

TMAC Resources Inc.

# Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Water Licence 2AM-DOH1323



## Package 3: NIRB and NWB Application Documents

Revisions to TMAC Resources Inc. - Amendment Application No. 1  
of Project Certificate No. 003 and Water Licence 2AM-DOH1323

## Regulatory Submission Outline

### PACKAGE 1

#### *Project Summary and Submission Outline*

- P1-1 Plain Language Summary (translated)
- P1-2 Maps
- P1-3 Schedule for Implementation
- P1-4 Regulatory Submission Outline

### PACKAGE 2

#### *Project Description*

- P2-1 Project Description with Executive Summary (translated)

### PACKAGE 3

#### *NIRB and NWB Application Documents*

- P3-1 NIRB Amendment Application Documents
- P3-2 NWB Amendment Application Documents
- P3-3 NPC Conformity Determination

### PACKAGE 4

#### *Environmental Effects Assessment*

- P4-1 Environmental Effects Assessment

### PACKAGE 5

#### *Management and Other Plans*

- P5-1 Air Quality Management Plan
- P5-2 Interim Closure and Reclamation Plan
- P5-3 Water Management Plan
- P5-4 Waste Rock and Ore Management Plan

### PACKAGE 6

#### *Engineering and Design Documents*

- P6-1 Doris Central Vent Raise Pad and Access Road
- P6-2 Doris Connector Vent Raise Pad and Access Road
- P6-3 Groundwater Inflow and Quality Model
- P6-4 Landfill
- P6-5 Reclamation and Security
- P6-6 Roberts Bay Discharge System: Water Management Options
- P6-7 Roberts Bay Discharge System: Surface Infrastructure
- P6-8 Roberts Bay Discharge System: Pump and Pipe Requirements
- P6-9 Roberts Bay Expanded Laydown Pads
- P6-10 Site-Wide Water and Load Balance
- P6-11 Storage Pad U
- P6-12 Tailings Geochemistry
- P6-13 Tailings Management System
- P6-14 Waste Rock and Ore Geochemistry, Static Testing
- P6-15 Waste Rock and Ore Geochemistry, Kinetic Testing

### PACKAGE 7

#### *Proponent Information*

- P7-1 Financial Statements
- P7-2 List of Officers
- P7-3 Certificate of Incorporation

## **Package 3**

NIRB and NWB Application Documents



**Package 3**  
**NIRB and NWB Application Documents**

**P3-1 NIRB Amendment Application  
Documents**





## PART 1 FORM PROJECT PROPOSAL INFORMATION REQUIREMENTS

To access NIRB documents, project screenings, and project reviews please visit the Nunavut Impact Review Board's ftp site <http://ftp.nirb.ca/>. The NIRB's website ([www.nirb.ca](http://www.nirb.ca)) is currently under construction. Please contact [info@nirb.ca](mailto:info@nirb.ca) should you have any questions or require further information.

### IMPORTANT!

Please be advised that your application will not be processed until the Sections 1 - 9 are completed in their entirety, in both English and Inuktitut (+ Inuinnaqtun, if in the Kitikmeot).

### SECTION 1: APPLICANT INFORMATION

1. Project Name Doris North Mine Project

2. Applicant's full name and mailing address:

TMAC Resources Inc.

PO Box 44

95 Wellington Street West, Suite 1010

Toronto, Ontario M5J 2N7

Phone: 416.628.0216

Fax: \_\_\_\_\_

Email: john.roberts@tmacresources.com

3. Primary contact's full name and mailing address:

John Roberts

Vice President, Environmental Affairs

Phone: 416.628.0216

Fax: \_\_\_\_\_

Email: john.roberts@tmacresources.com



## SECTION 2: AUTHORIZATION NEEDED

### 1. Indicate all authorizations associated with the project proposal:

<input checked="" type="checkbox"/>	Regional Inuit Association (RIA)	<input type="checkbox"/>	Canadian Launch Safety (CLS)
<input checked="" type="checkbox"/>	Nunavut Water Board (NWB)	<input type="checkbox"/>	Canadian Wildlife Service (CWS)
<input type="checkbox"/>	Nunavut Planning Commission (NPC)	<input type="checkbox"/>	Department of National Defense (DND)
<input type="checkbox"/>	Government of Nunavut (GN)	<input checked="" type="checkbox"/>	Environment Canada (EC)
<input type="checkbox"/>	Community Government & Services (CG&S)	<input checked="" type="checkbox"/>	Fisheries and Oceans Canada (DFO)
<input type="checkbox"/>	Culture and Heritage (CH)	<input type="checkbox"/>	Parks Canada (PC)
<input type="checkbox"/>	Nunavut Research Institute (NRI)	<input type="checkbox"/>	Hamlet
<input checked="" type="checkbox"/>	Aboriginal Affairs and Northern Development Canada (AANDC)	<input type="checkbox"/>	Other (please specify):

### 2. List the active permits, licenses, or other authorizations related to the project proposal, and their expiry date(s):

**NIRB Project Certificate No. 003**

**NWB Type A Water Licence No. 2AM-DOH1323 (August 15, 2023)**

**KIA Commercial Lease No. KTCL313D001 (September 13, 2018)**

**KIA Quarry 2 Lease #KTP307Q010**

**Fisheries Act Authorizations NU-02-01117.2, NU-02-01117.3, NU-10-0028**

**Navigable Waters Protection Act Approval 8200-02-6565**

**AANDC Jetty lease 77A/3-1-4**

**KIA Framework Agreement, including IIBA and Water Compensation Agreement**

### 3. List the pending\* permits, licenses, or other authorizations related to the project proposal:

**Doris North Mine Modifications and Related Amendments to Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323 (submitted to the NIRB and the NWB November 2013)**

\*Please provide a copy of all applications to the NIRB.

### 4. Has this project or any components of this project been previously screened or reviewed by NIRB?

☒

YES

☐

NO

If YES, indicate the previous project name and NIRB File No.

**05MN047:**

- Doris North Gold Mine, 2006;
- Applications for 12.8.2 Amendments
  - Doris North Mine Modifications and Related Amendments to Project Certificate No. 3 and Type A Water Licence No. 2AM-DOH0713, 2011;
  - Doris North Mine Modifications and Related Amendments to Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323, 2013, including screening, review, Information Requests, proponent responses and NIRB public consultations.



## SECTION 3: PROJECT PROPOSAL DESCRIPTION

1. Indicate the type of project proposal (check all that apply)<sup>(1,2)</sup>:  
(See Appendix A for Project Type Definitions)

1	All-Weather Road/Access Trail	<input type="checkbox"/>	9	Site Cleanup/Remediation	<input type="checkbox"/>
2	Winter Road/ Winter Trail	<input type="checkbox"/>	10	Oil and Natural Gas Exploration/Activities	<input type="checkbox"/>
3	Mineral Exploration	<input type="checkbox"/>	11	Marine Based Activities	<input type="checkbox"/>
4	Advanced Mineral Exploration	<input type="checkbox"/>	12	Scientific/International Polar Year Research *	<input type="checkbox"/>
5	Mine Development /Bulk Sampling	<input checked="" type="checkbox"/>	13	Harvesting Activities *	<input type="checkbox"/>
6	Pits and quarries	<input type="checkbox"/>	14	Tourism Activities *	<input type="checkbox"/>
7	Offshore Infrastructure (port, break water, dock)	<input checked="" type="checkbox"/>	15	Other <sup>(2)</sup> :	<input type="checkbox"/>
8	Seismic Survey	<input type="checkbox"/>			<input type="checkbox"/>

**Please note:**

- All project types listed above, except those marked with an asterisk (\*), will also require the Proponent to submit a **Part 2 Project Specific Information Requirement (PSIR) Form**. The NIRB application process will not be considered complete without the Part 2 PSIR Form.
  - Please be advised that in order to complete the NIRB process, the NIRB may request additional information at any time during the process.
  - If "Other" is selected, contact NIRB for direction on whether a Part 2 PSIR Form is required.
  -
2. If Project Type 3, 4 or 5 was selected in previous question, please indicate the mineral of interest that is being extracted. Include a brief description.

<input checked="" type="checkbox"/>	Base Metals (zinc, copper, gold, silver, etc) <b>Gold</b>
<input type="checkbox"/>	Diamonds
<input type="checkbox"/>	Uranium
<input type="checkbox"/>	Other: _____

- 3a. If Project Type 12, 13 or 14 was selected above, complete the table and questions below.

Transportation Type	Quantity	Proposed Use	Length of Use





**3b.** Describe any docks, piers, air strips or related structures that are to be used in conjunction with the proposed project activities. **Please note:** *the building of new structures may require a Part 2 Form.*

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**The Roberts Bay Discharge System as described in enclosed Package 2: Project Description (TMAC. 2015) and Package 6: Engineering and Design Documents of Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323.**

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**There is an existing jetty and all weather airstrip that will be utilized during Project activities.**

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**3c.** If a temporary camp site is to be established, describe the proposed structures in detail and indicate the type and source of power for the camp site if applicable.

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**4. Personnel**

Total No. of personnel on site = (A)	<u>280</u>	Total No. of days on-site = (B)	<u>365</u>	Total No. of Person days (A) × (B) =	<u>102,200</u>
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**5. Timing**

Period of operation:	from	<u>Q4 2016</u>	to	<u>Q4 2022</u>
Proposed term of authorization:	from	<u>ASAP</u>	to	<u>Aug 15, 2023 (2AM-DOH1323 expiry date)</u>

**6a. Region (check all that apply):**

<input type="checkbox"/> North Baffin	<input type="checkbox"/> Kivalliq	<input checked="" type="checkbox"/> Kitikmeot	<input type="checkbox"/> Transboundary: _____
<input type="checkbox"/> South Baffin	<input type="checkbox"/> National Park		

**6b.** Describe the location of the proposed project activities in a regional context, noting the proximity to the nearest communities and any protected areas.

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**The Doris North Mine is part of TMAC's Hope Bay Project, located 685 km northeast of Yellowknife, Northwest Territories, and 125 km southwest of Cambridge Bay, Nunavut Territory, and is situated east of Bathurst Inlet, Nunavut Territory. The nearest settlements are Umingmaktok, located 75 km to the west and Kingoak (Bathurst Inlet), located 110 km southwest. The centroid of the Project lies approximately 160 km above the Arctic Circle at 67°30' N latitude and 107° W longitude.**

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**6c.** Discuss the history of the site if it has been used for any project activities in the past.

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**Mine construction commenced as per Project Certificate No. 003 with project placed on care and maintenance prior to completion in 2012. There has been no production to date and no mine tailings have been generated.**

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**6d.** Indicate if there are any known archaeological/palaeontological historical sites in the area.

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**The majority of the Project area has been surveyed in detail and archaeological sites within most of the proposed expanded footprint area are known, documented and mitigable.**

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**A reconnaissance level survey of the area within the footprint of the Roberts Bay Discharge Access Road and margins of the west and southwest pads at the Roberts Bay Expanded Laydown Area has been conducted and there are no archaeological sites recorded. A detailed survey of these areas is planned for summer 2015.**

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## SECTION 6: WASTE DISPOSAL AND TREATMENT METHODS

### 1. List the types of waste associated with the proposed project activities:

It is expected that groundwater inflow will occur while mining under Doris Lake. While some water may be used for underground drilling purposes, the majority of this water will be directed to the wastewater management system and discharged to Roberts Bay. This is discussed further in enclosed *Package 2: Project Description, Package 4: Environmental Effects Assessment, Package 5 Management and Other Plans* and *Package 6: Engineering and Design Documents*, submitted as part of *Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323*.

There are no changes to the types of waste produced by the Project as approved per Project Certificate No. 003 and 2AM-DOH1323.

### 2. Describe the proposed Waste Management Plan.

Waste management will continue to occur in accordance with the current plans:

*Hazardous Waste Management Plan March 2012 (Rev 1.1; approved);  
Incinerator Management Plan, March 2012 (Rev1.1; approved);  
Interim Non-Hazardous Waste Management Plan March 2012 (Rev 1.1);  
Interim Water Management Plan (Feb 2012; approved);  
Landfarm Management Plan (Mar 2014); and  
Wastewater Treatment Management Plan, October 2012 (Rev 3; approved).*

A revised *Waste and Rock and Ore Management Plan (2015)* is included in the enclosed *Package 5 Management and Other Plans*, submitted as part of *Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323*

At least 6 months prior to operating the non-hazardous waste landfill, a *Landfill Management Plan* will be submitted.

At least 6 months prior to depositing tailings, a *Tailings Management Plan* will be submitted.

For further information on waste management and waste management infrastructure, refer to enclosed *Package 2: Project Description* and *Package 6: Engineering and Design Documents*, submitted as part of *Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323*.

## SECTION 7: COMMUNITY INVOLVEMENT & REGIONAL BENEFITS

### 1. List the community representatives that have been contacted and provide the minutes of the meetings if available:

The enclosed *Package 2: Project Description*, submitted as part of *Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323*, includes a summary of engagements conducted to date, which pertain to this application scope.





## APPENDIX A Project Type Definitions

**Access Trail:** A project proposal with the objective of providing vehicular access to an area of interest involving minimal alteration to the terrain.

**Advanced Exploration:** A project proposal with the objective of identifying size, grade, and physical characteristics of a mineral occurrence and to assess the economic and technical feasibility of developing the mineral deposit into a producing mine

**All-Weather Road:** A project proposal with the objective of road construction for use in all seasons.

**Bulk Sampling:** A project proposal with the objective of extracting of large samples of mineralized material involving hundreds to thousands of tonnes. Samples are selected as representative of the potential mineral deposit being sampled. May involve crushing/milling (on small-scale)

**Harvesting activities:** A project proposal with the objective of harvesting animals, marine mammals and/or fish from their natural habitats by means of hunting or trapping for traditional and commercial use.

**Marine Based Activities:** Any activity occurring in the marine environment, such as vessel use associated with land-based activities or disposal at sea.

\*Please note that normal community re-supply or individual ship movements not associated with land-based project proposals shall not be screened by NIRB (Section 12.12.2 of NLCA).

**Mine Development:** A project proposal with the objective of extracting broken rock with mineralization of sufficient grade and tonnage to sustain commercial mining operations (ore). Mining a body of ore can be achieved by either open pit and/or underground development. Mine development may involve milling. Milling involves treatment of the extracted ore through a combination of mechanical and chemical processes to selectively recover the valuable mineral.

**Mineral Exploration:** A project proposal with the objective of exploring an area to find geological anomalies. It involves site reconnaissance (ground and/or air) to locate broad and fiscal mineral deposits.

**Offshore Infrastructure:** A project proposal with the objective of building off loading facilities constructed off the shoreline and connected to the mainland of the marine or freshwater environment. Examples include a jetty, dock, or port facility.

**Oil and Gas Exploration/Activities:** A project proposal that includes 1) exploration, such as seismic or geological mapping, 2) drilling of oil and gas wells, 3) construction and operation of a pipeline, a gas processing plant or any oil and gas facility within Nunavut.

**Pits and Quarries:** A project proposal with the objective of pitting, which involves the extraction of granular material (i.e. sands and gravels) and quarrying, which involves the removal of consolidated rock (i.e. bedrock, frozen soil).

**Scientific Research:** A project proposal with the objective of implementing a series of site activities comprised of observation of phenomena, measurement and collection of data necessary for scientific investigation in designated areas within a limited time period.

**Seismic Survey:** A project proposal with the objective of conducting a survey to map the depths and contours of rock strata by timing the reflections of sound waves released from the surface. Survey site locations may be offshore (not within 12 nautical miles of any coast), near shore, and extended onshore.

**Site Cleanups:** A project proposal with the objective of site cleanups (includes DEW line site cleanups), which focuses on the remediation of chemically contaminated soils, stabilization of landfills and dumps, demolition/disposal of infrastructure and debris and monitoring after cleanup is completed.



		Location (package) within application*	Location (section) within application
<b>1. GENERAL PROJECT INFORMATION REQUIREMENTS</b>			
<b>Project Coordinates and Maps</b>			
1	The preferred method for submitting project coordinates information is through the use of a Geographic Information System (GIS) compatible digital file.	n/a	
2	Map of the project site within a regional context indicating the distance to the closest communities.	P1-2	-
3	Map of any camp site including locations of camp facilities.	P1-2	-
4	Map of the project site indicating existing and/or proposed infrastructure, proximity to water bodies and proximity to wildlife and wildlife habitat.	P1-2	-
<b>Project General Information</b>			
5	Discuss the need and purpose of the proposed project.	P2-1	1.3
6	Discuss alternatives to the project and alternative methods of carrying out the project, including the no-go alternative. Provide justification for the chosen option(s).	P2-1	1.4
7	Provide a schedule for all project activities.	P1-3	-
8	List the acts, regulations and guidelines that apply to project activities.	P2-1	1.5
9	List the approvals, permits and licenses required to conduct the project.	P2-1	1.6
<b>DFO Operational Statement (OS) Conformity</b>			
10	Indicate whether any Department of Fisheries and Oceans (DFO) Operational Statement (OS) activities apply to the project proposal	n/a	

\* Note: n/a is not applicable to this application



## Screening Part 2 Form, Project Specific Information Requirements (PSIR)

		Location (package) within application*	Location (section) within application
11	If any of the DFO's OS apply to the project proposal, does the Proponent agree to meet the conditions and incorporate the measures to protect fish and fish habitat as outlined in the applicable OS? If yes, provide a signed statement of confirmation.	<p>will consider available DFO guidance:</p> <ul style="list-style-type: none"> <li>- DFO Protocol for Winter Water Withdrawal from Ice-Covered Waterbodies</li> <li>- Fisheries protection policy statement</li> <li>- Framework for Assessing the Ecological Flow Requirements to Support Fisheries in Canada</li> </ul> <p>DFO. 2013c. Measures to Avoid Causing Harm to Fish and Fish Habitat. Fisheries and Oceans Canada.  <a href="http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/mesures-mesures-eng.html">http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/mesures-mesures-eng.html</a>          (accessed May 2015).</p>	
<b>Transportation</b>			
12	Describe how the project site will be accessed and how supplies will be brought to site. Provide a map showing access route(s).	no change requested to current Project components and activities	
13	If a previous airstrip is being used, provide a description of the type of airstrip (ice-strip/all-weather), including its location. Describe dust management procedures (if applicable) and provide a map showing location of airstrip.	no change requested to current Project components and activities	

\* Note: n/a is not applicable to this application

## Screening Part 2 Form, Project Specific Information Requirements (PSIR)

		Location (package) within application*	Location (section) within application
14	If an airstrip is being constructed, provide the following information: a. Discuss design considerations for permafrost b. Discuss construction techniques c. Describe the construction materials, type and sources, and the acid rock drainage (ARD) and metal leaching (ML) characteristics (if rock material is required for airstrip bed). d. Describe dust management procedures. e. Provide a map showing location of proposed airstrip.	n/a	
15	Describe expected flight altitudes, frequency of flights and anticipated flight routes.	no change requested to current Project components and activities	
<b>Camp Site</b>			
16	Describe all existing and proposed camp structures and infrastructure	P2-1	3.11
17	Describe the type of camp: a. Mobile b. Temporary c. Seasonal d. Permanent e. Other	P2-1	3.11
18	Describe the maximum number of personnel expected on site, including the timing for those personnel involved with the project.	P2-1	3.11
<b>Equipment</b>			
19	Provide a list of equipment required for the project and discuss the uses for the equipment.	no change requested to current Project components and activities. Available equipment onsite to be used	
20	If possible, provide digital photos of equipment.	n/a	
<b>Water</b>			
21	Describe the location of water source(s), the water intake methods, and all methods employed to prevent fish entrapment. Provide a map showing the water intake locations.	P2-1	3.4
22	Describe the estimated rate of water consumption (m <sup>3</sup> /day).	P2-1	3.4
23	Describe how waste water will be managed. If relevant, provide detail regarding location of sumps, including capacity of sumps and monitoring.	P2-1	3.6.3

\* Note: n/a is not applicable to this application

## Screening Part 2 Form, Project Specific Information Requirements (PSIR)

		Location (package) within application*	Location (section) within application
24	If applicable, discuss how surface water and underground water will be managed and monitored.	P2-1	3.6.3
<b>Waste Water (Grey water, Sewage, Other)</b>			
25	Describe the quantities, treatment, storage, transportation, and disposal methods for the following (where relevant): <ul style="list-style-type: none"> <li>- Sewage</li> <li>- Camp grey water</li> <li>- Combustible solid waste</li> <li>- Non-combustible solid waste, including bulky items/scrap metal</li> <li>- Hazardous waste or oil</li> <li>- Contaminated soils/snow</li> <li>- Empty barrels/fuel drums</li> <li>- Any other waste produced</li> </ul>	P6-4, P6-6	
26	If the project proposal includes a landfill or landfarm, indicate the locations on a map, provide the conceptual design parameters, and discuss waste management and contact-water management procedures.	P2-1	3.12
<b>Fuel</b>			
27	Describe the types of fuel, quantities (number of containers, type of containers and capacity of containers), method of storage and containment. Indicate the location on a map where fuel is to be stored, and method of transportation of fuel to project site.	no change requested to current Project components and activities	
28	Describe any secondary containment measures to be employed, including the type of material or system used. If no secondary containment is to be employed, please provide justification.	n/a	
29	Describe the method of fuel transfer and the method of refuelling.	n/a	
30	Describe spill control measures in place.	n/a	
<b>Chemicals and Hazardous Materials*</b>			
<i>included but not limited to oils, greases, anti mud, antifreeze, calcium or sodium chloride salt, lead acid batteries and cleaners</i>			
31	Describe the types, quantities (number of containers, the type of container and capacity of containers), method of storage and containment. Indicate the location on a map where material is to be stored, and method of transportation of materials to project site.	no change requested to current Project components and activities	
32	Describe any secondary containment measures to be employed, including the type of material or system used.	no change requested to current Project components and activities	

\* Note: n/a is not applicable to this application

## Screening Part 2 Form, Project Specific Information Requirements (PSIR)

		Location (package) within application*	Location (section) within application
33	Describe the method of chemical transfer.	no change requested to current Project components and activities	
34	Describe spill control measures in place.	no change requested to current Project components and activities	
<b>Workforce and Human Resources/Socio-Economic Impacts</b>			
35	Discuss opportunities for training and employment of local Inuit beneficiaries.	P2-1	4.1
36	Discuss workforce mobilization and schedule, including the duration of work and rotation length, and the transportation of workers to site.	P2-1	4.1
37	Discuss, where relevant, any specific hiring policies for Inuit beneficiaries.	P2-1	4.1
<b>Public Involvement/ Traditional Knowledge</b>			
38	Indicate which communities, groups, or organizations would be affected by this project proposal.	P2-1	4.2
39	Describe any consultation with interested Parties which has occurred regarding the development of the project proposal.	P2-1	4.2
40	Provide a summary of public involvement measures, a summary of concerns expressed, and strategies employed to address any concerns.	P2-1	4.3
41	Describe how traditional knowledge was obtained, and how it has been integrated into the project.	P2-1	4.4
42	Discuss future consultation plans.	P2-1	4.3
<b>2. PROJECT SPECIFIC INFORMATION</b>			
<b>SECTION A: Roads/Trails</b>			
<b>A-1. Project Information</b>			
1	Describe any field investigations and the results of field investigations used in selecting the proposed route (e.g. geotechnical, snow pack)	P6-1, P6-2, P6-7	
2	Provide a conceptual plan of the road, including example road cross-sections and water crossings.	P6-1, P6-2, P6-7	
3	Discuss the type and volume of traffic using the road/trail (i.e. type of vehicles and cargo and number of trips annually).	P6-1, P6-2, P6-7	
4	Discuss public access to the road.	n/a	
5	Describe maintenance procedures.	no change requested to current Project components and activities	

\* Note: n/a is not applicable to this application

## Screening Part 2 Form, Project Specific Information Requirements (PSIR)

		Location (package) within application*	Location (section) within application
6	Describe whether any portion of the road will be located outside of the Nunavut Settlement Area and whether any other regulatory requirements must be met (e.g. CEAA).	n/a	
<b>A-2. All-Weather Road/Access Trail</b>			
7	Discuss road design considerations for permafrost.	P6-1, P6-2, P6-7	
8	Describe the construction materials (type and sources for materials), and the acid rock drainage (ARD) and metal leaching characteristics of the construction materials.	P6-1, P6-2, P6-7	
9	Discuss construction techniques, including timing for construction activities.	P6-1, P6-2, P6-7	
10	Indicate on a map the locations of designated refuelling areas, water crossings, culverts, and quarries/borrow sources.	P6-1, P6-2, P6-7	
11	Identify the proposed traffic speed and measures employed to ensure public safety.	n/a	
12	Describe dust management procedures.	P5-1	
<b>SECTION B: Mineral Exploration/Advanced Exploration/Development</b>			
<b>B-1. Project Information</b>			
1	Describe the type of mineral resource under exploration.	n/a	
<b>B-2. Exploration Activity</b>			
2	Indicate the type of exploration activity: - Bulk Sampling (underground or other) - Stripping - Trenching - Pitting - Delineation drilling - Preliminary delineation drilling - Exploration Drilling - Geophysical Work (ground and/or air) - Other	n/a	

\* Note: n/a is not applicable to this application

## Screening Part 2 Form, Project Specific Information Requirements (PSIR)

		Location (package) within application*	Location (section) within application
3	Describe the exploration activities associated with this project: - Satellite remote sensing - Aircraft remote sensing - Soil sampling - Sediment sampling - On land drilling (indicate drill type) - On ice drilling (indicate drill type) - Water based drilling (indicate drill type) - Overburden removal - Explosives transportation and storage - work within navigable waters - On site sample processing - Off site sample processing - Waste rock storage - Ore storage - Tailings disposal - Portal and underground ramp construction - Landfilling - Landfarming - Other	n/a	
<b>B-3. Geosciences</b>			
4	Indicate the geophysical operation type: a. Seismic b. Magnetic c. Gravimetric d. Electromagnetic e. Other	n/a	
5	Indicate the geological operation type: a. Geological Mapping b. Aerial Photography c. Geotechnical Survey d. Ground Penetrating Survey e. Other	n/a	
6	Indicate on a map the boundary subject to air and/or ground geophysical work.	n/a	
7	Provide flight altitudes and locations where flight altitudes will be below 610m.	n/a	
<b>B-4. Drilling</b>			
8	Provide the number of drill holes and depths (provide estimates and maximums where possible).	n/a	
9	Discuss any drill additives to be used.	n/a	
10	Describe method for dealing with drill cuttings.	n/a	
11	Describe method for dealing with drill water.	n/a	
12	Describe how drill equipment will be mobilized.	n/a	
13	Describe how drill holes will be abandoned.	n/a	

\* Note: n/a is not applicable to this application

## Screening Part 2 Form, Project Specific Information Requirements (PSIR)

		Location (package) within application*	Location (section) within application
14	If project proposal involves uranium exploration drilling, discuss the potential for radiation exposure and radiation protection measures. Please refer to the <i>Canadian Guidelines for Naturally Occurring Radioactive Materials</i> for more information.	n/a	
<b>B-5. Stripping/ Trenching/ Pit Excavation</b>			
15	Discuss methods employed. (i.e. mechanical, manual, hydraulic, blasting, other)	n/a	
16	Describe expected dimensions of excavation(s) including depth(s).	n/a	
17	Indicate the locations on a map.	n/a	
18	Discuss the expected volume material to be removed.	n/a	
19	Discuss methods used to determine acid rock drainage (ARD) and metal leaching potential and results.	n/a	
<b>B-6. Underground Activities</b>			
20	Describe underground access.	P2-1	3.2
21	Describe underground workings and provide a conceptual plan.	P2-1	3.2
22	Show location of underground workings on a map.	P2-1	3.2
23	Describe ventilation system.	P2-1	3.2
24	Describe the method for dealing with ground ice, groundwater and mine water when encountered.	P2-1	3.2
25	Provide a Mine Rescue Plan.	On file with Nu Mines Inspector	
<b>B-7. Waste Rock Storage and Tailings Disposal</b>			
26	Indicate on a map the location and conceptual design of waste rock storage piles and tailings disposal facility.	P2-1	3.7
27	Discuss the anticipated volumes of waste rock and tailings.	P2-1	3.7
28	Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.	P2-1	3.7
<b>B-8. Stockpiles</b>			
29	Indicate on a map the location and conceptual design of all stockpiles.	P2-1	3.7
30	Describe the types of material to be stockpiled. (i.e. ore, overburden)	P2-1	3.7
31	Describe the anticipated volumes of each type of material to be stockpiled.	P2-1	3.7
32	Describe any containment measures for stockpiled materials as well as treatment measures for runoff from the stockpile.	P2-1	3.7
33	Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.	P2-1	3.7
<b>B-9. Mine Development Activities</b>			

\* Note: n/a is not applicable to this application



## Screening Part 2 Form, Project Specific Information Requirements (PSIR)

		Location (package) within application*	Location (section) within application
34	Indicate the type(s) of mine development activity(s): - <b>Underground</b> - Open Pit - Strip Mining - Other	P2-1	3.2
35	Describe mine activities.	P2-1	3
	<ul style="list-style-type: none"> <li>- Mining development plan and methods</li> <li>- Mine development plan</li> <li>- Site access</li> <li>- Site infrastructure</li> <li>- Milling process</li> <li>- Water source(s) for domestic and industrial uses, required volumes, distribution and management</li> <li>- Solid waste, wastewater and sewage management</li> <li>- Water treatment systems</li> <li>- Hazardous waste management</li> <li>- Ore stockpile management</li> <li>- Tailings containment and management</li> <li>- waste rock management</li> <li>- Site surface Water management</li> <li>- Mine Water management</li> <li>- Pitting and quarrying activities</li> <li>- Explosives use, supply and storage</li> <li>- Power generation, fuel requirements and storage</li> <li>- Continuing exploration</li> <li>- Other</li> </ul>	P2-1	3
36	Describe the explosive type(s), hazard class, volumes, uses, location of storage (show on map), and method of storage.	P2-1	3.13
<b>B-10. Geology and Mineralogy</b>			
37	Describe the physical nature of the ore body, including known dimensions and approximate shape.	P2-1	2.1
38	Describe the geology/ mineralogy of the ore deposit	P2-1	2.1
39	Describe the host rock in the general vicinity of the ore body.	P2-1	2.1
40	Discuss the predicted rate of production.	P2-1	2.1
41	Describe mine rock geochemical test programs which have been or will be performed on the ore, host rock, waste rock and tailings to determine acid generation and contaminant leaching potential. Outline methods and provide results if possible.	P2-1	2.2
<b>B-11. Mine</b>			
42	Discuss the expected life of the mine.	P2-1	3.2
43	Describe mine equipment to be used.	n/a	
44	Does the project proposal involve lake and/or pit dewatering? If so, describe the activity as well as the construction of water retention facilities if necessary.	n/a	

\* Note: n/a is not applicable to this application

## Screening Part 2 Form, Project Specific Information Requirements (PSIR)

		Location (package) within application*	Location (section) within application
45	Discuss the possibility of operational changes occurring during the mine life with consideration for timing. (e.g. open pit to underground)	n/a	
46	If project proposal involves uranium mining, consider the potential for radiation exposure and radiation protection measures. Particular attention should be paid to <i>The Nuclear Safety and Control Act</i> .	n/a	
<b>B-12. Mill</b>			
47	If a mill will be operating on the property in conjunction with mining, indicate whether mine-water may be directed to the mill for reuse.	P2-1	3.3
48	Describe the proposed capacity of the mill.	P2-1	3.3
49	Describe the physical and chemical characteristics of mill waste as best as possible.	P2-1	3.3
50	Will or does the mill handle custom lots of ore from other properties or mine sites?	P2-1	3.3
<b>SECTION C: Pits and Quarries</b>			
1	Describe all activities included in this project: - Pitting - Quarrying - Overburden removal - Road use and/or construction - Explosives transportation and storage - Work within navigable waters - Blasting - Stockpiling - Crushing - Washing - Other	n/a	
2	Describe any field investigations and the results of field investigations used in determining new extraction sites.	n/a	
3	Identify any carving stone deposits.	n/a	
4	Provide a conceptual design including footprint.	n/a	
5	Describe the type and volume of material to be extracted.	n/a	
6	Describe the depth of overburden.	n/a	
7	Describe any existing and potential for thermokarst development and any thermokarst prevention measures.	n/a	
8	Describe any existing or potential for flooding and any flood control measures.	n/a	
9	Describe any existing or potential for erosion and any erosion control measures.	n/a	
10	Describe any existing or potential for sedimentation and any sedimentation control measures.	n/a	
11	Describe any existing or potential for slumping and any slump control measures.	n/a	
12	Describe the moisture content of the ground.	n/a	
13	Describe any evidence of ice lenses.	n/a	

\* Note: n/a is not applicable to this application

## Screening Part 2 Form, Project Specific Information Requirements (PSIR)

		Location (package) within application*	Location (section) within application
14	If blasting, describe methods employed.	n/a	
15	Describe the explosive type(s), hazard class, volumes, uses, location of storage (show on map), and method of storage.	n/a	
16	Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.	n/a	
17	Discuss safety measures for the workforce and the public.	n/a	
<b>3. DESCRIPTION OF THE EXISTING ENVIRONMENT</b>			
<b>Physical Environment</b>			
	§ Proximity to protected areas, including:	n/a	
	§ Eskers and other unique landscapes (e.g. sand hills, marshes, wetlands, floodplains).	P4-1	3.3
	§ Evidence of ground, slope or rock instability, seismicity.	P6-3, P6-11	
	§ Evidence of thermokarsts.	P6-3, P6-11	
	§ Evidence of ice lenses.	P6-3, P6-11	
	§ Surface and bedrock geology.	P2-1	2.1
	§ Topography.	P6-11	4.5
	§ Permafrost (e.g. stability, depth, thickness, continuity, taliks).	P6-11	4.5
	§ Sediment and soil quality.	n/a	
	§ Hydrology/ limnology (e.g. watershed boundaries, lakes, streams, sediment geochemistry, surface water flow, groundwater flow, flood zones).	P4-1	2.3
	§ Tidal processes and bathymetry in the project area (if applicable).	P4-1	4.3
	§ Water quality and quantity.	P4-1	4.3
	§ Air quality.	P4-1	3.2
	§ Climate conditions and predicted future climate trends.	P4-1	n/a
	§ Noise levels.	P4-1	3.2
	§ Other physical Valued Ecosystem Components (VEC) as determined through community consultation and/or literature review.	P4-1	All
<b>Biological Environment</b>			
	§ Vegetation (terrestrial as well as freshwater and marine where applicable).	P4-1	3.3
	§ Wildlife, including habitat and migration patterns.	P4-1	3.3 & 4.4
	§ Birds, including habitat and migration patterns.	P4-1	3.3 & 4.4
	§ Species of concern as identified by federal or territorial agencies, including any wildlife species listed under the <i>Species at Risk Act (SARA)</i> , its critical habitat or the residences of individuals of the species.	P4-1	3.3 & 4.4
	§ Aquatic (freshwater and marine) species, including habitat and migration/spawning patterns.	P4-1	3.3 & 4.4
	§ Other biological Valued Ecosystem Components (VEC) as determined through community consultation and/or literature review.	P4-1	All

\* Note: n/a is not applicable to this application

## Screening Part 2 Form, Project Specific Information Requirements (PSIR)

		Location (package) within application*	Location (section) within application
<b>Socioeconomic Environment</b>			
	§ Proximity to communities.	P4-1	6.2
	§ Archaeological and culturally significant sites (e.g. pingos, soap stone quarries) in the project (Local Study Area) and adjacent area (Regional Study Area).	P4-1	5.0
	§ Palaeontological component of surface and bedrock geology.	n/a	
	§ Land and resource use in the area, including subsistence harvesting, tourism, trapping and guiding operations.	n/a	
	§ Local and regional traffic patterns.	n/a	
	§ Human Health, broadly defined as a complete state of wellbeing (including physical, social, psychological, and spiritual aspects).	P4-1	6.2
	§ Other Valued Socioeconomic Components (VSEC) as determined through community consultation and/or literature review.	P4-1	6.0
<b>4. IDENTIFICATION OF IMPACTS AND PROPOSED MITIGATION MEASURES</b>			
1	Please complete the attached Table 1 – Identification of Environmental Impacts, taking into consideration the components/ activities and project phase(s) identified in Section 4 of this document. Identify impacts in Table 1 as either positive (P), negative and mitigable (M), negative and non- mitigable (N), or unknown (U).	P3-1	-
2	Discuss the impacts identified in the above table.	P4-1	All
3	Discuss potential socioeconomic impacts, including human health.	P4-1	All
4	Discuss potential for transboundary effects related to the project.	n/a	
5	Identify any potentially adverse effects of the project proposal on species listed under the <i>Species at Risk Act</i> (SARA) and their critical habitats or residences, what measures will be taken to avoid or lessen those effects and how the effects will be monitored.	P4-1	All
6	Discuss proposed measures to mitigate all identified negative impacts.	P4-1	All
<b>5. CUMULATIVE EFFECTS</b>			
	Discuss how the effects of this project interact with the effects of relevant past, present and reasonably foreseeable projects in a regional context.	P4-1	All
<b>6. SUPPORTING DOCUMENTS</b>			
	Where relevant, provide the following supporting documents:		
	Abandonment and Decommissioning Plan	P5-2	-
	Existing site photos with descriptions	P1, P4 and P5-2	All
	Emergency Response Plan	n/a	

\* Note: n/a is not applicable to this application

## Screening Part 2 Form, Project Specific Information Requirements (PSIR)

		Location (package) within application*	Location (section) within application
	Comprehensive Spill Prevention/Plan (must consider hazardous waste and fuel handling, storage, disposal, spill prevention measures, staff training and emergency contacts)	n/a	
	Waste Management Plan/Program	P5-4	-
	Monitoring and Management Plans (e.g. water quality, air pollution, noise control and wildlife protection etc.)	P5-1 (Air Quality) P5-3 (Water Management Plan) P5-4 (Waste Rock Management Plan)	-
	If project activities are located within Caribou Protection Areas or Schedule 1 Species at Risk known locations, please provide a Wildlife Mitigation and Monitoring Plan	n/a	
	In addition, for Project Type 9 (Site Cleanup/Remediation), please provide the following additional supporting documents:		
	§ Remediation Plan including cleanup criteria and how the criteria were derived.	n/a	
	§ Human Health Risk Assessment of the contaminants at the site.	n/a	

\* Note: n/a is not applicable to this application



TABLE 1 - IDENTIFICATION OF ENVIRONMENTAL IMPACTS (continued)

P = Positive N = Negative and non-mitigatable M = Negative and mitigatable U = Unknown If no impact is expected cell is blank

	Potential Effect	Marine Wildlife	Changes to water quality as a result of TIA effluent and groundwater discharge to Roberts Bay	Freshwater	Surface Water Quantity	Potential alteration of Doris Lake outflow.	Surface Water Quality and Sediment Quality	Changes in surface water quality from runoff water from proposed expanded laydown area and pads.	Freshwater Aquatic Organisms, Fish and Fish Habitat	Reduction in or alteration of habitat (changes in flow) through water losses	Removal or alteration of aquatic habitat for additional infrastructure, including culvert construction.	Vegetation	Construction of proposed infrastructure, expansion of laydown area and pads, may result in direct loss or fragmentation of ecosystems and vegetation and habitat alteration.	Fugitive dust affecting vegetation growth by altering photosynthetic receptors, respiration, and transpiration
Project Phase	Construction		M			M		M		M	M		N	M
	Operations		M			M		M		M	M		N	M
	Closure							M					N	



TABLE 1 - IDENTIFICATION OF ENVIRONMENTAL IMPACTS (complete)

P = Positive N = Negative and non-mitigatable M = Negative and mitigatable U = Unknown If no impact is expected cell is blank

	Potential Effect	Terrestrial Wildlife	Habitat loss due to proposed amendment infrastructure expansion of laydown area and pads.	Wildlife nesting or denning on infrastructure	Direct mortality or disturbance	Socio-economic	Changes in employment and economy resulting from increased employment and economy to the Kitikmeot region due to extended mine operations.	Increase in training and education opportunities due to extended Project life and increased employment	Increase in contract and business opportunities due to extended Project life	Community Services and Infrastructure	Potential for project induced negative effects with respect to health services, social services, housing, and safety and protection services due to extended Project life and increased workforce.	Increased demand for housing or increased conditions of overcrowding	Archaeology	Disturbance or loss of recorded and unrecorded archaeological sites or significant heritage resources.
Project Phase	Construction		M	M	M		P	P	P		M	M		M
	Operations		M	M	M		P	P	P		M	M		M
	Closure		M				P	P	P					

THE NUNAVUT IMPACT REVIEW BOARD  
SCREENING PART 2 FORM  
TABLE 2 - MITIGATION AND MONITORING

	PROPOSED MITIGATION MEASURE	IMPLEMENTATION SCHEDULE	RESIDUAL IMPACTS	PROPOSED MONITORING SCHEDULE	REPORTING SCHEDULE
<b>IMPACTS (IDENTIFIED IN TABLE 1)</b>					
<b>Air Quality</b>					
Reduced air quality from emissions due to increased equipment use, a higher rate of ore processing, waste incineration and fuel combustion.	Use of well-maintained, fuel efficient equipment and promotion of fuel conservation measures. Drive at designated speeds on site roads. Adhere to all permits, authorizations and approvals.	Mitigation measure already in place	None	See <i>Air Quality Management Plan</i>	Annual
Reduced air quality from increased fugitive dust from a higher rate of materials handling, vehicle movements and blasting.	Apply water or dust suppression fluids to roadways to minimize dust from ore and waste rock haulage, site road traffic and maintenance (grading), when ambient air temperatures permit.	Mitigation measure already in place	None	See <i>Air Quality Management Plan</i>	Annual
	Minimize discharge heights from the crushers onto conveyors, and conveyors onto stockpiles. Enclose the discharge from crushers onto conveyors or into other equipment where practicable.	Mitigation measure already in place	None	See <i>Air Quality Management Plan</i>	Annual
Reduced air quality due to fugitive dust from subaerial deposition of tailings	Disposal of tailings in the TIA will be between the Interim Dike and the South Dam. Supernatant will drain from the tailings, through the Interim Dike to the Reclaim Pond.	Upon commencement of tailings deposition	None	See Air Quality Management Plan See <i>Tailings Management Plan</i> (under development)	Annual
	The beached tailings will be covered either with a dust suppressing layer of polymer and/or ice, or a rock cover, depending upon the season and mine schedule, when deposited. This combination of drainage and cover will control fugitive dust emissions.	Upon commencement of tailings deposition	None	See Air Quality Management Plan See <i>Tailings Management Plan</i> (under development)	Annual
<b>Noise</b>					
Changes to noise levels due to movement of additional vehicles, increased rate of materials handling, ore processing.	None; no impact expected	-	-	-	-
<b>Ground Stability and Permafrost</b>					
Potential alteration of the active layer due to expanded footprint.	Effects to permafrost will be minimized by limiting overall footprint.	Already incorporated into design	None	-	As-builts will be provided following construction

THE NUNAVUT IMPACT REVIEW BOARD  
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	PROPOSED MITIGATION MEASURE	IMPLEMENTATION SCHEDULE	RESIDUAL IMPACTS	PROPOSED MONITORING SCHEDULE	REPORTING SCHEDULE
<b>IMPACTS (IDENTIFIED IN TABLE 1)</b>					
	Construct pads and roads on either bedrock or on rock fill thermal pads at least 1 m thick to preserve permafrost.	Already incorporated into design	None	-	As-builts will be provided following construction
<b>Groundwater</b>					
Changes in groundwater quality due to interaction of talik and deep groundwater.	None; no impact expected	-	-	-	-
<b>Marine</b>					
<b>Water Quality and Sediment Quality</b>					
Discharge of Tailings Impoundment Area (TIA) effluent and groundwater to Roberts Bay has the potential to influence the water and sediment quality of Roberts Bay.	Discharge to Robert's Bay is via the Robert's Bay Discharge System. Locating the subsea pipe and diffuser at a depth such that the buoyant plume mixes sufficiently during its buoyant rise to trap below the pycnocline and below the euphotic zone. Discharge will not interact with the sediment due to the buoyant nature of the effluent plume.	Already incorporated into design	None	According to Aquatic Monitoring Framework (under development)	Annual
	All regulatory parameters will be met prior to discharge and will meet national CCME marine water quality guidelines for aquatic life in Roberts Bay.	Already incorporated into design	None	According to Aquatic Monitoring Framework (under development)	Annual
Discharge of Tailings Impoundment Area (TIA) effluent and groundwater to Roberts Bay has the potential to influence ice thickness	Mitigation by design. Discharge below 40 m, with diffuser to promote mixing, compliant effluent.	None	None	None	None
<b>Marine Aquatic Organisms , Fish and Fish Habitat</b>					
Changes to water quality as a result of TIA effluent and groundwater discharge to Roberts Bay	Compliance with regulatory water quality criteria for aquatic life in Roberts Bay will ensure no effect to marine aquatic organisms, fish and fish habitat	Already incorporated into design	None	According to Aquatic Monitoring Framework (under development)	Annual
Installation and decommissioning of the subsea pipeline and diffuser system has the potential to affect fish habitat.	Shoreline crossing of the pipeline has been designed to avoid disturbing sensitive shoreline fish habitat.	Already incorporated into design	None	In accordance with Lease (not yet applied for ).	Annual

THE NUNAVUT IMPACT REVIEW BOARD  
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	PROPOSED MITIGATION MEASURE	IMPLEMENTATION SCHEDULE	RESIDUAL IMPACTS	PROPOSED MONITORING SCHEDULE	REPORTING SCHEDULE
<b>IMPACTS (IDENTIFIED IN TABLE 1)</b>					
	Consideration of DFO's new prohibition regarding the prevention of serious harm to commercial, recreational and aboriginal fisheries. Adherence to DFO's measures to avoid harm and associated best management practices guidance for the timing of installation of the pipeline and diffuser and habitat offsetting will be considered if deemed necessary.	Already incorporated into design	None	-	Following construction
	At closure, anticipate leaving subsea pipeline in place to minimize disturbance and anticipate surface areas will become fish habitat over time.	Already incorporated into design	None	According to Final Closure Plan	According to Final Closure Plan
<b>Marine Wildlife</b>					
Changes to water quality as a result of TIA effluent and groundwater discharge to Roberts Bay	Compliance with regulatory water quality criteria for aquatic life in Roberts Bay will ensure no effect to marine aquatic organisms, fish and fish habitat	Already incorporated into design	None	According to Aquatic Monitoring Framework (under development)	Annual
<b>Freshwater</b>					
<b>Surface Water Quantity</b>					
Potential alteration of Doris Lake outflow.	Water management will limit water extraction from Doris Lake to current permitted volumes.	Mitigation measure already in place	None	See <i>Aquatic Effects Management Plan</i>	Annual
	Underground mine operations will incorporate mitigation measures such as grouting and backfilling to reduce groundwater inflow	incorporated into design	None	-	-
	Recycling of intercepted groundwater for drilling purposes will reduce the demand for fresh water and potential for lake drawdown.	Already incorporated into design	None	-	-
	Adhere to all permits, authorizations and approvals. Use will be within permissible use as described in existing permit. Unchanged.	Mitigation measure already in place	None	as per 2AM-DOH1323	Monthly (SNP), Annual

THE NUNAVUT IMPACT REVIEW BOARD  
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TABLE 2 - MITIGATION AND MONITORING

	PROPOSED MITIGATION MEASURE	IMPLEMENTATION SCHEDULE	RESIDUAL IMPACTS	PROPOSED MONITORING SCHEDULE	REPORTING SCHEDULE
<b>IMPACTS (IDENTIFIED IN TABLE 1)</b>					
<b>Surface Water Quality and Sediment Quality</b>					
Changes in surface water quality from runoff water from proposed expanded laydown area and pads.	Minimizing footprint and diversion of surface runoff, minimizes the alteration to runoff patterns. Runoff from the pads will be directed to the Pollution Control Pond.	Already incorporated into design	None	as per 2AM-DOH1323	Monthly (SNP), Annual
	Roads and infrastructure pads have been sited to avoid water bodies and are designed to minimize the risk for erosion and use of silt fencing if and where necessary.	Already incorporated into design	None	-	-
	Spill and emergency response equipment will be established.	Mitigation measure already in place	None	-	-
<b>Freshwater Aquatic Organisms, Fish and Fish Habitat</b>					
Reduction in or alteration of habitat (changes in flow) through water losses	Ensure compliance with DFO Protocol for Winter Water Withdrawal from Ice-covered Waterbodies in the Northwest Territories and Nunavut.	Already incorporated into design	None	See <i>Hydrology Compliance Monitoring Program</i>	Annual
	Additional water losses from Doris Lake are anticipated with mining in the talik zone. The cumulative water losses from Doris Lake may result in serious harm to fisheries and an Offset Plan and DFO Authorization will be obtained.	-	-	As per Fisheries Authorization, if required	As per Fisheries Authorization, if required
Removal or alteration of aquatic habitat for additional infrastructure, including culvert construction.	Minimized impacts by using accepted techniques for sediment control, riparian care, site isolation, and timing windows.	Already incorporated into design	None	Monitoring during construction	Annual
	Location of infrastructure to minimize the loss of aquatic systems, with a particular focus on avoiding important fish habitat (e.g., spawning).	Already incorporated into design	None	-	-

THE NUNAVUT IMPACT REVIEW BOARD  
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	PROPOSED MITIGATION MEASURE	IMPLEMENTATION SCHEDULE	RESIDUAL IMPACTS	PROPOSED MONITORING SCHEDULE	REPORTING SCHEDULE
<b>IMPACTS (IDENTIFIED IN TABLE 1)</b>					
	Infrastructure is designed with a minimum 30 m setback distance from adjacent water bodies and the water that comes into contact with these facilities will be intercepted for management prior to release to the environment.	Already incorporated into design	None	as per 2AM-DOH1323	Monthly (SNP), Annual
<b>Vegetation</b>					
Construction of proposed infrastructure, expansion of laydown area and pads, may result in direct loss or fragmentation of ecosystems and vegetation and habitat alteration.	Loss of ecosystems and vegetation will be minimized by limiting the additional amendment infrastructure footprint and avoiding critical habitat areas.	Already incorporated into design	None	-	-
	The proposed amendment expanded laydown area and pads are immediately adjacent to existing constructed footprints, reducing impacts associated with habitat fragmentation.	Already incorporated into design	None	-	-
Fugitive dust affecting vegetation growth by altering photosynthetic receptors, respiration, and transpiration	The tailings covered with either a dust suppressing layer of polymer and/or ice, or a rock cover as required when deposited will reduce control fugitive dust emissions	Following tailings deposition	None	See <i>Air Quality Management Plan</i>	Annual
<b>Terrestrial Wildlife</b>					
Habitat loss due to proposed amendment infrastructure expansion of laydown area and pads.	Minimizing overall Project footprint and avoiding significant habitat.	Already incorporated into design	None	See <i>Wildlife Mitigation and Monitoring Plan</i>	Annual
	Minimize noise on site	Mitigation measure already in place	None	See <i>Wildlife Mitigation and Monitoring Plan and Noise Abatement Plan</i>	Annual
Nesting or denning on infrastructure	Prevent wildlife from nesting or denning on project infrastructure	Mitigation measure already in place	None	See <i>Wildlife Mitigation and Monitoring Plan</i>	Annual
	Manage wastes to prevent attracting wildlife	Mitigation measure already in place	None	See <i>Wildlife Mitigation and Monitoring Plan, Hazardous Waste Management Plan and Non-Hazardous Waste Management Plan</i>	Annual
Direct mortality or disturbance	Manage vehicles and aircraft to reduce the chance of direct mortality and disturbance	Mitigation measure already in place	None	See <i>Wildlife Mitigation and Monitoring Plan</i>	Annual

THE NUNAVUT IMPACT REVIEW BOARD  
SCREENING PART 2 FORM  
TABLE 2 - MITIGATION AND MONITORING

	PROPOSED MITIGATION MEASURE	IMPLEMENTATION SCHEDULE	RESIDUAL IMPACTS	PROPOSED MONITORING SCHEDULE	REPORTING SCHEDULE
<b>IMPACTS (IDENTIFIED IN TABLE 1)</b>					
	Avoiding clearing during wildlife sensitive periods or using qualified personnel to conduct pre-clearing surveys if clearing occurs within sensitive wildlife periods.	Mitigation measure already in place	None	See <i>Wildlife Mitigation and Monitoring Plan</i>	Annual
<b>Socio-economic</b>					
Changes in employment and economy resulting from increased employment and economy to the Kitikmeot region due to extended mine operations.	Implement IIBA	Mitigation measure already in place	None	As per Socio-Economic Monitoring Committee	Annual
<b>Community Services and Infrastructure</b>					
Potential for project induced negative effects with respect to health services, social services, housing, and safety and protection services due to extended Project life and increased workforce.	Enforcement of alcohol and drug free site.	Mitigation measure already in place	None	As per Socio-Economic Monitoring Committee	Annual
	Adoption of a fly-in/fly out arrangement with well-equipped camp facilities will minimize any additional demand on community services and infrastructure.	Mitigation measure already in place	None	As per Socio-Economic Monitoring Committee	Annual
<b>Archaeology</b>					
Disturbance or loss of recorded and unrecorded archaeological sites or significant heritage resources.	Archaeological ground reconnaissance survey carried out and no known archeological resources at location. Conflicts of placing infrastructure are considered unlikely and implementation of a "chance find" procedure, if needed, following territorial legislation.	Mitigation measure already in place	None	As per Archaeology Education Program	Annual



**Package 3**  
**NIRB and NWB Application Documents**

**P3-2 NWB Amendment**  
**Application Documents**



## Application for Water Licence Amendment

Document Date: April 2013

Application Submission Date: **June 15, 2015**

**Resubmission of Amendment Application No. 1  
Type A Water Licence No. 2AM-DOH1323.**



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NUNAVUT WATER BOARD

NUNAVUT IMALIRIYIN KATIMAYIT

OFFICE DES EAUX DU NUNAVUT

## APPLICATION FOR WATER LICENCE AMENDMENT

The applicant is referred to the NWB's Guide 7: Licensee Requirements Following the Issuance of a Water Licence for more information about this application form.

Where possible, provide background information regarding the original licence application or attach previously submitted information.

EXISTING LICENCE NO: **2AM-DOH1323**

### 1. LICENSEE CONTACT INFORMATION

Is the licensee the same as that referred to on the existing licence?

☒ Yes ☐ No

If No, a licence assignment must be completed and approved by the NWB. **An amendment will only be issued in the name of the current licensee in the absence of assignment of the licence.**

If the licensee is the same, but the name of the licensee has changed, attach a certificate of name change.

Name:

**TMAC Resources Inc.**

Address:

**PO Box 44  
95 Wellington St. West, Suite 1010  
Toronto, ON  
M5J 2N7**

Phone: **416.628.0216**

Fax:

e-mail: **john.roberts@tmacresources.com**

**2. LICENSEE REPRESENTATIVE CONTACT INFORMATION – If different from Block 1.**

Name:

**John Roberts**  
**Vice President, Environmental Affairs**  
**TMAC Resources Inc.**

Address:

**Same as Block 1**

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

e-mail: \_\_\_\_\_

(Attach authorization letter.)

**3. NAME OF PROJECT**

Has the name of the project changed?

☐ Yes ☒ No

If Yes, indicate the name of the project including the name of the location: \_\_\_\_\_

**4. LOCATION OF UNDERTAKING**

Does the proposed amendment change the location of the amended undertaking?

☐ Yes ☒ No

Provide the project extents and camp locations. Identify proposed changes.

**Project Extents**

<b>NW:</b>	<b>Latitude:</b>	<b>Longitude:</b>
<b>NE:</b>	<b>Latitude:</b>	<b>Longitude:</b>
<b>SE:</b>	<b>Latitude:</b>	<b>Longitude:</b>
<b>SW:</b>	<b>Latitude:</b>	<b>Longitude:</b>

**Camp Location(s)**

<b>Latitude:</b>	<b>Longitude:</b>
------------------	-------------------

**5. MAP**

Does the proposed amendment change the locations of any of the main components of the undertaking?

☐ Yes ☒ No

Attach a topographical map, indicating the main components of the undertaking. Identify proposed changes.

NTS Map Sheet No.: \_\_\_\_\_ Map Name: \_\_\_\_\_ Map Scale: \_\_\_\_\_

**6. NATURE OF INTEREST IN THE LAND**

Does the proposed amendment change the nature of the interest in the land?

☐ Yes ☒ No

If Yes, indicate changes. \_\_\_\_\_

Check any of the following that are applicable to the proposed undertaking (at least one box under the 'Surface' header must be checked).

**Sub-surface**

☒ Mineral Lease from Nunavut Tunngavik Incorporated (NTI)

Date (expected date) of issuance: **March 30, 2015** Date of expiry: **March 30, 2035**  
**TMAC now has in place Inuit Mining and Land Access Agreements which provide TMAC with surface and subsurface access to IOL land and resources.**

☒ Mineral Lease from Indian and Northern Affairs Canada (INAC)

**Koig 2: Date of issuance: Apr. 17, 1997 Date of expiry: Apr. 17, 2018**  
***Note: the AANDC lease #3547 is a small section of grandparented mining lease to the southeast of Tail Lake that that underlies the explosives facility and part of the south dam.***

**Surface**

☒ Crown Land Use Authorization from Indian and Northern Affairs Canada (INAC)

**77A/3-1-4 Jetty Lease: Date of issuance: July 1, 2007 Date of expiry: June 30, 2017**

☒ Inuit Owned Land (IOL) Authorization from Kitikmeot Inuit Association (KIA)

Date (expected date) of issuance: **March 30, 2015** Date of expiry: **March 30, 2035**  
**TMAC now has in place Inuit Mining and Land Access Agreements which provide TMAC with surface and subsurface access to IOL land and resources.**

☐ IOL Authorization from Kivalliq Inuit Association (KivIA)  
Date (expected date) of issuance: \_\_\_\_\_ Date of expiry: \_\_\_\_\_

☐ IOL Authorization from Qikiqtani Inuit Association (QIA)  
Date (expected date) of issuance: \_\_\_\_\_ Date of expiry: \_\_\_\_\_

☐ Commissioner's Land Use Authorization  
Date (expected date) of issuance: \_\_\_\_\_ Date of expiry: \_\_\_\_\_

☐ Other \_\_\_\_\_

**NIRB Project Certificate No. 003**

Date (expected date) of issuance: **September 15, 2006** Date of expiry: \_\_\_\_\_

**Fisheries Act Authorization NU-02-0117.2**

Date (expected date) of issuance: **June 29, 2007** Date of expiry: **Dec 30, 2009\***

**Fisheries Act Authorization NU-02-0117.3**

Date (expected date) of issuance: **Jan 19, 2011** Date of expiry: **Dec 31, 2013\***

**Fisheries Act Authorization NU-10-0028**

Date (expected date) of issuance: **May 13, 2010** Date of expiry: **Dec 31, 2013\***

*\*monitoring conditions associated with the Authorizations extend past the authorization expiry period for the works undertaken*

**Navigable Waters Protection Act Approval 8200-02-6565**

Date (expected date) of issuance: **June 29, 2007** Date of expiry: **June 28, 2017**

Is the name of the entity(s) holding authorizations the same as that considered in the existing water licence?

☒ Yes ☐ No

If No, a licence assignment must be completed and approved by the NWB.

Name of entity(s) holding authorizations:

**7. NUNAVUT PLANNING COMMISSION (NPC) DETERMINATION**

Indicate the land use planning area in which the existing project is located.

- |                                       |  |
|---------------------------------------|--|
| <input type="checkbox"/> North Baffin | <input type="checkbox"/> Keewatin                  |
| <input type="checkbox"/> South Baffin | <input type="checkbox"/> Sanikiluaq                |
| <input type="checkbox"/> Akunnig      | <input checked="" type="checkbox"/> West Kitikmeot |

Does the proposed amendment change the land use planning area?

☐ Yes ☒ No

If yes, indicate the land use planning area in which the amended undertaking is located.

- |                                       |   |
|---------------------------------------|---|
| <input type="checkbox"/> North Baffin | <input type="checkbox"/> Keewatin       |
| <input type="checkbox"/> South Baffin | <input type="checkbox"/> Sanikiluaq     |
| <input type="checkbox"/> Akunnig      | <input type="checkbox"/> West Kitikmeot |

Was a land use plan conformity determination required from NPC prior to the issuance of the existing water licence?

☐ Yes ☒ No

If Yes, indicate date issued and attach copy. \_\_\_\_\_

Does the proposed amendment change the original NPC conformity determination or the need to obtain one?

☐ Yes ☒ No

If Yes, indicate date issued (or expected) and attach a copy. \_\_\_\_\_

If No, provide written confirmation from NPC confirming that a land use plan conformity review is not required.

**Written confirmation from NPC was requested by email on May 8, 2015. A copy of the email can be found in Package 3: NIRB and NWB Application Documents of Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323.**

## 8. NUNAVUT IMPACT REVIEW BOARD (NIRB) DETERMINATION

Was a screening determination required from NIRB prior to the issuance of the existing water licence?

☒ Yes ☐ No

If Yes, indicate date issued and attach copy.

### 05MN047:

- Doris North Gold Mine, September 15, 2006;
- Applications for 12.8.2 Amendments
  - Doris North Mine Modifications and Related Amendments to Project Certificate No. 3 and Type A Water Licence No. 2AM-DOH0713, 2011;
  - Doris North Mine Modifications and Related Amendments to Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323, 2013, including screening, review, Information Requests, proponent responses and NIRB public consultations.

### Refer to:

- [http://ftp.nirb.ca/02-REVIEWS/COMPLETED%20REVIEWS/05MN047-DORIS%20NORTH%20GOLD%20MINE%202006/2-REVIEW/11-BOARD\\_DECISION/158.\\_NIRB\\_DECISION](http://ftp.nirb.ca/02-REVIEWS/COMPLETED%20REVIEWS/05MN047-DORIS%20NORTH%20GOLD%20MINE%202006/2-REVIEW/11-BOARD_DECISION/158._NIRB_DECISION)
- <ftp://ftp.nirb.ca/03-MONITORING/05MN047-DORIS%20NORTH%20GOLD%20MINE/01-PROJECT%20CERTIFICATE/03-12.8.2%20AMENDMENTS/12.8.2%20AMENDMENT%20No.1/>

Does the proposed amendment change the original NIRB screening determination or the need to obtain one?

☒ Yes ☐ No

If Yes, indicate date issued (or expected) and attach a copy. \_\_\_\_\_

If No, provide written confirmation from NIRB confirming that a screening determination is not required.

TMAC first submitted an application to amend Project Certificate 003 and Water License 2AM-DOH1323 on November 29, 2013 (it is noted this amendment application was substantially similar to the amendment application originally filed by Hope Bay Mining and later withdrawn). In April 2014 the amendment process was suspended pending the provision of further information on the project by TMAC. In the interim TMAC has undertaken a successful exploration program and a technical review of the entire project to confirm that all currently foreseeable project revisions are included within the amendment application. We believe this approach will support an efficient regulatory process and will limit the need for further stand-alone amendment applications in future. While the June 2015 revised application reflects a change to the tailings management strategy described in November 2013 (from subaqueous to subaerial management) it should be noted most of the project activities and facilities described in the June 2015 revised amendment are substantially similar to those originally proposed in 2013 and have already been considered within the NIRB and NWB amendment processes.

Refer to the enclosed *Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323*.

## 9. DESCRIPTION OF UNDERTAKING

Does the proposed amendment change the description of the undertaking?

☒ Yes ☐ No

List and attach plans and drawings or project proposal. Identify proposed changes.

**Refer to the enclosed *Package 2: Project Description (TMAC 2015)* and *Package 6: Engineering and Design Documents of Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323.***

## 10. OPTIONS

Does the proposed amendment change any of the alternative methods and locations that were considered to carry out the project?

☐ Yes ☒ No

Provide a brief explanation of the alternative methods or locations that were considered to carry out the project. Identify proposed changes.

**Alternatives assessments per project components can be found within each design document provided in the enclosed *Package 6: Engineering and Design Documents of Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323.***

## 11. CLASSIFICATION OF PRIMARY UNDERTAKING

Indicate the primary classification of undertaking for the existing licence by checking one of the following boxes:

- |  |  |
|--|--|
| <input type="checkbox"/> Industrial  | <input type="checkbox"/> Agricultural                    |
| <input checked="" type="checkbox"/> Mining and Milling (includes exploration/drilling/exploration camps) |  |
| <input type="checkbox"/> Conservation  |  |
| <input type="checkbox"/> Municipal (includes camps/lodges)   | <input type="checkbox"/> Recreational                    |
| <input type="checkbox"/> Power   | <input type="checkbox"/> Miscellaneous (describe below): |

Does the proposed amendment change the classification of primary undertaking?

☐ Yes ☒ No

If Yes, indicate the primary undertaking of the amendment: \_\_\_\_\_

Information in accordance with applicable Supplemental Information Guidelines (SIG) must be updated and submitted with an Application for Amendment. Indicate which SIG(s) are applicable to your application.

- ☐ Hydrostatic Testing
- ☐ Tannery
- ☐ Tourist / Remote Camp
- ☐ Landfarm & On-Site Storage of Hydrocarbon Contaminated Soil
- ☐ Onshore Oil and Gas Exploration Drilling
- ☐ Mineral Exploration / Remote Camp
- ☐ Advanced Exploration
- ☒ Mine Development
- ☐ Municipal
- ☐ General Water Works
- ☐ Power



## 12. WATER USE

Indicate, using the boxes below, the types of water use(s) approved in the existing licence.

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> To obtain water for camp/ municipal purposes | <input checked="" type="checkbox"/> To divert a watercourse                    |
| <input checked="" type="checkbox"/> To obtain water for industrial purposes      | <input checked="" type="checkbox"/> To modify the bed or bank of a watercourse |
| <input checked="" type="checkbox"/> To cross a watercourse                       | <input type="checkbox"/> Flood control   |
| <input checked="" type="checkbox"/> To alter the flow of, or store water         |  |
| <input type="checkbox"/> Other: _____  |  |

Does the proposed amendment change the type(s) of water use(s)?

☐ Yes ☒ No

If Yes, indicate using the boxes below, the proposed change(s) to the type(s) of water use(s) noting any water use(s) that are to be added, continued, or removed.

- |   |   |
|---|---|
| <input type="checkbox"/> To obtain water for camp/ municipal purposes | <input type="checkbox"/> To divert a watercourse                    |
| <input type="checkbox"/> To obtain water for industrial purposes      | <input type="checkbox"/> To modify the bed or bank of a watercourse |
| <input type="checkbox"/> To cross a watercourse                       | <input type="checkbox"/> Flood control                              |
| <input type="checkbox"/> To alter the flow of, or store water         |   |
| <input type="checkbox"/> Other: _____                                 |   |

## 13. QUANTITY OF WATER INVOLVED

Does the proposed amendment change the source of water? ☐ Yes ☒ No

Indicate the water source(s). Identify proposed changes:

**TMAC wishes to permanently use Windy Lake as the domestic water source for the Doris Camp. Windy Lake is temporarily permitted as the Doris domestic water source under 2BE-HOP1222, and the use of water from Windy Lake for Doris domestic purposes is permitted under Part E Item 1 of 2AM-DOH1323.**

(show location(s) on map)

Does the proposed amendment change the quality of the water source and/or its available capacity?

☐ Yes ☒ No

Describe the quality of the water source(s) and the available capacity(s). Identify any changes.: \_\_\_\_\_

Does the proposed amendment change the overall quantity of water to be used?

☐ Yes ☒ No

Provide the overall estimated quantity to be used. Identify proposed changes. : \_\_\_\_\_ m<sup>3</sup>/day

Does the proposed amendment change the quantity of water to be used from each source?

☐ Yes ☒ No

Provide the estimated quantity(s) of water to be used from each source. Identify proposed changes. :

---

Does the proposed amendment change the quantity of water to be used for each purpose?

☐ Yes ☒ No

Provide the estimated quantities to be used for each purpose (camp, drilling, etc.). Identify proposed changes.:

---

Does the proposed amendment change the method(s) of extraction?

☐ Yes ☒ No

Describe the method(s) of extraction. Identify proposed changes. : \_\_\_\_\_

Does the proposed amendment change the quantity(s) of water returned to source(s)?

☒ Yes ☐ No

Estimated quantity(s) of water returned to source(s). Identify proposed changes. :

**TMAC wishes to discharge up to 4,000 m<sup>3</sup>/day of compliant effluent from the tailings impoundment area to Roberts Bay, instead of Doris Creek. For further details, refer to the enclosed *Package 2: Project Description* (TMAC 2015) and *Package 6: Engineering and Design Documents of Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323*.**

Does the proposed amendment change the quality(s) of water returned to source(s)?

☐ Yes ☒ No

Describe the quality(s) of water(s) returned to source(s). Identify any changes. : \_\_\_\_\_

---

#### 14. WASTE

Check the appropriate box(s) to indicate the types of waste(s) approved in the existing licence.

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Sewage                  | <input checked="" type="checkbox"/> Waste oil                      |
| <input checked="" type="checkbox"/> Solid Waste             | <input checked="" type="checkbox"/> Greywater                      |
| <input checked="" type="checkbox"/> Hazardous               | <input checked="" type="checkbox"/> Sludges                        |
| <input checked="" type="checkbox"/> Bulky Items/Scrap Metal | <input checked="" type="checkbox"/> Contaminated soil and/or water |
| <input type="checkbox"/> Animal Waste                       |  |
| <input type="checkbox"/> Other (describe): _____            |  |

Does the proposed amendment change the type(s) of waste(s) to be generated or deposited?

☒ Yes ☐ No

If Yes, indicate using the boxes below, the proposed change(s) to the type(s) of waste(s) to be generated and/or deposited noting the addition, removal or continued generation and/or disposal of waste(s).

- |  |   |
|--|---|
| <input type="checkbox"/> Sewage  | <input type="checkbox"/> Waste oil                      |
| <input type="checkbox"/> Solid Waste   | <input type="checkbox"/> Greywater                      |
| <input type="checkbox"/> Hazardous   | <input type="checkbox"/> Sludges                        |
| <input type="checkbox"/> Bulky Items/Scrap Metal                               | <input type="checkbox"/> Contaminated soil and/or water |
| <input type="checkbox"/> Animal Waste  |   |
| <input checked="" type="checkbox"/> Other (describe): <b>Groundwater</b> _____ |   |

**It is expected that groundwater inflow will occur while mining under Doris Lake. While some water may be used for underground drilling purposes, the majority of this water will be directed to the wastewater management system and discharged to Roberts Bay. This is discussed further in the enclosed *Package 2: Project Description, Package 4: Environmental Effects Assessment, Package 5: Management and Other Plans and Package 6: Engineering and Design Documents*, submitted as part of *Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323*.**

#### 15. QUANTITY AND QUALITY OF WASTE INVOLVED

Does the proposed amendment change the quantity(s) of the types of wastes involved?

☒ Yes ☐ No

Does the proposed amendment change the composition(s) of the types of wastes involved?

☒ Yes ☐ No

Does the proposed amendment change the method(s) of treatment for the types of waste involved?

☒ Yes ☐ No

Does the proposed amendment change the method(s) of disposal for the types of waste involved?

☒ Yes ☐ No

If Yes to any of the above, describe the proposed changes: \_\_\_\_\_

Due to an extended mine life, more waste rock, tailings, effluent and domestic waste will be produced.

TMAC is modifying tailings deposition to include a combination of backfill underground and subaerial deposition within the Tailings Impoundment Area, which is licensed under Schedule 2 of the *Metal Mining and Effluent Regulations*. All cyanide leach tailings will have the residual cyanide chemically destroyed prior to being deposited underground as backfill, while the remaining gravity flotation tailings will be deposited in a designated area within the existing tailings impoundment area. This approach maximizes use of capacity within the tailings area, isolates detoxified leach tailings and promotes water reuse.

It is expected that groundwater inflow will occur while mining under Doris Lake. While some water may be used for underground drilling purposes, the majority of this water will be directed to the wastewater management system and discharged to Roberts Bay.

TMAC is revising management of the tailings impoundment area so that water is discharged directly to Roberts Bay via pipeline and a diffuser on the ocean floor, rather than to Doris Creek as previously planned. Effluent quality requirements outlined in the *Metal Mining Effluent Regulations* will be met prior to discharge. Process water may be treated prior to discharge to Roberts Bay, if needed, and will be co-disposed with the groundwater at some times of the year.

TMAC is introducing treatment measures in the mill to destroy cyanide in the tailings slurry. Cyanide will be reduced to 0.5 mg/L, below management thresholds set out in the International Cyanide Management Code for the Gold Mining Industry and will meet all applicable Canadian regulatory standards

Expanded mining activities will result in additional waste rock that will require storage. Upon closure, all waste rock will be placed underground.

A non-hazardous waste landfill will be situated in Quarry 3, to receive non-hazardous waste generated during Doris operations and closure.

Due to the additional persons required to support increased mining and milling rates, there will be an increase in the volume of domestic waste produced at Doris Camp.

An extended mine life will increase the amount of hazardous and on-hazardous industrial generated.

These changes are discussed further in enclosed *Package 2: Project Description, Package 4: Environmental Effects Assessment, Package 5 Management and Other Plans and Package 6: Engineering and Design Documents*, submitted as part of *Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323*.

For each type of waste indicated in Block 14, describe its composition, quantity in cubic meters/day, method of treatment and method of disposal.

Type of Waste	Composition	Quantity Generated	Treatment Method	Disposal Method
Tailings	Flotation tailings (94%)	2,350,000 tonnes or 1,822,000 m <sup>3</sup> over life of mine	Gravity Flotation	Subaerial deposition in existing tailings impoundment area
	Detoxified cyanide leach tailings (6%)	150,000 tonnes or 116,000 m <sup>3</sup> over life of mine	SO <sub>2</sub> Destruction Process	Consolidated backfill underground
Waste Rock	Mineralized and non-mineralized waste rock	1,340,000 t over life of mine	-	Backfill underground
Groundwater	Groundwater	Up to 3,000 m <sup>3</sup> /day	-	Discharge to Roberts Bay via Marine Outfall and Diffuser
Domestic Waste	Domestic solid waste (incl. sewage sludge)	0.002 m <sup>3</sup> /day/persons	-	Incineration
Sewage	Domestic liquid waste	0.13 m <sup>3</sup> /day/person	Activated Sludge	Discharge to tailings impoundment area
Hazardous Waste	Hydrocarbon contaminated soils	0.05 m <sup>3</sup> – 0.9m <sup>3</sup> /day (estimated)	Landfarm	Reclamation, underground disposal, offsite backhaul
Hazardous Waste	Hydrocarbon contaminated materials, various filters, hoses, waste glycol, paints, lubricants, batteries	1 m <sup>3</sup> /day	Containment	Backhaul for offsite disposal
Waste Oil	Waste Oil	0.01 m <sup>3</sup> /day	Filter	Waste oil burner
Fluorescent Bulbs	Mercury-containing bulbs	0.002 m <sup>3</sup> /day	Crush and Contain	Offsite disposal
Non-Hazardous Waste	Construction waste, untreated wood and paper products, scrap metal, punctured aerosols, clean containers, incinerator ash	5m <sup>3</sup> -10m <sup>3</sup> /day	Landfill or Open Burn	Divert recyclables where possible, back haul for offsite recycling, burn pan

Refer to *Package 2: Project Description, Package 4: Environmental Effects Assessment, Package 5 Management and Other Plans and Package 6: Engineering and Design Documents*, submitted as part of *Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323*.

## 16. OTHER AUTHORIZATIONS

Does the proposed amendment change the need for other authorizations in addition to the sub-surface and surface land use authorizations provided in Block 6?

☒ Yes    ☐ No

If Yes, indicate any additional authorizations required, which authorizations are no longer required, and which authorizations continue to be required.

For each provide the following:

Authorization **1: Revision to Project Certificate 003**

Administering Agency: **Nunavut Impact Review Board**

Project Activity: **Subaerial tailings deposition, effluent discharge to Roberts Bay, expanded project footprint.**

Date (expected date) of issuance: **on or before June 15, 2016**    Date of expiry: \_\_\_\_\_

**TMAC first submitted an application to amend Project Certificate 003 and Water License 2AM-DOH1323 on November 29, 2013 (it is noted this amendment application was substantially similar to the amendment application originally filed by Hope Bay Mining and later withdrawn). In April 2014 the amendment process was suspended pending the provision of further information on the project by TMAC. In the interim TMAC has undertaken a successful exploration program and a technical review of the entire project to confirm that all currently foreseeable project revisions are included within the amendment application. We believe this approach will support an efficient regulatory process and will limit the need for further stand-alone amendment applications in future. While the June 2015 revised application reflects a change to the tailings management strategy described in November 2013 (from subaqueous to subaerial management) it should be noted most of the project activities and facilities described in the June 2015 revised amendment are substantially similar to those originally proposed in 2013 and have already been considered within the NIRB and NWB amendment processes. Based on communications between TMAC, the NWB and the NIRB, it is understood that the two Boards are prepared to facilitate a cooperative review of the proposed amendments.**

Authorization **2: Foreshore Lease for Roberts Bay Discharge System Marine Outfall Berm and Seabed**

Administering Agency: **AANDC**

Project Activity: **Construction of a Marine Outfall Berm**

Date (expected date) of issuance: **on or before June 15, 2016**    Date of expiry: \_\_\_\_\_

Authorization **3: Fisheries Authorization for Construction of Roberts Bay Discharge System Marine Outfall Berm, Discharge Pipeline and Diffuser**

Administering Agency: **DFO**

Project Activity: **Construction of Marine Outfall Berm, Discharge Pipeline and Diffuser**

Date (expected date) of issuance: **on or before June 15, 2016**    Date of expiry: \_\_\_\_\_

Authorization **4: Navigation Protection Act - Minor Works Order or Approval for Roberts Bay Discharge System Marine Pipeline and Diffuser**

Administering Agency: **Transport Canada**

Project Activity: **Placement of Marine Discharge Pipeline and Diffuser**

Date (expected date) of issuance: **on or before June 15, 2016**    Date of expiry: \_\_\_\_\_

**17. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES**

Does the proposed amendment change the predicted environmental impacts of the undertaking or the mitigation measures?

☒ Yes ☐ No

Describe direct, indirect, and cumulative impacts related to water and waste. Identify any changes.

*Refer to Package 4: Environmental Effects Assessment, submitted as part of Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323.*

**18. WATER RIGHTS OF EXISTING AND OTHER WATER USERS**

Was compensation paid and/or an agreement(s) for compensation been entered into with any existing or other users of water during consideration of the existing licence?

☐ Yes ☒ No

If Yes, provide the names, addresses and the nature of water use by those persons or properties.

Does the proposed amendment adversely affect any known persons or property including those that hold licences for water use in precedence to the application, domestic users, in-stream users, authorized waste depositors, owners of property, occupiers of property, and/or holders of outfitting concessions, registered trapline holders, and holders of other rights of a similar nature?

☐ Yes ☒ No

If Yes, provide the names, addresses and the nature of water use of those persons or properties.

Advise the Board if compensation has been paid and/or an agreement(s) for compensation has been reached with any existing or other water users with respect to the proposed amendment.

**19. INUIT WATER RIGHTS**

Was compensation paid/ or an agreement(s) for compensation been entered into with any Designated Inuit Organization (DIO) during consideration of the existing licence?

☒ Yes ☐ No

If Yes, which DIO(s) Kitikmeot Inuit Association

Does the proposed amendment substantially affect the quality, quantity or flow of waters flowing through Inuit Owned Land (IOL)?

☐ Yes ☒ No

If Yes, advise the Board if negotiations have commenced or an agreement to pay compensation for any loss or damage has been reached with one or more DIO(s) with respect to the proposed amendment.

- 20. CONSULTATION** - Provide a summary of any consultation meetings including when the meetings were held, where and with whom. Include a list of concerns expressed and measures to address concerns.

*The enclosed Package 2: Project Description, submitted as part of Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323, includes a summary of engagements conducted to date, which pertain to this application scope.*

**21. SECURITY INFORMATION**

Does the proposed amendment change the financial security assessment?

☒ Yes ☐ No

Does the proposed amendment change the estimate of the total financial security for final reclamation?

☒ Yes ☐ No

Provide an estimate of the total financial security for final reclamation equal to the total outstanding reclamation liability for land and water combined sufficient to cover the highest liability over the life of the undertaking. Estimates of reclamation costs must be based on the cost of having the necessary reclamation work done by a third party contractor if the operator defaults. The estimate must also include contingency factors appropriate to the particular work to be undertaken. Identify any changes in the financial security assessment resulting from the proposed amendment.

Where applicable, the financial security assessment should be prepared in a manner consistent with the principals respecting mine site reclamation and implementation found in the *Mine Site Reclamation Policy for Nunavut*, Indian and Northern Affairs Canada, 2002.

*Approval of the Project changes requested in this Amendment application will result in a closure and reclamation cost of \$25,269,000.*

*Refer to memorandum on reclamation costing found in the enclosed Package 6: Engineering and Design Documents and the updated Interim Closure Plan found in Package 5 Management and Other Plans submitted as part of Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323.*



## 22. FINANCIAL INFORMATION

Is the statement of financial security the same as that considered in the existing water licence?

☐ Yes ☒ No

Provide an updated statement of financial security.

**Refer to Package 7: Proponent Information submitted as part of Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323.**

If the applicant is a business entity please answer the questions below:

Is the list of the officers of the company the same as those considered in the existing water licence?

☐ Yes ☒ No

Provide a list of the officers of the company.

**Refer to Package 7: Proponent Information submitted as part of Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323.**

Is the Certificate of Incorporation or evidence of registration of the company name the same?

☒ Yes ☐ No

Attach a copy of the Certificate of Incorporation or evidence of registration of the company name.

**Refer to Package 7: Proponent Information submitted as part of Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323.**

## 23. STUDIES UNDERTAKEN TO DATE

List and attach updated studies, reports, research etc.

**Studies conducted in support of this Amendment Application are submitted as part of *Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323.***

**Compliance monitoring under 2AM-DOH1323, Project Certificate 003 and Fisheries Authorizations are ongoing and can be accessed here:**

- [ftp://ftp.nwb-oen.ca/1%20PRUC%20PUBLIC%20REGISTRY/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-DOH1323%20TMAC/3%20TECH/9%20MONITORING%20\(J\)\(K\)/](ftp://ftp.nwb-oen.ca/1%20PRUC%20PUBLIC%20REGISTRY/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-DOH1323%20TMAC/3%20TECH/9%20MONITORING%20(J)(K)/)
- <ftp://ftp.nirb.ca/03-MONITORING/05MN047-DORIS%20NORTH%20GOLD%20MINE/01-PROJECT%20CERTIFICATE/03-12.8.2%20AMENDMENTS/12.8.2%20AMENDMENT%20No.1/>

**Annual reporting to the NWB, the NIRB and KIA is up to date and ongoing, with annual reports summarizing studies undertaken over the preceding calendar year.**

Provide a compliance assessment and status report including a response to any inspector's reports. The licensee must contact the NWB for licence specific direction in completing the assessment and report.

**Refer to Package 3: NIRB and NWB Application Documents submitted as part of *Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323.***

If in non-compliance, a licence may not be issued until compliance is achieved. If in non-compliance, attach plans/reports for consideration. Application will not be processed if significant issues of non-compliance exist.

## 24. PROPOSED TIME SCHEDULE

When are proposed amendments scheduled to be undertaken: **On or before June 2016, immediately upon receipt of Amendment 1 to 2AM-DOH1323**

Does the proposed amendment change the time schedule considered in the existing licence for any phase of development?

☒ Yes ☐ No

Indicate the start and completion dates for each applicable phase of development (construction, operation, closure, and post closure). Identify proposed changes.

### Construction

Proposed Start Date: **Underway** Proposed Completion Date: **Q4 2016**  
(month/year) (month/year)

### Operation

Proposed Start Date: **Underway** Proposed Completion Date: **Q4 2020**  
(month/year) (month/year)

### Closure

Proposed Start Date: **Q1 2021** Proposed Completion Date: **Q1 2030**  
(month/year) (month/year)

### Post - Closure

Proposed Start Date: **Q1 2030** Proposed Completion Date: **Q4 2030**  
(month/year) (month/year)

For each applicable phase of development indicate which season(s) activities occur.

Construction

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

Operation

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

Closure

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

Post - Closure

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

**Refer to the *Schedule for Implementation* found in *Package 3: NIRB and NWB Application Documents* submitted as part of *Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323*.**

**25. PROPOSED TERM OF LICENCE**

On what date does the existing licence expire? **August 15, 2023**

Is the Licensee applying for a combined renewal and amendment of the existing licence?

☐ Yes ☒ No

If Yes, indicate the proposed term of the renewal (maximum of 25 years): \_\_\_\_\_

Requested date of renewal issuance: \_\_\_\_\_ Requested Expiry Date: \_\_\_\_\_  
(month/year) (month/year)

(The requested date of renewal issuance must be at least three (3) months from the date of application for a type B water licence and at least one (1) year from the date of application for a type A water licence, to allow for processing of the water licence application. These timeframes are approximate and do not account for the time to complete any pre-licensing land use planning or development impact requirements, time for the applicant to prepare and submit a water licence application in accordance with any project specific guidelines issued by the NWB, or the time for the applicant to respond to requests for additional information. See the NWB's *Guide 5: Processing Water Licence Applications* for more information)

**26. ANNUAL REPORTING**

Will the proposed amendment change the content of annual reports or the annual report template?

☐ Yes ☒ No

If Yes, provide details regarding the content of annual reports and a proposed outline or template of the annual report.

## 27. CHECKLIST

The following must be included with the application for Amendment for the water licensing process to begin.

Completed Application for Water Licence Amendment form.

☒ Yes ☐ No If no, date expected \_\_\_\_\_

Information addressing Supplement Information Guideline (SIG), where applicable (see Block 11)

☒ Yes ☐ No If no, date expected \_\_\_\_\_

Compliance Assessment / Status Report (see Block 23).

☒ Yes ☐ No If no, date expected \_\_\_\_\_

Indication of Renewal Requirement (see Block 26)

☒ Yes ☐ No If no, date expected \_\_\_\_\_

English Summary of Amendment Application.

☒ Yes ☐ No If no, date expected \_\_\_\_\_

Inuktitut and/or Inuinnaqtun Summary of Amendment Application.

☐ Yes ☒ No If no, date expected **June 16, 2015**

Application fee of \$30.00 CDN (Payee Receiver General for Canada).

☒ Yes ☐ No If no, date expected \_\_\_\_\_

Water Use Fee Deposit of \$30.00 CDN (Payee Receiver General for Canada). The actual water use fee will be calculated by the NWB based upon the amount of water authorized for use in accordance with the Regulations at the time of issuance of the licence.

☐ Yes ☒ No If no, date expected **August 16, 2015**

## 28. SIGNATURE

**M. John Roberts**

**Vice President  
Environmental Affairs**

**June 10, 2015**

**Name (Print)**

**Title (Print)**

**Signature**

**Date**

## 2AM-DOH1323 COMPLIANCE ASSESSMENT(AS OF JUNE 2015)

Clause		Compliance Status
--------	--	-------------------

Part A: Scope, Definitions and Enforcement		
A.1	~	N/A
A.2	~	N/A
A.3	~	N/A

Part B: General Conditions		
B.1	□	In compliance
B.2	□	Paid until Aug. 16, 2015
B.3	□	2007: April 30, 2008
	□	2008: May 29, 2009
	□	2009: March 31, 2010
	□	2010: March 31, 2011
	□	2011: March 30, 2012
	□	2012: March 28, 2013
	□	2013: March 31, 2014
	□	2014: March 31, 2015
B.4	x	Review with NWB
B.5	□	In compliance
B.6	x	On-going updates to Management Plans - several included with Amendment Application
B.7	□	In compliance
B.8	□	In compliance
B.9	□	In compliance
B.10	□	In compliance
B.11	x	Review with NWB
B.12	□	In compliance
B.13	□	In compliance
B.14	□	In compliance
B.15	x	In progress
B.16	~	N/A

Part C: Conditions Applying to Security		
C.1	□	In compliance
C.2	□	In compliance
C.3	~	N/A
C.4	~	N/A
C.5	□	In compliance

Part D: Conditions Applying to Construction and Operations		
D.1	□	In compliance
D.2	□	In compliance
D.3	□	In compliance
D.4	□	In compliance
D.5	□	In compliance
D.6	□	In compliance
D.7	□	In compliance
D.8	□	2007: No construction took place therefore no report submitted.
	□	2008: March 29, 2010
	□	2009: No construction took place therefore no report submitted.
	□	2010: March 31, 2011
	□	2011: March 30, 2012
	□	2012: April 8, 2013
	□	2013: May 13, 2014
	□	2014: March 31, 2015
D.9	□	In compliance
D.10	□	In compliance
D.11	□	In compliance
D.12	□	In compliance
D.13	□	Submitted February 4, 2010
D.14	□	In compliance
D.15	□	In compliance
D.16	□	In compliance
D.17	□	In compliance
D.18	□	In compliance
D.19	□	In compliance
D.20	□	In compliance

Part D: Conditions Applying to Construction and Operations ( <i>continued</i> )		
D.21	<input type="checkbox"/>	2009: November 27, 2009
	<input type="checkbox"/>	2010: March 31, 2011
	<input type="checkbox"/>	2011: March 29, 2012
	<input type="checkbox"/>	2012: January 23, 2014
	<input type="checkbox"/>	2013: May 12, 2014
	<input type="checkbox"/>	2014: May 5, 2015
D.22	<input type="checkbox"/>	In compliance
D.23	<input type="checkbox"/>	In compliance
D.24	<input type="checkbox"/>	In compliance
D.25	<input type="checkbox"/>	2010: December 23, 2010
	<input type="checkbox"/>	2011: December 23, 2011
	<input type="checkbox"/>	2012: November 6, 2012
	~	2013: N/A
	~	2014: N/A
D.26	<input type="checkbox"/>	In compliance
D.27	<input type="checkbox"/>	In compliance
D.28	<input type="checkbox"/>	In compliance

Part E: Conditions Applying to Water Use		
E.1	<input type="checkbox"/>	In compliance
E.2	x	Not yet applicable
E.3	<input type="checkbox"/>	In compliance
E.4	<input type="checkbox"/>	In compliance
E.5	<input type="checkbox"/>	In compliance
E.6	<input type="checkbox"/>	In compliance
E.7	<input type="checkbox"/>	In compliance

Part F: Conditions Applying to Water Management		
F.1	<input type="checkbox"/>	Being submitted with the Amendment
F.2	<input type="checkbox"/>	In compliance

Part G: Conditions Applying to Waste Management and Waste Management Plans		
G.1	<input type="checkbox"/>	In compliance
G.2	<input type="checkbox"/>	In compliance
G.3	<input type="checkbox"/>	In compliance
G.3.e	<input type="checkbox"/>	Submitted March 19, 2013
G.4	<input type="checkbox"/>	In compliance
G.5	<input type="checkbox"/>	2009: October 1, 2009 (Fail)
	<input type="checkbox"/>	2011: Sept. 1, 2011 (Fail)
	<input type="checkbox"/>	2012: July 19, 2012 (Pass)
	<input type="checkbox"/>	2013: N/A < 26t/yr
	<input type="checkbox"/>	2014: N/A <26t/yr
G.6	<input type="checkbox"/>	In compliance
G.7	<input checked="" type="checkbox"/>	In-progress
G.8	<input checked="" type="checkbox"/>	Not yet applicable
G.9	<input checked="" type="checkbox"/>	Not yet applicable
G.10	<input checked="" type="checkbox"/>	On-going updates to Management Plans
G.11	<input type="checkbox"/>	In compliance
G.12	<input type="checkbox"/>	In compliance
G.13	<input type="checkbox"/>	In compliance
G.14	<input type="checkbox"/>	Being submitted with Amendment.
G.15	<input checked="" type="checkbox"/>	Not applicable, no changes currently planned
G.16	<input type="checkbox"/>	In compliance
G.17	<input type="checkbox"/>	2010: March 31, 2011
	<input type="checkbox"/>	2011: March 29, 2012
	<input type="checkbox"/>	2012: January 23, 2013
	<input type="checkbox"/>	2013: May 12, 2014
	<input type="checkbox"/>	2014: May 5, 2014
G.18	<input type="checkbox"/>	In compliance
G.19	<input type="checkbox"/>	In compliance
G.20	<input type="checkbox"/>	In compliance
G.21	<input type="checkbox"/>	In compliance
G.22	<input type="checkbox"/>	In compliance
G.23	<input type="checkbox"/>	In compliance
G.24	<input type="checkbox"/>	In compliance
G.25	<input type="checkbox"/>	Being submitted with Amendment.
G.26	<input type="checkbox"/>	Compliant: a, d, e, f, h, j, k, m, n Not yet applicable: b, c, g, i, l
G.27	<input type="checkbox"/>	Being submitted with Amendment.
G.28	<input type="checkbox"/>	In compliance



**Part G: Conditions Applying to Waste Management and Waste Management Plans  
(continued)**

G.29	<input type="checkbox"/>	In compliance
G.30	<input type="checkbox"/>	In compliance
G.31	<input checked="" type="checkbox"/>	Not yet applicable
G.32	<input type="checkbox"/>	In compliance
G.33	<input checked="" type="checkbox"/>	Water quality model being updated for Amendment
G.34	<input checked="" type="checkbox"/>	Not yet applicable

**Part H: Conditions Applying to Modifications**

H.1	~	N/A
H.2	~	N/A
H.3	<input type="checkbox"/>	In compliance

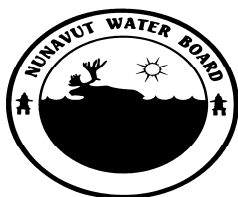
**Part I: Conditions Applying to Contingency Planning**

I.1	<input type="checkbox"/>	In compliance
I.2	<input type="checkbox"/>	In compliance
I.3	<input type="checkbox"/>	In compliance
I.4	<input type="checkbox"/>	In compliance
I.5	<input type="checkbox"/>	In compliance
I.6	<input type="checkbox"/>	In compliance
I.7	<input type="checkbox"/>	In compliance

Part J: Conditions Applying to General and Aquatic Effects Monitoring		
J.1	<input type="checkbox"/>	In compliance
J.2	<input type="checkbox"/>	In compliance
J.3	<input type="checkbox"/>	In compliance
J.4	<input type="checkbox"/>	In compliance
J.5	<input type="checkbox"/>	In compliance
J.6	<input type="checkbox"/>	In compliance
J.7	<input type="checkbox"/>	In compliance
J.8	<input type="checkbox"/>	In compliance
J.9	<input type="checkbox"/>	In compliance
J.10	<input type="checkbox"/>	In compliance
J.11	<input checked="" type="checkbox"/>	Not yet applicable
J.12	<input type="checkbox"/>	Compliant with a, d, e, f. All others are not yet applicable.
J.13	<input checked="" type="checkbox"/>	Not yet applicable
J.14	<input type="checkbox"/>	In compliance
J.15	<input type="checkbox"/>	In compliance, for current thermistor installations
J.16	<input checked="" type="checkbox"/>	Not yet applicable
J.17	<input checked="" type="checkbox"/>	Not yet applicable
J.18	<input type="checkbox"/>	2009: July 20-25, 2009
	<input type="checkbox"/>	2010: July 12-16, 2010
	<input type="checkbox"/>	2011: July 25-29, 2011
	<input type="checkbox"/>	2012: September 7-10, 2012
	<input type="checkbox"/>	2013: August 20-23, 2013
	<input type="checkbox"/>	2014: July 15-22, 2014
J.19	<input type="checkbox"/>	2009: November 27, 2009
	<input type="checkbox"/>	2010: March 31, 2011
	<input type="checkbox"/>	2011: March 19, 2012
	<input type="checkbox"/>	2012: March 28, 2013
	<input type="checkbox"/>	2013: April 18, 2014
	<input type="checkbox"/>	2014: February 2, 2015
J.20	<input type="checkbox"/>	In compliance
J.21	<input type="checkbox"/>	In compliance

Part K: Conditions Applying to General and Aquatic Effects Monitoring Plans		
K.1	~	N/A
K.2	x	Update in progress, owner change and formatting
K.3	□	In compliance
K.4	□	In compliance
K.5	□	In compliance
K.6	□	In compliance
K.7	x	In progress - A revised AEMP will be developed based on Amendment changes. Sampling occurring under current AEMP.

Part L: Conditions Applying to Abandonment, Reclamation and Closure		
L.1	x	Not yet applicable
L.2	□	In compliance
L.3	□	In compliance
L.4	□	In compliance
L.5	□	In compliance
L.6	□	Being submitted with Amendment
L.7	x	Not yet applicable.
L.8	~	N/A
L.9	x	Not yet applicable
L.10	□	In compliance
L.11	x	Not yet applicable
L.12	x	Not yet applicable
L.13	x	Not yet applicable
L.14	x	Not yet applicable
L.15	x	Not yet applicable
L.16	x	Not yet applicable



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NUNAVUT WATER BOARD  
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NUNAVUT IMALIRIYIN KATIMAYINGI  
OFFICE DES EAUX DU NUNAVUT

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# Draft

## Mining and Milling Supplemental Information Guideline (SIG) for Mine Development (MM3)

Date of Issuance: February 2010

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APPENDIX A: COMMONLY USED ACRONYMS

## 1.0 Introduction

This Supplemental Information Guideline (SIG) is for applicants seeking a water licence for water use, waste disposal, works and associated activities for Mine Development which is an undertaking classified as Mining and Milling in accordance with the *Northwest Territories Water Regulations* (NTWR or Regulations).

Supplemental information is required as part of the water licence application in accordance with section 48(2) of the Nunavut Waters Nunavut Surface Rights Tribunal Act (NWNSRTA or Act) which states:

*“An application, except in relation to a cancellation, shall be accompanied by the information and studies concerning the use of waters or the deposit of waste that are required for the Board to evaluate the qualitative and quantitative effects of the use or the deposit on waters.”*

Also, in accordance with section 48(3) of the Act, on the filing of an application, the Board may provide guidelines to the applicant respecting the information to be provided by the applicant in respect of any matter that the Board considers relevant, including the following:

- a) the description of the use of waters, deposit of waste or appurtenant undertaking, as the case may be;
- b) the qualitative and quantitative effects of the use of waters or the deposit of waste on the drainage basin where the use is to be undertaken or the deposit is to be made, and the anticipated impact of the use or deposit on other users;
- c) the measures the applicant proposes to take to avoid or mitigate any adverse impact of the use of waters or the deposit of waste;
- d) the measures the applicant proposes to take to compensate persons, including the designated Inuit organization, who are adversely affected by the use of waters or the deposit of waste;
- e) the program the applicant proposes to undertake to monitor the impact of the use of waters or the deposit of waste;
- f) The interests in and rights to lands and waters that the applicant has obtained or seeks to obtain; and

g) the options available for the use of waters or the deposit of waste.

To provide further guidance for these requirements, as well as the requirements of section 6(2) of the Regulations which outlines more specific information requirements for proposed undertakings, the NWB has developed Supplemental Information Guidelines (SIGs or Guidelines).

The SIGs are designed in spreadsheet format to facilitate the development of a concordance table that cross references the requirements of the SIG with the documents that make up the water licence application. The tables in the following nine (9) worksheets include columns for the applicant to enter information regarding the applicability of the requirement to the proposed undertaking; the title, author, and date of the document where information to address the requirement can be found; the electronic file name of the document; as well as the section of the document where the information can be found. Specific information about the proposed undertaking should not be inserted into these spreadsheets.

The applicant must complete the yellow sections of the SIG and submit the completed SIG along with the documents that address the requirements of the SIG to the NWB.

Further to this SIG, the applicant is referred to the NWB's *Guide 4 - Completing and Submitting a Water Licence Application for a New Licence*. This Guide provides more details regarding completion of the NWB's minimum information requirements, information required to complete plans including designs and reports, executive summaries and translations, as well as how, when and who to contact when submitting a water licence application.

Following submission of a water licence application, the NWB will determine whether the application is complete. If the NWB determines that an application is materially incomplete, meaning that items included in Section 2: Minimum Application Requirements are missing, the applicant will be informed by the NWB that their application has been rejected. In other cases, NWB staff will correspond with the applicant to resolve deficiencies before proceeding.

The NWB cannot issue, amend, or renew a licence where there is an applicable, approved land use plan until the NPC's requirements under the NLCA have been addressed regarding land use planning (Article 11). In addition, the NWB cannot issue, amend, or renew a licence where the appurtenant undertaking requires screening by NIRB in accordance with Part 4 of Article 12 of the NLCA until NIRB has completed its screening. Furthermore, notwithstanding sections 13.5.5 or 12.10.2 of the NLCA, where the appurtenant undertaking requires a review under Part 5 or Part 6 of Article 12 of the NLCA, the Board may not issue, amend, or renew a licence until NIRB has issued a project certificate. For this reason, the applicant must provide the NWB with written confirmation that both NPC's and NIRB's requirements under the NLCA have been addressed.

Following completion of development impact assessment in accordance with Article 12 of the NLCA, the NWB may issue additional Project Specific Information Requirements (PSIR) to the applicant. See Section 9 of the SIG.

The applicant is referred to Appendix A of these Guidelines for a list of additional documents, guidelines, legislation and standards that may be of use to the applicant in preparing the information to address this SIG.

Submission of the information required by this SIG does not relieve the applicant from confirming and following up on other information requirements which may be required during the regulatory process.



DOCUMENT KEY		Title, Author and Date of Document
<b>Package 1: Project Summary and Submission Outline</b>		
P1-1	Plain Language Summary	TMAC Resources Inc. (TMAC). 2015. Doris North Project: Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Water Licence 2AM-DOH1323 - Package 1: Project Summary and Submission Outline
P1-2	Maps	
P1-3	Schedule for Implementation	
P1-4	Regulatory Submission Outline	
<b>Package 2: Project Description</b>		
P2-1	Project Description-Executive Summary	TMAC Resources Inc. (TMAC). 2015. Doris North Project: Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Water Licence 2AM-DOH1323 - Package 2: Project Description
	Project Description	
<b>Package 3: NIRB and NWB Application Documents</b>		
P3-1	NIRB Amendment Application Documents	TMAC Resources Inc. (TMAC). 2015. Doris North Project: Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Water Licence 2AM-DOH1323 - Package 3:
P3-2	NWB Amendment Application Documents	
P3-3	NPC Conformity Determination	
<b>Package 4: Environmental Effects Assessment</b>		
P4-1	Effects Assessment	ERM. 2015. Doris North Project: Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Water Licence 2AM-DOH1323 - Package 4 Identification of Potential Environmental Effects and Proposed Mitigation. Prepared for TMAC Resources Inc. by ERM Consultants Canada Ltd.: Vancouver, British Columbia.
<b>Package 5: Management and Other Plans</b>		
P5-1	Air Quality Management Plan	TMAC Resources Inc. (TMAC). 2015. Air Quality Management Plan, Hope Bay. June 2015.
P5-2	Interim Closure and Reclamation Plan	TMAC Resources Inc. (TMAC). 2015. Doris North Mine Interim Closure and Reclamation. June 2015.
P5-3	Water Management Plan	TMAC Resources Inc. (TMAC). 2015. Water Management Plan, Hope Bay. June 2015.
P5-4	Waste Rock and Ore Management Plan	TMAC Resources Inc. (TMAC). 2015. Hope Bay Project, Waste Rock and Ore Management Plan, Hope Bay. June 2015.
<b>Package 6: Engineering and Design Documents</b>		
P6-1	Doris Central Vent Raise Pad and Access Road	SRK Consulting (Canada) Inc. (SRK). 2015. Doris North Project: Doris Central Vent Raise Pad and Access Road . Prepared for TMAC Resources Inc. May 2015.
P6-2	Doris Connector Vent Raise Pad and Access Road	SRK Consulting (Canada) Inc. (SRK). 2015. Doris North Project: Doris Connector Vent Raise Pad and Access Road. Prepared for TMAC Resources Inc. May 2015.
P6-3	Groundwater Inflow and Quality Model	SRK Consulting (Canada) Inc. (SRK). 2015. Hydrogeological Modeling of the Proposed Doris Mine, Hope Bay Project, Nunavut. Prepared for TMAC Resources Inc. June 2015.
P6-4	Landfill	SRK Consulting (Canada) Inc. (SRK). 2015. Doris North Project: Quarry #3 Non-Hazardous Waste Landfill Design Brief. Prepared for TMAC Resources Inc. May 2015.
P6-5	Reclamation and Security	SRK Consulting (Canada) Inc. (SRK). 2015. Costing Assumptions Summary for Doris North Mine Interim Closure and Reclamation Plan . Prepared for TMAC Resources Inc. June 2015.
P6-6	Roberts Bay Discharge System Water Management Options	SRK Consulting (Canada) Inc. (SRK). 2015. Doris North Project: Roberts Bay Discharge System Water Management Options. Prepared for TMAC Resources Inc. May 2015.
P6-7	Roberts Bay Discharge System 1-Surface Infrastructure	SRK Consulting (Canada) Inc. (SRK). 2015. Doris North Project: Roberts Bay Discharge System Surface Infrastructure Design Brief. Prepared for TMAC Resources Inc. May 2015.
P6-8	Roberts Bay Discharge System 2-Pump and Pipe Requirements	SRK Consulting (Canada) Inc. (SRK). 2015. Doris North Project: Roberts Bay Discharge System Pumps and Pipeline Requirements Brief. Prepared for TMAC Resources Inc. June 2015.

DOCUMENT KEY		Title, Author and Date of Document
P6-9	Roberts Bay Expanded Laydown Pads	SRK Consulting (Canada) Inc. (SRK). 2015. Doris North Project: Roberts Bay Laydown Expansion Design Brief. Prepared for TMAC Resources Inc. May 2015.
P6-10	Site-Wide Water and Load Balance	SRK Consulting (Canada) Inc. (SRK). 2015. Doris North Project - Water and Load Balance. Prepared for TMAC Resources Inc. June 2015.
P6-11	Storage Pad U	SRK Consulting (Canada) Inc. (SRK). 2015. Doris North Project: Expanded Laydown Area (Pad U). Prepared for TMAC Resources Inc. May 2015.
P6-12	Tailings Geochemistry	SRK Consulting (Canada) Inc. (SRK). 2015. Geochemical Characterization of Tailings from the Doris Deposits, Hope Bay. Prepared for TMAC Resources Inc. June 2015.
P6-13	Tailings Management System	SRK Consulting (Canada) Inc. (SRK). 2015. Doris North Project - Tailings Management System Design. Prepared for TMAC Resources Inc. May 2015.
P6-14	Waste Rock and Ore Geochemistry, Static Testing	SRK Consulting (Canada) Inc. (SRK). 2015. Static Testing and Mineralogical Characterization of Waste Rock and Ore from the Doris Deposit, Hope Bay. Prepared for TMAC Resources Inc. June 2015.
P6-15	Waste Rock and Ore Geochemistry, Kinetic Testing	SRK Consulting (Canada) Inc. (SRK). 2015. Kinetic Testing of Waste Rock and Ore from the Doris Deposit, Hope Bay. Prepared for TMAC Resources Inc. June 2015.
<b>Package 7: Proponent Information</b>		
P7-1	Statement of Financial Security	TMAC Resources Inc. (TMAC). 2015. Doris North Project: Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate No. 003 and Water Licence 2AM-DOH1323 - Package 7:
P7-2	List of Officers	
P7-3	Certificate of Incorporation	

## 2.0 Minimum Application Requirements (Application Checklist)

Section Title	Section No.	Information Requirement	Indicate whether Information Requirement is applicable by inserting ' Y ' or ' NA '	If 'NA' provide justification	Insert <u>Title, Author and Date of Document</u> where information is provided	Insert <u>electronic file name of document</u> where information is provided	Insert <u>Section of document</u> where information is provided	NWB Concordance Assessment
Minimum Application Requirements	1	General Water Licence Application Form (see the NWB's <i>Guide 4: Completing and Submitting a Water Licence Application for a New Licence</i> ) or Application for Water Licence Amendment Form, if appropriate (see NWB's <i>Guide 7: Licensee Requirements Following the Issuance of a Water Licence</i> ).	Y		See Document Key		P3-2	
	2	Information required to satisfy the requirements of the SIG including plans, reports and designs.	Y		See Document Key		P1 to P7	
	3	Executive summary in english.	Y		See Document Key		P1-1 and P2-2	
	4	Translated executive summary in appropriate language and dialect.	not available	to be provided June 16, 2016			P1-1 and P2-2	
	5	Application fee.	Y				with application cover letter	
	6	Water use fee.	not applicable	annual fees are paid per current license terms and conditions				
	7	A table indicating concordance of the application and supporting documents to the Guidelines. These generic Guidelines are provided in excel as a tool for applicants to provide the necessary concordance table.	Y		See Document Key		P3-2	

### Qualifications:

- Applications that do not include all of the items listed above will be returned to the applicant as incomplete with a request for the deficient information.
- If more than one licensable activity or facility is proposed that requires a water licence (eg. multiple water sources, waste deposits, structures, crossings, etc.) the required information must be provided for each activity or facility.
- Information between all documents that make up the application package must be consistent and must be accurately cross referenced.
- The application must distinguish between recommendations or options and actual commitments to chosen alternatives.
- For additional guidance regarding the submission of electronic documentation, see the NWB's *Guide 6: Electronic Documentation: Submissions and Registry*.
- The applicant, where practical, may combine components of the information requested in the SIG into more concise plans to provide clarity and eliminate duplication. If this practice is considered, then the applicant must clearly outline, through proper referencing and clearly detailed statements, how the NWB should consider the documents that have combined elements of information. Information management is the responsibility of the applicant.
- The applicant must submit a concise executive summary of the application package. In addition, the Applicant shall submit an executive summary for each separate supporting document, report or study. All executive summaries shall be provided in English, Inuktitut and/or Inuinnaqtun (where applicable).

**The applicant must complete the yellow columns of the worksheet(s). Blue columns are for NWB use only.**

### 3.0 General Water Licence Application

Section Title	Section No.	Information Requirement	Indicate whether Information Requirement is applicable by inserting ' Y ' or ' NA '	If 'NA' provide justification	Insert <u>Title, Author and Date of Document</u> where information is provided	Insert <u>electronic file name of document</u> where information is provided	Insert <u>Section of document</u> where information is provided	If information is not available at the time of application, indicate when the information will be made available	NWB Concordance Assessment	NIRB Guideline Section No.
Applicant	1	Provide the full name of the applicant and contact person including contact information (position, phone number, address, fax number and email address).	Y		See Document Key		P3-2			
Applicant Representative	2	Provide the name and contact information of any party submitting the application on behalf of the applicant (including position, phone number, address, fax number and email address).	Y				submitted with application in email			
	3	Provide a signed letter authorizing a party to be the applicant's representative in the licensing process.	not applicable	applicant is representing itself						
Name of Project	4	Provide the name of the project.	Y		See Document Key		P3-2			
Location of Undertaking	5	Provide coordinates of the project extents taking into account the Local Project Area (LPA) and the Regional Project Area (RPA), where applicable.	Y		See Document Key		P3-2			
	a	Provide location by Latitude and Longitude.	Y		See Document Key		P3-2			
	b	Provide location by UTM coordinates, if available.	Y		See Document Key		P3-2			
	c	Provide the distances to the nearest communities.	Y		See Document Key		P3-2			
	6	Indicate whether the drainage basin, in which the project is located, is shared with any other jurisdiction. If applicable, indicate which jurisdiction.	not applicable	drainage basin is not shared with any other jurisdiction						
Map	7	Provide a map at a 1:50,000 scale based on the National Topographic Series indicating the location of the undertaking, watercourses and the location of waste deposits. Additional maps at various scales may be provided if those maps will provide additional information or clarification. All additional maps must indicate the scale, map sheet number, and location of north.	Y		See Document Key		P1-2			
Nature of Interest in the Land	8	Provide the nature of the interest in the land associated with the proposed undertaking, including:	Y		See Document Key		P2-1			
	a	Sub-surface leases from Nunavut Tunngavik Incorporated (NTI) and/or Indian and Northern Affairs Canada (INAC) as well as surface authorizations from INAC for crown land use, a Designated Inuit Organization (DIO) for Inuit Owned Land (IOL) use, or the Government of Nunavut for Commissioner's land use. Provide the permit or licence	Y		See Document Key		P2-1			
	b	The date or expected date of issuance of any authorization and the date of expiry.	Y		See Document Key		P2-1			
	9	Indicate whether the applicant is the name of the entity holding the authorization for the interest in the land and if not, provide the name of the entity holding the authorization.	Y		See Document Key		P3-2			
NPC Determination	10	Provide written confirmation from the NPC confirming that NPC's requirements under the NLCA regarding land use plan conformity (Article 11 of the NLCA) have been addressed.	Y		See Document Key		P3-3			
NIRB Determination	11	Provide written confirmation from the NIRB confirming that NIRB's requirements under the NLCA regarding development impact assessment (Article 12 of the NLCA) have been or are in the process of being addressed. Documentation may include:	Y		See Document Key		P3-1 - Amendment request submitted concurrently to NIRB			
	a	Written confirmation from NIRB that the project proposal does not require screening;	Y		See Document Key		P3-1 - Amendment request submitted concurrently to NIRB			
	b	NIRB's screening determination;	Y		See Document Key		P3-1 - Amendment request submitted concurrently to NIRB			
	c	If a review is required, NIRB's recommendation to the Minister regarding the type of review;	Y		See Document Key		P3-1 - Amendment request submitted concurrently to NIRB			
	d	If a review is required, the Minister's written decision regarding the review of the development proposal;	Y		See Document Key		P3-1 - Amendment request submitted concurrently to NIRB			

### 3.0 General Water Licence Application

Section Title	Section No.	Information Requirement	Indicate whether Information Requirement is applicable by inserting 'Y' or 'NA'	If 'NA' provide justification	Insert <u>Title, Author and Date of Document</u> where information is provided	Insert <u>electronic file name of document</u> where information is provided	Insert <u>Section of document</u> where information is provided	If information is not available at the time of application, indicate when the information will be made available	NWB Concordance Assessment	NIRB Guideline Section No.
	e	If a review is required, NIRB's project certificate;	Y		See Document Key		P3-1 - Amendment request submitted concurrently to NIRB			
	12	List of activities requested for exception in accordance with NLCA s. 12.10.2;	not applicable	no request for exception under NLCA 12.10.2 is included in application						
	13	Indicate whether any Type B water licence application is for an activity to be considered for interim, short term approval in accordance with NLCA s. 13.5.5.	not applicable	no request for a Type B is included in application						
<b>Description of Undertaking</b>	14	See section 4 of this SIG for specific requirements.								
<b>Other Applicable Supplemental Information Guidelines</b>	15	Indicate whether any other Supplemental Information Guidelines apply to the undertaking including the following:								
	a	Hydrostatic testing	not applicable	not included in amendment request						
	b	Tannery	not applicable	not included in amendment request						
	c	Tourist / remote camp	not applicable	not included in amendment request						
	d	Landfarm and on-site storage of hydrocarbon contaminated soil	not applicable	not included in amendment request						
	e	Onshore oil and gas exploration drilling	not applicable	not included in amendment request						
	f	Mineral exploration/ remote camp	not applicable	not included in amendment request						
	g	Advanced exploration	not applicable	not included in amendment request						
	h	Mine development								
	i	Municipal	not applicable	not included in amendment request						
	j	General Water Works	not applicable	not included in amendment request						
	k	Power	not applicable	not included in amendment request						
<b>Options (Alternatives)</b>	16	Provide a brief explanation of the alternative methods or locations that were considered to carry out the project.	Y		See Document Key		P2-1 (s1.4)			
<b>Water Use:</b>	17	See section 6 of this SIG for specific requirements								
<b>Quality and Quantity</b>	18	See section 6 of this SIG for specific requirements								
<b>Waste Disposal</b>	19	See section 7 of this SIG for specific requirements								
<b>Waste Disposal: Quality and Quantity</b>	20	See section 7 of this SIG for specific requirements								
<b>Other Authorizations</b>	21	Provide a list of any authorizations required in relation to the project in addition to the water licence. For each additional authorization required for the project, provide the name of the authorization, the administering agency, the project activity requiring the authorization, the date or expected date of issuance and the date of expiry. Provide a description of how those authorizations may affect the NWB's water licensing process.	Y		See Document Key		P2-1 (s1.6)			
	22	Indicate whether an authorization has been obtained or sought from the Department of Fisheries and Oceans for dewatering or using any waterbodies for containment of waste	not applicable	Dewatering or using any waterbody for containment of waste is not included in amendment application.						
	23	Provide formal applications to the Navigable Waters Protection Program (NWPP) for any works.	not applicable	Formal application to NWPP not required at time of application						
	24	Provide a timetable for filing the appropriate plans and procedures required by government parties.	not applicable	Not required at time of application						
	25	Indicate whether the applicant/ licensee holds any existing water licences. If applicable, provide the licence number and expiry date of any existing water licences.	Y		See Document Key		P2-1 (s1.6)			
<b>Predicted Environmental Effect and Proposed mitigation measures</b>	26	Identify the potential effect of water use and waste disposal on the following components:								
	a	Groundwater and Surface Water including:								
		changes in flow (including seasonal rate of flow)	Y		See Document Key		P4-1 (s 2.0)			
		quantity	Y		See Document Key		P4-1 (s 2.0)			
		quality	Y		See Document Key		P4-1 (s 2.0)			
	b	Land including:								
		geologic structure change	Y		See Document Key		P5-4			
		soil contamination	Y		See Document Key		P6-4			

### 3.0 General Water Licence Application

Section Title	Section No.	Information Requirement	Indicate whether Information Requirement is applicable by inserting 'Y' or 'NA'	If 'NA' provide justification	Insert <u>Title, Author and Date of Document</u> where information is provided	Insert <u>electronic file name of document</u> where information is provided	Insert <u>Section of document</u> where information is provided	If information is not available at the time of application, indicate when the information will be made available	NWB Concordance Assessment	NIRB Guideline Section No.
		compaction, settling and erosion	Y		See Document Key		P6-4			
		alteration of the permafrost regime	Y		See Document Key		P6-1 (s4.3) P6-2 (s4.3) P6-7 (s4.9) P6-9 (s4.4) P6-11 (s4.5)			
		riparian zone loss	not applicable	Not conducting any works that would result in riparian zone loss						
	c	Vegetation including:					P4-1 (s 3.0)			
		species composition and abundance	Y		See Document Key		P4-1 (s 3.0)			
		non-native species introduction	not applicable	amendment request does include change to current approaches			P4-1 (s 3.0)			
		accumulation of toxins and heavy metals (in relation to remediation objectives for closure)	not applicable	Remediation objectives will be outlined in the Final Closure Plan						
	d	Aquatic Ecosystems including:					P4-1 (s 2.0 & 6.0)			
		fish	Y		See Document Key		P4-1 (s 2.0 & 6.0)			
		benthic invertebrates	Y		See Document Key		P4-1 (s 2.0 & 6.0)			
		plankton	Y		See Document Key		P4-1 (s 2.0 & 6.0)			
	27	Identify effects separately for each project phase.	Y		See Document Key		P4-1			
	28	Provide a description of the methods used to predict effects.	Y		See Document Key		P4-1			
	29	Provide a cumulative effects assessment of the project's water use and waste disposal activities in relation to other activities in the same drainage basin.	Y		See Document Key		P4-1 (s 2.5)			
	30	Identify effects arising from accidental events or malfunctions.	Y		See Document Key		P5-3, P5-4			
	31	Provide a description of all proposed mitigation, management and monitoring programs to mitigate adverse impacts.	Y		See Document Key		P4-1 (s 2.6, 3.6, 4.6, 6.6)			
	32	Provide a description of the measures to be taken to mitigate impacts on historical resources or traditional uses of water and procedures to be followed should artifacts be discovered.	Y		See Document Key		P4-1 (s 5.0)			
	33	If applicable, provide a description of any potential transboundary effects.	not applicable	no transboundary effects identified						
	34	See sections 5, 6, 7, and 8 of this SIG for additional information requirements								
Existing and Other User Water Rights	35	Provide the names, addresses, and nature of use for any known persons or properties that may be adversely affected by the proposed undertaking, including those that hold licences for water use in precedent to the application, domestic users, in-stream users, authorized waste depositors, owners of property, occupiers of property, and/or holders of outfitting concessions, registered trapline holders, and holders of other rights of a similar nature.	not applicable	no other water user rights in area						
	36	Provide a description of any potential effects of the project on the persons or properties identified in item 35 of this section.	not applicable	no other water user rights in area						
	37	Provide a description of the measures incorporated into the project design to mitigate effects of the project on the persons or properties identified in item 35 of this section.	not applicable	no other water user rights in area						
	38	Indicate whether compensation has been paid and/or agreement(s) for compensation have been reached with any existing or other users.	not applicable	no other water user rights in area						
Inuit Water Rights	39	Provide a description of any potential effects of the project on the quality, quantity, or flow of waters flowing through Inuit Owned Land (IOL).	Y		See Document Key		P4-1			
	40	Provide a description of the measures incorporated into the project design to mitigate effects of the project on the quality, quantity, or flow of waters flowing through IOL.	Y		See Document Key		P4-1			

### 3.0 General Water Licence Application

Section Title	Section No.	Information Requirement	Indicate whether Information Requirement is applicable by inserting ' Y ' or ' NA '	If 'NA' provide justification	Insert <u>Title, Author and Date of Document</u> where information is provided	Insert <u>electronic file name of document</u> where information is provided	Insert <u>Section of document</u> where information is provided	If information is not available at the time of application, indicate when the information will be made available	NWB Concordance Assessment	NIRB Guideline Section No.
	41	Indicate whether an agreement to pay compensation for any loss or damage has been reached with one or more Designated Inuit Organization (DIO); or if the parties have	Y		See Document Key		P4-1 (s 1.1)			
Consultation	42	Provide a summary of any consultation meetings including when the meetings were held, where and with whom.	Y		See Document Key		P2-1 (s 4.0)			
	43	Provide a summary of the results of consultation meetings including a list of concerns expressed and measures proposed to address concerns.	Y		See Document Key		P2-1 (s 4.0)			
Security	44	Provide a financial security assessment that is prepared in a manner consistent with principals respecting mine site reclamation and implementation found in the <u>Mine Site Reclamation Policy for Nunavut</u> , Indian and Northern Affairs Canada, 2002. The financial security assessment must include:	Y		See Document Key		P6-5			
	a	An estimate of the total financial security for final reclamation equal to the total outstanding reclamation liability for land and water combined sufficient to cover the highest liability over the life of the undertaking;	Y		See Document Key		P6-5			
	b	The cost of having the necessary reclamation work done by a third-party contractor if the operator defaults;	Y		See Document Key		P6-5			
	c	Contingency factors appropriate to the particular work to be undertaken.	Y		See Document Key		P6-5			
Abandonment and Restoration	45	Provide plans for the abandonment and restoration of the project. Plans must address all phases of the project including construction, operation, care & maintenance, final closure and post closure. Detail the costs to carry out the plan, and a proposal for financial assistance which covers the costs to carry out the plan.	not available					Remediation objectives will be provided in the Final Closure Plan		
	46	Provide a description of all remediation plans and remediation objectives. Discuss the results of any human health and ecological risk assessment used to establish remediation objectives.	Y		See Document Key		P5-2			
	47	Provide a list and description of any existing abandoned or restored site facilities.	Y		See Document Key		P5-2			
	48	Provide details regarding the timing of the removal of any dewatering dikes (if applicable) and the implications of this action on water quality.	Y		See Document Key		P5-2			
	49	Provide detailed information regarding the method used to remove/breach any dewatering dykes (if applicable), including details of any mitigation measures for any adverse impacts.	Y		See Document Key		P5-2			
Financial Information	50	Provide a statement of financial responsibility.	Y		See Document Key		P7-1			
	51	If the applicant is an entity for which audited financial statements are issued, a copy of the most recent audited financial statements must be attached to the statement of financial responsibility.	Y		See Document Key		P7-1			
	52	Provide the name of the corporation, limited company or other business entity, with a list of the officers of the company and a copy of the Certificate of Incorporation or evidence of registration of the company name.	Y		See Document Key		P7-2 and P7-3			
Studies and Designs	53	Provide a list of studies, reports and plans relevant to the application that have been undertaken to date including:	Y		See Document Key		P6			
	a	Design rational, design requirements, design criteria, design parameters, design standards/analysis/method;	Y		See Document Key		P6			
	b	Design assumptions and the limitations associated with such design assumptions;	Y		See Document Key		P6			
	c	The inclusion of clear, definable engineering qualifiers with all design drawings and reports;	Y		See Document Key		P6			
	d	Site specific data and analysis to support the design and management decisions made;	Y		See Document Key		P6			

### 3.0 General Water Licence Application

Section Title	Section No.	Information Requirement	Indicate whether Information Requirement is applicable by inserting 'Y' or 'NA'	If 'NA' provide justification	Insert <u>Title, Author and Date of Document</u> where information is provided	Insert <u>electronic file name of document</u> where information is provided	Insert <u>Section of document</u> where information is provided	If information is not available at the time of application, indicate when the information will be made available	NWB Concordance Assessment	NIRB Guideline Section No.
	e	Materials that appropriately delineate the particulars of a design or plan.	Y		See Document Key		P6			
	54	Provide construction methods and procedures regarding how infrastructure will be put in place on-site.	Y		See Document Key		P6			
	55	Provide a timetable for submission of preliminary and final-for-construction engineered designs (note: for construction designs are required for NWB approvals).	Y		See Document Key		IFD drawings included in P6	IFC drawings will be submitted at least 60 prior to commencement of construction of facilities.		
	56	See sections 5, 6 and 7 of this SIG for additional information requirements								
Proposed Time Schedule	57	Provide the proposed start and completion dates for each phase of development (construction, operation, closure and post closure) and any anticipated periods of seasonal shut down.	Y		See Document Key		P1-3			
Proposed Term of Licence	58	Provide a proposed term of licence including the expected date of licence issuance and the expected date of licence expiry.	not applicable	application does not include amendment to term of license						
Annual Reporting	59	Provide detailed information regarding the content of annual reports and a proposed outline or template of the annual report. The annual report should include the following:	not applicable	annual reporting as per current license terms and conditions						
	a	Water related monitoring results;	not applicable	annual reporting as per current license terms and conditions						
	b	Comparison of water quality and quantity monitoring data with the water quality and quantity predictions presented in the application;	not applicable	annual reporting as per current license terms and conditions						
	c	A description of how the conditions in the NIRB project certificate related to the NWB mandate have been implemented;	not applicable	annual reporting as per current license terms and conditions						
	d	Project changes under adaptive management;	not applicable	annual reporting as per current license terms and conditions						
	e	Any actions taken in response to direction provided by the Inspector.	not applicable	annual reporting as per current license terms and conditions						
Renewals and Amendments	60	If the application is for a renewal or amendment of an existing licence provide the water licence number and the date of water licence expiry.	Y		See Document Key		P3-2			
	61	If the application is for a renewal or amendment of an existing licence, provide a compliance assessment/status report. This report must document the status of compliance for each condition of the existing water licence taking into consideration inspector dialogues and inspector directions, responses to inspector dialogues and inspector directions, spills that may have occurred, and any reporting requirements. The report must indicate when facilities were inspected by regulatory agencies and list any spills that may have occurred including a description, location shown on a	Y		See Document Key		P3-2			



#### 4.0 Project Description

Section Title	Section No.	Information Requirement	Indicate whether Information Requirement is applicable by inserting 'Y' or 'NA'	If 'NA' provide justification	Insert Title, Author and Date of Document where information is provided	Insert electronic file name of document where information is provided	Insert Section of document where information is provided	If information is not available at the time of application, indicate when the information will be made available	NWB Concordance Assessment	NIRB Guideline Section No.
Description of Undertaking	1	Provide a complete description of the undertaking with detailed site plan(s) of all project infrastructure for the Local Project Area (LPA) and/or the Regional Project Area (RPA), where applicable. Include maps and/or aerial photos with scales that allow the determination of distances between the objects depicted. Differentiate any temporary components from permanent components. Consider the following in providing the description:								
	a	Raw water intake;	not applicable	not included in amendment request						
	b	Water storage and treatment facilities including distribution systems;	not applicable	not included in amendment request						
	c	Existing water bodies/courses and any changes to these water bodies/courses that may have or may occur as a result of water use or waste disposal facilities. Provide an outline of the drainage basin and drainage patterns within the RPA;	Y		See Document Key		P4-1 (s 2.3)			
	d	Location of receiving water bodies and drainage pathways;	Y		See Document Key		P4-1 (s 2.3)			
	e	Transportation access routes and details of water course crossings;	Y		See Document Key		P6-1, P6-2, P6-7			
	f	Locations of environmental monitoring sites;	Y		See Document Key		P5-3 (s. A6.2) P5-1 (s.3) P2-1 (s3.6.4) P5-2 (s9)			
	g	Traditional water use and land use areas that may be impacted by the project;	not applicable	no change arising from amendment request						
	h	Sewage treatment facilities;	not applicable	not included in amendment request						
	i	Wastewater treatment area and discharge outlet locations;	Y		See Document Key		P2-1 (s 3.6)			
	j	Solid waste disposal areas and drainage patterns;	not applicable	not included in amendment request						
	k	Incinerators	not applicable	not included in amendment request						
	l	Landfarm (see the NWB's SIG for Landfarm and on-site storage of hydrocarbon contaminated soil (I3));	not applicable	not included in amendment request						
	m	Waste rock piles (PAG and non-PAG);	Y		See Document Key		P2-1 (s 3.7)			
	n	Stockpiles;	Y		See Document Key		P2-1 (s 3.7)			
	o	Mill or processing plant;	Y		See Document Key		P2-1 (s 3.3)			
	p	Tailings containment areas;	Y		See Document Key		P2-1 (s 3.6)			
	q	Laydown areas;	Y		See Document Key		P2-1 (s 3.9)			
	r	Quarries;	Y		See Document Key		P2-1 (s 3.10)			
	s	Hazardous waste disposal area;	not applicable	not included in amendment request						
	t	Waste discharge distribution lines;	not applicable	not included in amendment request						
	u	Fuel and chemical storage;	not applicable	not included in amendment request						
	v	Explosives manufacturing and storage;	Y		See Document Key		P2-1 (s 3.13)			
	w	Abandoned and/or restored facilities;	not applicable	not included in amendment request						
	x	Existing on site infrastructure;	Y		See Document Key		P-6			
	y	Others;					P6			
Mine Plan	2	Provide a Mine Plan Overview including:								
	a	Description of the location, physical nature, geology and mineralogy of the ore deposit and host rock. (See section 5 items 19-23)	Y		See Document Key		P2-1 (s 2.1)			
	b	Mine development plan and methods	Y		See Document Key		P2-1 (s 2.0)			
	c	Exploration operations	not applicable	not included in amendment request						
	d	Description of earthworks for mine development	not applicable	not included in amendment request						
	e	Milling or processing plant operations including:	Y		See Document Key		P2-1 (s 3.3)			
		A copy of the mill or processing plant flow sheet. Indicate the points of addition of the various reagents (chemicals) that will be used.	Not available	A discussion of the process flow sheet is presented within the application			P2-1 (s 3.3)	Preliminary design will be provided during the public comment period		
		The capacity of the mill	Y		See Document Key		P2-1 (s 3.3)			

#### 4.0 Project Description

Section Title	Section No.	Information Requirement	Indicate whether Information Requirement is applicable by inserting 'Y' or 'NA'	If 'NA' provide justification	Insert <u>Title, Author and Date of Document</u> where information is provided	Insert <u>electronic file name of document</u> where information is provided	Insert <u>Section of document</u> where information is provided	If information is not available at the time of application, indicate when the information will be made available	NWB Concordance Assessment	NIRB Guideline Section No.
		If applicable, indicate whether the (proposed) milling circuit is in whole or in part based on autogenous grinding.	Y		See Document Key		P2-1 (s 3.3)			
		Predicted rate of production.	Y		See Document Key		P2-1 (s 3.3)			
	f	Expected life of the mine.	Y		See Document Key		P2-1 (s 3.2)			
	g	Camp and mine site population projections for each phase of the project.	Y		See Document Key		P2-1 (s 3.11)			

## 5.0 Baseline Information

Section Title	Section No.	Information Requirement	Indicate whether Information Requirement is applicable by inserting 'Y' or 'NA'	If 'NA' provide justification	Insert Title, Author and Date of Document where information is provided	Insert electronic file name of document where information is provided	Insert Section of document where information is provided	If information is not available at the time of application, indicate when the information will be made available	NWB Concordance Assessment	NIRB Guideline Section No.
Environmental Setting	1	Provide a description of the regional and local setting using maps and/or aerial photos with scales that allow the determination of distances between the objects depicted.	Y		See Document Key		P1-2			
	2	Provide a brief history of the property development which took place before the present company gained control of the site. Include shafts, adits, mills, waste dumps, chemical storage areas, tailings disposal areas, and effluent discharge locations. Make references to a detailed map.	Y		See Document Key		P2-1 (s 1.7)			
	3	Provide a description of the site conditions, including:								
	a	location	Y		See Document Key		P2-1			
	b	topography	Y		See Document Key		P6			
	c	geologic conditions	Y		See Document Key		P2-1 (s 2.1)			
	d	hydrologic characteristics	Y		See Document Key		P4-1 (s 2.0)			
	e	climate conditions and predicted future climate trends	not applicable	not included in amendment request						
	f	seismicity	Y		See Document Key		P6-11 (att 2, s 2.0)			
	g	permafrost conditions	Y		See Document Key		P6			
	4	Provide a description of the regional and local surface water regime and drainage area and outline the drainage basin on an attached map.	Y		See Document Key		P4-1 (s 2.3)			
	5	Provide a description of the groundwater regime.	Y		See Document Key		P6-3			
	6	Provide baseline data and an evaluation of baseline data describing surface and groundwater quality in the project area (physical, chemical, and biological characteristics).	Y		See Document Key		P4-1 (s 2.3)			
	7	Provide a description of the usual break-up and freeze-up periods.	Y		See Document Key		P4-1 (s 2.3)			
	8	Provide a description of streambed material, streambank material, and streambank vegetation.	Y		See Document Key		P4-1 (s 2.3)			
	9	Indicate the slope of the banks of any water course affected by the application	Y		See Document Key		P4-1 (s 2.3)			
	10	Provide a description of the meander pattern for any channel affected by the application	Y		See Document Key		P4-1 (s 2.3)			
	11	Provide the following streamflow data in cubic metres per second for each watercourse included in the application:	Y		See Document Key		P4-1 (s 2.3)			
	a	mean annual flow;	Y		See Document Key		P4-1 (s 2.3)			
	b	mean summer flow;	Y		See Document Key		P4-1 (s 2.3)			
	c	minimum summer flow;	Y		See Document Key		P4-1 (s 2.3)			
	d	minimum annual flow;	Y		See Document Key		P4-1 (s 2.3)			
	e	mean annual flood;	Y		See Document Key		P4-1 (s 2.3)			
	f	maximum summer flood;	Y		See Document Key		P4-1 (s 2.3)			
	g	mean summer flood;	Y		See Document Key		P4-1 (s 2.3)			
	12	Provide bathymetric information for water bodies affected by the application.	Y		See Document Key		P4-1 (s 2.3, 2.5)			
	13	Provide a description of the ground condition for design and engineering of earthwork infrastructure, including (if applicable, provide test pit/ drill hole logs and laboratory test results):	Y		See Document Key		P6- 1 to 15			
	a	Interim and permanent waste rock facilities	not applicable	not included in amendment request						
	b	Tailings containment area	Y		See Document Key		P6-13			
	c	Landfills	Y		See Document Key		P6-4			
	d	Landfills	not applicable	not included in amendment request						
	e	Fuel and chemical storage facilities	not applicable	not included in amendment request						
	f	Explosives management areas and facilities	Y		See Document Key		P2-1 (3.13)			
	g	Roads	Y		See Document Key		P6-1, P6-2, P6-7			
	h	Quarries or borrow pits	not applicable	not included in amendment request						
	i	Hazardous waste facilities	not applicable	not included in amendment request						
	j	Wastewater treatment facilities	not applicable	not included in amendment request						
	k	Ore stockpiles	Y		See Document Key		P6-11			
	l	Overburden piles	not applicable	not included in amendment request						
	m	Dewatering dikes	not applicable	not included in amendment request						
	14	Provide results of any assessment of the permeability of any faults and talks beneath water bodies.	Y		See Document Key		P6-3			
	15	Provide a description of the historical uses of the waters affected by the project.	Y		See Document Key		P4-1 (s1.1)			
	16	Provide a description of any traditional uses of water in the project area.	not applicable	no change arising from amendment request						

## 5.0 Baseline Information

Section Title	Section No.	Information Requirement	Indicate whether Information Requirement is applicable by inserting 'Y' or 'NA'	If 'NA' provide justification	Insert Title, Author and Date of Document where information is provided	Insert electronic file name of document where information is provided	Insert Section of document where information is provided	If information is not available at the time of application, indicate when the information will be made available	NWB Concordance Assessment	NIRB Guideline Section No.
Geology and Mineralogy	17	Indicate whether fish, shellfish, or other wildlife are present and harvested in or near discharge areas and, if applicable, indicate the species harvested and the level of harvest.	Y		See Document Key		P4-1(2.4, 4.4)			
	18	Provide a description of the results of any consultation with Elders regarding the collection of baseline data.	Y		See Document Key		P2-1 (4.3)			
	19	Provide a description of the physical nature of the mineralization, including known dimensions and approximate shape	Y		See Document Key		P6-12, P6-14, P6-15			
	20	Provide a description of the host rock in the general vicinity of the mineralization (from the surface to the mineralized zone)	Y		See Document Key		P6-12, P6-14, P6-15			
	21	Provide a geological description of the mineralized zone. (If possible, include the percentage of metals)	Y		See Document Key		P6-12, P6-14, P6-15			
	22	Provide a description of the geochemical tests which have been (or will be) performed on the ore, host rock, and waste rock to determine their relative acid generation and contaminant leaching potential. Outline methods used (or to be used) and provide test results in an attached report (ie. static test, kinetic tests).	Y		See Document Key		P6-12, P6-14, P6-15			
	23	Provide an estimate of the percentage of sulphide in the mineralization including:	Y		See Document Key		P6-12, P6-14, P6-15			
	a	Pyrite	Y		See Document Key		P6-12, P6-14, P6-15			
	b	Pyrrhotite	Y		See Document Key		P6-12, P6-14, P6-15			
	c	Pyrite / Pyrrhotite mixture	Y		See Document Key		P6-12, P6-14, P6-15			
	d	Arsenopyrite	Y		See Document Key		P6-12, P6-14, P6-15			
	24	Provide a description of the geochemical tests which have been (or will be) performed on quarry or borrow material to determine the relative acid generation and contaminant leaching potential. Outline methods used (or to be used) and provide test results in an attached report (ie. static test, kinetic tests).	Y		See Document Key		P6-12, P6-14, P6-15			
Fisheries	25	The applicant is advised to consult with DFO regarding fish and fish habitat related issues and to visit DFO's website at <a href="http://www.dfo-mpo.gc.ca/habitat/habitat-eng.htm">http://www.dfo-mpo.gc.ca/habitat/habitat-eng.htm</a> . Indicate whether the applicant has consulted with DFO and provide the results of any consultation.	not applicable	TMAC has not consulted with DFO at the time of application						
	26	If applicable, provide baseline data and an evaluation of baseline data describing fish and fish habitat in the project area.	Y		See Document Key		P4-1(2.4, 4.4)			
	27	If applicable, provide a fisheries assessment including:	Y		See Document Key		P4-1(2.5, 4.5)			
	a	Detailed area description (including photographic record);	Y		See Document Key		P4-1(2.5, 4.5)			
	b	Description of fish habitat (including river or lake bottom substrates such as silt, sand, or cobble);	Y		See Document Key		P4-1(2.5, 4.5)			
	c	Presence of sensitive habitats (spawning, migration corridors etc.);	Y		See Document Key		P4-1(2.5, 4.5)			
	d	Description of aquatic and riparian vegetation;	Y		See Document Key		P4-1(2.5, 4.5)			
	e	Fish community and life stage present;	Y		See Document Key		P4-1(2.5, 4.5)			
	f	Depth and width of watercourse;	Y		See Document Key		P4-1(2.5, 4.5)			
	g	Max/min water flows, currents, tides;	Y		See Document Key		P4-1(2.5, 4.5)			
	h	Turbidity and sediment loads (total suspended solids);	Y		See Document Key		P4-1(2.5, 4.5)			
	i	Sport, commercial, subsistence fishery present.	Y		See Document Key		P4-1(2.5, 4.5)			
Studies	28	Provide a list of baseline studies, reports and plans relevant to the application that have been undertaken to date including:	Y		See Document Key		P-3, P-4, P-6			
	a	Geotechnical studies;	Y		See Document Key		P6-13 (s2.1.4, 4.1.2)			
	b	Geochemical studies;	Y		See Document Key		P6-12, P6-14, P6-15			
	c	Water quality studies;	Y		See Document Key		P4-1			
	d	Hydrological and hydrogeological studies;	Y		See Document Key		P6-3			
	e	Traditional use studies;	not applicable	none required for amendment request						
	f	Aquatic studies;	Y		See Document Key		P4-1			
	g	Meteorological studies;	Y		See Document Key		P4-1			

# 6.0 Water Use: Quality, Quantity, Predicted Environmental Impact and Proposed Mitigation Measures

Section Title	Section No.	Information Requirement	Indicate whether Information Requirement is applicable by inserting 'Y' or 'NA'	If 'NA' provide justification	Insert Title, Author and Date of Document where information is provided	Insert electronic file, name of document where information is provided	Insert Section of document where information is provided	If information is not available at the time of application, indicate when the information will be made available	NWB Concordance Assessment	NIRB Guideline Section No.
Water Use	1	Provide a detailed description of all types of water uses including: (See the NWB definition of "use" in the NWB Guide 2: Terminology and Definitions). Categorize water consumption use(s) as either mining/industrial use and/or domestic use.								
	a	Obtain water for domestic purposes	not applicable	amendment request does not include a change in water uses						
	b	Obtain water for industrial purposes	not applicable	amendment request does not include a change in water uses						
		drilling	not applicable	amendment request does not include a change in water uses						
		mill or processing plant	not applicable	amendment request does not include a change in water uses						
		concrete production	not applicable	amendment request does not include a change in water uses						
		explosives manufacture	not applicable	amendment request does not include a change in water uses						
		ice road construction	not applicable	amendment request does not include a change in water uses						
		other: (describe)	not applicable	amendment request does not include a change in water uses						
	c	To cross a water course	Y	See Document Key			P6-1, P6-2, P6-7			
	d	To alter the flow of water, or store water	not applicable	amendment request does not include a change in water uses						
	e	Flood control	not applicable	amendment request does not include a change in water uses						
	f	To divert a watercourse	not applicable	amendment request does not include a change in water uses						
	g	To modify the bed or bank of a watercourse	not applicable	amendment request does not include a change in water uses						
	h	Others:	not applicable	amendment request does not include a change in water uses						
Water Use: Quality and Quantity Water Intake  **Identify uses as either domestic or industrial**	2	Provide the name of the primary water source(s) as well as the name of any alternative water source(s).	not applicable	amendment request does not include a change in water uses						
	3	Provide a description of the source(s) of water and the location of the water source(s) as shown on a map.	not applicable	amendment request does not include a change in water uses						
	4	Indicate the type of water source(s) as lake, river, well, or other type.	not applicable	amendment request does not include a change in water uses						
	5	Provide a description of the quality of the water from the source(s) for each season (summer, fall, winter, spring).	not applicable	amendment request does not include a change in water uses						
	6	Provide the capacity of the water source(s).	not applicable	amendment request does not include a change in water uses						
	7	Provide the acquisition rate in cubic metres per day and cubic metres per year from each water source.	not applicable	amendment request does not include a change in water uses						
	8	Provide a description of the water intake method(s) including the intake facility, the operating capacity of the pump used, the details of any screening to exclude fish, and the distance the pump will be placed from the ordinary high water mark of the watercourse.	not applicable	amendment request does not include a change in water uses						
	9	Provide a description of the general condition of any existing water intake facility. Rate the condition of the facility as satisfactory or unsatisfactory and explain the rating.	not applicable	amendment request does not include a change in water uses						
	10	Indicate whether water is drawn from the source(s) intermittently or continuously and if intermittently indicate during what months it is drawn and for what period it is drawn (days/weeks/months).	not applicable	amendment request does not include a change in water uses						
	11	Indicate the amount of water to be returned to the source.	not applicable	amendment request does not include a change in water uses						
	12	Provide a description of the methods to ensure water returned to any source is of an acceptable quality.	not applicable	amendment request does not include a change in water uses						
	13	Provide a description of any hydrostatic testing programs, including water sources, and treatment/disposal requirements. If applicable, refer to the NWB's SIG for Hydrostatic Testing.	not applicable	amendment request does not include a change in water uses						
	14	Indicate the quantities of water required for ice road construction and provide a description of the methods of ice road construction.	not applicable	amendment request does not include a change in water uses						
	15	Provide a description of any measures to reduce water consumption.	not applicable	amendment request does not include a change in water uses						
Water Storage	16	Provide a description of any water storage facilities including the type (reservoir/pond, storage tank), location, design, and the water storage volume in cubic meters.	not applicable	amendment request does not include a change in water uses						
	17	If the water storage facility is a reservoir, indicate whether the reservoir is lined, the type of liner and when it was or will be installed.	not applicable	amendment request does not include a change in water uses						

# 6.0 Water Use: Quality, Quantity, Predicted Environmental Impact and Proposed Mitigation Measures

Section Title	Section No.	Information Requirement	Indicate whether Information Requirement is applicable by inserting 'Y' or 'NA'	If 'NA' provide justification	Insert Title, Author and Date of Document where information is provided	Insert electronic file name of document where information is provided	Insert Section of document where information is provided	If information is not available at the time of application, indicate when the information will be made available	NWB Concordance Assessment	NIRB Guideline Section No.
	18	Indicate whether a storage reservoir is created in a natural channel. If applicable, provide plan and profile drawings of the reservoir including the size of the drainage basin upstream of the reservoir, topographical plan showing the drainage area boundary, number of hectares flooded, surface area of the reservoir at full capacity, storage capacity, and details of shoreline protection.	not applicable	amendment request does not include a change in water uses						
	19	Provide a plan showing representative cross sections of the reservoir.	not applicable	amendment request does not include a change in water uses						
	20	Provide a description of the general condition of any existing water storage facility and provide an explanation if it is unsatisfactory.	not applicable	amendment request does not include a change in water uses						
Water Distribution	21	Provide a description of water distribution systems (ie. piped water, trucked).	not applicable	amendment request does not include a change in water uses						
	22	Provide a description of the general condition of any existing water distribution system and provide an explanation if it is unsatisfactory.	not applicable	amendment request does not include a change in water uses						
Watercourse Crossings	23	Provide a description of any watercourse crossings including pipelines, bridges, culverts or roads and its purpose.	Y		See Document Key		P6-1, P6-2, P6-7			
	24	Provide a plan of any watercourse crossing showing cross section and elevations	Y		See Document Key		P6-1, P6-2, P6-7			
Watercourse Trainings	25	Provide a description of any watercourse trainings including channel and bank alterations, culverts, spurs, erosion control, and artificial accretion, and its purpose.	not applicable	amendment request does not include a change in water uses						
Flood Control	26	Provide a description of any flood control structures and its purpose.	not applicable	amendment request does not include a change in water uses						
Diversions	27	Provide a description of any diversions including ditches and dikes and its purpose.	Y		See Document Key		P5-3			
Alterations in flow	28	Provide a description of any activities or structures that could alter the flow of a watercourse including dams, spillways, berms, cofferdams, and dikes, and its purpose.	Y		See Document Key		P6-13			
	29	Indicate whether the natural storage capacity or water level of any lake or pond will be altered.	Y		See Document Key		P4-1 (2.4)			
	30	If the alteration involves a dam, provide a plan showing the length, height, cross section and elevations of the dam and the location and preliminary designs of spillways, canals, sluice pipes, and any other outlet work.	not applicable	amendment request does not include a change in water uses						
Dewatering	31	Provide a description of dewatering programs, if planned, including estimated quantities, qualities, dewatering flow rates, methods and schedule of withdrawal, end use or discharge location.	Y		See Document Key		P6-3			
	32	Provide an estimate of the quality and flow of groundwater that will flow into any open pits.	Y		See Document Key		P6-3			
Identification	33	Indicate whether there are any signs identifying past or present water intake, storage, distribution systems and/or waterwork structures presently in the project area.	not applicable	amendment request does not include a change in water uses						
Modifications	34	Indicate whether any changes are planned for the water intake, storage, distribution systems and/or waterwork structures. If applicable, see item 35 of this section.	not applicable	amendment request does not include a change in water uses						
Proposed Water Works	35	For each water work component provide the design plans stamped for construction. Design plans shall consider the following:	not applicable	amendment request does not include a change in water uses						
	a	Name of the water body(s) affected.	not applicable	amendment request does not include a change in water uses						
	b	Site photos, site map, or air photos of the location.	not applicable	amendment request does not include a change in water uses						
	c	Description of the existing condition of the site (see Section 5).	not applicable	amendment request does not include a change in water uses						
	d	Indicate whether any structure will be placed in water on a temporary, seasonal or permanent basis and provide a description of when and how the structure will be removed.	not applicable	amendment request does not include a change in water uses						
	e	The design flood flow in cubic metres per second and its return period for the type of structure proposed.	not applicable	amendment request does not include a change in water uses						
	f	An explanation of the rationale for the selected design flow flood and its return period.	not applicable	amendment request does not include a change in water uses						
	g	Design drawings in plan and profile, drawn to scale, including all relevant dimensions.	not applicable	amendment request does not include a change in water uses						

**6.0 Water Use: Quality, Quantity, Predicted Environmental Impact and Proposed Mitigation Measures**

Section Title	Section No.	Information Requirement	Indicate whether Information Requirement is applicable by inserting 'Y' or 'NA'	If 'NA' provide justification	Insert Title, Author and Date of Document where information is provided	Insert electronic file name of document where information is provided	Insert Section of document where information is provided	If information is not available at the time of application, indicate when the information will be made available	NWB Concordance Assessment	NIRB Guideline Section No.
	h	Details of design parameters including seismic design criteria if applicable.	not applicable	amendment request does not include a change in water uses						
	i	In water work timing restriction for fisheries.	not applicable	amendment request does not include a change in water uses						
	j	Start and completion dates for construction.	not applicable	amendment request does not include a change in water uses						
	k	Construction schedule and sequence taking into account any timing restrictions.	not applicable	amendment request does not include a change in water uses						
	l	Construction methods.	not applicable	amendment request does not include a change in water uses						
	m	Equipment to be used.	not applicable	amendment request does not include a change in water uses						
	n	A description of the source, type, and composition of material used in construction.	not applicable	amendment request does not include a change in water uses						
	o	The quantity of material to be either placed into or removed from the watercourse.	not applicable	amendment request does not include a change in water uses						
	p	Sedimentation and erosion control measures.	not applicable	amendment request does not include a change in water uses						
	q	Construction monitoring plans.	not applicable	amendment request does not include a change in water uses						
	r	Construction quality assurance and quality control measures.	not applicable	amendment request does not include a change in water uses						
	s	Assessment of impacts to fish and fish habitat (see item 44 of this Section).	not applicable	amendment request does not include a change in water uses						
	t	Bank stabilization measures (including the size range of material if applicable).	not applicable	amendment request does not include a change in water uses						
	u	Operation and maintenance plans including instrumentation, monitoring and inspection requirements.	not applicable	amendment request does not include a change in water uses						
	v	Contingency plans.	not applicable	amendment request does not include a change in water uses						
	w	Re-vegetation plans	not applicable	amendment request does not include a change in water uses						
	x	Proposed post construction monitoring (photos taken of the site before construction, during construction, and after construction; photos should be taken from the same reference point for easy comparison)	not applicable	amendment request does not include a change in water uses						
	y	Abandonment and restoration plans (see items 45-49 of Section 3).	not applicable	amendment request does not include a change in water uses						
	36	Final plans and drawings for construction must be stamped by a Professional Engineer licensed to practice in Nunavut. (See Section 7 of the NWB's Guide 4: Completing and Submitting a Water Licence Application for more information regarding design drawings).	Y		See Document Key		P-6			
	37	If geotextile is used or a similar material to prevent the transport of sediment into a watercourse, provide the technical specifications for the proposed material as well as the location, extent and placement method for the material.	not applicable	specifications will be provided with IFC drawings						
	38	If rip rap is used or a similar material for erosion protection, provide information regarding the minimum and maximum sizes of the material and the gradation between those limits. Indicate the quantity to be used and its source.	not applicable	specifications will be provided with IFC drawings						
Predicted Environmental Effects and Proposed mitigation measures	39	Provide a description of the effects of water usage on the source from which water will be drawn including the potential for drawdown.	Y		See Document Key		P4-1 (s 2.2)			
	40	Provide a description of any expected changes in surface water flow or storage including changes downstream of the project.	Y		See Document Key		P4-1 (s 2.2)			
	41	If the cross-section of any watercourse is changed, provide a description of the change and its effect on the flow capacity of the channel.	Y		See Document Key		P4-1 (s 2.2)			
	42	If the course of any channel is changed, provide a description of measures to maintain stream bed and bank stability.	Y		See Document Key		P4-1 (s 2.2)			
	43	Provide a description of measures of preventing surface water from coming into contact with waste and measures of managing surface water that does come into contact with waste (surface water management plan).	Y		See Document Key		P5-3			
	44	Provide a description of measures of preventing groundwater from coming into contact with waste and measures of managing groundwater that does come into contact with waste (groundwater management plan).	Y		See Document Key		P5-3			

**6.0 Water Use: Quality, Quantity, Predicted Environmental Impact and Proposed Mitigation Measures**

Section Title	Section No.	Information Requirement	Indicate whether Information Requirement is applicable by inserting 'Y' or 'NA'	If 'NA' provide justification	Insert Title, Author and Date of Document where information is provided	Insert electronic file name of document where information is provided	Insert Section of document where information is provided	If information is not available at the time of application, indicate when the information will be made available	NWB Concordance Assessment	NIRB Guideline Section No.
Fisheries	45	If applicable, provide a description of any potential impacts to fish and/or fish habitat. (Indirect effects may include project effects, water quality, or aquatic organisms. Direct effects may include degradation or alteration of fish habitat). The applicant is advised to consult with DFO regarding fish and fish habitat related issues and to visit DFO's website at <a href="http://www.dfo-mpo.gc.ca/habitat/habitat-eng.htm">http://www.dfo-mpo.gc.ca/habitat/habitat-eng.htm</a> .	Y		See Document Key		P4-1 (s 2.4)			
	a	Potential effects on fish or fish habitat;	Y		See Document Key		P4-1 (s 2.4)			
	b	The area in square metres to be impacted;	Y		See Document Key		P4-1 (s 2.4)			
	c	Measures to avoid sensitive periods and habitat areas (i.e., spawning beds, migration corridors);	Y		See Document Key		P4-1 (s 2.4)			
	d	Measures to avoid physical impacts on habitat;	Y		See Document Key		P4-1 (s 2.4); P3-1; P5-3			
	e	Measures to maintain flows and fish passage;	Y		See Document Key		P4-1 (s 2.4); P3-1; P5-3			
	f	Measures to avoid sedimentation;	Y		See Document Key		P4-1 (s 2.4); P3-1; P5-3			
	g	Measures to avoid spills;	Y		See Document Key		P4-1 (s 2.4); P3-1; P5-3			
	h	Detailed habitat no-net-loss plan and site restoration plan;	Y		See Document Key		P4-1 (s 2.4)			
Studies	46	Provide a list of studies, reports and plans relevant to the application that have been undertaken to date, including:	Y		See Document Key		P4-1 (s 2.4)			
	a	Options analysis;	Y		See Document Key		P-6			
	b	Water management plan including water balance analysis;	Y		See Document Key		P5-5-3, P6-3, P6-10			
	c	Fisheries assessment;	Y		See Document Key		P4-1 (s 2.4)			
	d	Construction plan and construction schedule for water works;	Y		See Document Key		P6-7, P6-8			
	e	Implementation schedule for construction of works.	Y		See Document Key		P1-3			
	f	Construction quality assurance and quality control plans;	not applicable	Construction Summary Reports submitted annually to the NIRB						
	g	Operation and maintenance plan;	not available	will incorporate terms and conditions of amended water license and Project Certificate				60 days prior to commissioning facility		
	h	Preliminary abandonment and reclamation plans for existing and proposed facilities;	Y		See Document Key		P5-2			
	i	Final abandonment and reclamation plans for facilities to be closed;	not applicable	Interim Closure Plan provided			P5-2			
	j	Monitoring plans (See Section 8).	Y		See Document Key		P-5			



# 7.0 Waste Disposal: Quality, Quantity, Predicted Environmental Impact and Proposed Mitigation Measures

Section Title	Section No.	Information Requirement	Indicate whether Information Requirement is applicable by inserting 'Y' or 'NA'	If 'NA' provide justification	Insert Title, Author and Date of Document where information is provided	Insert electronic file name of document where information is provided	Insert Section of document where information is provided	If information is not available at the time of application, indicate when the information will be made available	NWB Concordance Assessment	NIRB Guideline Section No.
Waste Disposal	1	Provide a detailed description of all types of waste and all forms of waste disposal including: (see the NWB definition of Waste in the NWB <i>Guide 2: Terminology and Definitions</i> )								
	a	Sewage	not applicable	not included in amendment reques						
	b	Grey water	not applicable	not included in amendment reques						
	c	Solid waste	Y		See Document Key		P6-4			
	d	Sludge	not applicable	not included in amendment reques						
	e	Hazardous waste including waste oil	not applicable	not included in amendment reques						
	f	Contaminated soil, snow, ice and/or water	Y		See Document Key		P6-4			
	g	Bulky items/ scap metal	not applicable	not included in amendment reques						
	h	Mill or processing plant waste	Y		See Document Key		P6-13			
	i	Mine water	Y		See Document Key		P6-6			
	j	Dredged material	not applicable	not included in amendment reques						
	k	Discharge from dewatered areas	not applicable	not included in amendment reques						
	l	Other: (describe)	not applicable	not included in amendment reques						
Waste Disposal: Quality and Quantity	2	For each type of waste, provide the composition, chemical characteristics and quantity generated. Also provide the location, rate, timing, frequency and duration of the deposit.	Y		See Document Key					
	3	For each type of waste, provide the proposed methods and processes for collecting, storing, treating and discharging the waste. Indicate the capacity of these facilities.	Y		See Document Key					
	4	Provide a description of any measures to minimize the production of wastes.	Y		See Document Key					
Identification	5	Indicate whether there are signs identifying any past or present wastewater disposal sites, solid waste disposal sites, or any other waste disposal sites presently in the project area.	Y	signage in place under current operations						
Modifications	6	Indicate whether any changes are planned for the wastewater, solid waste, or any other waste facilities. If applicable, see item 7 of this Section.	Y		See Document Key		See Item 7			
Proposed waste facilities	7	For each proposed waste facility provide design plans. The designs shall consider the following:								
	a	Site photos, site map, or air photos of the site.								
	b	Description of the existing condition of the site (see Section 5).								
	c	A description of the types of waste entering the facility (if applicable, provide a description of the source, type, and quantity of the waste):								
	d	The concentration of waste entering the facility:								
	e	The geochemical characterization of waste entering the facility, where applicable (i.e. tailings solids):								
	f	Distance of the facility from watercourses and fish bearing waters.								
	g	All sources of seepage encountered near watercourse and fish bearing waters as well as the volumes (m3/day) and direction of any seepage:								
	h	Existing and proposed drainage modifications.								
	i	Details of retaining structures.								
	j	Level of treatment (primary, secondary or tertiary).								
	k	By products of treatment which may require further treatment, characterization, handling and disposal.								
	l	Capacity and retention time of the facility:								
	m	Identification of final discharge point (last point of control).								
	n	Method and type of discharge (seasonal, annual, continuous including details of all decant, siphon mechanisms etc.								
	o	Estimated rates for discharge.								
	p	Restrictions on discharge.								
	q	Discharge effluent criteria proposed:								
	r	Receiving water quality objectives.								
	s	Capacity of the receiving environment:								
	t	Details regarding direction and path of wastewater flow from the area or infrastructure.								
	u	Design drawings in plan and profile, drawn to scale, including all relevant dimensions.								
			Y		See Document Key		P5-4 (Waste Rock and Ore Management Plan)  P6-4 (Landfill)  P6-6 (Roberts Bay Discharge System)  P6-13 (Tailings Management System)			

# 7.0 Waste Disposal: Quality, Quantity, Predicted Environmental Impact and Proposed Mitigation Measures

Section Title	Section No.	Information Requirement	Indicate whether Information Requirement is applicable by inserting 'Y' or 'NA'	If 'NA' provide justification	Insert Title, Author and Date of Document where information is provided	Insert electronic file name of document where information is provided	Insert Section of document where information is provided	If information is not available at the time of application, indicate when the information will be made available	NWB Concordance Assessment	NIRB Guideline Section No.
	v	Details of design parameters including seismic design if applicable.								
	w	Start and completion dates for construction.								
	x	Construction schedule and sequence taking into account any timing restrictions.								
	y	Construction methods.								
	z	Equipment to be used.								
	aa	A description of the source, type, and composition of the material to be used in construction.								
	bb	Construction monitoring plans.								
	cc	Construction quality assurance and quality control measures.								
	dd	Operation and maintenance plans.								
	ee	Contingency plans.								
	ff	Abandonment and restoration plans (see items 45-49 of Section 3).								
	8	Final plans and drawings for construction must be stamped by a Professional Engineer licensed to practice in Nunavut. (See Section 7 of the NWB's <i>Guide 4: Completing and Submitting a Water Licence Application</i> for more information regarding design drawings).								
	9	Provide an assessment of alternatives for any proposed tailing containment facility.								
	10	Provide a description of the general condition of any existing waste facilities and provide an explanation if it is unsatisfactory.								
Predicted Environmental Effects and Proposed mitigation measures	11	Provide detailed treatment plans for discharges from any tailings containment area, attenuation pond, reclaim pond, sewage disposal area, sumps or dewatered area. Water treatment plans should include estimates of treatment efficiency for each parameter of concern and a description of pH adjustment methods.	Y		See Document Key		P6-6 (Roberts Bay Discharge System)  P6-13 (Tailings Management System)			
	12	Clearly outline proposed discharge criteria, how the criteria were developed, standards to be applied, and how these criteria will be used to prevent ecological effects in the receiving environment.	Y		See Document Key		P4-1 (s 4.0)			
	13	If waste is expected to infiltrate into the ground, provide a description of the sub-surface soil compositions and provide information on groundwater elevations for the project area. Also provide the proximity between the proposed waste disposal system and the groundwater elevation.	Y		See Document Key		P6-3			
	14	Provide a discussion of the consequences of long-term stratification in any pit lakes and associated contingency plans.	not applicable	not included in amendment request						
	15	Provide detailed contingency plans for the treatment of turbid water during dewatering activities and/or increased suspended solids during any rewatering activities.	not applicable	not included in amendment request						
Operations and Maintenance	16	Provide operation and maintenance plans for any tailings containment areas.	not available	will be developed to incorporate terms and conditions of amended water license and Project Certificate				60 days prior to commissioning facility		
	17	If the project includes sewage and/or solid waste disposal, provide an Operations and Maintenance Manual in accordance with the "Guidelines for the Preparation of an Operations and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories, 1996".	not applicable	Plan is already in place under 2AM-DOH1323						
Hazardous Materials	18	Provide a description of the type and quantities of drill additives, mill reagents, petroleum products, chemicals and/or hazardous materials on site. MSDS sheets are not required to be submitted as part of the water licence application.	not applicable	Plan is already in place under 2AM-DOH1323						
	19	Provide details regarding the handling and storage of hazardous or potentially hazardous materials.	not applicable	Plan is already in place under 2AM-DOH1323						
Emergency Response and Spill Contingency	20	Provide designs for the fuel tank farm facilities including a description of the nearest water bodies. Provide an evaluation of impacts and mitigation measures in case of a fuel spill.	not applicable	not included in amendment request						

**7.0 Waste Disposal: Quality, Quantity, Predicted Environmental Impact and Proposed Mitigation Measures**

Section Title	Section No.	Information Requirement	Indicate whether Information Requirement is applicable by inserting 'Y' or 'NA'	If 'NA' provide justification	Insert <u>Title, Author and Date of Document</u> where information is provided	Insert <u>electronic file name of document</u> where information is provided	Insert <u>Section of document</u> where information is provided	If information is not available at the time of application, indicate when the information will be made available	NWB Concordance Assessment	NIRB Guideline Section No.
	21	Provide an Emergency Response and Spill Contingency Plan (ERSCP) that includes mechanisms and processes for addressing potential or actual failure of structures, response equipment and material storage, and programs for providing appropriate training to workers. The plan shall address all licensed facilities.	not applicable	Plan is already in place under 2AM-DOH1323						
	22	Plan(s) shall address phases of the project including construction, operation, and care & maintenance.	not applicable	Plan is already in place under 2AM-DOH1323						
	23	Provide an explanation of how the applicant will ensure project contractors meet the applicant's due diligence standards with respect to oil and hazardous material spill prevention, preparedness, response, and restoration.	not applicable	Plan is already in place under 2AM-DOH1323						
Studies	24	Provide a list of studies, reports and plans relevant to the application that have been undertaken to date including design and management decisions. Studies, reports and plans may include:	Y		See Document Key		P5- 1 to 4, P6-1 to 15, P4-1			
	a	Options analysis.								
	b	Geotechnical and geothermal assessment;								
	c	Water quality modeling;								
	d	Snow drift assessments;								
	e	Permafrost protection;								
	f	Mine waste and water management;								
	g	Landfill management;								
	h	Landfarm management;								
	i	Quarry Management;								
	j	Incineration management;								
	k	Hazardous waste management;								
	l	Operation and maintenance plan;								
	m	Inspection plan (see Section 8);								
	n	Tailings monitoring (see Section 8);								
	o	Mine site water quality monitoring (see Section 8);								
	p	Receiving water quality monitoring (see Section 8);								
	q	Aquatic effects monitoring (see Section 8);								
	r	Geotechnical and structural monitoring (see Section 8);								
	s	Quality assurance and quality control plan (see Section 8);								
	t	Spill contingency and emergency response plans;								
	u	Preliminary abandonment and reclamation plans for existing and proposed facilities;								
	v	Final abandonment and reclamation plans for facilities to be closed;								
	w	Remediation plans for waste disposal infrastructure;								
	x	Human health and ecological risk assessment for establishment of remediation objectives for closure;								
	y	Construction plan and construction schedule for waste management infrastructure;								
	z	Implementation schedule for construction of works, submission of studies and mitigation plans for operations and closure;								

## 8.0 Monitoring

Section Title	Section No.	Information Requirement	Indicate whether Information Requirement is applicable by inserting 'Y' or 'NA'	If 'NA' provide justification	Insert Title, Author and Date of Document where information is provided	Insert electronic file name of document where information is provided	Insert Section of document where information is provided	If information is not available at the time of application, indicate when the information will be made available	NWB Concordance Assessment	NIRB Guideline Section No.
Monitoring	1	Provide a Monitoring Plan including a description of the methods, procedures, standards, and schedules proposed. Monitoring may be required for water use; effluent, surface and/or groundwater water quality, quantity, or flow; ground temperature; ground settlement; etc. The Monitoring Plan must consider the life of the project, temporary closure and permanent closure.	Y		See Document Key		P5-1, P5-2, P5-3, as well as other Plans approved under 2AMDOH1323 already in place			
	2	Indicate who is responsible for sampling including that person's position, contact information and level of training.	Y		See Document Key		P5-1, P5-2, P5-3, as well as other Plans approved under 2AMDOH1323 already in place			
	3	Indicate the name and contact information of the certified laboratory performing the analysis of samples.	Y		See Document Key		P5-1, P5-2, P5-3, as well as other Plans approved under 2AMDOH1323 already in place			
	4	Provide an Inspection Plan including a description of the methods, procedures, standards, and schedules proposed. Inspections may be required for engineered facilities related to the management of water and waste as well as spills. The Inspection Plan must consider the life of the project, temporary closure and permanent closure.	Y		See Document Key		P5-1, P5-2, P5-3, as well as other Plans approved under 2AMDOH1323 already in place			
	5	Provide a summary table of all monitoring commitments that details all monitoring locations. The table should include parameter(s), location, frequency, and mining phase, along with, cross-referencing to sub-documents where detailed information is provided. Where appropriate, a map detailing the location of monitoring sites is to be provided.	Y		See Document Key		P5-1, P5-2, P5-3, as well as other Plans approved under 2AMDOH1323 already in place			
	6	Provide a summary table of the expected quality and quantity of waters, over time in all sumps, monitoring stations, and discharge points, along with i) if applicable, adaptive management criteria to benchmark if mitigation/contingency are to be implemented, ii) if applicable, water quality criteria, and iii) management action.	Y		See Document Key		P5-3, P6-10			
	7	Provide a monitoring plan for incinerator emissions (including, but not limited to, stack testing and annual reporting).	not applicable	Plan already in place under 2AM-DOH1323						
	8	Provide a Quality Assurance/ Quality Control (QA/QC) Plan that addresses both field sampling and laboratory analyses.	not applicable	Plan already in place under 2AM-DOH1323						

## **APPENDIX A: ADDITIONAL SOURCE DOCUMENTS TO ASSIST THE APPLICANT**

This appendix provides a list of reference documents including legislation, guidelines and standards that may be of use to the applicant in preparing the supplemental information.

### **Federal Legislation**

- *Canadian Environmental Protection Act, [1999, [1999, c.33]*
- *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations, [SOR/2008-197]*
- *Environmental Emergency Regulations, [SOR/2003-307]*
- *Fisheries Act, [R.S.C. c. F-14]*
- *Metal Mining Effluent Regulations, [SOR/ 2002-2222]*
- *Navigable Waters Protection Act, [R.S. 1985, c. N-22]*
- *Navigable Waters Bridges Regulations, [C.R.C., c. 1231]*
- *Navigable Waters Works Regulations, [C.R.C., c. 1232]*
- *Nunavut Land Claims Agreement*
- *Nunavut Waters and Nunavut Surface Rights Tribunal Act, [2002, c.10]*
- *Northwest Territories Waters Regulations, [SOR/93/303]*
- *Territorial Lands Act, [R.S. 1985, c. T-7]*
- *Territorial Land Use Regulations, [C.R.C., c. 1524]*
- *Territorial Quarrying Operations, [C.R.C., c. 1527]*
- *Transportation of Dangerous Goods Act, [1992, c.34]*
- *Transportation of Dangerous Goods Regulations, [SOR/2001-286]*

### **Territorial Legislation**

- *Environmental Protection Act (Nunavut), [R.S.N.W.T. 1988, c. E-7]*
- *Used Oil and Waste Fuel Management Regulations, [N.W.T. Reg. 064-2003]*
- *Mine Health and Safety Act, [S.N.W.T 1994, c.25]*
- *Mine Health and Safety Regulations, [R-125-95]*
- *Mine Health and Safety Regulations, amendment, Nu. Reg. 016-2003*
- *Safety Act, [R.S.N.W.T. 1988, c. S-1]*
- *Work Site Hazardous Materials Information System Regulations, [R.R.N.W.T. 1990 c. S-2]*
- *Transportation of Dangerous Goods Act, [R.S.N.W.T. 1988, c. 81 (Supp.)]*
- *Transportation of Dangerous Goods Regulations, [1991, N.W.T. Reg. 095-91]*
- *Public Health Act, [R.S.N.W.T. (Nu.) 1988 c. P.12]*

## **Guidelines and Policies**

- CCME – *Environmental Code of Practice for Aboveground and Underground Storage Tank Systems containing Petroleum and Allied Petroleum Products (2003);*
- CCME – *Canadian Environmental Quality Guidelines Guidelines (CEQG) and Canadian Water Quality Guidelines for the Protection of Aquatic Life;*
- CCME – *Canada-Wide Standards for Dioxins and Furans (2001);*
- CCME – *Canada-Wide Standards for Mercury Emissions (2000);*
- DFO – *Freshwater Intake End-of-Pipe Fish Screen Guideline (1995);*
- DFO – *Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters (1998);*
- DFO – *Policy for the Management of Fish Habitat (2001);*
- DFO – *Operational Statements;*

- DFO – *Other documents are available from the DFO's website at <http://www.dfo-mpo.gc.ca/habitat/habitat-eng.htm>;*
- EC – *Guidelines for the Preparation of Hazardous Material Spill Contingency Plans (1990);*
- EC – *Metal Mining Guidance Document for Aquatic Effects Monitoring (2002);*
- EC – *Guidelines for the Assessment of Alternatives for Tailings Storage for Metal Mining Projects Proposing to use Natural, Fish-bearing Water Bodies as Tailings Impoundment Areas (Draft July 4, 2008);*
- GN – *Spill Contingency Planning and Spill Reporting in Nunavut. A Guide to the New Regulations.*
- GN – *Environmental Guideline for Contaminated Site Remediation (2002);*
- GN – *Environmental Guideline for General Management of Hazardous Waste in Nunavut (2002);*
- GN - *Environmental Guideline for Ozone Depleting Substances (2002);*
- GN - *Environmental Guideline for Waste Antifreeze (2002);*
- GN - *Environmental Guideline for Waste Asbestos (2002);*
- GN - *Environmental Guideline for Waste Batteries (2002);*
- GN - *Environmental Guideline for Waste Paint (2002);*
- GN - *Environmental Guideline for Waste Solvent (2002);*
- GN - *Guideline for the Management of Waste Lead and Lead Paint (2001);*
- GN - *Municipal Solid Wastes Suitable for Open Burning;*
- GN - *Disposal Guidelines for Fluorescent Lamp Tubes;*
- GN – *Occupational Health & Safety Guidelines (2006);*

- GNWT - *Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories*, (1992)
- GNWT – *A Field Guide to Ice Construction Safety* (2007);
- *Guidelines for the Preparation of an Operations and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories* , Duong and Kent, 1996
- INAC - *Mine Site Reclamation Policy for Nunavut* (2002);
- INAC – *Guidelines for Spill Contingency Planning* (2007);
- INAC - *Quality Assurance (QA), Quality Control (QC) Guidelines for Use by Class "B" Licensees in Collecting Representative Water Samples in the Field and for Submission of a QA/QC Plan* (1996);
- INAC - *Quality Assurance (QA), Quality Control (QC) Guidelines for Use by Class "A" Licensees in meeting SNP requirements and for submission of a QA/QC Plan* (1996);
- INAC - *Mine Site Reclamation Guidelines for the Northwest Territories* (2007);
- INAC – *A Policy Respecting the Prohibition of Bulk Water Removal from Major River Basins in Nunavut* (2003);
- The Mining Association of Canada “*A Guide to the Management of Tailings Facilities*” (1998), (Referenced within the guidelines as GMTF);
- Mining Association of Canada, "*Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities*"
- The proponent where applicable should consider the application of the Canadian Dam Association “*Dam Safety Guidelines*” (January 1999) in the design, construction, operation, monitoring, decommission and closure of dam infrastructure. (Referenced within the guidelines as CDA);
- *Workplace Hazardous Materials Information System* (WHMIS);



The NWB maintains a folder on its FTP site containing electronic copies of reference documents. Federal legislation may be found on the Department of Justice Canada website at <http://laws.justice.gc.ca/>. Territorial Legislation may be found on the Canadian Legal Information Institute's website at <http://www.canlii.org/>. The applicant is encouraged to consult with government agencies on technical issues and to obtain the most up to date copy of reference documents.

It is the applicant's responsibility to ensure that all relevant standards and guidelines are considered in the water licence application and to incorporate proper footnotes and references.

## APPENDIX B: COMMONLY USED ACRONYMS

AA	Authorizing Agency
ABA	Acid Base Accounting
AMD	Acid Mine Drainage
AP	Acid Potential
A&R	Abandonment and Restoration
ARD	Acid Rock Drainage
ANFO	Ammonium Nitrate and Fuel Oil
BOD	Biological Oxygen Demand
BTEX	Benzene, Toluene, Ethyl-benzene and Xylene
CBOD	Carbonaceous Biological Oxygen Demand
CEA	Cumulative Environmental Assessment
CCME	Canadian Council Ministry of the Environment
CFU	Colony Forming Units
COD	Chemical Oxygen Demand
CWQS	Canadian Water Quality Standards
DFO	Department of Fisheries and Oceans
DIO	Designated Inuit Organization
DO	Dissolved Oxygen
DSG	Dam Safety Guidelines
DSI	Dam Safety Inspection
DSR	Dam Safety Review
EC	Environment Canada
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EPP	Emergency Preparedness Plan
ERSCP	Emergency Response Spill Contingency Plan
GN-DoE	Government Nunavut – Department of Environment
GN-CGS	Government Nunavut – Department of Community Government Service
GN-CLEY	Government of Nunavut - Department of Culture, Language, Elders and Youth
HDPE	High Density Polyethylene
FTP	File Transfer Protocol
IIBA	Inuit Impact Benefit Agreement
INAC	Indian and Northern Affairs Canada (also known as DIAND)
IOL	Inuit Owned Lands
IQ	Inuit Qaujimajatuqangit
IR	Information Request
LPA	Local Project Area
MSDS	Material Safety Data Sheet
MAC	Maximum Acceptable Concentration
MCE	Maximum Credible Earthquake
MDE	Maximum Design Earthquake
MMER	Metal Mining Effluent Regulations
NLCA	Nunavut Land Claims Agreement

NP	Neutralization Potential
NNP	Net Neutralization Potential
NPR	Neutralization Potential Ratio
NIRB	Nunavut Impact Review Board
NLCA	Nunavut Land Claims Agreement
NPC	Nunavut Planning Commission
NSA	Nunavut Settlement Area
NTI	Nunavut Tunngavik Incorporated
NTU	Nephelometric Turbidity Unit
NTWR	Northwest Territories Waters Regulations
NWB	Nunavut Water Board
NWNSRTA	Nunavut Waters Nunavut Surface Rights Tribunal Act
NWPP	Navigable Waters Protection Program
O&M	Operations and Maintenance
PAH	Polycyclic Aromatic Hydrocarbons
PC	Project Certificate
PCB	Poly-Chlorinated Biphenyl
PMF	Probable Maximum Flood
PMP	Probable Maximum Precipitation
POP	Persistent Organic Pollutant
PSIR	Project Specific Information Requirement
PVC	Polyvinyl Chloride
QA	Quality Assurance
QC	Quality Control
RBC	Rotating Biological Contactor
RPA	Regional Project Area
SIG	Supplemental Information Guidelines
SS	Suspended Solids
TDS	Total Dissolved Solids
TKN	Total Kjeldahl Nitrogen
TOC	Total Organic Carbon
TOD	Total Oxygen Demand
TS	Total Solids
TSP	Total Suspended Particulates
TSS	Total Suspended Solids
TK	Traditional Knowledge
UTM	Universal Transverse Mercator
UV	Ultraviolet Light
VOC	Volatile Organic Compound
VEC	Valued Ecosystem Component
WHMIS	Workplace Hazardous Material Information System

**Package 3**  
**NIRB and NWB Application Documents**

**P3-3 NPC Conformity Determination**



From: Sharleen Hamm  
Sent: June 4, 2015 10:58 AM  
To: Brian Aglukark (aglukark@nunavut.ca)  
Subject: RE: Doris North Project, Kitikmeot Region (2AM-DOH1323, Project Certificate 003, NIRB File # 05MN047)

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Hi Brian,

I'm following up on the email and our subsequent phone conversation on May 14. Based on that conversation, I understand that you have provided a response to the NIRB, on which TMAC should have been cc'd. When we chatted, you advised that you would confirm and follow-up with me by the end of the day on May 14, yet have not received a response.

Are you able to forward a copy of your communication to the NIRB? We'd like to have that for our records and inclusion in our impending submission to the NIRB and the NWB.

Feel free to call to discuss further, as needed.

Kind regards,  
Sharleen

Sharleen Hamm  
604.996.1110

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From: John Roberts  
Sent: May 8, 2015 11:20 AM  
To: Brian Aglukark (aglukark@nunavut.ca)  
Cc: Sharleen Hamm  
Subject: Doris North Project, Kitikmeot Region (2AM-DOH1323, Project Certificate 003, NIRB File # 05MN047)

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Mr. Aglukark,

TMAC Resources Inc. is planning to submit an updated application the NWB and the NIRB to amend the water licence (2AM-DOH1323) and project certificate (#003, NIRB File # 05MN047) for the Doris North Project in the Kitikmeot Region. The project is located in the following general geographic area:

Project Extents

Latitude	Longitude
68° 11' 05" N	106° 38' 58" W
68° 10' 43" N	106° 36' 31" W
68° 06' 34" N	106° 32' 22" W
68° 08' 07" N	106° 37' 44" W

Camp

Latitude

Longitude

68° 08' 07" N

106° 36' 52.6" W

It is our understanding that a conformity decision is not required for this project. Please review and confirm this understanding.

Thank you for your help.

John

M. John Roberts

Vice President, Environmental Affairs

TMAC Resources Inc.

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"Building Canada's Next Gold Mining District"

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