MEADOWBANK DIVISION

Monitoring Program Summary Report

December 2011

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 activity includes: water usage and sewage treatment plant discharge water quality.

Additionally, a summary of the AEM internal spill reporting for the month is included.

SECTION 2 • WATER MANAGEMENT

2.1 WATER USAGE

Freshwater usage for December 2011 is summarized in Table 2.1 below. Freshwater usage for the month totals 88,328 m^3. The consumption of fresh water for mine and mill operations (including production drills, batch plant and dust control) was 84,823 m^3 and the consumption of reclaim water in the mill was 243,021 m^3.

Table 2-1: Freshwater Usage (m^3)

	December
Camp	3,135
Mine & Mill Operations	84,823
Emulsion Plant	92
Water Truck	278
Total	**88,328**

2.2 SEWAGE TREATMENT PLANTS

Three water samples were taken at the effluents of the sewage treatment plants (STP) in December; due to lab closures for the holidays, the weekly samples scheduled for the last week of the month were not collected.

The Seprotech STP results are shown in Table 2.2 below; the LJ-Mix STP results are shown in Table 2.3. The results of the Seprotech discharge show the system was working well. The LJ-Mix discharge results showed altered nutrient loads and elevated bacterial counts; the STP operators took mitigative measures and by December 19th the system was returning to normal operations.

Table 2-2: Seprotech Effluent Results

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	

Table 2-3: LJ-Mix Effluent Results

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	

SECTION 3 • SPILL MANAGEMENT

AEM has developed a system of tracking spills on-site. Table 3.1 summarizes the AEM internal spill reports for the month. Eight (8) spills occurred on site; one 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
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
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