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July 17, 2015

Mr. Willard Hagen, Chair
Mackenzie Valley Land and Water Board
7TH FLOOR – 4910 50TH AVENUE
YELLOWKNIFE, NT X1A 2P6

Dear Mr. Hagen;

RE: April 2015 Monthly Report for Water Licence, MV2012L8-0010, Part B, Item 7

Aboriginal Affairs and Northern Development Canada (AANDC) was issued Water Licence MV2012L8-0010 (the Licence) on March 28, 2013 for water use and waste disposal associated with roaster complex deconstruction and underground stabilization at the Giant Mine. Part B, Item 7 of the Licence requires that the commitments made in the *Communications Plan for Duration of Site Stabilization Activities* (SSP Communications Plan) be fulfilled. One of the commitments in the SSP Communications Plan is to provide monthly updates to the Mackenzie Valley Land and Water Board and identified Parties during active operations.

If you have any questions or concerns, please contact the undersigned at (867)669-2425 or adrian.paradis@aandc-aadnc.gc.ca.

Sincerely,

Adrian Paradis
Regulatory Manager
Giant Mine Remediation Plan

Encl. Monthly Report April 2015

c.c.: AANDC Inspector

**GIANT MINE ROASTER COMPLEX DECONSTRUCTION
AND UNDERGROUND STABILIZATION**

**WATER LICENCE MV2012L8-0010 – PART B, ITEM 7
SSP COMMUNICATIONS PLAN**

MONTHLY REPORT

April 2015

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INTRODUCTION

Water Licence MV2012L8-0010 (the Licence) was issued to Aboriginal Affairs and Northern Development Canada (AANDC) on March 28, 2013 for water use and waste disposal associated with roaster complex deconstruction and underground stabilization at the Giant Mine. Part B, Item 7 of the Licence requires that the commitments made in the *Communications Plan for Duration of Site Stabilization Activities* (SSP Communications Plan) be fulfilled. One of the commitments in the SSP Communications Plan is to provide monthly updates to the Mackenzie Valley Land and Water Board (MVLWB) and identified Parties¹ during active operations.

The SSP Communications Plan requires that the monthly updates include the following items:

- Progress/status update of the work
- Summary of outcomes from environmental and health and safety related inspections
- Summary of outcomes from air and water quality monitoring

This report has been prepared for the Licence and describes activities that took place in April 2015.

¹ Parties identified in the SSP Communications Plan include the following:

Residents of Yellowknife, N'Dilo and Dettah	North Slave Métis Alliance
Yellowknives Dene First Nation	Lutsel K'e First Nation
Giant Mine Advisory Committee	NWT Métis Nation
Tlicho First Nation	City of Yellowknife
Back Bay Community Association	Alternatives North
Ecology North	Workers Safety & Compensation Commission
City Emergency Services	Media
Members of the NWT Legislature	Giant Mine Community Alliance
Federal and territorial government agencies and inspection agencies, including Government of the Northwest Territories, Fisheries and Oceans and Environment Canada	

REGULATORY MILESTONES

A list of major regulatory milestones and activities is provided in the table below for reference purposes.

Table 1: Regulatory Milestones during the Reporting Period

	There are no regulatory milestones to report for April 2015.
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ROASTER COMPLEX DECONSTRUCTION – PROGRESS UPDATE

The bulk of the deconstruction and containerization activities had been completed by the end of November. During the month of April, the on-site activities were limited to the following:

- Completion of site inspections of the Materials Storage Area (MSA). The inspections were completed on April 3 and April 29, 2015. No issues or deficiencies were identified during these site inspections.

UNDERGROUND STABILIZATION – PROGRESS UPDATE

Please find below the monthly Underground progress for April 2015.

- Finalized the paste plant design including all power requirements.
- Began installation of barricades and other rehabilitation activities.
- Continued mobilization of equipment to site for paste production including site trailers and communications gear.
- Began the installation and setup of underground monitoring equipment.
- Install a bridge over Baker Creek in reach 2 near Gatehouse.
- 650 m³ of water was used for dust suppression on tailings stockpiles in the month of April 2015.

ENGAGEMENT ACTIVITIES

Table 2 provides a summary of engagement activities related to the Site Stabilization Plan (SSP) during the reporting period. Other topics have not been reported below.

Table 2: Engagement Activities Related to Site Stabilization Plan during the Reporting Period

Engagement Activity/Target	Number	Type
Public Events	1	Giant Mine Working Group, YKDFN Giant Mine Advisory Committee, Public Meetings, Community Alliance
Information Distribution	5	Meetings, E-newsletter, e-mails, website, twitter posts
Site Tours	1	City of Yellowknife
Media Interactions (based on # of media involved)	1	Interviews, site tour, emailed responses

MONITORING and INSPECTIONS

Health and Safety Inspections

- 0 lost time incidents
- 0 minor first aid incidents
- 0 property damages.
- 0 reported near misses
- Weekly safety inspections were not completed during the month of April due to the minimal site activities.

Spill Events

No reportable spills occurred during the month of April 2015.

Water Quality Monitoring

No samples were collected from the waste water treatment system as there is no activity occurring on site which required the collection and disposal of water.

Sanitary Waste Management

In the month of April there were no onsite activities that required the collection and disposal of sanitary waste.

Air Quality Monitoring Program

A tiered ambient air quality monitoring program made up of three distinct parts has been implemented at the Giant Mine site. The three parts to the air quality program include task specific perimeter monitoring around specific projects, fenceline monitoring and community monitoring.

Perimeter air monitoring includes daily, real-time monitoring for Particulate Matter (PM₁₀) as well as 24-hour samples collected every three days and analyzed for PM₁₀, total suspended particulates (TSP), and arsenic.

Please find below the summary for air monitoring for the month of April 2015:

General Operations

- Routine annual maintenance was performed in preparation for the field season.

Interim Underground Stabilization (IUS) Program:

- Air quality monitoring was shut down January 20th, 2015 and is scheduled to resume in mid to late May.

Fenceline Program:

- Fenceline air quality monitoring started operations at all sites Friday April 10, 2015. Fenceline samplers are scheduled to run daily from 7 AM to 7 PM local time
- No 15-minute average particulate matter less than 10 microns in diameter (PM₁₀) concentrations above the established Risk Based Action Level (RBAL) criteria were measured at the fenceline monitoring stations during the month. PM₁₀ concentrations measured at all fenceline locations remained typical of background concentrations;
- No 15-minute average total suspended particulate (TSP) concentrations above the established RBAL were measured at the fenceline monitoring stations during the month. PM₁₀ concentrations measured at all fenceline locations remained typical of background concentrations

Community Program:

- There were no continuous PM_{2,5} concentrations greater than the target criteria for the community stations for the month of April.
- There were eight days when PM₁₀ concentrations above the referenced criteria were recorded at community stations throughout the month. All occurrences were investigated and none of these coincided with elevated levels at site. Road dust in the city of Yellowknife has been visually observed throughout the reporting period. Details of these events are as follows:
 1. PM₁₀ concentrations were above the referenced criteria April 5 and April 7, 2015 at the NAPS community station due to road dust.
 2. 24-hour PM₁₀ concentrations were above the referenced criteria on April 13, 2015 at the NAPS community station and on April 14, 2015 at the NDL community station. Winds on April 13 and April 14 were light to moderate blowing from the north and northeast. Fenceline concentrations remained low on April 13 and April 14, with fenceline 15-minute PM₁₀ concentrations below 10 µg/m³. PM₁₀ concentrations at YCC were well below the reference criteria during this time. Road dust in the city of Yellowknife has been visually observed throughout the reporting period;
 3. 24-hour PM₁₀ concentrations above the referenced criteria on April 21, 22 and 23 at the N'Dilo community station. Winds were from the east during those periods and the concentrations at the fenceline and other community stations were comparatively lower, indicating that that the PM levels at NDL were most likely from localized sources
 4. 24-hour PM₁₀ concentrations were above the referenced criteria on April 30, 2015 at the NAPS community station. Winds on April 30, 2015 were light blowing from the south and west. Fenceline concentrations remained low on April 30, 2015, with fenceline 15-minute PM₁₀ concentrations below 10 µg/m³. PM₁₀ concentrations at YCC and NDL were below the reference criteria during the week. Road dust in the city of Yellowknife has been visually observed throughout the reporting period;

- Sampling for TSP (high volumetric air flow), PM₁₀ (high volumetric air flow), asbestos, total inorganics (trace metals), and arsenic for a twenty-four hour period was conducted every three (3) days for the community sampling program in accordance with the construction season sampling program. Sampling of these parameters has been ongoing since June 24th, 2013.
 1. Asbestos results for samples measured on April 3, 6, 9, 12, 18, 24, and 27, 2015 were less than the analytical detection limit and/or below the referenced criteria. The asbestos samples collected at NAPS community station on April 3, 2015 were invalidated due to particulate overloading the filter cartridge. Laboratory results from asbestos samples collected at the community stations on April 15 and 21, 2015 are pending.
 2. TSP, PM₁₀, and trace metals (including arsenic) results from samples collected on April 6, 9, 12, 15, and 27, 2015 were less than the analytical detection limit and/or below the referenced criteria.
 3. Laboratory results for TSP and total iron were above the referenced criteria at the NDL community station April 21, 2015. The PM₁₀ sample collected on April 21, 2015 at NDL was equal to the referenced criteria. YCC and NAPS community station TSP, PM₁₀, and trace metals (including arsenic) results from April 21, 2015 were below the referenced criteria. Winds on April 21, 2015 were light to moderate and blowing from the east, thereby orienting the NDL station upwind of the Giant Mine site. The 24-hour PM₁₀ BAM concentrations at NDL were above the referenced criteria on April 21, 2015. Meanwhile, 24-hour PM₁₀ BAM concentrations at the YCC and NAPS community stations remained well below the standard, further indicating the high particulate concentrations observed at the NDL station were likely caused by sources located within the immediate vicinity of the NDL station. Fenceline concentrations remained low on April 21, 2015, with fenceline 15-minute PM₁₀ concentrations below 10 µg/m³. Visual observations of road dust from snow melt and road sand; that the NDL station was upwind of the Giant Mine site; low fenceline PM₁₀ concentrations; and elevated particulate concentrations isolated to the NDL station indicate measured concentrations above the ambient air quality standard were likely caused by local road dust.
 4. TSP and total iron concentrations were above the reference criteria at the NAPS community station on April 30, 2015. TSP and total iron concentrations at YCC and NDL community stations were more than seven times lower than concentrations at NAPS indicating the exceedances at NAPS were likely caused by sources in close proximity to the NAPS station.

Wildlife Observations and Follow-Up Actions

No wildlife observations occurred in active work areas and no nesting or rearing habitat was disturbed in the course of work activities.

There were 12 sightings of foxes throughout the site during the month. No issues or concerns were noted by site personnel.

