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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No.: **1BR-SIM1520**

August 21, 2015

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RE: NWB Renewal/Amendment Licence No. 1BR-SIM1520

Dear Ms. Lamontagne and Ms. Arsenault:

Please find attached Licence No. **1BR-SIM1520** issued to the Department of Indian Affairs and Northern Development (DIAND) 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 (Nunavut Land Claims Agreement or NLCA)*. 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. The NWB recommends that an application for the renewal of this Licence 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 by interested persons on issues identified. This information is attached for your consideration.^{1,2}

Sincerely,

Thomas Kabloona
Nunavut Water Board
Chair

TK/ce/ri

Enclosure: Licence No. **1BR-SIM1520**
Comments: AANDC

Cc: Kitikmeot Distribution List

1 Aboriginal Affairs and Northern Development Canada (AANDC) – Water Resources Division, May 14, 2015;
2 Kitikmeot Inuit Association (KIA), May 6, 2015.

DECISION

LICENCE NUMBER: 1BR-SIM1520

This is the decision of the Nunavut Water Board (NWB) with respect to an application dated July 10, 2014, for the renewal of a Water Licence made by:

ABORIGINAL AFFAIRS AND NORTHERN DEVELOPMENT CANADA – CONTAMINATED SITES

to allow for the use of Water and deposit of Waste during Post-Remediation and Long-term Monitoring activities at the CAM-D (Simpson Lake) Intermediate Distant Early Warning (DEW) Line site, which is located approximately 80 km west of Kugaaruk and 120 km southeast of Taloyoak within the Kitikmeot Region, Nunavut generally located at the geographical coordinates as follows:

Latitude: 68° 35' N Longitude: 91° 57' W

DECISION

After having been satisfied that the application was for a location within an area in which there is no valid Land Use Plan³ and was Exempt from Screening by the Nunavut Impact Review Board⁴ pursuant to Section 12.4.3 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* (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 1BR-SIM1520 be issued subject to the terms and conditions contained therein. (Motion #: 2015-B1-027)

SIGNED this 17th day of August 2015 at Gjoa Haven, NU.

Thomas Kabloona
Nunavut Water Board
Chair
TK/ce/ri

3 Nunavut Planning Commission (NPC) Land Use Conformity Determination, dated May 11, 2015.

4 Nunavut Impact Review Board (NIRB) Exemption from Screening Report, dated May 11, 2015.

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I. BACKGROUND

The CAM-D (Simpson Lake) Intermediate DEW Line Site is centrally located on the Boothia Peninsula, approximately 80 km west of Kugaaruk and 120 km southeast of Taloyoak, within the Kitikmeot Region, Nunavut, at the general latitude of 68°35'N and general longitude 91°57'W.

The CAM-D (Simpson Lake) Intermediate DEW Line (CAM-D) Site operated from 1957 until 1963, when the site was vacated and abandoned. In 1985, the Department of Indian Affairs and Northern Development (DIAND), Department of National Defence (DND) and Environment Canada (EC) conducted a partial cleanup of the CAM-D Site and identified related environmental hazards. A Short Range Radar facility was constructed between 1992 and 1995, 1 km east of the CAM-D site. This site will not be remediated during the CAM-D site project. A 1994 scientific investigation of the site was conducted by the Environmental Sciences Group of Royal Roads Military College where sampling took place and Tier I and Tier II contaminated soils were identified. As has been the practice at similar DEW line facilities, a detailed site investigation was undertaken prior to the commencement of remediation activities. Based on this assessment, a comprehensive site remediation work plan and reference document, *CAM-D DEW Line Site, Simpson Lake, Nunavut, Remedial Action Plan, dated December 2007* (RAP) was developed whereby remediation options for each waste stream identified at the site were proposed, and critically evaluated, to discuss potential risks, advantages and disadvantages of each remediation option. The Remedial Action Plan (RAP) was designed to meet cleanup objectives, in accordance with the *AANDC Abandoned Military Site Remediation Protocol, March 2005* as follows:

- Restore the site to an environmentally safe condition;
- Prevent the migration of contaminants into the Arctic ecosystem;
- Remove physical hazards for the protection of human health and safety; and
- Implement a cost effective remediation solution.

The CAM-D site remediation commenced in 2010, the materials destined for southern disposal were sent to CAM-3 via cat train in March 2012 and final demobilization from CAM-3 to southern disposal sites occurred September 2012. To contain the soils and waste left on site, a non-hazardous waste landfill (NHWL) was constructed in 2012. The remediation activities were completed in 2012 and the remediation included the following activities:

- Mobilization of equipment, materials and personnel to site by winter cat train;
- Airstrip improvement;
- Road improvement;
- Camp set-up and operation;
- Quarrying of gravel and overburden materials;
- Landfill construction and closure;

- Sewage Lagoons construction, operation and decommissioning;
- Hazardous materials removal, handling and transportation;
- Temporary storage on site for hazardous materials, equipment and fuels;
- Building and infrastructure demolition;
- Debris consolidation and disposal;
- Excavation of petroleum hydrocarbon (PHC) contaminated soils and disposal off site;
- Excavation and removal of metals and PCB contaminated paint from site;
- Site grading; and
- Demobilization of equipment, removal of materials/wastes including Hazardous wastes and personnel.

A temporary camp was set up at the site to facilitate the remediation activities. Upon completion of site remediation, all camp facilities, including equipment and excess fuel, were removed from the site. The post remediation monitoring activities has followed the schedule identified in the approved “*CAM-D (Simpson Lake) Monitoring Plan*”, dated February 22, 2010 and submitted on July 17, 2014. The three phases recommended by the protocol are:

- Phase I: years 1, 3 and 5;
- Phase II: years 7, 10, 15 and 25 (if required); and
- Phase III: beyond year 25 (if required).

Monitoring at the CAM-D (Simpson Lake) is currently in Phase I of the post-remediation monitoring plan. A Long-Term Monitoring report (developed by Franz Environmental Inc.) has been provided for Phase I years 1 and 3 monitoring activities, corresponding to 2012 and 2014 respectively. The Long-Term Monitoring report submitted details the activities carried-out: observation of the natural environment (water, visual, and soil), data/sample collection, picture recordings, site map updates and operational recommendations. The site is anticipated to begin Phase I, year 5 monitoring activities in 2016. The visit will be carried out during the summer months of June, July, August or September. An evaluation of Phase I monitoring data would be carried out at the end of the 2016 program to confirm whether or not additional monitoring is required. If additional monitoring (Phase II) is required, it will commence in 2018. It is therefore noted that from 2012 to 2018, the Licensee has planned to conduct four (4) biennial site monitoring visits.

II. FILE HISTORY

On **November 25, 2008**, the Nunavut Water Board (NWB) issued Licence 1BR-SIM0813 which allowed for water use and waste disposal associated with the remediation of the CAM-D (Simpson Lake) Intermediate Distant Early Warning (DEW) Line Site.

On **June 17, 2010**, the NWB issued an amendment for Licence 1BR-SIM0813, which amended the terms and conditions with respect to use of water and deposit of waste during camp

operations (change of camp location, water source and monitoring stations) and the implementation of a remedial action plan.

III. PROCEDURAL HISTORY

On July 10, 2014, an application to renew and amend Water Licence No. 1BR-SIM0813 was filed with the NWB by the Department of Indian Affairs and Northern Development (DIAND) for water use and waste disposal activities associated site Post-remediation Long-term monitoring activities at the CAM-D (Simpson Lake) Intermediate DEW Line Site, located approximately 80 km west of Kugaaruk and 120 km southeast of Taloyoak, within the Kitikmeot Region, Nunavut, at the general latitude of 68°35'N and general longitude 91°57'W.

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* S.55.1 and S.55.4, due to delayed submissions of Phase I monitoring results and the Long-Term Monitoring Report for 2014, the notice was distributed to interested parties only on April 8, 2015 with a comment period deadline of May 8, 2015. An extension was granted, per the request of Aboriginal Affairs and Northern Development Canada's Water Resources Division (AANDC-WRD), till May 15, 2015. Comments were received from AANDC-WRD on May 14, 2015.

IV. GENERAL CONSIDERATIONS

Term of the Licence

In accordance with the *Act* S. 45, the NWB may issue a licence for a term not exceeding twenty-five years. The applicant requested a twenty-three (23) year renewal licence under which it plans to monitor, assess and confirm the stability of the landfill at the project site at specific intervals during the monitoring program. In its review of the Application AANDC-WRD supported the request for a twenty-three (23) year licence term. In determining an appropriate term of a Water Licence, the Board considers a number of factors, including the compliance record of the Applicant and the risk to Water resources posed by the undertaking. The Licensee has not demonstrated a strong compliance record since the initial Licence was issued in 2008. Annual reports have been submitted past the deadline stipulated in Part B, item 1 of the issued Water Licence. Moreover, the annual reports for 2008, 2009 and 2011 are currently outstanding. A long term monitoring plan (dated February 22, 2010) was submitted on July 17, 2014, considerably past the required deadline of May 30, 2013 in accordance with Part K, item 11 of the expired Licence 1BR-SIM0813. In addition, Section 4.4 and Appendix B in the "*Long Term Monitoring, 2012 CAM-D, Simpson Lake, Nunavut*" and the "*Long Term Monitoring, 2014 CAM-D, Simpson Lake, Nunavut*" reports, prepared by Franz Environmental Inc., highlight a few on-site monitoring concerns that will be further discussed in the *Monitoring* section below.

Given the current stage of the remediation program, the Board has decided to issue the Licence for a term of five (5) years, during which the Applicant may complete Phase I monitoring, assess

the results, and determine the characteristics of a Phase II Monitoring Program. The NWB believes that a term of approximately five (5) years is appropriate and will allow the Licensee the opportunity to: properly carry out the terms and conditions of the Licence, complete the proposed Phase I long-term remediation plans (expected to be completed at the end of 2016), and revise the Phase II long-term remediation plans, as detailed in the approved “*CAM-D (Simpson Lake) Monitoring Plan*”, dated February 22, 2010. The NWB has extended the Licence term to two years after this first monitoring event in Phase II (i.e 2020), in order to allow the Licensee necessary time to conduct two (2) more biennial site visits, and to consolidate, assess and respond appropriately to the accumulated results, at that point in time.

Water Use

Current site activities only pertain to Long-Term monitoring visits every 2 years, for a maximum duration of 2 days on site. These activities do not require the establishment of a remote camp and therefore, water usage is mainly limited to the water collected for sampling activities, expected to be a maximum of one (1) m³ per day.

Based upon the projected requirements of the Licensee, the Board has set the terms and conditions in the Water Licence, which govern water usage. The maximum permitted usage of Water by the Licensee, over the term of the Water Licence and for all purposes, has been set at one (1) m³ per day.

Deposit of Waste

The Licensee has indicated that no remote camp sites will need to be established for the monitoring activities. It is expected that no sewage will be generated and that all solid waste produced during monitoring activities (estimated at 0.5 m³ for paper towels, Teflon tubing, filters, etc.) will be backhauled off-site and disposed of in an approved landfill site.

The Board, having duly considered these issues and the submission of the Applicant, has set the terms and conditions in the Water Licence, which govern the disposal of solid waste during the proposed undertaking accordingly.

Annual Report

The requirements for an Annual Report 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. Since the onset of this Licence, in 2008, until the issuance of this amend and renew Licence, in 2015, the Board has received annual reports for 2010, 2012, 2013 and 2014.

The Phase I long-term monitoring at CAM-D, Simpson Lake, involves intermittent monitoring events and therefore, the Board does not require a comprehensive Annual Report from the Licensee during non-active years, however, in place of an Annual Report the Licensee shall continue to provide written notification to the Board indicating the activity and if applicable, that no sampling events occurred at the site for the given year. These conditions are reflected in the Licence under Part B. This information is kept in the NWB's public registry and made available to interested persons upon request. In addition, the NWB maintains reporting information on its FTP site, which can be accessed using the following link: <ftp.nwb-oen.ca>

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. As stipulated in AANDC-WRD's review of the submitted application materials, the Licensee is requested in Part H, item 1 of this Licence to revise Figure 3 and 6 in the approved "*Spill Contingency Plan CAM-D Dew Line Environmental Remediation Simpson Lake, Nunavut*" for the above mentioned project which was submitted on September 9, 2010. These figures should reflect the updated site diagrams included in the approved report "*Long Term Monitoring, 2014 CAM-D, Simpson Lake, Nunavut*", submitted on March 23, 2015. The requirements for the Spill Contingency Plan is detailed under Part H.

Abandonment and Restoration (A&R)

According to information provided by the Licensee, the abandonment and restoration activities for the site were completed in 2012. The Licensee initiated the post-construction monitoring program in 2012 and plans to continue doing so for a period of 25 years. Under the terms and conditions in the Licence applying to abandonment and restoration, the Licensee is required to remove any remaining equipment and facilities associated with the project upon completion. Additional conditions for restoration have been included under Part I of this Water Licence.

Monitoring

The Licensee shall conduct its monitoring activities in accordance with the approved "*CAM-D Simpson Lake Monitoring Plan*", dated February 22, 2010, and the recommendations included in the "*Long Term Monitoring, 2012 CAM-D, Simpson Lake, Nunavut*" and the "*Long Term Monitoring, 2014 CAM-D, Simpson Lake, Nunavut*" reports prepared by Franz Environmental Inc. The Monitoring Program indicates that the Phase I long-term monitoring of the landfills is scheduled every other year (biennial, i.e year 1, 3 and 5) thus concluding its fifth year in 2016, the first monitoring event in phase II follows this same monitoring frequency, and is scheduled for year 7 (i.e 2018). The NWB has extended the Licence term to two years after this first

monitoring event in Phase II (i.e 2020), in order to allow the Licensee necessary time to consolidate, assess and respond appropriately to the accumulated results from monitoring the site biennially. As stipulated in Section 2.3 of the Monitoring Program, it is understood that the decision to conduct less frequent monitoring in Phase II (i.e year 10, 15 and 25) will rest on the evaluation of the monitoring data from Phase I.

Section 4.4 and Appendix B of both the “*Long Term Monitoring, 2012 CAM-D, Simpson Lake, Nunavut*” and the “*Long Term Monitoring, 2014 CAM-D, Simpson Lake, Nunavut*” reports, prepared by Franz Environmental Inc., indicated that the Monitoring Well 2 has not undergone a full analysis because it was completely frozen during the site visit for 2012 and partially frozen in 2014, allowing for insufficient water sample collection. Moreover, Monitoring Well 1 shows an upward spike in 2014 (from 2012) in the concentrations of some metals, resulting in concentrations greater than the upper limit of acceptability as stipulated in the Canadian Council of Ministers of the Environment (CCME) Federal Interim Groundwater Quality Guidelines⁵, notably for Total Cobalt, Total Chromium, Total Nickel, and Dissolved Lead metals.

The NWB looks to the Long Term Monitoring Reports for 2016 and 2018 for improved remediation measures and monitoring activities.

⁵ FIGQG, May 2010. [Guidance on Federal Interim Groundwater Quality Guidelines for Federal Contaminated Sites.](#)



NUNAVUT WATER BOARD WATER LICENCE RENEWAL

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 INDIAN AFFAIRS AND NORTHERN DEVELOPMENT

(Licensee)

PO BOX 2200, IQALUIT, NUNAVUT X0A 0H0

(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use Water or deposit Waste for a period subject to restrictions and conditions contained within this Licence:

Licence Number/Type: 1BR-SIM1520 TYPE "B"

Water Management Area: KAZAN WATERSHED (07)

Location: CAM-D (SIMPSON LAKE) INTERMEDIATE DEW LINE SITE,
KITIKMEOT REGION, NUNAVUT

Classification: INDUSTRIAL UNDERTAKING

Purpose: DIRECT USE OF WATER AND DEPOSIT OF WASTE

Quantity of Water use not
to Exceed: 1 CUBIC METRE PER DAY

Date of Licence Issuance: AUGUST 17, 2015

Expiry of Licence: AUGUST 16, 2020

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

Thomas Kabloona,
Nunavut Water Board
Chair

Licence No. 1BR-SIM1520

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. Scope

- a. This Licence allows for the implementation of a post-closure monitoring program following remediation activities, during an undertaking classified as Industrial at the CAM-D (Simpson Lake) Intermediate DEW Line (CAM-D) Site, located approximately 80 km west of Kugaaruk and 120 km southeast of Taloyoak, within the Kitikmeot Region, Nunavut, at the general latitude of 68°35'N and general longitude 91°57'W:
- b. 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;
- c. 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-SIM1520

“**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 the application for amendment and renewal of Licence No. 1BR-SIM0813, received by the NWB on July 10, 2014;

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

“CAM-D” means the former Distant Early Warning (DEW) Line site at Simpson Lake, the current remediation site;

“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;

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

“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- SIM0811 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;

“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;

“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;

“Non-Hazardous Waste Disposal Facility” comprises the Non-Hazardous Waste Landfill as described in the “*CAM-D DEW Line Site Simpson Lake, Nunavut, Remedial Action Plan (December, 2007)*” submitted February 7, 2008

“Post Remediation Plan” refers to the Long-Term “*CAM-D (Simpson Lake Monitoring Plan)*” dated February 22, 2010 and submitted on July 17, 2014.

“Regulations” means the Nunavut Waters Regulations SOR 2013/69 18th April, 2013;

“Sewage” means all toilet Wastes and greywater;

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

“Solid Waste Disposal Facilities” comprises the area and associated structures designed to contain solid Waste and to permanently isolate the contents of the disposal facility from the environment as described in the Application for Water Licence filed by the Applicant on January 29, 2003

“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 a structure or depression that collects, controls, and filters liquid waste before it is released to the environment. This structure should be designed to prevent erosion while allowing percolation of liquid waste;

“Tier I Soil” means soil containing contaminant concentrations within the types and ranges defined as Dew Line Cleanup Criteria (DCC) Tier I in Appendix B of the *AANDC Abandoned Military Site Remediation Protocol, March 2005* (see Table 1);

“Tier II Soil” means soil containing contaminant concentrations within the types and ranges defined as Dew Line Cleanup Criteria (DCC) Tier II in Appendix B of the *AANDC Abandoned Military Site Remediation Protocol, March 2005* (see Table 1);

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

“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;

“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;

“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.

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

“Water Supply Facilities” comprises the lake (either Simpson or Freshwater Lake) utilized as a water source and associated infrastructure designed to collect and supply water;

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 a Monitoring Report on the appurtenant undertaking with the Board no later than March 31st of the year following the calendar year being reported, according to the monitoring schedule presented in section 2.3 of the “CAM-D Simpson Lake Monitoring Plan”, dated February 22, 2010. The Report shall contain the following information:
 - a. A summary report of Water use activities;

- b. A summary of any construction work, modification and major maintenance work (including as-built diagrams) carried out on existing Solid Waste Disposal Facilities;
 - c. Tabular summaries for all data and information generated under the “Monitoring Program”;
 - d. An analysis of data collected during the Monitoring Program and a brief description of any future studies planned by the Licensee;
 - e. The results of any review conducted and any recommendations regarding any changes to the Monitoring Plan and/or remediation requirements;
 - f. A summary of remediation work undertaken during the year and an outline of work anticipated for the following year;
 - g. Water use 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. Any revisions to the remediation plan;
 - j. Any updates or revisions for manuals and plans as required by changes in operation and/or technology;
 - k. 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;
 - l. A brief summary of work done to address concerns or deficiencies listed in the inspection reports and/or compliance reports prepared by an Inspector;
 - m. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence; and
 - n. Any other details on Water use requested by the Board by year being reported.
2. In years where no monitor events occur, pursuant to Part B, Item 1, the Licensee shall file a written notice with the Board, informing it that no monitoring event took place for the given year, and/or also indicating what activities did take place (including licence site inspections, reports filed, updated plans, etc.). This written notice shall be submitted no later than March 31st of the year following the calendar year being reported.
 3. 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.
 4. 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.
 5. The Monitoring Program and compliance dates specified in the Licence may be modified at the discretion of the Board.
 6. 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 objective and will notify the Licensee in writing of acceptance, or rejection or alterations of the Plan.

7. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
8. 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.
9. The Licensee shall post signs in the appropriate areas to identify the stations of the Monitoring Program and to inform the public of the location of the Landfill. All signage postings shall be in the Official Languages of Nunavut.
10. 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:**
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
11. 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.
12. 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.

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

PART C: CONDITIONS APPLYING TO WATER USE

1. The volume of Water for the purpose of groundwater sampling shall not exceed one (1) cubic metre per day.
2. The Licensee shall not remove any material from below the ordinary High Water Mark of any water body.
3. The Licensee shall not conduct any activity that will cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
4. The Licensee shall implement and maintain sediment and erosion control measures prior to and during the operation to prevent entry of sediment and/or dust into Water. .
5. 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.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

1. The Licensee shall locate areas designated for waste disposal including all pump-out water 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 shall not practice on-site land filling of domestic waste, unless otherwise approved by the Board in writing.
3. The Licensee shall provide to the Board, documented authorization from any community in Nunavut receiving wastes from the CAM-D Simpson Lake DEW Line Site monitoring program prior to any backhauling and disposal of wastes to those communities.
4. The Licensee shall backhaul and dispose of all hazardous wastes, waste oil and non-combustible waste generated through the course of the operation at a licensed waste disposal site.
5. 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, Part B, Item 1.

PART E: CONDITIONS APPLYING TO THE UNDERTAKING

1. The Licensee shall conduct all activities in such a way as to minimize impacts on surface drainage and immediately undertake any corrective measures in the event of any impacts on surface drainage.
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 minimize disturbance to terrain, permafrost and drainage during movement of contractor's equipment and personnel around the site during post closure monitoring activities.
4. All sites affected by sampling 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.
5. The Licensee shall implement proper handling, storage and transportation procedures for hazardous materials to prevent entry to any water body.

PART F: CONDITIONS APPLYING TO DRILLING OPERATIONS

1. In order to improve on-site monitoring, if required, the Licensee is authorized to drill and install monitoring wells.
2. The Licensee shall not conduct any land based drilling within thirty one (31) metres of the ordinary High Water Mark of any water body, unless otherwise approved by the Board in writing.
3. The Licensee shall dispose of all drill wastes in a sump or an appropriate natural depression at a distance of at least thirty one (31) metres from the ordinary High Water Mark of any adjacent water body, where any flow into a water body is not possible and no additional impacts are created.

PART G: CONDITIONS APPLYING TO CONSTRUCTION AND MODIFICATIONS

1. The Licensee may, without written consent from the Board, carry out Modifications to
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the Water Supply Facilities and 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. 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 G, Item 1 have not been met can be carried out only with 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 H: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

1. Licensee shall submit an updated Spill Contingency Plan to address comments provided by AANDC-WRD during the review of this application. Revisions to the Plan ("*Spill Contingency Plan CAM-D Dew Line Environmental Remediation Simpson Lake, Nunavut*") for the above mentioned project which was submitted on September 9, 2010) are to be submitted in the form of an addendum to the Board, to be submitted to the Board by March 31, 2016.
2. 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, unless directed otherwise by the Board.
3. The Licensee shall prevent any chemicals, petroleum products or wastes associated with the project from entering water. All sumps, fuel caches and hazardous waste shall be located a minimum of thirty one (31) metres above the ordinary High Water Mark of any adjacent water body and inspected on a regular basis.
4. The Licensee shall ensure that 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 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 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. The 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 I: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION

1. The Licensee shall backfill and restore, all temporary containment sumps, to the pre-existing natural contours of the land.
2. All roads and airstrip, if any, shall be re-graded to match natural contour to reduce erosion.
3. 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
4. The Licensee shall remove from the site, all infrastructure and site materials, including all fuel caches, drums, barrels, material and equipment prior to the expiry of this Licence.
5. 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 2009. 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.
6. All disturbed areas shall be contoured and stabilized upon completion of work and restored to a pre-disturbed state.

PART J: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Board has approved the Plan entitled “*CAM-D (Simpson Lake) Monitoring Plan*” dated February 22, 2010 and submitted on July 17, 2014 as additional information with the Application. Any changes or updates to this Plan, shall be submitted as an addendum with the Annual Monitoring Reports referred to in Part B, Item 1 and 2.
2. The Licensee shall carry out the long-term monitoring activities as defined in the Monitoring Plan approved in Part J, item 1, including any amendments as approved by the board.
3. The Licensee shall conduct all sampling, sample preservation and 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.
4. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
5. The Licensee shall ensure that tabular summaries for all data and information generated under the “Monitoring Program”, as well as an analysis of data collected during the “Monitoring Program,” are provided to the Board in the Annual Report, in accordance with Part B, Item 1.
6. The Licensee shall provide the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where sources of water are utilized for all purposes.
7. The Licensee shall review the Quality Assurance/Quality Control Plan (QA/QC) and the “*CAM-D (Simpson Lake) Monitoring Plan*” for changes in operation and/or technology and modify the Plans accordingly. Any revisions to the QA/QC Plan shall be acceptable to an accredited laboratory and include, when being submitted to the Board, a covering letter from the accredited laboratory confirming acceptance of the Plan for analyses to be performed under the Licence. The revisions to the QA/QC Plan and the “*CAM-D (Simpson Lake) Monitoring Plan*” are to be submitted in the form of an addendum to be included with the Annual Report, unless directed otherwise by the Board.
8. The Licensee shall submit a Preliminary Phase II Monitoring Summary Report as part of the relevant Annual Report. The Report summarize data collected during Phase I and II monitoring, and include information on the integrity of the Waste Disposal Facilities. The Report shall also address whether the facilities have performed as expected and

encased in permafrost. The report must include an assessment of how the facilities are expected to perform in the long term as well as appropriate recommendations.

9. Additional monitoring requirements may be imposed by the Inspector.

Table No.1
(From AANDC Abandoned Military Site Remediation Protocol)
DEW Line Clean-up Criteria (DCC)^a

Substance	DCC Tier I^{bc} (mg/L)	DCC Tier II^d (mg/L)
Arsenic	-	30
Cadmium	-	5.0
Chromium	-	250
Cobalt	-	50
Copper		100
Lead	200	500
Mercury	-	2.0
Nickel	-	100
Zinc	-	500
PCB's	1.0	5.0

a. These criteria were adopted specifically for the cleanup of Arctic DEW Line Sites from the 1991 versions of the Quebec Soil Contamination Indicators and the Canadian Council of Ministers of the Environment Interim Canadian Environmental Criteria for Contaminated Sites.

b. Soil criteria are given in parts per million, ppm.

c. Soils containing lead and/or PCBs at concentrations in excess of DCC I, but less than DCC II, may be landfilled,

d. Soils containing one or more substrates in excess of DCC II must be containerized - i.e. removed in a manner which precludes contact with the Arctic ecosystem.