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Re: December 2013 – Monthly Monitoring Report for Water Licence 2AM-DOH1323

This report is comprised of monitoring requirements as set out in Schedule J of water licence 2AM-DOH1323 and additional requirements from AANDC. Licence items include:

- Part D (Conditions Applying to Construction) Items 7 and 18;
- Part E (Conditions applying to Water Use) Item 1;
- Part G (Conditions Applying to Waste Management and Waste Management Plans) Items 1, 3(b) and 3 (e), 23 (a), 24 (c, e), 28, 29, 30, 32;
- Part J (Conditions Applying to General and Aquatic Effects Monitoring) Items 8, and 12 (d, g).

Other monitoring requirements stipulated in the licence refer to facilities that have not been constructed. Doris Camp is currently operating in a care and maintenance phase with water management, drill exploration, and environmental compliance being the focus of current activities.

Part D: Conditions Applying to Construction

Item 7. Construction Monitoring

Construction activities did not take place this month.

Item 18. Surface Runoff Effluent Quality Limits

No run off occurred this month due to frozen conditions.

Part E: Conditions Applying to Water Use

Item 1: Water Usage

96 m³ of water was extracted from Windy Lake Water for Doris Camp use this month as permitted by water licences 2BE-HOP1222 and 2AM-DOH1323. Windy Lake water quality results are presented in the 2BE-HOP1222 monthly monitoring report.

Schedule J: Water Quality Monitoring at Water Intake

Monthly compliance samples were taken from monitoring station ST-7 (Doris Lake raw water) in accordance with the Schedule J requirements of the licence (Table 1).

Table 1: Monthly Compliance Sample Results for ST-7, December 2013

Sample ID		ST7-06DEC13
ALS ID		L1400885-7
Date Sampled		12-06-2013 2:00:00 AM
Parameters	Units	Results
Conductivity (EC)	uS/cm	319

Sample ID		ST7-06DEC13
ALS ID		L1400885-7
Date Sampled		12-06-2013 2:00:00 AM
Parameters	Units	Results
Hardness (as CaCO ₃)	mg/L	53.4
pH	pH	6.78
Total Suspended Solids	mg/L	<3.0
Ammonia, Total (as N)	mg/L	<0.050
Nitrate (as N)	mg/L	<0.050
Nitrite (as N)	mg/L	<0.050
Orthophosphate-Dissolved (as P)	mg/L	<0.0010
Phosphorus (P)-Total	mg/L	0.027
Cyanide, Total	mg/L	<0.0050
Cyanide, Free	mg/L	<0.0050
Fecal Coliforms	CFU/100mL	<2
Aphanizomenon (Cyanophyceae)	cells/mL	24600
Total cyanobacterial cell count	cells/mL	33600
Limnithrix (Cyanophyceae)	cells/mL	1540
Planktolyngbya (Cyanophyceae)	cells/mL	5950
Pseudoanabaena (Cyanophyceae)	cells/mL	1540
Aluminum (Al)-Total	mg/L	0.0093
Antimony (Sb)-Total	mg/L	<0.00040
Arsenic (As)-Total	mg/L	<0.00040
Barium (Ba)-Total	mg/L	<0.0030
Beryllium (Be)-Total	mg/L	<0.0010
Boron (B)-Total	mg/L	<0.050
Cadmium (Cd)-Total	mg/L	<0.000010
Calcium (Ca)-Total	mg/L	10.7
Chromium (Cr)-Total	mg/L	<0.0010
Cobalt (Co)-Total	mg/L	<0.0020
Copper (Cu)-Total	mg/L	0.0015
Iron (Fe)-Total	mg/L	0.020
Lead (Pb)-Total	mg/L	<0.00010
Lithium (Li)-Total	mg/L	<0.010
Magnesium (Mg)-Total	mg/L	7.58
Manganese (Mn)-Total	mg/L	0.0070
Mercury (Hg)-Total	mg/L	<0.000020
Molybdenum (Mo)-Total	mg/L	<0.0050
Nickel (Ni)-Total	mg/L	<0.0020
Potassium (K)-Total	mg/L	2.44
Selenium (Se)-Total	mg/L	<0.00040
Silver (Ag)-Total	mg/L	<0.000020
Sodium (Na)-Total	mg/L	34.4
Thallium (Tl)-Total	mg/L	<0.00010
Tin (Sn)-Total	mg/L	<0.050
Titanium (Ti)-Total	mg/L	<0.0010
Uranium (U)-Total	mg/L	<0.00010
Vanadium (V)-Total	mg/L	<0.0010
Zinc (Zn)-Total	mg/L	<0.0040
Calcium (Ca)-Dissolved	mg/L	9.83
Magnesium (Mg)-Dissolved	mg/L	7.01
Biochemical Oxygen Demand	mg/L	<2.0
Oil and Grease	mg/L	<1.0
Oil And Grease (Visible Sheen)		NO VISIBLE SHEEN
Microcystin	ug/L	<0.20

Part G: Conditions Applying to Waste Management and Waste Management Plans.**Item 1: Condition to Provide Notice of a Planned Discharge**

On May 21, 2013 AANDC and the NWB were provided with a discharge notification for the discharge of ST4, ST5, ST6A, ST6B, and ST8.

Item 3(b): Conditions applying to sewage effluent quality

Monthly compliance samples were taken from monitoring station ST-8B (Sewage Treatment Plant Effluent) in accordance with the Schedule J requirements of the licence (Table 2).

Table 2: Monthly Compliance Sample Results for ST-8B, December 2013

Sample ID		ST8B-06DEC13	Part G Item 3 (b)	
ALS ID		L1400885-8	Maximum Average Concentration	Maximum Allowable Grab Sample Concentration
Sample Date/Time		16-06-2013 2:00 AM		
Parameter	Units	Results		
pH	pH	6.78	6.5 - 9.0	9
Total Suspended Solids	mg/L	<3.0	100	100
Biochemical Oxygen Demand (BOD ₅)	mg/L	<2	80	80
Oil and Grease	mg/L	1.8	5	10
Oil And Grease (Visible Sheen)		NO VISIBLE SHEEN	No Visible Sheen	No Visible Sheen
Fecal Coliform	CFU/ 100mL	<2	10,000	10,000

No water was available for sampling at locations ST-9 (prior to entry into Glenn Lake) due to frozen conditions.

Item 3(e): Treated Sewage Effluent Release in cubic meters

This month, 50 m³ of sewage effluent was discharged from the sewage treatment plant.

Item 23(a) and Items 24(c, e): Sedimentation pond, land farm, and fuel containment sumps

No water was discharged from the Sedimentation (ST-1) or Pollution Control Ponds (ST-2), Landfarm (ST-4), the Doris tank farm (ST-5), or the Roberts Bay tank farms (ST6-A and ST6-B) this month.

Item 28, 29, 30 and Part J Item 8: Water Discharged from Tailing Impoundment Area

Dewatering of the Tailings Impoundment Area commenced on June 21, 2013 and ended September 6, 2013. No water was discharged from the TIA this month.

Item 32: Tailings Impoundment Area Discharge Volume

No water was discharged from the TIA this month.

Schedule J: Tailings Impoundment Area Water Quality (TL-10)

No water was discharged from the TIA this month and no water was sampled.

Part J: Conditions Applying to General and Aquatics Effects Monitoring**Item 12d: Tonnages of Waste Rock Stored on the Temporary Waste Rock Pad**

Underground mining is no longer occurring. Waste rock has not been removed from the pile. The total volume of rock on the temporary waste rock pad is 182,716 tonnes, as per the December 2011 survey.

Item 12g: Tail Lake Ice Thickness

Ice thickness at Tail Lake on December 30 was 50".

Environmental Incident Reporting

Dec 16/13 – Approx. 2.5L of pre-mix antifreeze was detected under a pick-up during vehicle warm up at the Doris camp pad. The antifreeze was soaked up with spill pads, and the residue scraped up and contained in bags. The contaminated snow and spill pads were securely stored for appropriate offsite disposal. The vehicle was removed from service for repairs.

Should there be any questions regarding this monthly report, please contact Katsky Venter or Léa-Marie Bowes-Lyon at (867) 988-0569 or Katsky.Venter@tmacresources.com or Lea-Marie.Bowes-Lyon@tmacresources.com.

Yours sincerely,

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