



The NWB strongly recommends that the Licensee consult the comments received from interested persons on issues identified. Aboriginal Affairs and Northern Development Canada (AANDC) recommended that its publication entitled *Abandoned Military Sited Remediation Protocol* (2009) be consulted in determining remediation and monitoring criteria for this project and that the criteria meet or exceed the standards described in its document. Environment Canada (EC) provided recommendations/comments aimed at minimizing potential impacts of the project on the receiving environment. These comments are attached for your information.¹

Sincerely,



Thomas Kabloona
Nunavut Water Board
Chair

TK/sj/mp

Enclosure: Licence No. **1BR-RBL1419**
Comments – AANDC, EC

Cc: Qikiqtani Distribution List

¹ Aboriginal Affairs and Northern Development Canada (AANDC), July 19, 2011; and Environment Canada (EC), July 22, 2011.

DECISION

LICENCE NUMBER: 1BR-RBL1419

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a new Licence, initially received on March 17, 2011 and made by:

TRANSPORT CANADA, ENVIRONMENTAL AFFAIRS – PROGRAMS

to allow for the deposit of waste associated with or generated by the Resolute Bay Landfill Remediation Project, located proximal to the Resolute Bay Airport in the Qikiqtani Region, Nunavut, at the following general geographical coordinates:

Latitude: 74° 44' 44.77" N	Longitude: 94° 01' 55.13" W
Latitude: 74° 44' 52.46" N	Longitude: 95° 01' 20.17" W
Latitude: 74° 42' 48.04" N	Longitude: 94° 58' 40.22" W
Latitude: 74° 42' 45.01" N	Longitude: 95° 00' 09.30" W (Project Extents).

DECISION

After having been satisfied that the application was in conformity with the North Baffin Regional Land Use Plan² and exempt from the requirement of screening by the Nunavut Impact Review Board³ in accordance with Schedule 12.1 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 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 1BR-RBL1419 be issued subject to the terms and conditions contained therein. (Motion #: 2014-B1-015).

SIGNED this 11th day of July, 2014 at Gjoa Haven, NU.



Thomas Kabloona
Nunavut Water Board
Chair

² NPC Conformity Determination, May 10, 2011.

³ NIRB Screening Exemption Determination, February 27, 2012.

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INTRODUCTION

The Resolute Bay Landfill Remediation Project (Project) involves the implementation of activities planned for a Solid Waste Landfill (APEC 1), a Historical Landfill (APEC 2) and a Vehicle Storage Area (APEC 3), all of which are located proximal to the Resolute Bay Airport on Cornwallis Island, approximately 5 kilometres northwest of the current Resolute Bay Airport in the Qikiqtani Region of Nunavut.

Part of the preparatory work carried out for the project involved a Phase II/III Environmental Site Assessment (ESA) that took into consideration previous environmental studies and/or assessments carried out for the site. A Report⁴ containing the results of the ESA was included as part of the application submitted by Transport Canada to the Nunavut Water Board for a water licence to carry out this Project. The “Conceptual Remedial or Risk Management Action Plans” Section of the ESA report included three (3) remediation options to mitigate potential impacts associated with the sites.

The following is a summary of the activities/undertakings proposed by the Licensee to achieve the Project’s remediation objectives:

- Off-site recycling of selected metal debris that can be accessed at the metal storage area and the two main landfills;
- Surface waste material would be consolidated and placed on the main slope, extending down the toe of the slope;
- Waste material would be placed on the main slope as per specifications by a qualified professional to ensure a stable slope with an acceptable factor for safety;
- Exposed waste would be covered with a geotextile and available fill material;
- The Solid Waste Landfill and Historical Landfill should be shaped so that overland drainage is properly managed and surface water is directed away from the landfill;
- Long-term monitoring will also be required to ensure the remediation targets are working to the designed specifications;
- The maximum amount of material will be removed and recycled while any additional material will be managed to eliminate exposure to the environment;
- Construction will require 2 years; and
- Monitoring of the site will consist of inspections and sampling ground water monitoring wells for 2 years after the construction phase to ensure the site is operating as designed.

PROCEDURAL HISTORY

The NWB acknowledged receipt, on March 23, 2011, of the following documents as part of the water licence application (Application) submitted on March 17, 2011, by Transport Canada, for the Resolute Bay Landfill Remediation Project:

- Water licence application form
- English Landfill Remediation Summary
- NIRB Forms Part 1 and Part 2
- Human Health and Ecological Risk Assessment Resolute Bay Airport Landfill Sites;

⁴ “Phase II/III Environmental Site Assessment Final Report Resolute Bay Airport Landfill Sites, Resolute Bay, Nunavut”, dated March 2010.

- Phase II/III Environmental Site Assessment, submitted
- Site Photos, submitted

Following an internal review, which determined that the March 17, 2011 submission was deficient, the NWB requested that the proponent address the deficiencies identified in order for the Board to begin processing the Application. In response to the Board's request, the proponent submitted the following additional information for consideration:

- Nunavut Planning Commission(NPC) positive conformity review, received May 10, 2011
- Revised Application, received June 23, 2011
- Inuktitut Summary, received June 23, 2011

On June 23, 2011 the NWB acknowledged receipt of the additional submission and distributed the Application for a thirty (30) day comment period with the deadline for submissions set for July 23, 2011. Comments were received from AANDC and EC. On February 27, 2012, the NWB received the Nunavut Impact Review Board's (NIRB) determination for the project. Although the intervening parties, NPC, and the NIRB did not provide any objections to Board potentially issuing a licence for the project, comments and recommendations relevant to improving management plans and meeting remediation objectives were provided.

As indicated above, the NWB acknowledged receipt of a complete Application in June 2011 for field activities proposed to be undertaken in 2012. However, before the NWB issued a decision on the Application, Transport Canada requested⁵ that the licence issuance be delayed until funding was secured for the Project. The request to delay the licence issuance was followed up by a cancellation request⁶, which was later rescinded⁷ due to indications that funding was forthcoming for the 2013 field seasons. On January, 2013 Transport Canada indicated to the NWB that some funding had been secured for the project to carry out site visits during the 2013-2014 field seasons but not for the entire project. January 7, 2014, Transport Canada indicated in its correspondence⁸ to the NWB that it had likely secured funding to commence the Project during the 2014-2015 field seasons.

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 applicant requested a five (5) year term for the licence, which the NWB believes is consistent with and appropriate for the type of undertaking and schedule of activities proposed in the application. The Board has therefore granted the requested term.

⁵Email from M. Molinski, Transport Canada, to S. Joseph, NWB, Re: Resolute Bay Landfill Schedule for field Work 2012, dated May 9, 2012.

⁶Email from D. Kirkland, Transport Canada, to S. Joseph, NWB, Re: Licences 1BR-MDR, 1BR-RBL, and 1BR-RLF.

⁷Letter from M. Molinski, Transport Canada, to P. Beaulieu, NWB, Re: Resolute Bay Landfill Water Licence Application – 1BR-RBL Request. to Reinstate, dated January 10, 2013.

⁸Email from M. Molinsk, Transport Canada, to S. Joseph, NWB, Re: Resolute Bay Landfill Site, dated January 7, 2014.

B. Annual Report

Under the reporting section in the Licence, Part B, Item 1, the Licensee is required to submit, on an annual basis, a report pertaining to the deposition of wastes associated with the project. The NWB maintains annual reporting information on its public registry. In addition, the information is made available to interested persons upon request. A standard form for annual reporting can be downloaded from the NWB's ftp site at <http://nunavutwaterboard.org/ftp/> in the administration folder.

C. Water Use

No water use has been requested for domestic and/or other purposes in the Application submitted for the Resolute Bay Landfill Remediation Project. As such, the Board has included conditions that exclude the use of water under Part C, Item 1 of the Licence.

D. Deposit of Waste

Aggregate Sources

Information contained in the Phase II/III Environmental Site Assessment Report accompanying Application indicates that aggregate will be required to cover and/or cap the landfills being remediated irrespective of the remediation option being chosen and implemented by the proponent. Conditions have been included under Part E, Item 1 in the Licence to ensure that aggregates used for any facilities associated with the project do not possess acid generating and/or metal leaching characteristics. In cases where it is determined that the materials are suitable for use, the Licensee is required to implement appropriate drainage control measures to prevent sediment loading into nearby water bodies.

Solid Waste Landfill (APEC 1)

The Solid Waste Landfill, which has a surface area of approximately 40,000 m² and located proximal to the Resolute Bay Airport's Sewage Lagoon Facility, was used as a dump during the 1960s and 1970s, mainly. A new landfill was constructed southeast of the Hamlet in 1995; however, the information provided suggests that the Solid Waste Landfill had continued to be used unofficially as a dump up to 2005. The environmental assessment and audit carried out on the site identified a variety of waste types including drums, scrap metals and plastic scattered near the site. Pools of standing water near the landfill, evidence of leachate containing petroleum hydrocarbons and metals, and significant vegetative growth were also observed near the landfill during the ESA. Drainage from the landfill discharges towards the west into Allen Bay while the area behind the toe of the landfill drains into a small unnamed creek and several small ponds. The NWB has included terms and conditions under Part D and Part K in the Licence requiring the Licensee to monitor this facility during and after remediation.

Historic Landfill (APEC 2)

The Historical Landfill covers an area of approximately 145,000 m² and is located southwest of the airport terminal building. The site was used from the period 1947 to 1996. The Canadian and American Military Forces used the site from 1947 – 1964 while Transport Canada and various airport tenants used the site from the period 1964 to 1995. Information provided as part of the application indicates that although disposal activities had ended in the early 1970s, the use of the landfill did not officially cease until 1996. The environmental assessment carried out on the site identified significant vegetative growth proximal to the landfill. The community water

supply, Strip Lake, is located several kilometres to the south of the landfill and a hotel project is currently being developed along the northeast boundary of the Historic Landfill. Drainage from historical Historic Landfill is described as a complex of interconnected lakes and drainage channels that ultimately discharge towards the south into Resolute Bay. Three small lakes west of the landfill capture runoff and drainage from the landfill and eventually drain into Meretta Lake onto Resolute Lake and finally into Resolute Bay. A patchy, discontinuous wetland has developed at the toe of the Historic Landfill along its southern extents. Conditions have been included under Part D and Part K in the Licence to ensure that this facility is monitored before, during and after remediation activities.

Vehicle Storage Area (APEC 3)

The Vehicle Storage Area consists of two sites with areas of 3750 m² and 900 m², respectively, and that are located 1 to 3 kilometers northwest of the airport terminal. The site has been used as an area for the disposal of vehicles and other equipment including drums, tires, tanks, glass, etc. Although the site was identified in an audit conducted in 1993, it was not included in the investigation carried out for the Solid Waste Landfill and Historic Landfill. Drainage from the Vehicle Storage Area discharges towards the west into Allen Bay and surficial flow drains into McMaster River Valley. The NWB has included conditions under Part D and Part K, to ensure that potential runoff or leachate from this facility is monitored before, during and after remediation activities.

E. Spill Contingency Planning

The Board has approved the Spill Contingency Plan submitted as additional information with the application under Part I, Item 1. The Licensee is required to submit to the Board for review with the initial annual report, an addendum to the Plan that addresses the relevant comments and recommendations provided by intervening parties during the review process.

F. Abandonment and Restoration

Under Part J, Item 1, the Licensee is required to submit to the Board for review, within sixty (60) days following the completion of remediation activities, an updated stand-alone Remedial Action Plan that reflects documented remediation options implemented for the Resolute Bay Landfill Remediation Project.

G. Monitoring

Conditions have been included that require the Licensee to monitor water quality up-gradient and down-gradient of the Solid Waste Landfill, Historic Landfill and proximal to the Vehicle Storage Area. In addition, the Licensee is required to submit to the Board for review sixty (60) days prior to the first release of any effluent, a Quality Assurance/Quality Control (QA/QC) Plan. The Plan must receive approval from an analyst confirming Plan's acceptability. All of the monitoring results, along with analyses carried out on the results, are to be provided to the NWB as part of the annual reporting requirements. This requirement is included under Part K in the Licence. In addition, the Board has included under Part K, Item 1 in the Licence, a condition requiring the Licensee to submit a Long-Term Monitoring Plan to the Board for approval at least sixty (60) days prior to initiating Long-Term Monitoring activities.

H. Operations and Maintenance

As recommended by AANDC, the Licensee is required to submit to the Board for approval within sixty (60) days following the completion of remediation of the Solid Waste Landfill, Historical Landfill, and Vehicle Storage Area, an Operation and Maintenance (O&M) Manual that includes O&M procedures for the Solid Waste Landfill and the included Historic Landfill mentioned in this Licence.

Further, the Licensee is required to submit to the Board for review, at least sixty (60) days prior to construction of any facilities under this Licence, For-Construction Drawings that are 95 % complete, and signed and stamped by an Engineer. The drawings shall identify the final discharge location for the Solid Waste Landfill, Historic Landfill and the Vehicle Storage Area and any other facility approved under the Licence. This requirement is detailed under Part E, Item 2.

The Board, having considered the Application submitted, interveners' comments, and the nature of the undertaking, has accordingly set terms and conditions in this Licence to govern the deposit of wastes for the proposed Resolute Bay Landfill Remediation Project.



NUNAVUT WATER BOARD WATER LICENCE

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

TRANSPORT CANADA, ENVIRONMENTAL AFFAIRS – PROGRAMS

(Licensee)

3RD FLOOR – 344 EDMONTON STREET WINNIPEG, MANITOBA R3C 0P6

(Mailing Address)

hereinafter called the Licensee, the right to deposit waste for a period subject to restrictions and conditions contained within this licence:

Licence Number/Type: 1BR-RBL1419

Water Management Area: (55) BATHURST AND CORNWALLIS ISLANDS
WATERSHED

Location: RESOLUTE BAY LANDFILL REMEDIATION PROJECT
QIKIQTANI REGION, NUNAVUT

Classification: INDUSTRIAL UNDERTAKING – TYPE “B”

Purpose: DEPOSIT OF WASTE

Quantity of Water use not
to Exceed: WATER USE NOT ALLOWED UNDER THIS LICENCE

Date of Licence Issuance: JULY 11, 2014

Expiry of Licence: JULY 10, 2019

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

Thomas Kabloona
Nunavut Water Board, Chair

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. Scope

This Licence allows for the deposit of waste for an undertaking classified as Industrial at the Resolute Bay Landfill Remediation Project, located approximately five (5) kilometres northwest of Hamlet of Resolute Bay Airport, within the Qikiqtani Region, Nunavut at the following general coordinates:

Project Extents

Latitude: 74°44'44.77" N	Longitude: 94°01'55.13" W
Latitude: 74°44'52.46" N	Longitude: 95°01'20.17" W
Latitude: 74°42'48.04" N	Longitude: 94°58'40.22" W
Latitude: 74°42'45.01" N	Longitude: 95°00'09.30" W

- a. This Licence is issued subject to the conditions contained herein with respect to 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: 1BR-RBL1419

“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;

“**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*;

“**Borrow Sources**” mean sources of aggregate materials used for construction purposes and the development of new landfills and/or for general grading purposes as described in the “Abandon Military Site Remediation Protocol” (INAC 2009);

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

“**Effluent**” means treated or untreated liquid waste material that is discharged into the environment from a structure such as a settling pond or following a treatment process;

“**Engineer**” means a professional engineer registered to practice in Nunavut in accordance with the *Consolidation of Engineers and Geoscientists Act S. Nu 2008, c.2* and the *Engineering and Geoscience Professions Act S.N.W.T. 2006, c.16 Amended by S.N.W.T. 2009, c.12*;

“**Final Discharge Point**” means the point at which the Licensee no longer exerts care and/or control over the quality and/or quantity of the effluent from a treatment process;

“**Greywater**” means all liquid wastes from showers, baths, sinks, kitchens and domestic washing facilities, but does not include toilet wastes;

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

“**High Water Mark**” means the usual or average level to which a body of water rises at its highest point and remains for sufficient time so as to change the characteristics of the land (ref. Department of Fisheries and Oceans Canada, Operational Statement: Mineral Exploration Activities);

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

“**Licensee**” means the individual or organization to which Licence 1BR-RBL1419, Type “B”, is issued or assigned;

“**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;

“Regulations” means the *Nunavut Waters Regulations* sor 2013/669 18th April, 2013;

“Sewage” means all toilet wastes and greywater;

“Sewage Disposal Facility” comprises the area and engineered structures designed to contain and/or treat sewage;

“Solid Waste” means non-hazardous waste and Type-A soil;

“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;

“Sump” means an excavation in impermeable soil for the purpose of catching or storing water or waste;

“Type A Soil” means soil contaminated with hydrocarbons in which the primary petroleum product present in the soil as determined by laboratory analysis consists of lubricating oil and grease (F3 – F4 Fractions);

“Type B Soil” means soil contaminated with hydrocarbons in which the primary petroleum product present in the soil as determined by laboratory analysis consists of fuel oil and/or diesel fuel and /or gasoline (F1 – F2 Fractions);

“Toilet Wastes” means all human excreta and associated products, but does not include greywater;

“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;

“Waste Disposal Facilities” means all facilities designated for the purpose of disposing and/or treating waste including the Solid Waste Landfill, Historical Landfill and the Vehicle Storage Area as described in the Application, which the NWB acknowledged receiving on June 23, 2011;

“Water” or “Waters” means waters as defined in section 4 of the Act.

3. Enforcement

- i. 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*;
- ii. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*; and
- iii. 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. Licensee shall file an Annual Report on the appurtenant undertaking with the Board no later than March 31 of the year following the calendar year being reported that shall contain the following information:
 - a. The monthly and annual quantities (in cubic metres) of material deposited at the Waste Disposal Facilities;
 - b. A summary of all waste backhauled to any community in Nunavut required under Part D, Item 6;
 - c. A summary of any construction work, modification and major maintenance work (including as-built diagrams) carried out on the Waste Disposal Facilities approved under the Licence;
 - d. Tabular summaries for all data and information generated under the “Monitoring Program”;
 - e. An analysis of data collected during the “Monitoring Program” and a brief description of any future studies planned by the Licensee;
 - f. A summary of remediation work undertaken during the year and an outline of work anticipated for the following year;
 - g. A summary of any studies requested by the Board that relate to waste disposal, and or reclamation, and a brief description of any future studies planned;
 - h. A list of unauthorized discharges and summary of follow-up actions taken;
 - i. If applicable, a description of any trenches and sumps excavated, including but not limited to the following: GPS coordinates, dimensions, depth below active layer, and secondary containment features;
 - j. A public consultation/participation report describing consultation with local organizations and the residents of the nearby communities;
 - k. A brief summary of work done to address concerns or deficiencies listed in inspection reports and/or compliance reports prepared by an Inspector;
 - l. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence; and

- m. Any other details on 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 changes.
 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, within sixty (60) days of issuance of this Licence, post signs in the appropriate areas identifying the locations and the “Monitoring Program Stations” for the Waste Disposal Facilities and/or any other facilities authorized under the Licence. All postings shall be in the Official Languages of Nunavut.
 8. 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@nwb-oen.ca

(b) **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

9. 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.
10. 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.
11. This Licence is not assignable except as provided in Section 44 of the *Act*.

PART C: CONDITIONS APPLYING TO WATER USE

1. The Licensee is not authorized to use water under this Licence.
2. The Licensee shall not remove any material from below the ordinary high water mark of any water body.
4. The Licensee shall not do anything that will cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
5. The Licensee shall implement sediment and erosion control measures to prevent the deposition of dust and/or sediment into water bodies, arising from contractor activities or on-site vehicular travel.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

1. The Licensee shall locate areas designated for waste disposal at a minimum distance of thirty-one (31) metres from the ordinary High Water Mark of any water body such that the quality, quantity or flow of water is not impaired, unless otherwise approved by the Board in writing.
2. The Licensee is authorized to dispose of all acceptable food waste, paper waste and untreated wood products in an incinerator.
3. The Licensee shall not open- burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood to prevent the deposition of waste materials of incomplete combustion and/or leachate from contaminated ash residual, from impacting any surrounding waters, unless otherwise approved by the Board in writing.

4. The Licensee shall dispose of any hazardous materials including Polychlorinated Biphenyl (PCB) amended paints or lead painted products, and Petroleum Hydrocarbon Contaminated Soils that do not meet incineration criteria, off site at a currently approved treatment facility.
5. The Licensee shall direct appropriate wastes originating from the Resolute Bay Landfill Remediation Project to the Waste Disposal Facilities authorized under this Licence or as otherwise approved by the Board in writing.
6. The Licensee shall provide to the Board, documented authorization from any community in Nunavut receiving waste from the Resolute Bay Landfill Remediation Project prior to backhauling any waste for storage or disposal.
7. The Licensee shall maintain records of all waste backhauled and records of confirmation of proper disposal of backhauled waste and include this information within the Annual Report, under Part B, Item 1. These records shall be made available to an Inspector upon request. The Licensee shall not transport hazardous wastes prior to registering with the Government of Nunavut as a waste generator and utilizing the prescribed manifests.
8. The Licensee shall provide notice to an Inspector at least ten (10) days prior to initiating any decant or discharge from the Waste Disposal Facilities.
9. All contact water associated with the Waste Disposal Facilities including seepage from Monitoring Program Stations shall meet the following Effluent quality limits prior to being released onto land at a location that is at least thirty-one (31) metres away from the ordinary High Water Mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created:

Parameter	Maximum Allowable Concentration (mg/L)
pH	6 to 9 (pH units)
TSS	50
Oil and Grease	15 and no visible sheen
Total Lead	0.001
Benzene	0.37
Toluene	0.002
Ethylbenzene	0.090

10. If the effluent associated with Part D, Item 9 and Item 12 does not meet the Effluent limits under Part D, Item 9, it shall be considered hazardous waste and disposed off-site at an approved facility or as otherwise approved by the Board in writing.
11. All water being pumped from excavated areas and borrow pits shall be contained at holding facility and shall be treated if necessary, to meet Effluent quality limits set in Part D, Item 9, prior to being released.

12. The Licensee shall provide for the proper storage, transportation and treatment, off site at an approved facility or as otherwise approved by the Board in writing, of all Hazardous Waste Materials identified in the Application as acknowledged by the Board on June 23, 2011, including any contaminated soils, items contaminated with PCBs and Heavy Metals and waste oil generated through construction and remediation activities.
13. The Licensee shall for the purposes of carrying out the Monitoring Program, install ground water monitoring wells, at least one up-gradient and two down-gradient of each the Solid Waste Landfill, Historic Landfill, and Vehicle Storage Area.
14. The Licensee shall dispose of any material coated with Polychlorinated Biphenyl (PCB) - amended paints hazardous materials and soils containing contaminants in excess of Canadian Environmental Protection Act (CEPA) Guidelines, off site at an approved treatment facility in accordance with the application received June 23, 2011.

PART E: CONDITIONS APPLYING TO THE UNDERTAKING

1. The Licensee may use aggregates for the purposes specified in the “Conceptual Remedial or Risk Management Action Plan” Section of the *Phase II/III Environmental Site Assessment Final Report, Resolute Bay Airport Landfill Sites, Resolute Bay Nunavut*, dated March 2010, provided that the aggregate sources are approved by an Inspector, free of contaminants.
2. The Licensee shall submit to the Board for approval, within sixty (60) days following the completion of remediation of the Waste Disposal Facilities, an Operation and Maintenance Manual for all facilities operated at the Resolute Bay Landfill Remediation Project. The manual shall be prepared in accordance with the “*Guidelines for the Preparation of an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories; 1996*”.
3. The Operations and Maintenance Manual referred to in Part E, Item 2 shall address the following items:
 - a. As-built construction drawings of the facility (stamped by a professional Engineer registered in Nunavut);
 - b. Feasibility of alternative disposal methods and sites;
 - c. Operation and maintenance procedures for each facility;
 - d. Runoff diversion and management;
 - e. Monitoring Program for both water and soil.
4. The Licensee shall review the Plan referred to in this Part 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.
5. The Licensee shall, upon the failure of any constructed facilities, repair such facilities immediately to the appropriate standards as recommended by an Engineer.

6. The Licensee shall implement proper handling, storage and transportation procedures for hazardous materials during remediation activities.
7. The Licensee shall minimize disturbance to terrain, permafrost and drainage during extraction of granular material, development and closure of landfills, movement of contractor's equipment and personnel around the site and removal of site debris.
8. The Licensee shall not cause erosion to the banks of any body of water and shall provide and implement necessary controls prior to and maintained during the activities to prevent such erosion and entry of sediment into Water.
9. The Licensee shall design and construct all stream crossings to minimize erosion and/or deposition of Waste into water.
10. The Licensee shall ensure that existing creek channels are maintained at their normal width and depth to the extent possible, during and after construction.
11. Granular materials and rock rip-rap used for any temporary stream crossings, approaches or required for bank stabilization must be obtained from a source that is approved by an Inspector, and is clean and free of contaminants as outlined in Part E, Item 1. Such material must not be removed or gathered from below the ordinary High Water Mark of any water body.
12. All sites affected by construction or removal activities shall be stabilized, landscaped as necessary, and suitable erosion control measures implemented to minimize sediment deposition into watercourses located on or adjacent to the site.
13. The Licensee shall restore and stabilize all areas affected by the undertaking upon completion of the work.
14. The Licensee shall not deposit Waste in any water body, or on the banks thereof, which may impair the quality, quantity, or flow of water.
15. Areas designated for Waste disposal shall be located at a minimum of thirty-one (31) metres from the ordinary High Water Mark of any body of water, unless otherwise authorized by the Board.
16. The Licensee shall dispose of all scrap metal, discarded machinery and parts, and other bulky material in a manner that conforms to the remedial option selected in the "Conceptual Remedial or Risk Management Action Plan" Section of the Phase II/III *Environmental Site Assessment Final Report, Resolute Bay Airport Landfill Sites, Resolute Bay Nunavut*, dated March 2010.

PART F: CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURES AND OPERATIONS

1. No camp activities are authorized under the provisions of this Licence.

2. The Licensee shall conduct all activities in such a way as to minimize impacts on surface drainage and the Licensee shall immediately undertake corrective measures in the event of any impacts on surface drainage.
3. With respect to access road, pad construction or other earthworks, the deposition of debris or sediment into or onto any water body is prohibited. These materials shall be disposed a distance of at least thirty-one (31) metres from the ordinary High Water Mark in such a fashion that they do not enter the water.
4. The Licensee shall not mobilize heavy equipment or vehicles for trenching or other activities unless the ground surface is capable of fully supporting the equipment or vehicles without rutting or gouging. Overland travel of equipment or vehicles shall be suspended if rutting occurs

PART G: CONDITIONS APPLYING TO DRILLING OPERATIONS

1. The Licensee is authorized to drill for the purposes of installing monitoring wells and/or thermistors, and other instrumentation required for the monitoring of the Waste Disposal Facilities.

PART H: CONDITIONS APPLYING TO CONSTRUCTION AND MODIFICATIONS

1. The Licensee shall provide to the Board for review, within sixty (60) days prior to the construction, detailed designs for all Waste Disposal Facilities referred to in this Licence, complete with for-construction drawings, signed and stamped by an Engineer. The designs shall consider siting, operation, monitoring, sampling, analytical methods, decommissioning and closure options and plans for the proposed Facilities.
2. The Licensee shall submit to the Board for review within sixty (60) days following construction, as-built plans and drawings of the facilities referred to in this Licence. These plans and drawings shall be stamped by an Engineer.
3. The Licensee may, without written consent from the Board, carry out Modifications to the Waste Disposal Facilities 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. such Modifications are consistent with the NIRB Screening Decision;
 - d. 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

- e. the Board has not rejected the proposed Modifications.
- 4. Modifications, for which all of the conditions referred to in Part H, Item 3 have not been met, can be carried out only with written approval from the Board.
- 5. 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 I: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

- 1. The Board has approved the Plan entitled “Spill Contingency Plan Resolute Bay Landfill Remediation, Resolute Bay Airport, Nunavut” dated April 2011 submitted as additional information with the application.
- 2. The Licensee shall provide with the next annual report, an addendum to the Plan referred to in Part I, Item 1 that addresses relevant comments received from AANDC and EC during the review of the application.
- 3. 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.
- 4. The Licensee shall conduct any equipment maintenance and servicing in designated areas and shall implement special procedures (such as the use of drip pans) to manage motor fluids and other waste so as to 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 the Approved Spill Contingency Plan;
 - b. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the AANDC Water Resources Inspector at (867) 975-4295; and
 - c. Submit to the AANDC Water Resources Inspector on each occurrence, a detailed report including the GPS location, no later than thirty (30) days after initially reporting the event.
- 6. Licensee shall, in addition to Part H, Item 5, regardless of the quantity of releases of harmful substances, report to the NWT/NU Spill Line if the release is near or into a Water body.

PART J: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION

1. The Licensee shall carry out remediation activities on the Waste Disposal Facilities in accordance with the option selected under the “Conceptual Remedial or Risk Management Action Plan” Section of the *Phase II/III Environmental Site Assessment Final Report, Resolute Bay Airport Landfill Sites, Resolute Bay Nunavut*, dated March 2010. The Licensee is required to submit to the Board for review within sixty (60) days following the completion of remediation activities an updated stand-alone Remedial Action Plan that reflects the actual remedial options implemented for the Resolute Bay Landfill Remediation Project.
2. The Licensee shall complete all restoration work for the temporary camp facilities and waste disposal activities not included under Part J, Item 1 of this Licence, prior to the expiry of this Licence.
3. The Licensee shall backfill and restore all temporary containment sumps to the pre-existing natural contours of the land.
4. All disturbed areas shall be stabilized and re-vegetated as required, upon completion of work, and restored as practically as possible to a pre-disturbed state.

PART K: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Licensee shall submit to the Board for approval, at least sixty (60) days prior to initiating Long-Term Monitoring for the Project, a Post-closure Monitoring Plan for the site that includes information on Long-Term Monitoring of the Waste Disposal Facilities and that addresses water quality monitoring, site stability and the need for thermal monitoring and ground water monitoring.
2. The Licensee shall maintain Monitoring Program Stations at the following locations:

Monitoring Program Station Number	Description	Status
RBL-1	Monitoring Well installed up-gradient of the Solid Waste Landfill	Active (Water Quality)
RBL-2	Monitoring Well installed down-gradient of the Solid Waste Landfill	Active (Water Quality)
RBL-3	Monitoring Well installed down-gradient of the Solid Waste Landfill	Active (Water Quality)
RBL-4	Discharge from the Solid Waste Landfill	Active (Water Quality)
RBL-5	Monitoring Well installed up-gradient of the Historic Landfill	Active (Water Quality)

RBL-6	Monitoring Well installed down-gradient of the Historic Landfill	Active (Water Quality)
RBL-7	Monitoring Well installed down-gradient of the Historic Landfill	Active (Water Quality)
RBL-8	Discharge from the Historic Landfill	Active (Water Quality)
RBL-10	Monitoring Well installed up-gradient of the Vehicle Storage Area (Site 1)	Active (Water Quality)
RBL-11	Monitoring Well installed down-gradient of the Vehicle Storage Area (Site 1)	Active (Water Quality)
RBL-12	Monitoring Well installed down-gradient of the Vehicle Storage Area (Site 1)	Active (Water Quality)
RBL-13	Discharge from the Vehicle Storage Area (Site 1)	Active (Water Quality)
RBL-14	Monitoring Well installed up-gradient of the Vehicle Storage Area (Site 2)	Active (Water Quality)
RBL-15	Monitoring Well installed down-gradient of the Vehicle Storage Area (Site 2)	Active (Water Quality)
RBL-15	Monitoring Well installed down-gradient of the Vehicle Storage Area (Site 2)	Active (Water Quality)
RBL-16	Discharge from the Vehicle Storage Area (Site 2)	Active (Water Quality)

3. The Licensee shall measure and record, in cubic metres, the daily quantities of Effluent discharged from the Waste Disposal Facilities at Monitoring Program Stations RBL-4, RBL-8, RBL-13, and RBL-16.
4. The Licensee shall sample the Effluent, prior to discharge, at Monitoring Program Stations RBL-4, RBL-8, RBL-13, and RBL-16 and analyze for the following parameters:

pH	Conductivity
Total Suspended Solids (TSS)	Ammonia Nitrogen
Nitrate – Nitrite	Oil and Grease (visual)
Total Phenols	Sulphate
Total Hardness	Total Alkalinity
Sodium	Potassium
Magnesium	Calcium
Chloride	Total Cadmium
Total Copper	Total Chromium
Total Iron	Total Lead
Total Mercury	Total Nickel
Total Zinc	Total Phosphorous
Total Aluminum	Total Manganese
Total Cobalt	Total Arsenic
Total Petroleum Hydrocarbons (TPH)	

Polycyclic Aromatic Hydrocarbons (PAH)
Benzene, Toluene, Ethylbenzene, Xylene
(BTEX)

5. The Licensee shall sample twice per year (once during spring freshet and once during mid-summer) water at Monitoring Program Stations RBL-1, RBL-2, RBL-3, RBL-5, RBL-6, RBL-7, RBL-9, RBL-10, RBL-11, RBL-12, RBL-14 and RBL-15 for the purpose of analyzing samples for the parameters listed under Part K Item 4.
6. The Licensee shall determine the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where wastes associated with camp operations are deposited.
7. The Licensee shall monitor compliance with respect to Part D Item 9, by collecting a representative sample once at the beginning of discharge, upon initial release and prior to the end of discharge, from the Discharge Points of the Waste Disposal Facilities at Monitoring Program Station RBL-4, RBL-8, RBL-13, and RBL-16.
8. The Licensee shall monitor compliance with respect to Part D Item 9 by collecting a representative composite sample from the total volume to be released from the Final Discharge Points identified in Part K, Item 2 of this Licence.
9. The Licensee shall assess and record, when carrying out the project, the concentration of F1 – F4 fractions in petroleum hydrocarbon contaminated soil, according to the CCME *Canada-Wide Standard for Petroleum Hydrocarbons (PHC) in Soil*, from all sources and excavations associated with the project.
10. 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.
11. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing
12. The Licensee shall submit to the Board for review, at least sixty (60) days prior to the first release of any effluent, a Quality Assurance/Quality Control Plan that conforms to the guidance document “*Quality Assurance (QA) and Quality Control (QC) Guidelines For Use by Class “B” Licensees in Collecting Representative Water Samples in the Field and for Submission of a QAQC Plan*” INAC (1996). The Plan shall be acceptable to an accredited laboratory and include a covering letter from the accredited laboratory confirming acceptance of the Plan for analyses to be performed under the Licence.