



MEADOWBANK DIVISION

## **Monitoring Program Summary Report**

**December 2013**

Type A Water License 2AM-MEA0815

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## **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, Vault Dewatering 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

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### 2.1 WATER USAGE

Freshwater usage for December 2013 is summarized in Table 2.1 below. Total freshwater used for the month was 47,156 m<sup>3</sup>. The yearly freshwater used exceeds our License limit of 700,000 m<sup>3</sup>. The total freshwater used to date is 1,593,578 m<sup>3</sup>. The total amount of reclaim water used in the mill for December was 264,264 m<sup>3</sup>.

On April 23<sup>rd</sup>, 2013 Agnico Eagle Mines (AEM) Meadowbank Division submitted a request to the Nunavut Water Board for an amendment to increase the freshwater use rate at the Meadowbank Gold Project. Water license amendment pre-hearing conference and technical meeting was held in Baker Lake on October 16<sup>th</sup> and 17<sup>th</sup>. On December 20<sup>th</sup>, AEM received comments from AANDC regarding the final hearing scheduled for January 17<sup>th</sup>, 2014.

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

	<b>December</b>
Freshwater Storage Tank	46,946
Emulsion Plant	210
Water Truck	0
<b>Total</b>	<b>47,156</b>
<b>Year to date total</b>	<b>1,593,578</b>

### 2.2 WASTE ROCK STORAGE FACILITY SEEPAGE

The RSF seepage has been frozen since October 5<sup>th</sup>, 2013. In December, weekly inspections were completed at RSF and NP-2 Lake and a monthly sample was taken in NP-2 Lake. The independent engineering firm report was submitted to AANDC in response to the Inspector's Direction received on November 8<sup>th</sup> (Appendix 1).

### 2.3 ASSAY ROAD SEEPAGE

No more seepage has been visible since November 24<sup>th</sup>. On December 11<sup>th</sup>, AEM sent spill report update #4 to Government Agencies (Appendix 2). In December, AEM contracted a consultant to review and make recommendations. Consultant Phase 1 report is scheduled for completion around mid-January 2014.

### 2.4 SEWAGE TREATMENT PLANTS

One (1) effluent wastewater sample was taken from the onsite sewage treatment plant (STP's) in December.

The Seprotech STP results are shown in Table 2.3.1 below; the LJ-Mix STP results are shown in Table 2.3.2. 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 2.3.1: Seprotech Effluent Results**

Parameters	Units	December 9, 2013
Ammonia	mg N/L	<0.01
Ammonia-Ammonium	mg N/L	6.3
Total Kjeldahl Nitrogen	mg N/L	46.2
BOD-5	mg/L	8
COD	mg/L	79
Total Suspended Solids	mg/L	25
Nitrate	mg N/L	23.20
Nitrite	mg N/L	0.08
pH *	Units	4.50
Fecal Coliform	UFC/100 mL	24
Total Coliform	UFC/100 mL	200

\*Parameter measured by STP operators

**Table 2.3.2: LJ-Mix Effluent Results**

Parameters	Units	December 9, 2013
Ammonia	mg N/L	<0.01
Ammonia-Ammonium	mg N/L	9.5
Total Kjeldahl Nitrogen	mg N/L	14.5
BOD-5	mg/L	11
COD	mg/L	100
Total Suspended Solids	mg/L	37
Nitrate	mg N/L	26.10
Nitrite	mg N/L	0.31
pH *	Units	4.00
Fecal Coliform	UFC/100 mL	24
Total Coliform	UFC/100 mL	130

\*Parameter measured by STP operators

## 2.5 PORTAGE ATTENUATION POND EFFLUENT

There was no Portage Attenuation Pond Discharge thru Actiflo Water Treatment Plant (ST-9) in December.

## **2.6 NON CONTACT WATER**

In December, there was no water discharged through the non-contact water diversion ditches due to freezing conditions.

## **2.7 VAULT DEWATERING**

In December, no water was discharged to Wally Lake.

## 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 none (0) were 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
2013-12-02	Oil	1	Cat dome contractor Maintenance	When plumber went to start the Kubota, he noticed a small pool of oil on the ground. Oil pan was checked and seal on the oil pan was damaged.	Oil was cleaned up with pads and shovels and disposed at the incinerator.	No
2013-12-02	Hydraulic oil	15	Behind batch plant	When moving 200 ton crane - hydraulic hose broke and hydraulic oil spilled onto the ground.	Machine was stopped and hose was repaired. Contaminated snow was collected and sent to yellow roll off bin.	No
2013-12-02	Diesel	2	Inuksuk side parking area	Accidentally powered diesel pump tank.	Tank was unplugged and spill was collected. Contaminated material sent to the incinerator.	No
2013-12-03	Antifreeze	10	Baker Lake gate house	Radiator hose clamp failure.	Cleaned up the contaminant and checked all clamps.	No
2013-12-13	Glycol	60	Vault parking lot	Rupture of the glycol heater inside the generator enclosure.	Leak was isolated by closing 2 ball valves, 6182 Gen-02 was locked-out for repairs. Glycol was collected and sent to the TSF.	No
2013-12-14	Diesel	20	Refuelling station - haul trucks	HTR01 Wiggin plunger was stuck while refueling.	Contaminated snow picked up and disposed of into the yellow roll-off bin.	No
2013-12-24	Motor oil	1	Mine dry parking	During transport of passengers to Mine Dispatch - a rock struck the pickup truck oil pan and created a small crack. Oil from the pan began to leak out.	Spill was cleaned up with rags and pick-up truck was sent to maintenance for repair. Contaminated rags disposed into the bin at the maintenance shop	No

**Appendix 1**  
***Golder RSF seepage report***