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NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN KATIMAYINGI

## DECISION

### LICENCE NUMBER: NWB2MUS0305

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a Licence dated April 25, 2003, made by:

**Anglo American Exploration (Canada) Ltd.**

to allow for the use of water and disposal of waste during camp operations and drilling operations on their MuskoX Exploration Property located approximately 110 km south of Kugluktuk, Nunavut. With respect to this application, the NWB gave notice to the public that Anglo American Exploration (Canada) Ltd. had filed an application for a water licence.

## DECISION

In accordance with S. 13.5.1 of the *Nunavut Land Claim Agreement* (NLCA), the application was forwarded to the Nunavut Impact Review Board, to determine whether the application required a review pursuant to S.12.4.1 of the NLCA. After having been advised by the Nunavut Impact Review Board that the application could proceed without a review pursuant to S. 12.4.4(a), the NWB decided that the application could go through the regulatory process.

After reviewing the submission of the Applicant and written comments expressed by interested parties, 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 *Nunavut Land Claims Agreement* and of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSTRTA), 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 NWNSTRTA and determined that:

**Licence Number NWB2MUS0305 be issued subject to the terms and conditions contained therein. (Motion #: 2003-20)**

SIGNED this 15th day of July 2003 at Gjoa Haven, NU.

**Original signed by:**

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Philippe di Pizzo  
Chief Administrative Officer

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## **I. INTRODUCTION**

On April 25, 2003, an application was filed with the Nunavut Water Board by Anglo-American Exploration Ltd. for a water licence for water use and waste disposal activities during camp operations and drilling operations on their Muskox Exploration Property located approximately 110 km south of Kugluktuk, Nunavut. In accordance with S. 13.5.1 of the *Nunavut Land Claim Agreement* (NLCA), the application was forwarded to the Nunavut Impact Review Board, to determine whether the application required a review pursuant to S.12.4.1 of the NLCA. After having been advised by the Nunavut Impact Review Board that the application could proceed without a review, pursuant to S. 12.4.4(a), the NWB decided that the application could go through the regulatory process.

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* S. 55.1 and Article 13 of the *Nunavut Land Claims Agreement*, public notice of the application was posted. The application was then referred for review and comments to Federal, Territorial and local organizations. No public concerns were expressed, and after reviewing the submission of the Applicant and written comments expressed by interested parties, 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 *Nunavut Land Claims Agreement* and of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSTRA), 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 NWNSTRA.

## **II. GENERAL CONSIDERATIONS**

### **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 two years is appropriate. The 2-year licence 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.

### **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 parties upon request.

### **Emergency Response**

The Board generally requires that all Licensees prepare comprehensive Emergency Response Plan to establish a state of readiness to ensure a prompt and effective response to possible spills or system failure events. The site-specific emergency response 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.

### **Abandonment and Restoration (A&R)**

To ensure that all future abandoned facilities are reclaimed in an appropriate manner, the NWB has imposed the requirement for the submission of an Abandonment and Restoration Plan. The plan should be submitted by the Licensee at within six (6) months of issuance of the licence .

Pursuant to the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*, the Nunavut Water Board, hereinafter referred to as the Board, hereby grants to

**ANGLO-AMERICAN EXPLORATION LTD.**

(Licensee)

of

**VANCOUVER, BC V6C 1G8**

(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:

**NWB2MUS0305**

Licence Number

**NUNAVUT 07**

Water Management Area

**MUSKOX EXPLORATION PROPERTY, KITIKMEOT REGION, NUNAVUT**

Location

**WATER USE AND WASTE DISPOSAL**

Purpose

**INDUSRIAL UNDERTAKINGS**

Description

**20 CUBIC METRES DAILY**

Quantity of Water Not to be Exceeded

**JULY 15, 2003**

Date of Licence

**JULY 15, 2005**

Expiry Date of Licence

Dated this 15<sup>th</sup> day of July 2003 at Gjoa Haven, NU.

**Original signed by:**

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 industrial undertakings at the Muskox Exploration Property, Kitikmeot Region, Nunavut (65°54'52''N; 115°14'37''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: **NWB2MUS0305**

**“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;

**“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 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 Emergency Response Plan;
  - iv. Progressive reclamation work undertaken;
  - v. Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported.
2. The Licensee shall notify the NWB of any changes in operating plans or conditions associated with this project at least thirty (30) days prior to any such change
3. Flow meters or other such devices used for measuring the volumes of water used shall be installed by the Licensee, and operated and maintained to the satisfaction of an Inspector.
4. If the Licensee contemplates the renewal of Licence No.NWB2MUS0305, it is its responsibility 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. NWB2MUS0305 be filed at least three months before the Licence's expiry date.

5. If Licence No. NWB2MUS0305 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
6. The Licensee shall ensure a copy of this Licence is maintained at the Muskox Exploration Property camp site 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

7. 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 McGregor Lake up to a maximum of 10 cubic metres per day. Water use for drilling operations shall not exceed 50 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 with an appropriate mesh size to ensure that there is no entrainment of fish.
4. The Licensee shall not remove any material from below the ordinary high water mark of any water body.
5. The Licensee shall not do anything that will cause erosion of the banks of any body of water on or adjacent to the land and shall provide necessary controls to prevent such erosion.
6. 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 not be located within thirty (30) metres of the ordinary high water mark of any water body, unless otherwise authorized by the Board.
2. No open burning or 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 discharge and contain all greywater in a sump located at least thirty (30) metres from the 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 covered with 0.5 m of sand prior to abandonment .

#### **PART E: CONDITIONS FOR CAMPS AND ACCESS INFRASTRUCTURES**

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 and 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 high water mark in such a fashion that they do not enter the water.

#### **PART F: CONDITIONS APPLYING TO DRILLING OPERATIONS**

1. The Licensee shall ensure that all drill cuttings and any return water and sludge that cannot be re-circulated be disposed of in a properly constructed sump or an appropriate natural depression located at least thirty (30) metres from the high water mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created.
2. No land-based drilling is to be done within thirty (30) metres of the high water mark of any water body. Drill waste from on-ice drilling shall be removed from the drill site.
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. The Licensee shall follow the *Interim Guidelines for On-Ice Drilling in the NWT* for all on-ice drilling operations. 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.

7. 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.
8. With respect to access road and 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 high water mark in such a fashion that they do not enter the water.
9. The Licensee shall establish baseline water quality conditions before drilling through lake ice.
10. 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.
11. With respect to access road and 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 high water mark in such a fashion that they do not enter the water.

#### **PART G: CONDITIONS APPLYING TO EMERGENCY RESPONSE**

1. The Licensee shall submit to the Board, within 30 days of issuance of the Licence, an updated Emergency Response Plan. The updated Emergency Response Plan shall indicate the location (including GPS co-ordinates) of all fuel storage areas associated with the undertaking and provide updated contact information spill response personnel in Nunavut.
2. If not approved by the Board, the plan referred to in Part G, Item 1 shall be revised and resubmitted within fifteen (15) days of receiving notification of the Board's decision.
3. The Licensee shall revise their Emergency Response Plan annually to reflect changes in personnel, operations and/or technology or as directed by the Board.
4. The Licensee shall ensure that any chemicals, fuel or wastes associated with the project do not enter water. All sumps and fuel caches shall be located a minimum of thirty (30) metres from the normal high water mark of any adjacent water body.
5. If, during the duration of this Licence, an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, the Licensee shall:
  - ii. Employ the Emergency Response Plan;
  - iii. 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

- iv. Submit to the DIAND Water Resources Inspector a detailed report, including the GPS location, on each occurrence no later than thirty (30) days after initially reporting the event.

#### **PART H: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION**

1. The Licensee shall submit to the Board for approval an preliminary Abandonment and Restoration Plan within six (6) months of issuance of the licence. The Plan shall include, but not be limited to where applicable:
  - i. water intake facilities;
  - ii. water treatment and waste disposal sites and facilities;
  - iii. petroleum and chemical storage areas;
  - iv. any site affected by waste spills;
  - v. leachate prevention;
  - vi. an implementation schedule;
  - vii. maps delineating all disturbed areas, and site facilities;
  - viii. consideration of altered drainage patterns;
  - ix. type and source of cover materials;
  - x. future area use;
  - xi. hazardous wastes; and
  - xii. a proposal identifying measures by which restoration costs will be financed by the Licensee upon abandonment.
2. The Licensee shall implement the plan specified in Part H, Item 1 as and when approved by the Board.

3. The Licensee shall revise the Plan referred to in Part H, Item 1 if not approved. The revised Plan shall be submitted to the Board for approval within thirty (30) days of receiving notification of the Board's decision.
4. The Licensee shall complete the restoration work within the time schedule specified in the Plan, or as subsequently revised and approved by the Board.

#### **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 wastes associated with camp operations and drilling operations are deposited.
3. Additional sampling and analysis may be requested by an Inspector.
4. 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 1.
5. Modifications to the Monitoring Program may be made only upon written approval of the Chief Administrative Officer