
Tables

Table 1.1: List of Reporting Requirements

Authorization Reference	Reporting Requirement	Report Section
NWB 2AM- MEA0815 Schedule B-1	Construction Details for dikes and dams.	2.1
NWB 2AM- MEA0815 Schedule B-2	Results of lake level monitoring conducted under the protocol developed as per Part D Item 11.	3.1
NWB 2AM- MEA0815 Schedule B-3	Summary of reporting results for the Water Balance Water Quality model and any calibrations as required in Part E Items 6 and 7.	3.2
NWB 2AM- MEA0815 Schedule B-4	The bathymetric survey(s) conducted prior to each year of shipping at the Baker Lake Marshalling Facility.	3.3
NWB 2AM- MEA0815 Schedule B-5	Geochemical monitoring results.	4.1
NWB 2AM- MEA0815 Schedule B-6	Volumes of waste rock used in construction and placed in the Rock Storage Facilities.	4.2
NWB 2AM- MEA0815 Schedule B-7	An update on the remaining capacity of the Tailings Storage Facility.	4.3.1
NWB 2AM- MEA0815 Schedule B-8	Summary of quantities and analysis of seepage and runoff monitoring from the landfills.	7.5
NWB 2AM- MEA0815 Schedule B-9	A summary report of solid waste disposal activities including monthly and annual quantities in cubic metres of waste generated and location of disposal.	5.2
NWB 2AM- MEA0815 Schedule B-10	Report of Incinerator test results including the materials burned and the efficiency of the Incinerator as they relate to water and the deposit of waste into water.	5.3
NWB 2AM- MEA0815 Schedule B-11	A list and description of all unauthorized discharges including volumes, spill report line identification number and summaries of follow-up action taken.	6
NWB 2AM- MEA0815 Schedule B-12	A summary of modifications and/or major maintenance work carried out on all water and waste related structures and facilities.	10.1
NWB 2AM- MEA0815 Schedule B-13	The results and interpretation of the Monitoring Program in accordance with Part I and Schedule I.	7 Table 1.2
NWB 2AM- MEA0815 Schedule B-14	The results of monitoring under the AEMP.	7.10
NWB 2AM- MEA0815 Schedule B-15	Results of monitoring pursuant to the Fault Testing and Monitoring Plan (August 2007).	4.3.2
NWB 2AM- MEA0815 Schedule B-16	A summary of any progressive closure and reclamation work undertaken including photographic records of site conditions before and after completion of operations, and an outline of any work anticipated for the next year, including any changes to implementation and scheduling.	8.1
NWB 2AM- MEA0815 Schedule B-17	A summary of on-going field trials to determine effective capping thickness for the Tailings Storage Facility and Waste Rock Storage Facilities for the purpose of long term environmental protection.	4.3.3
NWB 2AM- MEA0815 Schedule B-18	An updated estimate of the current restoration liability based on project development monitoring, results of restoration research and any changes or modifications to the Appurtenant Undertaking.	8.2
NWB 2AM- MEA0815 Schedule B-19	A summary of any studies requested by the Board that relate to Waste disposal, Water use or Reclamation, and a brief description of any future studies planned.	9.1

Authorization Reference	Reporting Requirement	Report Section
NWB 2AM- MEA0815 Schedule B-20	Where applicable, revisions as Addendums, with an indication of where changes have been made, for Plans, Reports, and Manuals.	9.2
NWB 2AM- MEA0815 Schedule B-21	An executive summary in English, Inuktitut and French of all plans, reports, or studies conducted under this Licence.	9.3
NWB 2AM- MEA0815 Schedule B-22	A summary of actions taken to address concerns or deficiencies listed in the inspection reports and/or compliance reports filed by an Inspector.	10.2
NWB 2AM- MEA0815 Schedule B-23	A summary of public consultation and participation with local organizations and the residents of the nearby communities, including a schedule of upcoming community events and information sessions.	10.3
NWB 2AM- MEA0815 Schedule B-24	Any other details on Water use or Waste Disposal requested by the Board by November 1st of the year being reported.	3.5 / 5.4
NWB 2AM- MEA0815 Part E Item 8	The Licensee shall, on an annual basis during Operations, compare the predicted water quantity and quality within the pits, to the measured water quantity and quality.	3.4
NWB 2AM- MEA0815 Part I Item 14	The Licensee shall submit to the Board as part of the Annual Report required under Part B Item 5, all reports and performance evaluations prepared by the Independent Geotechnical Expert Review Panel.	2.1.2
NWB 2AM- MEA0815 Part I Item 16	The Licensee shall submit the results and interpretation of the Seepage Monitoring program.	7.8
DFO HADD NU-03- 0190 AWPAP Condition 5.2.4	Creel survey results.	7.15
DFO HADD NU-03- 0190 AWPAP Condition 5.3 / 6	Submit written report summarizing 2008 monitoring results and photographic record of works and undertakings.	7.7
DFO HADD NU-03- 0191 Mine Site Condition 6.1	Submit Written Report and Photographic Record summarizing monitoring program results.	7.10 / 7.11
INAC Land Lease 66A/8-71-2 Condition 19	The lessee shall submit to the Minister every two years after the commencement date of this lease, a report describing any variations from the Abandonment and Restoration Plan and updated cost estimates.	8.2
INAC Land Lease 66A/8-71-2 Condition 33	The lessee shall file annually a report for the preceding year, outlining ongoing restoration completed in conformity with the approved Abandonment and Restoration Plan, as well as any variations from the said Plan.	8.1
INAC Land Lease 66A/8-72-2 Condition 8	The lessee shall file a report, annually ... i. Quantity of material removed and location of removal, for the immediately preceding calendar year ii. Such other data as are reasonably required by the Minister from time to time.	2.2
INAC Land Lease 66A/8-72-2 Condition 25	The lessee shall file, annually, a report for the preceding year, outlining the ongoing borrow area operations completed in conformity with the approved Borrow Management Plan, as well as any variations from the Plan.	2.2
INAC Land Lease 66A/8-72-2 Condition 33	The lessee shall file annually a report for the preceding year, outlining ongoing restoration completed in conformity with C&R Plan, as well as any variations from the said Plan.	8.1

Authorization Reference	Reporting Requirement	Report Section
INAC Land Lease 66A/8-72-2 Condition 37	The lessee shall submit to the Minister every 2 years after the commencement date of this lease, a report describing cumulative variations from the C&R Plan with updated cost estimates.	8.2
KIA ROW KVRW06F04 Condition 14	Submit to KIA every two years on each anniversary of the commencement date, a report describing any variations from the Abandonment and Restoration Plan and updated cost estimates.	8.2
KIA ROW KVRW06F04 Condition 26	File annually a progress report for the preceding year, outlining any ongoing restoration completed, in conformity with the Abandonment and Restoration plan.	8.1
KIA ROW KVRW06F04 Schedule E - Condition 8	The lessee shall file annually a report for the preceding year, outlining the ongoing borrow area operations completed in conformity with the approved Borrow Management Plan, as well as any variations from the Plan.	2.2

Table 1.2: Summary of Sample Stations

NWB Station	Description	Phase	2011 Reporting Status
ST-DC-1 to TBD	Monitoring stations during Dike Construction as defined in Part D Item 11	Construction	Not Applicable in 2011
ST-DD-1 to TBD	Monitoring stations during Dike Dewatering as defined in Part D Item 11	Construction	Section 7.2
ST-1	Water Intake for camp and mill	Construction, early operation, late operation, closure	Section 7.14
ST-2	Reclaim Water Intake	Construction, early operation, late operation, closure	Section 7.14
ST-3	Water Intake for Emulsion Plant	Construction, early operation, late operation, closure	Section 7.14
ST-4	Water reclaimed from Tailings Storage Facility	Early operation, late operation, closure	same as ST-2
ST-5	Portage Area (east) diversion ditch	Early operation, late operation, closure	Not Applicable in 2011 - not yet constructed
ST-6	Portage Area (west) diversion ditch	Early operation, late operation, closure	Not Applicable in 2011 - not yet constructed
ST-7	Vault Area diversion ditch	Early operation, late operation, closure	Not Applicable in 2011
ST-9	Portage Attenuation Pond prior to discharge through Third Portage Lake Outfall Diffuser	Early operation	Not Applicable in 2011 - not yet constructed
ST-10	Vault Attenuation Pond prior to discharge through Wally Lake Outfall Diffuser	Late operation	Not Applicable in 2011
ST-11	Tailings Storage Facility	Post closure	Not Applicable in 2011
ST-12	Portage/ Goose Pit Lake	Post closure	Not Applicable in 2011
ST-13	Vault Pit Lake	Post closure	Not Applicable in 2011

NWB Station	Description	Phase	2011 Reporting Status
ST-14 (TEH-11)	Discharge to the land from Landfarm sump at mine site	Pre-development, Construction, early operation, late operation, closure	Not Applicable in 2011 - Section 7.5
ST-15	Vault non-contact diversion ditch	Early operation, late operation, closure	Not Applicable in 2011 - not yet constructed
ST-16	Portage Rock Storage Facility	Early operation, late operation, closure	Section 7.4
ST-17**	North Portage Pit Sump	Early operation	Section 7.3
	Portage Pit Lake	Late operation, closure	Not Applicable in 2011
ST-18	Portage Attenuation Pond	Early operation	Section 7.3
ST-19**	Third Portage Pit Sump	Early operations	Section 7.3
	Third Portage Pit Lake	Late operations	Not Applicable in 2011
ST-20	Goose Island Pit Sump	Early operations	Not Applicable in 2011 - not yet constructed
	Goose Island Pit Lake	Late operations, closure	Not Applicable in 2011
ST-21	Tailings Reclaim Pond	Early operation (south of central dike), late operation (north of central dike)	Section 7.4
ST-22	Tailings Storage Facility	Late operation, closure	Not Applicable in 2011
ST-23	Vault Pit Sump	Late operations	Not Applicable in 2011
ST-24***	Vault Rock Storage Facility	Late operation	Not Applicable in 2011
		Closure (east ditch)	Not Applicable in 2011
		ST-24-A	
		Closure (west ditch)	Not Applicable in 2011
		ST-24-B	
ST-25	Vault Attenuation Pond	Late operation	Not Applicable in 2011
ST-26	Vault Pit Lake	Closure	
ST-S-1 to TBD	Seeps (to be determined)	Construction, Early operations, late operations, closure	Section 7.8

NWB Station	Description	Phase	2011 Reporting Status
ST-GW-1 to TBD	Groundwater wells (to be determined)	Construction, Early operations, late operations, closure	Section 7.9 & Appendix F4
ST-AEMP-1 to TBD	Receiving AEMP	Construction, Early operations, late operations, closure	Section 7.10 & Appendix F2
ST-MMER-1 to TBD	Vault and Portage effluent outfall	Early and late operations	Not Applicable in 2011
ST-37 (MEA-1)	Water sample location at Baker Lake in close proximity to the construction facilities	Pre- development, construction, early operation, late operation, closure	Sections 7.6 & Appendix F2
ST-38 (MEA-2)	East Contact Water Pond located in the south-east corner of the lay-down area	Pre- development, construction, early operation, late operation, closure	Not Applicable in 2011 - Section 7.6
ST-39 (MEA-3)	West Contact Collection Pond located in the south-west corner of the lay-down area	Pre- development, construction, early operation, late operation, closure	Not Applicable in 2011 - Section 7.6
ST-40 (MEA-4)	Secondary containment sump at the Bulk Fuel Storage Facility	Pre- development, construction, early operation, late operation, closure	Section 7.6
ST-41 (MEA-5)	Water sample location at the ammonium nitrate storage area	Pre- development, construction, early operation, late operation, closure	Not Applicable in 2011 - Section 7.6
ST-42 (MEA-6)	Water sample location at the explosive storage area	Pre- development, construction, early operation, late operation, closure	Not Applicable in 2011 - Section 7.6

Table 2.1: 2011 Routine Geotechnical Monitoring Program

Instrumentation	Dewatering Frequency	Operations Frequency
Piezometers	Daily	Daily
Slope Inclinator Casings	Monthly	Monthly
Thermistors	Daily	Daily to Weekly
Surface Monuments and Surface Prisms ²	Monthly	Monthly
Seismographs	During blasting at the Portage Pit / Goose Pit adjacent to the dike	

Footnotes:

1. All the instrumentations are monitored by a qualified employee (technician or engineer)

The data is treated, verified and reported to the Engineering Superintendent.

2. The monitoring system for the surface monuments and surface prisms at Bay Goose Dike and East Dike will be modified and reajusted to provide more precise monitoring on a regular basis.

Table 3.1: 2011 Lake Level Monitoring

Identification Code	Dewatering Intake (masl)		Discharge (masl)
	Second Portage Lake Impoundment Area	Bay Goose Impoundment Area	Third Portage Lake
	SPL-IN	BG-IN	TPL-survey
8-Jan-11	108.57		133.66
12-Jan-11	108.17		133.66
19-Jan-11	107.97		133.61
23-Jan-11	108.04		
26-Jan-11	108.11		133.68
2-Feb-11	108.20		
10-Feb-11	108.27		133.55
16-Feb-11	108.33		133.62
23-Feb-11	108.34		133.60
5-Mar-11	108.40		
12-Mar-11	108.07		
16-Mar-11	107.67		133.60
25-Mar-11	107.27		133.58
30-Mar-11	106.79		133.56
6-Apr-11	106.26		
13-Apr-11	105.47		133.57
20-Apr-11			133.56
5-May-11			133.54
18-May-11	102.09		133.53
19-May-11			133.61
9-Jun-11	100.07		133.56
14-Jun-11	100.81		133.61
15-Jun-11	101.00		133.62
16-Jun-11	101.23		133.66
17-Jun-11	101.46		133.70
18-Jun-11	101.70		133.72
19-Jun-11	101.89		133.75
20-Jun-11	102.11		133.81
21-Jun-11	102.22		133.71
22-Jun-11	102.35		133.77
23-Jun-11	102.45		133.79
28-Aug-11	97.63	133.11	133.67
29-Aug-11	97.69	133.08	133.73
30-Aug-11	97.76	133.04	
31-Aug-11	97.96	132.96	133.72
1-Sep-11	97.93	132.93	133.70
2-Sep-11	97.89	132.88	133.70
3-Sep-11	97.92	132.81	133.67
4-Sep-11	97.92	132.78	133.70
5-Sep-11	98.00	132.76	133.74
6-Sep-11	97.90	132.75	133.70
7-Sep-11	97.87	132.65	133.59

Identification Code	Dewatering Intake (masl)		Discharge (masl)
	Second Portage Lake Impoundment Area	Bay Goose Impoundment Area	Third Portage Lake
	SPL-IN	BG-IN	TPL-survey
8-Sep-11	98.17	132.66	133.69
9-Sep-11	97.74	132.64	133.78
10-Sep-11	98.05	132.54	133.54
11-Sep-11	97.92	132.57	133.73
12-Sep-11	97.77	132.33	133.60
13-Sep-11	97.99	132.46	133.71
14-Sep-11	98.05	132.39	133.74
17-Sep-11		132.19	133.01
18-Sep-11		132.21	133.73
19-Sep-11	97.79	132.15	133.74
21-Sep-11	97.80	132.05	133.73
24-Sep-11		132.02	133.74
25-Sep-11		131.96	133.74
26-Sep-11		131.89	133.72
27-Sep-11		131.83	133.80
28-Sep-11	98.07	131.85	
29-Sep-11	98.10	131.70	133.73
30-Sep-11	98.20	131.66	133.70
1-Oct-11		131.60	133.71
2-Oct-11	98.21	131.39	
3-Oct-11	98.10	131.44	133.67
4-Oct-11	97.93	131.39	133.70
5-Oct-11	98.06	131.35	
6-Oct-11	98.37	131.28	133.71
7-Oct-11	98.48	131.24	133.75
8-Oct-11	98.58	131.17	133.69
9-Oct-11	98.67	131.08	133.68
10-Oct-11	98.70	131.04	133.73
11-Oct-11	98.75	130.95	
12-Oct-11	98.73	130.91	133.71
28-Oct-11			133.66
20-Nov-11	100.40		133.61
5-Dec-11	100.94		133.61
12-Dec-11	101.15		133.59
16-Dec-11		126.01	
19-Dec-11	101.42		133.60
26-Dec-11			133.65
27-Dec-11	101.61		

Table 4.1: 2011 Rock Volumes

	North and South Portage Pit (tonnes)								
	Ore	Waste Rock							
		Tailings Dams		Other Dams & Dikes		Roads		Crushers	
		NPAG	PAG	NPAG	PAG	NPAG	PAG	NPAG	PAG
January	231,025				47,354	65,905	2,573	34,523	
February	133,165				1,972	23,335	11,760	39,520	
March	86,161				6,109	15,179	1,976	31,295	
Q1	450,351	0	0	0	0	55,436	104,419	16,309	105,337
April	235,303					40,803	36,794	71,049	14,015
May	207,399					22,967	41,205	62,668	75,312
June	326,108			8,744	0	20,236	270,831	1,763	174,485
Q2	768,810	0	0	8,744	0	84,006	348,830	135,480	263,812
July	340,966	54,927	0	0	0	696	98,817	30,240	44,510
August	326,808	89,684	33,012	0	0	811	3,864	62,205	55,539
September	412,783	93,844	239,986	0	0	21,616	5,582	3,319	145,225
Q3	1,080,557	238,454	272,998	0	0	23,123	108,263	95,764	245,275
October	389,418	0	0	7,645	14,440	25,066	111,796	3,045	50,569
November	321,180	0	0	0	12,725	2,377	27,141	55,046	28,896
December	334,768	0	0	33,674	130,725	33,267	22,249	51,567	570
Q4	1,045,366	0	0	41,319	157,889	60,711	161,185	109,658	80,035
TOTAL	3,345,084	238,454	272,998	50,062	157,889	223,275	722,697	357,211	694,460

North and South Portage Pit (tonnes)								
Waste Rock (continued)								
	Waste Dump		Overburden till		Other		Total	
	NPAG	PAG	NPAG	PAG	NPAG	PAG	NPAG	PAG
January	143,355	878,522	87,666		0	2,544	280,948	981,494
February	87,924	657,379	21,504		291	113	123,452	720,346
March	2,534	614,226	45,268		0	1,044	55,887	661,744
Q1	233,813	2,150,127	154,438	0	291	3,701	460,287	2,363,584
April	68,806	1,204,797	224,257		622	10,882	405,537	1,266,487
May	103,013	810,094	535,523		2,734	46,335	726,905	972,946
June	4,279	1,010,099	577,967		517	26,099	613,505	1,481,514
Q2	176,098	3,024,990	1,337,747	0	3,873	83,315	1,745,947	3,720,947
July	192,567	1,474,705	202,176		19,140	0	499,746	1,618,033
August	113,295	1,078,570	292,748		2,384	0	561,126	1,170,985
September	32,461	1,366,359	325,485		22,884	0	499,609	1,757,153
Q3	338,323	3,919,635	820,409	0	44,408	0	1,560,482	4,546,170
October	95,662	1,569,791	125,932		19,398	143,327	276,749	1,889,922
November	33,651	1,920,823	18,104		0	110,214	109,178	2,099,798
December	157,636	1,755,467			608	52,847	276,751	1,961,858
Q4	286,948	5,246,081	144,036	0	20,006	306,387	662,678	5,951,578
TOTAL	1,035,183	14,340,832	2,456,630	0	68,578	393,404	4,429,393	16,582,280

Table 4.2: 2011 Tailings Volume

	Tailings Solid (tonnes)	Tailings Liquid (tonnes)	Density of Tailings (% solid)	Density of Slurry (tonnes / m³)	Tailings Placed in TSF (m³)
January	193748	157427	55.17%	1.60	121337
February	213313	188983	53.02%	1.56	136692
March	221615	195785	53.09%	1.56	141906
April	223041	204469	52.17%	1.55	144213
May	186811	158880	54.04%	1.58	118424
June	257401	223986	53.47%	1.57	164165
July	284295	250850	53.12%	1.56	181984
August	275766	239707	53.50%	1.57	175828
September	306020	255696	54.48%	1.58	193082
October	306756	244146	55.68%	1.61	191047
November	214868	168346	56.07%	1.61	133255
December	294088	282875	50.97%	1.53	192542
TOTAL					1,894,473

Table 5.1: 2011 Volume of Waste Transferred

Month	Volume of Waste Transferred to AEM Landfill (m³)	Volume of Waste Sent to Incinerator (m³)
January	660	332
February	480	310
March	1104	343
April	1104	332
May	1332	343
June	1008	332
July	948	343
August	1032	332
September	1332	299
October	829	343
November	696	232
December	660	201
Total	11,185	3,740

Table 5.2: 2011 Hazardous Materials Shipped Off Site

Type of Waste	Type of Packaging and Amount of Items						
	Drum	Tote	Quatrex	60 L steel drum	20 L plastic pail	20 L steel pail	Container (Bulk)
Acid lead batteries			26				
Empty content contaminated	1435	35		573	50	60	1
Empty plastic pails (SO)					3272		
Glycol	4	4					
Oil filters	130		2				
Oily solids waste	191		231	2			
Oily water	6	22					
Plastic pail lids (SO)			32				
Propane			1				
Scraped electrical wire							6
Scraped metal							1
Scraped tire							4
Urethane resin and catalyser	18						
Vegetal oil (cooking)	12				18		
Waste aviation fuel	4						
Waste diesel	8	21					
Waste epoxy cement					6		
Waste gasoline	2						
Waste glycol and oil mixed		14					
Waste grease	12			51	12		
Waste hydraulic hoses	6		10				
Waste liquid soap	4						
Waste Methanol (windshield washer)		3					
Waste oil	96	330					
Waste oily sludge							1
Waste oily sludge and debris	9						
Waste paint	2		4				
Waste pitch	29						
Waste spray cans (aerosols)	3		7				
Waste water and glycol		23					
TOTAL	1971	452	313	626	3358	60	13

Table 5.3: 2011 Incinerator Ash Monitoring

	Units	Guideline for Industrial Waste	Mine Site Incinerator	
		Discharge*	23-Feb-11	13-Sep-11
Arsenic	mg/L	2.5	0.9084	0.46
Barium	mg/L	100	0.0593	0.13
Cadmium	mg/L	0.5	0.0124	0.018
Chromium	mg/L	0.5	0.0009	0.075
Lead	mg/L	5	<0.0005	0.02
Mercury	mg/L	0.1	0.00052	<0.01
Selenium	mg/L	1	0.005	<0.005
Silver	mg/L	5	<0.0005	<0.01
Zinc	mg/L	500	1.02	6.6

Footnotes:

* Government of Nunavut Environmental Guideline for Industrial Waste Discharges (D of SD, 2002)

Table 5.4: 2011 Waste Oil - Volume Incinerated or Consumed

Month	Total Volume of Waste Oil Incinerated or Consumed (m³)	Volume of Waste Oil Incinerated at the Incinerator (m³)	Volume of Waste Oil Consumed in the Furnace (m³)
January	0.382	0.382	0
February	2.087	0.087	2
March	0.6	0.6	0
April	0.257	0.257	0
May	0.201	0.201	0
June	0.393	0.393	0
July	0.176	0.176	0
August	0.437	0.437	0
September	0.403	0.403	0
October	0.22	0.22	0
November	0.382	0.382	0
December	0.34	0.34	0
Total	5.878	3.878	2

Table 5.5: 2011 Waste Oil Monitoring at Incinerator

	Units	Maximum Allowable Concentration *	9-Jan-11	1-Feb-11	1-Mar-11	5-Apr-11	3-May-11	5-Jun-11
Cadmium	mg/L	2	< 1	< 1	< 1	< 1	< 1	< 1
Chromium	mg/L	10	< 1	< 1	< 1	< 1	< 1	< 1
Lead	mg/L	100	< 5	< 5	< 5	< 5	< 5	< 5
PCB	mg/L	2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorine	mg/L	1000	170	2100	100	240	100	840
Flash point	°C	≥ 37.7	> 80	> 80	> 80	73	> 80	> 80

	Units	Maximum Allowable Concentration *	12-Jul-11	10-Aug-11	13-Sep-11	11-Oct-11	11-Nov-11	7-Dec-11
Cadmium	mg/L	2	< 2	< 1	< 1	< 1	< 1	< 1
Chromium	mg/L	10	< 2	< 1	< 1	< 1	< 1	5
Lead	mg/L	100	< 5	< 5	< 5	< 5	< 5	< 5
PCB	mg/L	2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorine	mg/L	1000	300	110	1700	< 100	270	2800
Flash point	°C	≥ 37.7	2	> 80	58	55	61	> 80

	Units	Maximum Allowable Concentration *	16-Dec-11	19-Dec-11
Cadmium	mg/L	2	< 1	< 1
Chromium	mg/L	10	2	2
Lead	mg/L	100	< 5	< 5
PCB	mg/L	2	< 0.5	< 0.5
Chlorine	mg/L	1000	370	350
Flash point	°C	≥ 37.7	> 80	> 80

Footnotes:

* NWT Used Oil and Waste Fuel Management Regulations (NWT, 2003)

highlighted values exceed the maximum allowable concentration

Table 6.1: 2011 Reported Spills

Date of Spill	Hazardous Material	Quantity	Location	Cause of spill	Clean-up action taken	Reported to Spill Hot Line
2011-01-08	Hydraulic oil	45 L	South portage pit	hydraulic hose broke	Contaminated soil taken to hazardous materials storage area	N
2011-01-08	Hydraulic oil	55 L	North portage pit	hydraulic hose broke	Contaminated soil taken to hazardous materials storage area	N
2011-02-12	Transmission oil	8 L	Heavy equipment parking by refueling station	Haul truck leaking	Contaminated snow taken to snow cells	N
2011-02-12	Unknown	numerous spots	Service building	vehicles waiting for maintenance	Contaminated snow taken to snow cells	N
2011-02-14	Anti-Freeze	5 L	Heavy equipment parking by refueling station	Haul truck leaking	Contaminated snow taken to snow cells	N
2011-02-18	Hydraulic oil	12 L	Front of construction garage	Hose broke on a zoom boom	Contaminated snow taken to snow cells	N
2011-02-19	Fuel	40 L	Meadowbank refueling station	Breaker of main control kicked out; when re-energized the fuel hose came out of the tank of fuel truck	Contaminated snow taken to snow cells	N
2011-02-19	Unknown	numerous spots	Airport Tarmac	Refueling plane	Contaminated snow taken to snow cells	N
2011-02-19	Unknown	5 L	Old garage	Unknown	Contaminated snow taken to snow cells	N
2011-02-19	Diesel fuel	5 L	Exploration camp	Unknown	Contaminated snow taken to snow cells	N
2011-02-27	Oil	40 L	Cold storage coverall	Unknown	Contaminated snow taken to snow cells	N

Date of Spill	Hazardous Material	Quantity	Location	Cause of spill	Clean-up action taken	Reported to Spill Hot Line
2011-02-27	Oil	5 L	Construction Garage	Unknown	Contaminated snow taken to snow cells	N
2011-02-27	Unknown	10 L	Exploration camp	Unknown	Contaminated snow taken to snow cells	N
2011-02-27	Oil	10 L	Gym coverall area	Unknown	Contaminated snow taken to snow cells	N
2011-02-27	Oil	60 L	Heavy equipment parking by refueling station	Unknown	Contaminated snow taken to snow cells	N
2011-02-27	Oil	10 L	Incinerator area	Unknown	Contaminated snow taken to snow cells	N
2011-02-27	Oil	20 L	Old warehouse	Unknown	Contaminated snow taken to snow cells	N
2011-02-27	Oil	50 L	TCG shop area	Unknown	Contaminated snow taken to snow cells	N
2011-02-27	Oil	60 L	Service building	Unknown	Contaminated snow taken to snow cells	N
2011-03-12	Fuel	200 L	South pit	Fuel truck went off the road and broke some hoses	Contaminated soil taken to Quarry 22	Y
2011-03-14	Hydraulic oil	30 L	Low grade stockpile	Damage to hydraulic motor	Contaminated soil taken to Quarry 22	N
2011-03-19	Hydraulic oil	20 L	Bridge 1 on AWP/AR at km 8-9	Hydraulic hose leak	Contaminated snow taken to snow cells; contaminated soil taken to Quarry 22	N
2011-03-19	Fuel	~ 50 L	Baker Lake refueling station	Unknown	Contaminated snow taken to snow cells; contaminated soil taken to Quarry 22	N
2011-04-03	Oil	5 L	North side of Truck shop	Mechanical failure	Contaminated soil taken to hazardous materials storage area	N

Date of Spill	Hazardous Material	Quantity	Location	Cause of spill	Clean-up action taken	Reported to Spill Hot Line
2011-04-03	Fuel	75 L	AWPAR km 100	A broken shaft on the skidder hit the fuel tank valve	Contaminated soil taken to hazardous materials storage area	N
2011-04-08	Hydraulic oil	100 L	Unknown	Hydraulic hose broke on 50 ton truck	Contaminated soil taken to Quarry 22	Y
2011-04-10	Drill hammer oil	8 L	South Portage	Dropped the pail while transferring from pick up to drill	Contaminated snow taken to snow cells	N
2011-04-16	Hydraulic oil	77 L	Waste rock storage facility	Hydraulic hose broke	Spill cleaned up with spill kit diapers; diapers disposed of in hazardous material storage area	N
2011-04-25	Anti-freeze	15 L	South Portage pit	Hose ruptured	Contaminated soil taken to Quarry 22	N
2011-04-25	Hydraulic oil	12 L	Air strip hill	Hose ruptured	Contaminated soil taken to hazardous materials storage area	N
2011-04-26	Hydraulic oil	3 L	Bay Goose dike	Hydraulic hose broke	Contaminated soil taken to hazardous materials storage area	N
2011-05-03	Reclaim Water	105 m ³	South side of the power house (in the trench for mill piping)	Operator got stuck in the trench and pierced the pipe using his bucket to get out	Sucker truck pumped up the water and brought it to Tailing Pond; contaminated snow taken to Tailing Pond	N
2011-05-09	Hydraulic oil	10 L	Truck Shop	Broken hydraulic hose	Contaminated soil taken to Hazmat area	N
2011-05-09	Hydraulic oil	3 L	Air Strip Hill	Broken hydraulic hose	Contaminated soil taken to Hazmat area	N
2011-05-09	Hydraulic oil	5 L	Truck Shop	Broken hydraulic hose	Contaminated soil taken to Hazmat area	N
2011-05-11	Hydraulic oil	20 L	North Portage	Broken hydraulic hose	Contaminated soil taken to Hazmat area	N
2011-05-12	Hydraulic oil	25 L	Old Sana Crusher 2	Broken hydraulic hose	Contaminated soil taken to Hazmat area	N

Date of Spill	Hazardous Material	Quantity	Location	Cause of spill	Clean-up action taken	Reported to Spill Hot Line
2011-06-30	Slurry containing cyanide	250 m ³	Mill garage door A and B	Generator failure caused power to shut off; unable to manually close overflow valve on CIP tank	Spill contained by building berms at doorways; slurry taken to the tailings pond; an emergency air tank was brought to the mill during cleanup	Y
2011-07-01	Hydraulic oil	~ 20 L (numerous spots)	Along AWPART from Meadowbank to Emulsion	Tractor trailer went off the road and tipped	Contaminated soil taken to Hazmat area	N
2011-07-03	Fuel	80 L	Wash Bay	Rock pierced the fuel line	Contaminated soil taken to Hazmat area	N
2011-07-04	Anti-Freeze	3 L	Truck Shop	Broken hose	Contaminated soil taken to Hazmat area	N
2011-07-05	Glycol	30 L	Old genset	Gasket not tight enough	Contaminated soil taken to Hazmat area	N
2011-07-06	Hydraulic oil	~ 8 L	Drill bit shop	The intercooler of the skytrack cracked	Contaminated soil taken to Hazmat area	N
2011-07-18	Fuel	280 L	Road in front of the TCG-Sana pad	Fire in the injection unit	Contaminated water was stored in totes for treatment; contaminated soil taken to Quarry 22	Y
2011-07-19	Hydraulic oil	35 L	Dewatering pump on Second portage arm	Broken hydraulic hose	Contaminated soil taken to Hazmat area	N
2011-07-21	Fuel	500 L	Baker Lake refueling station	Over-filling	Contaminated soil taken to Quarry 22	Y
2011-07-22	Fuel	5 L	AWPART km 80	Tractor trailer went on the side of the road and tipped	Contaminated soil taken to Hazmat area	N
2011-07-24	Hydraulic oil	80 L	South Portage Pit	Broken hydraulic hose	Contaminated soil taken to Hazmat area	N
2011-07-26	Hydraulic oil	90 L	South Portage Pit	Broken hydraulic hose	Contaminated soil taken to Hazmat area	N

Date of Spill	Hazardous Material	Quantity	Location	Cause of spill	Clean-up action taken	Reported to Spill Hot Line
2011-08-05	Slurry	40 m ³	Between the leach tank and the temporary Genset	Broken pipe	Pumped up the water inside mill tailings tank; contaminated soil taken to Tailings Pond	N
2011-08-14	Oil	40 L	Airport parking lot	Motor failure	Contaminated soil taken to Quarry 22	N
2011-08-19	Oil	11.2 m ³	AWPAR km 34	Tractor trailer went off the road	Contaminated soil taken to Quarry 5 over a tarp	Y
2011-08-31	Oil	400 L	Between Talbon and Nahanni shop	Fork of the zoom boom punctured tote	Sucker truck pumped up the oil and put it into drums; contaminated oil and soil taken to Hazmat area	Y
2011-09-03	Hydraulic oil	10 L	TCG shop area	While performing maintenance on an excavator, a hydraulic oil leak occurred	Contaminated soil taken to Hazmat area	N
2011-09-12	Hydraulic oil	85 L	Waste Rock Storage Facility	Rock punctured hydraulic hose	Contaminated soil taken to Hazmat area	N
2011-09-13	Fuel	3 L	East dike	Rock punctured fuel tank	Contaminated soil taken to Hazmat area	N
2011-09-15	Hydraulic oil	35 L	TCG shop area	Broken hinge pinched the truck brake line	Contaminated soil taken to Hazmat area	N
2011-09-18	Hydraulic oil	20 L	Mid Portage Pit	Broken fitting	Contaminated soil taken to Hazmat area	N
2011-10-10	Hydraulic oil	250 L	Truck Shop	Broken hydraulic hose	Contaminated soil taken to Hazmat area	Y
2011-10-13	Fuel	2300 L	Baker Lake refueling station	Over-filling	Contaminated soil taken to Quarry 5	Y
2011-10-13	Copper Sulfate	1000 kg	Mill	Improper storage	Contaminated soil taken to Hazmat area	N
2011-10-14	Oil	20 L	White Coverall	Pump punctured tote	Transferred oil with the lube truck and took contaminated soil to Hazmat area	N

Date of Spill	Hazardous Material	Quantity	Location	Cause of spill	Clean-up action taken	Reported to Spill Hot Line
2011-10-21	Slurry	60 L	Stormwater dike	Maintenance on the slurry pipe	Contaminated soil taken to Tailings Pond	N
2011-10-29	Fuel	280 L	North Portage Pit	Air compressor detached itself from the drill	Contaminated soil taken to Quarry 22	Y
2011-11-09	Used oil	625 L	Beneath Primary crusher	Fork of the zoom boom punctured tote	Placed absorbent pads on ground; contaminated snow/soil taken to Hazmat area	Y
2011-11-11	Tailings	18,000 L	Near Tear Drop Lake	Pig stuck in tailings pipe	Picked up the tailings and took it to the Tailings Pond	N
2011-11-14	Oil	80 L	Mid Portage Pit	Broken hose on the drill	Stopped the machine; contaminated soil taken to Hazmat area	N
2011-11-14	Oil	50 L	Old transit laydown	Broken hydraulic hose	Cleaned up with rags and scraped with BACO	N
2011-11-19	Tailings	60 L	Between powerhouse and secondary crusher	Pig stuck in tailings pipe	Pick up the tailings and took it to the dome	N
2011-11-25	Reclaim water and scaling	63 m3	Tailings pipe air strip area	Pig stuck in tailings pipe	Picked up the tailings and took it to the Tailings Pond	N
2011-11-25	Reclaim water and scaling	90 m3	Tailings pipe WTP area	Pig stuck in tailings pipe	Picked up the tailings and took it to the Tailings Pond	N
2011-11-27	Reclaim water and scaling	4 m3	Tailings pipe elbow near the powerhouse	Too much pressure for the tailings pipe elbow	Picked up the tailings and took it to the Tailings Pond	N
2011-12-04	Oil	70 L	South Pit	Mechanical failure	Contaminated soil taken to Hazmat area	N
2011-12-12	Transmission fluid	7 L	Door A outside the mill	Drove over a skid plate and it flipped braking the tranny casing	Contaminated snow taken to Hazmat area	N
2011-12-20	Fuel	10 L	Refueling station	Nozzle didn't stop	Contaminated snow taken to Hazmat area	N

Date of Spill	Hazardous Material	Quantity	Location	Cause of spill	Clean-up action taken	Reported to Spill Hot Line
2011-12-20	Hydraulic oil	20 L	Mid Pit	Broken hose	Contaminated soil taken to Hazmat area	N
2011-12-19	Hydraulic oil	30 L	Mid Pit	Broken hose	Contaminated soil taken to Hazmat area	N
2011-12-19	Hydraulic oil	55 L	Mid Pit	Broken hose	Contaminated soil taken to Hazmat area	N
2011-12-22	Hydraulic oil	350 L	Waste dump	Broken hose	Contaminated soil taken to Quarry 22	Y
2011-12-22	Hydraulic oil	5 L	Waste dump	Broken hose	Contaminated soil taken to Quarry 22	N

Table 7.1: 2011 GPS Coordinates of Meadowbank Mine Site Sampling Stations

Sample Location Description	Sample ID	GPS Coordinates Easting / Northing	
Dewatering Second Portage Lake Impoundment Area			
water quality monitoring at dewatering water treatment plant (outlets for plants 1 and 2)	DD-WTP	14W 0637591	7215171
water quality monitoring in receiving environment - dewatering discharge area	TPL	14W 0637022	7214994
lake level monitoring at dewatering intake	SPL-IN	14W 0638316	7214747
lake level monitoring in Third Portage Lake	TPL-Survey	14W 0637353	7213756
Dewatering Bay-Goose Impoundment Area			
water quality monitoring at dewatering pumps (pumps 1 and 2)	BG-PUMP	14W 0638331	7212707
water quality monitoring at dewatering water treatment plant (outlets for plants 1 and 2)	BG-WTP	14W 0637591	7215171
lake level monitoring at dewatering intake	BG-IN	14W 0638331	7212707
MMER and EEM			
effluent water quality monitoring and toxicity testing	DD-FD1	14W 0637591	7215171
water quality monitoring in receiving environment - discharge area	TPN	14W 0637022	7214994
water quality monitoring in receiving environment - reference area	TPS	14W 0633840	7208079
Sewage Treatment Plant			
STP discharge to stormwater management pond	STP	14W 0638046	7214140
Incinerator			
ash sampling; waste oil sampling	Incinerator	14W 0638191	7213406
Baker Lake Bulk Fuel Storage Facility			
water quality monitoring of discharge from secondary containment area	BL-Fuel	14W 0647657	7134790
Meadowbank Bulk Fuel Storage Facilities			
water quality monitoring of discharge from secondary containment area	MB-Fuel	14W 0638262	7213433

Sample Location Description	Sample ID	GPS Coordinates Easting / Northing
<i>Tailings Reclaim Pond</i> water quality monitoring	ST-21	14W 0637610 7215745
<i>North Portage Pit Sump</i> water quality monitoring from area of water accumulation	ST-17	14W 0638951 7214783
<i>South Portage Pit Sump</i> water quality monitoring from area of water accumulation	ST-19	14W 0638898 7213939
<i>East Dike Seepage</i> water quality monitoring of seepage from East Dike - North location	EDS-N	14W 0639280 7214166
water quality monitoring of seepage from East Dike - South location	EDS-S	14W 0639316 7213937
<i>Attenuation Pond</i> water quality monitoring	ST-18	14W 0638316 7214747
<i>Waste Rock Storage Facility</i> water quality monitoring of seepage from Waste Rock Storage Facility	SW-RSF	14W 0638589 7216159
<i>Saddle Dam 1 Seepage</i> water quality monitoring of seepage from Saddle Dam 1	SD1S	14W 0636976 7216001

Table 7.2: 2011 Dewatering at the Second Portage Lake Impoundment Area
- Turbidity and Total Suspended Solids Monitoring

Date	DD-WTP-01(Out)		DD-WTP-02(Out)		Both WTP Outlets				TPL - ENV	
	24-hour	Lab TSS	24-hour	Lab	NTU	TSS	NTU	TSS	24-hour	Lab TSS
	Mean		Mean	TSS	Mean	Mean	day Mean	30-day Mean	Mean	
	NTU	mg/L	NTU	mg/L	NTU	mg/L	NTU	mg/L	NTU	mg/L
2011-01-01	1.0	1	Not in operation		1.0	1	2.0	5	0.3	<1
2011-01-02	1.1	1	Not in operation		1.1	1	1.8	5		
2011-01-03	Bad weather		Not in operation							
2011-01-04	1.9	1	Not in operation		1.9	1	1.8	5		
2011-01-05	1.2	6	Not in operation		1.2	6	1.7	5		
2011-01-06	1.7	4	Not in operation		1.7	4	1.8	5		
2011-01-07	1.2	4	Not in operation		1.2	4	1.7	5		
2011-01-08	0.8	3	Not in operation		0.8	3	1.7	5		
2011-01-09	1.0	4	Not in operation		1.0	4	1.6	5		
2011-01-10	1.2	5	Not in operation		1.2	5	1.6	5		
2011-01-11	No sample		Not in operation						0.3	2
2011-01-12	1.2	7	Not in operation		1.2	7	1.5	5		
2011-01-13	1.7	9	Not in operation		1.7	9	1.5	5		
2011-01-14	1.8	6	Not in operation		1.8	6	1.6	5		
2011-01-15	0.9	3	Not in operation		0.9	3	1.5	5		
2011-01-16	0.9	3	Not in operation		0.9	3	1.5	5		
2011-01-17	Not in operation		Not in operation							
2011-01-18	Not in operation		Not in operation							
2011-01-19	Not in operation		Not in operation							
2011-01-20	Not in operation		Not in operation							
2011-01-21	Not in operation		Not in operation						1	
2011-01-22	Not in operation		Not in operation							
2011-01-23	Not in operation		Not in operation							
2011-01-24	Not in operation		Not in operation							
2011-01-25	Not in operation		Not in operation							
2011-01-26	Not in operation		Not in operation							
2011-01-27	Not in operation		Not in operation							
2011-01-28	Not in operation		Not in operation							
2011-01-29	Not in operation		Not in operation							
2011-01-30	Not in operation		Not in operation							
2011-01-31	Not in operation		Not in operation							
2011-02-01	Not in operation		Not in operation							

Date	DD-WTP-01(Out)		DD-WTP-02(Out)		Both WTP Outlets				TPL - ENV	
	24-hour	Lab TSS	24-hour	Lab	NTU 24-hour	TSS 24-hour	NTU 30-	TSS 30-	24-hour	Lab TSS
	Mean	mg/L	Mean	TSS	Mean	Mean	day Mean	day Mean	Mean	mg/L
	NTU		NTU	mg/L	NTU	mg/L	NTU	mg/L	NTU	mg/L
2011-02-02	Not in operation		Not in operation							
2011-02-03	Not in operation		Not in operation							
2011-02-04	Not in operation		Not in operation							
2011-02-05	Not in operation		Not in operation							
2011-02-06	Not in operation		Not in operation							
2011-02-07	Not in operation		Not in operation							
2011-02-08	Not in operation		Not in operation							
2011-02-09	Not in operation		Not in operation							
2011-02-10	Not in operation		Not in operation							
2011-02-11	Not in operation		Not in operation							
2011-02-12	Not in operation		Not in operation							
2011-02-13	Not in operation		Not in operation							
2011-02-14	Not in operation		Not in operation							
2011-02-15	Not in operation		Not in operation							
2011-02-16	Not in operation		Not in operation							
2011-02-17	Not in operation		Not in operation							
2011-02-18	Not in operation		Not in operation							
2011-02-19	Not in operation		Not in operation							
2011-02-20	Not in operation		Not in operation							
2011-02-21	Not in operation		Not in operation							
2011-02-22	Not in operation		Not in operation							
2011-02-23	Not in operation		Not in operation							
2011-02-24	Not in operation		Not in operation							
2011-02-25	Not in operation		Not in operation							
2011-02-26	Not in operation		Not in operation							
2011-02-27	Not in operation		Not in operation							
2011-02-28	Not in operation		Not in operation							
2011-03-01	Not in operation		Not in operation							
2011-03-02	Not in operation		Not in operation							
2011-03-03	Not in operation		Not in operation							
2011-03-04	Not in operation		Not in operation							
2011-03-05	Not in operation		Not in operation							
2011-03-06	Not in operation		Not in operation							
2011-03-07	Not in operation		Not in operation						0.3	1
2011-03-08	Not in operation		Not in operation							
2011-03-09	2.9	12	Not in operation		2.9	12	1.5	5		

Date	DD-WTP-01(Out)		DD-WTP-02(Out)		Both WTP Outlets				TPL - ENV	
	24-hour	Lab TSS	24-hour	Lab	NTU 24-hour	TSS 24-hour	NTU 30-	TSS 30-	24-hour	Lab TSS
	Mean	mg/L	Mean	TSS	Mean	Mean	day Mean	day Mean	Mean	mg/L
	NTU		NTU	mg/L	NTU	mg/L	NTU	mg/L	NTU	mg/L
2011-03-10	No sample		Not in operation							
2011-03-11	2.0	9	Not in operation		2.0	9	1.5	5		
2011-03-12	1.1	8	Not in operation		1.1	8	1.5	5		
2011-03-13	1.4	10	Not in operation		1.4	10	1.5	5		
2011-03-14	1.1	13	Not in operation		1.1	13	1.5	5		
2011-03-15	3.8	12	Not in operation		3.8	12	1.6	5		
2011-03-16	1.8	3	Not in operation		1.8	3	1.6	5	0.4	1
2011-03-17	0.6	3	Not in operation		0.6	3	1.5	5		
2011-03-18	0.5	1	Not in operation		0.5	1	1.4	5		
2011-03-19	0.6	1	Not in operation		0.6	1	1.4	5		
2011-03-20	Not in operation		Not in operation							
2011-03-21	Not in operation		Not in operation							
2011-03-22	Not in operation		Not in operation							
2011-03-23	Not in operation		Not in operation							
2011-03-24	2.4	7	Not in operation		2.4	7	1.4	5		
2011-03-25	0.4	5	Not in operation		0.4	5	1.4	5		
2011-03-26	1.4	9	Not in operation		1.4	9	1.4	5		
2011-03-27	2.5	3	Not in operation		2.5	3	1.4	5		
2011-03-28	1.0	9	Not in operation		1.0	9	1.4	5		
2011-03-29	0.3	2	Not in operation		0.3	2	1.4	5	1.0	2
2011-03-30	1.8	2	Not in operation		1.8	2	1.4	6		
2011-03-31	1.0	2	Not in operation		1.0	2	1.4	6		
2011-04-01	0.8	8	Not in operation		0.8	8	1.4	6		
2011-04-02	0.7	9	Not in operation		0.7	9	1.3	6		
2011-04-03	0.7	10	Not in operation		0.7	10	1.3	6		
2011-04-04	1.4	9	Not in operation		1.4	9	1.3	6		
2011-04-05	0.8	3	Not in operation		0.8	3	1.3	6		
2011-04-06	0.9	4	Not in operation		0.9	4	1.3	6	1.0	4
2011-04-07	1.0	7	Not in operation		1.0	7	1.3	6		
2011-04-08	1.1	4	Not in operation		1.1	4	1.3	6		
2011-04-09	1.8	5	Not in operation		1.8	5	1.3	6		
2011-04-10	1.1	2	Not in operation		1.1	2	1.3	6		
2011-04-11	1.2	2	Not in operation		1.2	2	1.3	6		
2011-04-12	0.8	1	Not in operation		0.8	1	1.3	6	0.1	3
2011-04-13	0.9	3	Not in operation		0.9	3	1.2	6		
2011-04-14	0.9	2	Not in operation		0.9	2	1.2	5		

Date	DD-WTP-01(Out)		DD-WTP-02(Out)		Both WTP Outlets				TPL - ENV	
	24-hour	Lab TSS	24-hour	Lab	NTU 24-hour	TSS 24-hour	NTU 30-	TSS 30-	24-hour	Lab TSS
	Mean	mg/L	Mean	TSS	Mean	Mean	day Mean	day Mean	Mean	mg/L
	NTU		NTU	mg/L	NTU	mg/L	NTU	mg/L	NTU	mg/L
2011-04-15	1.0	3	Not in operation		1.0	3	1.2	5	0.4	1
2011-04-16	0.8	5	Not in operation		0.8	5	1.2	5		
2011-04-17	1.0	5	Not in operation		1.0	5	1.2	5		
2011-04-18	0.7	4	Not in operation		0.7	4	1.1	4		
2011-04-19	0.9	4	Not in operation		0.9	4	1.0	4		
2011-04-20	1.1	5	Not in operation		1.1	5	1.0	5		
2011-04-21	2.2	9	Not in operation		2.2	9	1.1	5		
2011-04-22	0.6	1	Not in operation		0.6	1	1.1	5		
2011-04-23	0.8	1	Not in operation		0.8	1	1.0	5		
2011-04-24	0.5	1	Not in operation		0.5	1	1.1	4		
2011-04-25	0.4	1	Not in operation		0.4	1	1.0	4		
2011-04-26	0.8	1	Not in operation		0.8	1	1.0	4		
2011-04-27	1.1	4	Not in operation		1.1	4	1.0	4		
2011-04-28	0.5	2	Not in operation		0.5	2	1.0	4	0.6	2
2011-04-29	0.4	1	Not in operation		0.4	1	0.9	4		
2011-04-30	Not in operation		Not in operation							
2011-05-01	0.7	1	Not in operation		0.7	1	0.9	4	1.0	1
2011-05-02	0.9	1	Not in operation		0.9	1	0.9	4		
2011-05-03	0.9	6	Not in operation		0.9	6	0.9	4		
2011-05-04	0.8	8	Not in operation		0.8	8	0.9	4		
2011-05-05	0.9	10	Not in operation		0.9	10	0.9	4		
2011-05-06	1.9	6	Not in operation		1.9	6	1.0	4		
2011-05-07	Not in operation		Not in operation							
2011-05-08	2.8	5	Not in operation		2.8	5	1.0	4	0.2	7
2011-05-09	1.1	4	Not in operation		1.1	4	1.0	4		
2011-05-10	0.6	2	Not in operation		0.6	2	1.0	4		
2011-05-11	0.5	8	Not in operation		0.5	8	1.0	4		
2011-05-12	0.5	7	Not in operation		0.5	7	0.9	4		
2011-05-13	1.4	2	Not in operation		1.4	2	0.9	4		
2011-05-14	2.2	1	Not in operation		2.2	1	1.0	4		
2011-05-15	1.9	2	Not in operation		1.9	2	1.0	4	1.6	1
2011-05-16	3.0	4	Not in operation		3.0	4	1.1	4		
2011-05-17	3.0	6	1.2	1	2.1	4	1.1	4		
2011-05-18	1.1	5	0.2	3	0.7	4	1.1	4		
2011-05-19	Not in operation		0.7	10	0.7	10	1.1	4		
2011-05-20	2.7	10	1.7	11	2.2	11	1.2	4		

Date	DD-WTP-01(Out)		DD-WTP-02(Out)		Both WTP Outlets				TPL - ENV	
	24-hour	Lab TSS	24-hour	Lab	NTU 24-hour	TSS 24-hour	NTU 30-	TSS 30-	24-hour	Lab TSS
	Mean	mg/L	Mean	TSS	Mean	Mean	day Mean	day Mean	Mean	mg/L
	NTU		NTU	mg/L	NTU	mg/L	NTU	mg/L	NTU	
2011-05-21	2.0	10	1.5	11	1.8	11	1.2	4		
2011-05-22	Not in operation		Not in operation							
2011-05-23	3.8	11	1.8	14	2.8	13	1.3	5		
2011-05-24	4.1	6	3.0	5	3.5	6	1.3	5		
2011-05-25	3.3	24	2.8	7	3.1	16	1.4	5		
2011-05-26	3.0	8	3.6	9	3.3	9	1.5	5		
2011-05-27	1.2	2	1.3	1	1.3	2	1.5	5		
2011-05-28	1.3	1	1.2	2	1.3	2	1.5	5		
2011-05-29	3.5	11	2.9	8	3.2	10	1.6	6		
2011-05-30	3.4	8	2.0	8	2.7	8	1.7	6		
2011-05-31	4.1	10	4.8	14	4.4	12	1.8	6		
2011-06-01	5.9	15	5.4	20	5.6	18	2.0	7		
2011-06-02	9.5	16	8.8	20	9.1	18	2.2	7		
2011-06-03	9.3	25	8.8	23	9.1	24	2.5	8		
2011-06-04	5.1	4	3.4	4	4.2	4	2.6	8		
2011-06-05	1.6	4	1.5	6	1.6	5	2.6	8		
2011-06-06	3.9	13	2.1	9	3.0	11	2.7	8		
2011-06-07	Not in operation		Not in operation							
2011-06-08	Not in operation		Not in operation							
2011-06-09	Not in operation		Not in operation							
2011-06-10	8.5	26	11.0	28	9.7	27	3.0	8		
2011-06-11	14.7	26	5.9	16	10.3	21	3.2	9		
2011-06-12	8.4	18	6.1	18	7.2	18	3.4	9		
2011-06-13	Not in operation		Not in operation							
2011-06-14	Not in operation		Not in operation							
2011-06-15	Not in operation		Not in operation							
2011-06-16	Not in operation		Not in operation							
2011-06-17	Not in operation		Not in operation							
2011-06-18	Not in operation		Not in operation							
2011-06-19	Not in operation		Not in operation							
2011-06-20	Not in operation		Not in operation							
2011-06-21	Not in operation		Not in operation							
2011-06-22	Not in operation		Not in operation							
2011-06-23	Not in operation		Not in operation							
2011-06-24	Not in operation		Not in operation							
2011-06-25	Not in operation		Not in operation							

Date	DD-WTP-01(Out)		DD-WTP-02(Out)		Both WTP Outlets				TPL - ENV	
	24-hour	Lab TSS	24-hour	Lab	NTU 24-hour	TSS 24-hour	NTU 30-	TSS 30-	24-hour	Lab TSS
	Mean	mg/L	Mean	TSS	Mean	Mean	day Mean	day Mean	Mean	mg/L
	NTU		NTU	mg/L	NTU	mg/L	NTU	mg/L	NTU	mg/L
2011-06-26	Not in operation		Not in operation							
2011-06-27	Not in operation		Not in operation							
2011-06-28	Not in operation		Not in operation							
2011-06-29	Not in operation		Not in operation							
2011-06-30	Not in operation		Not in operation							
2011-07-01	Not in operation		Not in operation							
2011-07-02	Not in operation		Not in operation							
2011-07-03	Not in operation		Not in operation							
2011-07-04	3.6	11	3.2	10	3.4	11	3.5	10		
2011-07-05	3.2	6	2.8	10	3.0	8	3.6	10		
2011-07-06	1.9	7	1.7	9	1.8	8	3.6	10		
2011-07-07	Not in operation		Not in operation							
2011-07-08	Not in operation		Not in operation							
2011-07-09	Not in operation		Not in operation							
2011-07-10	3.6	10	8.1	4	5.9	7	3.8	10		
2011-07-11	3.9	11	Not in operation		3.9	11	3.9	10		
2011-07-12	2.7	6	2.0	2	2.3	4	3.9	10		
2011-07-13	4.4	12	2.5	7	3.5	10	3.9	11		
2011-07-14	Not in operation		5.0	12	5.0	12	4.0	11		
2011-07-15	9.9	14	Not in operation		9.9	14	4.3	11		
2011-07-16	3.5	5	Not in operation		3.5	5	4.4	11		
2011-07-17	5.6	5	4.9	17	5.3	11	4.5	11		
2011-07-18	3.8	14	4.7	16	4.3	15	4.6	11		
2011-07-19	Not in operation		Not in operation							
2011-07-20	2.2	8	2.6	8	2.4	8	4.6	11	0.2	<1
2011-07-21	2.2	6	2.7	7	2.4	7	4.5	11		
2011-07-22	Not in operation		1.4	3	1.4	3	4.5	11		
2011-07-23	Not in operation		0.8	4	0.8	4	4.4	10		
2011-07-24	Not in operation		0.4	4	0.4	4	4.3	11		
2011-07-25	Not in operation		0.3	9	0.3	9	4.3	11		
2011-07-26	Not in operation		1.6	4	1.6	4	4.3	11		
2011-07-27	Not in operation		0.4	2	0.4	2	4.2	10	1.5	<1
2011-07-28	Not in operation		Not in operation							
2011-07-29	Not in operation		Not in operation							
2011-07-30	1.8	3	Not in operation		1.8	3	4.0	10		
2011-07-31	1.8	80	Not in operation		1.8	80	3.8	12		

Date	DD-WTP-01(Out)		DD-WTP-02(Out)		Both WTP Outlets				TPL - ENV	
	24-hour	Lab TSS	24-hour	Lab	NTU 24-hour	TSS 24-hour	NTU 30-day	TSS 30-day	24-hour	Lab TSS
	Mean	mg/L	Mean	TSS	Mean	Mean	Mean	Mean	Mean	mg/L
	NTU		NTU	mg/L	NTU	mg/L	NTU	mg/L	NTU	
2011-08-01	1.9	6	Not in operation		1.9	6	3.6	11	0.1	<1
2011-08-02	Not in operation		2.8	7	2.8	7	3.5	12		
2011-08-03	Not in operation		Not in operation							
2011-08-04	Not in operation		Not in operation							
2011-08-05	Not in operation		Not in operation							
2011-08-06	0.9	4	0.9	5	0.9	5	3.5	11	2.0	<1
2011-08-07	3.7	5	3.6	5	3.6	5	3.5	11		
2011-08-08	3.6	6	4.0	6	3.8	6	3.3	11		
2011-08-09	Not in operation		Not in operation							
2011-08-10	Not in operation		2.6	6	2.6	6	3.0	10		
2011-08-11	Not in operation		Not in operation						0.4	<1
2011-08-12	2.7	7	Not in operation		2.7	7	2.9	10		
2011-08-13	Not in operation		Not in operation							
2011-08-14	1.0	56	Not in operation		1.0	56	2.8	11		
2011-08-15	4.0	3	Not in operation		4.0	3	2.8	11		
2011-08-16	Not in operation		5.1	8	5.1	8	2.9	11	0.2	1
2011-08-17	Not in operation		1.0	< 1	1.0	1	2.8	11		
2011-08-18	Not in operation		Not in operation							
2011-08-19	2.0	7	Not in operation		2.0	7	2.7	11		
2011-08-20	Not in operation		1.2	6	1.2	6	2.7	11		
2011-08-21	Not in operation		1.5	4	1.5	4	2.6	11	0.1	<1
2011-08-22	Not in operation		0.8	2	0.8	2	2.4	10		
2011-08-23	Not in operation		Not in operation							
2011-08-24	Not in operation		2.8	8	2.8	8	2.2	10		
2011-08-25	1.0	5	Not in operation		1.0	5	2.1	10		
2011-08-26	Not in operation		Not in operation						0.1	<1
2011-08-27	2.9	11	2.8	8	2.8	10	2.0	10		
2011-08-28	5.6	5	1.3	8	3.4	7	2.0	10		
2011-08-29	Not in operation		2.6	4	2.6	4	2.0	10		
2011-08-30	1.4	7	1.0	5	1.2	6	2.0	10		
2011-08-31	0.7	1	1.0	7	0.83	4	2.0	10		
2011-09-01	1.6	8	Not in operation		1.6	8	2.0	10		
2011-09-02	0.9	7	Not in operation		0.9	7	2.0	10		
2011-09-03	1.1	8	Not in operation		1.1	8	2.0	10		
2011-09-04	2.2	8	Not in operation		2.2	8	2.0	10		
2011-09-05	4.1	4	Not in operation		4.1	4	2.2	10		

Date	DD-WTP-01(Out)		DD-WTP-02(Out)		Both WTP Outlets				TPL - ENV	
	24-hour	Lab TSS	24-hour	Lab	NTU 24-hour	TSS 24-hour	NTU 30-day	TSS 30-day	24-hour	Lab TSS
	Mean	mg/L	Mean	TSS	Mean	Mean	Mean	Mean	Mean	mg/L
	NTU		NTU	mg/L	NTU	mg/L	NTU	mg/L	NTU	
2011-09-06	2.9	2	Not in operation		2.9	2	2.2	10	1.3	3
2011-09-07	1.9	6	Not in operation		1.9	6	2.2	10		
2011-09-08	1.7	4	Not in operation		1.7	4	2.2	7		
2011-09-09	2.2	1	Not in operation		2.2	1	2.2	7		
2011-09-10	1.9	3	Not in operation		1.9	3	2.2	7	2.7	2
2011-09-11	1.5	4	Not in operation		1.5	4	2.2	7		
2011-09-12	1.1	3	Not in operation		1.1	3	2.1	7		
2011-09-13	Not in operation		Not in operation							
2011-09-14	4.3	10	Not in operation		4.3	10	2.1	7	0.8	<1
2011-09-15	Not in operation		2.7	8	2.7	8	2.1	7		
2011-09-16	Not in operation		2.7	8	2.7	8	2.1	7		
2011-09-17	Not in operation		2.7	10	2.7	10	2.2	6		
2011-09-18	1.2	10	Not in operation		1.2	10	2.1	6	1.0	1
2011-09-19	2.4	10	2.3	12	2.4	11	2.0	6		
2011-09-20	3.6	4	6.9	1	5.3	3	2.2	6		
2011-09-21	1.0	2	0.7	<1	0.9	2	2.1	6		
2011-09-22	Not in operation		Not in operation						1.3	5
2011-09-23	1.8	3	0.8	2	1.3	3	2.1	6		
2011-09-24	1.1	7	Not in operation		1.1	7	2.1	6		
2011-09-25	Not in operation		Not in operation							
2011-09-26	Not in operation		Not in operation						3.6	5
2011-09-27	Not in operation		Not in operation							
2011-09-28	Not in operation		Not in operation							
2011-09-29	Not in operation		Not in operation							
2011-09-30	Not in operation		Not in operation							
2011-10-01	Not in operation		Not in operation						7.9	18
2011-10-02	Not in operation		Not in operation							
2011-10-03	7.9	18	Not in operation		7.9	18	2.3	6		
2011-10-04	Not in operation		Not in operation						2.4	6
2011-10-05	Not in operation		Not in operation							
2011-10-06	Not in operation		Not in operation							
2011-10-07	Not in operation		Not in operation							
2011-10-08	Not in operation		Not in operation						3.6	5
2011-10-09	Not in operation		Not in operation							
2011-10-10	Not in operation		Not in operation							
2011-10-11	3.6	5	Not in operation		3.6	5	2.4	6		

Date	DD-WTP-01(Out)		DD-WTP-02(Out)		Both WTP Outlets				TPL - ENV	
	24-hour	Lab TSS	24-hour	Lab	NTU 24-hour	TSS 24-hour	NTU 30-	TSS 30-	24-hour	Lab TSS
	Mean	mg/L	Mean	TSS	Mean	Mean	day Mean	day Mean	Mean	mg/L
	NTU		NTU	mg/L	NTU	mg/L	NTU	mg/L	NTU	mg/L
2011-10-12	Not in operation		1.3	4	1.3	4	2.4	6	0.9	4
2011-10-13	Not in operation		Not in operation							
2011-10-14	Not in operation		Not in operation							
2011-10-15	0.7	4	Not in operation		0.7	4	2.3	6		
2011-10-16	Not in operation		Not in operation							
2011-10-17	Not in operation		Not in operation							
2011-10-18	0.4	< 1	Not in operation		0.4	1	2.2	6		
2011-10-19	Not in operation		0.8	2	0.8	2	2.1	6		
2011-10-20	4.6	5	Not in operation		4.6	5	2.3	6		
2011-10-21	SPL Dewatering Completed									

Footnotes:

turbidity values are measured in field by environment department

samples for TPL-ENV are collected from depth with highest turbidity value determined during NTU depth profiling

2011-01-11 - No sample: the environment technicians responded to an ERT call

2011-03-10 - No sample: kitchen fire

2011-05-23 - work on ice stopped due to unsafe ice conditions

**Table 7.3: 2011 Dewatering at the Second Portage Lake Impoundment Area
- pH and Aluminum Monitoring**

Date	DD-WTP-01		DD-WTP-02		Both WTP Outlets		TPL - ENV
	pH units	Total Al mg/L	pH units	Total Al mg/L	pH 24-hour Mean units	Al 24-hour Mean mg/L	pH units
2011-01-04	6.80	0.489			6.80	0.489	
2011-01-10	6.45	0.977			6.45	0.977	6.82
2011-01-12	6.41	0.783			6.41	0.783	
2011-01-13	6.63				6.63		6.73
2011-01-19							6.67
2011-03-06							6.40
2011-03-09	6.69				6.69		
2011-03-11	6.78				6.78		
2011-03-12	6.72				6.72		
2011-03-13	6.66				6.66		
2011-03-14	6.68				6.68		
2011-03-15	6.76	0.882			6.76	0.882	
2011-03-16	6.64				6.64		6.35
2011-03-17	6.59				6.59		
2011-03-18	6.59				6.59		
2011-03-19	6.52				6.52		
2011-03-24	6.40	1.100			6.40	1.100	
2011-03-25	6.33				6.33		
2011-03-26	6.63				6.63		
2011-03-27	6.84				6.84		
2011-03-28	6.39				6.39		
2011-03-29	6.51	0.599			6.51	0.599	6.03
2011-03-30	6.61				6.61		
2011-03-31	6.40				6.40		
2011-04-01	6.50				6.50		
2011-04-02	6.46				6.46		
2011-04-03	6.50				6.50		
2011-04-04	6.50	1.440			6.50	1.440	
2011-04-05	6.59				6.59		
2011-04-06	6.69				6.69		6.88
2011-04-07	6.55				6.55		
2011-04-08	6.48				6.48		
2011-04-09	6.80				6.80		
2011-04-10	6.48				6.48		
2011-04-11	6.56				6.56		
2011-04-12	6.87	1.020			6.87	1.020	7.02
2011-04-13	6.71				6.71		
2011-04-14	6.68				6.68		
2011-04-15	6.61				6.61		
2011-04-16	6.78				6.78		
2011-04-17	6.62				6.62		
2011-04-18	6.50	0.750			6.50	0.750	
2011-04-19	6.67				6.67		
2011-04-20	6.64				6.64		5.91
2011-04-21	6.57				6.57		
2011-04-22	6.77				6.77		

Date	DD-WTP-01		DD-WTP-02		Both WTP Outlets		TPL - ENV
	pH	Total Al	pH	Total Al	pH 24-hour Mean	Al 24-hour Mean	pH
	units	mg/L	units	mg/L	units	mg/L	units
2011-04-23	6.74	0.481			6.74	0.481	6.11
2011-04-24	6.73				6.73		
2011-04-25	6.75				6.75		
2011-04-26	6.76				6.76		
2011-04-27	6.87				6.87		
2011-04-28	6.75				6.75		
2011-04-29	6.76				6.76		
2011-05-01	6.82	0.309			6.82	0.309	6.78
2011-05-02	6.85				6.85		
2011-05-03	6.84				6.84		
2011-05-04	6.84				6.84		
2011-05-05	6.87				6.87		
2011-05-06	7.11				7.11		
2011-05-08	6.91				6.91		
2011-05-09	6.92	0.516			6.92	0.516	6.93
2011-05-10	7.09				7.09		
2011-05-11	7.02				7.02		
2011-05-12	6.98				6.98		
2011-05-13	6.99				6.99		
2011-05-14	6.68				6.68		
2011-05-15	6.92				6.92		
2011-05-16	6.82	0.725			6.82	0.624	6.43
2011-05-17	6.92				6.89		
2011-05-18	6.89				6.75		
2011-05-19					6.78		
2011-05-20	6.94				6.94		
2011-05-21	6.68				6.80		
2011-05-23	6.82				6.68		
2011-05-24	6.74	6.70	1.460	6.75	0.998		
2011-05-25	6.81	6.90		6.72			
2011-05-26	6.79	6.82		6.86			
2011-05-27	6.69	6.74		6.81			
2011-05-28	6.68	6.65		6.72			
2011-05-29	6.70	6.67		6.67			
2011-05-29	6.70	6.84		6.77			
2011-05-30	6.55	0.470	6.88	0.836	6.72	0.653	
2011-05-31	6.98				6.79		6.89
2011-06-01	6.70	0.284	6.55	0.405	6.63	0.345	
2011-06-02	6.81				6.76		
2011-06-03	6.91				6.94		
2011-06-04	6.84				6.79		
2011-06-05	6.85				6.90		
2011-06-06	7.08				7.03		
2011-06-10	6.62				6.72		
2011-06-11	6.60				6.60		
2011-06-12	6.60				6.52		
2011-07-04	6.31	0.687	6.34	0.689	6.33	0.688	
2011-07-05	6.67				6.62		
2011-07-06	6.63				6.57		
2011-07-10	6.62				6.78		

Date	DD-WTP-01		DD-WTP-02		Both WTP Outlets		TPL - ENV
	pH	Total Al	pH	Total Al	pH 24-hour Mean	Al 24-hour Mean	pH
	units	mg/L	units	mg/L	units	mg/L	units
2011-07-11	6.62	0.694			6.62	0.694	
2011-07-12	6.71		6.72		6.72		
2011-07-13	6.71		6.78		6.75		
2011-07-14			6.71		6.71		
2011-07-15	6.76				6.76		
2011-07-16	6.90				6.90		
2011-07-17	6.71		6.67		6.69		
2011-07-18	6.79	0.805	6.53	1.120	6.66	0.963	
2011-07-20	6.51		6.77		6.64		6.29
2011-07-21	6.94		7.00		6.97		
2011-07-22			7.13		7.13		
2011-07-23			6.63		6.63		
2011-07-24			6.66		6.66		
2011-07-25			6.54	0.560	6.54	0.560	
2011-07-26			6.80		6.80		
2011-07-27			6.72		6.72		6.95
2011-07-30	6.61				6.61		
2011-07-31	6.94				6.94		
2011-08-01	6.76	0.924			6.76	0.924	
2011-08-02			6.67		6.67		6.72
2011-08-03							
2011-08-06	7.18		7.32		7.25		
2011-08-07	7.30		7.45		7.38		
2011-08-08	7.15	0.319	7.31	0.325	7.23	0.322	
2011-08-10			7.19		7.19		6.18
2011-08-15	7.30	0.434			7.30	0.434	
2011-08-19							6.45
2011-08-22			6.82	0.492	6.82	0.492	
2011-08-24			6.94		6.94		6.84
2011-08-27	6.97	1.970	6.91		6.94	1.970	
2011-08-29			6.83	1.650	6.83	1.650	
2011-08-30		1.420				1.420	
2011-08-31							6.43
2011-09-05	7.25	0.571			7.25	0.571	
2011-09-07							6.21
2011-09-12	7.10	0.368			7.10	0.368	
2011-09-15							6.80
2011-09-19	7.18	0.587	7.16	0.668	7.17	0.628	
2011-10-03	7.10	1.05			7.10	1.050	
2011-10-07							6.22
2011-10-11	7.29				7.29		
2011-10-12			6.83		6.83		6.25
2011-10-18	7.21				7.21		
2011-10-19			6.87		6.87		

Footnotes:

pH concentration is measured in field by environment department

samples for TPL-ENV are collected from depth with highest turbidity value determined during NTU depth profiling

2011-05-23 - work on ice stopped due to unsafe ice conditions

Table 7.4: 2011 Dewatering at the Bay Goose Impoundment Area
- Turbidity and Total Suspended Solids Monitoring

Date	BG-PUMP-1		BG-PUMP-2		Both Pumps			
	24-hour	Lab TSS	24-hour	Lab TSS	NTU 24-hour Mean	TSS 24-hour Mean	NTU 30-day Mean	TSS 30-day Mean
	NTU	mg/L	NTU	mg/L	NTU	mg/L	NTU	mg/L
2011-07-26	6.6	4	Not in operation		6.6	4		
2011-07-27	8.8	2	Not in operation		8.8	2		
2011-07-28	4.9	1	Not in operation		4.9	1		
2011-07-30	6.1	2	Not in operation		6.1	2		
2011-07-31	4.1	2	Not in operation		4.1	2		
2011-08-01	5.0	1	Not in operation		5.0	1		
2011-08-02	4.7	1	Not in operation		4.7	1		
2011-08-03	4.5	2	4.8	13	4.6	8		
2011-08-04	5.8	8	4.3	2	5.0	5		
2011-08-05	4.3	< 1	4.1	< 1	4.2	1		
2011-08-06	3.5	2	4.2	2	3.9	2		
2011-08-07	3.3	2	3.3	2	3.3	2		
2011-08-08	Not in operation		3.6	1	3.6	1		
2011-08-09	Not in operation		3.7	< 1	3.7	1		
2011-08-10	Not in operation		4.1	< 1	4.1	1		
2011-08-11	Not in operation		3.3	< 1	3.3	1		
2011-08-12	Not in operation		2.7	< 1	2.7	1		
2011-08-13	2.8	< 1	2.9	< 1	2.8	1		
2011-08-14	5.6	< 1	2.7	< 1	4.1	1		
2011-08-15	2.9	< 1	2.9	< 1	2.9	1		
2011-08-16	2.4	1	2.3	1	2.4	1		
2011-08-17	2.7	1	Not in operation		2.7	1		
2011-08-18	3.0	1	Not in operation		3.0	1		
2011-08-19	2.9	< 1	Not in operation		2.9	1		
2011-08-20	Not in operation		2.3	< 1	2.3	1		
2011-08-21	Not in operation		2.0	< 1	2.0	1		
2011-08-22	Not in operation		2.1	< 1	2.1	1		
2011-08-23	2.0	< 1	2.0	3	2.0	2		
2011-08-24	1.8	1	1.9	2	1.9	2		
2011-08-25	2.1	2	2.0	2	2.0	2	3.7	2
2011-08-26	1.9	1	1.9	1	1.9	1	3.6	2
2011-08-27	2.1	< 1	2.1	1	2.1	1	3.3	2
2011-08-28	1.3	1	1.4	1	1.3	1	3.2	2
2011-08-29	2.5	1	1.6	2	2.0	2	3.1	2
2011-08-30	1.8	< 1	1.8	1	1.8	1	3.0	2
2011-08-31	2.0	< 1	1.5	< 1	1.7	1	2.9	2
2011-09-01	2.3	< 1	1.9	1	2.1	1	2.8	2
2011-09-02	1.8	1	1.8	2	1.8	2	2.7	1
2011-09-03	1.7	2	1.9	2	1.8	2	2.6	1
2011-09-04	3.5	19	5.2	16	4.4	18	2.6	2
2011-09-05	2.0	1	2.0	2	2.0	2	2.6	2
2011-09-06	3.6	< 1	2.0	< 1	2.8	1	2.5	2
2011-09-07	1.8	2	2.2	2	2.0	2	2.5	2
2011-09-08	3.0	2	3.7	2	3.4	2	2.5	2
2011-09-09	3.0	< 1	3.1	1	3.1	1	2.4	2
2011-09-10	2.5	< 1	2.8	< 1	2.7	1	2.4	2

Date	BG-PUMP-1		BG-PUMP-2		Both Pumps			
	24-hour	Lab TSS	24-hour	Lab TSS	NTU 24-hour Mean	TSS 24-hour Mean	NTU 30-day Mean	TSS 30-day Mean
	NTU	mg/L	NTU	mg/L	NTU	mg/L	NTU	mg/L
2011-09-11	2.8	< 1	3.8	15	3.3	8	2.4	2
2011-09-12	2.6	< 1	2.0	1	2.3	1	2.4	2
2011-09-13	2.5	2	2.9	2	2.7	2	2.4	2
2011-09-14	2.4	1	2.7	1	2.6	1	2.4	2
2011-09-15	3.0	< 1	2.9	1	2.9	1	2.4	2
2011-09-16	2.2	4	2.3	3	2.3	4	2.4	2
2011-09-17	2.0	4	2.8	4	2.4	4	2.3	2
2011-09-18	2.1	3	2.2	3	2.2	3	2.3	2
2011-09-19	2.0	4	2.0	3	2.0	4	2.3	2
2011-09-20	1.7	3	2.0	4	1.9	4	2.3	2
2011-09-21	1.6	1	1.6	< 1	1.6	1	2.3	2
2011-09-22	2.8	2	Not in operation		2.8	2	2.3	2
2011-09-23	Not in operation		3.4	2	3.4	2	2.4	2
2011-09-24	3.3	3	2.6	4	3.0	4	2.4	3
2011-09-25	3.8	2	Not in operation		3.8	2	2.5	3
2011-09-26	4.0	2	3.4	1	3.7	2	2.5	3
2011-09-27	3.6	3	4.4	2	4.0	3	2.6	3
2011-09-28	5.4	6	5.5	6	5.4	6	2.7	3
2011-09-29	5.4	3	4.8	5	5.1	4	2.8	3
2011-09-30	5.2	5	5.7	3	5.5	4	3.0	3
2011-10-01	5.4	< 1	5.5	4	5.5	3	3.1	3
2011-10-02	8.2	8	9.4	7	8.8	8	3.3	3
2011-10-03	7.1	2	8.5	5	7.8	4	3.5	3
2011-10-04	9.0	3	9.5	2	9.3	3	3.7	3
2011-10-05	13.7	30	12.3	12	13.0	21	4.0	3
2011-10-06	9.4	8	9.2	8	9.3	8	4.2	4
2011-10-07	9.7	5	9.9	7	9.8	6	4.5	4
2011-10-08	8.7	6	8.2	8	8.5	7	4.7	4
2011-10-09	7.1	5	8.7	5	7.9	5	4.8	4
2011-10-10	8.6	4	7.4	5	8.0	5	5.0	4
2011-10-11	10.0	10	8.1	11	9.0	11	5.2	4
2011-10-12	7.2	5	7.3	4	7.2	5	5.4	4
2011-10-13	8.7	4	8.2	3	8.4	4	5.6	4
2011-10-14	6.6	3	7.6	6	7.1	5	5.7	5
2011-10-15	6.1	3	6.8	3	6.4	3	5.8	5
2011-10-16	5.4	3	4.9	3	5.2	3	5.9	5
2011-10-17	4.8	3	5.4	2	5.1	3	6.0	5
2011-10-18	4.9	4	4.4	5	4.6	5	6.1	5
2011-10-19	4.2	1	3.9	< 1	4.1	1	6.2	5
2011-10-20	3.9	1	4.0	1	3.9	1	6.2	4
2011-10-21	4.6	< 1	4.9	< 1	4.7	1	6.3	4
2011-10-22			4.6	1	4.6	1	6.4	4
2011-10-23			3.9	< 1	3.9	1	6.4	4

Date	BG-WTP-1		BG-WTP-2		Both WTP Outlets			
	24-hour	Lab	24-hour	Lab	NTU 24-	TSS 24-	NTU 30-day	TSS 30-day
	NTU	TSS mg/L	NTU	TSS mg/L	hour Mean NTU	hour Mean mg/L	Mean NTU	Mean mg/L
2011-10-22	Not in operation							
2011-10-23	0.3	4			0.3	4	6.3	4
2011-10-24	0.1	1	1.8	2	0.9	2	6.2	4
2011-10-25	0.8	7	0.5	4	0.6	6	6.1	5
2011-10-26	0.2	5	0.1	5	0.2	5	6.0	5
2011-10-27	0.1	2	0.2	2	0.1	2	5.8	4
2011-10-28	0.9	< 1	2.0	< 1	1.4	1	5.7	4
2011-10-29	0.6	3	0.5	2	0.6	3	5.5	4
2011-10-30	1.9	2	0.6	2	1.3	2	5.4	4
2011-10-31	0.8	1	1.2	5	1.0	3	5.1	4
2011-11-01	0.1	2	0.9	2	0.5	2	4.9	4
2011-11-02	0.2	4	0.4	3	0.3	4	4.6	4
2011-11-03	0.4	2	0.9	4	0.6	3	4.2	4
2011-11-04	0.7	4	0.3	4	0.5	4	3.9	3
2011-11-05	0.7	2	0.4	6	0.6	4	3.6	3
2011-11-06	0.2	2	0.1	2	0.1	2	3.3	3
2011-11-07	0.0	2	0.2	2	0.1	2	3.0	3
2011-11-08	2.0	1	2.2	2	2.1	2	2.8	3
2011-11-09	0.1	6	0.1	2	0.1	4	2.6	3
2011-11-10	0.0	2	0.2	3	0.1	3	2.3	3
2011-11-11	0.0	5	0.5	5	0.2	5	2.0	3
2011-11-12	1.4	1	0.2	< 1	0.8	1	1.8	3
2011-11-13	2.0	3	0.7	4	1.4	4	1.7	3
2011-11-14	10.5	6	1.0	5	5.7	6	1.7	3
	Dewatering Suspended							

Footnotes:

turbidity values are measured in field by environment department

**Table 7.5: 2011 Dewatering at the Bay Goose Impoundment Area
- pH and Aluminum Monitoring**

Date	BG-Pump-1 / BG-WTP-1		BG-Pump-2 / BG-WTP-2		Both Pumps / WTP Outlets	
	pH	Total Al	pH	Total Al	pH 24-hour Mean	Al 24-hour Mean
	units	mg/L	units	mg/L	units	mg/L
2011-07-26	6.94		Not in operation		6.94	
2011-07-27	6.95		Not in operation		6.95	
2011-07-28	6.72	0.256	Not in operation		6.72	0.256
2011-07-30	6.81		Not in operation		6.81	
2011-07-31	7.31		Not in operation		7.31	
2011-08-01	7.16		Not in operation		7.16	
2011-08-02	6.84		Not in operation		6.84	
2011-08-03	7.05		6.72		6.89	
2011-08-04	6.97		7.10		7.04	
2011-08-05	6.80		7.14		6.97	
2011-08-06	7.00		7.12		7.06	
2011-08-07	6.99		7.01		7.00	
2011-08-08	Not in operation		6.88		6.88	
2011-08-09	Not in operation		7.03		7.03	
2011-08-10	Not in operation		6.91		6.91	
2011-08-11	Not in operation		6.97	0.052	6.97	0.052
2011-08-15	6.71	0.013	6.79	0.022	6.75	0.018
2011-08-22	Not in operation		6.88	0.086	6.88	0.086
2011-08-27	7.07	0.088	7.03		7.05	
2011-08-29	6.94	0.092	7.03	0.110	6.99	
2011-09-05	7.03	0.077	6.94	0.016	6.99	0.047
2011-09-12	7.30	0.049	7.26	0.066	7.28	0.058
2011-09-19	7.00	0.027	6.98	0.027	6.99	0.027
2011-09-26	6.64	0.041	6.55	0.042	6.60	0.042
2011-10-03	7.21	0.134	7.19	0.131	7.20	0.133
2011-10-10	6.73	0.145	6.81	0.152	6.77	0.149
2011-10-17	6.94	0.094	7.59	0.092	7.27	0.093
Pipe Transfers to Water Treatment Plant						
2011-10-24	6.53	0.860	6.76	0.198	6.65	0.529
2011-10-31	6.62	0.096	6.64	0.357	6.63	0.227
2011-11-07	7.00	0.585	7.00	0.308	7.00	0.447
2011-11-14	6.96		6.65		6.81	

Footnotes:

pH concentration is measured in field by environment department

Table 7.6: 2011 Water Transfers around the Mine Site

Water Pumped FROM Various Mine Site Locations					
	North Pit (ST-17)	South Pit (ST-19)	East Dike Seepage (EDS)	Waste Rock Seepage (SW-RSF)	Stormwater Management Pond #1
January	0	27 357	0	0	
February	0	27 357	0	0	
March	0	27 357	0	0	
April	0	27 357	0	0	
May	0	27 357	0	0	
June	0	36 000	20 000	0	120 000
July	0	30 000	18 000	37 874	
August	6 500	27 500	9 000		
September	0	23 000	12 000	0	
October	0	10 000	5 000	8100	
November	0	25 000	0	0	
December	0	40 000	0	0	

Water Pumped TO Various Mine Site Locations				
North Pit	South Pit	East Dike Seepage	Waste Rock Seepage	Stormwater Management Pond #1
	from January to August pumped to Stormwater Management Pond #1;			
pumped to Attenuation Pond	from September to December pumped to Attenuation Pond	pumped to South Pit basin	pumped to Tailings Pond	pumped to Tailings Pond

Table 7.7: 2011 Attenuation Pond Water Quality Monitoring (ST-18)

Date	Units	20-Nov-11	5-Dec-11	12-Dec-11
*pH		6.97	7.64	6.96
*Turbidity	NTU	4.3	87	4.6
Alkalinity	mg CaCO ₃ /L	116	126	132
Ammonia	mg N/L	0.06	0.12	0.17
Arsenic	mg/L	0.0042	0.0077	0.0050
Chloride	mg/L	30.3	34.2	37.4
Copper	mg/L	0.0034	0.0073	0.0032
Dissolved Aluminum	mg/L	< 0.01	0.01	< 0.01
Dissolved Arsenic	mg/L	< 0.005	< 0.005	< 0.005
Dissolved Barium	mg/L	0.115	0.140	0.124
Dissolved Cadmium	mg/L	< 0.005	< 0.005	< 0.005
Dissolved Copper	mg/L	< 0.005	0.005	< 0.005
Dissolved Iron	mg/L	< 0.05	< 0.05	< 0.05
Dissolved Lead	mg/L	< 0.005	< 0.005	< 0.005
Dissolved Manganese	mg/L	2.06	1.79	2.54
Dissolved Mercury	mg/L	< 0.0005	< 0.0005	< 0.0005
Dissolved Molybdenum	mg/L	< 0.005	0.030	0.022
Dissolved Nickel	mg/L	0.013	0.014	0.014
Dissolved Selenium	mg/L	< 0.005	< 0.005	< 0.005
Dissolved Silver	mg/L	< 0.005	< 0.005	< 0.005
Dissolved Thallium	mg/L	< 0.01	< 0.01	< 0.01
Dissolved Zinc	mg/L	0.017	0.015	0.016
Fluoride	mg/L	0.61	0.78	0.74
Hardness	mg CaCO ₃ /L	273	281	264
Lead	mg/L	0.0028	0.0020	< 0.0003
Nickel	mg/L	0.0140	0.0142	0.0183
Nitrate	mgN/L	4.7	7.6	6.0
Nitrite	mgN/L	0.11	0.18	0.19
Sulphate	mg/L	240	198	278
Total dissolved solids (TDS)	mg/L	530	553	623
Zinc	mg/L	0.059	0.015	< 0.001

Footnotes:

* Parameter measured in the field by environment department

Table 7.8: 2011 North Portage Pit Sump Water Quality Monitoring (ST-17)

Date	Units		11-Aug-11	6-Sep-11	4-Oct-11
*pH			7.51	7.57	7.51
*Turbidity	NTU		1.35	1.71	2.62
Alkalinity	mg CaCO ₃ /L		87	110	92
Ammonia	mg N/L		1.0	0.72	0.64
Arsenic	mg/L		0.0112	0.0008	0.0016
Chloride	mg/L		73.4	54	42.2
Copper	mg/L		0.0815	0.0026	0.0037
Dissolved Aluminum	mg/L	<	0.01	< 0.01	0.01
Dissolved Arsenic	mg/L	<	0.005	< 0.005	< 0.005
Dissolved Barium	mg/L		0.097	< 0.097	0.082
Dissolved Cadmium	mg/L	<	0.005	< 0.005	< 0.005
Dissolved Copper	mg/L		0.013	0.005	< 0.005
Dissolved Iron	mg/L	<	0.05	< 0.05	< 0.05
Dissolved Lead	mg/L	<	0.005	< 0.005	0.007
Dissolved Manganese	mg/L		0.007	0.077	0.11
Dissolved Mercury	mg/L	<	0.0005	< 0.0005	< 0.0005
Dissolved Molybdenum	mg/L		0.072	0.196	0.223
Dissolved Nickel	mg/L		0.019	0.007	0.024
Dissolved Selenium	mg/L		0.005	0.009	0.011
Dissolved Silver	mg/L	<	0.005	< 0.005	< 0.005
Dissolved Thallium	mg/L	<	0.01	< 0.01	< 0.01
Dissolved Zinc	mg/L		0.009	0.006	0.015
Fluoride	mg/L		0.34	0.42	0.35
Hardness	mg CaCO ₃ /L		246	102	325
Lead	mg/L	<	0.0003	0.0021	< 0.0003
Nickel	mg/L	<	0.0005	0.0078	0.0309
Nitrate	mgN/L		45.1	76.9	45.4
Nitrite	mgN/L		1.2	1.5	0.33
Sulphate	mg/L		90	179	190
Total dissolved solids (TDS)	mg/L		763	907	731
Zinc	mg/L	<	0.001	0.011	0.013

Footnotes:

*Parameter measured in the field by environment department

Table 7.9: 2011 South Portage Pit Sump Water Quality Monitoring (ST-19)

Date		17-Feb-11	2-Mar-11	6-Apr-11	4-May-11
Lab Identification	Units	SW5a & SW5b	SW5a	SW5A	SW5a-ST-19
*pH		-	7.64	7.77	7.19
*Turbidity	NTU	-	80.1	410	10.9
Alkalinity	mg CaCO ₃ /L	137	447	130	123
Ammonia	mg N/L	0.51			
Ammonia Nitrogen	mg N/L	3.5	250	22	11.4
Arsenic	mg/L	0.0147	0.0085	0.0140	0.0107
Chloride	mg/L	11.8			
Copper	mg/L	0.0017	0.0654	0.0280	0.0138
Dissolved Aluminum	mg/L	0.06			
Dissolved Arsenic	mg/L	0.011			
Dissolved Barium	mg/L	0.005			
Dissolved Cadmium	mg/L	< 0.005			
Dissolved Copper	mg/L	< 0.005			
Dissolved Iron	mg/L	< 0.05			
Dissolved Lead	mg/L	< 0.005			
Dissolved Manganese	mg/L	0.012			
Dissolved Mercury	mg/L	< 0.0005			
Dissolved Molybdenum	mg/L	0.036			
Dissolved Nickel	mg/L	< 0.005			
Dissolved Selenium	mg/L	< 0.005			
Dissolved Silver	mg/L	< 0.005			
Dissolved Thallium	mg/L	< 0.01			
Dissolved Zinc	mg/L	< 0.005			
Fluoride	mg/L	1.4			
Hardness	mg CaCO ₃ /L	106			
Lead	mg/L	< 0.0003	< 0.0003	0.0042	0.0072
Nickel	mg/L	0.0067	0.0919	0.1300	0.0109
Nitrate	mgN/L	5.6			
Nitrite	mgN/L	0.14			
Sulphate	mg/L	26			
Total dissolved solids	mg/L	274		230	272
Zinc	mg/L	0.006	0.014	0.022	0.004

Footnotes:

*Parameter measured in the field
by environment department

Date		1-Jun-11	5-Jul-11	2-Aug-11	6-Sep-11
Lab Identification	Units	ST-19	ST-19	ST-19	ST-19
*pH		8.05	7.59	7.69	6.87
*Turbidity	NTU	544	4.99	35.4	4.94
Alkalinity	mg CaCO3/L	132	121	109	93
Ammonia	mg N/L		1.2	0.45	0.07
Ammonia Nitrogen	mg N/L	17.1			
Arsenic	mg/L	0.0053	< 0.0005	0.0044	0.0010
Chloride	mg/L	11.5	12.5	14.5	7.4
Copper	mg/L	0.0261	0.0099	< 0.0005	0.0021
Dissolved Aluminum	mg/L	0.01	< 0.01	< 0.01	< 0.01
Dissolved Arsenic	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Barium	mg/L	0.022	0.042	0.015	0.014
Dissolved Cadmium	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Copper	mg/L	0.011	0.005	< 0.005	< 0.005
Dissolved Iron	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Lead	mg/L	< 0.005	< 0.005	0.005	< 0.005
Dissolved Manganese	mg/L	0.025	0.023	0.051	0.075
Dissolved Mercury	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dissolved Molybdenum	mg/L	0.028	0.040	0.029	0.016
Dissolved Nickel	mg/L	0.021	0.005	0.031	0.008
Dissolved Selenium	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Silver	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Thallium	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc	mg/L	< 0.005	< 0.005	0.010	< 0.005
Fluoride	mg/L	0.97	0.94	0.99	0.51
Hardness	mg CaCO3/L	289	157	187	101
Lead	mg/L	< 0.0003	< 0.0003	0.0103	0.0008
Nickel	mg/L	0.0597	0.0049	0.0365	0.0085
Nitrate	mgN/L	22.0	23.6	27.118	11.1
Nitrite	mgN/L	0.57	0.54	0.482	0.28
Sulphate	mg/L	30	31	114	28
Total dissolved solids	mg/L		21	492	244
Zinc	mg/L	0.035	0.007	< 0.001	0.002

Footnotes:

*Parameter measured in the field
by environment department

Date		4-Oct-11	1-Nov-11	8-Dec-11
Lab Identification	Units	ST-19	ST-19	ST-19
*pH		7.21	7.49	7.64
*Turbidity	NTU	159.7	12.44	87
Alkalinity	mg CaCO3/L	54	97	111
Ammonia	mg N/L	0.11	0.23	0.34
Ammonia Nitrogen	mg N/L			
Arsenic	mg/L	0.0072	0.0062	0.0251
Chloride	mg/L	4.3	10.0	7.9
Copper	mg/L	0.0152	0.0264	0.0260
Dissolved Aluminum	mg/L	< 0.01	< 0.01	0.03
Dissolved Arsenic	mg/L	< 0.005	< 0.005	0.008
Dissolved Barium	mg/L	0.016	0.030	0.017
Dissolved Cadmium	mg/L	< 0.005	< 0.005	< 0.005
Dissolved Copper	mg/L	< 0.005	0.011	0.014
Dissolved Iron	mg/L	< 0.05	< 0.05	0.06
Dissolved Lead	mg/L	< 0.005	< 0.005	< 0.005
Dissolved Manganese	mg/L	0.072	0.040	0.083
Dissolved Mercury	mg/L	< 0.0005	< 0.0005	< 0.0005
Dissolved Molybdenum	mg/L	< 0.005	0.023	0.021
Dissolved Nickel	mg/L	< 0.005	< 0.005	0.007
Dissolved Selenium	mg/L	< 0.005	< 0.005	< 0.005
Dissolved Silver	mg/L	< 0.005	< 0.005	< 0.005
Dissolved Thallium	mg/L	< 0.01	< 0.01	< 0.01
Dissolved Zinc	mg/L	0.005	0.036	0.005
Fluoride	mg/L	0.61	0.91	0.86
Hardness	mg CaCO3/L	96	124	113
Lead	mg/L	0.0007	0.0076	< 0.0003
Nickel	mg/L	0.0184	0.0059	0.0180
Nitrate	mgN/L	6.0	13.2	10.1
Nitrite	mgN/L	0.16	0.27	0.34
Sulphate	mg/L	34	24	16
Total dissolved solids	mg/L	177	273	252
Zinc	mg/L	0.030	0.043	0.019

Footnotes:

*Parameter measured in the field
by environment department

Table 7.10: 2011 Saddle Dam #1 Water Quality Monitoring (SD1S)

Date		29-Sep-11
Lab Identification	Units	SW-SD-1
*pH		6.92
*Turbidity	NTU	24.9
Alkalinity	mg CaCO ₃ /L	78
Aluminum	mg/L	0.573
Ammonia	mgN/L	0.08
Arsenic	mg/L	0.0753
Barium	mg/L	0.0488
Cadmium	mg/L	< 0.00002
Chloride	mg/L	13.7
Chromium	mg/L	0.0017
Copper	mg/L	0.0043
Fluoride	mg/L	0.31
Hardness	mg CaCO ₃ /L	290
Iron	mg/L	0.64
Lead	mg/L	< 0.0003
Manganese	mg/L	0.1946
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0257
Nickel	mg/L	0.0278
Nitrate	mg/L	31.4
Selenium	mg/L	0.003
Silver	mg/L	< 0.0002
Sulfate	mg/L	97
Thallium	mg/L	< 0.005
Zinc	mg/L	0.010

Footnotes:

* Parameters measured in field by environment department

Table 7.11: 2011 Tailings Reclaim Pond Water Quality Monitoring (ST-21)**Monthly Monitoring**

Date	Units	18-Apr-11	25-May-11	6-Jun-11	5-Jul-11
*pH		8.48	10.19	7.81	7.84
*Turbidity	NTU	5.7	6.8	12.35	27.2
Alkalinity	mg CaCO ₃ /L	90	108	72	81
Ammonia	mg N/L				1.9
Ammonia nitrogene (NH ₃)	mg N/L	70.9	49.3	54.6	
Chloride	mg/L	548	331	379	335
Cyanide	mg/L	8.37	6.97	5.7	2.61
Dissolved Aluminum	mg/L	0.06	0.08	< 0.01	0.02
Dissolved Arsenic	mg/L	0.091	0.033	0.040	0.036
Dissolved Barium	mg/L	0.055	0.020	0.043	0.040
Dissolved Cadmium	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Copper	mg/L	2.938	3.44	0.794	2.84
Dissolved Iron	mg/L	0.43	< 0.05	0.23	< 0.05
Dissolved Lead	mg/L	< 0.005	0.006	< 0.005	< 0.005
Dissolved Manganese	mg/L	0.013	< 0.005	0.045	0.130
Dissolved Mercury	mg/L	< 0.0005	< 0.0005	< 0.0005	0.0006
Dissolved Molybdenum	mg/L	0.055	0.174	0.176	0.158
Dissolved Nickel	mg/L	0.087	0.457	0.335	0.330
Dissolved Selenium	mg/L	0.009	< 0.005	0.006	0.006
Dissolved Silver	mg/L	0.008	< 0.005	0.005	0.005
Dissolved Thallium	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc	mg/L	< 0.005	0.013	< 0.005	< 0.005
Fluoride	mg/L	0.11	0.11	< 0.1	< 0.1
Hardness	mg CaCO ₃ /L	1110	714	774	757
Nitrate	mgN/L	7.2	6.0	6.1	3.5
Nitrite	mgN/L	0.13	0.10	0.10	0.08
Sulphate	mg/L	2170	1400	1557	1157
Total dissolved solids (TDS)	mg/L	3580	1696	2350	2002

Monthly Monitoring Continued

Date	Units	2-Aug-11	6-Sep-11	4-Oct-11	19-Dec-11
*pH		8.09	7.87	7.93	8.21
*Turbidity	NTU	4.4	6.58	7.75	3.35
Alkalinity	mg CaCO ₃ /L	147	139	121	132
Ammonia	mg N/L	1.2	1.3	1.1	1.6
Ammonia nitrogene (NH ₃)	mg N/L				
Chloride	mg/L	230	273	277	524
Cyanide	mg/L	0.014	0.388	1.11	1.56
Dissolved Aluminum	mg/L	0.01	< 0.01	0.03	0.01
Dissolved Arsenic	mg/L	0.050	0.046	0.036	0.007
Dissolved Barium	mg/L	0.038	< 0.037	0.038	0.046
Dissolved Cadmium	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Copper	mg/L	0.361	0.823	0.820	5.98
Dissolved Iron	mg/L	0.31	< 0.05	< 0.05	< 0.05
Dissolved Lead	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Manganese	mg/L	0.113	0.106	0.097	0.027
Dissolved Mercury	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dissolved Molybdenum	mg/L	0.180	0.210	0.198	0.286
Dissolved Nickel	mg/L	0.093	0.050	0.047	0.138
Dissolved Selenium	mg/L	< 0.005	< 0.005	0.005	< 0.005
Dissolved Silver	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Thallium	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc	mg/L	0.010	< 0.005	0.010	< 0.005
Fluoride	mg/L	0.32	0.05	0.07	< 0.02
Hardness	mg CaCO ₃ /L	808	858	748	818
Nitrate	mgN/L	4.3	5.1	4.8	7.0
Nitrite	mgN/L	0.33	0.26	0.21	0.20
Sulfate	mg/L	1532	1737	1458	1659
Total dissolved solids (TDS)	mg/L	2106	2250	2322	2465

Annual Monitoring

Date	Units	18-Apr-11	25-May-11	6-Jun-11	5-Jul-11
Aluminum	mg/L	0.122	0.184	0.555	
Antimony	mg/L			0.0014	
Arsenic	mg/L	0.0909	0.0586	0.0565	0.0508
Barium	mg/L	0.0574	0.0221	0.0466	
Beryllium	mg/L			< 0.0005	
Cadmium	mg/L	0.00074	0.00022	0.00033	
Chromium	mg/L			0.0043	
Cobalt	mg/L			0.1622	
Copper	mg/L	2.938	3.447	2.484	3.459
Iron	mg/L	1.2	0.45	0.62	1.0
Lead	mg/L	< 0.0003	0.0097	< 0.0003	0.0102
Lithium	mg/L			< 0.005	
Manganese	mg/L	0.0181	0.0240	0.0530	
Molybdenum	mg/L	0.2483	0.1687	0.1791	
Nickel	mg/L	0.2047	0.4597	0.3598	0.4109
Selenium	mg/L	0.010	< 0.001	0.008	
Strontium	mg/L			0.435	
Thallium	mg/L	< 0.005	< 0.005	< 0.005	
Tin	mg/L			< 0.001	
Titanium	mg/L			0.22	
Uranium	mg/L			0.070	
Vanadium	mg/L			< 0.0005	
Zinc	mg/L	0.001	0.009	0.003	0.008

Footnotes:

* Parameter measured in the field by environment department

Table 7.12: 2011 Waste Rock Storage Facility Seepage Water Quality Monitoring (SW-RSF)

Date			19-Jun-11		1-Aug-11		6-Sep-11		4-Oct-11		1-Nov-11
Lab Identification	Units		WR-SW-1		RSF-1		SW-RSF-1		SW-RSF-1		SW-RSF-1
*pH			5.98		6.58		6.32		6.97		6.60
*Turbidity	NTU		58.2		7.7		7.4		5.2		7.2
Alkalinity	mg CaCO ₃ /L		16		31		46		35		44
Aluminum	mg/L				0.391		0.184		0.119		0.095
Ammonia	mgN/L	<	0.05	<	0.05	<	0.05	<	0.05	<	0.05
Arsenic	mg/L			<	0.0005		0.0028		0.0016		0.0007
Barium	mg/L			<	0.0101		0.0106		0.0134		0.0158
Cadmium	mg/L				0.00036	<	0.00002	<	0.00002	<	0.0002
Chloride	mg/L	<	0.5		1.3		1.8		2.9		2.6
Chromium	mg/L				0.0027	<	0.0006	<	0.0006		0.0026
Copper	mg/L				0.0015		0.0018		0.0012		0.0017
Fluoride	mg/L	<	0.1	<	0.1		0.13		0.14		0.16
Hardness	mg CaCO ₃ /L				42		55		67		82
Iron	mg/L				0.94		1.4		2.2		1.5
Lead	mg/L			<	0.0003	<	0.0003	<	0.0003		0.0019
Manganese	mg/L				0.3177		0.5629		0.6666		1.320
Mercury	mg/L			<	0.00001	<	0.00001	<	0.00001	<	0.00001
Molybdenum	mg/L			<	0.0005	<	0.0005	<	0.0005	<	0.0005
Nickel	mg/L				0.0186		0.0304		0.0559		0.0619
Nitrate	mg/L		0.18		0.07	<	0.01		0.32		0.27
Selenium	mg/L			<	0.001	<	0.001	<	0.01	<	0.001
Silver	mg/L			<	0.0002	<	0.0002	<	0.0002	<	0.0002
Sulphate	mg/L	<	1		10		24		49		37
Thallium	mg/L					<	0.005	<	0.0050	<	0.005
Zinc	mg/L				0.012		0.001	<	0.001	<	0.001

Footnotes:

* Parameters measured in the field by environment department

Table 7.13: 2011 Sewage Treatment Plant Water Quality Monitoring**Sample Location: STP-Out**

Date	Units	3-Jan-11	10-Jan-11	17-Jan-11	24-Jan-11	31-Jan-11	7-Feb-11	14-Feb-11	21-Feb-11	28-Feb-11
Ammonia	mg N/L									
Ammonia-Ammonium	mg N/L		18.7	26.6	32.2	36.8		30.1	33	16.2
BOD-5	mg/L		77	2	3	2		2	1	2
COD	mg/L		303	62	51	26		17	27	50
Total Suspended Solids	mg/L		108	8	5	6		6	12	21
Nitrate-Nitrite	mg N/L		NA	41.4	44.9	46.0		51.5	43.3	30.5
Nitrite	mg N/L									
Nitrate	mg N/L									
pH *	units		6.23	3.54	3.69	3.60		3.30	3.50	4.10
Total Phosphorus	mg/L		8.0	13.7	16.1	13.6		12.9	13	12.3
Fecal Coliform	UFC/100 mL		300,000	0	<2	<2		<2	<2	2
Total Coliform	UFC/100 mL		20,000,000	4	<4	2		10	38	32

Sample Location: STP-Out

Date	Units	7-Mar-11	15-Mar-11	22-Mar-11	29-Mar-11	4-Apr-11	11-Apr-11	18-Apr-11	26-Apr-11
Ammonia	mg N/L								
Ammonia-Ammonium	mg N/L	24.5	10.1	6.8	8.8	17.9	15.1	25.4	15.3
BOD-5	mg/L	1	2	2	1	2	3	3	5
COD	mg/L	17	29	22	50	34	51	81	33
Total Suspended Solids	mg/L	10	33	7	6	5	2	12	6
Nitrate-Nitrite	mg N/L	46.3	37.7	32.1	30.6	33.2	36.0	36.6	33.2
Nitrite	mg N/L								
Nitrate	mg N/L								
pH *	units	3.60	3.50	3.70	3.80	4.10	4.40	6.30	4.40
Total Phosphorus	mg/L	12.9	12.4	12.6	8.0	10.8	14.2	13.3	12.5
Fecal Coliform	UFC/100 mL	2	<2	<2	<2	10	<2	134	16
Total Coliform	UFC/100 mL	12	8	4	6	20	4	400	100

Sample Location: STP-Out

Date	Units	2-May-11	9-May-11	16-May-11	23-May-11	30-May-11	6-Jun-11	13-Jun-11	20-Jun-11	27-Jun-11
Ammonia	mg N/L								<0.05	
Ammonia-Ammonium	mg N/L	7.6	5.6	6.5	11.2	9.7	17.0	16.4		18.6
BOD-5	mg/L	1	2	2	2	3	4	3	6	9
COD	mg/L	59	36	22	32	16	30	41	74	66
Total Suspended Solids	mg/L	6	25	8	9	4	7	9	10	25
Nitrate-Nitrite	mg N/L	27.9	27.5	37.9	31.7	33.8	36.4	41.2	37.0	38.7
Nitrite	mg N/L									
Nitrate	mg N/L									
pH *	units	3.80	4.00	4.20	4.60	3.80	4.00	4.60	5.00	5.00
Total Phosphorus	mg/L	11.3	12.3	11.3	13.2	13.6	11.6	11.8	11.9	12.3
Fecal Coliform	UFC/100 mL	<2	4	8	2	<2	4	18	90	44
Total Coliform	UFC/100 mL	32	<10	104	80	48	10	130	<1,000	>20,000

Sample Location: STP-Out

Date	Units	4-Jul-11	12-Jul-11	18-Jul-11	25-Jul-11	1-Aug-11	8-Aug-11	15-Aug-11	22-Aug-11	29-Aug-11
Ammonia	mg N/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05			
Ammonia-Ammonium	mg N/L							17.9	21.4	35.2
BOD-5	mg/L	4	4	4	1	11	7	7	28	9
COD	mg/L	54	59	41	45	54	52	95	76	110
Total Suspended Solids	mg/L	16	8	11	6	16	11	15	19	11
Nitrate-Nitrite	mg N/L									
Nitrite	mg N/L	<0.01	<0.01	0.01	<0.01	0.09	0.16	0.01	0.16	0.20
Nitrate	mg N/L	39.4	40.9	43.0	38.9	33.3	34.3	40.7	37.8	39.8
pH *	units	3.60	3.80	4.10	3.60	3.7	5.5	4.3	3.8	3.7
Total Phosphorus	mg/L	11.8	11.8	13.8	12.8	14.6	14.3	13.9	13.1	13.9
Fecal Coliform	UFC/100 mL	<4	2	<2	4	88	4	10	1,000	92
Total Coliform	UFC/100 mL	600	10	20	4	400	<100	100	9,000	1,000

Sample Location: Sepro

Date	Units	3-Oct-11	10-Oct-11	18-Oct-11	24-Oct-11	31-Oct-11	7-Nov-11	14-Nov-11	21-Nov-11	28-Nov-11
Ammonia-Ammonium	mg N/L		13.6	11.4	4.1	11.3	10.2	10.3	4.4	
BOD-5	mg/L		4	6	5	8	6	5	2	
COD	mg/L		44	50	53	63	52	44	66	
Total Suspended Solids	mg/L		17	19	12	25	15	8	18	
Total Kjeldahl Nitrogen	mg N/L		17	13	7	39	13	14	7	
Nitrite	mg N/L		0.01	<0.01	<0.01	0.05	0.01	0.01	0.01	
Nitrate	mg N/L		37	32.3	27.7	33.4	31.1	32.6	29.4	
pH *	units	3.9	4.1	3.9		5	4.6	3.9	5.5	
Total Phosphorus	mg/L		12.7	12.5	11.4	13	12.2	13.7	13.7	
Fecal Coliform	UFC/100 mL		6	8	20	200	24	24	32	
Total Coliform	UFC/100 mL		60	52	140	1000	300	200	80	

Sample Location: Sepro

Date	Units	5-Dec-11	12-Dec-11	19-Dec-11	27-Dec-11
Ammonia-Ammonium	mg N/L	5.9	11.9	8.4	
BOD-5	mg/L	6	4	6	
COD	mg/L	57	55	73	
Total Suspended Solids	mg/L	9	10	17	
Total Kjeldahl Nitrogen	mg N/L	9	14	11	
Nitrite	mg N/L	0.02	0.02	0.25	
Nitrate	mg N/L	30.2	33.6	30.6	
pH *	units	5.2	5	5.7	5.2
Total Phosphorus	mg/L	13.8	13.4	13.3	
Fecal Coliform	UFC/100 mL	56	8	92	
Total Coliform	UFC/100 mL	500	<100	600	

Sample Location: LJ-Mix

Date	Units	3-Oct-11	10-Oct-11	18-Oct-11	24-Oct-11	31-Oct-11	7-Nov-11	14-Nov-11	21-Nov-11	28-Nov-11
Ammonia-Ammonium	mg N/L					39.8	16.4	16.7	42.3	
BOD-5	mg/L					25	11	19	6	
COD	mg/L					61	55	65	73	
Total Suspended Solids	mg/L					25	23	15	24	
Total Kjeldahl Nitrogen	mg N/L					100	22	21	43	
Nitrite	mg N/L					6.3	1.9	0.32	5.3	
Nitrate	mg N/L					15.6	33.2	34.8	13	
pH *	units	7.4	6.9	6.7	7.4	7.1	6.2	5.6	7.1	
Total Phosphorus	mg/L					12.4	12.7	14.1	13	
Fecal Coliform	UFC/100 mL		68	<100	<1000	190	68	24	148	
Total Coliform	UFC/100 mL		200	4800	<10,000	2000	200	30,000	500	

Sample Location: LJ-Mix

Date	Units	5-Dec-11	12-Dec-11	19-Dec-11	27-Dec-11
Ammonia-Ammonium	mg N/L	38.2	76.7	94.7	
BOD-5	mg/L	14	41	24	
COD	mg/L	57	71	100	
Total Suspended Solids	mg/L	16	69	20	
Total Kjeldahl Nitrogen	mg N/L	39	90	93	
Nitrite	mg N/L	1.1	0.12	1.6	
Nitrate	mg N/L	21.6	0.16	1.4	
pH *	units	6.6	7.2	8.2	6.2
Total Phosphorus	mg/L	13.3	12.4	12.4	
Fecal Coliform	UFC/100 mL	28	250000	600	
Total Coliform	UFC/100 mL	<100	400000	2000	

Footnotes:

* parameter measured in field by STP operators

3-Jan-11 - no sample was collected; only technician on site did not have hepatitis vaccine

7-Feb-11 - no sample collected due to bad weather

September STP-Out samples erroneously not collected

28-Nov-11 - no sample collected due to bad weather

27-Dec-11 - sample did not arrive at lab in time; bacterial lab closed for holidays

Table 7.14: 2011 Sewage Treatment Plant Waste Volume

Month	Liquid Sewage Volume (m ³)	Sewage Sludge Volume (m ³)		
	Readings from Equalization Tank at STP	STP	Sewage Truck	Total
January	2228	27.5	9.6	37.1
February	1859	12.0	12.1	24.1
March	1925	10.8	18.8	29.6
April	1874	11.0	21.1	32.1
May	2080	39.1	27.7	66.9
June	2851	14.0	47.3	61.3
July	2596	73.3	92.3	165.6
August	2601	0.0	31.0	31.0
September	3224	45.6	41.3	86.9
October	3524	20.4	43.1	63.5
November	3600	0.0	29.1	29.1
December	2852	55.1	53.1	108.2
Total	31,214	308.8	426.4	735.2

Table 7.15: 2011 Secondary Containment Water Quality at the Meadowbank Bulk Fuel Storage Facility (Mb-Fuel)

	Units	Maximum Allowable Concentration *		1-Jun-11	1-Sep-11
Arsenic	mg/L			0.0128	0.0009
Benzene	ug/L	370	<	0.3	< 0.3
Toluene	ug/L	2	<	0.3	< 0.3
Ethylbenzene	ug/L	90	<	0.3	< 0.3
Total Xylenes	ug/L			0.3	< 0.3
Copper	mg/L			0.0070	0.0041
Total Cyanide	mg/L		<	0.005	< 0.005
Total oil and grease	mg/L	15	<	1	< 1
Total Suspended Solids	mg/L			81	4
Nickel	mg/L			0.0185	0.0029
Ammonia	mg N/L			0.12	< 0.05
pH	units			7.71	7.55
Lead	mg/L	0.001	<	0.0003	0.1051
Zinc	mg/L			0.014	< 0.001

Footnotes:

* NWB Type A water license 2AM-MEA0815, Part F, Item 6

highlighted values exceed the maximum allowable concentration

Table 7.16: 2011 Secondary Containment Water Quality at the Baker Lake Bulk Fuel Storage Facility (BL-Fuel)

	Units	Maximum Allowable Concentration *	BL tank farm 1-4 (old)	BL tank farm 5-6 (new)	BL tank farm 1-4 (south)	BL tank farm 5-6 (north)
			1-Jun-11	1-Jun-11	18-Sep-11	18-Sep-11
Arsenic	mg/L	1	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Benzene	ug/L	370	< 0.3	< 0.3	< 0.3	< 0.3
Toluene	ug/L	2	< 0.3	< 0.3	< 0.3	< 0.3
Ethylbenzene	ug/L	90	< 0.3	< 0.3	< 0.3	< 0.3
Total Xylenes	ug/L		< 0.3	< 0.3	0.7	0.6
Copper	mg/L	0.6	0.0029	0.0077	0.0042	0.0127
Total Cyanide	mg/L	0.2	< 0.005	< 0.005	< 0.005	< 0.005
Total oil and grease	mg/L	5	< 1	< 1	< 1	< 1
Total Suspended Solids	mg/L	30	7	42	4	11
Nickel	mg/L	1	0.0009	0.0016	0.0014	0.0031
Ammonia	mg N/L	6	0.08	0.09	< 0.05	< 0.05
pH	units	6.0 - 9.5	7.69	7.61	8.11	8.00
Lead	mg/L	0.1 / 0.001 **	< 0.0003	< 0.0003	0.0027	0.0017
Zinc	mg/L	1	0.006	0.012	0.003	0.008

Footnotes:

* NWB Type A water license 2AM-MEA0815, Part F, Item 23

** two allowable concentrations are listed in the license

highlighted values exceed the maximum allowable concentration

Table 7.17: 2011 East Dike Seepage Water Quality Monitoring

Date		5-Jul-11	2-Aug-11	6-Sep-11	20-Sep-11	26-Sep-11	4-Oct-11	5-Oct-11
Lab Identification		EAST-DIKE- SEEPAGE	EAST-DIKE- SEEPAGE	EAST-DIKE- SEEPAGE	EAST-DIKE- SEEPAGE	EAST-DIKE- SEEPAGE	EAST-DIKE- SEEPAGE	east dike seepage south
Station Name	Units	EDS-N	EDS-N	EDS-N	EDS-N	EDS-N	EDS-N	EDS-S
*pH		6.66	8.29	6.50	6.91	6.93	7.14	6.59
*Turbidity	NTU	73.3	9.9	13.1	4.0	2.4	179.4	207.0
Alkalinity	mg CaCO3/L	43	28	41	49	24	37	27
Aluminum	mg/L	1.79	0.216	0.569	0.101	0.146	3.36	1.94
Ammonia	mg N/L	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05
Arsenic	mg/L	<0.0005	0.0153	<0.0005	0.0022	0.0043	0.0020	0.0285
Barium	mg/L	0.0297	0.0115	0.0098	0.0059	0.0061	0.0496	0.0204
Cadmium	mg/L	<0.00008	0.00510	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Chloride	mg/L	0.6	1.1	<0.5	0.7	0.8	1.9	0.9
Chromium	mg/L	0.0020	0.0145	0.0014	0.0009	<0.0006	0.0035	0.0206
Copper	mg/L	0.0076	<0.0005	0.002	0.0026	<0.0005	0.0246	0.0064
Fluoride	mg/L	<0.1	<0.1	0.09	0.08	0.08	0.41	0.11
Hardness	mg CaCO3/L	28	47	29	21	25	86	58
Iron	mg/L	3.0	0.30	0.08	<0.01	<0.01	3.7	3.6
Lead	mg/L	<0.0003	<0.0003	0.0012	0.0011	<0.0003	0.0063	0.0036
Manganese	mg/L	0.0619	0.0077	0.0141	0.0021	0.0014	0.1996	0.0916
Mercury	mg/L	<0.00001	0.00012	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	mg/L	0.0007	0.0026	<0.0005	<0.0005	<0.0005	0.0042	<0.0005
Nickel	mg/L	0.0062	0.0063	0.0018	0.0010	0.0007	0.0087	0.0255
Nitrate	mg/L	0.68	1.6	0.38	0.62	0.66	4.5	1.1
Nitrite-Nitrate	mg N/L							
Selenium	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver	mg/L	<0.0005	0.0019	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sulphate	mg/L	1	7	7	6	6	25	30
Thallium	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc	mg/L	<0.001	<0.001	0.003	0.002	0.007	0.012	0.013

Footnotes:

* Parameter measured in the field by
environment department

Date		5-Oct-11	1-Nov-11	1-Nov-11	1-Nov-11	10-Nov-11	10-Nov-11	10-Nov-11
Lab Identification		east dike seepage north	EAST-DIKE- SEEPAGE	east dike seepage south	east dike seepage north	east dike seepage south	east dike seepage north	east dike seepage north
Station Name	Units	EDS-N	EDS-N	EDS-S	EDS-N	EDS-N	EDS-N	EDS-N
*pH		8.12	6.89	7.61	7.50	7.62	7.48	7.52
*Turbidity	NTU	36.8	4.4	3.4	1.5	2.5	1.2	1.5
Alkalinity	mg CaCO3/L	24	78	24	23	42	47	46
Aluminum	mg/L	0.296	0.084	0.142	0.133	0.223	0.066	0.067
Ammonia	mg N/L	<0.05	0.15	<0.05	<0.05			
Arsenic	mg/L	<0.0005	0.0124	0.0009	0.0031	<0.0005	<0.0005	<0.0005
Barium	mg/L	0.0089	0.0318	0.0047	0.0051	0.0058	0.0049	0.0052
Cadmium	mg/L	<0.00002	0.00016	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Chloride	mg/L	0.9	7.4	0.7	0.7	0.6	0.6	0.7
Chromium	mg/L	<0.0006	0.0011	0.0010	<0.0006	0.0034	0.0038	<0.0006
Copper	mg/L	0.0020	0.0090	0.0022	0.0010	0.0014	0.0012	0.0007
Fluoride	mg/L	0.07	0.88	0.08	0.08	0.08	0.07	0.07
Hardness	mg CaCO3/L	25	71	19	21	22	22	24
Iron	mg/L	0.32	<0.01	<0.01	<0.01	0.19	0.11	<0.01
Lead	mg/L	0.0016	0.0158	0.0589	<0.0003	0.0044	0.0004	<0.0003
Manganese	mg/L	0.0170	0.0708	0.0039	0.0039	0.0092	0.0007	0.0007
Mercury	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	mg/L	<0.0005	0.0186	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	0.0036	0.0020	0.0010	0.0006	0.0014	0.0005	<0.0005
Nitrate	mg/L	0.36	7.5	0.10	0.10			
Nitrite-Nitrate	mg N/L							
Selenium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver	mg/L	<0.0002	<0.0002	0.0005	<0.0002	<0.0002	<0.0002	<0.0002
Sulfate	mg/L	3	21	4	1	6	2	4
Thallium	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc	mg/L	0.005	0.010	0.145	<0.001	0.005	0.006	0.001

Footnotes:

* Parameter measured in the field by
environment department

Date		10-Nov-11	11-Nov-11	11-Nov-11	11-Nov-11	11-Nov-11	12-Nov-11	12-Nov-11
Lab Identification		east dike seepage south	east dike seepage north	east dike seepage south	-SEEPAGE NORTH	EAST-DIKE- SEEPAGE SOUTH	-SEEPAGE SOUTH AM	-SEEPAGE NORTH AM
Station Name	Units	EDS-S	EDS-N	EDS-S	EDS-N	EDS-S	EDS-S	EDS-N
*pH		7.58	7.29	7.44	7.09	7.84	7.46	7.49
*Turbidity	NTU	2.4	1.3	2.0	0.6	2.5	0.4	3.5
Alkalinity	mg CaCO3/L	40	39	45	40	46	46	40
Aluminum	mg/L	0.157	0.017	0.296	0.093	0.077	0.109	0.025
Ammonia	mg N/L							
Arsenic	mg/L	<0.0005	0.0011	<0.0005	0.0018	<0.0005	<0.0005	0.0006
Barium	mg/L	0.0055	0.0055	0.0072	0.0048	0.0054	0.0056	0.0050
Cadmium	mg/L	<0.00002	0.00010	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Chloride	mg/L	0.7	0.7	0.7	0.6	0.7	0.7	0.7
Chromium	mg/L	<0.0006	<0.0006	0.0014	<0.0006	<0.0006	<0.0006	<0.0006
Copper	mg/L	0.0013	0.0055	0.0016	0.0007	0.0011	0.0011	0.0007
Fluoride	mg/L	0.08	0.08	0.08	0.07	0.08	0.08	0.07
Hardness	mg CaCO3/L	24	24	23	23	22	22	23
Iron	mg/L	<0.01	<0.01	0.44	<0.01	0.03	0.04	<0.01
Lead	mg/L	0.0012	0.0010	0.0052	0.0244	<0.0003	<0.0003	<0.0003
Manganese	mg/L	0.0065	0.0011	0.0164	0.0006	0.0062	0.0072	0.0006
Mercury	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	0.0010	0.0006	0.0017	<0.0005	0.0009	0.0011	0.0005
Nitrate	mg/L							
Nitrite-Nitrate	mg N/L							
Selenium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sulfate	mg/L	2	4	5	4	4	6	4
Thallium	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc	mg/L	0.001	0.048	0.005	<0.001	0.002	0.001	0.001

Footnotes:

* Parameter measured in the field by
environment department

Date		12-Nov-11	12-Nov-11	13-Nov-11	13-Nov-11	14-Nov-11	14-Nov-11	14-Nov-11
Lab Identification		-SEEPAGE SOUTH PM	-SEEPAGE NORTH PM	-SEEPAGE NORTH AM	-SEEPAGE SOUTH AM	EAST-DIKE- SEEPAGE SOUTH AM	EAST-DIKE- SEEPAGE NORTH AM	EAST DIKE SEEPAGE NORTH PM
Station Name	Units	EDS-S	EDS-N	EDS-N	EDS-S	EDS-S	EDS-N	EDS-N
*pH		7.67	7.77	7.83	6.96	7.93	6.94	8.07
*Turbidity	NTU	2.5	0.4	0.4	2.6	0.6	2.3	0.4
Alkalinity	mg CaCO3/L	46	40	48	45	46	48	38
Aluminum	mg/L	0.122	0.045	0.019	0.275	0.222	0.062	0.035
Ammonia	mg N/L					<0.05	<0.05	<0.05
Arsenic	mg/L	<0.0005	0.0006	<0.0005	<0.0005	<0.0005	0.0024	0.0005
Barium	mg/L	0.0066	0.0050	0.0052	0.0070	0.0063	0.0052	0.0091
Cadmium	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.00118
Chloride	mg/L	0.6	0.6	0.6	0.6	<0.5	<0.5	0.5
Chromium	mg/L	0.0009	<0.0006	<0.0006	0.0013	<0.0006	<0.0006	0.0016
Copper	mg/L	0.0018	0.0016	0.0007	0.0020	0.0457	0.0011	0.0021
Fluoride	mg/L	0.08	0.07	0.08	0.08	0.08	0.07	0.07
Hardness	mg CaCO3/L	21	23	23	23	22	23	26
Iron	mg/L	0.14	<0.01	<0.01	0.42	0.10	<0.01	0.01
Lead	mg/L	<0.0003	<0.0003	0.0012	0.0009	0.0137	0.0004	0.0006
Manganese	mg/L	0.0073	0.0006	0.0006	0.0151	0.0105	0.0010	0.0024
Mercury	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	0.0011	<0.0005	<0.0005	0.0018	0.0015	<0.0005	0.0018
Nitrate	mg/L							
Nitrite-Nitrate	mg N/L					0.08	0.06	0.05
Selenium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sulfate	mg/L	5	4	3	4	3	2	<1
Thallium	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc	mg/L	0.006	<0.001	0.002	0.008	0.029	0.008	0.006

Footnotes:

* Parameter measured in the field by environment department

Date		14-Nov-11	15-Nov-11	15-Nov-11	15-Nov-11	16-Nov-11	16-Nov-11	16-Nov-11
Lab Identification		EAST-DIKE- SEEPAGE SOUTH PM	EAST-DIKE- SEEPAGE SOUTH AM	EAST-DIKE- SEEPAGE NORTH PM	EAST-DIKE- SEEPAGE SOUTH PM	EAST-DIKE- SEEPAGE NORTH AM	EAST-DIKE- SEEPAGE SOUTH AM	east dike seepage north
Station Name	Units	EDS-S	EDS-S	EDS-N	EDS-S	EDS-N	EDS-S	EDS-N
*pH		7.83	7.13	8.22	7.54	7.9	6.98	8.23
*Turbidity	NTU	2.6	2.2	0.7	6.4	1.6	2.5	1.5
Alkalinity	mg CaCO3/L	45	45	33	46	47	44	26
Aluminum	mg/L	0.059	0.145	0.070	0.201	0.069	0.144	0.073
Ammonia	mg N/L	<0.05	<0.05			<0.05	<0.05	
Arsenic	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	0.0013	<0.0005	<0.0005
Barium	mg/L	0.0050	0.0059	0.0046	0.0049	0.0042	0.0052	0.0046
Cadmium	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Chloride	mg/L	0.7	0.7	0.8	0.8	0.6	0.6	1.1
Chromium	mg/L	<0.0006	<0.0006	0.0017	0.0026	<0.0006	<0.0006	0.0018
Copper	mg/L	0.0010	0.0014	0.0007	0.0024	0.0021	0.003	0.0008
Fluoride	mg/L	0.08	0.09	0.07	0.08	0.08	0.08	0.07
Hardness	mg CaCO3/L	20	22	22	20	20	19	22
Iron	mg/L	0.03	0.16	<0.01	0.17	<0.01	<0.01	<0.01
Lead	mg/L	<0.0003	<0.0003	<0.0003	0.0012	<0.0003	0.0009	<0.0003
Manganese	mg/L	0.0046	0.0095	<0.0005	0.0081	<0.0005	0.0073	0.0009
Mercury	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	0.0008	0.0044	0.0005	0.0021	0.0006	0.0010	0.0005
Nitrate	mg/L							
Nitrite-Nitrate	mg N/L	0.07	0.06			0.07	0.07	
Selenium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sulfate	mg/L	1	2	8	6	4	4	3
Thallium	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc	mg/L	<0.001	0.028	0.019	0.006	<0.001	<0.001	0.010

Footnotes:

* Parameter measured in the field by
environment department

Date		16-Nov-11	19-Nov-11	19-Nov-11	20-Nov-11	20-Nov-11	21-Nov-11	21-Nov-11
Lab Identification		EAST-DIKE- SEEPAGE SOUTH PM	EAST-DIKE- SEEPAGE SOUTH AM	-SEEPAGE SOUTH PM	-SEEPAGE SOUTH AM(10H40)	-SEEPAGE SOUTH PM(18H15)	EAST-DIKE- SEEPAGE SOUTH AM	EAST-DIKE- SEEPAGE SOUTH PM
Station Name	Units	EDS-S	EDS-S	EDS-S	EDS-S	EDS-S	EDS-S	EDS-S
*pH		6.82	7.5	7.26	7.18	7.19	7.05	7.12
*Turbidity	NTU	2.2	1.1	3.0	1.9	1.0	2.5	2.8
Alkalinity	mg CaCO3/L	46	47	47	48	47	47	47
Aluminum	mg/L	0.142	0.106	0.122	0.098	0.105	0.176	0.206
Ammonia	mg N/L				<0.05	<0.05	<0.05	<0.05
Arsenic	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Barium	mg/L	0.0045	0.0046	0.0047	0.0045	0.0045	0.0049	0.0060
Cadmium	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Chloride	mg/L	1.1	1.0	1.1	1.1	1.0	1.0	0.8
Chromium	mg/L	0.0022	0.0016	0.0022	0.0021	0.0020	0.0024	0.0026
Copper	mg/L	0.0012	0.0012	0.0012	0.0012	0.0011	0.0012	0.0015
Fluoride	mg/L	0.08	0.08	0.08	0.08	0.09	0.08	0.08
Hardness	mg CaCO3/L	20	21	21	21	21	20	23
Iron	mg/L	0.14	0.04	0.08	0.05	0.03	0.15	0.18
Lead	mg/L	0.0004	0.0009	0.0015	0.0019	0.0010	<0.0003	0.0013
Manganese	mg/L	0.0055	0.0033	0.0039	0.0031	0.0032	0.0062	0.0078
Mercury	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	0.0009	0.0010	0.0009	0.0009	0.0009	0.0010	0.0013
Nitrate	mg/L							
Nitrite-Nitrate	mg N/L				0.06	0.06	0.06	0.08
Selenium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sulfate	mg/L	4	8	8	5	4	7	5
Thallium	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc	mg/L	0.017	0.001	0.009	0.003	0.003	0.003	0.005

Footnotes:

* Parameter measured in the field by
environment department

Date		22-Nov-11	22-Nov-11	22-Nov-11	22-Nov-11	23-Nov-11	23-Nov-11	24-Nov-11
Lab Identification		-SEEPAGE NORTH AM	-SEEPAGE SOUTH AM	-SEEPAGE NORTH PM	-SEEPAGE SOUTH PM	EAST-DIKE- SEEPAGE NORTH AM	-SEEPAGE NORTH PM	EAST-DIKE- SEEPAGE NORTH PM
Station Name	Units	EDS-N	EDS-S	EDS-N	EDS-S	EDS-N	EDS-N	EDS-N
*pH		8.12	7.16	8.55	7.16	8.18	8.25	8.54
*Turbidity	NTU	2.5	2.8	8.8	4.5	2.8	6.1	3.2
Alkalinity	mg CaCO3/L	41	47	37	46	46	47	11
Aluminum	mg/L	0.074	0.155	0.148	0.201	0.168	0.099	0.092
Ammonia	mg N/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Arsenic	mg/L	<0.0005	<0.0005	0.0022	<0.0005	0.0012	0.0025	<0.0005
Barium	mg/L	0.0048	0.0052	0.0056	0.0055	0.0058	0.0045	0.0055
Cadmium	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Chloride	mg/L	0.9	0.9	0.7	0.8	0.7	0.7	1.2
Chromium	mg/L	0.0011	0.0018	0.0016	0.0476	0.0013	<0.0006	0.0023
Copper	mg/L	0.0008	0.0014	0.0010	0.0014	0.0020	<0.0005	0.0019
Fluoride	mg/L	0.07	0.08	0.08	0.09	0.07	0.07	0.10
Hardness	mg CaCO3/L	21	22	26	23	25	16	21
Iron	mg/L	<0.01	0.11	0.02	0.18	0.04	<0.01	<0.01
Lead	mg/L	<0.0003	0.0007	0.0030	0.0010	0.0037	<0.0003	<0.0003
Manganese	mg/L	0.0008	0.0066	0.0024	0.0073	0.0018	0.0022	0.0032
Mercury	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	0.00603	<0.00001	<0.00001
Molybdenum	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	<0.0005	0.0011	0.0008	0.0015	0.0016	0.0006	<0.0005
Nitrate	mg/L							
Nitrite-Nitrate	mg N/L	0.05	0.07	0.06	0.06	0.05	0.04	
Selenium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sulfate	mg/L	4	4	<1	4	6	1	3
Thallium	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc	mg/L	0.003	0.003	0.004	0.003	0.003	<0.001	0.047

Footnotes:

* Parameter measured in the field by environment department

Date		25-Nov-11	25-Nov-11	1-Dec-11	20-Dec-11	20-Dec-11
Lab Identification		EAST-DIKE- SEEPAGE NORTH AM	EAST-DIKE- SEEPAGE NORTH PM	-SEEPAGE NORTH AM	SW-4a South	SW-4a North
Station Name	Units	EDS-N	EDS-N	EDS-N	EDS-S	EDS-N
*pH		8.11	8.68	8.15	7.58	7.01
*Turbidity	NTU	3.4	2.1	0.9	5.1	2.6
Alkalinity	mg CaCO ₃ /L	20	21	21	16	22
Aluminum	mg/L	0.092	0.053	0.051	0.112	0.073
Ammonia	mg N/L				<0.05	<0.05
Arsenic	mg/L	0.0015	<0.0005	<0.0005	<0.005	0.0005
Barium	mg/L	0.0053	0.0051	0.0049	0.0053	0.0051
Cadmium	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Chloride	mg/L	1.2	1.2	1.4	0.8	0.8
Chromium	mg/L	0.0042	0.0030	0.0049	<0.0006	<0.0006
Copper	mg/L	0.0013	0.0009	0.0009	0.0006	<0.0005
Fluoride	mg/L	0.10	0.08	0.07	0.08	0.20
Hardness	mg CaCO ₃ /L	21	20	21	19	22
Iron	mg/L	<0.01	<0.01	<0.01	0.23	0.06
Lead	mg/L	<0.0003	<0.0003	<0.0003	0.0014	<0.0003
Manganese	mg/L	0.0014	0.0006	<0.0005	0.0051	0.0008
Mercury	mg/L	<0.00001	0.00002	<0.00001	<0.00001	<0.00001
Molybdenum	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	<0.0005	<0.0005	<0.0005	0.0006	<0.0005
Nitrate	mg/L				0.07	0.08
Nitrite-Nitrate	mg N/L				0.07	0.08
Selenium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Silver	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sulfate	mg/L	6	3	5	1	3
Thallium	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc	mg/L	0.005	0.005	0.005	<0.001	<0.001

Footnotes:

* Parameter measured in the field by
environment department

Table 7.18 - 2011 MMER Effluent Monitoring

Dewatering Final Discharge 1 - DD-FD1	Units	Maximum Allowable Concentration							
Date	DD-Mon-YY		4-Jan-11	10-Jan-11	17-Jan-11	24-Jan-11	31-Jan-11	7-Feb-11	14-Feb-11
Time	HH-MM		9:30						
Arsenic	mg/L	1	0.0029	0.0023	NDEP	NDEP	NDEP	NDEP	NDEP
Copper	mg/L	0.6	<0.0005	0.0009	NDEP	NDEP	NDEP	NDEP	NDEP
Cyanide	mg/L	2	0.039	0.019	NDEP	NDEP	NDEP	NDEP	NDEP
Lead	mg/L	0.4	<0.0003	0.0022	NDEP	NDEP	NDEP	NDEP	NDEP
Nickel	mg/L	1	0.0073	0.0099	NDEP	NDEP	NDEP	NDEP	NDEP
Zinc	mg/L	1	0.002	0.006	NDEP	NDEP	NDEP	NDEP	NDEP
Total Suspended Solids	mg/L	30	2	6	NDEP	NDEP	NDEP	NDEP	NDEP
Radium 226	Bq/L	1.11	NMR	0.071	NDEP	NDEP	NDEP	NDEP	NDEP
pH *	units	6-9.5	6.80	6.45	NDEP	NDEP	NDEP	NDEP	NDEP
Daphnia magna	LC50 %		>100	NMR	NDEP	NDEP	NDEP	NDEP	NDEP
Rainbow trout	LC50 %		>100	NMR	NDEP	NDEP	NDEP	NDEP	NDEP

Dewatering Final Discharge 1 - DD-FD1	Units	Maximum Allowable Concentration							
Date	DD-Mon-YY		21-Feb-11	28-Feb-11	7-Mar-11	15-Mar-11	24-Mar-11	29-Mar-11	4-Apr-11
Time	HH-MM								8:00
Arsenic	mg/L	1	NDEP	NDEP	NDEP	NMR	NMR	NMR	0.0021
Copper	mg/L	0.6	NDEP	NDEP	NDEP	NMR	NMR	NMR	<0.0005
Cyanide	mg/L	2	NDEP	NDEP	NDEP	NMR	NMR	NMR	0.068
Lead	mg/L	0.4	NDEP	NDEP	NDEP	NMR	NMR	NMR	<0.0003
Nickel	mg/L	1	NDEP	NDEP	NDEP	NMR	NMR	NMR	0.0102
Zinc	mg/L	1	NDEP	NDEP	NDEP	NMR	NMR	NMR	<0.001
Total Suspended Solids	mg/L	30	NDEP	NDEP	NDEP	14	4	4	8
Radium 226	Bq/L	1.11	NDEP	NDEP	NDEP	NMR	NMR	NMR	0.067
pH *	units	6-9.5	NDEP	NDEP	NDEP	6.76	6.43	6.51	6.50
Daphnia magna	LC50 %		NDEP	NDEP	NDEP	NMR	NMR	NMR	>100
Rainbow trout	LC50 %		NDEP	NDEP	NDEP	NMR	NMR	NMR	>100

Dewatering Final Discharge 1 - DD-FD1	Units	Maximum Allowable Concentration							
Date	DD-Mon-YY		11-Apr-11	18-Apr-11	26-Apr-11	2-May-11	9-May-11	16-May-11	23-May-11
Time	HH-MM		7:34	6:25		8:06	7:54	8:45	9:40
Arsenic	mg/L	1	NMR	NMR	NMR	NMR	NMR	NMR	NMR
Copper	mg/L	0.6	NMR	NMR	NMR	NMR	NMR	NMR	NMR
Cyanide	mg/L	2	NMR	NMR	NMR	NMR	NMR	NMR	NMR
Lead	mg/L	0.4	NMR	NMR	NMR	NMR	NMR	NMR	NMR
Nickel	mg/L	1	NMR	NMR	NMR	NMR	NMR	NMR	NMR
Zinc	mg/L	1	NMR	NMR	NMR	NMR	NMR	NMR	NMR
Total Suspended Solids	mg/L	30	2	6	2	2	9	4	9
Radium 226	Bq/L	1.11	NMR	NMR	NMR	NMR	NMR	NMR	NMR
pH *	units	6-9.5	6.56	6.50	6.76	6.85	6.92	6.82	6.80
Daphnia magna	LC50 %		NMR	NMR	NMR	NMR	NMR	NMR	NMR
Rainbow trout	LC50 %		NMR	NMR	NMR	NMR	NMR	NMR	NMR

Dewatering Final Discharge 1 - DD-FD1	Units	Maximum Allowable Concentration							
Date	DD-Mon-YY		30-May-11	6-Jun-11	13-Jun-11	20-Jun-11	27-Jun-11	4-Jul-11	11-Jul-11
Time	HH-MM		8:00	7:00					
Arsenic	mg/L	1	NMR	NMR	NDEP	NDEP	NDEP	<0.0005	NMR
Copper	mg/L	0.6	NMR	NMR	NDEP	NDEP	NDEP	<0.0005	NMR
Cyanide	mg/L	2	NMR	NMR	NDEP	NDEP	NDEP	0.067	NMR
Lead	mg/L	0.4	NMR	NMR	NDEP	NDEP	NDEP	<0.0003	NMR
Nickel	mg/L	1	NMR	NMR	NDEP	NDEP	NDEP	0.0037	NMR
Zinc	mg/L	1	NMR	NMR	NDEP	NDEP	NDEP	0.001	NMR
Total Suspended Solids	mg/L	30	6	NA	NDEP	NDEP	NDEP	6	12
Radium 226	Bq/L	1.11	NMR	NMR	NDEP	NDEP	NDEP	0.025	NMR
pH *	units	6-9.5	6.55	NA	NDEP	NDEP	NDEP	6.31	6.61
Daphnia magna	LC50 %		NMR	NMR	NDEP	NDEP	NDEP	>100	NMR
Rainbow trout	LC50 %		NMR	NMR	NDEP	NDEP	NDEP	>100	NMR

Dewatering Final Discharge 1 - DD-FD1	Units	Maximum Allowable Concentration							
Date	DD-Mon-YY		18-Jul-11	25-Jul-11	1-Aug-11	8-Aug-11	15-Aug-11	22-Aug-11	29-Aug-11
Time	HH-MM				9:00				
Arsenic	mg/L	1	NMR	NMR	NMR	NMR	NMR	NMR	NMR
Copper	mg/L	0.6	NMR	NMR	NMR	NMR	NMR	NMR	NMR
Cyanide	mg/L	2	NMR	NMR	NMR	NMR	NMR	NMR	NMR
Lead	mg/L	0.4	NMR	NMR	NMR	NMR	NMR	NMR	NMR
Nickel	mg/L	1	NMR	NMR	NMR	NMR	NMR	NMR	NMR
Zinc	mg/L	1	NMR	NMR	NMR	NMR	NMR	NMR	NMR
Total Suspended Solids	mg/L	30	12	6	6	5	3	3	5
Radium 226	Bq/L	1.11	NMR	NMR	NMR	NMR	NMR	NMR	NMR
pH *	units	6-9.5	6.75	6.54	6.76	7.23	7.30	6.88	6.80
Daphnia magna	LC50 %		NMR	NMR	NMR	NMR	NMR	NMR	NMR
Rainbow trout	LC50 %		NMR	NMR	NMR	NMR	NMR	NMR	NMR

Dewatering Final Discharge 1 - DD-FD1	Units	Maximum Allowable Concentration							
Date	DD-Mon-YY		5-Sep-11	12-Sep-11	19-Sep-11	26-Sep-11	3-Oct-11	11-Oct-11	19-Oct-11
Time	HH-MM								
Arsenic	mg/L	1	NMR	NMR	NMR	NDEP	0.0207	NMR	NMR
Copper	mg/L	0.6	NMR	NMR	NMR	NDEP	0.0029	NMR	NMR
Cyanide	mg/L	2	NMR	NMR	NMR	NDEP	<0.005	NMR	NMR
Lead	mg/L	0.4	NMR	NMR	NMR	NDEP	0.0048	NMR	NMR
Nickel	mg/L	1	NMR	NMR	NMR	NDEP	0.0098	NMR	NMR
Zinc	mg/L	1	NMR	NMR	NMR	NDEP	<0.001	NMR	NMR
Total Suspended Solids	mg/L	30	3	3	10	NDEP	<1	5	1
Radium 226	Bq/L	1.11	NMR	NMR	NMR	NDEP	0.1	NMR	NMR
pH *	units	6-9.5	7.25	7.10	7.08	NDEP	7.1	7.29	7.21
Daphnia magna	LC50 %		NMR	NMR	NMR	NDEP	>100	NMR	NMR
Rainbow trout	LC50 %		NMR	NMR	NMR	NDEP	>100	NMR	NMR

Dewatering Final Discharge 1 - DD-FD1	Units	Maximum Allowable Concentration					
Date Time	DD-Mon-YY HH-MM		24-Oct-11	31-Oct-11	7-Nov-11	14-Nov-11	15-Nov-11
Arsenic	mg/L	1	NMR	NMR	NMR	NMR	NDEP
Copper	mg/L	0.6	NMR	NMR	NMR	NMR	NDEP
Cyanide	mg/L	2	NMR	NMR	NMR	NMR	NDEP
Lead	mg/L	0.4	NMR	NMR	NMR	NMR	NDEP
Nickel	mg/L	1	NMR	NMR	NMR	NMR	NDEP
Zinc	mg/L	1	NMR	NMR	NMR	NMR	NDEP
Total Suspended Solids	mg/L	30	1	5	2	11	NDEP
Radium 226	Bq/L	1.11	NMR	NMR	NMR	NMR	NDEP
pH *	units	6-9.5	6.75	6.62	7	6.78	NDEP
Daphnia magna	LC50 %		NMR	NMR	NMR	NMR	NDEP
Rainbow trout	LC50 %		NMR	NMR	NMR	NMR	NDEP

Footnotes:

* Parameter measured in field by environment department

NDEP (No Deposit) = measurement not taken because there was no deposit from the final discharge point

NMR (No Measurement Required) = measurement not taken in accordance with the conditions set out in section 12 or 13 of the MMER

June 6, 2011 - Not Available; samples erroneously not collected

Table 7.19: 2011 EEM Monitoring

DD-FD1 (Effluent)	Date Time	10-Jan-11	11-Apr-11	24-Aug-11	NA
		6:20	7:34	NA	NA
Aluminium	mg/L	0.857	1.1	0.541	ND
Ammonia	mg N/L			<0.05	ND
Ammonia-Ammonium	mg N/L	4.8	6.7		ND
Cadmium	mg/L	<0.00008	<0.00008	0.00025	ND
Iron	mg/L	<0.01	<0.01	0.69	ND
Mercury	mg/L	<0.00001	<0.00001	0.00293	ND
Molybdenum	mg/L	0.0116	0.0148	0.0329	ND
Nitrate	mg N/L	1.1	1.0	1.6	ND
Fathead Minnow IC25	% v/v	>100	NR	91.49	NR
Fathead Minnow LC50	% v/v	>100	NR	>100	NR
Ceriodaphnia dubia IC25	% v/v	62.5	NR	10.78	NR
Ceriodaphnia dubia LC50	% v/v	>100	NR	65.98	NR
Freshwater Alga IC25	% v/v	>90.90	NR	>90.90	NR
Lemna minor IC25 (dw)	% v/v	76.2	NR	1.81	NR
Lemna minor IC25 (f#)	% v/v	46	NR	1.77	NR

TPN (Exposure Area)	Date Time	17-Jan-11	12-Apr-11	24-Aug-11	20-Dec-11
		NA	NA	NA	NA
Alkalinity	mg CaCO3/L	25	15	10	<2
Aluminum	mg/L	0.016	0.149	0.009	0.060
Ammonia				<0.05	<0.05
Ammonia-Ammonium	mg N/L	<0.05	0.25		
Arsenic	mg/L	<0.0005	0.0008	<0.0005	<0.0005
Cadmium	mg/L	<0.00008	<0.00008	<0.00002	<0.00002
Copper	mg/L	<0.0005	<0.0005	0.0271	0.0021
Cyanide - total	mg/L	<0.005	<0.005	<0.005	0.005
Dissolved oxygen *	mg/L	12.4	19.5	9.2	25.3
Hardness	mg CaCO3/L	6	10	7	10
Iron	mg/L	0.03	<0.01	<0.01	<0.01
Lead	mg/L	<0.0003	<0.0003	<0.0003	0.0109
Mercury	mg/L	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	mg/L	<0.0005	<0.0005	0.0016	<0.0005
Nickel	mg/L	<0.0005	<0.0005	0.0014	0.0006
Nitrate	mg N/L	0.01	0.03	0.05	0.03
pH *	Units	7.12	7.17	7.59	6.22
Radium	Bq/L	<0.002	<0.002	<0.002	0.003
Temperature *	(°C)	0.3	0.2	10.4	0.38
Total suspended solids	mg/L	1	<1	2	<1
Zinc	mg/L	<0.001	0.009	<0.001	0.035

TPS (Reference Area)	Date Time	17-Jan-11 NA	12-Apr-11 NA	24-Aug-11 NA	20-Dec-11 NA
Alkalinity	mg CaCO ₃ /L	18	12	9	<2
Aluminum	mg/L	0.046	0.033	<0.006	0.03
Ammonia	mg N/L			<0.05	<0.05
Ammonia-Ammonium	mg N/L	<0.05	<0.05		
Arsenic	mg/L	<0.0005	<0.0005	<0.0005	<0.0005
Cadmium	mg/L	<0.00008	0.00008	<0.00002	<0.00002
Copper	mg/L	0.0009	<0.0005	0.0131	0.001
Cyanide - total	mg/L	0.005	<0.005	0.005	<0.005
Dissolved oxygen *	mg/L	11.9	16.8	9.2	16.78
Hardness	mg CaCO ₃ /L	6	5	6	11
Iron	mg/L	0.25	<0.01	<0.01	<0.01
Lead	mg/L	0.0124	<0.0003	0.0005	<0.0003
Mercury	mg/L	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	mg/L	<0.0005	<0.0005	0.0005	<0.0005
Nickel	mg/L	<0.0005	<0.0005	0.0008	<0.0005
Nitrate	mg N/L	0.01	0.08	0.01	0.03
pH *	Units	6.81	7.12	7.92	7.91
Radium	Bq/L	<0.002	0.002	<0.002	0.003
Temperature *	(°C)	0.4	0.4	10.7	0.42
Total suspended solids	mg/L	<1	<1	1	<1
Zinc	mg/L	0.004	0.003	<0.001	0.006

Footnotes:

ND = no discharge

NR = not required

* Parameters measured in the field

Table 7.20 - 2011 MMER Effluent Volume

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1	18210	0	0	6160	14220	27400	0	13706	2410	3850	31120
2	14320	0	0	6590	13590	17150	0	0	1570	3090	29850
3	6260	0	0	15080	13380	6370	10320	0	3900	5070	29930
4	16460	0	0	15740	14110	7330	18560	0	0	0	29570
5	18960	0	0	15670	12870	13960	7320	4090	3810	0	29900
6	18741	0	0	16138	12730	1580	6600	18910	3960	310	29680
7	20340	0	0	15600	0	5740	1780	24380	2720	0	28910
8	17420	0	2090	15690	13150	16860	3470	13810	9890	1030	26850
9	18870	0	6060	13540	12610	3228	6180	1700	6650	0	21640
10	18750	0	8080	12880	7640	7210	19070	5620	3650		28060
11	18480	0	13310	14660	5470	12670	12290	5050	8300	2930	19900
12	14180	0	12110	14760	4790	17510	20470	6600	4440	3980	10630
13	15020	0	11650	14270	4220	0	23460	5015	1190	0	4870
14	17450	0	18652	13170	6950	5975	22120	0	6360	0	3940
15	7620	0	16211	13320	6024	1040	7290	5015	3480	3180	
16	2810	0	14100	13420	15860	790	10220	0	2068	0	
17	0	0	16048	15070	17100	0	14570	3010	3520	0	
18	0	0	12200	14980	18980	0	24330	0	2410	10286	
19	0	0	6420	15310	16670	0	2170	4050	1040	6060	
20	0	0	0	15110	9310	0	5870	6620	1470	7221	
21	0	0	0	14120	3150	0	1500	0	2860	6660	
22	0	0	0	13700	11550	0	6300	1780	0	14160	
23	0	0	4420	14380	20906	0	13410	2130	1930	12634	
24	0	0	8940	13800	27880	0	13990	5340	1040	28466	
25	0	0	18480	14460	25160	0	11260	2280	0	30190	
26	0	0	15290	13360	34473	0	9580	1130	0	29794	
27	0	0	15460	14210	13100	0	12110	2040	0	27836	
28	0	0	15380	14320	12491	0	0	5990	0	29100	
29	0		7780	13880	14800	0	0	2170	0	28150	
30	0		6800	11330	30060	0	0	1400	0	26930	
31	0		6620		28580		1420	4160		28080	
Total (m³)	243,891	0	236,101	414,718	441,824	144,813	285,660	145,996	78,668	309,007	324,850

Footnotes:

From January 1 to October 23, the water originated from Second Portage Lake Impoundment Area

From October 22 to November 14, the water originated from Bay Goose Impoundment Area

Table 7.21: 2011 MMER & EEM QAQC

Duplicate / Field Blank Analytical Certificate ID	Units	10-Jan-11			10-Jan-11		
		Original ID DD-FD1 (EEM-1)	Duplicate ID 2011-01-10 DUP-3	RPD	Original ID MMER	Duplicate ID 2011-01-10 DUP-2	RPD
Total Suspended Solids	mg/L				6	6	0
Ammonia	mg N/L	4.8	4.8	0			
Nitrate	mg/L	1.1	1.0	10			
Aluminum	mg/L	0.857	0.885	-3			
Arsenic	mg/L				0.0023	0.0023	0
Copper	mg/L				0.0009	0.0010	-11
Cyanide (total)	mg/L				0.019	< 0.005	117
Lead	mg/L				0.0022	0.0019	15
Nickel	mg/L				0.0099	0.0096	3
Zinc	mg/L				0.006	0.004	40
Radium 226	mg/L				0.071	0.067	6
Cadmium	mg/L	< 0.00008	< 0.00008	0			
Iron	mg/L	< 0.01	< 0.01	0	< 0.01	< 0.01	0
Mercury	mg/L	< 0.00001	< 0.00001	0			
Molybdenum	mg/L	0.0116	0.0118	-2			

Duplicate / Field Blank Analytical Certificate ID	Units	18-Apr-11			4-Jul-11		
		Original ID DD-FD1 (MMER-1)	Duplicate ID DD-FD1 (MMER-1)	RPD	Original ID DD-FD1 (MMER-1)	Duplicate ID DD-FD1- DUP	RPD
Total Suspended Solids	mg/L	6	4	40	6	10	-50
Arsenic	mg/L				< 0.0005	< 0.0005	0
Copper	mg/L				< 0.0005	0.0019	-117
Cyanide (total)	mg/L				0.067	0.091	-30
Lead	mg/L				< 0.0003	0.2135	-199
Nickel	mg/L				0.0037	0.0046	-22
Zinc	mg/L				< 0.001	0.009	-160
Radium 226	Bq/L				0.025	0.024	4

Duplicate / Field Blank Analytical Certificate ID	Units	24-Aug-11			Field Blank EEM-1-FB
		Original ID EEM-1	Duplicate ID EEM-1-DUP	RPD	
Alkalinity	mg CaCO ₃ /L	82.0	81.0	1	< 2.0
Ammonia	mg N/L	< 0.05	< 0.05	0	< 0.05
Hardness	mg CaCO ₃ /L	200	203	-1	3
Nitrate	mg/L	1.6	1.6	0	< 0.01
Aluminum	mg/L	0.541	1.49	-93	0.011
Cadmium	mg/L	0.00025	0.00013	63	< 0.00009
Iron	mg/L	0.69	0.23	100	< 0.01
Mercury	mg/L	0.00293	0.00298	-2	0.00250
Molybdenum	mg/L	0.0329	0.0271	19	0.0028

Duplicate / Field Blank Analytical Certificate ID	Units	24-Aug-11			Field Blank TPS (EEM-3-FB)
		Original ID TPS (EEM-3-REF)	Duplicate ID TPS (EEM-3-DUP)	RPD	
Total Suspended Solids	mg/L	1	3	-100	2
Alkalinity	mg CaCO ₃ /L	9.0	10.0	-11	< 2.0
Ammonia	mg N/L	< 0.05	< 0.05	0	< 0.05
Hardness	mg CaCO ₃ /L	6	6	0	2
Nitrate	mg/L	0.01	0.01	0	< 0.01
Aluminum	mg/L	< 0.006	< 0.006	0	< 0.006
Arsenic	mg/L	< 0.0005	< 0.0005	0	< 0.0005
Copper	mg/L	0.0131	0.0095	32	0.0075
Cyanide (total)	mg/L	< 0.005	< 0.005	0	< 0.005
Lead	mg/L	0.0005	0.0004	22	0.0035
Nickel	mg/L	0.0008	0.0008	0	0.0009
Zinc	mg/L	< 0.001	< 0.001	0	< 0.001
Radium 226	Bq/L	< 0.002	< 0.002	0	< 0.002
Cadmium	mg/L	< 0.00002	< 0.00002	0	< 0.00002
Iron	mg/L	< 0.01	< 0.01	0	< 0.01
Mercury	mg/L	< 0.00001	< 0.00001	0	< 0.00001
Molybdenum	mg/L	0.0005	< 0.0005	0	< 0.0005

Duplicate / Field Blank Analytical Certificate ID	Units	29-Aug-11			Field Blank DD-FD1-FB (MMER-1)
		Original ID DD-FD1 (MMER-1)	Duplicate ID DD-FD1- DUP (MMER-1)	RPD	
Total Suspended Solids	mg/L	5	5	0	< 1

Duplicate / Field Blank Analytical Certificate ID	Units	12-Sep-11			Field Blank DD-FD1-FB (MMER-1)
		Original ID DD-FD1 (MMER-1)	Duplicate ID DD-FD1- DUP (MMER-1)	RPD	
Total Suspended Solids	mg/L	3	2	40	< 1

Duplicate / Field Blank Analytical Certificate ID	Units	20-Dec-11			Field Blank TPN-FB (EEM DISCHARG E 1)
		Original ID TPN (EEM DISCHARG E 1)	Duplicate ID TPN-DUP (EEM DISCHARG E 1)	RPD	
Total Suspended Solids	mg/L	< 1	< 1	0	1
Alkalinity	mg CaCO ₃ /L	< 2	< 2	0	< 2
Ammonia	mg N/L	< 0.05	< 0.05	0	< 0.05
Hardness	mg CaCO ₃ /L	10	8	22	< 1
Nitrate	mg/L	0.03	0.04	-29	< 0.01
Aluminum	mg/L	0.060	< 0.006	164	0.082
Arsenic	mg/L	< 0.0005	< 0.0005	0	0.0005
Copper	mg/L	0.0021	0.0021	0	< 0.0005
Cyanide (total)	mg/L	0.005	< 0.005	0	< 0.005
Lead	mg/L	0.0109	< 0.0003	189	< 0.0003
Nickel	mg/L	0.0006	< 0.0005	18	< 0.0005
Zinc	mg/L	0.035	< 0.001	189	0.006
Radium 226	Bec/L	0.003	0.005	-50	0.002
Cadmium	mg/L	< 0.00002	< 0.00002	0	< 0.00002
Iron	mg/L	< 0.01	< 0.01	0	< 0.01
Mercury	mg/L	< 0.00001	< 0.00001	0	< 0.00001
Molybdenum	mg/L	< 0.0005	< 0.0005	0	< 0.0005

Footnotes:

RPD = Relative Percent Difference

RPD values in bold represent concentrations within 10x the MDL

highlighted RPD values represent exceedences of QAQC objectives

Table 7.22: 2011 Dewatering QAQC

Duplicate / Field Blank		10-Jan-11			12-Jan-11		
Analytical Certificate ID	Units	Original ID DD-WTP-01	Duplicate ID 2011-01-10 DUP-1	RPD	Original ID DD-WTP-01	Duplicate ID DD-WTP-01- DUP	RPD
Total Suspended Solids	mg/L	5	7	-33	7	6	15
Aluminum	mg/L	0.977	0.951	3	0.783	0.745	5

Duplicate / Field Blank		24-Mar-11			4-Apr-11		
Analytical Certificate ID	Units	Original ID DD-WTP-01	Duplicate ID DD-WTP-01- DUP-1	RPD	Original ID DD-WTP-01	Duplicate ID DD-WTP-01- DUP	RPD
Total Suspended Solids	mg/L	7	6	15	9	12	-29
Aluminum	mg/L	1.10	1.13	-3	1.44	1.34	7

Duplicate / Field Blank		15-Apr-11			18-Apr-11		
Analytical Certificate ID	Units	Original ID DD-WTP-01	Duplicate ID DD-WTP-01- DUP-1	RPD	Original ID DD-WTP-01	Duplicate ID DD-WTP- DUP1-01	RPD
Total Suspended Solids	mg/L	3	2	40	0.750	0.740	1
Aluminum	mg/L						

Duplicate / Field Blank		18-May-11			18-May-11		
Analytical Certificate ID	Units	Original ID DD-WTP-01	Duplicate ID DD-WTP- DUP1-01	RPD	Original ID DD-WTP-02	Duplicate ID DD-WTP- DUP2-02	RPD
Total Suspended Solids	mg/L	5	6	-18	3	4	-29
Aluminum	mg/L						

Duplicate / Field Blank Analytical Certificate ID Units		23-May-11			23-May-11		
		Original ID	Duplicate ID	RPD	Original ID	Duplicate ID	RPD
		DD-WTP-01	DD-WTP-DUP1-01		DD-WTP-02	DD-WTP-DUP2-02	
Total Suspended Solids	mg/L	11	14	-24	14	8	55
Aluminum	mg/L	0.535	0.729	-31	1.46	1.83	-22

Duplicate / Field Blank Analytical Certificate ID Units		6-Jun-11			6-Jun-11		
		Original ID	Duplicate ID	RPD	Original ID	Duplicate ID	RPD
		DD-WTP-01	DD-WTP-01-DUP		DD-WTP-02	DD-WTP-02-DUP	
Total Suspended Solids	mg/L	13	16	-21	9	14	-43
Aluminum	mg/L	0.284	0.256	10	0.405	0.402	1

Duplicate / Field Blank Analytical Certificate ID Units		4-Jul-11			4-Jul-11		
		Original ID	Duplicate ID	RPD	Original ID	Duplicate ID	RPD
		DD-WTP-01	DD-WTP-01-DUP		DD-WTP-02	DD-DTP-02-DUP	
Total Suspended Solids	mg/L	11	11	0	10	9	11
Aluminum	mg/L	0.687	0.725	-5	0.689	0.691	0

Duplicate / Field Blank Analytical Certificate ID Units		11-Jul-11			21-Jul-11		
		Original ID	Duplicate ID	RPD	Original ID	Duplicate ID	RPD
		DD-WTP-01	DD-WTP-01-DUP		DD-WTP-01	DD-WTP-01-DUP1	
Total Suspended Solids	mg/L	11	10	10	6	6	0
Aluminum	mg/L						

Duplicate / Field Blank Analytical Certificate ID Units		21-Jul-11			31-Jul-11		
		Original ID	Duplicate ID	RPD	Original ID	Duplicate ID	RPD
		DD-WTP-02	DD-WTP-DUP2-02		DD-WTP-01	DD-WTP-01-DUP	
Total Suspended Solids	mg/L	7	9	-25	80	89	-11
Aluminum	mg/L						

Duplicate / Field Blank Analytical Certificate ID Units		10-Aug-11			11-Aug-11		
		Original ID	Duplicate ID	RPD	Original ID	Duplicate ID	RPD
		DD-WTP-02	DD-WTP-02-DUP		DD-BG-PUMP-2	DD-BG-PUMP-2-DUP	
Total Suspended Solids	mg/L	6	6	0	0.052	0.023	77
Aluminum	mg/L						

Duplicate / Field Blank Analytical Certificate ID Units		21-Aug-11			21-Aug-11		
		Original ID	Duplicate ID	RPD	Original ID	Duplicate ID	RPD
		DD-BG-PUMP-2	DD-BG-PUMP-2-DUP		DD-WTP-02	DD-WTP-02-DUP	
Total Suspended Solids	mg/L	< 1	< 1	0	4	4	0
Aluminum	mg/L						

Duplicate / Field Blank Analytical Certificate ID Units		29-Aug-11				30-Aug-11			
		Original ID	Duplicate ID	RPD	Field Blank	Original ID	Duplicate ID	RPD	Field Blank
		DD-WTP-02	DD-WTP-02			DD-WTP-01	DD-WTP-01-DUP		
Total Suspended Solids	mg/L					7	7	0	< 1.0
Aluminum	mg/L	1.65	1.63	1	< 0.006	1.42	1.39	2	0.033

Duplicate / Field Blank Analytical Certificate ID Units		30-Aug-11				31-Aug-11			
		Original ID	Duplicate ID	RPD	Field Blank	Original ID	Duplicate ID	RPD	Field Blank
		DD-WTP-02	DD-WTP-02			DD-BG-PUMP-1	DD-BG-PUMP-1-		
Total Suspended Solids	mg/L	5	5	0	< 1.0	< 1	< 1	0	< 1.0
Aluminum	mg/L								

Duplicate / Field Blank Analytical Certificate ID Units		31-Aug-11			31-Aug-11			
		Original ID	Duplicate ID	RPD	Original ID	Duplicate ID	RPD	Field Blank
		DD-BG-PUMP-1	DD-BG-PUMP-1-DUP		DD-TPL	DD-TPL-DUP		
Total Suspended Solids	mg/L	< 1	< 1	0	< 1	< 1	0	< 1.0
Aluminum	mg/L							

Duplicate / Field Blank Analytical Certificate ID Units		9-Sep-11			10-Sep-11		
		Original ID	Duplicate ID	RPD	Original ID	Duplicate ID	RPD
		DD-WTP-01	DD-WTP-01-DUP		DD-BG-PUMP-1	DD-BG-PUMP-1-	
Total Suspended Solids	mg/L	1	3	-100	< 1	< 1	0
Aluminum	mg/L						

Duplicate / Field Blank Analytical Certificate ID Units		10-Sep-11			12-Sep-11		
		Original ID	Duplicate ID	RPD	Original ID	Duplicate ID	RPD
		DD-BG-PUMP-2	DD-BG-PUMP-2-DUP		DD-WTP-01	DD-WTP-01-DUP	
Total Suspended Solids	mg/L	< 1	1	0			
Aluminum	mg/L				0.368	0.427	-15

Duplicate / Field Blank Analytical Certificate ID Units		15-Sep-11			20-Sep-11		
		Original ID	Duplicate ID	RPD	Original ID	Duplicate ID	RPD
		DD-TPL	DD-TPL		DD-BG-PUMP-1	DD-BG-PUMP-1-	
Total Suspended Solids	mg/L	2	<	1	3	2	40
Aluminum	mg/L			67			

Duplicate / Field Blank Analytical Certificate ID Units		20-Sep-11			20-Sep-11		
		Original ID	Duplicate ID	RPD	Original ID	Duplicate ID	RPD
		DD-BG-PUMP-2	DD-BG-PUMP-2-DUP		DD-WTP-01	DD-WTP-01-DUP	
Total Suspended Solids	mg/L	4	2	67	4	1	120
Aluminum	mg/L						

Duplicate / Field Blank Analytical Certificate ID Units		20-Sep-11			30-Sep-11		
		Original ID	Duplicate ID	RPD	Original ID	Duplicate ID	RPD
		DD-WTP-02	DD-WTP-02-DUP		DD-GB-PUMP-1	DD-BG-PUMP-1-	
Total Suspended Solids	mg/L	1	1	0	5	3	50
Aluminum	mg/L						

Duplicate / Field Blank Analytical Certificate ID Units		30-Sep-11			3-Oct-11		
		Original ID	Duplicate ID	RPD	Original ID	Duplicate ID	RPD
		DD-GB-PUMP-2	DD-BG-PUMP-2-DUP		DD-WTP-01	DD-WTP-01-DUP	
Total Suspended Solids	mg/L	3	8	-91	23	24	-4
Aluminum	mg/L						

Duplicate / Field Blank Analytical Certificate ID	Units	10-Oct-11			10-Oct-11		
		Original ID DD-BG- PUMP-1	Duplicate ID DD-BG- PUMP-1-	RPD	Original ID DD-BG- PUMP-2	Duplicate ID DD-BG- PUMP-2-	RPD
Total Suspended Solids	mg/L	4	8	-67	5	8	-46
Aluminum	mg/L						

Duplicate / Field Blank Analytical Certificate ID	Units	11-Oct-11			12-Oct-11		
		Original ID DD-WTP-01	Duplicate ID DD-WTP-01- DUP	RPD	Original ID DD-WTP-02	Duplicate ID DD-WTP-02- DUP	RPD
Total Suspended Solids	mg/L	5	5	0	4	4	0
Aluminum	mg/L						

Duplicate / Field Blank Analytical Certificate ID	Units	17-Oct-11			17-Oct-11		
		Original ID DD-BG- PUMP-1	Duplicate ID DD-BG- PUMP-1-	RPD	Original ID DD-BG- PUMP-2	Duplicate ID DD-BG- PUMP-2-	RPD
Total Suspended Solids	mg/L	0.094	0.114	-19	0.092	0.091	1
Aluminum	mg/L						

Duplicate / Field Blank Analytical Certificate ID	Units	19-Oct-11			20-Oct-11		
		Original ID DD-WTP-02	Duplicate ID DD-WTP-02- DUP	RPD	Original ID DD-BG- PUMP-1	Duplicate ID DD-BG- PUMP-1-	RPD
Total Suspended Solids	mg/L	2	2	0	1	<	0
Aluminum	mg/L						

Duplicate / Field Blank		20-Oct-11			20-Oct-11		
Analytical Certificate ID	Units	Original ID	Duplicate ID	RPD	Original ID	Duplicate ID	RPD
		DD-BG-PUMP-2	DD-BG-PUMP-2-DUP-03		DD-WTP-01	DD-WTP-01-DUP-01	
Total Suspended Solids	mg/L	1	4	-120	5	7	-33
Aluminum	mg/L						

Duplicate / Field Blank		29-Oct-11			29-Oct-11		
Analytical Certificate ID	Units	Original ID	Duplicate ID	RPD	Original ID	Duplicate ID	RPD
		DD-WTP-01	DD-WTP-01-DUP-01		DD-WTP-02	DD-WTP-02-DUP	
Total Suspended Solids	mg/L	3	2	40	2	1	67
Aluminum	mg/L						

Duplicate / Field Blank		9-Nov-11			9-Nov-11		
Analytical Certificate ID	Units	Original ID	Duplicate ID	RPD	Original ID	Duplicate ID	RPD
		BG-WTP-01	BG-WTP-01-DUP		BG-WTP-02	BG-WTP-02-DUP	
Total Suspended Solids	mg/L	6	5	18	2	2	0
Aluminum	mg/L						

Footnotes:

RPD = Relative Percent Difference

RPD values in bold represent concentrations within 10x the MDL

Table 7.23: 2011 STP QAQC

Duplicate / Field Blank Analytical Certificate ID	Units	4-Apr-11			6-Jun-11		
		Original ID Seprotech STP-OUT	Duplicate ID Seprotech STP-OUT- dup	RPD	Original ID Seprotech STP-OUT	Duplicate ID DUP Seprotech STP-OUT	RPD
Total Suspended Solids	mg/L	5	6	-18	7	9	-25
Ammonia	mg N/L	17.9	10.3	54	17.0	13.2	25
Nitrate	mg N/L	33.2	32.1	3	36.4	36.7	-1
Nitrite	mg N/L	0.01	0.01	0	0.01	0.01	0
Total Phosphate	mg/L	10.8	10.9	-1	11.6	11.0	5
COD	mg/L	34	33	3	30	31	-3
BOD5	mg/L	2	1	67	4	4	0

Duplicate / Field Blank Analytical Certificate ID	Units	20-Jun-11			4-Jul-11		
		Original ID STP-OUT	Duplicate ID STP-OUT- DUP	RPD	Original ID STP-OUT	Duplicate ID STP-OUT- DUP	RPD
Total Suspended Solids	mg/L	10	12	-18	16	17	-6
Ammonia	mg N/L	< 0.05	< 0.05	0	< 0.05	< 0.05	0
Nitrate	mg N/L	36.9	37.2	-1	39.4	38.0	4
Nitrite	mg N/L	0.05	0.04	22	< 0.01	< 0.01	0
Total Phosphate	mg/L	11.9	11.4	4	11.8	11.9	-1
COD	mg/L	74	62	18	54	70	-26
BOD5	mg/L	8	9	-12	4	7	-55

Footnotes:

RPD = Relative Percent Difference

RPD values in bold represent concentrations within 10x the MDL

highlighted RPD values represent exceedences of QAQC objectives

Table 7.24: 2011 Surface Water QAQC

Duplicate / Field Blank Analytical Certificate ID	Units	18-Apr-11		
		Original ID ST-21	Duplicate ID ST-21 (DUP-1)	RPD
Total Dissolved Solids	mg/L	3580	3461	3
Alkalinity	mg CaCO ₃ /L	90	90	0
Ammonia Ammonium	mg N/L	70.9	69.2	2
Ammonia	mg N/L			
Hardness	mg CaCO ₃ /L	1110	1117	-1
Fluoride	mg/L	0.11	0.13	-17
Chloride	mg/L	548	543	1
Sulfate	mg/L	2170	2041	6
Nitrate	mg/L	7.2	7.2	0
Nitrite	mg/L	0.13	0.13	0
Aluminium	mg/L	0.122	0.131	-7
Arsenic	mg/L	0.0909	0.0917	-1
Copper	mg/L	2.938	1.586	60
Cyanide (total)	mg/L	8.37	7.84	7
Lead	mg/L	< 0.0003	< 0.0003	0
Nickel	mg/L	0.2047	0.1942	5
Zinc	mg/L	0.001	< 0.001	0
Cadmium	mg/L	0.00074	0.00068	8
Barium	mg/L	0.0574	0.0562	2
Manganese	mg/L	0.0181	0.0174	4
Thallium	mg/L	< 0.005	< 0.005	0
Selenium	mg/L	0.010	0.011	-10
Iron	mg/L	1.2	0.86	33
Mercury	mg/L	0.00033	0.00034	-3
Molybdenum	mg/L	0.2483	0.2333	6
Silver	mg/L	0.0080	0.0078	3
Dissolved Aluminum	mg/L	0.06	0.08	-29
Dissolved Arsenic	mg/L	0.091	0.089	2
Dissolved Barium	mg/L	0.055	0.055	0
Dissolved Cadmium	mg/L	< 0.005	< 0.005	0
Dissolved Copper	mg/L	1.50	1.40	7
Dissolved Iron	mg/L	0.43	0.46	-7
Dissolved Lead	mg/L	< 0.005	< 0.005	0
Dissolved Manganese	mg/L	0.013	0.013	0
Dissolved Mercury	mg/L	< 0.0005	< 0.0005	0
Dissolved Molybdenum	mg/L	0.055	0.057	-4
Dissolved Nickel	mg/L	0.087	0.089	-2
Dissolved Selenium	mg/L	0.009	0.010	-11
Dissolved Silver	mg/L	0.008	0.008	0
Dissolved Thallium	mg/L	< 0.01	< 0.01	0
Dissolved Zinc	mg/L	< 0.005	< 0.005	0

Footnotes:

RPD = Relative Percent Difference

RPD values in bold represent concentrations within 10x the MDL

highlighted RPD values represent exceedences of QAQC objectives

Duplicate / Field Blank Analytical Certificate ID	Units	25-May-11			
		Original ID ST-21	Duplicate ID DUP-2 (ST-21)	RPD	Field Blank FB-2 (ST-21)
Total Dissolved Solids	mg/L	1696	2006	-17	55
Alkalinity	mg CaCO ₃ /L	108	110	-2	< 2
Ammonia Ammonium	mg N/L	49.3	49.4	0	0.22
Ammonia	mg N/L				
Hardness	mg CaCO ₃ /L	714	719	-1	< 1
Fluoride	mg/L	0.11	0.12	-9	< 0.1
Chloride	mg/L	331	319	4	< 0.5
Sulfate	mg/L	1400	1400	0	< 0.5
Nitrate	mg/L	6.0	5.9	2	0.12
Nitrite	mg/L	0.10	0.10	0	< 0.01
Aluminium	mg/L	0.184	0.185	-1	< 0.006
Arsenic	mg/L	0.0586	0.0457	25	< 0.0005
Copper	mg/L	3.447	3.720	-8	0.0017
Cyanide (total)	mg/L	6.97	6.77	3	< 0.005
Lead	mg/L	0.0097	0.0126	-26	0.0235
Nickel	mg/L	0.4597	0.4910	-7	< 0.0005
Zinc	mg/L	0.009	0.011	-20	< 0.001
Cadmium	mg/L	0.00022	0.00024	-9	< 0.00008
Barium	mg/L	0.0221	0.0213	4	< 0.0005
Manganese	mg/L	0.0240	0.0232	3	< 0.0005
Thallium	mg/L	< 0.005	< 0.005	0	< 0.005
Selenium	mg/L	< 0.001	0.003	-100	< 0.001
Iron	mg/L	< 0.45	0.49	-9	< 0.01
Mercury	mg/L	0.00039	0.00038	3	< 0.00001
Molybdenum	mg/L	0.1687	0.1715	-2	< 0.0005
Silver	mg/L	0.0046	0.0049	-6	< 0.0005
Dissolved Aluminum	mg/L	0.08	0.07	13	< 0.01
Dissolved Arsenic	mg/L	0.033	0.036	-9	< 0.005
Dissolved Barium	mg/L	0.020	0.020	0	< 0.005
Dissolved Cadmium	mg/L	< 0.005	< 0.005	0	< 0.005
Dissolved Copper	mg/L	3.44	3.58	-4	< 0.005
Dissolved Iron	mg/L	< 0.05	0.10	-67	< 0.05
Dissolved Lead	mg/L	0.006	< 0.005	18	< 0.005
Dissolved Manganese	mg/L	< 0.005	< 0.005	0	< 0.005
Dissolved Mercury	mg/L	< 0.0005	< 0.0005	0	< 0.0005
Dissolved Molybdenum	mg/L	0.174	0.176	-1	< 0.005
Dissolved Nickel	mg/L	0.457	0.476	-4	< 0.005
Dissolved Selenium	mg/L	< 0.005	0.005	0	< 0.005
Dissolved Silver	mg/L	< 0.005	< 0.005	0	< 0.005
Dissolved Thallium	mg/L	< 0.01	< 0.01	0	< 0.01
Dissolved Zinc	mg/L	0.013	0.008	48	< 0.005

Footnotes:

RPD = Relative Percent Difference

RPD values in bold represent concentrations within 10x the MDL

highlighted RPD values represent exceedences of QAQC objectives

Duplicate / Field Blank Analytical Certificate ID	Units	6-Jun-11	
		Original ID	Field Blank
		ST-21	FB-2 (ST21)
Total Dissolved Solids	mg/L	2350	1
Alkalinity	mg CaCO ₃ /L	72	10
Ammonia Ammonium	mg N/L	54.6	0.09
Ammonia	mg N/L		
Hardness	mg CaCO ₃ /L	774	< 1
Fluoride	mg/L	< 0.1	< 0.1
Chloride	mg/L	379	< 0.5
Sulfate	mg/L	1557	3
Nitrate	mg/L	6.1	< 0.01
Nitrite	mg/L	0.10	< 0.01
Aluminium	mg/L	0.555	< 0.006
Arsenic	mg/L	0.0565	< 0.0005
Copper	mg/L	2.484	0.0141
Cyanide (total)	mg/L	5.65	< 0.005
Lead	mg/L	< 0.0003	< 0.0003
Nickel	mg/L	0.3598	< 0.0006
Zinc	mg/L	0.003	< 0.001
Cadmium	mg/L	0.00033	< 0.00008
Barium	mg/L	0.0466	< 0.0005
Manganese	mg/L	0.0530	< 0.0005
Thallium	mg/L	< 0.005	< 0.005
Selenium	mg/L	0.008	< 0.001
Iron	mg/L	0.62	< 0.01
Mercury	mg/L		< 0.00001
Molybdenum	mg/L	0.1791	< 0.0005
Silver	mg/L		< 0.0005
Dissolved Aluminum	mg/L	< 0.01	< 0.01
Dissolved Arsenic	mg/L	0.040	< 0.005
Dissolved Barium	mg/L	0.043	< 0.005
Dissolved Cadmium	mg/L	< 0.005	< 0.005
Dissolved Copper	mg/L	0.794	0.007
Dissolved Iron	mg/L	0.23	< 0.05
Dissolved Lead	mg/L	< 0.005	< 0.005
Dissolved Manganese	mg/L	0.045	< 0.005
Dissolved Mercury	mg/L	< 0.0005	< 0.0005
Dissolved Molybdenum	mg/L	< 0.176	< 0.005
Dissolved Nickel	mg/L	0.335	< 0.005
Dissolved Selenium	mg/L	0.006	< 0.005
Dissolved Silver	mg/L	0.005	< 0.005
Dissolved Thallium	mg/L	< 0.01	< 0.01
Dissolved Zinc	mg/L	< 0.005	< 0.005

Footnotes:

RPD = Relative Percent Difference

RPD values in bold represent concentrations within 10x the MDL

highlighted RPD values represent exceedences of QAQC objectives

Duplicate / Field Blank Analytical Certificate ID	Units	1-Aug-11		
		Original ID RSF-1	Duplicate ID RSF-1-DUP	RPD
Total Dissolved Solids	mg/L	57	56	2
Alkalinity	mg CaCO ₃ /L	31	32	-3
Ammonia Ammonium	mg N/L			
Ammonia	mg N/L	< 0.05	< 0.05	0
Hardness	mg CaCO ₃ /L	42	39	7
Fluoride	mg/L	< 0.1	< 0.1	0
Chloride	mg/L	1.3	1.3	0
Sulfate	mg/L	10	13	-26
Nitrate	mg/L	0.07	0.09	-25
Nitrite	mg/L			
Aluminium	mg/L	0.391	0.309	23
Arsenic	mg/L	< 0.0005	< 0.0005	0
Copper	mg/L	0.0015	0.0011	31
Cyanide (total)	mg/L			
Lead	mg/L	< 0.0003	< 0.0003	0
Nickel	mg/L	0.0186	0.0149	22
Zinc	mg/L	0.012	0.003	120
Cadmium	mg/L	0.00036	0.00055	-42
Barium	mg/L	0.0101	0.0097	4
Manganese	mg/L	0.3177	0.2753	14
Thallium	mg/L			
Selenium	mg/L	< 0.001	< 0.001	0
Iron	mg/L	0.94	0.51	59
Mercury	mg/L	< 0.00001	< 0.00001	0
Molybdenum	mg/L	< 0.0005	< 0.0005	0
Silver	mg/L	< 0.0002	< 0.0002	0
Dissolved Aluminum	mg/L			
Dissolved Arsenic	mg/L			
Dissolved Barium	mg/L			
Dissolved Cadmium	mg/L			
Dissolved Copper	mg/L			
Dissolved Iron	mg/L			
Dissolved Lead	mg/L			
Dissolved Manganese	mg/L			
Dissolved Mercury	mg/L			
Dissolved Molybdenum	mg/L			
Dissolved Nickel	mg/L			
Dissolved Selenium	mg/L			
Dissolved Silver	mg/L			
Dissolved Thallium	mg/L			
Dissolved Zinc	mg/L			

Footnotes:

RPD = Relative Percent Difference

RPD values in bold represent concentrations within 10x the MDL

highlighted RPD values represent exceedences of QAQC objectives

Duplicate / Field Blank Analytical Certificate ID	Units	2-Aug-11		
		Original ID ST-19	Duplicate ID ST-19-DUP	RPD
Total Dissolved Solids	mg/L	492	470	5
Alkalinity	mg CaCO ₃ /L	109	109	0
Ammonia Ammonium	mg N/L			
Ammonia	mg N/L	0.45	0.50	-11
Hardness	mg CaCO ₃ /L	187	188	-1
Fluoride	mg/L	0.99	1.0	-1
Chloride	mg/L	14.5	14.5	0
Sulfate	mg/L	114	119	-4
Nitrate	mg/L	27.118	26.516	2
Nitrite	mg/L	0.482	0.484	0
Aluminium	mg/L			
Arsenic	mg/L	0.0044	0.0167	-117
Copper	mg/L	< 0.0005	< 0.0005	0
Cyanide (total)	mg/L			
Lead	mg/L	0.0103	< 0.0003	189
Nickel	mg/L	0.0365	0.0313	15
Zinc	mg/L	< 0.001	0.004	-120
Cadmium	mg/L			
Barium	mg/L			
Manganese	mg/L			
Thallium	mg/L			
Selenium	mg/L			
Iron	mg/L			
Mercury	mg/L			
Molybdenum	mg/L			
Silver	mg/L			
Dissolved Aluminum	mg/L	< 0.01	< 0.01	0
Dissolved Arsenic	mg/L	< 0.005	< 0.005	0
Dissolved Barium	mg/L	0.015	0.014	7
Dissolved Cadmium	mg/L	< 0.005	< 0.005	0
Dissolved Copper	mg/L	< 0.005	< 0.005	0
Dissolved Iron	mg/L	< 0.05	0.39	-155
Dissolved Lead	mg/L	0.005	< 0.005	0
Dissolved Manganese	mg/L	0.051	0.055	-8
Dissolved Mercury	mg/L	< 0.0005	< 0.0005	0
Dissolved Molybdenum	mg/L	0.029	0.029	0
Dissolved Nickel	mg/L	0.031	0.052	-51
Dissolved Selenium	mg/L	< 0.005	< 0.005	0
Dissolved Silver	mg/L	< 0.005	< 0.005	0
Dissolved Thallium	mg/L	< 0.01	< 0.01	0
Dissolved Zinc	mg/L	< 0.010	0.009	11

Footnotes:

RPD = Relative Percent Difference

RPD values in bold represent concentrations within 10x the MDL

highlighted RPD values represent exceedences of QAQC objectives

Duplicate / Field Blank Analytical Certificate ID	Units	2-Aug-11		
		Original ID ST-21	Duplicate ID ST-21-DUP	RPD
Total Dissolved Solids	mg/L	2106	2118	-1
Alkalinity	mg CaCO3/L	147	148	-1
Ammonia Ammonium	mg N/L			
Ammonia	mg N/L	1.2	1.1	9
Hardness	mg CaCO3/L	808	800	1
Fluoride	mg/L	0.32	0.33	-3
Chloride	mg/L	230	231	0
Sulfate	mg/L	1532	1594	-4
Nitrate	mg/L	4.3	4.5	-5
Nitrite	mg/L	0.33	0.33	0
Aluminium	mg/L			
Arsenic	mg/L			
Copper	mg/L			
Cyanide (total)	mg/L	0.014	0.039	-94
Lead	mg/L			
Nickel	mg/L			
Zinc	mg/L			
Cadmium	mg/L			
Barium	mg/L			
Manganese	mg/L			
Thallium	mg/L			
Selenium	mg/L			
Iron	mg/L			
Mercury	mg/L			
Molybdenum	mg/L			
Silver	mg/L			
Dissolved Aluminum	mg/L	0.01	0.15	-175
Dissolved Arsenic	mg/L	0.050	0.056	-11
Dissolved Barium	mg/L	0.038	0.045	-17
Dissolved Cadmium	mg/L	< 0.005	< 0.005	0
Dissolved Copper	mg/L	0.361	0.482	-29
Dissolved Iron	mg/L	0.31	0.41	-28
Dissolved Lead	mg/L	< 0.005	0.009	-57
Dissolved Manganese	mg/L	0.113	0.130	-14
Dissolved Mercury	mg/L	< 0.0005	< 0.0005	0
Dissolved Molybdenum	mg/L	0.180	0.208	-14
Dissolved Nickel	mg/L	0.093	0.102	-9
Dissolved Selenium	mg/L	< 0.005	< 0.005	0
Dissolved Silver	mg/L	< 0.005	< 0.005	0
Dissolved Thallium	mg/L	< 0.01	< 0.01	0
Dissolved Zinc	mg/L	< 0.010	< 0.017	-52

Footnotes:

RPD = Relative Percent Difference

RPD values in bold represent concentrations within 10x the MDL

highlighted RPD values represent exceedences of QAQC objectives

Duplicate / Field Blank Analytical Certificate ID	Units	2-Aug-11		
		Original ID East-dike- seepage	Duplicate ID East-dike- seepage- DUP	RPD
Total Dissolved Solids	mg/L			
Alkalinity	mg CaCO ₃ /L	28	28	0
Ammonia Ammonium	mg N/L			
Ammonia	mg N/L	< 0.05	< 0.05	0
Hardness	mg CaCO ₃ /L	47	47	0
Fluoride	mg/L	< 0.1	< 0.1	0
Chloride	mg/L	1.1	1.1	0
Sulfate	mg/L	7	7	0
Nitrate	mg/L	1.6	1.618	-1
Nitrite	mg/L			
Aluminium	mg/L	0.216	0.230	-6
Arsenic	mg/L	0.0153	0.0062	85
Copper	mg/L	< 0.0005	< 0.0005	0
Cyanide (total)	mg/L			
Lead	mg/L	< 0.0003	< 0.0003	0
Nickel	mg/L	0.0063	0.0055	14
Zinc	mg/L	< 0.001	< 0.001	0
Cadmium	mg/L	0.00510	0.00521	-2
Barium	mg/L	0.0115	0.0116	-1
Manganese	mg/L	0.0077	0.0077	0
Thallium	mg/L	< 0.005	< 0.005	0
Selenium	mg/L	< 0.001	< 0.001	0
Iron	mg/L	0.30	0.29	3
Mercury	mg/L	0.00012	0.00009	29
Molybdenum	mg/L	0.0026	0.0021	21
Silver	mg/L	0.0019	0.0016	17
Dissolved Aluminum	mg/L			
Dissolved Arsenic	mg/L			
Dissolved Barium	mg/L			
Dissolved Cadmium	mg/L			
Dissolved Copper	mg/L			
Dissolved Iron	mg/L			
Dissolved Lead	mg/L			
Dissolved Manganese	mg/L			
Dissolved Mercury	mg/L			
Dissolved Molybdenum	mg/L			
Dissolved Nickel	mg/L			
Dissolved Selenium	mg/L			
Dissolved Silver	mg/L			
Dissolved Thallium	mg/L			
Dissolved Zinc	mg/L			

Footnotes:

RPD = Relative Percent Difference

RPD values in bold represent concentrations within 10x the MDL

highlighted RPD values represent exceedences of QAQC objectives

Duplicate / Field Blank Analytical Certificate ID	Units	11-Aug-11		
		Original ID ST-17	Duplicate ID ST-17-DUP	RPD
Total Dissolved Solids	mg/L	763	745	2
Alkalinity	mg CaCO3/L	87	87	0
Ammonia Ammonium	mg N/L			
Ammonia	mg N/L	1.0	0.98	2
Hardness	mg CaCO3/L	246	247	0
Fluoride	mg/L	0.34	0.35	-3
Chloride	mg/L	73.4	73.4	0
Sulfate	mg/L	90	86	5
Nitrate	mg/L	45.1	44.7	1
Nitrite	mg/L	1.2	1.2	0
Aluminium	mg/L			
Arsenic	mg/L	0.0112	0.0068	49
Copper	mg/L	0.0815	0.0202	121
Cyanide (total)	mg/L			
Lead	mg/L	< 0.0003	0.0364	-197
Nickel	mg/L	< 0.0005	< 0.0005	0
Zinc	mg/L	< 0.001	< 0.001	0
Cadmium	mg/L			
Barium	mg/L			
Manganese	mg/L			
Thallium	mg/L			
Selenium	mg/L	0.005	0.006	-18
Iron	mg/L			
Mercury	mg/L			
Molybdenum	mg/L			
Silver	mg/L			
Dissolved Aluminum	mg/L	< 0.01	< 0.01	0
Dissolved Arsenic	mg/L	< 0.005	< 0.005	0
Dissolved Barium	mg/L	0.097	0.107	-10
Dissolved Cadmium	mg/L	< 0.005	< 0.005	0
Dissolved Copper	mg/L	0.013	0.013	0
Dissolved Iron	mg/L	< 0.05	< 0.05	0
Dissolved Lead	mg/L	< 0.005	< 0.005	0
Dissolved Manganese	mg/L	0.007	0.006	15
Dissolved Mercury	mg/L	< 0.0005	< 0.0005	0
Dissolved Molybdenum	mg/L	0.072	0.081	-12
Dissolved Nickel	mg/L	0.019	0.017	11
Dissolved Selenium	mg/L	0.005	0.006	-18
Dissolved Silver	mg/L	< 0.005	< 0.005	0
Dissolved Thallium	mg/L	< 0.01	< 0.01	0
Dissolved Zinc	mg/L	0.009	< 0.005	57

Footnotes:

RPD = Relative Percent Difference

RPD values in bold represent concentrations within 10x the MDL

highlighted RPD values represent exceedences of QAQC objectives

Duplicate / Field Blank Analytical Certificate ID	Units	1-Nov-11		
		Original ID SW-RSF-1	Duplicate ID SW-RSF-1- DUP	RPD
Total Dissolved Solids	mg/L			
Alkalinity	mg CaCO ₃ /L	44	44	0
Ammonia Ammonium	mg N/L			
Ammonia	mg N/L	< 0.05	< 0.05	0
Hardness	mg CaCO ₃ /L	82	81	1
Fluoride	mg/L	0.16	0.15	6
Chloride	mg/L	2.6	2.6	0
Sulfate	mg/L	37	38	-3
Nitrate	mg/L	0.27	0.28	-4
Nitrite	mg/L			
Aluminium	mg/L	0.095	0.096	-1
Arsenic	mg/L	0.0007	0.0024	-110
Copper	mg/L	0.0017	0.0019	-11
Cyanide (total)	mg/L			
Lead	mg/L	0.0019	< 0.0003	145
Nickel	mg/L	0.0619	0.0601	3
Zinc	mg/L	< 0.001	0.001	0
Cadmium	mg/L	< 0.00002	< 0.00002	0
Barium	mg/L	0.0158	0.0144	9
Manganese	mg/L	1.320	1.278	3
Thallium	mg/L	< 0.005	< 0.005	0
Selenium	mg/L	< 0.001	< 0.001	0
Iron	mg/L	1.5	1.3	14
Mercury	mg/L	< 0.00001	< 0.00001	0
Molybdenum	mg/L	< 0.0005	< 0.0005	0
Silver	mg/L	< 0.0002	< 0.0002	0
Dissolved Aluminum	mg/L			
Dissolved Arsenic	mg/L			
Dissolved Barium	mg/L			
Dissolved Cadmium	mg/L			
Dissolved Copper	mg/L			
Dissolved Iron	mg/L			
Dissolved Lead	mg/L			
Dissolved Manganese	mg/L			
Dissolved Mercury	mg/L			
Dissolved Molybdenum	mg/L			
Dissolved Nickel	mg/L			
Dissolved Selenium	mg/L			
Dissolved Silver	mg/L			
Dissolved Thallium	mg/L			
Dissolved Zinc	mg/L			

Footnotes:

RPD = Relative Percent Difference

RPD values in bold represent concentrations within 10x the MDL

highlighted RPD values represent exceedences of QAQC objectives

Duplicate / Field Blank Analytical Certificate ID	Units	12-Dec-11		
		Original ID ST-18	Duplicate ID ST-18-DUP	RPD
Total Dissolved Solids	mg/L	623	617	1
Alkalinity	mg CaCO ₃ /L	132	131	1
Ammonia Ammonium	mg N/L			
Ammonia	mg N/L	0.17	0.15	13
Hardness	mg CaCO ₃ /L	264	263	0
Fluoride	mg/L	0.74	0.75	-1
Chloride	mg/L	37.4	37.1	1
Sulfate	mg/L	278	270	3
Nitrate	mg/L	6.0	6.0	0
Nitrite	mg/L	0.19	0.19	0
Aluminium	mg/L			
Arsenic	mg/L	0.0050	0.0023	74
Copper	mg/L	0.0032	0.0035	-9
Cyanide (total)	mg/L			
Lead	mg/L	< 0.0003	0.0004	-29
Nickel	mg/L	0.0183	0.0159	14
Zinc	mg/L	< 0.001	< 0.001	0
Cadmium	mg/L			
Barium	mg/L			
Manganese	mg/L			
Thallium	mg/L			
Selenium	mg/L			
Iron	mg/L	0.83	0.72	14
Mercury	mg/L			
Molybdenum	mg/L			
Silver	mg/L			
Dissolved Aluminum	mg/L	< 0.01	< 0.01	0
Dissolved Arsenic	mg/L	< 0.005	< 0.005	0
Dissolved Barium	mg/L	0.124	0.117	6
Dissolved Cadmium	mg/L	< 0.005	< 0.005	0
Dissolved Copper	mg/L	< 0.005	< 0.005	0
Dissolved Iron	mg/L	< 0.05	< 0.05	0
Dissolved Lead	mg/L	< 0.005	< 0.005	0
Dissolved Manganese	mg/L	2.54	2.44	4
Dissolved Mercury	mg/L	< 0.0005	< 0.001	0
Dissolved Molybdenum	mg/L	0.022	0.021	5
Dissolved Nickel	mg/L	0.014	0.021	-40
Dissolved Selenium	mg/L	< 0.005	< 0.005	0
Dissolved Silver	mg/L	< 0.005	< 0.005	0
Dissolved Thallium	mg/L	< 0.01	< 0.01	0
Dissolved Zinc	mg/L	0.016	0.015	6

Footnotes:

RPD = Relative Percent Difference

RPD values in bold represent concentrations within 10x the MDL

highlighted RPD values represent exceedences of QAQC objectives

Table 7.25: 2011 Bulk Fuel Storage Facility QAQC

Duplicate / Field Blank Analytical Certificate ID	Units	1-Jun-11			Field Blank
		Original ID MB Tank Farm	Duplicate ID	RPD	
Total Suspended Solids	mg/L	81	90	-11	5
Ammonia Ammonium	mg N/L	0.12	0.13	-8	0.08
Arsenic	mg/L	0.0128	0.0129	-1	< 0.0005
Nickel	mg/L	0.0185	0.0197	-6	< 0.0005
Lead	mg/L	< 0.0003	< 0.0003	0	< 0.0003
Zinc	mg/L	0.0140	0.015	-7	0.001
Total Cyanide	mg/L	< 0.005	< 0.005	0	< 0.005
Benzene	µg/L	< 0.3	< 0.3	0	< 0.3
Toluene	µg/L	< 0.3	< 0.3	0	< 0.3
Ethylbenzene	µg/L	< 0.3	< 0.3	0	< 0.3
Xylene	µg/L	0.3	0.3	0	< 0.3
Oil & Grease	mg/L	< 1	< 1	0	< 1

Footnotes:

RPD = Relative Percent Difference

Table 7.26: 2011 Analite NEP 160 #1 Turbidity Meter Calibration

Date	Standard	Initial Reading (NTU)	Final Reading (NTU)
2011-01-01	0	0.01	0.01
	10	10.03	9.99
	100	100.10	100.00
2011-01-02	0	0.04	0.00
	10	10.05	10.01
	100	100.10	100.00
2011-01-04	0	0.02	0.01
	10	10.03	10.01
	100	100.00	100.00
2011-01-05	0	0.06	0.00
	10	10.04	10.02
	100	100.00	100.00
2011-01-06	0	0.00	0.00
	10	10.05	10.00
	100	100.00	100.00
2011-01-07	0	-0.02	0.01
	10	10.07	10.01
	100	100.30	100.00
2011-01-08	0	0.07	0.00
	10	9.95	10.00
	100	99.40	100.00
2011-01-09	0	0.01	0.03
	10	10.11	10.02
	100	100.40	100.20
2011-01-10	0	0.03	0.01
	10	9.99	9.99
	100	100.10	100.00
2011-01-12	0	0.03	0.00
	10	10.10	10.00
	100	100.00	100.00
2011-01-13	0	0.03	0.02
	10	10.11	9.99
	100	101.70	100.00
2011-01-14	0	0.03	0.01
	10	10.08	9.97
	100	100.50	100.00
2011-01-15	0	0.08	0.03
	10	10.11	9.98
	100	100.50	100.00
2011-02-23	0.00	-0.40	0.01
	10.00	9.67	9.96
	100.00	98.90	100.10
2011-02-23	0.00	-0.07	-0.03
	10.00	10.02	9.97
	100.00	100.80	100.00
2011-01-16	0	0.11	0.04
	10	10.06	10.02
	100	101.10	100.00
2011-03-12	0	0.09	-0.01
	10	9.88	10.04
	100	101.70	100.00

Table 7.27: 2011 Analite NEP 160 #2 Turbidity Meter Calibration

Date	Standard	Initial Reading (NTU)	Final Reading (NTU)
2011-09-21	0.00	0.01	0.01
	10.00	9.98	10.00
	100.00	99.60	99.70
2011-09-22	0.00	0.02	0.04
	10.00	9.99	10.20
	100.00	99.50	100.10
2011-09-23	0.00	0.03	-0.03
	10.00	10.10	10.03
	100.00	100.70	100.10
2011-09-24	0.00	-0.09	0.02
	10.00	9.91	10.02
	100.00	99.30	100.00
2011-09-25	0.00	0.03	-0.03
	10.00	10.09	9.98
	100.00	100.20	100.10
2011-09-26	0.00	-0.02	0.03
	10.00	10.01	10.03
	100.00	99.30	99.90
2011-09-27	0.00	0.05	0.00
	10.00	10.03	10.01
	100.00	100.10	100.00
2011-09-28	0.00	0.02	0.00
	10.00	10.02	10.00
	100.00	99.90	99.80
2011-09-29	0.00	0.02	0.03
	10.00	9.95	9.97
	100.00	99.50	100.10
2011-09-30	0.00	0.11	0.00
	10.00	10.03	10.01
	100.00	100.20	100.00
2011-10-01	0.00	0.10	0.03
	10.00	10.05	10.01
	100.00	99.50	100.10
2011-10-02	0.00	0.04	0.02
	10.00	10.02	10.00
	100.00	100.20	99.90
2011-10-03	0.00	0.03	0.00
	10.00	10.03	10.00
	100.00	100.20	100.00
2011-10-04	0.00	0.01	0.02
	10.00	9.97	10.00
	100.00	100.70	99.90
2011-10-05	0.00	0.01	0.02
	10.00	9.99	10.04
	100.00	99.70	100.10
2011-10-06	0.00	0.02	0.02
	10.00	10.05	10.01
	100.00	99.90	100.00

Date	Standard	Initial Reading	Final Reading
		(NTU)	(NTU)
2011-10-07	0.00	0.05	0.01
	10.00	10.03	10.01
	100.00	100.30	100.00
2011-10-08	0.00	0.57	0.00
	10.00	11.57	9.99
	100.00	107.80	99.90
2011-10-09	0.00	0.03	0.00
	10.00	10.08	10.00
	100.00	100.80	100.00
2011-10-10	0.00	0.00	0.00
	10.00	10.04	9.99
	100.00	99.60	99.80
2011-10-11	0.00	0.01	0.00
	10.00	10.02	10.01
	100.00	100.00	99.90
2011-10-12	0.00	0.04	0.01
	10.00	10.07	10.02
	100.00	99.80	100.00
2011-10-13	0.00	0.03	0.01
	10.00	10.02	10.01
	100.00	100.00	100.00
2011-10-14	0.00	0.08	0.00
	10.00	10.08	10.02
	100.00	100.00	100.00
2011-10-15	0.00	0.01	0.00
	10.00	10.09	10.03
	100.00	100.10	100.00
2011-10-16	0.00	0.06	0.03
	10.00	10.00	10.00
	100.00	99.70	99.90
2011-10-17	0.00	0.01	0.00
	10.00	9.97	10.01
	100.00	99.70	100.10
2011-10-18	0.00	0.00	0.02
	10.00	9.94	10.01
	100.00	99.60	100.10
2011-10-19	0.00	0.02	0.00
	10.00	10.01	9.97
	100.00	99.60	99.80
2011-10-20	0.00	0.01	0.02
	10.00	9.97	10.00
	100.00	100.00	100.00
2011-10-21	0.00	0.02	0.02
	10.00	9.98	10.00
	100.00	100.10	99.90
2011-10-22	0.00	0.00	0.01
	10.00	10.03	10.04
	100.00	100.00	100.00

Date	Standard	Initial Reading (NTU)	Final Reading (NTU)
2011-10-23	0.00	0.21	-0.03
	10.00	10.02	9.97
	100.00	99.40	99.80
2011-10-24	0.00	-0.05	-0.01
	10.00	9.98	10.02
	100.00	99.70	100.00
2011-10-25	0.00	-0.05	-0.01
	10.00	9.97	10.02
	100.00	99.80	100.00
2011-10-26	0.00	0.00	-0.02
	10.00	10.10	9.98
	100.00	100.50	100.10
2011-10-27	0.00	-0.04	-0.02
	10.00	9.95	9.99
	100.00	100.00	99.90
2011-10-28	0.00	-0.07	0.00
	10.00	9.96	10.01
	100.00	100.00	100.00
2011-10-29	0.00	0.02	0.00
	10.00	10.02	10.02
	100.00	100.10	100.00
2011-10-30	0.00	0.03	0.00
	10.00	10.04	10.00
	100.00	100.20	100.00
2011-10-31	0.00	0.03	0.00
	10.00	10.06	10.01
	100.00	100.20	100.10
2011-11-01	0.00	0.07	0.02
	10.00	10.03	10.02
	100.00	100.10	100.00
2011-11-02	0.00	0.03	0.00
	10.00	10.01	10.00
	100.00	99.80	99.80
2011-11-03	0.00	0.07	0.00
	10.00	9.96	10.01
	100.00	99.70	100.00
2011-11-04	0.00	0.40	0.03
	10.00	10.03	10.00
	100.00	100.20	100.10
2011-11-05	0.00	0.02	0.00
	10.00	10.05	10.00
	100.00	100.10	100.00
2011-11-06	0.00	-0.02	0.00
	10.00	10.04	10.05
	100.00	100.00	100.00
2011-11-07	0.00	-0.02	0.00
	10.00	9.90	10.00
	100.00	99.20	100.00

Date	Standard	Initial Reading (NTU)	Final Reading (NTU)
2011-11-08	0.00	0.05	0.01
	10.00	10.05	10.03
	100.00	100.40	100.00
2011-11-09	0.00	0.04	0.00
	10.00	10.03	10.00
	100.00	100.10	100.00
2011-11-10	0.00	-0.01	0.01
	10.00	10.02	10.00
	100.00	99.80	100.00
2011-11-11	0.00	-0.14	0.00
	10.00	10.03	10.03
	100.00	99.10	100.00
2011-11-12	0.00	0.03	0.00
	10.00	10.02	10.00
	100.00	99.30	100.00
2011-11-13	0.00	-0.02	0.01
	10.00	9.98	99.90
	100.00	99.90	100.00
2011-11-14	0.00	-0.01	0.00
	10.00	9.99	10.00
	100.00	103.50	100.00
2011-11-15	0.00	-0.01	0.02
	10.00	10.00	9.98
	100.00	100.50	100.00
2011-11-16	0.00	0.02	-0.10
	10.00	10.06	10.00
	100.00	100.30	100.00
2011-11-17	0.00	0.00	0.00
	10.00	9.94	10.03
	100.00	99.60	100.00
2011-11-19	0.00	0.01	0.01
	10.00	9.97	10.00
	100.00	99.30	100.00
2011-11-20	0.00	-0.01	0.01
	10.00	9.96	10.01
	100.00	99.80	100.00
2011-11-21	0.00	0.00	0.02
	10.00	10.05	10.01
	100.00	99.70	99.99
2011-11-22	0.00	0.01	0.01
	10.00	9.98	10.01
	100.00	99.70	100.10
2011-11-23	0.00	0.03	0.00
	10.00	9.97	10.01
	100.00	99.90	100.00
2011-11-24	0.00	0.02	0.01
	10.00	10.00	10.00
	100.00	100.10	100.10

Date	Standard	Initial Reading	Final Reading
		(NTU)	(NTU)
2011-11-25	0.00	0.01	0.01
	10.00	10.01	9.99
	100.00	100.40	100.10
2011-12-01	0.00	0.00	-0.01
	10.00	9.90	10.01
	100.00	99.40	100.00
2011-12-05	0.00	0.07	0.00
	10.00	10.05	10.02
	100.00	100.30	100.00
2011-12-08	0.00	0.03	0.01
	10.00	11.19	9.97
	100.00	99.90	100.00
2011-12-12	0.00	-0.05	0.00
	10.00	10.06	9.99
	100.00	101.20	100.00
2011-12-17	0.00	-0.04	-0.02
	10.00	9.92	10.01
	100.00	99.40	99.90
2011-12-18	0.00	-0.02	0.00
	10.00	10.04	10.01
	100.00	100.00	99.50
2011-12-19	0.00	0.04	0.01
	10.00	10.08	10.01
	100.00	100.00	100.00
2011-12-20	0.00	-0.12	0.02
	10.00	9.76	10.02
	100.00	98.80	100.00
2011-12-23	0.00	-0.06	0.00
	10.00	10.04	10.02
	100.00	100.10	100.00
2011-12-24	0.00	0.03	0.01
	10.00	10.04	10.01
	100.00	100.00	100.00

Table 7.28: 2011 Analite NEP 160 #4 Turbidity Meter Calibration

Date	Standard	Initial Reading (NTU)	Final Reading (NTU)
2011-01-20	0	0.05	0.00
	10	9.96	10.01
	100	99.60	100.00
2011-01-26	0	-0.01	0.00
	10	10.02	10.04
	100	100.50	100.10
2011-02-05	0.00	0.08	0.01
	10.00	10.07	10.02
	100.00	99.30	100.00
2011-02-10	0.00	0.00	0.00
	10.00	9.99	10.00
	100.00	99.80	99.90
2011-02-13	0.00	0.03	0.00
	10.00	9.97	9.99
	100.00	99.90	100.00
2011-02-17	0.00	-0.01	0.00
	10.00	9.99	9.99
	100.00	100.00	100.00
2011-02-24	0.00	0.06	0.02
	10.00	9.67	10.02
	100.00	101.30	99.80
2011-02-25	0.00	-0.01	0.00
	10.00	9.67	10.03
	100.00	101.30	100.10
2011-02-26	0.00	0.01	0.00
	10.00	10.05	10.03
	100.00	100.20	100.30
2011-02-27	0.00	0.02	0.00
	10.00	10.03	10.01
	100.00	100.10	100.00
2011-02-28	0.00	0.07	0.02
	10.00	10.11	10.05
	100.00	101.30	100.50
2011-03-05	0.00	0.02	0.00
	10.00	9.96	9.98
	100.00	101.30	99.90
2011-03-09	0.00	0.05	0.02
	10.00	10.04	10.03
	100.00	101.00	99.90
2011-03-11	0.00	0.03	0.01
	10.00	10.01	9.99
	100.00	100.80	99.90
2011-03-13	0.00	0.03	0.02
	10.00	10.08	9.99
	100.00	99.70	100.00
2011-03-14	0.00	0.04	0.02
	10.00	9.97	10.00
	100.00	100.40	100.10

Date	Standard	Initial Reading (NTU)	Final Reading (NTU)
2011-03-15	0.00	0.02	-0.01
	10.00	9.98	10.02
	100.00	99.90	100.10
2011-03-16	0.00	0.01	0.02
	10.00	9.95	9.98
	100.00	100.40	100.2,
2011-03-17	0.00	0.05	-0.03
	10.00	9.81	10.01
	100.00	99.60	101.10
2011-03-18	0.00	-0.03	0.02
	10.00	10.09	9.31
	100.00	102.50	100.30
2011-03-19	0.00	-0.05	0.01
	10.00	10.03	10.01
	100.00	99.80	100.00
2011-03-20	0.00	0.03	0.00
	10.00	99.90	10.10
	100.00	100.30	100.00
2011-03-25	0.00	0.01	0.01
	10.00	12.94	10.00
	100.00	98.60	99.90
2011-03-27	0.00	0.38	0.01
	10.00	11.21	9.98
	100.00	101.40	99.90
2011-03-28	0.00	0.03	0.01
	10.00	10.01	9.98
	100.00	99.90	100.00
2011-03-29	0.00	-0.17	0.05
	10.00	10.02	10.03
	100.00	100.30	100.20
2011-03-30	0.00	0.01	0.00
	10.00	10.05	9.94
	100.00	99.60	100.10
2011-03-31	0.00	-0.01	0.00
	10.00	9.90	9.99
	100.00	99.90	100.00
2011-04-01	0.00	0.01	-0.01
	10.00	9.96	9.98
	100.00	100.40	100.10
2011-04-02	0.00	0.04	0.01
	10.00	9.93	9.99
	100.00	9.96	100.10
2011-04-03	0.00	-0.02	0.00
	10.00	9.88	9.99
	100.00	99.10	100.10
2011-04-04	0.00	0.02	0.01
	10.00	10.20	9.99
	100.00	99.60	99.90
2011-04-05	0.00	0.04	0.02
	10.00	10.03	10.01
	100.00	100.40	100.20

Date	Standard	Initial Reading (NTU)	Final Reading (NTU)
2011-04-06	0.00	0.11	-0.04
	10.00	10.11	10.03
	100.00	100.30	100.00
2011-04-07	0.00	-0.35	0.01
	10.00	10.06	10.00
	100.00	100.30	100.10
2011-04-08	0.00	0.00	0.00
	10.00	10.00	10.00
	100.00	99.90	99.90
2011-04-09	0.00	0.05	0.01
	10.00	9.93	10.01
	100.00	100.20	100.10
2011-04-10	0.00	0.03	0.01
	10.00	9.98	9.99
	100.00	99.40	99.90
2011-04-11	0.00	0.29	0.01
	10.00	10.53	10.00
	100.00	101.30	100.00
2011-04-12	0.00	0.00	0.00
	10.00	10.06	10.03
	100.00	100.40	100.10
2011-04-13	0.00	0.00	-0.01
	10.00	10.03	10.00
	100.00	100.00	100.00
2011-04-14	0.00	-0.06	0.01
	10.00	10.01	9.99
	100.00	100.40	100.00
2011-04-15	0.00	0.05	0.01
	10.00	10.02	9.97
	100.00	101.30	99.60
2011-04-16	0.00	0.11	0.04
	10.00	10.06	10.03
	100.00	101.10	99.80
2011-04-17	0.00	0.14	0.02
	10.00	10.00	10.00
	100.00	99.50	100.10
2011-04-18	0.00	-0.02	0.00
	10.00	10.05	10.01
	100.00	100.30	100.00
2011-04-19	0.00	0.01	0.02
	10.00	10.05	10.02
	100.00	99.70	100.30
2011-04-20	0.00	0.05	0.01
	10.00	9.96	10.01
	100.00	100.10	99.00
2011-04-21	0.00	-0.09	0.01
	10.00	9.94	10.01
	100.00	99.00	100.00
2011-04-22	0.00	0.03	0.01
	10.00	9.99	10.01
	100.00	100.30	99.90

Date	Standard	Initial Reading	Final Reading
		(NTU)	(NTU)
2011-04-23	0.00	0.03	0.03
	10.00	10.02	9.15
	100.00	100.90	100.20
2011-04-24	0.00	0.00	0.01
	10.00	9.11	10.04
	100.00	100.40	99.80
2011-04-25	0.00	-0.01	0.00
	10.00	10.01	10.00
	100.00	99.60	99.80
2011-04-26	0.00	-0.06	0.06
	10.00	9.87	9.99
	100.00	99.50	99.90
2011-04-27	0.00	0.01	0.04
	10.00	9.93	10.04
	100.00	99.60	100.00
2011-04-28	0.00	0.04	-0.01
	10.00	10.07	9.99
	100.00	100.00	100.00
2011-04-29	0.00	0.09	0.01
	10.00	10.02	10.02
	100.00	100.40	100.00
2011-04-30	0.00	0.05	0.02
	10.00	9.96	9.99
	100.00	100.40	100.10
2011-05-01	0.00	0.01	0.00
	10.00	9.94	9.99
	100.00	100.30	99.90
2011-05-02	0.00	0.03	0.02
	10.00	9.98	10.05
	100.00	100.10	99.90
2011-05-03	0.00	0.05	0.01
	10.00	10.07	9.98
	100.00	100.10	99.90
2011-05-04	0.00	0.03	0.01
	10.00	9.98	9.98
	100.00	99.60	100.30
2011-05-05	0.00	0.02	0.01
	10.00	9.98	10.02
	100.00	100.40	100.10
2011-05-06	0.00	-0.01	0.01
	10.00	9.96	9.99
	100.00	100.10	100.30
2011-05-08	0.00	-0.02	0.00
	10.00	9.96	9.99
	100.00	100.40	100.20
2011-05-09	0.00	-0.01	0.00
	10.00	10.05	10.00
	100.00	100.30	99.80
2011-05-10	0.00	0.05	0.01
	10.00	10.02	10.00
	100.00	99.70	100.20

Date	Standard	Initial Reading (NTU)	Final Reading (NTU)
2011-05-11	0.00	0.08	0.02
	10.00	10.07	10.00
	100.00	99.30	100.00
2011-05-12	0.00	0.04	0.00
	10.00	10.03	10.00
	100.00	100.10	100.00
2011-05-13	0.00	0.03	0.01
	10.00	10.27	9.99
	100.00	103.20	100.10
2011-05-14	0.00	0.01	0.02
	10.00	10.01	10.01
	100.00	99.90	100.10
2011-05-15	0.00	0.22	0.01
	10.00	9.85	10.03
	100.00	98.40	99.80
2011-05-16	0.00	-0.28	0.02
	10.00	10.31	9.99
	100.00	101.70	100.00
2011-05-17	0.00	0.04	0.01
	10.00	10.03	9.98
	100.00	99.80	100.10
2011-05-18	0.00	0.24	0.02
	10.00	10.03	9.97
	100.00	99.70	99.90
2011-05-19	0.00	-0.26	0.02
	10.00	9.99	10.01
	100.00	100.60	100.10
2011-05-20	0.00	0.02	-0.03
	10.00	9.94	9.97
	100.00	99.60	100.10
2011-05-21	0.00	0.03	0.01
	10.00	10.03	10.00
	100.00	100.40	99.80
2011-05-22	0.00	0.00	0.02
	10.00	10.02	9.97
	100.00	99.60	100.20
2011-05-23	0.00	0.03	-0.03
	10.00	10.02	9.99
	100.00	100.10	100.20
2011-05-24	0.00	-0.05	-0.01
	10.00	9.99	10.20
	100.00	99.90	99.90
2011-05-25	0.00	-0.01	-0.03
	10.00	9.97	10.02
	100.00	100.20	99.80
2011-05-26	0.00	0.02	0.02
	10.00	10.13	10.01
	100.00	99.90	100.10
2011-05-27	0.00	-0.02	0.00
	10.00	9.90	9.96
	100.00	100.20	100.00

Date	Standard	Initial Reading (NTU)	Final Reading (NTU)
2011-05-28	0.00	0.04	0.02
	10.00	10.06	10.03
	100.00	100.10	100.10
2011-05-29	0.00	-0.01	-0.01
	10.00	10.20	9.99
	100.00	99.90	100.20
2011-05-30	0.00	0.09	0.01
	10.00	10.00	9.95
	100.00	99.00	99.80
2011-05-31	0.00	0.03	0.03
	10.00	10.07	9.98
	100.00	100.00	100.00
2011-06-01	0.00	-0.01	0.03
	10.00	10.01	9.96
	100.00	100.03	99.90
2011-06-02	0.00	0.03	0.00
	10.00	9.84	9.95
	100.00	99.50	99.80
2011-06-03	0.00	0.05	0.03
	10.00	9.96	9.97
	100.00	100.00	99.90
2011-06-04	0.00	-0.05	0.02
	10.00	10.02	10.03
	100.00	100.10	100.10
2011-06-05	0.00	0.01	0.02
	10.00	9.94	9.98
	100.00	100.40	99.80
2011-06-06	0.00	0.08	-0.01
	10.00	10.09	9.96
	100.00	100.20	99.90
2011-06-07	0.00	0.03	0.00
	10.00	10.04	10.05
	100.00	100.50	100.50
2011-06-08	0.00	0.01	-0.01
	10.00	10.06	9.99
	100.00	95.00	99.80
2011-06-09	0.00	0.02	0.01
	10.00	10.00	10.00
	100.00	100.10	99.80
2011-06-10	0.00	-0.11	0.03
	10.00	9.92	9.98
	100.00	100.20	99.70
2011-06-11	0.00	0.07	0.03
	10.00	9.87	10.01
	100.00	99.80	100.20
2011-06-12	0.00	0.11	0.00
	10.00	10.02	9.99
	100.00	100.20	100.20
2011-06-14	0.00	0.04	0.01
	10.00	10.03	9.99
	100.00	100.10	100.00

Date	Standard	Initial Reading (NTU)	Final Reading (NTU)
2011-06-15	0.00	0.01	0.00
	10.00	10.03	10.00
	100.00	100.20	100.00
2011-06-16	0.00	0.03	0.01
	10.00	10.02	9.99
	100.00	100.10	100.00
2011-06-18	0.00	0.43	0.01
	10.00	10.03	10.03
	100.00	100.10	99.90
2011-06-19	0.00	0.13	0.01
	10.00	9.46	10.01
	100.00	100.30	100.10
2011-06-20	0.00	0.13	0.01
	10.00	9.62	9.99
	100.00	100.20	100.00
2011-06-21	0.00	0.02	0.01
	10.00	10.04	9.98
	100.00	100.00	100.00
2011-06-25	0.00	0.02	0.01
	10.00	10.04	9.98
	100.00	100.00	100.00
2011-06-28	0.00	-0.01	0.02
	10.00	9.80	9.98
	100.00	99.80	99.80
2011-06-30	0.00	0.04	0.01
	10.00	10.06	9.99
	100.00	100.00	100.00
2011-07-04	0.00	-0.22	0.01
	10.00	10.46	10.00
	100.00	101.00	99.90
2011-07-05	0.00	-0.01	0.00
	10.00	8.65	10.01
	100.00	97.20	100.20
2011-07-06	0.00	0.03	0.01
	10.00	10.21	10.01
	100.00	100.10	100.00
2011-07-09	0.00	0.02	0.01
	10.00	9.63	10.02
	100.00	98.80	100.30
2011-07-10	0.00	0.01	0.01
	10.00	10.03	9.98
	100.00	100.60	100.10
2011-07-11	0.00	0.00	0.00
	10.00	9.94	9.98
	100.00	100.30	100.00
2011-07-12	0.00	0.00	0.00
	10.00	10.03	9.98
	100.00	100.10	100.00
2011-07-13	0.00	0.02	0.02
	10.00	10.04	9.99
	100.00	100.10	100.00

Date	Standard	Initial Reading (NTU)	Final Reading (NTU)
2011-07-14	0.00	0.00	0.00
	10.00	9.97	9.99
	100.00	100.00	100.00
2011-07-15	0.00	0.02	0.01
	10.00	10.04	9.99
	100.00	100.10	100.00
2011-07-16	0.00	0.04	0.01
	10.00	9.93	10.02
	100.00	100.10	100.00
2011-07-17	0.00	0.09	0.00
	10.00	9.83	10.02
	100.00	100.10	100.00
2011-07-18	0.00	0.05	0.00
	10.00	10.08	10.03
	100.00	100.10	100.00
2011-07-19	0.00	0.04	0.00
	10.00	10.04	10.01
	100.00	100.10	100.00
2011-07-20	0.00	0.02	0.01
	10.00	10.00	9.98
	100.00	99.80	100.00
2011-07-21	0.00	0.00	0.01
	10.00	9.97	9.98
	100.00	99.80	99.90
2011-07-22	0.00	0.01	0.00
	10.00	10.02	9.98
	100.00	100.10	99.90
2011-07-23	0.00	0.05	0.01
	10.00	10.09	10.03
	100.00	100.70	100.10
2011-07-24	0.00	-0.10	0.01
	10.00	9.98	9.99
	100.00	100.20	99.90
2011-07-25	0.00	0.03	0.00
	10.00	10.07	10.02
	100.00	100.20	100.10
2011-07-26	0.00	1.04	0.02
	10.00	11.00	10.30
	100.00	100.90	100.20
2011-07-27	0.00	-0.03	0.01
	10.00	9.40	10.01
	100.00	95.10	99.90
2011-07-28	0.00	0.03	0.01
	10.00	10.00	9.97
	100.00	100.10	100.00
2011-07-29	0.00	0.02	-0.02
	10.00	9.96	9.99
	100.00	100.00	99.70
2011-07-30	0.00	-0.13	0.03
	10.00	410.01	9.99
	100.00	98.70	100.20

Date	Standard	Initial Reading (NTU)	Final Reading (NTU)
2011-07-31	0.00	-0.04	0.01
	10.00	10.01	9.99
	100.00	98.70	100.20
2011-08-01	0.00	-0.08	0.01
	10.00	9.98	9.99
	100.00	102.40	100.10
2011-08-02	0.00	0.04	0.02
	10.00	10.55	10.00
	100.00	99.00	100.00
2011-08-03	0.00	-0.03	-0.01
	10.00	10.01	9.99
	100.00	99.50	100.20
2011-08-04	0.00	0.05	0.02
	10.00	9.99	10.01
	100.00	99.60	100.20
2011-08-05	0.00	0.03	0.02
	10.00	9.97	10.00
	100.00	99.20	100.20
2011-08-06	0.00	0.02	0.02
	10.00	9.97	10.00
	100.00	100.70	100.20
2011-08-07	0.00	0.01	-0.02
	10.00	9.94	9.98
	100.00	100.00	99.80
2011-08-08	0.00	0.07	0.00
	10.00	10.10	10.03
	100.00	100.40	100.20
2011-08-09	0.00	0.05	0.02
	10.00	10.09	10.04
	100.00	100.03	99.90
2011-08-10	0.00	-0.02	0.02
	10.00	10.10	9.99
	100.00	99.90	99.90
2011-08-11	0.00	0.04	0.01
	10.00	9.97	10.02
	100.00	100.10	100.00
2011-08-12	0.00	0.03	0.02
	10.00	10.09	10.02
	100.00	100.90	99.90
2011-08-13	0.00	0.03	0.01
	10.00	10.04	10.01
	100.00	9.99	100.00
2011-08-14	0.00	-0.10	0.00
	10.00	10.18	10.01
	100.00	100.40	100.00
2011-08-15	0.00	0.02	0.01
	10.00	10.03	10.02
	100.00	100.00	100.00
2011-08-16	0.00	0.02	0.02
	10.00	10.01	10.01
	100.00	100.00	100.00

Date	Standard	Initial Reading	Final Reading
		(NTU)	(NTU)
2011-08-17	0.00	0.05	0.03
	10.00	10.03	10.02
	100.00	100.00	100.00
2011-08-18	0.00	0.01	0.01
	10.00	10.04	10.03
	100.00	99.90	100.00
2011-08-19	0.00	0.01	0.01
	10.00	10.03	10.01
	100.00	100.11	99.90
2011-08-20	0.00	0.02	0.02
	10.00	9.99	10.04
	100.00	99.50	99.80
2011-08-21	0.00	0.02	0.00
	10.00	10.03	9.99
	100.00	100.10	99.90
2011-08-22	0.00	0.00	-0.01
	10.00	10.00	9.96
	100.00	99.60	100.20
2011-08-23	0.00	0.13	0.02
	10.00	10.02	9.96
	100.00	9.99	100.10
2011-08-24	0.00	0.01	0.00
	10.00	9.96	9.99
	100.00	9.98	100.00
2011-08-25	0.00	0.02	0.03
	10.00	10.02	10.00
	100.00	99.90	99.80
2011-08-26	0.00	0.01	0.01
	10.00	10.03	9.98
	100.00	100.10	100.20
2011-08-27	0.00	0.03	0.04
	10.00	9.96	10.03
	100.00	100.50	99.60
2011-08-28	0.00	0.03	0.04
	10.00	9.95	10.20
	100.00	100.80	100.20
2011-08-29	0.00	0.05	-0.01
	10.00	10.05	10.01
	100.00	99.70	100.10
2011-08-30	0.00	-0.36	-0.02
	10.00	9.88	9.99
	100.00	98.10	99.90
2011-08-31	0.00	0.17	0.01
	10.00	10.13	10.02
	100.00	101.30	99.90
2011-09-01	0.00	0.03	0.01
	10.00	9.98	10.01
	100.00	100.10	100.00
2011-09-02	0.00	0.10	0.00
	10.00	9.98	10.01
	100.00	100.00	100.00

Date	Standard	Initial Reading (NTU)	Final Reading (NTU)
2011-09-03	0.00	0.03	0.00
	10.00	10.05	10.02
	100.00	100.00	100.00
2011-09-04	0.00	0.05	0.01
	10.00	10.01	10.01
	100.00	100.10	100.00
2011-09-05	0.00	0.01	0.00
	10.00	10.00	10.00
	100.00	99.60	99.90
2011-09-06	0.00	0.00	0.00
	10.00	10.05	10.05
	100.00	100.30	100.30
2011-09-07	0.00	0.01	0.01
	10.00	10.03	10.03
	100.00	100.20	100.20
2011-09-08	0.00	0.00	0.00
	10.00	10.04	10.01
	100.00	100.10	100.00
2011-09-09	0.00	0.01	0.00
	10.00	10.06	10.02
	100.00	100.30	100.00
2011-09-10	0.00	0.06	0.01
	10.00	10.05	10.00
	100.00	100.10	100.00
2011-09-11	0.00	0.01	0.00
	10.00	10.02	10.02
	100.00	100.20	100.00
2011-09-12	0.00	0.02	0.00
	10.00	10.01	9.99
	100.00	100.20	100.00
2011-09-13	0.00	0.04	0.00
	10.00	10.08	10.02
	100.00	100.00	100.00
2011-09-14	0.00	0.02	0.00
	10.00	10.03	10.01
	100.00	100.00	100.00
2011-09-15	0.00	0.00	0.00
	10.00	10.07	10.01
	100.00	100.60	100.10
2011-09-16	0.00	0.06	0.00
	10.00	9.93	9.97
	100.00	99.50	100.00
2011-09-17	0.00	0.01	0.01
	10.00	10.01	10.01
	100.00	100.00	100.00
2011-09-18	0.00	0.01	0.01
	10.00	10.03	10.02
	100.00	100.01	100.00
2011-09-19	0.00	0.38	0.04
	10.00	11.31	10.03
	100.00	108.08	100.80

Date	Standard	Initial Reading	Final Reading
		(NTU)	(NTU)
2011-09-20	0.00	0.58	0.00
	10.00	11.54	9.98
	100.00	108.00	99.90

Table 7.29: 2011 Analite NEP 160 #5 Turbidity Meter Calibration

Date	Standard	Initial Reading (NTU)	Final Reading (NTU)
2011-01-16	0.00	0.05	0.01
	10.00	10.03	10.01
	100.00	100.20	100.00
2011-01-17	0.00	0.02	0.01
	10.00	10.02	10.00
	100.00	100.00	100.00
2011-01-18	0.00	0.01	0.01
	10.00	10.02	10.02
	100.00	100.00	100.00
2011-01-19	0.00	0.06	0.02
	10.00	10.11	10.01
	100.00	100.60	100.00
2011-03-01	0.00	0.07	0.04
	10.00	10.05	10.02
	100.00	98.30	100.10
2011-03-02	0.00	0.33	0.02
	10.00	10.08	9.99
	100.00	100.90	99.80
2011-03-04	0.00	0.15	0.02
	10.00	10.01	10.00
	100.00	99.20	100.20
2011-03-06	0.00	0.04	0.02
	10.00	9.97	9.99
	100.00	98.30	99.90
2011-03-07	0.00	0.04	0.04
	10.00	10.04	9.97
	100.00	101.10	99.80

Table 7.30: 2011 Hoskin Scientific 340I pH Meter Calibration

Date	Standard	Initial Reading	Final Reading	Slope (mV)
2011-01-04	4.00	4.06	4.01	-58.6
	7.01	7.03	7.01	
2011-01-10	4.00	4.08	4.00	-58.3
	7.01	7.09	7.00	
2011-01-13	4.00	4.07	4.04	-58.5
	7.01	7.03	7.01	
2011-01-17	4.00	4.55	4.00	-59.7
	7.01	8.11	7.00	
2011-01-18	4.00	4.11	4.01	-59.8
	7.01	7.18	7.01	
2011-01-24	4.00	4.11	4.02	-58.1
	7.01	6.89	6.99	
2011-02-13	4.00	4.31	4.01	-58.1
	7.01	6.86	7.01	
2011-02-17	4.00	4.63	4.02	-58.0
	7.01	6.73	7.01	
2011-03-06	4.00	4.06	4.01	-57.9
	7.01	6.95	7.01	
2011-03-09	4.00	3.98	4.00	-58.2
	7.01	7.01	7.00	
2011-03-11	4.00	3.99	4.01	-57.9
	7.01	7.00	7.01	
2011-03-12	4.00	4.02	4.00	-58.6
	7.01	7.01	7.01	
2011-03-13	4.00	4.03	4.00	-57.6
	7.01	7.01	7.01	
2011-03-14	4.00	4.02	4.01	-58.1
	7.01	7.02	7.00	
2011-03-15	4.00	4.01	4.01	-57.9
	7.01	6.99	7.00	
2011-03-16	4.00	4.01	4.01	-57.7
	7.01	7.02	7.00	
2011-03-17	4.00	4.00	4.02	-58.3
	7.01	6.99	7.00	
2011-03-18	4.00	3.98	4.02	-58.3
	7.01	6.96	7.05	
2011-03-19	4.00	4.06	4.01	-58.2
	7.01	6.99	7.02	
2011-03-20	4.00	4.02	4.01	-58.3
	7.01	6.98	6.99	
2011-03-25	4.00	4.09	3.97	-57.5
	7.01	7.06	7.00	
2011-03-27	4.00	3.98	4.01	-56.8
	7.01	7.01	7.00	
2011-03-28	4.00	3.98	4.01	-54.5
	7.01	6.91	7.00	
2011-03-29	4.00	4.00	4.00	-57.8
	7.01	7.03	7.00	
2011-03-30	4.00	4.04	4.01	-57.8
	7.01	7.04	7.01	

Date	Standard	Initial Reading	Final Reading	Slope (mV)
2011-03-31	4.00	4.02	3.98	-58.1
	7.01	7.04	7.02	
2011-04-01	4.00	4.00	4.00	-56.6
	7.01	7.01	7.01	
2011-04-02	4.00	4.03	4.01	-57.2
	7.00	7.00	7.00	
2011-04-03	4.00	4.05	4.02	-58.0
	7.00	6.98	7.01	
2011-04-04	4.00	4.05	4.01	-58.0
	7.00	7.01	7.00	
2011-04-05	4.00	4.07	4.01	-57.4
	7.00	7.04	7.02	
2011-04-06	4.00	3.99	4.01	-57.9
	7.00	7.04	7.01	
2011-04-07	4.00	4.00	4.00	-58.3
	7.00	7.03	7.02	
2011-04-08	4.00	4.00	4.00	-58.2
	7.00	7.01	7.01	
2011-04-09	4.00	4.00	4.00	-58.5
	7.00	7.01	7.00	
2011-04-10	4.00	6.94	3.99	-58.2
	7.00	4.01	7.00	
2011-04-11	4.00	7.12	4.00	-58.2
	7.00	4.03	7.01	
2011-04-12	4.00	4.03	4.01	-58.2
	7.00	7.06	7.02	
2011-04-13	4.00	4.04	4.01	-58.3
	7.00	7.02	7.01	
2011-04-14	4.00	4.04	4.01	-57.8
	7.00	7.02	7.01	
2011-04-15	4.00	4.03	4.02	-56.5
	7.00	7.02	6.98	
2011-04-16	4.00	4.01	4.00	-57.1
	7.00	6.96	6.97	
2011-04-17	4.00	4.01	4.01	-55.8
	7.00	7.03	6.96	
2011-04-18	4.00	4.04	4.01	-56.7
	7.00	6.98	7.02	
2011-04-19	4.00	4.05	4.01	-56.1
	7.00	7.00	7.00	
2011-04-20	4.00	4.07	3.99	-56.2
	7.00	7.07	7.02	
2011-04-21	4.00	4.05	4.00	-56.0
	7.00	7.02	7.02	
2011-04-22	4.00	4.03	4.00	-56.2
	7.00	7.01	7.00	
2011-04-23	4.00	4.02	4.01	-56.3
	7.00	7.00	7.00	
2011-04-24	4.00	4.01	4.00	-56.0
	7.00	7.02	7.01	
2011-04-25	4.00	4.00	4.01	-58.0
	7.00	7.01	7.05	

Date	Standard	Initial Reading	Final Reading	Slope (mV)
2011-04-26	4.00	4.05	4.00	-55.8
	7.00	7.06	7.00	
2011-04-27	4.00	4.01	3.98	-57.2
	7.00	7.05	7.03	
2011-04-28	4.00	4.01	3.93	-55.3
	7.00	7.02	7.00	
2011-04-29	4.00	4.03	4.00	-55.4
	7.00	7.05	7.00	
2011-05-01	4.00	4.05	4.00	-55.2
	7.00	7.03	7.00	
2011-05-02	4.00	4.07	4.00	-55.1
	7.00	7.09	7.00	
2011-05-03	4.00	4.02	4.00	-56.4
	7.00	7.09	7.00	
2011-05-04	4.00	4.06	4.00	-56.3
	7.00	7.08	7.00	
2011-05-05	4.00	4.06	4.01	-56.1
	7.00	7.04	7.00	
2011-05-06	4.00	4.05	4.00	-55.9
	7.00	7.03	7.00	
2011-05-08	4.00	4.05	4.00	-55.3
	7.00	7.04	7.01	
2011-05-09	4.00	3.98	4.00	-55.8
	7.00	6.98	7.00	
2011-05-10	4.00	4.05	4.00	-55.4
	7.00	7.03	7.00	
2011-05-11	4.00	4.03	4.00	-55.4
	7.00	7.05	7.00	
2011-05-12	4.00	4.05	4.00	-55.5
	7.00	7.03	7.00	
2011-05-13	4.00	4.05	4.00	-54.6
	7.00	7.02	7.01	
2011-05-14	4.00	4.02	4.01	-56.7
	7.00	7.01	6.99	
2011-05-15	4.00	4.06	4.00	-54.1
	7.00	7.02	7.02	
2011-05-16	4.00	4.01	3.98	-55.3
	7.00	7.02	7.00	
2011-05-17	4.00	4.03	4.00	-53.6
	7.00	7.01	7.02	
2011-05-18	4.00	3.98	4.02	-58.5
	7.00	6.98	7.03	
2011-05-19	4.00	4.07	4.00	-54.6
	7.00	7.12	7.02	
2011-05-20	4.00	4.02	4.00	-56.9
	7.00	7.03	7.02	
2011-05-21	4.00	4.04	4.02	-54.9
	7.00	7.00	7.00	
2011-05-22	4.00	4.32	3.94	-53.0
	7.00	7.04	7.02	
2011-05-23	4.00	4.03	3.98	-54.6
	7.00	7.02	6.95	

Date	Standard	Initial Reading	Final Reading	Slope (mV)
2011-05-24	4.00	4.01	3.99	-53.5
	7.00	6.74	7.02	
2011-05-25	4.00	4.01	3.99	-54.2
	7.00	7.01	7.02	
2011-05-26	4.00	4.01	4.00	-56.8
	7.00	6.96	6.98	
2011-05-27	4.00	4.01	4.02	-53.6
	7.00	6.96	7.02	
2011-05-28	4.00	4.03	4.01	-54.2
	7.00	7.01	7.01	
2011-05-29	4.00	4.02	4.03	-53.7
	7.00	7.01	7.03	
2011-05-30	4.00	4.04	4.01	-53.2
	7.00	7.07	7.01	
2011-05-31	4.00	4.08	4.01	-51.5
	7.00	7.05	7.01	
2011-06-01	4.00	4.08	4.00	-51.8
	7.00	7.09	7.01	
2011-06-02	4.00	3.90	4.00	-52.6
	7.00	7.04	7.00	
2011-06-03	4.00	4.93	4.00	-52.3
	7.00	7.06	7.00	
2011-06-04	4.00	3.90	4.00	-52.0
	7.00	6.91	7.00	
2011-06-05	4.00	3.98	4.01	-52.7
	7.00	6.99	7.01	
2011-06-06	4.00	4.09	4.01	-52.7
	7.00	6.98	7.01	
2011-06-07	4.00	3.94	4.01	-52.7
	7.00	7.02	7.01	
2011-06-08	4.00	3.69	4.01	-58.7
	7.00	3.69	6.99	
2011-06-10	4.00	4.02	3.98	-58.7
	7.00	7.02	6.97	
2011-06-11	4.00	4.07	4.01	-56.5
	7.00	6.95	6.97	
2011-06-12	4.00	3.98	4.02	-57.8
	7.00	7.02	6.99	
2011-06-13	4.00	4.02	4.01	-56.9
	7.00	7.02	6.99	
2011-06-14	4.00	4.02	4.01	-54.3
	7.00	7.01	6.98	
2011-06-15	4.00	3.97	4.00	-58.2
	7.00	6.98	7.02	
2011-06-16	4.00	4.05	4.00	-57.0
	7.00	7.03	7.02	
2011-06-18	4.00	3.95	4.03	-58.6
	7.00	6.99	7.01	
2011-06-19	4.00	4.09	4.01	-58.4
	7.00	7.01	7.01	
2011-06-20	4.00	4.05	4.01	-57.8
	7.00	7.03	7.02	

Date	Standard	Initial Reading	Final Reading	Slope (mV)
2011-06-25	4.00	4.05	4.01	
	7.00	7.09	7.01	
2011-06-30	4.00	4.03	4.01	-58.2
	7.00	7.08	7.00	
2011-07-04	4.00	4.03	4.01	-57.2
	7.00	7.07	7.01	
2011-07-05	4.00	4.09	3.98	-57.5
	7.00	7.11	7.00	
2011-07-06	4.00	4.10	4.01	-57.8
	7.00	7.13	7.01	
2011-07-09	4.00	4.51	3.99	-57.6
	7.00	7.20	6.99	
2011-07-10	4.00	3.99	4.00	-57.4
	7.00	6.95	7.01	
2011-07-11	4.01	4.01	4.01	-57.0
	7.01	7.00	7.00	
2011-07-12	4.01	4.02	4.00	-56.6
	7.00	7.04	7.01	
2011-07-13	4.01	4.04	4.00	-56.4
	7.00	7.02	7.03	
2011-07-14	4.01	4.01	4.01	-56.7
	7.00	6.98	6.99	
2011-07-15	4.01	4.05	4.00	-57.8
	7.00	7.04	6.99	
2011-07-16	4.01	4.04	4.02	-57.2
	7.00	7.03	6.98	
2011-07-17	4.01	4.03	4.01	-56.9
	7.00	7.07	7.03	
2011-07-18	4.01	4.12	4.00	-55.9
	7.00	7.04	7.02	
2011-07-19	4.01	4.00	4.00	-57.8
	7.00	7.02	6.97	
2011-07-20	4.01	4.21	4.01	-53.1
	7.00	6.98	7.01	
2011-07-21	4.01	4.08	4.04	-52.8
	7.00	6.98	7.04	
2011-07-23	4.01	4.11	4.01	-52.5
	7.00	7.07	7.02	
2011-07-24	4.01	4.10	3.99	-52.4
	7.00	7.03	7.01	
2011-07-25	4.01	4.07	4.03	-53.4
	7.00	7.06	7.01	
2011-07-26	4.01	4.09	4.01	-52.9
	7.00	7.08	7.00	
2011-07-27	4.01	4.09	4.01	-53.4
	7.00	7.06	7.00	
2011-07-29	4.01	4.07	4.02	-51.6
	7.00	7.06	7.04	
2011-07-30	4.01	3.66	4.00	-58.4
	7.00	7.04	7.01	
2011-07-31	4.01	4.03	4.01	???
	7.00	7.01	7.01	

Date	Standard	Initial Reading	Final Reading	Slope (mV)
2011-08-01	4.01	4.03	4.00	-58.7
	7.00	7.05	7.01	
2011-08-02	4.01	4.27	4.01	-52.1
	7.00	6.96	7.01	
2011-08-03	4.01	4.03	4.01	-58.4
	7.00	7.01	7.01	
2011-08-04	4.01	4.04	4.01	56.2
	7.00	7.05	7.01	
2011-08-05	4.01	4.05	4.01	-54.3
	7.00	7.06	7.00	
2011-08-06	4.01	4.01	4.01	-57.5
	7.00	7.00	7.00	
2011-08-07	4.01	4.09	3.98	-51.5
	7.00	7.08	7.00	
2011-08-08	4.01	4.03	4.01	-51.7
	7.00	7.02	7.00	
2011-08-09	4.01	4.04	4.00	-50.6
	7.00	7.01	7.02	
2011-08-10	4.01	4.05	4.01	-56.5
	7.00	7.08	7.03	
2011-08-11	4.01	4.03	4.02	-54.9
	7.00	7.02	7.01	
2011-08-12	4.01	4.07	3.99	-54.7
	7.00	7.03	6.99	
2011-08-15	4.01	4.05	4.00	-58.3
	7.00	7.03	7.01	
2011-08-19	4.01	3.93	3.99	-58.3
	7.00	6.93	7.01	
2011-08-23	4.01	4.40	4.01	-53.2
	7.00	7.70	7.03	
2011-08-27	4.01	4.93	4.01	-58.6
	7.00	6.28	7.03	
2011-08-29	4.01	4.27	3.97	-59.4
	7.00	7.30	7.01	
2011-08-31	4.01	4.04	4.00	-58.5
	7.00	6.97	6.99	
2011-09-01	4.01	4.06	3.99	-57.9
	7.00	6.97	6.99	
2011-09-05	4.01	4.02	3.99	-57.6
	7.00	7.06	7.00	
2011-09-06	4.01	4.03	4.03	-57.9
	7.00	6.91	7.01	
2011-09-07	4.01	4.03	4.03	-58.5
	7.00	7.01	7.01	
2011-09-12	4.01	4.05	3.99	-58.5
	7.00	7.03	7.00	
2011-09-14	7.00	6.98	7.02	-57.6
	4.01	4.06	4.01	
2011-09-15	7.00	7.00	7.02	-57.6
	4.01	4.06	3.99	
2011-09-16	7.00	7.10	7.02	-57.6
	4.01	3.96	4.00	

Date	Standard	Initial Reading	Final Reading	Slope (mV)
2011-09-18	7.00	6.99	7.00	-58.1
	4.01	4.02	4.00	
2011-09-19	4.01	4.14	4.00	-58.5
	7.00	7.10	7.00	
2011-09-20	4.00	4.01	4.01	-58.5
	7.00	7.00	7.00	
2011-09-21	4.00	4.04	3.98	-57.6
	7.00	7.04	6.98	
2011-09-26	4.00	3.89	4.02	-57.0
	7.00	6.90	7.04	
2011-09-29	4.00	4.03	4.00	-58.1
	7.00	7.01	7.03	
2011-10-03	4.00	4.05	4.02	
	7.00	7.07	7.00	
2011-10-04	4.00	4.03	4.01	-57.5
	7.00	7.02	7.02	
2011-10-05	4.00	4.05	4.01	-58.2
	7.00	7.12	7.00	
2011-10-07	4.00	4.05	4.01	-57.7
	7.00	7.05	7.02	
2011-10-10	4.00	4.07	4.01	-58.0
	7.00	7.05	7.01	
2011-10-11	4.00	3.97	3.99	-57.7
	7.00	7.05	7.02	
2011-10-12	4.00	4.03	3.99	-58.3
	7.00	7.05	7.01	
2011-10-17	4.00	4.05	3.99	-54.8
	7.00	7.08	7.02	
2011-10-18	4.00	3.91	4.01	-57.8
	7.00	7.10	7.02	
2011-10-19	4.00	4.04	4.02	-57.4
	7.00	7.06	7.04	
2011-10-24	4.00	4.08	4.00	-58.1
	7.00	7.02	6.97	
2011-10-31	4.00	4.03	4.00	-57.6
	7.00	7.04	7.00	
2011-11-01	4.00	4.05	4.01	-58.3
	7.00	6.99	7.00	
2011-11-07	4.00	4.01	4.00	-56.7
	7.00	7.02	7.00	
2011-11-10	4.00	4.05	4.00	
	7.00	7.04	7.01	
2011-11-11	4.00	4.04	4.00	-57.1
	7.00	7.03	7.01	
2011-11-12	4.00	3.95	4.01	-56.9
	7.00	7.05	7.03	
2011-11-13	4.00	3.94	4.01	-57.9
	7.00	7.02	7.02	
2011-11-14	4.00	3.98	3.98	-58.3
	7.00	7.00	7.00	
2011-11-15	4.00	4.07	4.00	-56.7
	7.00	7.04	7.03	

Date	Standard	Initial Reading	Final Reading	Slope (mV)
2011-11-16	4.00	4.03	4.03	-57.8
	7.00	7.07	7.03	
2011-11-17	4.00	4.08	4.01	-57.1
	7.00	7.09	7.03	
2011-11-19	4.00	3.98	4.00	-57.5
	7.00	7.05	7.02	
2011-11-20	4.00	4.02	4.01	-57.5
	7.00	7.06	7.03	
2011-11-21	4.00	4.04	3.99	-57.2
	7.00	7.06	7.02	
2011-11-22	4.00	4.05	4.02	-56.9
	7.00	7.03	7.00	
2011-11-24	4.00	3.95	3.99	-57.0
	7.00	6.98	7.01	
2011-12-01	4.00	4.06	3.98	-56.5
	7.00	7.06	7.02	
2011-12-05	4.00	4.17	4.00	-55.7
	7.00	7.07	7.02	
2011-12-08	4.00	3.95	4.01	-55.7
	7.00	4.04	7.02	
2011-12-12	4.00	3.99	4.00	-56.4
	7.00	7.06	7.01	
2011-12-18	4.00	3.94	4.01	
	7.00	6.86	7.03	
2011-12-19	4.00	4.04	3.99	
	7.00	7.03	6.99	
2011-12-23	4.00	3.89	4.03	-58.5
	7.00	7.01	7.01	

Table 7.31: 2011 Hanna Multi-Parameter #1 Meter Calibration

Date	pH			Dissolved Oxygen			Conductivity		
	Standard	Initial Reading	Final Reading	Standard	Initial Reading (%)	Final Reading (%)	Standard (µS/cm)	Initial Reading (µS/cm)	Final Reading (µS/cm)
2011-01-14				air saturation	109.7	100	1413	1229	1409
2011-01-17	7.00 4.00	7.35 4.59	7.01 4.01	air saturation	97.2	100	1413	1398	1414
2011-04-12	7.00 4.00	7.18 4.02	7.01 4.00	air saturation	9640	100.1	1413	1415	1413

Table 7.32: 2011 Hanna Multi-Parameter #2 Meter Calibration

Date	pH			Dissolved Oxygen			Conductivity		
	Standard	Initial Reading	Final Reading	Standard	Initial Reading (%)	Final Reading (%)	Standard (µS/cm)	Initial Reading (µS/cm)	Final Reading (µS/cm)
2011-02-05				air saturation	93.3	100	1413	1410	1415
2011-02-13				air saturation	86.2	100	1413	1421	1414
2011-09-12	7.00 4.00	7.14 4.04	7 4				1413	1420	1413
2011-09-14	7.00 4.00	6.98 3.92	7.02 4.01				1413	1440	1413
2011-09-15	7.00 4.00	7.00 4.06	7.02 3.99				1413	1395	1413
2011-09-18	7.00 4.00	6.99 4.02	7 4				1413	1432	1413
2011-09-19	7.00 4.00	7.10 4.14	7 4				1413	1376	1413
2011-11-21	7.00 4.00	7.17 4.12	7.01 3.99	air saturation	103	100			
2011-11-22	7.00 4.00	6.99 3.99	7 3.99	air saturation	105	100			
2011-11-23	7.00 4.00	6.98 3.99	7.01 4.02	air saturation	105	100			
2011-11-24	7.00 4.00	7.09 4.06	7.01 4.02						
2011-11-25	7.00 4.00	6.99 4.00	6.99 3.99						
2011-11-26	7.00 4.00	6.96 3.97	7.01 3.97						
2011-11-27	7.00 4.00	6.98 3.78	7.01 4						
2011-12-17	7.00 4.00	7.03 4.08	6.98 4	air saturation	102.2	100			
2011-12-20	7.00 4.00	7.22 4.04	7.02 4	air saturation	92.1	99.9	1413	1400	1411
2011-12-23	7.00 4.00	7.13 4.28	4 7.05	air saturation	102	100	1413	1474	1428
2011-12-24	7.00 4.00	6.95 3.54	7 4	air saturation	100.5	100	1413	1443	1427

Table 7.33: 2011 YSI Meter Calibration

Date	Dissolved Oxygen			Conductivity		
	Standard	Initial Reading (%)	Final Reading (%)	Standard ($\mu\text{S/cm}$)	Initial Reading ($\mu\text{S/cm}$)	Final Reading ($\mu\text{S/cm}$)
14/01/2011	air saturation	107.9	99.6	1413	1489	1414
17/01/2011	air saturation	100.7	99.7	1413	1321	1417
12/04/2011	air saturation	97.5	100.1	1413	2745.4	1406

Table 7.34: 2011 Freshwater Usage

Water Location	Source Lake	Jan	Feb	Mar	Apr	May	Jun	Jul
Camp	Third Portage Lake	3,040	2,861	2,303	3,060	3,302	3,331	3,186
Mill (freshwater tank)	Third Portage Lake	67,852	70,324	85,312	80,930	94,627	87,228	89,247
Emulsion plant	No-name Lake	0	0	0	0	0	0	193
Water truck	Second Portage Lake	633	202	186	2,464	1,814	107	1,970
Total Freshwater Usage (m³)		71,525	73,387	87,801	86,454	99,743	90,666	94,595
Ore Water (m³)	Ore	974	1,072	2,920	4,319	5,199	9,643	4,612
Reclaim Water Usage (m³)	Tailings Pond	162,170	153,657	151,112	174,706	167,012	184,166	209,868

Water Location	Source Lake	Aug	Sep	Oct	Nov	Dec	Total
Camp	Third Portage Lake	3,516	3,510	3,285	3,309	3,135	37,837
Mill (freshwater tank)	Third Portage Lake	97,141	136,458	81,465	65,049	84,823	1,040,456
Emulsion plant	No-name Lake	215	198	176	120	92	994
Water truck	Second Portage Lake	265	691	198	158	278	8,967
Total Freshwater Usage (m³)		101,137	140,858	85,124	68,636	88,328	1,088,254
Ore Water (m³)	Ore	2,112	2,971	3,110	2,624	4,606	44,162
Reclaim Water Usage (m³)	Tailings Pond	200,061	172,168	191,984	134,345	243,021	2,144,270