

December 21, 2009

*Via Email and Xpresspost*

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Dear Mr. Dwyer,

**Re: Water License 2AM-MEA0815 November Monitoring Program Summary Report**

As required by Water license 2AM-MEA0815 Part I Item 25, please find the November 2009 Monitoring Program Summary Report enclosed.

Should you have any questions regarding this submission, please contact me directly at 819-763-0229 or via email at [stephane.robert@agnico-eagle.com](mailto:stephane.robert@agnico-eagle.com).

Regards,



Stéphane Robert  
Environment Superintendent

*Encl (1)*

cc: Ian Rumbolt, Indian and Northern Affairs Canada  
David Abernethy, Indian and Northern Affairs Canada  
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Stephen Hartman, Kivalliq Inuit Association



## MEADOWBANK GOLD PROJECT

# **Monitoring Program Summary Report**

**November 2009**

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, monitoring activity and analytical monitoring at the mine site for the month of November 2009.

It should be noted that the Meadowbank Project is in the construction phase and is not scheduled to commence operations until early 2010. Consequently many of the license specified reporting locations or requirements are associated with facilities that are not yet constructed and thus reporting cannot be fully initiated until these facilities are constructed and commissioned.

The dewatering of the northwest arm of Second Portage Lake continued during November. During this phase of construction no other water has been pumped, discharged or transferred, rather all site contact run-off are contained and directed to the Stormwater Management Pond (Tear Drop Attenuation Pond). The monitoring points covered by this monthly report will expand as the facilities are constructed. Additionally, for the NWB to review, Section 4 summarizes the AEM internal spill reporting for November.

## SECTION 2 • WATER QUALITY MONITORING

### 2.1 DEWATERING OF SECOND PORTAGE ARM

The dewatering of the northwest arm of Second Portage Lake continued through November. 1,080,727 m<sup>3</sup> of water was discharged during the month. The Total Suspended Solids (TSS) and turbidity values at the outlets of TSS Water Treatment Plants (WTP) 1 and 2 are as follows:

- TSS 30 days mean: 7.0 mg/L (limit 15 mg/L)
- NTU 30 days mean: 4.8 NTU (limit 15 NTU)

Tables 2.1 and 2.2 summarize the November monitoring results.

**Table 2.1: November 2009 Dewatering Monitoring – TSS and turbidity**

Station	DD-WTP-01(Out)		DD-WTP-02(Out)		Both WTP Outlets			
	24-hour Mean	Lab TSS	24-hour Mean	Lab TSS	NTU 24-hour Mean	TSS 24-hour Mean	NTU 30-day Mean	TSS 30-day Mean
Date of Analysis	NTU	mg/L	NTU	mg/L		mg/L		mg/L
1-Nov-09	4.71	4	10.01	7	7.36	5.50	5.74	6.25
2-Nov-09	3.60	3	3.47	5	3.54	4.00	5.30	5.80
3-Nov-09	4.94	5	5.60	8	5.27	6.50	5.29	5.92
4-Nov-09	4.63	5	5.91		5.27	5.00	5.29	5.85
5-Nov-09	4.59	2	4.80	7	4.70	4.50	5.22	5.67
6-Nov-09	5.18	34	12.46	21	8.82	27.50	5.62	8.24
7-Nov-09	4.43	8	4.28	4	4.36	6.00	5.49	8.00
8-Nov-09	6.06	7	5.68	3	5.87	5.00	5.52	7.71
9-Nov-09	11.40	11	5.63	6	8.52	8.50	5.77	7.78
10-Nov-09	3.90	3	4.34	9	4.12	6.00	5.65	7.64
11-Nov-09	4.78	11	6.68	7	5.73	9.00	5.65	7.74
12-Nov-09	4.90	13	3.48	8	4.19	10.50	5.55	7.93
13-Nov-09	2.19	10	3.91	6	3.05	8.00	5.40	7.94
14-Nov-09	1.02	10	2.25	8	1.64	9.00	5.18	8.00
15-Nov-09	2.88	2	3.28	11	3.08	6.50	5.06	7.91
16-Nov-09	3.62	5	3.92	4	3.77	4.50	4.99	7.73
17-Nov-09	4.84	2	4.94	1	4.89	1.50	4.99	7.41
18-Nov-09	4.75	10	4.63	5	4.69	7.50	4.97	7.41
19-Nov-09	4.05	6	3.18	6	3.62	6.00	4.91	7.35
20-Nov-09	4.58	7	3.14	6	3.86	6.50	4.87	7.31
21-Nov-09	3.85	7	4.28	7	4.07	7.00	4.83	7.30
22-Nov-09	5.54	6	5.25	5	5.40	5.50	4.85	7.22
23-Nov-09	3.81	1	4.01	4	3.91	2.50	4.82	7.04

24-Nov-09	11.95	21	3.09	1		7.52	11.00	4.92	7.19
25-Nov-09	9.41	7	2.35	1		5.88	4.00	4.96	6.94
26-Nov-09	3.63	3	2.62	1		3.13	2.00	4.89	6.73
27-Nov-09	4.56	6	2.66	4		3.61	5.00	4.85	6.73
28-Nov-09	--	--	--	--				4.83	6.75
29-Nov-09	3.88	17	3.52	3		3.70	10.00	4.79	6.91
30-Nov-09	--	--	--	--				4.77	6.98

"—" indicates no data collected

**Table 2.2: November 2009 Dewatering Monitoring – pH and Al**

Station	DD-WTP-01(Out)		DD-WTP-02(Out)		Both WTP Outlets	
	pH	Total Al	pH	Total Al	pH 24-hour Mean	Al 24-hour Mean
Date of Analysis		mg/L		mg/L		
2-Nov-09	7.19	0.36	7.24	0.26	7.22	0.31
9-Nov-09	--	0.45	--	0.34		0.39
16-Nov-09	7.35	0.40	7.38	0.29	7.37	0.34
17-Nov-09	6.92	--	7.02	--	6.97	
23-Nov-09	7.28	0.37	7.24	0.27	7.26	0.32

"—" indicates no data collected

## 2.2 DIKE MONITORING

A workshop was held with the participation of INAC, KIA, DFO and NWB to present the action plan for the 2010 Bay-Goose Dike Phase 2 construction. The principal objectives were to:

- Review the fundamental causes of TSS and the TSS control performance of the Phase 1 Bay-Goose dike construction activities,
- Review possible mitigation measures; and
- Present an action plan/strategy to improve TSS control performance for the Phase 2 construction activities.

A revised Water Quality Monitoring and Management Plan for Dike Construction and Dewatering will be submitted at the beginning of December for approval by the NWB and the regulators.

## SECTION 3 • WATER MANAGEMENT

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### 3.1 WATER USAGE

Under Water License 2AM-MEA0815, the total water consumption limit is 700,000 m<sup>3</sup>/year or 58,333 m<sup>3</sup>/month for the batch plant, domestic and milling water use. During November, the daily average number of people on site was 531. The total consumption of water for the camp, the batch plant and the mine site was 2,420 m<sup>3</sup> for the month, an average of 80.7 m<sup>3</sup> a day.

**Table 3.1: November 2009 Water Usage**

	Water Usage (m <sup>3</sup> )
Batch Plant	16
Water Treatment Plant	2,404
Water for Dust Control	0
<b>Total for the Site</b>	<b>2,420</b>

### 3.2 SEWAGE TREATMENT PLANT MONITORING

At the sewage treatment plant, two systems are now in operation (the Seprotech L333 and the two Little John LJ100s). Four water samples were taken at the effluent. The results showed the two sewage treatment plants are working well.

**Table 3.2: November 2009 STP Effluent Results**

Station: STP-OUT				
Parameter	11/02/2009	11/10/2009	11/16/2009	1/23/2009
NH3-NH4 (mg/L)	37.0	30.8	32.8	38.6
BOD-5 (mg/L)	23	11	9	13
COD (mg/L)	138	90	126	103
TSS (mg/L)	43	48	41	24
NO2-NO3 (mg N/L)	64.0	56.9	56.8	54.9
pH	5.71	4.86	5.97	5.76
P tot (mg P/L)	20.2	20.7	19.6	18.7
Fecal Coliform (CFU/ 100mL)	300	4	30	<100
Total Coliform (CFU /100mL)	<1,000	9,000	<1,000	<100
Atypical Colony (CFU /100mL)	119,000	26,000	85,000	2,600

## SECTION 4 • SPILL MANAGEMENT SUMMARY

During the construction phase AEM is developing a system of tracking spills on-site. Table 4.1 summarizes the AEM internal spill reports for November.

**Table 4.1: Summary of November 2009 AEM Internal Spill Reports**

Date of Spill	Hazardous Material (Fuel, Oil, etc.)	Quantity	Location	Cause of Spill	Clean-up Action Taken	Reported to Spill Hotline
2009-11-06	Antifreeze	45 L	South Portage Pit	Hose burst	Put absorbent pads on the ground and made secondary containment to contain the spill. 4m of muck removed with 966 and taken to Quarry 22	N
2009-11-13	Transmission oil	15 L	South Portage Pit	Rock fell on sight glass level window causing the window to break	Contaminated material loaded into truck 773 #9 and transported to Quarry 22 on day shift	N
2009-11-13	Hydraulic oil	50 L	North Portage pit	Hydraulic hose burst	Contaminated rock transported to Quarry 22	N
2009-11-24	Diesel Fuel	15 L	Incinerator Building	Tank filled to the top with cold diesel fuel. It expanded with the heat of the building causing the tank to overflow	Spill happened on the cement floor. Absorbent pads applied to the spill	N
2009-11-21	Hydraulic oil	2 L	Near TSS Plant	Mechanical failure	There will be access to the spill as soon as the hystor is moved	N
2009-11-28	Hydraulic oil	40 L	South Portage Pit	Hose burst	Contaminated soil collected and taken to Quarry 22	N
2009-11-28	Transmission oil	5 L	TSS Water treatment Plant	Broken transmission on a pick truck	Contaminated snow collected and taken to the contaminated snow cells	N



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2009-11-30	Hydraulic oil	2 L	Between Powerhouse and Transfer Tower	Broken hose	Put down absorbent pads immediately after the spill. Scraped the contaminated snow scraped with a loader and taken to the snow cells.	N
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