From:	Stephane Robert
To:	"licensingadmin@nunavutwaterboard.org"
Cc:	"Jim Rogers"; "David.Abernethy@inac-ainc.gc.ca"; "environmental@kivalliqinuit.ca"; "ian.rumbolt@inac-ainc.gc.ca"; Rachel Gould
Subject:	RE: 2AM-MEA0815 March 2011 Monitoring Summary Report
Date:	Monday, April 25, 2011 7:28:36 PM
Attachments:	March 2011 Monitoring Summary Report v2.pdf

Hi Richard

Please use the version 2 of the March 2011 Monitoring Summary Report for the Meadowbank Division.

Thank you

Stéphane Robert
Environment Superintendent
Meadowbank Division
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De : Stephane Robert
Envoyé : 25 avril 2011 00:04
À : licensingadmin@nunavutwaterboard.org
Cc : Jim Rogers; David.Abernethy@inac-ainc.gc.ca; environmental@kivalliqinuit.ca; ian.rumbolt@inac-ainc.gc.ca; Rachel Gould
Objet : 2AM-MEA0815 March 2011 Monitoring Summary Report

Dear Richard

As required by NWB Water license 2AM-MEA0815 Part I Item 25, please find the March 2011 Monitoring Summary Report for the Meadowbank Division attached.

Should you have any questions regarding this submission, please contact me via email at stephane.robert@agnico-eagle.com or rgould@agnico-eagle.com,

Regards

Stéphane Robert
Environment Superintendent
Meadowbank Division
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MEADOWBANK DIVISION

Monitoring Program Summary Report

March 2011

Type A Water License 2AM-MEA0815

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LIST OF TABLES

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, sewage treatment plant discharge water quality and dewatering monitoring.

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

March 10, 2011, a fire occurred and burned the entire kitchen. The majority of the people on site were evacuated and the operations ran with minimal staff until March 30. An investigation report of the fire kitchen is included in Appendix A.

SECTION 2 • WATER MANAGEMENT

2.1 WATER USAGE

Freshwater usage for the month totals 87,800 m^3 and is summarized in Table 2.1 below. The consumption of fresh water for mine and mill operations (including production drills, batch plant and dust control) was 85,302 m^3 and the consumption of reclaim water in the mill was 151,112 m^3.

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

	March
Camp	2303
Mine & Mill Operations	85302
Emulsion Plant	120
Water Truck	65
Total for the site	87800
Year to date (m^3)	**232747**

2.2 SEWAGE TREATMENT PLANT MONITORING

Four water samples were taken at the effluent of the sewage treatment plants (STP). The results showed the system is working well.

Table 2-2: STP Effluent Results

Date	**Units**	7-March-11	15-March-11	22-March-11	29-March-11
BOD-5	mg/L	1	2	2	1
COD (mg/L)	mg/L	17	29	22	50
Total Suspended Solids	mg/L	10	33	7	6
Nitrate-Nitrite	mg N/L	46.3	37.7	32.1	30.6
pH	units	3.6	3.5	3.7	3.8
Total Phosphorus	mg/L	12.9	12.4	12.6	8.0
Ammonia	mg/L	24.5	10.1	6.8	8.8
Fecal Coliform	UFC/100 mL	2	<2	<2	<2
Total Coliform	UFC/100 mL	12	8	4	6

2.3 DEWATERING OF SECOND PORTAGE ARM

The dewatering of the Second Portage Arm restarted on March 9. Both water treatment plants were both operational. However, the discharge from WTP-02 has been redirected to WTP-01 prior to discharge. Consequently, only WTP-01 is being monitored.

The pH and Aluminum concentrations at the outlet of the TSS water treatment plants were as follows:

- pH 24 hour minimum/maximum: 6.28/6.44 units (Limit is 6-9 units)
- Al 24 hour maximum concentration: 1.100 mg/L (Limit is 1.5 mg/L)

Table 2.3 summarizes the dewatering monitoring results for pH and Aluminum for the month.

Table 2-3: Dewatering Monitoring – pH and Al

Date	DD-WTP-01	
	pH	**Total Al**
	units	mg/L
2011-03-15	6.28	0.882
2011-03-24	6.48	1.100
2011-03-29	6.44	0.599

The turbidity and Total Suspended Solids (TSS) concentrations at the outlet of the TSS water treatment plants were as follows:

- NTU 24 hour mean maximum concentration: 2.9 NTU (Maximum Limit is 30 NTU)
- TSS 24 hour mean maximum concentration: 13 mg/L (Maximum Limit is 22.5 mg/L)
- NTU 30 days mean maximum concentration: 2.9 NTU (Maximum Limit is 15 NTU)
- TSS 30 days mean maximum concentration: 12 mg/L (Maximum Limit is 15 mg/L)

Table 2.4 summarizes the dewatering monitoring results for turbidity and TSS for the month.

Table 2-4: Dewatering Monitoring – TSS and Turbidity

Date	DD-WTP-01(Out)		DD-WTP-02(Out)		Both WTP Outlets			
	Enviro readings	Lab TSS	Enviro readings	Lab TSS	NTU 24-hour Mean	TSS 24-hour Mean	NTU 30-day Mean	TSS 30-day Mean
	NTU	mg/L	NTU	mg/L				
2011-03-01								
2011-03-02								
2011-03-03								
2011-03-04								
2011-03-05								
2011-03-06								
2011-03-07								
2011-03-08	restart the pump							
2011-03-09	2,9	12	exit by line 1		2,9	12	2,9	12,0
2011-03-10		Fire, no sample						
2011-03-11	2,0	9	exit by line 1		2,0	9	2,5	11
2011-03-12	1,1	8	exit by line 1		1,1	8	2,0	10
2011-03-13	1,4	10	exit by line 1		1,4	10	1,8	10
2011-03-14	1,1	13	exit by line 1		1,1	13	1,7	10
2011-03-15	3,8	12	exit by line 1		3,8	12	2,0	11
2011-03-16	1,8	3	exit by line 1		1,8	3	2,0	10
2011-03-17	0,6	3	exit by line 1		0,6	3	1,8	9
2011-03-18	0,5	1	exit by line 1		0,5	1	1,7	8
2011-03-19	0,6	1	exit by line 1		0,6	1	1,6	7
2011-03-20	Pump broken						1,6	7
2011-03-21	Pipe frozen						1,6	7
2011-03-22	Pipe frozen						1,6	7
2011-03-23	recirculation						1,6	7
2011-03-24	2,4	7	exit by line 1		2,4	7	1,6	7
2011-03-25	0,4	5	exit by line 1		0,4	5	1,5	7
2011-03-26	1,4	9	exit by line 1		1,4	9	1,5	7
2011-03-27	2,5	3	exit by line 1		2,5	3	1,6	7
2011-03-28	1,0	9	exit by line 1		1,0	9	1,6	7
2011-03-29	0,3	2	exit by line 1		0,3	2	1,5	7
2011-03-30	1,8	2	exit by line 1		1,8	2	1,5	6
2011-03-31	1,0	2	exit by line 1		1,0	2	1,5	6

SECTION 3 • SPILL MANAGEMENT SUMMARY

AEM has developed a system of tracking spills on-site. Table 3.1 summarizes the AEM internal spill reports for the month. No spills were reported to the GN spill hotline.

Table 3-1: Summary of AEM Internal Spill Reports

Date of Spill	Hazardous Material (Fuel, Oil, etc.)	Quantity	Location	Cause of spill	Clean-up action taken	Reported to Spill GN HotLine
2011-03-12	Fuel	200L	South pit	Fuel truck went off-road and broke some hoses	Pick up the contaminated soil and brought it to the quarry 22	Y
2011-03-14	Hydraulic oil	30 L	Low grade stockpile	Damage to hydraulic motor	Pick up the contaminated soil and brought it to the quarry 22.	N
2011-03-19	Hydraulic oil	20 L	Bridge 1 on AWPAR at km 8-9	Hydrolic hose leak	Remove contaminated snow to snow cell Remove contaminated soil and bring it to quarry 22	N
2011-03-19	Fuel	50 L	BL Refueling station	spill of fuel	Remove contaminated snow to snow cell. Remove contaminated soil and bring it to quarry 22	N

Appendix A

Meadowbank Kitchen Fire Investigation Report

AGNICO-EAGLE
MEADOWBANK DIVISION

Meadowbank Kitchen Fire Investigation Report –

Date: March 10 / 2011

Time : Reported at 3:39 pm to Meadowbank Security office

Reported by: Yann Laguna (Cook 3) Kitchen Staff

Weather Conditions: Winds NW 20 to 40 km/h, Temperature – 55 C with wind chill.

Location of Fire:

Main Kitchen (this is where it was initially discovered). Based on the statements made by the Kitchen Staff that the fire was first noticed with the smell coming out of the drain at the steam pot, which is in the middle of the building.

Area consumed by the Fire :

- the Kitchen, including the cold and dry storage buildings, the dining area, as well as the Human Resources Office, Security Office, Camp Management Offices and TV/Games room were destroyed.

- Dormitory Wings #6 & #7 received some smoke damage

Sequence of Events:

- 3:30 am., the smoke started coming out from under the flooring in the service area of the kitchen. It was also reported that there was a lot of smoke coming out of the drain from the steam pot.

- 3;39 am., Yann Laguna, Cook, called the Meadowbank Gatehouse and notified security that there was a fire in the Kitchen.

- 3:45 am., the ERT Team was paged, by security Guard , Peter Kukkshot.

- 3:45 am., ETR Team Members started assembling in the fire hall. Camp personnel assembling to Muster Stations.

- 3:55 am., the first ERT Team responded. Significant smoke was coming out from under the “skirting” around the bottom of the kitchen and dinning room buildings.

- 4:00 am., ERT Team #1 begins to set up the fire hose in preparation for opening an access door to the crawl space, under these buildings. The ERT Team could see fire, through the smoke under the kitchen area.

- 4:10 am., ERT Team #2 sets up the skid pump. Two ERT members report heavy smoke on the down wind side of the kitchen/dinning hall buildings. Access from this side is impossible.

- 4:15 am., the 980 Loader is used to clear the snow away to allow the ERT Team to attach the fire. At this time the request was made to have the 345 Excavator sent over as a back to the Loader, incase the buildings must be torn down.

- 4:32 am., ERT Team reports to Incident Commander that the fire has spread and that they are having problems with their SCBA,s (self contained breathing apparatus).

- 4:33 AM., the ERT Team is notified that Security has checked and all the rooms in the main dormitory are evacuated and that the head count is continuing.

- 4:45 am., The ERT Team has the 980 Loader open an access to the crawl space by the Kitchen. With the additional oxygen the fire flares up, engulfing the kitchen.

- <u>AT this point the decision is given by the Acting Mine Manger, to tear down this section and control the fire.</u>

- 4:50 am., due to the sparks and burning embers being blown around by the winds, the workforce was moved from the Muster Station in the Gymnasium coverall to the Arctic Corridor, leading to the Mill.

- The ERT Team #3, set up fire hose from the main corridor to the outside to protect the Gymnasium coverall.

- 5:00 am., Wings 6 & 7 are ventilated, as they were contaminated with smoke and soot. The water trucks, used to fill the skid pump, are put in the shops.

- 6:00 am., All of the kitchen, dinning, front entrance and kitchen storage buildings’ have been torn out, by the Loaders and the burning materials was piled up and dosed with snow.

- 7:00 am., smothering efforts continue, but the threat, of fire, to the rest of the buildings has been extinguished.

Employee Evacuation:

- The focus was to keep essential services and to maintain the mill in operation and 175 persons are staying on site.

- Employee from Baker Lake were transported by bus.

- The evacuation went well. The Convair 580 aircraft took +-200 passengers from the mine site to Rankin Inlet and 2- 737 flew employees to VD and then MTL.

Basic Cause of the fire

- Appears to be, an electrical malfunction, of either the electrical cables or heat trace cables, under the buildings, which ignited the plastic drain lines.

Resume of Action:

The water used during the event come from the mill. The volume of water used during the intervention is evaluated at approximately 15 000 litres.

Trucks of 50 and 100 tons have been filled with snow to smother the fire. Around 15 loads were brought to stop the fire. Once the fire stopped, the heavy equipment pursued their work covering all the burning debris with snow to avoid flare fire again. At the end, the dinning room, the kitchen, food storage areas, offices and the front desk have been destructed. The debris are composed of construction material (wood, steel sheet, tar, electrical cables, pipes, etc.), kitchen and dinning room equipment and clerical material.

No fire chemical product has been used. No runoff was created by the intervention. The water used was limited and the cold weather (wind chill condition around -55^{o}C) freezes it immediately when the water was sprayed.

On March 23th, we received the authorization from the insurance company to clean the debris mixed with snow and ice. The debris mixed was send with the snow and ice to the landfill. It was cover immediately on place with muck rock to avoid odours dispersion and attract scavenger roaming around. The cleaning was completed on March 29th.

Pictures

1- General view of the fire around 6h00 AM.

2 - Shovel working to dismantle the kitchen.

3 - After the blaze, pile of mixed snow and debris.

4 – Other view of the after event.