



MEADOWBANK DIVISION

Monitoring Program Summary Report

May 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 PLANTS2

2.3 ATTENUATION POND EFFLUENT4

2.4 NON CONTACT WATER.....4

2.5 AIRSTRIP EXTENSION4

SECTION 3 • SPILL MANAGEMENT 5

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 May 2013 is summarized in Table 2.1 below. Total freshwater used for the month was 191,795 m³. The yearly freshwater used is actually over the quantity prescribe of 700,000 m³ by our licence. The total freshwater used to date is 949,588 m³. The total amount of reclaim water used in the mill for May was 149,134 m³.

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. AEM is currently waiting for NWB's comments and/or amendment.

Table 2-1: Freshwater Usage (m³)

	May
Freshwater Storage Tank	191,626
Emulsion Plant	169
Water Truck	0
Total	191,795
Year to date total	949,588

2.2 SEWAGE TREATMENT PLANTS

One (1) effluent wastewater samples were taken from the onsite sewage treatment plants (STP's) in May. As stipulated in Operation & Maintenance Manual Sewage Treatment Plant V4 April 2013, AEM reduced sampling frequency to once every two weeks in February 2013 and to once per month in May 2013. The reasons for this sampling frequency reduction are:

- Sampling data from the last three years certainly indicates that units are operating as designed and show little variability in the results;
- Raw sewage stream basically doesn't change;
- Operators do daily operational inspection and perform weekly maintenance and repairs, if necessary. The daily operational inspections identify problems efficiently and quickly and have proven to be as effective as sampling;

- If there is major problem or failure in the RBC it would be most likely due to changes in the influent (raw sewage) ie high strength sewage (BOD high) killing bacteria in the RBC. In this case, there would be visible effluent problems (part of daily operational checks), low dissolved Oxygen (part of daily operational checks) and increased odours that the operator would note. If this occurs, a sample will be taken to try to determine the source of the problem;
- RBC effluent is not discharged to the environment;

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	13-May-13
Ammonia	mg N/L	<0.05
Ammonia-Ammonium	mg N/L	5.0
Total Kjeldahl Nitrogen	mg N/L	9.0
BOD-5	mg/L	1
COD	mg/L	67
Total Suspended Solids	mg/L	12
Nitrate	mg N/L	19.00
Nitrite	mg N/L	4.00
pH *	units	6.5
Fecal Coliform	UFC/100 mL	NA
Total Coliform	UFC/100 mL	NA

*Parameter measured by STP operators

NA : Not Available due to conservation delay

Table 2.2.2: LJ-Mix Effluent Results

Parameters	Units	13-May-13
Ammonia	mg N/L	0.08
Ammonia-Ammonium	mg N/L	13.6
Total Kjeldahl Nitrogen	mg N/L	19.0
BOD-5	mg/L	2
COD	mg/L	112
Total Suspended Solids	mg/L	30
Nitrate	mg N/L	23.80
Nitrite	mg N/L	0.36
pH *	units	6.7
Fecal Coliform	UFC/100 mL	NA
Total Coliform	UFC/100 mL	NA

*Parameter measured by STP operators
NA : Not Available due to conservation delay

2.3 ATTENUATION POND EFFLUENT

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

2.4 NON CONTACT WATER

In May, 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

Daily monitoring of airstrip began on March 20, 2013 and ended on April 6 when AEM completed the extension of the airstrip to accommodate a Boeing 737. Turbidity data and TSS concentrations indicated that the routine monitoring stations did not exceed the NWB limits. Turbidity curtains, if deemed necessary, will be deployed along the face of the airstrip extension to contain sediment and erosion during freshet and during the open water season. If deemed necessary, additional TSS monitoring at ST-AS 2 to 4 will be conducted during this time.

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
2013-05-18	Diesel fuel	4	Haul truck tank farm	The quick coupler was not working properly, the labor try to make it work with a bar, the fuel came out fast and he got some on him and on the ground.	Spill was contained with snow. Coupler was fixed	No
2013-05-19	Oil	25	Maitenance Parking Lot Inukshuk Side	The final drive broke on haul truck 20. When removing the cover - the oil spilled onto the ground. Absorbant pads and drums were placed on and under the areas where oil continued to leak.	Site Services has been notified and will pick up the soil and deposit at the contaminated soil pad.	No
2013-05-21	Oil	15	Pushback pattern #5109421	Hose on Turbine broke causing spill	The operator shut down the equipment and contained the spill. Absorbant pads were used on the spilled oil.	No
2013-05-22	Propane	575	Behind old warehouse	Regulator Valve on propane tank stuck causing the release of propane.	ERT was called to the spill. A propane specialist was also on site to assess and stop the spill.	Yes
2013-05-24	Oil	25	East end of maintenance shop	A fitting on the oil tank inside Lube Truck 39 came loose causing a spill. It is unknown if the fitting was improperly connected or if it came loose due to vibration.	Mechanic laid down absorbent pads and taped/barricaded the area. The mechanic then inspected the oil tank fitting and made the proper connection.	No
2013-05-24	Hydraulic oil	10	Booster pump	Hydraulic hose as broken and it spill of the ground	Put some spill kit absorbent, took the absorbent at the incinerator and shoveled material and bring it to the land farm.	No

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

2013-05-27	Antifreeze	10	AWPAR	Arctic Fuel truck going off road on the AWPR.	Cleaned-up contaminated material	No
------------	------------	----	-------	---	-------------------------------------	----