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NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN KATIMAYIT  
OFFICE DES EAUX DU NUNAVUT

File No.: **1BW-DUV1214**

July 19, 2012

Alan Kathan  
Small Craft Harbours Branch  
Central and Arctic Region  
Department of Fisheries and Oceans Canada  
501 University Crescent  
Winnipeg, MB R3T 2N6  
Email: [Alan.Kathan@dfo-mpo.gc.ca](mailto:Alan.Kathan@dfo-mpo.gc.ca)

**RE: Licence No. 1BW-DUV1214; Pangnirtung Small Craft Harbour Project, Pangnirtung, NU**

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Dear Alan Kathan:

Please find attached Licence No. **1BW-DUV1214** issued to the Department of Fisheries and Oceans Canada (DFO), Small Craft Harbours Branch, Central and Arctic Region by the Nunavut Water Board (NWB) 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* (NLCA) and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA). However, the expiry or cancellation of a licence does not relieve the holder from any obligations imposed by the licence. Where a renewal of this Licence is required, the NWB recommends that an application be filed at least three (3) 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 sixty (60) 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.

The NWB strongly recommends that the Licensee consult the comments received from interested persons on issues identified. This information is attached for your consideration.<sup>1</sup>

Sincerely,

A handwritten signature in dark ink, appearing to read 'T. Kabloona', with a stylized flourish at the end.

Thomas Kabloona  
Nunavut Water Board, Chair

TK/sj/pb

Enclosure: Licence No. **1BW-DUV1214**  
Comments – AANDC, EC

cc: Distribution – Qikiqtani

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<sup>1</sup>Aboriginal Affairs and Northern Development Canada (AANDC), April 16, 2012; and Environment Canada (EC) April 13, 2012.

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## DECISION

### LICENCE NUMBER: 1BW-DUV1214

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a renewal Water Licence received January 11, 2011 made by:

#### DEPARTMENT OF FISHERIES AND OCEANS CANADA (DFO) SMALL CRAFT HARBOURS BRANCH, CENTRAL AND ARCTIC REGION

to allow for the use, maintenance and eventual abandonment of a watercourse crossing and associated drainage redirection structure constructed in support of the Pangnirtung Small Craft Harbour Project, located within the Hamlet of Pangnirtung in the Qikiqtani Region, Nunavut, generally located at the approximate geographical coordinates as follows:

|                        |  |
|------------------------|--|
| Latitude: 69°9'2.87" N | Longitude: 65°41'30.01" W (Duval River Crossing) |
| Latitude: 66°8'40" N   | Longitude: 65°42'55" W (Drainage Redirection)    |

### **DECISION**

After having been satisfied that the application was for a location that falls outside of an area with an approved Land Use Plan<sup>2</sup> and subject to a 12.4.4(a) Screening Decision by the Nunavut Impact Review Board<sup>3</sup> in accordance with Article 12 of 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 (Act)* 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 considering the 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*, waived the requirement to hold a public hearing, and determined that:

**Licence No. 1BW-DUV0911 be renewed as Licence No. 1BW-DUV1214 under (Motion #: 2012-03-L04) subject to the terms and conditions contained therein.**

SIGNED this 17<sup>th</sup> day of July 2012 at Gjoa Haven, NU.



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Thomas Kabloona  
Nunavut Water Board, Chair

TK/sj/pb

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<sup>2</sup>NPC Conformity Decision, July 14, 2011.

<sup>3</sup>NIRB Screening Decision, June 4, 2012.

## **LICENCE NUMBER: 1BW-DUV1214**

### **INTRODUCTION**

In 2009, the Department of Fisheries and Oceans Canada (DFO), Small Craft Harbours Branch, Central and Arctic Region, constructed a temporary crossing on a section of the Duval River that outlet into the bay east of the Hamlet of Pangnirtung, Nunavut. The crossing was constructed using three steel culverts along with rock and gravel aggregates as described in the drawing entitled “Proposed Haul Road and Crossing Location Plan” (Drawing No. 0913451001A004) submitted as part of the licence renewal application received by the NWB.

The crossing is used as the only route for transporting crushed rock from the existing municipal quarry to the Pangnirtung Small Craft Harbour site.

### **PROCEDURAL HISTORY**

On January 21, 2011, the NWB received from DFO an application to renew Licence 1BW-DUV0911. Following receipt, the NWB conducted a Preliminary Technical Review (PTR) of the application in which several deficiencies were identified. The Licensee was informed that it needed to address those deficiencies before the application could proceed through the licensing process. On February 3, 2012, the NWB was in receipt of all outstanding information and distributed the application and supporting information to interested persons for a thirty (30) day comment and/or review period. The following documents were received and distributed in support of the application

- Cover letter dated November 7, 2011;
- Cover letter dated January 21, 2011;
- Application for Water Licence Renewal, received February 3, 2012;
- Spill Contingency Plan, received February 3, 2012;
- List of attachments, received February 3, 2012;
- Culvert Crossing report, English and Inuktitut, received February 3, 2012;
- Construction Environmental Management Plan Summary, English and Inuktitut, received Feb. 3, 2012;
- Application summary, English and Inuktitut, received February 3, 2012;
- Construction Environmental Management Plan, received February 15, 2012;
- Golder Associates Technical Memorandum, dated December 3, 2008; and
- NPC confirmation no conformity required, dated July 14, 2011.

On or before the deadline for comments, submissions were received from two intervening parties: Aboriginal Affairs and Northern Development Canada (AANDC) provided comments and recommendations related to improvising the functionality of the Spill Contingency (SCP) and the requirement of a site specific Abandonment and Restoration (A&R) Plan; Environment Canada (EC) indicated that it had no comments regarding the renewal application and that comments submitted on behalf of EC for previous renewals are still applicable. Overall, no objections were expressed with respect to the issuance of a Licence renewal.

Apart from the recently expired Licence, 1BW-DUV0911, that was issued on October 23, 2009

and expired on October 31, 2011, there has been one other Licence issued for the Project. Licence NWB4DUV0405, which was issued on October 15, 2004 and expired on October 31, 2005, allowed for the completion of in-stream works to facilitated emergency repairs associated with the Duval River Bridge.

## **LICENCE CONSIDERATIONS**

The following section outlines the major issues identified by the NWB and/or raised by interested parties during the review of the application. The sections provide the background with respect to the terms and conditions imposed within the licence.

### **A. General Conditions**

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 Licensee has requested a two (2) year term for the renewed licence, which the NWB believes is appropriate to fully complete the proposed undertaking.

### **B. Construction**

The Board has replaced the original condition under Part E, Item 1 of Licence 1BW-DUV0911, with the requirement that the Licensee submit to the Board for review as-built drawings of the Duval River Crossing that are signed and stamped by an Engineer. As part of the renewal application, the Licensee submitted as-built drawings that were not signed nor stamped by an Engineer.

The Licensee has indicated that dredging within the Pangnirtung inner basin will not be completed until October 2012 and that dredged material deposited in the marshaling area are considerably more saturated and less stable than originally anticipated. As a result, the Licensee plans to re-evaluate the marshaling area in the summer of 2012. The Board has included the requirement for submission of a Construction Summary Report including stamped, as-built plans and/or drawings within ninety (90) days of completion of the diversion structure.

### **C. Spill Contingency Plan**

Under Part F, Item 1 of the Licence terms and conditions, there is the requirement for the Licensee to update and submit to the Board for approval, the Plan entitled “Spill Contingency Plan for Petroleum Product for Harbour Development Project Pangnirtung, Nunavut,” dated October 15, 2009.

### **D. Abandonment and Restoration Plan**

According Part G, Item 1, the Licensee is required to submit to the Board for Approval, within six (6) months of issuance of this Licence, an Abandonment and Restoration (A&R) Plan. The Licensee is reminded that this condition was included in the previous Licence and remains as an

outstanding item under the expired Licence. In its correspondence<sup>4</sup> to the Board, the Licensee has requested that the submission date for the A&R Plan be extended to June 2013. Although the rationale for the request was considered, the Board, taking into account that the requirement is an outstanding compliance issue with the previous Licence, has decided to include the requirement for the Plan to be submitted within six (6) months of issuance of the renewal instead of the date requested by the Licensee.

### **E. Monitoring**

The Board has included basic monitoring conditions under Part H of the Licence to ensure that potential impacts to fresh water sources are minimized during the construction, operation, and reclamation phases of the project.

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<sup>4</sup> Department of Fisheries and Oceans Canada (DFO) Letter from A. Kathan to R. Dwyer, dated November 7, 2011 regarding: Pangnirtung Small Craft Harbour NWB License No. 1BW-DUV0911 Renewal Application.



## NUNAVUT WATER BOARD WATER LICENCE RENEWAL

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Licence No. 1BW-DUV1214

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

DEPARTMENT OF FISHERIES AND OCEANS CANADA (DFO)  
SMALL CRAFT HARBOURS BRANCH, CENTRAL AND ARCTIC REGION

(Licensee)

501 UNIVERSITY CRESCENT, WINNIPEG, MB, R3T 2N6

(Mailing Address)

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

Licence Number/Type: 1BW-DUV1214 TYPE "B"

Water Management Area: NUNAVUT 05

Location: PANGNIRTUNG SMALL CRAFT HARBOUR PROJECT  
QIKIQTANI REGION, NUNAVUT

Classification: WATER CROSSING AND DRAINAGE DIVERSION

Quantity of Water use not  
to Exceed: NO WATER USE ALLOWED

Date of Licence Issuance: JULY 17, 2012

Expiry of Licence: JULY 16, 2014

This Licence renewal, recorded at Gjoa Haven, Nunavut, includes and is subject to the annexed conditions.

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Thomas Kabloona  
Nunavut Water Board, Chair



## **PART A: SCOPE, DEFINITIONS AND ENFORCEMENT**

### **1. Scope**

The Licence is to allow for the operation, maintenance and abandonment of the temporary Duval River crossing, including the impact berm on the upstream side and haul road on the downstream side of the structure. The crossing and associated structures were constructed in October 2009 for the purpose of transporting materials from the municipal quarry to the Pangnirtung harbor site in support of the Pangnirtung Small Craft Harbour Project (Project). It is expected that once the Project is completed, this drainage feature will be redirected through a new culvert positioned under the gravel road followed by an open channel through the marshalling area to the northeast of the existing breakwater.

- 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**

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

**“Addendum”** means the supplemental text that is added to a full plan or report usually included at the end of the document and is not intended to require a full resubmission of the revised report;

**“Amendment”** means a change to original terms and conditions of this Licence requiring correction, addition or deletion of specific terms and conditions of the Licence; modifications inconsistent with the terms of the set terms and conditions of the Licence;

**“Appurtenant Undertaking”** means an undertaking in relation to which a use of water 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 and the Nunavut Waters and Nunavut Surface Rights Tribunal Act;*

**“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;

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

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

**“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;

**“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;

**“Regulations”** means the *Northwest Territories Water Regulations* sor/93-303 8th June, 1993, omitting Section 5, Water Use or Waste Deposit without a Licence;

**“Spill Contingency Plan”** means a Plan developed to deal with unforeseen petroleum and hazardous materials events that may occur during the operations conducted under the Licence;

**“Waste”** means, as defined in S.4 of the *Act*, any substance that, by itself or in combination with other substances found in water, would have the effect of altering the quality of any water to which the substance is added to an extent that is detrimental to its use by people or by any animal, fish or plant, or any water that would have that effect because of the quantity or concentration of the substances contained in it or because it has been treated or changed, by heat or other means.

### 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, containing the following information:
  - a. A summary report of waste disposal activities;
  - b. A list of unauthorized discharges and a summary of follow-up actions taken;
  - c. Any revisions to the Spill Contingency Plan Spill Contingency Plan, submitted in the form of an Addendum;
  - d. A description of all progressive and or final reclamation work undertaken, including photographic records of site conditions before, during and after completion of operations;
  - e. A summary of all information requested and results of the Monitoring Program; and
  - f. Any other details waste disposal requested by the Board by November 1 of the year being reported.
2. The 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.
3. 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.
4. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
5. The Licensee shall review the Plans referred to in this Licence, as required by changes in operation and/or technology, and modify the Plan accordingly. Revisions to the Plans are to be submitted in the form of an Addendum to be included with the Annual Report
6. 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 conditions 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.
7. The Licensee shall ensure a copy of this Licence is maintained at the site of operations at all times. Any communication with respect to this Licence shall be made in writing to the attention of:
  - (a) **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](mailto:licensing@nunavutwaterboard.org)

**(b) Inspector Contact:**

Manager of Field Operations, AANDC  
Nunavut District, Nunavut Region  
P.O. Box 100  
Iqaluit, NU X0A 0H0  
Telephone: (867) 975-4295  
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 all documents or correspondence submitted by the Licensee to the Board are received and acknowledged by the Manager of Licensing.
10. This Licence is not assignable except as provided in Section 44 of the *Act*.

**PART C: CONDITIONS APPLYING TO THE PROTECTION OF WATER**

1. The Licensee shall ensure that all fill material used is from an approved source and shall be free of contaminants.
2. The Licensee shall not cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
3. The Licensee shall implement sediment and erosion control measures prior to and be maintained during the operation to prevent entry of sediment into water.
4. The Licensee shall prepare all sites in such manner as to prevent rutting of the ground surface to minimize impacts on surface drainage.
5. The Licensee shall undertake appropriate corrective measures to mitigate impacts on surface drainage resulting from the Licensee's operations.
6. The Licensee shall limit any in-stream activity to low water period. In-stream activity is prohibited during fish migration.
7. The Licensee shall locate stream crossings to minimize approach grades. Approaches shall be stabilized during construction and upon completion of the project, to control runoff, erosion and subsequent siltation to any water body.

8. Machinery is not permitted to travel up the stream bed and fording is to be kept to a minimum and limited to one area.
9. Equipment used should be well cleaned and free of oil and grease and maintained free of fluid leaks. The Licensee shall ensure that pollutants from machinery used during construction do not enter water.
10. The Licensee shall locate equipment storage holding areas on gravel, sand or other durable land, a distance of at least thirty one (31) metres above the ordinary high water mark of any water body in order to minimize impacts on surface drainage and water quality.
11. The Licensee shall designate an area for the deposition of excavated and stockpiled materials that is at least thirty one (31) metres above the ordinary high water mark of any water body.
12. The Licensee shall not utilize any equipment or vehicles in the course of this undertaking unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting or gouging. Overland travel of equipment or vehicles shall cease if rutting occurs.

**PART D: CONDITIONS APPLYING TO WASTE DISPOSAL**

1. The Licensee shall not practice on-site land filling of domestic waste, unless otherwise approved by the Board in writing.
2. The Licensee shall provide to the Board, documented authorization from the community of Pangnirtung prior to the backhauling of any waste.
3. The Licensee shall backhaul and dispose of all hazardous wastes, waste oil and non-combustible waste generated through the course of the operation, in a licensed waste disposal site.
4. The Licensee shall maintain records of all waste backhauled and records of confirmation of proper disposal of backhauled waste. These records shall be made available to an Inspector upon request.

**PART E: CONDITIONS APPLYING TO CONSTRUCTION AND MODIFICATIONS**

1. The Licensee shall, within sixty (60) days of issuance of this Licence, submit to the Board for review, stamped as-built plans and/drawings of the Duval River Crossing.

2. The Licensee shall, within ninety (90) days of constructing the drainage diversions structure at the marshaling area, submit to the Board for review a Construction Summary Report along with stamped as-built plans and/or drawings. The report shall include explanations for any deviations from construction drawings and account for the effect(s) that construction and field decisions may have on the performance of the engineered facilities.
3. The Licensee may, without written consent from the Board, carry out Modifications to the Project 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.
4. Modifications for which all of the conditions referred to in Part G, Item 3 have not been met, can be carried out only with written approval from the Board.
5. The Licensee shall provide to the Board as-built plans and drawings of the Modifications referred to in this Part within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.

#### **PART F: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING**

1. The Licensee has provided the Plan entitled “Spill Contingency Plan for Petroleum Product for Harbour Development Project Pangnirtung, Nunavut,” dated October 15, 2009, as supporting information with the Licence renewal application. The Licensee shall, within sixty (60) days of issuance of this licence, provide to the Board for approval, an updated Plan that includes and/or address the following:
  - a. The name, job title and 24 hour contact number for the person responsible for activating the spill plan;
  - b. A detailed description of the site, including its geographic location – in UTM and/or geographic coordinates;
  - c. An inventory of the type and amount of hazardous materials (if any) stored on site;
  - d. A site map scaled appropriately that shows the location of any spill response equipment, sensitive areas, such as, water bodies and probable pathways of contaminant flow, and general topography;
  - e. Reference to and/or the location of Material Safety Data Sheets (MSDS) for all

- hazardous substances stored on site;
  - f. Contact information for AANDC's Manager of Field Operations (telephone number: (867) 975-4295 and fax number: (867) 979-6445);
  - g. A copy of the NT-NU Spill Report Form; and
  - h. Contact information for the following agencies/organizations: Hamlet of Pangnirtung, EC, NT-NU Spill Report Line, and GN-DOE.
2. The Licensee shall prevent any chemicals, petroleum products or wastes associated with the project from entering water. All sumps and fuel caches shall be located at a distance of at least thirty one (31) metres from the ordinary high water mark of any adjacent water body and inspected on a regular basis.
  3. The Licensee shall ensure any equipment maintenance and servicing be conducted only in designated areas and shall implement special procedures (such as the use of drip pans) to manage motor fluids and other waste and contain potential spills.
  4. The Licensee shall use secondary containment or a surface liner (drip pans, fold-a-tanks, etc) at all fuel-transfer and refueling stations.
  5. The Licensee shall ensure that an adequate supply of spill kits (minimum capacity of 205L), shovels, barrels, sorbents and pumps are maintained on site at all times.
  6. The Licensee shall ensure that all on site personnel are properly trained in fuel and hazardous waste handling procedures and spill response procedures.
  7. 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 the Spill Contingency Plan;
    - b. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the Inspector at (867) 975-4295; and
    - c. For each spill occurrence, submit to the Inspector, no later than thirty (30) days after initially reporting the event, a detailed report that will include the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain and clean up the spill site.

**PART G: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION OR TEMPORARY CLOSING**

1. The Licensee shall, within six (6) months of Licence issuance, submit to the Board for approval, an Abandonment and Restoration Plan for the Duval River crossing and drainage diversion that includes planned procedures for the removal of culverts, mitigation and monitoring measures to be employed for the protection of water, disposal of materials removed from the crossing(s) and a schedule and implementation plan for the timely removal of the temporary infrastructure.

2. The Licensee shall complete all restoration work detailed in the Abandonment and Restoration Plan prior to the expiry of this Licence.
3. The Licensee shall carry out progressive reclamation of all components of the project no longer required for the Licensee's operations.
4. The Licensee shall remove from the site, all infrastructure and site materials prior to the expiry of this Licence.
5. In order to promote growth of vegetation and the needed microclimate for seed deposition, all disturbed surfaces shall be prepared by ripping, grading, or scarifying the surface to conform to the natural topography.
6. Areas that have been contaminated by hydrocarbons from normal fuel transfer procedures shall be reclaimed to meet objectives as outlined in the Government of Nunavut's Environmental Guideline for Site Remediation, January 2002. The use of reclaimed soils for the purpose of back fill or general site grading may be carried out only upon consultation and approval by the Government of Nunavut, Department of Environment and an Inspector.
7. All disturbed areas shall be contoured and stabilized upon completion of work and restored to a pre-disturbed state.

**PART H: CONDITIONS APPLYING TO THE MONITORING PROGRAM**

1. The Licensee shall maintain Monitoring Stations at the following locations:

| Monitoring Program Station Number | Description                        | Status |
|-----------------------------------|------------------------------------|--------|
| DUV-1                             | Upstream of Duval River Crossing   | Active |
| DUV-2                             | Downstream of Duval River Crossing | Active |

2. Licensee shall monitor all activities for signs of erosion.
3. The Licensee shall obtain a digital photographic record of the water crossing during operation and before and after abandonment.
4. Licensee shall, during periods of low flow, conduct water quality sampling at Monitoring Program Stations DUV-1 and DUV-2 as follows:
  - a. at least once annually during operation of the Duval River Crossing;
  - b. at least once immediately prior to decommissioning the crossing;



- c. weekly during decommissioning activities; and
  - d. at least once following completion of decommissioning activities.
5. The Licensee shall, for samples collected under Part H, Item 4, analyze for the following parameters:
- |              |                        |                      |
|--------------|------------------------|----------------------|
| pH           | Temperature            | Total Oil and Grease |
| Conductivity | Total Suspended Solids |                      |
6. All sampling, sample preservation and analyses shall be conducted 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 include in the Annual Report required under Part B, Item 1, and the Construction Summary Report required under Part E, Item 2, all data-monitoring results and information required by this Part.