

Part A: Scope and Definitions

Scope

1. This Licence entitles Aboriginal Affairs and Northern Development Canada to use Water and dispose of Waste for miscellaneous undertakings [limited to the deconstruction of the Roaster Complex and stabilization of the Underground Stabilization Work Area and associated activities as described in the application](#) located at the Giant Mine Site (62°28'54" N, 114°19'12" W and 62°32'38" N, 114°22'34" W), Northwest Territories.

Explanation – Editorial changes to improve readability.

2. This Licence is issued subject to the conditions contained herein with respect to the taking of Water and the depositing of Waste of any type in any Waters or in any place under any conditions where such Waste or any other Waste that results from the deposits of such Waste may enter any Waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the *Northwest Territories Waters Act*, or other statutes imposing more stringent conditions relating to the quantity or type of Waste that may be so deposited or under which any such Waste may be so deposited, this Licence shall be deemed, upon promulgation of such Regulations, to be automatically amended to conform to such Regulations.
3. Compliance with the terms and conditions of this Licence does not absolve the Licensee from the responsibility for compliance with the requirements of all applicable federal, territorial, and municipal legislation.

Definitions

In this Licence: **MV2012L8-0010**

“**Act**” means the *Northwest Territories Waters Act*.

“**Analyst**” means an Analyst designated by the Minister under subsection 35(1) of the Act.

“**Board**” means the Mackenzie Valley Land and Water Board established under Part 4 of the *Mackenzie Valley Resource Management Act*.

“**Inspector**” means an Inspector designated by the Minister under subsection 35(1) of the Act.

“**Licensee**” means the holder of this Licence.

“Minister” means the Minister of Aboriginal Affairs and Northern Development Canada.

“Modification” means an alteration to a physical work that introduces a new structure or eliminates an existing structure and does not alter the purpose or function of the work but does not include an expansion.

“Polishing Pond” means the retention structure downstream of the effluent treatment plant that is designed to receive treated minewater. Located at 62° 30' 43.146" N, 114° 20' 54.961" W. ~~means a component of the current water treatment infrastructure located at (RO note: need lat and long here and possibly better definition).~~

Explanation - Wording suggestion provided in response to RO note.

“Roaster Complex” means a group of industrial process buildings at the Giant Mine Site located south of the B 1 Pit on the south side of Highway 4 (Figures 13 and 14 in the Roaster Complex Deconstruction Detailed Project Description provided in the application package). Located at 62° 30' 7.099" N, 114° 21' 27.534" W.

“Regulations” means Regulations proclaimed pursuant to section 33 of the *Northwest Territories Waters Act*.

“Underground Stabilization Work Area” includes the underground stopes, chambers and bulkheads that are clustered near the ~~B-1 and 82~~ B1 and B2 open pits; on the west side of the Mill near Highway 4; and at the north end of the roaster complex (as shown on Figures 3, 4a and 4b in the Underground Stabilization Detailed Project Description provided the application package).

Explanation - Simple editorial change.

“Waste(s)” means Waste as defined by section 2 of the Act.

“Water(s)” means any Waters as defined by section 2 of the Act.

~~**“Water Use Fee”** means a fee for the use of Water as defined by section 33 of the *Northwest Territories Waters Act*.~~

Explanation – Remove definition as the Government of Canada is not required to pay water use fees which is reflected in the absence of any conditions related to water use fee payment in the body of the licence below.

Part B: General Conditions

1. The Licensee shall file ~~a bi-annual~~ reports with the Board as follows ~~not later than March 31 of the year following the calendar year reported~~ which shall contain the information as listed in Schedule 1, item 1:

Reporting Period	Bi-annual Report Submission Date
May 1 – October 31 each year	January 31 each year
November 1 – April 30 each year	July 31 each year

Explanation - The Giant Team agrees with the parties that emphasized the importance of sound reporting in their review comments on the application package. As such, we suggest that reporting occurs twice a year rather than annually and have inserted "Bi-" into the condition. Corresponding changes have been made to Schedule 1.

2. The Licensee shall comply with the terms of any plans approved pursuant to the conditions of this Licence and with any amendments to the plans as may be made from time to time pursuant to the conditions of this Licence and as approved by the Board.
3. Compliance dates specified in the Licence may be modified at the discretion of the Board.
4. The Licensee shall comply with the Schedules annexed to this Licence, and with any amendments to the Schedules as may be made from time to time pursuant to the conditions of this Licence and as approved by the Board.
5. Meters, devices, or other methods used for measuring the volumes of Water used and Waste discharged shall be installed, operated, and maintained by the Licensee to the satisfaction of an Inspector.
6. The Licensee shall post the necessary signage identifying the areas of the work for the Roaster Complex deconstruction and the Underground Stabilization Work Area. All postings shall be located and maintained to the satisfaction of an Inspector.
7. The Licensee shall ensure a copy of this Licence ~~and all approved plans under this Licence are~~ maintained at site operation at all times.

Explanation – The suggested change has been incorporated as per Alternative North's recommendation number 7.

Part C: Conditions Applying to Water Use

1. The Licensee shall obtain all recycled Water from the Polishing Pond.
2. The Licensee shall obtain all fresh Water from on site storage tanks.
3. The quantity of treated minewater used for all purposes shall not exceed 300 cubic

metres per day.

Part D: Conditions Applying to Waste Disposal

1. The Licensee shall ensure that any unauthorized Wastes associated with the B Licence undertaking do not enter any Waters.
2. The Licensee shall abide by the approved Waste Management Plan for Roaster Complex Deconstruction.
3. The Licensee shall abide by the approved Waste Management Plan for Underground Stabilization.
4. The Licensee shall modify the Waste Management Plans referred to in Part D, items ~~1 and 2~~ 2 and 3 as necessary to reflect any proposed changes in operations. Any proposed changes shall be submitted to the Board for approval.

Explanation - Simple editorial change.

Part E: Conditions Applying to Modifications

Intentionally left blank

Part F: Conditions Applying to Contingency Planning

1. If, during the period of this Licence, an unauthorized discharge of Waste occurs, or if such a discharge is foreseeable, the Licensee shall:
 - a. Employ the appropriate contingency plan;
 - b. Report the incident immediately via the 24-hour NWT Spill Report Line. Currently the number is (867) 920-8130; and
 - c. Submit to an Inspector a detailed report on each occurrence not later than 30 days after initially reporting the event *that includes a summary of clean-up actions and preventative measures to avoid any further unauthorized discharges as applicable.*

Explanation – Additional wording incorporated as the Giant Team agrees with Alternative North's recommendation 8.

2. *The Licensee shall abide by the approved Emergency and Spill Response Plan.*
3. *The Licensee shall modify the Emergency and Spill Response Plan referred to in Part F, item 2 as necessary to reflect any proposed changes in operations. Any proposed changes shall be submitted to the Board for approval.*

Explanation – Insertion of new Conditions 2 and 3 is recommended to close the loop on the plan approval process.

Part G: Conditions Applying to Abandonment and Restoration

Intentionally left blank

Part H: Conditions Applying to Construction

1. The Licensee shall, ~~within~~ 60 days prior to starting deconstruction of the Roaster Complex, ~~beginning work on the Roaster Complex deconstruction~~, submit to the Board for approval a detailed deconstruction plan. This plan shall contain the items as listed under Schedule 2, item 1.

Explanation – The suggested wording is provided to allow the contractor to mobilize to site; carry out preparatory work; and installation of supporting temporary infrastructure such as office trailers prior to plan approval being received. In order to finalize the information requested in Schedule 2, the contractor needs to be installed at the site.

2. The Licensee shall, 30 days prior to the use of any wetting agents during decontamination for Roaster Complex deconstruction, submit to the Board for approval the Material Safety Data Sheet(s) for the wetting agents.

Explanation – We recommend the inclusion of the above new condition as per Alternative North's request number 11.

3. The Licensee shall, ~~within~~ 60 days prior to starting backfilling of stopes or chambers, construction of new bulkheads or repair of existing bulkheads, ~~beginning work~~ in the Underground Work Stabilization Area, submit to the Board for approval a detailed Stabilization Plan. This plan shall contain the items as listed under Schedule 2, item 2.

Explanation – The suggested wording is provided to allow the contractor to mobilize to site; carry out preparatory work; and installation of supporting temporary infrastructure such as office trailers prior to plan approval being received. In order to finalize the information requested in Schedule 2, the contractor needs to be installed at the site.

4. The Licensee shall implement the plans referred to in Part H items 1 and 3 as and when approved by the Board.

Explanation – If the new MSDS requirement identified above is accepted by the Board, then the above editorial change is required.

5. If not approved by the Board, the plans referred to in Part H items 1 and 3 shall be revised and resubmitted for approval as directed by the Board.

Explanation – If the new MSDS requirement identified above is accepted by the Board, then the above editorial change is required.

6. The Licensee shall modify the plans referred to in Part H items 1 and 3 as necessary to reflect any proposed changes in operations. Any proposed changes shall be submitted to the Board for approval.

Explanation – If the new MSDS requirement identified above is accepted by the Board, then the above editorial change is required.

Part I: Conditions Applying to Operation and Maintenance

Intentionally left blank

Mackenzie Valley Land and Water Board

Chair

Witness

Schedule 1 – General Conditions

1. The Bi-Annual Report referred to in Part B, item 1 shall include, but not be limited to, the following information:

Explanation - The Giant Team agrees with the parties that emphasized the importance of sound reporting in their review comments on the application package. As such, we suggest that reporting occurs twice a year rather than annually and have inserted "Bi-" into the condition.

- a. The monthly and bi-annual quantities in cubic metres of fresh Water obtained from all sources;

Explanation – Changed to bi-annual to reflect recommendation that reporting occur every 6 months.

- b. The monthly and bi-annual quantities in cubic metres of recycled Water obtained from all sources;

Explanation – Changed to bi-annual to reflect recommendation that reporting occur every 6 months.

- c. The monthly and bi-annual quantities in cubic metres of each and all Waste discharged;

Explanation – Changed to bi-annual to reflect recommendation that reporting occur every 6 months.

- d. A list of unauthorized discharges, including any clean-up actions taken and preventative measures implemented to prevent future discharges;

Explanation – Additional wording incorporated as per Alternative North's recommendation number 12.

- e. An outline of any spill training and communications exercises carried out;

- f. A summary of any public engagement and consultation activities completed during the year and an outline of any activities anticipated for the next year;

- g. A summary of any revisions to the approved Emergency Response and Contingency Plans;

Explanation – There may be a need to submit revisions to the referenced plans at any time during the year, not just every 6 or 12 months, so we respectfully request that the report contain a summary of revisions as approved under Condition F3.

- h. A summary of any revisions to the approved Waste Management Plans for Roaster Complex Deconstruction and Underground Stabilization.

Explanation – There may be a need to submit revisions to the referenced plans at any time during the year, not just every 6 or 12 months, so we respectfully request that the report contain a summary of revisions as approved under Condition D4.

- i. Details of all work completed for the Roaster Complex and the Underground Stabilization Work Area and any anticipated activities for the upcoming 6-month period, including the sequence in which the structures of the Roaster Complex will be deconstructed;

Explanation – “6-month period” was added in to reflect our recommendation for bi-annual reporting. The phrase regarding the deconstruction sequence was added in as per our comments on Schedule 2, Item 1(c).

- j. Details on the types and quantities of hazardous materials removed from the Roaster Complex deconstruction;
- k. Details on the types and quantities of packaging used for storing waste at the Temporary Waste Storage Area, including non-hazardous and arsenic-containing hazardous waste; and

Explanation – This is a new item added in as per our comments under Schedule 2, Item 1(f).

- l. Details on the volume of each type of backfill material used in each stope or chamber during the reporting period; and

Explanation – This is a new item added in as per our comments under Schedule 2, Item 2(b).

- m. Completed “As-Built Statement of Risk Mitigation” letters stamped by a professional engineer that confirm the mitigation of risks associated with the Underground Stabilization Work Area.

Explanation - This is a new item suggested to address YKDFN’s comment 5 that there is a need for the parties and Board to have evidence that the underground risks have been mitigated.

- n. Any other details on Water Use or Waste disposal requested by the Board by November 1 of the year being reported.

Schedule 2 – Conditions Applying to Construction

1. The Roaster Complex detailed deconstruction plan referred to in Part H, item 1 shall include, but not be limited to, the following:

~~a) An assessment of the potential risks to workers from chosen deconstruction methods and mitigating measures to address these risks, including, but not limited to, the potential generation of arsine gas;~~

Explanation – We request that this item be removed for the following reasons:

- A number of regulators are charged with regulating the same aspects at site for different purposes (for example, hazardous substances). While deconstruction methods are within the jurisdiction of the Board to the extent appropriate to deal with waters and related waste issues, we respectfully suggest that regulating the deconstruction for the purpose of protecting worker safety be attended to by the WSCC under the Mine Health and Safety Act.*
- The Emergency and Spill Response Plan outlines the training, equipment needs and procedures for responding to a variety of incidents, including arsenic trioxide releases, tailings releases and petroleum hydrocarbon releases, among other incidents. Summaries of spill contingency training and communications exercises are requirements of the Bi-Annual Report under Schedule 1 (item e) Any new information or changes to the existing spill response information requires approval by the Board under Part F and Schedule 2.*

~~b) The methodology and equipment proposed for deconstruction, and the advantages of the chosen method(s) over other alternative methods considered but not chosen by the Contractor;~~

Explanation – We request that this item be removed for the following reasons:

- The methodology and equipment that is required for deconstruction was outlined in the proposed application (Roaster Complex Detailed Project Description) and supplemental material (responses to Alternative North's questions on first draft of the SSP application package). These documents indicated that deconstruction methodologies were limited to a "piece by piece" deconstruction from the top down using cranes rather than demolition by the "wrecking ball" analogy. Piece by piece deconstruction provides for greater control including minimising dust generation and unplanned collapses.*
- Deconstruction of the roaster complex will be overseen externally by the WSCC mine inspector and City inspector, and internally by the independent QAQC consultant as described under Section 2.4.2, item i in the Roaster Complex Detailed Project Description.*

- ~~e) The sequence of deconstruction work within each structure of the complex to be taken down, including where decontamination work is required as part of structure deconstruction;~~

Explanation - We suggest that this item be moved to the bi-annual reporting requirement in Schedule 1 as the sequence in which structures are taken down is an engineering decision based on observations as the work proceeds. In addition, Schedule 1, Item (1)(i) already requires a description of anticipated work for the upcoming reporting period. See suggested wording added to Schedule 1, Item (1)(i).

- ~~d) An assessment of the potential risks to the environment from chosen deconstruction methods and mitigating measures to address these risks;~~

Explanation – We respectfully request that this item be removed as requesting a reassessment of potential risks in a specific plan is redundant to the Board's process as a whole. In addition, mitigating measures are described in the various submittals required as part of the application and/or licence: waste management plan, spill contingency plan, dust control and air quality monitoring, recycled water containment and transportation (see new item i below) and MSDS sheets (see new item in Part H).

- ~~e) Access restrictions and traffic control during deconstruction work, with consideration of the proximity of the existing Highway 4;~~

Explanation – We respectfully request that this item be replaced by the new condition we have proposed below (Schedule 2, item 1i) for recycled water management details which is to include a discussion of spill prevention measures (traffic control is one type of measure). We respectfully suggest that regulating access restrictions and traffic control be attended to by the GNWT Department of Transportation under the Public Highways Act.

- f) The size reduction, stacking, packaging, and storage procedures for non-hazardous waste and arsenic-containing hazardous waste, and packaging type ~~and quantities~~ as applicable;

Explanation –

- i. Recommend addition of “and arsenic-containing hazardous waste” - We agree with Alternatives North’s recommendation 15 that this item should be expanded but we have limited it to arsenic-containing hazardous waste because it will be stored on site until such time that final disposal plans are approved through the type A licensing process. Non-arsenic containing hazardous waste will be removed from site in accordance with the Transportation of Dangerous Goods Regulations.*
- ii. We request that “and quantities” be removed from this item and instead included under the reporting requirements in Schedule 1 (see proposed wording in the*

new item under Schedule 1, Item 1k). Providing the exact quantities of each type of packaging required is not possible prior to the start of any deconstruction. This type of information is better placed in the reporting requirements under Schedule 1.

- g) Spill contingency plans specific to Roaster Complex deconstruction ~~if they align with~~ deviate from or add to the November 2012 Emergency and Spill Contingency Plan prepared by ~~the current Care and Maintenance Contractor,~~ Nuna/Deton Cho Joint Venture; and

Explanation – The change is requested because Nuna/Deton Cho is the Mine Manager as defined by the Mine Health and Safety Act for the NWT and their procedures, as provided in the application package, must be adhered to by all workers on site. The wording change would allow any additions or changes made to Nuna's plan presented in the application package or procedures developed by the roaster contractor that differ from Nuna's plan to be approved by the Board. The public will also have the opportunity to review clean up actions and lessons learned through the submission of bi-annual reports suggested by the Giant Team.

- h) Mitigative measures to control the generation of dust, and the detailed plan for ambient air quality monitoring.

Explanation - Air quality monitoring for industrial hygiene and ambient (environmental) purposes will be undertaken during roaster deconstruction. We have requested that the item be clarified to include only ambient air quality monitoring as we respectfully suggest that regulating industrial hygiene air quality monitoring, which is related to worker health and safety, be attended to by the WSSC under the Mine Health and Safety Act.

- i) Design of the recycled water collection and transport system, and related spill prevention measures.

Explanation – We recommend the inclusion of the above new item as per Environment Canada's recommendation 3 that the design of the water collection and transportation system for the roaster be approved by the Board. Spill prevention measures will include traffic controls related to the transport of recycled water from the Roaster area to the Northwest Tailings Pond as described in the explanation for Schedule 2, Item 1e above.

2. The detailed Stabilization Plan referred to in Part H, item 2 shall include, but not be limited to, the following:

- ~~a) Type of backfill material required which may be one or a combination of tailings paste, waste rock from mine development, or existing inert rock material on the surface (e.g., quarried rock);~~

Explanation – Section 2.3.2 in the Underground Stabilization Detailed Project Description identifies the type of backfill materials that will be used. As none of the parties raised any

concerns about the use of the proposed materials either during the engagement period or the review period, we suggest that the type of backfill material(s) used in each stope or chamber be provided in the bi-annual report identified in Schedule 1.

We recommend that this item be replaced by the following condition which could be inserted into Part H: "The Licencee shall only use tailings paste, waste rock from mine development, or existing inert rock material stockpiled on the surface to backfill the chambers and stopes unless otherwise approved by the Board."

~~b) Volume of each backfill material required;~~

Explanation – We request that this item be moved to the reporting requirement under Schedule 1 (see proposed wording under Schedule 1, Item 1(l)). The backfill materials that will be used as part of the project are recycled materials (e.g., tailings, existing stockpiles of rock on site); no fresh rock on the surface will be quarried nor will any rock from the underground be brought to the surface. In addition, the application states that between 130,000-150,000 m³ of tailings is required. Exact volumes of backfill material won't be known until backfilling is complete because the exact geometry of each open space in the chambers and stopes are not known.

~~e) Detailed methodologies for carrying out backfilling of the chambers and repairing/reinforcing bulkheads;~~

Explanation – We request that this condition be replaced with the following two new conditions under Part H of the WL because no concerns were raised about the proposed methodologies set out in the Underground Stabilization Detailed Project Description. Any changes would still require Board approval.

- (a) The Licensee shall manufacture tailings paste using only a mixer truck based mobile system or a mobile modular paste plant system as described in the Giant Mine Underground Stabilization Detailed Project Description unless otherwise approved by the Board.*
- (b) The Licensee shall repair or reinforce bulkheads as described in the Giant Mine Underground Stabilization Detailed Project Description unless otherwise approved by the Board.*

~~d) Health and safety plans;~~

Explanation – We request that this item be removed for the following reasons:

- A number of regulators are charged with regulating the same aspects at site for different purposes (for example, hazardous substances). While deconstruction methods are within the jurisdiction of the Board to the extent appropriate to deal with waters and related waste issues, we respectfully suggest that regulating the deconstruction for the purpose of protecting worker safety and others in proximity to the worksite be attended to by the WSCC under the Mine Health and Safety Act.*
- The Emergency and Spill Response Plan outlines the training, equipment needs and procedures for responding to a variety of incidents, including arsenic trioxide releases, tailings releases and petroleum hydrocarbon releases, among other incidents. Summaries of spill contingency training and communications exercises are requirements of the Bi-Annual Report under Schedule 1, Item 1e.*

Any new information or changes to the existing spill response information requires approval by the Board under Part F and Schedule 2.

- e) Detailed plans to mitigate potential effects to the environment and issues related to tailings excavation including:

~~o Effect on future tailings cover geometry and drainage;~~

Explanation – We request removal of this item as the closure of the tailings ponds, including grading and tailings covers, will be dealt with under the Type A water licence for the greater Giant Mine Remediation Project.

- o Management of wet or frozen tailings if encountered;
- o Ensuring acceptable grain size range of tailings as there can be no slimes used in making paste;

~~o Seasonal effects (during freshet and rainfall events water collecting in the excavated areas within the South and Central tailings ponds will need to be pumped away from the excavation to other areas of the tailings ponds);~~

Explanation – We request that this item be replaced by a condition under Part D that states: “The Licencee, during excavation of tailings in the South and Central tailings ponds for paste manufacturing, shall pump ponded water in the excavated areas only to other areas within the South and Central tailings ponds unless otherwise approved by the Board.”

- o Operational dust control (wetting of tailings during excavation and paste production using treated minewater);
- o Operational water management (treated minewater usage associated with dust control and wash down of equipment);

~~o Disposal of waste materials such as wood, barrels and scrap metal encountered in the tailings; and~~

Explanation – Request that this item be removed as this has been addressed in the Underground Stabilization Waste Management Plan provided in the licence application.

- o Cross-highway transport of tailings to temporary stockpiles (trucked or piped); and;

- f) Spill contingency plans specific to the Underground Stabilization Work Area ~~that align with~~ if they deviate from or add to the November 2012 Emergency and Spill Contingency Plan prepared by the current Care and Maintenance Contractor, Nuna/Deton Cho Joint Venture ~~(Tab 5 in the application package).~~

Explanation – The change is requested because Nuna/Deton Cho is the Mine Manager as defined by the Mine Health and Safety Act for the NWT and their procedures, as

provided in the application package, must be adhered to by all workers on site. The wording change would allow any additions or changes made to Nuna's plan presented in the application package or procedures developed by the roaster contractor that differ from Nuna's plan to be approved by the Board. The public will also have the opportunity to review clean up actions and lessons learned through the submission of bi-annual reports suggested by the Giant Team.