



MEADOWBANK DIVISION

Monitoring Program Summary Report

June 2012

Type A Water License 2AM-MEA0815

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SECTION 1 • BACKGROUND

As required under Part I, Item 25 of Type A Water License 2AM-MEA0815, this report documents the water management and monitoring activity at the mine site for the month. This includes water usage, Portage Attenuation Pond discharge water quality and sewage treatment plant discharge water quality (to onsite storm water management pond).

In addition, a summary of spills/actions for the month is included.

SECTION 2 • WATER MANAGEMENT

2.1 WATER USAGE

Freshwater usage for June 2012 is summarized in Table 2.1 below. Total freshwater used for the month was 92,576 m³. The total amount of reclaim water used in the mill for June was 223,627 m³.

Table2-1: Freshwater Usage (m3)

	February
Freshwater Storage Tank	92,449
Emulsion Plant	127
Water Truck	0
Total	92,576

2.2 SEWAGE TREATMENT PLANTS

Four effluent wastewater samples were taken from the onsite sewage treatment plants (STP's) in June.

The Seprotech STP results are shown in Table 2.2.1 below; the LJ-Mix STP results are shown in Table 2.2.2. The results of the discharge show the system was working well. The effluent is discharged to the onsite stormwater pond and is not discharged to the natural environment.

Table 2.2.1: Seprotech Effluent Results

Date	Units	4-Jun-12	13-Jun-12	20-Jun-12	25-Jun-12
Ammonia	mg N/L	< 0.05	< 0.05	< 0.05	< 0.05
Ammonia-Ammonium	mg N/L	10.5	9.4	8.1	5.0
Total Kjeldahl Nitrogen	mg N/L	15	15	13	9
BOD-5	mg/L	13	9	19	6
COD	mg/L	60	48	74	68
Total Suspended Solids	mg/L	31	21	26	22
Nitrate	mg N/L	21.8	20.4	22.5	22.3
Nitrite	mg N/L	0.01	0.02	0.02	0.01
Total Phosphorus	mg/L	9.9	11.4	9.6	7.7
pH *	units	4.20	4.40	5.20	4.90
Fecal Coliform	UFC/100 mL	132	12	140	240
Total Coliform	UFC/100 mL	< 1,000	< 1,000	***	< 10,000

***: The great number of bacteria restrains distinction of total coliforms and atypical colonies. Numbers of total coliforms may be misjudged there this result is not applicable.

Table 2.2.2: LJ-Mix Effluent Results

Date	Units	4-Jun-12	13-Jun-12	20-Jun-12	25-Jun-12
Ammonia	mg N/L	< 0.05	< 0.05	0.2	< 0.05
Ammonia-Ammonium	mg N/L	12.8	12.9	18.5	12.9
Total Kjeldahl Nitrogen	mg N/L	17	21	40	13
BOD-5	mg/L	14	10	15	13
COD	mg/L	56	43	69	74
Total Suspended Solids	mg/L	27	13	32	23
Nitrate	mg N/L	22.8	28.5	22.6	30.5
Nitrite	mg N/L	0.10	0.06	1.60	< 0.01
Total Phosphorus	mg/L	9.7	9.1	8	7.9
pH *	units	5.10	5.30	6.20	5.00
Fecal Coliform	UFC/100 mL	40	140	340	600
Total Coliform	UFC/100 mL	400	1,400	6,000	< 100,000

2.3 ATTENUATION POND EFFLUENT

In June, we discharged effluent to the environment from the Portage Attenuation Pond in Third Portage Lake.

Four weekly effluent samples were taken from the Actiflo Water Treatment Plant (ST-9). Please note that the June 19th was lost in transportation from mine site to the analytical laboratory. All the results respected the effluent quality limits the License A (Part F, item 2).

The sample results are shown in Table 2.3.1 below.

Table 2.3.1: ST-9 - Effluent Monitoring

Date Hour	Max grab conc.	Units	June 5, 2012 8:40	June 12, 2012 7:45	June 19, 2012 8:20	June 26, 2012 10:00	Monthly average	Max avg. conc.
Ammonia	32	mg N/L	0.09	0.09	⌘	0.05	0.08	16
Chloride	2000	mg/L	19.7	34.1	⌘	10.8	21.5	1000
Cyanide Total	1.0	mg/L	0.10	0.145	⌘	0.066	0.103	0.5
Nitrate	40	mg N/L	1.3	2.1	⌘	0.9	1.4	20
pH**	6-9.0		7.19	7.27	6.63	7.2	7.07	6-9.0
C10-C50	6	mg/L	< 0.1	< 0.1	⌘	0.1	0.1	3
TSS	30	mg/L	8	2	⌘	2	4	15
Turbidity**	15	NTU	2.91	1.01	2.42	3.73	2.52	15
aluminum	1.5	mg/L	0.835	0.37	⌘	0.631	0.61	1.5
arsenic	0.60	mg/L	0.0041	< 0.0005	⌘	0.0005	0.0017	0.30
cadmium	0.004	mg/L	< 0.00002	< 0.00002	⌘	0.00002	0.00002	0.002
copper	0.2	mg/L	0.0017	0.0019	⌘	0.0013	0.0016	0.1

mercury	0.0008	mg/L	< 0.00001	< 0.00001	⌘	0.00001	0.00001	0.0004
nickel	0.4	mg/L	0.0111	0.0246	⌘	0.0164	0.0174	0.2
lead	0.20	mg/L	< 0.0003	0.0056	⌘	0.0003	0.0021	0.10
zinc	0.8	mg/L	< 0.001	< 0.001	⌘	0.018	0.007	0.4
Dissolved aluminum	1.0	mg/L	< 0.01	0.07	⌘	0.04	0.04	1.0

** indicate the analysis was performed by the environmental department

⌘ indicate the sample was lost in transportation from site to laboratory

SECTION 3 • SPILL MANAGEMENT

AEM has developed a system of tracking spills on-site. Table 3.1 summarizes the AEM spill reports for the month. One (1) spill occurred on site and was reported to the GN spill hotline.

Table 3-1: Summary of AEM Internal Spill Reports

Date of Spill	Hazardous Material	Quantity	Location	Cause of spill	Clean-up action taken	Reported to Spill Hot Line
1-Jun-12	hydraulic oil	340L	Bay goose pit	Rocks fall off pit wall – hit truck	Cont. soil taken to temporary on site storage facility.	Yes