



MEADOWBANK DIVISION

Monitoring Program Summary Report

July 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 July 2012 is summarized in Table 2.1 below. Total freshwater used for the month was 95,820 m³. The total amount of reclaim water used in the mill for July was 251,250 m³.

Table2-1: Freshwater Usage (m3)

	February
Freshwater Storage Tank	95,660
Emulsion Plant	160
Water Truck	0
Total	95,820

2.2 SEWAGE TREATMENT PLANTS

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

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	2-Jul-12	9-Jul-12	16-Jul-12	23-Jul-12	30-Jul-12
Ammonia	mg N/L	< 0.05	< 0.05	< 0.05	<0.05	< 0.05
Ammonia-Ammonium	mg N/L	6.9	7.3	7.5	7.2	6.9
Total Kjeldahl Nitrogen	mg N/L	8	11	11	13	12
BOD-5	mg/L	5	6	13	17	9
COD	mg/L	35	62	62	59	66
Total Suspended Solids	mg/L	17	17	13	14	18
Nitrate	mg N/L	19.2	20.9	22.9	25	22
Nitrite	mg N/L	0.03	0.05	0.02	0.02	0.04
Total Phosphorus	mg/L	13.8	9.7	9.7	11.5	10.6
pH *	units	4.60	5.30	4.70	4.30	4.50
Fecal Coliform	UFC/100 mL	236	16	20	20	56
Total Coliform	UFC/100 mL	< 10,000	< 1,000	200	< 100,000	< 10,000

Table 2.2.2: LJ-Mix Effluent Results

Date	Units	2-Jul-12	9-Jul-12	16-Jul-12	23-Jul-12	30-Jul-12
Ammonia	mg N/L	< 0.05	< 0.05	< 0.05	no flow	< 0.05
Ammonia-Ammonium	mg N/L	11.0	8.6	7.2	no flow	9.3
Total Kjeldahl Nitrogen	mg N/L	13	14	13	no flow	16
BOD-5	mg/L	8	9	15	no flow	18
COD	mg/L	64	73	95	no flow	79
Total Suspended Solids	mg/L	40	30	20	no flow	29
Nitrate	mg N/L	20.0	22.6	23.1	no flow	22.5
Nitrite	mg N/L	0.07	0.1	0.08	no flow	0.21
Total Phosphorus	mg/L	14.4	10.4	9.9	no flow	11.5
pH *	units	4.80	5.40	5.40	no flow	5.40
Fecal Coliform	UFC/100 mL	90	48	60	no flow	80
Total Coliform	UFC/100 mL	< 100,000	2,000	200	no flow	< 1,000

2.3 ATTENUATION POND EFFLUENT

In July, 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). Sample on July 26th was taken as a duplicate of AANDC Inspector samples. 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 next page.

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Table 2.3.1: ST-9 - Effluent Monitoring

Date	Max grab conc.	Units	03/07/2012		10/07/2012		18/07/2012		26/07/2012		Monthly average	Max avg. conc.
Hour			8:15		8:30		7:45		16:00			
Ammonia	32	mg N/L	0.1	<	0.05		0.31		0.17		0.16	16
Chloride	2000	mg/L	31.0		33.1		39.6		21.2		31.2	1000
Cyanide Total	1.0	mg/L	0.187		0.200		0.169		0.128		0.171	0.5
Nitrate	40	mg N/L	1.7		1.4		12.9		14.9		7.7	20
pH**	6-9.0		7.5		-		7.9		7.81		7.74	6-9.0
C10-C50	6	mg/L	< 0.1	<	0.1	<	0.1		NS		0.1	3
TSS	30	mg/L	3		6		4		4		4	15
Turbidity**	15	NTU	0.75		-		1.32		1.44		1.17	15
aluminum	1.5	mg/L	0.506		0.757		1.06		1.33		0.91	1.5
arsenic	0.60	mg/L	0.003		0.005		0.0104		0.0075		0.0065	0.30
cadmium	0.004	mg/L	0.00004	<	0.00002	<	0.00002		0.00068		0.00019	0.002
copper	0.2	mg/L	0.0073		0.0025		0.0035		0.0300		0.0108	0.1
mercury	0.0008	mg/L	< 0.00001	<	0.00001	<	0.00001	<	0.00001		0.00001	0.0004
nickel	0.4	mg/L	0.0154		0.0135		0.0201		0.0306		0.0199	0.2
lead	0.20	mg/L	< 0.0003	<	0.0003	<	0.0003	<	0.0003		0.0003	0.10
zinc	0.8	mg/L	0.014	<	0.001		0.009		0.124		0.037	0.4
Dissolved aluminum	1.0	mg/L	0.02	<	0.01		0.11		0.1		0.06	1.0

** indicate the analysis was performed by the environmental department

- indicate no data available

NS indicate this parameter was not sampled

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. Eight (8) spills 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
14-Jul-12	Diesel	50L	Exploration diesel tank	Human error	Contaminated soil taken to contaminated soil disposal	No
14-Jul-12	Oil	500L	hazmat sorting out	Human error	Oil was pumped into drums, contaminated soil put in drums and stored at Hazmat area	Yes
14-Jul-12	Hydraulic oil	60L	waste dump	Failed component fall on hydraulic hoses	Contaminated soil taken to Hazmat area	No
14-Jul-12	Hydraulic oil	10L	truck shop parking inuksuk side	Failed component	Contaminated soil taken to Hazmat area	No
18-Jul-12	Hydraulic oil	20L	central dyke	Failed component	Contaminated soil taken to Hazmat area	No
17-Jul-12	Oil	600L	maintenance dome side	Human error	Pump free oil on the ground and bring contaminated soil to contaminated soil disposal area.	Yes
20-Jul-12	Antifreeze	70L	In front of SANA garage	Failed component	Contaminated soil taken to Hazmat area	No
29-Jul-12	Diesel	5L	TCG storage area	Leak from a HAZMAT storage container	Contaminated soil taken to Hazmat area	No