (mg/L) - TL-3	TL2-10JUN12	TL2-12JUN12	TL2-14JUN12	TL2-16JUN12	TL2-18JUN12	TL2-20JUN12
ALS ID			L1160661-2	L1162380-2	L1163245-1	L1164051-1	L1166892-1	L1166892-4
Date/Time Sampled			6/10/2012 11:05:00 AM	6/12/2012 12:00:00 AM	6/14/2012 11:05:00 AM	6/16/2012 1:10:00 PM	6/18/2012 1:15:00 PM	6/20/2012 4:40:00 PM
Conductivity (EC)	uS/cm		303	310	308	296	270	217
Hardness (as CaCO3)	mg/L		50.6	54.4	51.3	54.4	44.3	38.2
pH	pH	6.0 - 9.0	7.7	7.66	7.72	7.74	7.71	7.65
Total Suspended Solids	mg/L	15	<3.0	5	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	mg/L		172	187	178	239	168	142
Ammonia, Total (as N)	mg/L	1.54*	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chloride (Cl)	mg/L	150	66.5	67.2	67.3	66.6	60.4	48.3
Nitrate (as N)	mg/L	2.9	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrite (as N)	mg/L	0.06	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Orthophosphate-Dissolved (as P)	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total	mg/L		0.023	<0.020	<0.020	0.02	<0.020	<0.020
Cyanide, Total	mg/L	0.01	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, Free	mg/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aluminum (Al)-Total	mg/L	0.1	0.0241	0.0188	0.0235	0.089	0.26	0.162
Antimony (Sb)-Total	mg/L		<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Arsenic (As)-Total	mg/L	0.005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Barium (Ba)-Total	mg/L		<0.0030	<0.0030	<0.0030	0.0061	0.0057	0.0044
Beryllium (Be)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Total	mg/L	0.000017	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L		9.66	9.78	9.6	9.19	7.21	5.95
Chromium (Cr)-Total	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Copper (Cu)-Total	mg/L	0.002	0.0016	0.0016	0.0016	0.0018	0.0018	0.0014
Iron (Fe)-Total	mg/L	0.3	0.042	0.044	0.057	0.157	0.532	0.349
Lead (Pb)-Total	mg/L	0.001	<0.00010	<0.00010	<0.00010	0.00011	0.00016	0.00011
Lithium (Li)-Total	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Magnesium (Mg)-Total	mg/L		6.48	6.62	6.64	6.63	5.16	4.02
Manganese (Mn)-Total	mg/L		0.0061	0.0058	0.0096	0.0132	0.0285	0.0179
Mercury (Hg)-Total	mg/L	0.000026	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Molybdenum (Mo)-Total	mg/L	0.0073	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Analyte	Units	Maximum Concentration of Any Grab Sample (mg/L) - TL-3	TL2-10JUN12	TL2-12JUN12	TL2-14JUN12	TL2-16JUN12	TL2-18JUN12	TL2-20JUN12
ALS ID			L1160661-2	L1162380-2	L1163245-1	L1164051-1	L1166892-1	L1166892-4
Date/Time Sampled			6/10/2012 11:05:00 AM	6/12/2012 12:00:00 AM	6/14/2012 11:05:00 AM	6/16/2012 1:10:00 PM	6/18/2012 1:15:00 PM	6/20/2012 4:40:00 PM
Nickel (Ni)-Total	mg/L	0.025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K)-Total	mg/L		2.14	2.22	2.25	2.08	2.1	1.67
Selenium (Se)-Total	mg/L	0.001	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Silver (Ag)-Total	mg/L	0.00001	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Sodium (Na)-Total	mg/L		28.9	29.9	30.5	28.3	25.6	21
Thallium (Tl)-Total	mg/L	0.0008	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Titanium (Ti)-Total	mg/L		<0.0010	<0.0010	<0.0010	0.0029	0.0075	0.0046
Uranium (U)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Vanadium (V)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.03	<0.0040	<0.0040	<0.0040	0.0076	<0.0040	<0.0040
Calcium (Ca)-Dissolved	mg/L		9.67	9.97	-	10.7	8.04	7.01
Magnesium (Mg)-Dissolved	mg/L		6.43	7.16	-	6.73	5.89	5.02

Table 14 (cont): TL-2 Sample Results, June 2012

Analyte	Units	Maximum Concentration of Any Grab Sample (mg/L) - TL-3	TL2-22JUN12	TL2-24JUN12	TL2-26JUN12	TL2-28JUN12	TL-2 Monthly Average
ALS ID			L1168943-1	L1168943-4	L1170838-1	L1170838-4	
Date/Time Sampled			6/22/2012 4:00:00 PM	6/22/2012 3:50:00 PM	6/26/2012 4:30:00 PM	6/26/2012 4:30:00 PM	
Conductivity (EC)	uS/cm		190	190	166	173	242
Hardness (as CaCO ₃)	mg/L		31.8	34.3	30	32.9	42.2
pH	pH	6.0 - 9.0	7.58	7.57	7.51	7.58	7.64
Total Suspended Solids	mg/L	15	<3.0	<3.0	4	<3.0	2.1
Total Dissolved Solids	mg/L		121	120	112	101	154
Ammonia, Total (as N)	mg/L	1.54*	<0.050	<0.050	<0.050	<0.050	0.025
Chloride (Cl)	mg/L	150	41.3	41.6	35.5	37.5	53.2
Nitrate (as N)	mg/L	2.9	<0.050	<0.050	<0.050	<0.050	0.025
Nitrite (as N)	mg/L	0.06	<0.050	<0.050	<0.050	<0.050	0.025
Orthophosphate-Dissolved (as P)	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	0.0005
Phosphorus (P)-Total	mg/L		<0.020	<0.020	<0.020	<0.020	0.012
Cyanide, Total	mg/L	0.01	<0.0050	<0.0050	<0.0050	<0.0050	0.0025
Cyanide, Free	mg/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	0.0025
Aluminum (Al)-Total	mg/L	0.1	0.201	0.191	0.16	0.153	0.128
Antimony (Sb)-Total	mg/L		<0.00040	<0.00040	<0.00040	<0.00040	0.00020
Arsenic (As)-Total	mg/L	0.005	<0.00040	<0.00040	<0.00040	<0.00040	0.00020
Barium (Ba)-Total	mg/L		0.0043	0.004	0.0041	0.0034	0.0037
Beryllium (Be)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	0.0005
Boron (B)-Total	mg/L		<0.050	<0.050	<0.050	<0.050	0.025
Cadmium (Cd)-Total	mg/L	0.000017	<0.000010	<0.000010	<0.000010	<0.000010	0.000005
Calcium (Ca)-Total	mg/L		5.85	6.2	4.66	5.33	7.34
Chromium (Cr)-Total	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	0.0005
Cobalt (Co)-Total	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	0.0010
Copper (Cu)-Total	mg/L	0.002	0.0013	0.0013	0.0014	0.0015	0.0015
Iron (Fe)-Total	mg/L	0.3	0.491	0.437	0.316	0.343	0.277
Lead (Pb)-Total	mg/L	0.001	0.00011	<0.00010	<0.00010	<0.00010	0.00008
Lithium (Li)-Total	mg/L		<0.010	<0.010	<0.010	<0.010	0.005
Magnesium (Mg)-Total	mg/L		4.54	4.61	3.49	4	5.22
Manganese (Mn)-Total	mg/L		0.0172	0.0145	0.0141	0.0115	0.0138
Mercury (Hg)-Total	mg/L	0.000026	<0.000020	<0.000020	<0.000020	<0.000020	0.000010
Molybdenum (Mo)-Total	mg/L	0.0073	<0.0050	<0.0050	<0.0050	<0.0050	0.0025

Analyte	Units	Maximum Concentration of Any Grab Sample (mg/L) - TL-3	TL2-22JUN12	TL2-24JUN12	TL2-26JUN12	TL2-28JUN12	TL-2 Monthly Average
ALS ID			L1168943-1	L1168943-4	L1170838-1	L1170838-4	
Date/Time Sampled			6/22/2012 4:00:00 PM	6/22/2012 3:50:00 PM	6/26/2012 4:30:00 PM	6/26/2012 4:30:00 PM	
Nickel (Ni)-Total	mg/L	0.025	<0.0020	<0.0020	<0.0020	<0.0020	0.0010
Potassium (K)-Total	mg/L		1.82	1.84	1.48	1.7	1.93
Selenium (Se)-Total	mg/L	0.001	<0.00040	<0.00040	<0.00040	<0.00040	0.00020
Silver (Ag)-Total	mg/L	0.00001	<0.000020	<0.000020	<0.000020	<0.000020	0.000010
Sodium (Na)-Total	mg/L		21.8	23.1	15.9	19.1	24.4
Thallium (Tl)-Total	mg/L	0.0008	<0.00010	<0.00010	<0.00010	<0.00010	0.00005
Tin (Sn)-Total	mg/L		<0.050	<0.050	<0.050	<0.050	0.025
Titanium (Ti)-Total	mg/L		0.0069	0.0067	0.0036	0.0034	0.0037
Uranium (U)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	0.00005
Vanadium (V)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	0.0005
Zinc (Zn)-Total	mg/L	0.03	<0.0040	<0.0040	<0.0040	<0.0040	0.0026
Calcium (Ca)-Dissolved	mg/L		5.66	6.23	5.36	5.98	7.62
Magnesium (Mg)-Dissolved	mg/L		4.28	4.55	4.04	4.37	5.39

Note: Ammonia maximum criteria based on pH 7 at 20°C. Red text indicates exceedence of TL-3 (downstream) criteria at TL-2 (upstream)

Table 15: TL-3 Sample Results and Comparison to TL-2 Sample Results, June 2012

Analyte	Units	Maximum Concentration of Any Grab Sample (mg/L)	TL3- 10JUN12	TL3- 12JUN12	TL3- 14JUN12	TL3- 16JUN12	TL3- 18JUN12	TL3- 20JUN12
ALS ID			L1160661-3	L1162380-3	L1163245-2	L1164051-2	L1166892-2	L1166892-5
Date/Time Sampled			6/10/2012 11:25:00 AM	6/12/2012 12:00:00 AM	6/14/2012 11:20:00 AM	6/16/2012 1:20:00 PM	6/18/2012 1:25:00 PM	6/20/2012 4:50:00 PM
Conductivity (EC)	uS/cm		309	309	306	286	258	223
Hardness (as CaCO ₃)	mg/L		51.5	54.3	50.3	46.6	44.1	38.5
pH	pH	6.0 - 9.0	7.74	7.74	7.79	7.67	7.71	7.68
Total Suspended Solids	mg/L	15	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	mg/L		175	192	177	184	157	140
Ammonia, Total (as N)	mg/L	1.54*	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chloride (Cl)	mg/L	150	67.6	66.5	66.8	63.7	58	49.4
Nitrate (as N)	mg/L	2.9	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrite (as N)	mg/L	0.06	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Orthophosphate-Dissolved (as P)	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total	mg/L		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Cyanide, Total	mg/L	0.01	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, Free	mg/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aluminum (Al)-Total	mg/L	0.1	0.0655	0.034	0.0376	0.0989	0.284*	0.15*
Antimony (Sb)-Total	mg/L		<0.00040	0.00047	<0.00040	<0.00040	<0.00040	<0.00040
Arsenic (As)-Total	mg/L	0.005	<0.00040	0.00068	<0.00040	<0.00040	<0.00040	<0.00040
Barium (Ba)-Total	mg/L		0.0035	0.0032	<0.0030	0.0036	0.0059	0.0041
Beryllium (Be)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Total	mg/L	0.000017	<0.000010	0.000047	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L		12.2	10.4	9.57	9.5	7.22	6.52
Chromium (Cr)-Total	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Copper (Cu)-Total	mg/L	0.002	0.0016	0.0017	0.0016	0.0015	0.0016	0.0015
Iron (Fe)-Total	mg/L	0.3	0.117	0.068	0.079	0.166	0.542*	0.341*

Analyte	Units	Maximum Concentration of Any Grab Sample (mg/L)	TL3- 10JUN12	TL3- 12JUN12	TL3- 14JUN12	TL3- 16JUN12	TL3- 18JUN12	TL3- 20JUN12
ALS ID			L1160661-3	L1162380-3	L1163245-2	L1164051-2	L1166892-2	L1166892-5
Date/Time Sampled			6/10/2012 11:25:00 AM	6/12/2012 12:00:00 AM	6/14/2012 11:20:00 AM	6/16/2012 1:20:00 PM	6/18/2012 1:25:00 PM	6/20/2012 4:50:00 PM
Lead (Pb)-Total	mg/L	0.001	<0.00010	0.00023	<0.00010	<0.00010	0.00014	<0.00010
Lithium (Li)-Total	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Magnesium (Mg)-Total	mg/L		7.8	7.18	6.42	6.61	5.19	4.14
Manganese (Mn)-Total	mg/L		0.0107	0.0071	0.0098	0.0134	0.027	0.0168
Mercury (Hg)-Total	mg/L	0.000026	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Molybdenum (Mo)-Total	mg/L	0.0073	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Nickel (Ni)-Total	mg/L	0.025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K)-Total	mg/L		2.89	2.43	2.21	2.17	2.24	1.63
Selenium (Se)-Total	mg/L	0.001	<0.00040	0.00047	<0.00040	<0.00040	<0.00040	<0.00040
Silver (Ag)-Total	mg/L	0.00001	<0.000020	0.000041	<0.000020	<0.000020	<0.000020	<0.000020
Sodium (Na)-Total	mg/L		37.3	32	29.5	28.3	24.9	20.6
Thallium (Tl)-Total	mg/L	0.0008	<0.00010	0.00044	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Titanium (Ti)-Total	mg/L		0.0029	0.0013	0.0017	0.0031	0.0088	0.0047
Uranium (U)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Vanadium (V)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.03	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Calcium (Ca)-Dissolved	mg/L		9.75	10.1	-	9.31	7.96	7.35
Magnesium (Mg)-Dissolved	mg/L		6.61	7.06	-	5.66	5.87	4.88
Oil and Grease	mg/L	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Oil And Grease (Visible Sheen)			-	no visible sheen	no visible sheen	No Visible Sheen Present	-	-

Notes: red text indicates over licence discharge criteria. Red text with a * indicates TL-2 and TL-3 were above the licence discharge criteria on that date. Black text with a * indicates that value is above licence criteria but below TL-2 on that date.

Table 15 (cont.): TL-3 Sample Results and Comparison to TL-2 Sample Results, June 2012

Analyte	Units	Maximum Concentration of Any Grab Sample (mg/L)	TL3-22JUN12	TL3-24JUN12	TL3-26JUN12	TL3-28JUN12
ALS ID			L1168943-2	L1168943-5	L1170838-2	L1170838-5
Date/Time Sampled			6/22/2012 4:10:00 PM	6/22/2012 4:00:00 PM	6/26/2012 4:30:00 PM	6/26/2012 4:30:00 PM
Conductivity (EC)	uS/cm		194	175	163	170
Hardness (as CaCO ₃)	mg/L		32.7	31.7	31	32.4
pH	pH	6.0 - 9.0	7.59	7.57	7.57	7.6
Total Suspended Solids	mg/L	15	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	mg/L		125	111	100	97
Ammonia, Total (as N)	mg/L	1.54*	<0.050	<0.050	<0.050	<0.050
Chloride (Cl)	mg/L	150	42.2	37.9	34.7	36.5
Nitrate (as N)	mg/L	2.9	<0.050	<0.050	<0.050	<0.050
Nitrite (as N)	mg/L	0.06	<0.050	<0.050	<0.050	<0.050
Orthophosphate-Dissolved (as P)	mg/L		<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total	mg/L		<0.020	<0.020	<0.020	<0.020
Cyanide, Total	mg/L	0.01	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, Free	mg/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050
Aluminum (Al)-Total	mg/L	0.1	0.198*	0.173*	0.157*	0.158*
Antimony (Sb)-Total	mg/L		<0.00040	<0.00040	<0.00040	<0.00040
Arsenic (As)-Total	mg/L	0.005	<0.00040	<0.00040	<0.00040	<0.00040
Barium (Ba)-Total	mg/L		0.0045	0.0036	0.006	0.004
Beryllium (Be)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total	mg/L		<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Total	mg/L	0.000017	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L		6.48	5.94	4.79	5.58
Chromium (Cr)-Total	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L		<0.0020	<0.0020	<0.0020	<0.0020
Copper (Cu)-Total	mg/L	0.002	0.0014	0.0012	0.0015	0.0013
Iron (Fe)-Total	mg/L	0.3	0.469*	0.406*	0.334*	0.331*
Lead (Pb)-Total	mg/L	0.001	<0.00010	<0.00010	0.00041	<0.00010

Analyte	Units	Maximum Concentration of Any Grab Sample (mg/L)	TL3-22JUN12	TL3-24JUN12	TL3-26JUN12	TL3-28JUN12
ALS ID			L1168943-2	L1168943-5	L1170838-2	L1170838-5
Date/Time Sampled			6/22/2012 4:10:00 PM	6/22/2012 4:00:00 PM	6/26/2012 4:30:00 PM	6/26/2012 4:30:00 PM
Lithium (Li)-Total	mg/L		<0.010	<0.010	<0.010	<0.010
Magnesium (Mg)-Total	mg/L		4.67	4.24	3.49	3.98
Manganese (Mn)-Total	mg/L		0.0166	0.0128	0.0124	0.0109
Mercury (Hg)-Total	mg/L	0.000026	<0.000020	<0.000020	<0.000020	<0.000020
Molybdenum (Mo)-Total	mg/L	0.0073	<0.0050	<0.0050	<0.0050	<0.0050
Nickel (Ni)-Total	mg/L	0.025	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K)-Total	mg/L		1.8	1.76	1.45	1.69
Selenium (Se)-Total	mg/L	0.001	<0.00040	<0.00040	<0.00040	<0.00040
Silver (Ag)-Total	mg/L	0.00001	<0.000020	<0.000020	<0.000020	<0.000020
Sodium (Na)-Total	mg/L		22.8	19.6	15.7	18.9
Thallium (Tl)-Total	mg/L	0.0008	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.050	<0.050	<0.050	<0.050
Titanium (Ti)-Total	mg/L		0.0066	0.0062	0.0032	0.0048
Uranium (U)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010
Vanadium (V)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.03	<0.0040	<0.0040	0.0678	<0.0040
Calcium (Ca)-Dissolved	mg/L		6.02	5.96	5.65	6.03
Magnesium (Mg)-Dissolved	mg/L		4.3	4.09	4.11	4.21
Oil and Grease	mg/L	5	<1.0	<1.0	<1.0	<1.0
Oil And Grease (Visible Sheen)			no visible sheen	no visible sheen	no visible sheen	no visible sheen

Notes: Red text indicates over licence discharge criteria. Red text with a * indicates TL-2 and TL-3 were above the licence discharge criteria on that date. Black text with a * indicates that value is above licence criteria but below TL-2 on that date.