

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

WATER LICENCE MV2012L8-0010 – PART B, ITEM 7

SSP COMMUNICATIONS PLAN

MONTHLY REPORT

December 2014

TABLE OF CONTENTS

INTRODUCTION	1
REGULATORY MILESTONES	2
ROASTER COMPLEX DECONSTRUCTION – PROGRESS UPDATE	2
UNDERGROUND STABILIZATION – PROGRESS UPDATE.....	3
ENGAGEMENT ACTIVITIES	3
MONITORING and INSPECTIONS.....	4
Health and Safety Inspections	4
Spill Events	4
Water Quality Monitoring.....	4
Sanitary Waste Management	6
Air Quality Monitoring	7
Wildlife Observations and Follow-Up Actions	8

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 December 2014.

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

	<ul style="list-style-type: none">• No regulatory milestones during December 2014.
--	--

ROASTER COMPLEX DECONSTRUCTION – PROGRESS UPDATE

The bulk of the deconstruction and containerization activities had been completed by the end of November 2014. During the month of December the on-site activities were limited to:

- Completion of site inspections of the Materials Storage Area (MSA)
- Relocation of all remaining containers containing arsenic impacted wastes to the MSA.

A summary of the work completed during 2014 includes;

- AC Roaster Building:
 - The building has been decontaminated and deconstructed to slab on grade.
 - All arsenic and/or asbestos containing materials are packaged and are stored in the MSA.
 - All non-hazardous materials (metal, wood and fibreglass) that were decontaminated were placed in the storage yard at the Waste Transfer Storage Area (WTSA).
- Cottrell Precipitator Building:
 - The building has been decontaminated and deconstructed to slab on grade.
 - All arsenic and/or asbestos containing materials are packaged and stored in the MSA.
 - All non-hazardous materials (metal, wood and fibreglass) that were decontaminated were placed in the storage yard at the Waste Transfer Storage Area (WTSA).
- Dorrco Roaster:
 - The building has been decontaminated and deconstructed to slab on grade.
 - All arsenic and/or asbestos containing materials are packaged and stored in the MSA.
 - All non-hazardous materials (metal, wood and fibreglass) that were decontaminated were placed in the storage yard at the Waste Transfer Storage Area (WTSA).
- Calcine:
 - The building has been decontaminated and deconstructed to slab on grade.
 - All arsenic and/or asbestos containing materials are packaged and stored in the MSA.
 - All non-hazardous materials (metal, wood and fibreglass) that were decontaminated were placed in the storage yard at the Waste Transfer Storage Area (WTSA).

- Baghouse:
 - The building has been decontaminated and deconstructed to slab on grade.
 - All arsenic and/or asbestos containing materials are packaged and stored in the MSA.
 - All non-hazardous materials (metal, wood and fibreglass) that were decontaminated were placed in the storage yard at the Waste Transfer Storage Area (WTSA).

- Material Storage Area:
 - Inspections of the MSA occurred on December 1 and December 9, 2014. After the December 1 inspection, one of the membranes covering bags of arsenic containing waste was adjusted in order to adequately cover the underlying bags. These activities were completed prior to the December 9 inspection.

UNDERGROUND STABILIZATION – PROGRESS UPDATE

Please find below the monthly Underground progress the December 2014

- Excavation and the stockpiling of tailings in preparation for paste production in the Spring of 2015. By the end of December, approximately 35,000 cubic meters of tailings have been stockpiled.
- Underground assessments and preparations with mine engineers to determine ground support requirements and approach for backfilling plan were completed in early December.
- Completed the formation of an ice cap (~40 cubic meters of water drawn from the Polishing Pond and sprayed over tailings) on the tailings stockpile as a dust suppression effort over the winter months.

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	2	Giant Mine Working Group, YKDFN GMAC
Information Distribution	9	Meetings, E-Newsletter, e-mails, website
Site Tours	0	N/A
Media Interactions (based on # of media involved)	5	Interviews, site tour, emailed responses, twitter posts

MONITORING and INSPECTIONS

Health and Safety Inspections

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

Spill Events

No reportable spills occurred during the month of December.

Water Quality Monitoring

No samples were collected from the waste water treatment system as there is no activity occurring on site.

The following table presents a summary of all the project discharges during the 2013 and 2014 construction seasons. It should be noted there were no additional discharges in December 2014.

Table 3: Treated Wastewater Discharged to Date to the Northwest Tailings Pond

Date	Volume (Litres)
Total for 2013	384,745
May 25, 2014	15,140
June 8, 2014	22,700
June 15, 2014	30,280
June 22, 2014	22,700
June 29, 2014	22,700
July 6, 2014	22,700
July 13, 2014	22,700
July 20, 2014	38,250
July 27, 2014	53,000
August 1, 2014	22,710
August 6, 2014	22,710
August 12, 2014	30,285
August 16, 2014	30,285
August 20, 2014	22,710
August 26, 2014	30,285
August 30, 2014	30,285
September 8, 2014	30,280
September 11, 2014	30,280
September 25, 2014	30,280
September 29, 2014	30,280
October 2, 2014,	30,280
October 21, 2014	7,570
October 22, 2014	26,497
October 27, 2014	39,747
November 3, 2014	39,747
November 7, 2014	39,747
November 10, 2014	39,747
November 14, 2014	26,496
Total for Project	1,195,136

Sanitary Waste Management

The following table presents a summary of all the sanitary sewage discharges during the 2013 and 2014 construction seasons. It should be noted that there were no additional sanitary sewage discharges in December 2014.

Table 4: Sanitary Wastewater Discharged to Date to the Dettah Sewage Lagoon

Date	Volume (Litres)
Total for 2013	67,364
Week ending April 20, 2014	152
Week ending May 4, 2014	1,893
Week ending May 25, 2014	3,400
Week ending June 1, 2014	3,785
Week ending June 8, 2014	2,840
Week ending June 15, 2014	2,270
Week ending June 22, 2014	3,030
Week ending June 29, 2014	3,785
Week ending July 6, 2014	3,030
Week ending July 13, 2014	3,400
Week ending July 20, 2014	3,030
Week ending July 27, 2014	3,400
Week ending August 4, 2014	3,785
Week ending August 10, 2014	8,700
Week ending August 17, 2014	3,030
Week ending August 24, 2014	3,410
Week ending August 31, 2014	3,030
Week ending September 7, 2014	3,030
Week ending September 14, 2014	3,785
Week ending September 21, 2014	2,650
Week ending September 28, 2014	2,650
Week ending October 5, 2014	2,649
Week ending October 12, 2014	6,435
Week ending October 19, 2014	1,892
Week ending October 26, 2014	5,299
Week ending November 2, 2014	2,650
Week ending November 9, 2014	2,271
Week ending November 16, 2014	14,006
Total for Project	170,651

Air Quality Monitoring

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 the roaster, 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 December:

Community Program:

- There were no continuous PM_{2.5} and PM₁₀ concentrations greater than the target criteria for the community stations for the month of December.
- 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 is conducted every three (3) days for the community sampling program. Sampling of these parameters has been ongoing since June 24, 2013. Laboratory results for the month of December are available up to December 10, 2014. Results were below either detection limits or target criteria for all parameters for the month of December. Laboratory results collected after December 10, 2014 are pending.

Fenceline Program:

- There were no measured concentrations greater than PM₁₀ target action level or the TSP target action level at the fenceline monitoring stations for the month of December.
- Fenceline monitoring was completed for 2014 on December 20. Start up was initiated January 5, 2015 and likely to continue for a two week period.

Interim Underground Stabilization (IUS) Program:

- There were no measured concentrations greater than the PM₁₀ target action level for the month of December.
- There were no measured concentrations greater than the arsenic target action level for samples submitted up to December 7, 2014. Filter analysis results pending after December 7, 2014.
- Air quality monitoring was completed for 2014 on December 20. Start up was initiated January 5, 2015 and likely to continue for a two week period.

Roaster Program:

No real time monitoring for PM₁₀ occurred due to work being completed for the season on November 21, 2014.

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.

Two wildlife observations outside of the active work areas were noted by security personnel during December:

- On December 21, a wolf was spotted in that area of A1 pit.
- On December 30, a fox was observed near the main gate eating a chunk of meat (3-4 kg of red meat). As the meat was “clean cut” (i.e. had been prepared for human consumption), it was removed by security personnel and provided to the RCMP for laboratory analysis later that day.