



MEADOWBANK DIVISION

## **Monitoring Program Summary Report**

**April 2013**

Type A Water License 2AM-MEA0815

Table of Contents

SECTION 1 • BACKGROUND ..... 1

SECTION 2 • WATER MANAGEMENT ..... 2

    2.1 WATER USAGE.....2

    2.2 SEWAGE TREATMENT PLANTS .....3

    2.3 ATTENUATION POND EFFLUENT .....3

    2.4 NON CONTACT WATER.....4

    2.5 AIRSTRIP EXTENSION .....4

SECTION 3 • SPILL MANAGEMENT ..... 5

## SECTION 1 • **BACKGROUND**

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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, airstrip extension 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

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### 2.1 WATER USAGE

Freshwater usage for April 2013 is summarized in Table 2.1 below. Total freshwater used for the month was 212,000 m<sup>3</sup>. The yearly freshwater used is actually over the quantity prescribe of 700,000 m<sup>3</sup> by our licence. The total freshwater used to date is 757,793 m<sup>3</sup>. The total amount of reclaim water used in the mill for April was 114.732 m<sup>3</sup>.

In February 2013, the reclaim water barge became unusable as a result of accidental shifting and intake of excess solids (mill slurry). This was also due to an overall lack of water in the reclaim pond. On February 21, 2013, ore processing began using fresh water only. Attempts were made to repair the barge, but were not successful, and due to frozen conditions, repositioning of the barge at this time was not possible. However, the reclaim road has been extended and a diesel pump installed temporarily to obtain reclaim water. As a result of these conditions, fresh water use will be higher than anticipated in 2013.

Meadowbank's current NWB License (2AM-MEA0815) permits Agnico Eagle Mines Ltd. (AEM) to obtain 700,000 m<sup>3</sup> per year of fresh water for domestic camp use, mining, milling and associated uses. Despite significant success at engineering solutions to optimize fresh water use, requirements are projected to continue to exceed the permitted rate. Increased fresh water use is due to higher than anticipated rates of ore processing, and an adjustment of the initial water balance model, resulting in a deficit of reclaimed water. Agnico Eagle Mines (AEM) Meadowbank Division submitted, on April 23, 2013, a request to the Nunavut Water Board for an amendment to increase freshwater use rate at the Meadowbank Gold Project, Water License # 2AM-MEA0815.

**Table 2-1: Freshwater Usage (m<sup>3</sup>)**

	<b>April</b>
Freshwater Storage Tank	212,000
Emulsion Plant	168
Water Truck	0
<b>Total</b>	<b>212,168</b>
<b>Year to date total</b>	<b>757,793</b>

## 2.2 SEWAGE TREATMENT PLANTS

Two (2) effluent wastewater samples were taken from the onsite sewage treatment plants (STP's) in April.

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 indicate the system was working well. The effluent is discharged to the onsite storm water pond and is not discharged to the natural environment.

**Table 2.2.1: Seprotech Effluent Results**

Parameters	Units	1-Apr-13	15-Apr-13
Ammonia	mg N/L	0.21	0.69
Ammonia-Ammonium	mg N/L	19.2	38.9
Total Kjeldahl Nitrogen	mg N/L	16	46.0
BOD-5	mg/L	3	12
COD	mg/L	51	86
Total Suspended Solids	mg/L	10	20
Nitrate	mg N/L	19.4	12.40
Nitrite	mg N/L	0.46	1.0
pH *	units	6.7	6.6
Fecal Coliform	UFC/100 mL	12	68
Total Coliform	UFC/100 mL	200	<100

\*Parameter measured by STP operators

**Table 2.2.2: LJ-Mix Effluent Results**

Parameters	Units	1-Apr-13	15-Apr-13
Ammonia	mg N/L	<0.05	<0.05
Ammonia-Ammonium	mg N/L	9.9	0.8
Total Kjeldahl Nitrogen	mg N/L	16	12.0
BOD-5	mg/L	13	16
COD	mg/L	79	95
Total Suspended Solids	mg/L	46	44
Nitrate	mg N/L	25.4	24.40
Nitrite	mg N/L	0.15	0.37
pH *	units	6.0	5.6
Fecal Coliform	UFC/100 mL	10	8
Total Coliform	UFC/100 mL	100	<100

\*Parameter measured by STP operators

## 2.3 ATTENUATION POND EFFLUENT

For the month of April there is no effluent from the attenuation pond ST-9.

## 2.4 NON CONTACT WATER

In April, there was no water discharged to or through the diversion water ditch (ST-6 and ST-5) due to freezing conditions.

## 2.5 AIRSTRIP EXTENSION

As required under Part D, Item 15 of Type A Water License 2AM-MEA0815, this section provides the April 2013 monitoring results obtained during the airstrip extension construction.

Daily monitoring of airstrip began on March 20, 2013. On April 6, 2013 the daily monitoring was ended because in water rock placement was completed. Some barriers and silt fence will be put in place before freshet starts to avoid dispersion of TSS, if any.

The TSS concentrations for the airstrip extension construction were as follows:

- Maximum short-term TSS concentration from monitoring stations ST-AS-2, ST-AS-3 and ST-AS-4 was 1.9 mg/L (Maximum Limit is 50 mg/L)
- Monthly mean TSS concentration from monitoring stations ST-AS-2, ST-AS-3 and ST-AS-4 was 1.4 mg/L (Maximum Limit is 15 mg/L)

The April 2013 airstrip extension monitoring results are provided in Table 2.5.

**Table 2.5 April 2013 airstrip extension monitoring**

Date	ST-AS-2		ST-AS-3		ST-AS-4		Daily Maximum	
	Max NTU of day	Max TSS per day	Max NTU of day	Max TSS per day	Max NTU of day	Max TSS per day	Max NTU of day	Max TSS per day
2013-04-01	7.8	1.9	3.4	0.8	5.0	1.2	7.8	1.9
2013-04-02	6.9	1.7	5.5	1.3	4.0	0.9	6.9	1.7
2013-04-03	2.5	0.6	1.2	0.3	2.1	0.5	2.5	0.6
2013-04-06	6.1	1.5	3.6	0.8	6.1	1.5	6.1	1.5

## 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. Seven (7) spills occurred on site and one (1) was reported to the GN spill hotline. AEM contained and cleaned up all the spills.

**Table 3-1: Summary of AEM Internal Spill Reports**

Date of Spill	Hazardous Material	Quantity (L/Kg)	Location	Cause of spill	Clean-up action taken	Reported to Spill Hot Line
2013-04-10	Diesel fuel	20	Auxiliary Equipment Meadowbank	A rock contacted the fuel truck operating tank, therefore scratching the tank and making small puncture holes.	When noticing fuel leak fuel man stopped truck at fuel farm. applied absorbing diapers and advised his supervisor of the small fuel leak. He then left to go to the garage where he placed a retention bin under the tank. Loader went to tank farm to pick up rags and brought contaminated material at csp.	No
2013-04-10	Slurry	2000	Operation Process Plant Meadowbank	Tailings pipe flange broke inside of Mill building. Slurry leaked outside garage door A and went towards Assay Lab building.	Slurry was contained with snow berms. Berms and contaminated material to be move throughout the next 24 hours. Material that can be returned into the circuit will be placed back in the mill. If it cannot the material will be scraped up and hauled to the TSF.	Yes
2013-04-17	Diesel fuel	5	Meadowbank, near blast panel	Valve on Fuel truck went into open position due to machine vibration	Spill pads were used to clean up spill. Metal bracket was welded on to keep valve position at closed and from moving into open position.	No
2013-04-18	Hydraulic oil	15	Open Pit Meadowbank, pattern #5046PS250, Pit B	Hydraulic line ruptured.	Drill was shut down immediately and spill pads where used to clean up/absorb the spill.	No

Type A Water License 2AM-MEA0815  
Monitoring Program Summary Report

2013-04-22	Petroleum products	10	Maintenance Meadowbank Parking Lot Bay 4	Mechanic was doing test outside of the shop. Compressor tank was overfilled.	Equipment was stopped and picked up immediately with skid steer. Contaminate soil was put in a waste disposal drum. We asked maintenance that spills of this nature be taken to the contaminated soil pad in the future.	No
2013-04-24	Hydraulic oil	40	Open Pit Meadowbank, Pit B	Busted hose	Picked up contaminated material and brought it to the landfarm	No
2013-04-27	Hydraulic oil	40	Open Pit Meadowbank, bottom of waste dump ramp	Busted hose	Pick it up and brought to landfarm	No