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NUNAVUT WATER BOARD

NUNAVUT IMALIRIYIN KATIMAYINGI

DECISION

LICENCE NUMBER: NWB2ARN0507 -Type "B"

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a new Licence dated October 14, 2004 made by:

KENNECOTT CANADA EXPLORATION INC.

to allow for the use of water and disposal of waste during camp operations and exploration drilling operations at the Arnak Project located within the Kitikmeot Region, Nunavut (camp to be located at latitude 67°34'19"N, longitude 91°00'27"W).

DECISION

After having been satisfied that the application was exempt from the requirement for screening by the Nunavut Impact Review Board in accordance with Schedule 12.1, Paragraph 5 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 furthermore to delegate its authority to approve the application to the Chief Administrative Officer pursuant to S. 13.7.5 of the NLCA and S. 49(a) of the NWNSRTA and determined that:

Licence Number NWB2ARN0507 -Type "B" be issued subject to the terms and conditions contained therein. (Motion #: 2005-48 2004-48)

SIGNED this 16th day of February, 2005 at Gjoa Haven, NU.



Philippe di Pizzo
Chief Administrative Officer

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I. INTRODUCTION

On October 14, 2004, an application for a renewal license was filed with the Nunavut Water Board by Kennecott Canada Exploration Inc., for water use and waste disposal activities during camp operations and drilling operations at the Arnak Project located within the Kitikmeot Region, Nunavut (camp located at latitude 67°34'19"N, longitude 91°00'27"W).

After having been satisfied that the application was exempt from the requirement for screening by the Nunavut Impact Review Board in accordance with Schedule 12.1, Paragraph 5 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. No public concerns were expressed, and 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 furthermore to delegate its authority to approve the application to the Chief Administrative Officer pursuant to S.13.7.5 of the *NLCA* and S.49(a) of the *NWNSRTA*.

II. 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 NWB believes that a term of approximately two years is appropriate. The licence term will allow the Licensee to properly carry out the terms and conditions of the licence and will ensure that sufficient time is given to permit the Licensee to develop, submit and implement the plans required under the licence to the satisfaction of the NWB.

B. Annual Report

The requirements 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. This information is maintained on the public registry and is available to any interested persons upon request.

C. 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. The Board conditionally approves the "*Kennecott Canada Exploration Inc. Arnak Project Contingency Plan for Material Spills in Exploration Camps & Remote Sites and Drilling Operation*", with the requirement that the Licensee submit additional information as an *addendum* to the approved Plan to the NWB within thirty (30) days of the issuance of this License.

D. Abandonment and Restoration (A&R)

To ensure that all future abandoned facilities are reclaimed in an appropriate manner, the NWB requires Licensees to submit an Abandonment and Restoration Plan. The Board conditionally approves the "*Reclamation Plan for Arnak Project (Nunavut)*", with the requirement that the Licensee submit additional information as an *addendum* to the approved Plan to the NWB within thirty (30) days of the issuance of this License.

LICENCE NWB2ARN0507 –Type “B”

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

KENNECOTT CANADA EXPLORATION INC.

(Licensee)
of
354-200 GRANVILLE STREET, VANCOUVER, BC V6C 1S4

(Mailing Address)

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

NWB2ARN0507 - Type “B”
Licence Number _____
NUNAVUT 06
Water Management Area _____
ARNAK PROJECT, KITIKMEOT REGION, NUNAVUT
Location _____
WATER USE AND WASTE DISPOSAL
Purpose _____
MINING AND MILLING – TYPE “B”
Classification of Undertaking _____
15 CUBIC METRES DAILY
Quantity of Water Not to Exceed _____
FEBRUARY 16, 2005
Date of Licence _____
FEBRUARY 28, 2007
Expiry Date of Licence _____

Dated this 16th day of February, 2005 at Gjoa Haven, NU.



Philippe di Pizzo
Chief Administrative Officer

PART A: SCOPE AND DEFINITIONS

1. Scope

- a. This Licence allows for the use of water and the disposal of waste for an undertaking classified as Mining and Milling at the Arnak Project, located approximately 130 km southwest of Kugaaruk within the Kitikmeot Region, Nunavut (camp located at latitude 67°34'19"N, longitude 91°00'27"W);
- b. This License 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: **NWB2ARN0507 -Type "B"**

"Act" means the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

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

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

"Chief Administrative Officer" means the Executive Director of the Nunavut Water Board;

"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 holder of this Licence

“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;

“Sewage” means all toilet wastes and greywater;

“Spill Contingency Plan” means the approved *“Kennecott Canada Exploration Inc. Arnak Project Contingency Plan for Material Spills in Exploration Camps & Remote Sites and Drilling Operations”* developed to deal with unforeseen petroleum and chemical events that may occur during the operations conducted under the Licence;

“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;

PART B: GENERAL CONDITIONS

1. The Water use fee shall be paid in accordance with the requirements of the *Act*.
2. Licensee shall file an Annual Report on the appurtenant undertaking with the Board not later than March 31st of the year following the calendar year reported which shall contain the following information:
 - i. A summary report of water use and waste disposal activities;
 - ii. A list of unauthorized discharges and a summary of follow-up actions taken;
 - iii. Revisions to the Spill Contingency Plan and Abandonment and Restoration Plan;
 - iv. Progressive reclamation work undertaken;
 - v. All information as required by Part I, Item 5; and
 - vi. Any other details on water use or waste disposal requested by the Board by November 1 of the 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 install flow meters or other such devices, or implement suitable methods required for the measuring of water volumes, to be operated and maintained to the satisfaction of an Inspector.
5. If the Licensee contemplates the renewal of Licence No. NWB2ARN0507, 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. The NWB recommends that an application for the renewal of Licence No. NWB2ARN0507 be filed at least three months before the Licence expiry date.
6. If Licence No. NWB2ARN0507 requires an amendment, a public hearing may be required. 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 may vary depending on the scope of the amendment requested
7. The Licensee shall ensure a copy of this Licence is maintained at the site of operations at all times. Any communication with respect to this Licence shall be made in writing to the attention of:

(i) Chief Administrative Officer:

Executive Director
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
Telephone: (867) 360-6338
Fax: (867) 360-6369

(ii) 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

8. The Licensee shall submit one paper copy and one electronic copy of all reports, studies, and plans to the Board. Reports or studies submitted to the Board by the Licensee shall include a detailed executive summary in Inuktitut.

PART C: CONDITIONS APPLYING TO WATER USE

1. The Licensee shall obtain water for domestic use from Frost Lake, up to a maximum of 5 cubic metres *per* day. Water use for drilling operations shall be obtained from local lakes and adjacent water sources, up to a maximum of 10 cubic meters per day.
2. If the drilling requires water in sufficient volume that the source water body may be drawn down the Licensee shall, at least 30 days prior to commencement of drilling, submit to the Board for approval the following: volume required, hydrological overview of the water body, details of impacts, and proposed mitigation measures. The use of streams is not recommended as a water source.
3. The Licensee shall equip all water intake hoses with a screen of an appropriate mesh size to ensure that there is no entrainment of fish.
4. The Licensee shall ensure that the rate of water withdrawal is such that fish do not become impinged on the screen.
5. The Licensee shall not remove any material from below the ordinary high water mark of any water body.
6. 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.
7. Sediment and erosion control measures shall be implemented prior to and maintained during the operation to prevent entry of sediment into water.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

1. Areas designated for waste disposal that may impair the quality, quantity, or flow of water shall be located at least thirty (30) metres above the ordinary high water mark of any water body, unless otherwise authorized by the Board.
2. No open burning or on-site land filling of domestic waste is permitted.
3. The Licensee shall incinerate all combustible waste, and shall ensure that all hazardous

wastes, waste oil and non-combustible waste generated through the course of the operation are backhauled and disposed of in an approved waste disposal site.

4. The Licensee shall contain all greywater in a sump located at least thirty (30) metres above the ordinary high water mark of any water body, at a site where direct flow into a water body is not possible and no additional impacts are created.
5. The Licensee shall discharge all sewage into latrine pits located at least thirty (30) metres from the high water mark of any water body. These latrine pits shall be treated with lime and restored, to the satisfaction of an Inspector, to the pre-existing contours of the land prior to abandonment.

PART E: CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURES and OPERATIONS

1. The Licensee shall not erect camps or store material on the surface of frozen streams or lakes except what is for immediate use. Camps shall be located such as to minimize impacts on surface drainage.
2. All activities shall be conducted in such a way as to minimize impacts on surface drainage and the Licensee shall immediately undertake any corrective measures in the event of any impacts on surface drainage.
3. Winter lake and stream crossings, including ice bridges, shall be constructed entirely of water, ice or snow; stream crossings shall be removed or notched prior to spring break-up.
4. With respect to access road, pad construction or other earthworks, the deposition of debris or sediment into any water body is prohibited. These materials shall be disposed of above the ordinary high water mark in such a fashion that they do not enter the water.

PART F: CONDITIONS APPLYING TO DRILLING OPERATIONS

1. No land-based drilling is to be done within thirty (30) metres of the high water mark of any water body.
2. The Licensee shall ensure that all drill cuttings and any return water and sludge that cannot be re-circulated, including CaCl in any quantity or concentration, be disposed of

in a properly constructed sump or an appropriate natural depression located at least thirty (30) metres above the ordinary high water mark of any adjacent water body, such that the contents do not enter any water body, and no additional impacts are created.

3. Drilling additives or mud shall not be used in connection with holes drilled through lake ice unless they are re-circulated or contained such that they do not enter the water, or are demonstrated to be non-toxic.
4. If artesian flow is encountered, drill holes shall be plugged and permanently sealed upon project termination.
5. For all on-ice drilling operations the Licensee shall follow the *Interim Guidelines for On-Ice Drilling in the NWT*. These are:
 - i. All drill cuttings shall be removed from the ice surface;
 - ii. The release of total suspended solids in the receiving environment shall be in compliance with the Guidelines for Total Suspended Solids contained in the Canadian Council of Ministers of the Environment's (CCME) Canadian Water Quality Guidelines, Chapter 3 - Freshwater Aquatic Life; and
 - iii. For kimberlite targets, non-toxicity must be demonstrated; toxicity testing shall be done on the effluent from the drilling operation and the results shall be submitted to the Nunavut Water Board and/or an Inspector upon request.
6. The Licensee shall establish baseline water quality conditions before drilling through lake ice and the results shall be submitted to the Nunavut Water Board and/or an Inspector upon request.

PART G: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

1. The Licensee shall revise the approved "*Kennecott Canada Exploration Inc. Arnak Project Contingency Plan for Material Spills in Exploration Camps & Remote Sites and Drilling Operations*" to reflect the following
 - i. The addition of Environment Canada personnel in Iqaluit to the spill response contact list for Nunavut; and
 - ii. The location (including GPS co-ordinates) of all fuel storage areas associated with the undertaking.

2. The information required in Part G, Item 1 shall be submitted as an addendum to the approved Plan within thirty (30) days of issuance of the License.
3. The Licensee shall annually review the Spill Contingency Plan and modify the Plan as necessary to reflect changes in personnel, operations and/or technology. Any proposed modifications shall be submitted to the Board as an addendum to the original plan in accordance with Part B, Item 2(iii).
4. The Licensee shall ensure that any chemicals, petroleum products or wastes associated with the project do not enter water. All sumps and fuel caches shall be located a minimum of thirty (30) metres above the ordinary high water mark of any adjacent water body. The Licensee is encouraged to use some form of secondary containment.
5. 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.
6. If during the term of this Licence, an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, the Licensee shall:
 - i. Employ the Spill Contingency Plan;
 - ii. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the DIAND Water Resources Inspector at (867) 975-4298; and
 - iii. Submit to the DIAND Water Resources Inspector on each occurrence, a detailed report including the GPS location, no later than thirty (30) days after initially reporting the event.

PART H: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION

1. The Licensee shall revise the approved "*Reclamation Plan for Arnak Project (Nunavut)*", to include provisions for the remediation of any hydrocarbon-impacted soils that may result from spills of petroleum products associated with this undertaking.
2. The information required in Part H, Item 1 shall be submitted as an addendum to the approved Plan within thirty (30) days of issuance of the License.
3. The Licensee shall annually review the Plan referred to in Part H, Item 1 and if needed, modify the Plan to reflect changes in operation and/or technology. Revisions shall be submitted with the Annual Report as an addendum to the Plan for the approval of the Board.
4. The Licensee shall complete the restoration work within the time schedule specified in

the approved Plan, or as subsequently revised and approved by the Board.

5. The Licensee shall endeavor to carry out progressive reclamation for any components of the project no longer required for the Licensee's operations.
6. The Licensee shall backfill and restore, to the satisfaction of an Inspector, all camp and drilling waste disposal sumps to the pre-existing contours of the land prior to the expiry of this Licence.
7. All disturbed areas shall be stabilized and re-vegetated as required, upon completion of work, and restored to a pre-disturbed state.

PART I: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Licensee shall measure and record in cubic metres the daily quantities of water utilized for camp operations and drilling operations, for all purposes.
2. The Licensee shall determine 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.
3. 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 and drilling operations are deposited.
4. Additional sampling and analysis may be requested by an Inspector.
5. The Licensee shall include all of the data and information required by the "Monitoring Program" in the Licensee's Annual Report, as required per Part B, Item 2.
6. Modifications to the Monitoring Program may be made only upon written approval of the Chief Administrative Officer.