



July 13, 2017

David A. Brown
Staff Environmental Engineer
Shell Canada Energy
150 N. Dairy Ashford Road
Houston, Texas 77079

Dear Mr. Brown:

Re: N7L1-1834 – Shell Canada Energy, Camp Farewell – Term Amendment of Type “B” Water Licence

The Inuvialuit Water Board (IWB) is pleased to approve a term amendment of Water Licence N7L1-1834 for closure and remediation and post monitoring activities. In this regard, all terms and conditions for N7L1-1834 will remain as originally issued with the exception of:

1. the extension of the expiry date to July 17, 2029;
2. Part B: General Conditions, Item 12; and
3. Part D: Conditions Applying to Waste Disposal, Item 16.

Each of these are detailed in the attached licence amendment.

A copy of the amended Terms and Conditions and all documentation associated with the term amendment of the licence has been filed in the Public Register. Copies are available at the IWB office and on the IWB Electronic Register located on the IWB website: www.inuvwb.ca.

The IWB appreciates the cooperation of Shell Canada Energy in complying with the Terms and Conditions of the Water Licence. Should you have any questions or concerns, please contact Mardy Semmler, Executive Director, at (867) 678-2942.

Sincerely,

A handwritten signature in black ink, appearing to read 'Roger Connolly', written over a circular stamp or seal.

Roger Connolly
Chairperson

Attachments

Copied to: Lloyd Gruben, ENR Water Resources Officer - Inuvik Region



INUVIALUIT WATER BOARD LICENCE AMENDMENT

Licensee	Shell Canada Energy
Licence Number	N7L1-1834
Effective Date of Amendment	July 18, 2017

Pursuant to the *Waters Act* and Waters Regulations the Inuvialuit Water Board hereby grants the following Licence Amendment.

Term of Water Licence

The current expiry date has been extended to July 17, 2029 to ensure consistency with the Closure and Reclamation Plan that includes an eight (8) year monitoring, maintenance, and reporting program following the completion of the permanent closure activities.

Part B: General Conditions

12. Consultation records, including a summary, with the Hunters and Trappers Committee (HTC) of Tuktoyaktuk must be submitted to the IWB at least thirty (30) days prior to conducting any activities at the site.

Part D: Conditions Applying to Waste Disposal

16. A barge waste management and disposal plan must be submitted to the IWB at least thirty (30) days prior to mobilization of the barge to the site.

This Licence is amended and recorded at Inuvik, Northwest Territories.

INUVIALUIT WATER BOARD

Chairperson

July 13, 2017
Date

PART A: SCOPE AND DEFINITIONS

1. Scope

- a) This Licence entitles Shell Canada Energy to use water and dispose of Waste as an industrial undertaking associated with oil and gas exploration and development in the Mackenzie Delta at Farewell Camp and Stockpile Site (Camp Farewell) located at Latitude 69°12'30" North, and Longitude 135°06'04" West, Northwest Territories;
- 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 *Northwest Territories Waters 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 automatically amended to conforming to such Regulations; 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.
- d) This Licence is issued subject to the conditions contained herein with respect to the use of Waters as prescribed in Section 8 of the *Act* and the deposit of Waste to any Waters as prescribed in Section 9 of the *Act*.

2. Definitions

In this Licence: **N7L1-1834**

"Act" means the *Northwest Territories Waters Act*;

"Analyst" means an Analyst designated by the Minister under Section 35(1) of the *Northwest Territories Waters Act*;

“Average Concentration” means the discrete average of up to four (4) consecutive analytical results submitted to the Board in accordance with the sampling and analysis requirements specified in the “Surveillance Network Program”;

“Board” means the Northwest Territories Water Board established under Section 10 of the *Northwest Territories Waters Act*;

“Freeboard” means the vertical distance between water line and the lowest elevation of the effective water containment crest on a dam or dyke’s upstream slope;

“Geotechnical Engineer” means a professional engineer registered with the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists whose principal field of specialization is the design and construction of earthworks in a permafrost environment;

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

“Inspector” means an Inspector designated by the Minister under Section 35(1) of the *Northwest Territories Waters Act*;

“Licensee” means the holder of this Licence;

“Minister” means the Minister of Aboriginal Affairs and Northern Development Canada (AANDC);

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

“Regulations” mean Regulations proclaimed pursuant to Section 33 of the *Northwest Territories Waters Act*;

“Sewage” means all toilet Wastes and Greywater;

“Sewage Treatment Facilities” comprises the area and engineered structures designed to contain Sewage as identified in the project description and also include a Sump constructed of impervious material and/or with an impervious liner;

“Sump” means an excavation for the purpose of catching or storing water and/or Waste;

“Waste” means Waste as defined by Section 2 of the *Northwest Territories Waters Act*;

“Waste Disposal Facilities” mean all facilities designated for the disposal of Waste and include the Sewage disposal facilities, solid Waste disposal facilities, and bagged toilet Wastes disposal facilities;

“Water Supply Facilities” mean all facilities designed to collect, treat and supply water for industrial purposes; and

“Waters” mean Waters as defined by Section 2 of the *Northwest Territories Waters Act*;

PART B: GENERAL CONDITIONS

1. The Licensee shall file an Annual Report with the Board not later than March 31st of the year following the calendar year reported which shall contain the following information:
 - a) the monthly and annual quantities in cubic metres of fresh water obtained from all sources;
 - b) the monthly and annual quantities in cubic metres of each and all Waste discharged;
 - c) the location and direction of flow of all Waste discharged to the water or the land;
 - d) a summary of the monthly and annual quantities of Waste stored on site and transported off site;
 - e) the results of sampling carried out under the “Surveillance Network Program”;
 - f) a summary of any Modifications carried out on the Water Supply Facilities and Sewage Treatment Facilities, including all associated structures;
 - g) a list of any spills and unauthorized discharges;
 - h) details on the restoration of any Sumps;
 - i) a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;

- j) a summary of any studies requested by the Board that relate to Waste disposal, water use, or reclamation, and a brief description of any future studies planned;
 - k) notation of updates and/or revisions to the approved Spill Contingency Plan, Waste Disposal Facilities operations and maintenance plan, and sewage treatment plan;
 - l) an outline of any spill training and communications exercises carried out; and
 - m) any other details on water use or Waste disposal requested by the Board within forty-five (45) days before the annual report is due.
2. The Licensee shall comply with the "Surveillance Network Program" annexed to this Licence, and any amendment to the said "Surveillance Network Program" as may be made from time to time, pursuant to the conditions of this Licence.
 3. The "Surveillance Network Program" and compliance dates specified in the Licence may be modified at the discretion of the Board.
 4. The Licensee shall, within thirty (30) days of the issuance of this Licence, submit to the Board for approval a map or drawing indicating the location of all Surveillance Network Program sampling stations.
 5. The Licensee shall, within thirty (30) days of the issuance of this Licence, post the necessary signs to identify the stations of the "Surveillance Network Program". All postings shall be located and maintained to the satisfaction of an Inspector.
 6. Any meters, devices or other such methods used for measuring the volumes of water used or Waste disposed and discharged shall be installed, operated and maintained by the Licensee to the satisfaction of an Inspector.
 7. The Licensee shall immediately report to the 24 Hour Spill Report Line (867-920-8130) any spills which are reported to, or observed by, the Licensee within the project boundaries.
 8. All monitoring data shall be submitted in printed form and electronically in spreadsheet format on a diskette or other electronic forms acceptable to the Board.
 9. All reports shall be submitted to the Board in printed format accompanied by an electronic copy in a common word processing format on diskette or other electronic forms acceptable to the Board.

10. Within thirty (30) days of issuance of this Licence, the Licensee shall have posted and shall maintain a security deposit in the amount of Two Million (\$2,000,000.00) Dollars pursuant to Section 17 of the Act and Section 12 of the Regulations, in a form suitable to the Minister. The security deposit shall be maintained until such time as it is fully or in part refunded by the Minister pursuant to Section 17 of the Act.
11. The Licensee shall ensure a copy of this Licence is maintained at the site of operation at all times.

PART C: CONDITIONS APPLYING TO WATER USE

1. The Licensee shall obtain water from the Middle Channel of the Mackenzie River in winter or the unnamed lake north of the camp in summer as described in the project description, or as otherwise approved by an Inspector.
2. The daily quantity of water used for all purposes shall not exceed 150 cubic metres.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

1. The Licensee shall within thirty (30) days of the issuance of this Licence, submit to the Board for approval an updated operation and maintenance plan for the Waste Disposal Facilities. This plan shall include but not necessarily be limited to details on the design, operational capacity, management and maintenance, and disposal of sludges.
2. All Sewage shall be directed to the onsite Sewage Treatment Facilities as approved by an Inspector.
3. The Sewage Treatment Facilities shall be maintained and operated in such a manner as to prevent structural failure to the satisfaction of the Inspector.
4. All Waste discharged from the onsite Sewage lagoon shall be directed to the channel of the Mackenzie River at a location approved by an Inspector.
5. There should be no discharge of floating solids, garbage, grease, free oil or foam.

6. All effluent discharged by the Licensee from the Sewage lagoon at "Surveillance Network Program" Station Number 1834-1 shall meet the following effluent quality requirements:

Sample Parameter	Average Concentration
BOD ₅	70.0 mg/L
Total Suspended Solids	70.0 mg/L
Faecal Coliforms	1 X 10 ⁴ CFU/dL
Oil and Grease	5.0 mg/L
Total Residual Chlorine (TRC)	0.1 mg/L

7. The effluent discharged shall have a pH between six (6) and nine (9) and no visible sheen of oil and grease.
8. Introduction of water to Waste for the purpose of achieving effluent quality requirements in Part D, Item 7 is prohibited.
9. A Freeboard limit of 1.0 metre shall be maintained at all times in the Sewage lagoon, or as recommended by a qualified Geotechnical Engineer and/or as approved by the Board.
10. The Licensee shall advise an Inspector at least five (5) days prior to initiating and decant of the Sewage lagoon.
11. All 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 as may be approved by an Analyst.
12. The Licensee shall contain all contaminated soil or contaminated snow in such a manner as to minimize the potential for migration of contaminants into any Waters, to the satisfaction of an Inspector.
13. The Licensee shall store, segregate and dispose of all solid and hazardous Wastes in a manner acceptable to the Inspector.
14. Unless authorized by this Licence, the Licensee shall ensure that any Wastes associated with this undertaking do not enter any water body.
15. The Licensee shall submit to the Board a copy of each agreement(s) between third parties to store, transport or dispose of Wastes. The copy submitted to the Board shall include, at a minimum, the following:

- a. type of Waste;
- b. quantities of Waste;
- c. disposal location(s), and
- d. proof of acceptance from third parties.

PART E: CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee may, without written approval from the Board, carry out Modifications to the planned undertakings provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
 - a) the Licensee has notified an Inspector in writing of such proposed Modifications at least five (5) days prior to beginning the Modifications;
 - b) such Modifications do not place the Licensee in contravention of either the Licence or the Act;
 - c) an Inspector has not, during the five (5) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than five (5) days; and
 - d) an Inspector has not rejected the proposed Modifications.
2. Modifications for which all of the conditions referred to in Part F, Item 1 have not been met may be carried out only with written approval from an Inspector.
3. The Licensee shall provide to the Board as-built plans and drawings of the Modifications referred to in this Licence within ninety (90) days of completion of the Modifications.

PART F: CONDITIONS APPLYING TO CONTINGENCY PLANNING

1. The Licensee shall submit to the Board for approval within thirty (30) days of issuance of this Licence an updated Emergency Response & Spill Contingency Plan in accordance, for example, with the *Guidelines for Spill Contingency Planning, April 2007*, developed by AANDC-Water Resources Division.

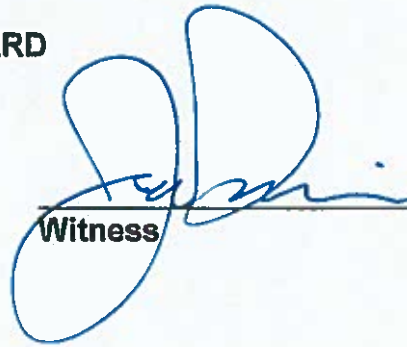
2. The Licensee will maintain a copy of the approved Emergency Response & Spill Contingency Plan onsite in a readily available location, to the satisfaction of an Inspector.
3. The Licensee shall ensure that petroleum products, hazardous material and other Wastes associated with the project do not enter any Waters.
4. The Licensee shall ensure that all containment berms are constructed of an impermeable material, to the satisfaction of an Inspector.
5. The Licensee shall ensure that fuel stored in each tank within the tank farm be no greater than 85% of the tank's capacity to allow for expansion and avoid overflows.
6. If, during the period of this Licence, an unauthorised discharge of Waste occurs, or if such a discharge is foreseeable, the Licensee shall:
 - a) report the incident immediately via the 24 Hour Spill Reporting Line (867) 920-8130; and
 - b) submit to an Inspector a detailed report on each occurrence not later than thirty (30) days after initially reporting the event.

PART G: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION

1. The Licensee shall submit to the Board for approval within one (1) year of issuance of this Licence, an updated Interim Abandonment and Restoration Plan including plans for the abandonment and restoration of the Sewage lagoon and a complete Phase II environmental site assessment of Camp Farewell. This assessment will include the full delineation of contamination (soil and water) associated with Camp Farewell operations, located both on and off the gravel base pad.
2. The Licensee shall implement this Plan as and when approved by the Board.
3. Following approval of the Plan, the Licensee shall review the Abandonment and Restoration Plan every two (2) years and shall modify the Plan as necessary to reflect changes in operations and technology. All proposed Modifications to the Plan shall be submitted to the Board for approval.

NORTHWEST TERRITORIES WATER BOARD


Chairman


Witness