

March 16, 2011

Randal Warren
Manager Reclamation & Drilling Waste
Shell Canada Limited
400- 4th Avenue S.W.
P.O. Box 100, Station M
Calgary, Alberta
T2P 2H5

Dear Mr. Warren:

Re: Issuance of a Type "B" Water Licence- Unipkat I-22

Attached is Water Licence N7L1-1831 granted by the Northwest Territories Water Board (the Board) in accordance with the *Northwest Territories Waters Act*. A copy of this Licence has been filed in the Public Registry at the Board offices in Yellowknife and in Inuvik. Water Licence N7L1-1831 has been approved for a period of two years commencing March 16, 2011 and expiring September 30, 2013. Also attached are the general procedures for the administration of licences in the Northwest Territories. Please review these carefully and address any questions to one of the Board offices.

Please be advised that this letter, with attached procedures, all inspection reports and correspondence related thereto are part of the Board public registry and are intended to keep all interested parties informed of the manner in which the licence requirements are being met. All public registry material will be considered if an amendment to the licence or its renewal is requested.

Please read all the conditions carefully and note that in accordance with the attached water licence Part B, condition 6, a security deposit in the amount of \$165,000.00 shall be posted with the Minister and copied to the Board prior to the start of the operation pursuant to section 17 of the *Northwest Territories Waters Act*. Submit payment of the security, made out to the Receiver General for Canada in the amount of \$165,000.00, to: Indian and Northern Affairs Canada, P.O. Box 1500, Yellowknife, NT, X1A 2R3 Attention: Robert Jenkins.

Supplemental information to be submitted by Licensee as required through Licence Conditions:

- Security Deposit (prior the start of operation);
- a Monitoring and Sampling Plan (May 1, 2011);
- an Annual Report (September 30, 2011, 2012);
- a Report as described in Part K, Condition 3 (Six months prior to the expiry of Licence N7L1-1831); and
- a Final Report (September 1, 2013).

The full cooperation of Shell Canada Ltd is anticipated and appreciated.

Should you have any further questions or concerns, please communicate with the Northwest Territories Water Board by telephone at (867) 678-2942 or via e-mail at info@nwtwb.com.

Sincerely,



Eddie Dillon
Chairperson
NWT Water Board

Attached: General Procedures for the administration of licences issued under the *Northwest Territories Waters Act* in the Northwest Territories
Licence N7L1-1831

Distribution: Conrad Baetz, INAC-NMDO
Robert Jenkins, INAC-WRD
Sam Bird, IEG Consultant Ltd
Patrick Clancy, ENR
Amenda Joynt, DFO
Stacey Lamber, EC

GENERAL PROCEDURES FOR THE ADMINISTRATION OF LICENCES ISSUED UNDER THE NORTHWEST TERRITORIES WATERS ACT IN THE NORTHWEST TERRITORIES

1. At the time of issuance, a copy of the licence is placed on the Northwest Territories Water Board public registry in the Yellowknife and Inuvik Offices, and is then available to the public.
2. To enforce the terms and conditions of the licence, the Minister of Indian and Northern Affairs Canada has appointed Inspectors in accordance with Section 35(1) of the *Northwest Territories Waters Act*. The Inspectors coordinate their activities with officials of the Water Resources Division of Indian and Northern Affairs Canada. The Inspector responsible for Licence N7L1-1831 is located in the North Mackenzie District Office in Inuvik.
3. To keep the Northwest Territories Water Board and members of the public informed of the licensee's conformity to licence conditions, the Inspectors prepare reports which detail observations on how each item in the licence has been met. These reports are forwarded to the licensee with a covering letter indicating what action, if any, should be taken. The inspection reports and covering letters are placed on the Northwest Territories Water Board public registry, as are any responses received from the licensee pertaining to the inspection reports. It is therefore of prime importance that you react in all areas of concern regarding all inspection reports so that these concerns may be clarified.
4. If the renewal of Licence N7L1-1831 is contemplated it is the responsibility of the licensee to apply to the Northwest Territories Water Board for renewal of the licence. The past performance of the licensee, new documentation and information, and points raised during a public hearing, if required, will be used to determine the terms and conditions of any licence renewal. Please note that if the licence expires and another has not been issued, then water and waste disposal must cease, or you the licensee, would be in contravention of the *Northwest Territories Waters Act*. An application for renewal of Licence N7L1-1831 should be made at least eight months in advance of the licence expiry date.
5. If, for some reason, Licence N7L1-1831 requires amendment, then a public hearing may be required. You are reminded that applications for amendments should be submitted as soon as possible to provide the Northwest Territories Water Board with ample time to go through the amendment process. The process may take up to six (6) months or more depending on the scope of the amendment requested.

6. Specific clauses of your Licence make reference to the Board or Inspector. The contact person, address, phone and fax number of each is:

Board: Executive Director
Northwest Territories Water Board
P.O. Box 2531
Inuvik, NT X0E 0T0
Phone No: (867) 678-2942
Fax No: (867) 678-2943

Inspector: Water Resource Officer
North Mackenzie District Office
Indian and Northern Affairs Canada
P.O. Box 2100
Inuvik, NT X0E 0T0
Phone No: (867) 777-8900
Fax No: (867) 777-2090

NORTHWEST TERRITORIES WATER BOARD

Pursuant to the *Northwest Territories Waters Act* and Regulations, the Northwest Territories Water Board, Hereinafter referred to as the Board, hereby grants to:

Shell Canada Ltd

(Licensee)

Of

Shell Canada Ltd
400- 4th Avenue S.W.
P.O. Box 100, Station M
Calgary, Alberta
T2P 2H5

(Mailing Address)

Hereinafter called the Licensee, the right to alter, divert or otherwise use water subject to the restrictions and conditions contained in the *Northwest Territories Waters Act* and Regulations made thereunder and subject to and in accordance with the conditions specified in this Licence.

Licence Number:	<u>N7L1-1831</u>
Licence Type:	<u>"B"</u>
Water Management Area:	<u>NORTHWEST TERRITORIES 07</u>
Location:	<u>Latitude: 69°11'36.07" North Longitude: 135°20'33.88" West NORTHWEST TERRITORIES</u>
Purpose:	<u>To use water and dispose of waste for Industrial undertakings</u>
Quantity of water <u>Not to be exceeded:</u>	<u>295 CUBIC METRES DAILY</u>
Effective Date of Licence:	<u>March 16, 2011</u>
Expiry Date of Licence:	<u>September 30, 2013</u>

This Licence issued and recorded at Inuvik includes and is subject to the annexed conditions.


Chairperson (Eddie Dillon)


Witness (Mike Harlow)

PART A: SCOPE AND DEFINITIONS

1. Scope

- a. This Licence entitles Shell Canada Ltd to use Water and dispose of Waste for industrial undertakings at Unipkat I-22, Latitude 69°11'36.07" North and Longitude 135°20'33.88" 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 conform with 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.

2. Definitions

In this Licence: **N7L1-1831**

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

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

"Greywater" means all liquid Waste 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 Indian and Northern Affairs Canada;

"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;

"High Water Mark" means the visible high Water mark of any lake, river, stream or other Waterbody where the presence and action of the Water is so common and usual, and so long continued, as to mark upon the soil of the bed of the lake, stream or other Waterbody, a character distinct from that of the banks thereof, both in respect to vegetation and in respect to the nature of the soil itself;

"Project" means the activities to be carried out at Unipkat I-22, NT by Shell Canada Ltd as defined in the Water License application and associated documents, which include the Project Description;

"Regulations" means Regulations proclaimed pursuant to Section 33 of the *Northwest Territories Waters Act*;

"Sewage" means all Toilet Wastes and Greywater;

"Sewage Disposal Facility" comprises the area and engineered structures designed to contain Sewage;

"Solid Waste Disposal Facility" comprises the area and associated structures designed to contain solid Waste including structures used to contain surface runoff which is associated with the Solid Waste Disposal Facility;

"Spring Freshet" means the sudden increase in flow carried by a stream as snowmelt occurs at higher elevations in the watershed;

"Toilet Wastes" means all human excreta and associated products but does not include Greywater;

"Waste(s)" means Waste as defined by Section 2 of the *Northwest Territories Waters Act*;

"Water(s)" means any Waters as defined by Section 2 of the *Northwest Territories Waters Act*; and

"Waterbody(s)" means any area that in a normal year has Water flowing or standing above ground to the extent that evidence of an ordinary high Water mark is established. Wetlands contiguous to the Waterbody are considered part of the Waterbody;

PART B: GENERAL CONDITIONS

1. The Licensee shall file annual reports no later than September 30 of 2011 and 2012 respectively and will file a Final Report no later than September 1, 2013

with the Board and an Inspector that shall contain, at a minimum, the following information:

- a. a description of the Water use activities carried out during the Project;
 - b. the total quantities in cubic metres of fresh Water obtained from all sources;
 - c. the total quantities for each type of Waste disposed of, and their disposal location(s);
 - d. the total quantities of contaminated soil or snow disposed of, their disposal location(s) and concentrations of parameters as identified in the approved site Monitoring and Sampling Plan referred to in Part J-1;
 - e. the total quantities of contaminated soil or snow that will remain onsite and concentrations of parameters as identified in the approved site Monitoring and Sampling Plan referred to in Part J-1;
 - f. the total quantities of sump material removed from the sump for disposal and, if any, the total quantities of sump material that will remain onsite;
 - g. the results of any sampling and monitoring program undertaken during and after the removal of contaminated soil and sump material;
 - h. a summary of the total volume for each type of hazardous materials stored on site and transported off site;
 - i. a summary of the remediation and restoration activities undertaken under the term of this Water Licence, including photographs, monitoring results and analytical data in relation to the effectiveness of the remediation undertaken;
 - j. a list of any spills and unauthorized discharges;
 - k. a plan of action for future remediation of the Unipkat I-22 site; and
 - l. any other details on Water use or Waste disposal requested by the Board within forty-five (45) days before the final report is due.
2. The annual reports and the final report required to be submitted to the Board and an Inspector will be unbound and reproducible by standard photocopier, accompanied by two electronic copies to the Board and one copy to an Inspector.
 3. 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 to the satisfaction of an Inspector.

4. 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.
5. The Licensee shall ensure a copy of this Licence is maintained at the site of operation at all times.
6. Prior to the use of Water for this operation or the disposal of Waste, the Licensee shall have posted and shall maintain a security deposit in the amount of **One Hundred and Sixty-Five Thousand Dollars "\$165,000.00"** for this operation pursuant to section 17(1) of the *Act* and section 12 of the Regulations. 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*.
7. The Licensee shall, at a minimum, implement all of the policies, practices, mitigation measures, recommendations and procedures for the protection of the environment referred to in its application, Project Description and other documents submitted regarding the Unipkat I-22 Project. All field operation staff shall be provided with appropriate advice/training on how to implement these policies, practices, mitigation measures, recommendations and procedures.

PART C: CONDITIONS APPLYING TO WATER USE

1. The Licensee shall obtain all Water from Arvoknar Channel or Middle Channel of the Mackenzie River as described in the Project Description or as otherwise approved by an Inspector.
2. The Licensee may obtain Water from an alternate Water supply for use on an emergency basis upon approval of an Inspector when it is not possible to obtain Water from Arvoknar Channel or Middle Channel of the Mackenzie River as stated in Part C, Item 1.
3. The daily quantity of Water used for all purposes shall not exceed 295 cubic metres.

PART D: CONDITIONS APPLYING TO WATERBODY ALTERATION

1. All disturbed ground surfaces shall be stabilized in such a manner so as to prevent erosion and surface runoff during the undertakings.
2. For the excavation of backfill material and the removal of debris activities, the Licensee shall control siltation or sedimentation downstream of the work area

and minimize further erosion to the extent possible, utilizing appropriate measures to the satisfaction of an Inspector.

3. Excavated material and removed debris shall be deposited to a disposal area, approved by an Inspector.
4. All material excavated from the Waterbody must be deposited in such a manner as to remain in a stable condition.
5. Equipment used during the excavation and removal of debris shall be mechanically sound and free of leaks. Mechanized clearing of brush, wood and other debris should not be done immediately adjacent to any Waterbody.
6. The Arvoknar Channel shall not be disturbed beyond the immediate area required for the purpose of the undertaking, as described in the application and related documents.
7. The Licensee shall minimize the disturbance of riparian vegetation within the immediate boundary of any Waterbody to the extent practicable.
8. All disturbed ground surfaces shall be regraded in a manner which is consistent with the topography of the site and which prevents erosion and surface runoff from carrying sediment into any Waterbody. Where soil conditions permit, disturbed areas shall be re-vegetated with appropriate reclamation seeds and/or plant species that are native to the Northwest Territories.

PART E: CONDITIONS APPLYING TO WATERBODY CROSSING

1. If the Licensee requires a Waterbody crossing, it is recommended that the following measures be implemented at all Waterbody crossings:
 - a. winter stream crossings should be located to minimize approach grades and be constructed entirely of ice and snow materials;
 - b. the Licensee shall ensure that only clean snow is used for construction of snowfills for vehicle and equipment access on all Waterbody crossing and that no debris is placed in the Waterbody channel;
 - c. the banks of any Waterbody should be protected using suitable erosion control measures;
 - d. ice and snow crossings should not impede the flow of any Waterbody. These crossings shall be removed or V-notched before spring break-up to facilitate natural flow;

- e. any materials placed below the normal high Water mark used in the construction of Water crossings shall be free of any contaminants, debris, or fine materials; and
- f. Water crossing should be at right angles to the shoreline of the Waterbody.

PART F: CONDITIONS APPLYING TO ON-SITE EXCAVATION

1. No excavated loose soil should be left on top of the ice to avoid sediment discharge in the Water streams during the Spring Freshet.
2. Excavated materials shall be stabilized and stored to the satisfaction of an Inspector and at a safe distance from any Waterbody, prior to transportation off-site.
3. The Licensee shall ensure that following the excavation of the sump and contaminated soils, these areas are backfilled and compacted as much as practicable to ensure that any potential sediment from the excavation does not enter the river upon Spring Freshet.

PART G: CONDITIONS APPLYING TO WASTE DISPOSAL

1. All Wastes, soils, sump materials and vegetation associated with the Project shall be handled, stored, transported and disposed of in such a manner that they are not deposited, or allowed to be deposited, into any Waterbody. All materials shall be stored above the ordinary high Water mark to the satisfaction of an Inspector.
2. All Sewage from the camp shall be directed to a licensed Sewage Disposal Facility or disposed of in a manner approved by an Inspector.
3. The Licensee shall dispose of all camp solid Wastes at a licensed Solid Waste Disposal Facility or in a manner acceptable to an Inspector.
4. The Licensee shall dispose of all contaminated soil at a licensed treatment facility or in a manner acceptable to an Inspector.
5. The Licensee shall dispose of all sump material at a licensed facility capable of receiving this type of material or in a manner acceptable to an Inspector.
6. Prior to the off-site disposal of Wastes, 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.
7. The Licensee shall store all contaminated soil or snow and sump material in such a manner as to minimize the potential for migration of contaminants into any Waters, to the satisfaction of an Inspector.
 8. When transported off-site, contaminated soil or snow and sump materials shall be properly contained so as to prevent spillage or dispersal, to the satisfaction of an Inspector.

PART H: CONDITIONS APPLYING TO OPERATION AND MAINTENANCE

1. The Licensee shall submit a Waste Management Plan prior the start of the Project for review and approval by the Board.
2. The Licensee shall implement the Waste Management Plan, as and when approved by the Board.
3. If the Board has not approved the Waste Management Plan prior the start of the Project, the Licensee shall implement the Unipkat I-22 Waste Management Plan 2011, dated January 25, 2011 as submitted to the Board.
4. If not approved by the Board, the Waste Management Plan shall be revised and resubmitted for approval within ten (10) working days of receiving notification of the Board's decision.
5. The Unipkat I-22 Waste Management Plan 2011, dated January 25, 2011, or revised Waste Management Plan as approved by the Board, shall be posted on site for the duration of the Project.
6. The Licensee shall submit a Spill Contingency Plan prior the start of the Project for review and approval by the Board.
7. The Licensee shall implement the Spill Contingency Plan, as and when approved by the Board.
8. If the Board has not approved the Spill Contingency Plan prior the start of the Project, the Licensee shall implement the Spill Contingency Plan as submitted to the Board.

9. If not approved by the Board, the Spill Contingency Plan shall be revised and resubmitted for approval within ten (10) working days of receiving notification of the Board's decision.
10. All employees shall be trained in procedures to be followed and the equipment to be used in the containment of a spill.
11. Fuel, lubricants, hydraulic fluids, coolants and similar substances shall be stored a minimum of thirty (30) metres from the High Water Mark of any Waterbody, in such a way that said substances are not deposited in or allowed to be deposited in Waters.
12. Hazardous Materials should be handled in a manner to prevent contamination of any Waterbody.
13. Hazardous Materials shall be stored to the satisfaction of an Inspector.
14. A dedicated area should be used for refuelling equipment with measures taken to ensure capture and containment of drips and potential spills. Secondary containment or a surface liner should be used when refuelling any equipment on site and should also be used at all fuel drum locations. An appropriate spill kit with absorbent material should be located at all fuel storage and transfer sites.
15. Refuelling of equipment with limited mobility may be refuelled below the High Water Mark of Arvoknar Channel and Middle Channel of the Mackenzie River. Refuelling activities shall adhere to the following:
 - a. The fuel transfer shall be visually and continually monitored;
 - b. A containment tray will be placed below the vehicle's refuelling portal;
 - c. Fuel transfer nozzles shall be operated manually and will not be locked in the open positions;
 - d. Spill kits, including absorbent pads, shall be maintained in close proximity to the stationary equipment during refuelling operations;
 - e. Fuel transfers shall be conducted with an operator at each end of the transfer hose;
 - f. Fuel transfers shall only be conducted during daylight hours; and
 - g. Fuel transfer equipment components such as pumps, hoses and nozzles shall be visually checked for leaks or damage prior to each refuelling operation.

PART I: 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 the Board 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. the Board 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. the Board has not rejected the proposed Modifications.
2. Modifications for which the conditions referred to in Part I, Item 1 have not been met may be carried out only with written approval from the Board.
3. The Licensee shall provide to the Board site plans of the Modifications referred to in Part I, Item 1 within ninety (90) days of completion of the Modifications.

PART J: CONDITIONS APPLYING TO MONITORING AND SAMPLING

1. A Site Monitoring and Sampling Plan should be submitted to the Board for review and approval by May 1st, 2011.
2. The Site Monitoring and Sampling Plan required to be submitted to the Board will be unbound and reproducible by standard photocopier, accompanied by two electronic copies to the Board and one copy to an Inspector.
3. The Licensee shall implement the Site Monitoring and Sampling Plan as approved by the Board.
4. If not approved by the Board, the Site Monitoring and Sampling Plan shall be revised and resubmitted for approval within thirty (30) days of receiving notification of the Board's decision.
5. Thermisters used to monitor the integrity of the barrier should be extended below the depth of impacted soil.
6. The licensee shall submit to the Board any other information or documents regarding monitoring and sampling requested by the Board at least six (6) months prior to the expiry date of the licence.

PART K: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION

1. Upon completion of all activities, the Licensee shall ensure that all materials, equipment, temporary structures and debris are removed from the site. Other final restoration activities as may be outlined in the Project Description shall be implemented to the satisfaction of an Inspector.
2. The use of the ice road shall be completed by April 15, 2011 or as approved by an Inspector.
3. Six (6) months prior to the expiry of this Licence the Licensee shall provide to the Board for approval a report which shall include the results of the Monitoring and Sampling activities described in Part J and any mitigation measures required.

NORTHWEST TERRITORIES WATER BOARD



Chairperson (Eddie Dillon)



Witness (Mike Harlow)