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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No.: **8BC-TAD0811**

April 2, 2008

Director of Engineering Services
City of Iqaluit
P.O. Box 460
Iqaluit, Nunavut
X0A 0H0

RE: NWB LICENCE No. 8BC-TAD0811

Dear Sir:

Please find attached Licence No. **8BC-TAD0811** issued to the City of Iqaluit by the Nunavut Water Board **Motion #: 2008-01-07** pursuant to its authority under Article 13 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*. The terms and conditions of the attached Licence related to water use and waste disposal are an integral part of this approval.

If the Licensee contemplates the renewal of this Licence, it is the responsibility of the Licensee to apply to the NWB for its renewal. The past performance of the Licensee, new documentation and information, and issues raised during a public hearing, if the NWB is required to hold one, will be used to determine the terms and conditions of the Licence renewal. Note that if the Licence expires before the NWB issues a new one, then water use and waste disposal must cease, or the Licensee will be in contravention of the Nunavut Land Claims Agreement. However, the expiry or cancellation of a licence does not relieve the holder from any obligations imposed by the licence. The NWB recommends that an application for the renewal of this Licence be filed at least three months prior to the Licence expiry date.

If the Licensee contemplates or requires an amendment to this licence, the NWB may decide, in the public interest, to hold a public hearing. The Licensee should submit applications for amendment as soon as possible to give the NWB sufficient time to go through the amendment process. The process and timing may vary depending on the scope of the amendment, however a minimum of thirty (30) days is required from time of acceptance by the NWB. It is the responsibility of the Licensee to ensure that all application materials have been received and

acknowledged by the Manager of Licensing.

Sincerely,

A handwritten signature in dark ink, appearing to read 'T. Kabloona', with a long horizontal flourish extending to the right.

Thomas Kabloona
A/Chief Executive Officer

TK/dh/pb

Enclosure: Licence No. **8BC-TAD0811**

Cc: Qikiqtani Distribution List



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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

DECISION

LICENCE NUMBER: 8BC-TAD0811

This is the decision of the Nunavut Water Board (NWB) with respect to an application dated May 5, 2007 for a new Licence, made by:

CITY OF IQALUIT

to allow for access road construction, water course crossings and quarrying operations associated with the Trail Area Deposit, located approximately 1.3 kilometres northwest of Upper Base, on the outskirts of Iqaluit, Qikiqtani Region, Nunavut (general latitude 63°48'50" N and general longitude 68°30'48" W).

DECISION

After having been satisfied that no applicable Land Use Plan applied, and that the application could proceed following the screening of the proposed undertaking by the Nunavut Impact Review Board (Screening Decision August 11, 2006; NIRB Ref. # 06EN048) in accordance with the *Nunavut Land Claim Agreement* (NLCA), the NWB decided that the application could proceed through the regulatory process. In accordance with S.55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA) and Article 13 of the *NLCA*, public notice of the application was given and interested persons were invited to make representations to the NWB.

After reviewing the submission of the Applicant and representations made by interested persons, the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the *NLCA* and of the *NWNSRTA*, decided to waive the requirement to hold a public hearing and determined that:

Licence Number 8BC-TAD0811 be issued subject to the terms and conditions contained therein. (Motion #: 2008-01-07)

SIGNED this 2nd day of April 2008 at Gjoa Haven, NU.

Thomas Kabloona
A/Chief Executive Officer

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I. INTRODUCTION

On May 5, 2007, the City of Iqaluit filed an Application for a Water Licence with the NWB, to allow for access road construction, water course crossings and quarrying operations associated with the Trail Area Deposit, located approximately 1.3 kilometres northwest of Upper Base, on the outskirts of Iqaluit, Qikiqtani Region, Nunavut (general latitude 63°48'50" N and general longitude 68°30'48" W).

II. PROCEDURAL HISTORY

The Application for Water Licence filed with the Nunavut Water Board by the City of Iqaluit was sent to the Interested Parties on May 14, 2007, with a deadline for comments of June 14, 2007. Comments were received from Indian and Northern Affairs Canada (INAC), Environment Canada, the Department of Fisheries and Oceans (DFO), and the Department of the Environment-Government of Nunavut (DOE-GN), prior to the deadline.

The Licensee is directed to the written submissions received during the public review period for this Application for renewal, which can be found on the NWB ftp site at the following url: <http://nunavutwaterboard.org/ftp/8BC-CONSTRUCTION/8BC-TAD/Comments & Intervenors>.

The Licensee is also reminded that compliance with the terms and conditions of this Licence does not absolve the Licensee from the responsibility for compliance with the requirements of all other applicable Federal, Territorial and Municipal legislation.

III. GENERAL CONSIDERATIONS

A. Term of the Licence

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* S. 45, the NWB may issue a licence for a term not exceeding twenty-five years. The NWB believes that a term of approximately three (3) years is appropriate. The licence term will allow the Licensee to properly carry out the terms and conditions of the licence, to the satisfaction of the NWB.

B. Water Use

The Licensee has stated that no water use will be required during the term of this Licence, although three (3) watercourse crossings will be required. The Licence contains a requirement that a Trail Area Deposit Site Water Management Plan for activities associated with the Trail Area Deposit and Access Road, be developed within ninety (90) days of the issuance of this Licence, which shall address comments received by the Parties during the NWB review process.

Based upon the stated requirements of the Licensee, the Board has set the terms and conditions in the water licence, which govern water usage.

C. Annual Report

The requirements imposed on the Licensee in this licence are for the purpose of ensuring that the NWB has an accurate annual update of water use and depositions of waste during a calendar year. This information is maintained on the public registry and is available to interested persons upon request. The requirements of this Annual Report can be found in Part B, Item 1. A standard form for annual reporting under Part B, Item 1, can be downloaded from the NWB ftp site at <http://nunavutwaterboard.org/ftp/> in the administration folder.

D. Spill Contingency Planning

The Board generally requires that all Licensees prepare a comprehensive Spill Contingency Plan to establish a state of readiness to ensure a prompt and effective response to possible spills or system failure events. The site-specific spill contingency plan will assist the Licensee in responding to emergencies such that the impacts to water in particular and the environment and public health in general are minimized. The Licence contains a requirement that a Spill Contingency Plan for construction activities associated with the Trail Area Deposit Access Road be developed within ninety (90) days of the issuance of this Licence, which shall address comments received by the Parties during the NWB review process.

E. Abandonment and Restoration (A&R)

To ensure that all facilities are reclaimed in an appropriate manner upon abandonment, the NWB requires Licensees to prepare and submit an Abandonment and Restoration Plan, at least six (6) months prior to abandoning the Trail Area Deposit Access Road, and any associated quarries. Other conditions for restoration have been included under Part I of this Water Licence.

LICENCE 8BC-TAD0811

Pursuant to the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*, the Nunavut Water Board, hereinafter referred to as the Board, hereby grants to

CITY OF IQALUIT

(Licensee)

Of

PO BOX 460, IQALUIT, NU X0A 0H0

(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water for a period subject to restrictions and conditions contained within this licence:

8BC-TAD0811

Licence Number

NUNAVUT 05

Water Management Area

TRAIL AREA DEPOSIT, CITY OF IQALUIT, QIKIQTANI REGION, NU

Location

**WATER USE AND WASTE DISPOSAL ASSOCIATED WITH ACCESS ROAD
CONSTRUCTION AND QUARRYING ACTIVITIES**

Purpose

INDUSTRIAL – TYPE “B”

Classification of Undertaking

N/A

Quantity of Water Not to Exceed

APRIL 2, 2008

Date of Licence

MARCH 31, 2011

Expiry Date of Licence

Dated this 2nd day of April 2008 at Gjoa Haven, NU.



Thomas Kabloona
A/Chief Executive Officer

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. Scope

This Licence allows for access road construction, water course crossings and quarrying operations associated with the Trail Area Deposit, located approximately 1.3 kilometres northwest of Upper Base, on the outskirts of Iqaluit, Qikiqtani Region, Nunavut (general latitude 63°48'50" N and general longitude 68°30'48" W).

- a. This Licence is issued subject to the conditions contained herein with respect to the taking of water and the depositing of waste of any type in any waters or in any place under any conditions where such waste or any other waste that results from the deposits of such waste may enter any waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the Nunavut Waters and Nunavut Surface Rights Tribunal Act, or other statutes imposing more stringent conditions relating to the quantity or type of waste that may be so deposited or under which any such waste may be so deposited, this Licence shall be deemed, upon promulgation of such Regulations, to be subject to such requirements; and;
- b. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

2. Definitions

In this Licence: 8BC-TAD0811

“Act” means the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*

“Analyst” means an Analyst designated by the Minister under Section 85 (1) of the *Act*;

“Appurtenant undertaking” means an undertaking in relation to which a use of waters or a deposit of waste is permitted by a licence issued by the Board;

“Board” means the Nunavut Water Board established under the *Nunavut Land Claims Agreement*;

“Chief Administrative Officer” means the Executive Director of the Nunavut Water Board;

“Engineer” means a professional engineer registered to practice in Nunavut in accordance with the Engineering, Geological and Geophysical Act (Nunavut) S.N.W.T. 1998, c.38, s.5;

“Hazardous waste” means waste classified as “hazardous” by Nunavut Territorial or Federal Legislation, or as “dangerous goods” under the *Transportation of Dangerous Goods Act*;

“Inspector” means an Inspector designated by the Minister under Section 85 (1) of the *Act*;

“Infrastructure” means all construction necessary for granular extraction, such as watercourse crossings, piping, sewage and water systems, reservoirs, and roads;

“Licensee” means the individual or organization to which Licence 8BC-TAD0811 Type “B” is issued or assigned;

“Maximum Average Concentration” means the arithmetic means of any four consecutive analytical results submitted to the Board in accordance with the sampling and analysis requirements specified in the “Monitoring Program”;

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

“Monitoring Program” means a program established to collect data on surface water and groundwater quality to assess impacts to the environment of an appurtenant undertaking;

“Nunavut Land Claims Agreement” (NLCA) means the “*Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*,” including its preamble and schedules, and any amendments to that agreement made pursuant to it;

“Solid Waste” means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operation, and from community activities, but not including Hazardous Waste;

“Waste” means waste as defined in Section 85 (1) of the *Act*;

3. Enforcement

- a. Failure to comply with this Licence will be a violation of the *Act*, subjecting the Licensee to the enforcement measures and the penalties provided for in the *Act*;

- b. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*; and
- c. For the purpose of enforcing this Licence and with respect to the use of water and deposit or discharge of waste by the licensee, Inspectors appointed under the *Act*, hold all powers, privileges and protections that are conferred upon them by the *Act* or by other applicable law.

PART B: GENERAL CONDITIONS

1. The Licensee shall file an Annual Report on the appurtenant undertaking with the Board no later than March 31st of the year following the calendar year being reported, which shall contain the following information:
 - a. Tabular summaries for all data and information generated under the “Monitoring Program”;
 - b. An analysis of data collected during the “Monitoring Program” and a brief description of any future studies planned by the Licensee;
 - c. A summary of any abandonment and restoration work undertaken during the year and an outline of any work anticipated for the next year, presented with photographic records of site conditions before, during and after completion of operations;
 - d. A summary of the geochemical and geophysical assessment carried out on construction materials under Part D, Item 1;
 - e. A summary of any studies requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned;
 - f. A list of unauthorized discharges and summary of follow-up actions taken;
 - g. If applicable, a description of any trenches and sediment management ponds excavated, including but not limited to the following: GPS coordinates, dimensions, depth below active layer, and secondary containment features;
 - h. A public consultation/participation report describing consultation with local organizations and the residents of the nearby communities;
 - i. A brief summary of work done to address concerns or deficiencies listed in the inspection reports and/or compliance reports prepared by an Inspector;
 - j. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence; and
 - k. Any other details on water use or waste disposal requested by the Board by November 1st of the year being reported.
2. The Licensee shall comply with the “Monitoring Program” described in this Licence, and any amendments to the “Monitoring Program” as may be made from time to time, pursuant to the conditions of this Licence.
3. The Monitoring Program” and compliance dates specified in this Licence may be

modified at the discretion of the Board.

4. The Licensee shall, within ninety (90) days after the first visit by the Inspector following issuance of this Licence, post the necessary signs to identify the stations of the “Monitoring Program”, to the satisfaction of the Inspector. All signage postings shall be in the Official Languages of Nunavut.
5. The Licensee shall immediately report to the 24-Hour Spill Report Line (867-920-8130) any spills of Waste, which are reported to, or observed by the Licensee, within the areas of the activities describe in the scope of the Licence and the Application submitted to the NWB, May 4, 2007.
6. Licensee shall notify the NWB of any changes in operating plans or conditions associated with this project at least thirty (30) days prior to any such change.
7. The Licensee shall maintain a copy of this Licence at the site of operations at all times. Any communication with respect to this Licence shall be made in writing to the attention of:
 - (i) **Manager of Licensing**
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
Telephone: (867) 360-6338
Fax: (867) 360-6369
Email: licensing@nunavutwaterboard.org
 - (ii) **Inspector Contact:**
Water Resources Officer
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4298
Fax: (867) 979-6445
8. The Licensee shall submit one paper copy and one electronic copy of all reports, studies, and plans to the Board. Reports or studies submitted to the Board by the Licensee shall include a detailed executive summary in Inuktitut.
9. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the Board is received and acknowledged by the Manager of Licensing.
10. The Licensee shall, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted, cannot be undertaken without subsequent

written Board approval and direction. The Board may alter or modify a Plan if necessary to achieve the legislative objectives and will notify the Licensee in writing of acceptance, rejection or alteration of the Plan.

11. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
12. Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this Licence, and any additional terms and condition imposed upon approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence should be contemplated in the development of a Plan where appropriate.
13. This Licence is not assignable except as provided in Section 44 of the *Act*.

PART C: CONDITIONS APPLYING TO PROTECTION OF WATER

1. The Licensee shall operate and maintain all materials and equipment used for the purpose of site preparation and project completion, in a manner that prevents any deleterious substance from entering the water.
2. The Licensee shall conduct activities such that any stockpiled materials are stored and stabilized away from the water, that vehicle and equipment re-fuelling and maintenance is conducted away from the water, and that any part of equipment entering the water shall be free of fluid leaks and externally cleaned/degreased to prevent any deleterious substance from entering the water.
3. The Licensee shall ensure that all in-stream work for the drainage course crossings illustrated on the "*Proposed Road to Gravel Source Site Plan* (Trow Associates, 2007; DRG SP1) is completed in the dry, in as much as is practically attainable. In addition:
 - a. Existing stream flows shall be maintained downstream of the de-watered work area without interruption, during all stages of the work;
 - b. Flow dissipaters and/or filter bags, or equivalent, shall be placed at water discharge points to prevent erosion and sediment release;
 - c. Sediment laden dewatering discharge shall be pumped to a settling basin well away from the watercourse and allowed to settle and/or filter through the riparian vegetation before re-entering the watercourse downstream of the construction area; and
 - d. The work area shall be stabilized against the impacts of high flow events at the end of each workday.

4. The Licensee shall implement sediment and erosion control measures prior to and maintained during the work phases, to prevent entry of sediment into the water or the movement of re-suspended sediment.
5. The Licensee shall visually monitor sediment control fencing and/or silt curtains for effectiveness on a daily basis during construction activities.
6. The Licensee shall stabilize all disturbed areas upon completion of work and restored to a pre-disturbed state or better. Sediment and erosion control measures should be left in place and maintained until all disturbed areas have been stabilized.
7. The Licensee shall submit to the Board for approval, within ninety (90) days of issuance of this Licence, a Trail Area Deposit Site Water Management Plan for activities associated with the granular source and the Trail Area Deposit Access Road. The Licensee shall, in the development of the Plan, refer to comments submitted by interested parties as part of the review of the Application.

PART D: CONDITIONS APPLYING TO THE UNDERTAKING

1. The Licensee shall only use fill material for construction that is from an approved source and shall provide evidence that it is free of contaminants by carrying out a comprehensive assessment of materials suitability, including geochemical and physical characterization. This assessment should provide the necessary information to verify that non-acid generating and non-metals leaching materials have been selected for construction, allowing an evaluation of the qualitative and quantitative effects upon water. The assessment results, complete with discussion shall be reported as an appendix within the Annual Report as required under Part B, Item 1.
2. The Licensee shall minimize disturbance to terrain, permafrost and drainage during movement of contractor's equipment and personnel around the site during construction activities.
3. The Licensee shall conduct all activities in a manner as to minimize impacts on surface drainage and the Licensee shall immediately undertake any corrective measures in the event of any impacts on surface drainage
4. The Licensee shall stabilize, landscaped as necessary and implement suitable erosion control measures at all sites, to minimize sediment deposition into watercourses located on or adjacent to the site.
5. With respect to access road, pad construction or other earthworks, the deposition of debris or sediment into any water body is prohibited. These materials shall be disposed of a distance of at least thirty (30) metres from the ordinary high water mark of any water

body in a manner such that they cannot enter the water.

6. The Licensee shall monitor all activities for signs of erosion and shall implement and maintain sediment and erosion control measures prior to the undertaking to prevent entry of sediment into any water body.
7. The Licensee shall conduct daily visual inspections for all construction activity during spring freshet and during and after remarkable rainfall events with sampling of runoff/seepage where turbidity is evident.
8. The Licensee shall not deposit any waste in any body of water, or on the banks thereof, which may impair the quality, quantity, or flow of water.
9. All surface runoff during the construction of any facilities, subject to Part I, Item 4, where flow may directly or indirectly enter a water body, shall not exceed the following effluent quality limits unless otherwise approved by the Board in writing:

Parameter	Maximum Average Concentration (mg/L)	Maximum Concentration of Any Grab Sample (mg/L)
Total Suspended Solids	50.0	100.0

10. Discharge from the Trail Area Deposit Quarry at Monitoring Program Station TAD-3, where flow may directly or indirectly enter a water body, is not to exceed the following effluent quality limits:

Parameter	Maximum Average Concentration (mg/L)	Maximum Concentration of Any Grab Sample (mg/L)
Total Arsenic	0.5	1.00
Total Copper	0.30	0.60
Total Lead	0.20	0.40
Total Nickel	0.50	1.00
Total Zinc	0.50	1.00
Total Suspended Solids	15.0	30.0
Oil and Grease	no visible sheen	
pH	6.0 to 9.5	

11. The Licensee shall provide to the Board, within ninety (90) days of the completion of the approved construction activities, a Construction Report, which shall contain the following information:

- a. A list of any unauthorized discharges of waste, as defined in s.4 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, into water and a summary of follow-up actions taken;
- b. A summary of the work undertaken to complete the project;
- c. A tabular summary of all information generated during sediment monitoring activities; and
- d. A digital photographic record of construction activities.

PART E: CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURES AND OPERATIONS

- 1. The Licensee shall conduct all activities in a manner as to minimize impacts on surface drainage and the Licensee shall immediately undertake any corrective measures in the event of any impacts on surface drainage.
- 2. The deposition of debris or sediment into any water body is prohibited. These materials shall be disposed of at least thirty (30) metres above the ordinary high water mark of any water body in a manner as to prevent erosion and sedimentation of any surrounding water body.

PART F: CONDITIONS APPLYING TO MODIFICATIONS

- 1. The Licensee may, without written consent from the Board, carry out Modifications to the Trail Area Deposit Access Road, provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
 - a. the Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
 - b. such Modifications do not place the Licensee in contravention of the Licence or the *Act*;
 - c. the Board has not, during the sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
 - d. the Board has not rejected the proposed Modifications.
- 2. Modifications for which all of the conditions referred to in Part F, Item 1 have not been met can be carried out only with the written approval from the Board.
- 3. The Licensee shall provide as-built plans and drawings of the Modifications referred to in this Licence within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.

PART G: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

1. The Licensee shall, within sixty (60) days of issuance of this licence, submit to the Board for approval, a project specific Spill Contingency Plan prepared in accordance with the document “*Contingency Planning and Spill Reporting in Nunavut: A Guide to the New Regulations.*”
2. The Licensee shall review the Plan referred to in this Part annually and as required by changes in operation and/or technology and modify the Plan accordingly. Revisions to the Plan are to be submitted in the form of an Addendum to be included with the Annual Report.
3. The Licensee shall prevent any chemicals, petroleum products or wastes associated with the project from entering water unless otherwise authorized under this licence. All fuel caches and equipment-refueling areas shall be located a minimum of thirty (30) metres above the ordinary high water mark of any adjacent water body and inspected on a regular basis. The Licensee is encouraged to use some form of secondary containment on fuel and chemical storage facilities associated with this undertaking.
4. The Licensee shall conduct any equipment maintenance and servicing only in designated areas and shall implement special procedures (such as the use of drip pans) to manage fluids, waste and contain potential spills.
5. If during the term of this Licence, an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, the Licensee shall:
 - a. Employ measures to minimize the unauthorized discharge of waste, and to mitigate the effects of any such spill as may occur;
 - b. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the INAC Water Resources Inspector at (867) 975-4295; and
 - c. Submit to the INAC Water Resources Inspector on each occurrence, a detailed report including the GPS location, no later than thirty (30) days after initially reporting the event.

PART H: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION

1. The Licensee shall implement the approved “Abandonment and Restoration Plan, Trail Area Deposit; February-07”.

2. The Licensee shall review the Plan referred to in this Part annually and as required by changes in operation and/or technology and modify the Plan accordingly. Revisions to the Plan are to be submitted in the form of an Addendum to be included with the Annual Report.
3. Licensee shall submit to the Board, for approval in writing, a *Final Abandonment and Restoration Plan* at least six (6) months prior to abandoning any appurtenant undertaking permitted under this Licence, or upon submission of the final design drawings for the construction of new facilities to replace existing ones. Where applicable, the Plan shall include information on the following:
 - a. a description of all facilities permitted under the Licence;
 - b. water treatment and waste disposal sites and facilities;
 - c. petroleum and chemical storage areas;
 - d. any site affected by waste spills;
 - e. leachate prevention;
 - f. maps delineating all disturbed areas, and site facilities;
 - g. proposed final slope grades of the excavation sites;
 - h. consideration of altered drainage patterns;
 - i. type and source of cover materials;
 - j. future area use;
 - k. hazardous wastes;
 - l. a proposal identifying measures by which restoration costs will be financed by the Licensee upon abandonment; and
 - m. an implementation schedule
4. The Licensee shall, upon completion of work, stabilize and re-vegetated as required any areas disturbed as a result of the undertaking and restore as practically as possible, to a pre-disturbed state.
5. The Licensee shall carry out progressive reclamation of any components of the project no longer required for the Licensee's operations in accordance with the "Environmental Guidelines for Pits and Quarries (INAC)".

PART I: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Licensee shall undertake monitoring at the following locations:

Monitoring Program Station Number	DFO/Trow Culvert location identifier*	Description
TAD-1	1+485	Up-Stream of the watercourse crossing illustrated in “ <i>Proposed Road to Gravel Source Site Plan</i> (Trow Associates, 2007; DRG SP1) provided with the Application
TAD-1a		Down-Stream of the watercourse crossing illustrated in “ <i>Proposed Road to Gravel Source Site Plan</i> (Trow Associates, 2007; DRG SP1) provided with the Application
TAD-2	1+120	Up-Stream of the watercourse crossing
TAD-2a		Down-Stream of the watercourse crossing
TAD-3	0+800	Up-Stream of the watercourse crossing
TAD-3a		Down-Stream of the watercourse crossing
TAD-4	0+680	Up-Stream of the watercourse crossing
TAD-4a		Down-Stream of the watercourse crossing
TAD-5	0+285.7	Up-Stream of the watercourse crossing
TAD-5a		Down-Stream of the watercourse crossing
TAD-6		Runoff contact water from within the quarry operations prior to release to the environment

* Locations derived from DFO follow-up email to Crystal Jones, City of Iqaluit, re: Watercrossings, Road to Trail Area Deposit, City of Iqaluit, October 29, 2007.

2. The Licensee shall locate and confirm the Monitoring Program Stations related to the water crossings identified in Item 1, providing GPS co-ordinates in degrees, minutes and seconds of latitude and longitude. These stations are to be included on a topographical location map with an appropriate scale, providing watercourse drainage information.
3. The Licensee shall determine the baseline level of Total Suspended Solids (TSS) present in the water at all the stream crossing sites, prior to the commencement of construction activities.
4. The Licensee shall monitor stream water quality for Total Suspended Solids (TSS) during construction activities at all stream crossings, Program Monitoring Stations TAD-1 through TAD-5 (a and b inclusive), through weekly sampling at the monitoring sites, located with the assistance of an Inspector. Should an increase of greater than twenty percent (20%) be observed in the concentrations of TSS above background levels at the downstream monitoring site, the Licensee shall immediately undertake necessary mitigation measures and perform daily sampling until the TSS concentrations are shown to have returned to background levels as observed at the upstream reference location.
5. The Licensee shall monitor the runoff water from the Trail Area Deposit quarry operations at Monitoring Program Station TAD-6, once monthly during periods of flow, for the following parameters:

Total Suspended Solids

pH

Electrical Conductivity

Ammonia Nitrogen

Nitrate-Nitrite

Sulphate

Oil and Grease

Total Alkalinity

Total Hardness

Calcium

Magnesium

Potassium

Sodium

Total Trace Metals as determined by a standard ICP Scan (to include at a minimum, the following elements: Al, Sb, Ba, Be, Cd, Cr, Co, Cu, Fe, Pb, Li, Mn, Mo, Ni, Se, Sn, Sr, Tl, Ti, U, V, Zn), and

Trace Arsenic and Mercury

6. The Licensee shall conduct all sampling, sample preservation and sample analyses in accordance with methods prescribed in the current edition of *Standard Methods for the Examination of Water and Wastewater*, or by such other methods approved by the Board in writing.
7. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
8. Additional monitoring requirements may be requested by the Inspector.
9. The Licensee shall provide to the Board, tabular summaries for all data and information generated under the monitoring program, as well as an analysis of data collected during monitoring activities, in the Annual Report in accordance with Part B, Item 1 (i and ii).