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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No.: **8BC-HIG0712**

November 8, 2007

Mr. Andrew Mitchell, Project Manager
Zinifex Canada Inc.
401-1113 Jade Court
Thunder Bay, ON P7B 6M7
Email: Andrew.Mitchell@zinifex.com

RE: NWB LICENCE No. 8BC-HIG0712

Dear Mr. Mitchell:

Please find attached Licence No. **8BC-HIG0712** issued to Zinifex Canada Inc. by the Nunavut Water Board (NWB) **Motion #:** **2007-13-12** 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*. 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 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 30 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.

Sincerely,

Original signed by:

Thomas Kabloona
A/Chief Executive Officer

TK/ajw/pb

Enclosure: Licence No. **8BC-HIG0712**

Cc: Jim Rogers, INAC
Peter Kusugak, INAC
Andrew Keim, INAC
Colette Spagnuolo, INAC
Erin Calder, NWMB
Carson Gillis, NTI
Amy Liu, DFO
Bradley Flynn, DFO
Cindy Parker, EC
Earle Baddaloo, GN-DOE
John Dawe, GN
Leslie Payette, NIRB
Dave Hohnstein, NWB
Jim Wall, NWB
Kevin Tweedle, KIA



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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

8BC-HIG0712

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a new Licence dated September 25, 2006 made by:

ZINIFEX CANADA INC.
(Formerly Wolfden Resources Inc.)

to allow for camp operations, access road with related watercourse crossings and airstrip construction associated with the Re-licensing Program for the High Lake Exploration Project, located approximately 50 km south of Gray's Bay, Coronation Gulf and 175 km east southeast of Kugluktuk, in the Kitikmeot Region of Nunavut (generally located at latitude 67°22'24"N, longitude 110°51'33"W, Weatherhaven Camp and latitude 67°29'12"N, longitude 110°49'16"W, construction camp, Sand Lake).

DECISION

After having been satisfied that no applicable Land Use Plan applied, and that the application could proceed following the screening of the proposed undertaking by the Nunavut Impact Review Board (Screening Decision August 11, 2006; NIRB Ref. # 06EN048) in accordance with 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 8BC-HIG0712 be issued subject to the terms and conditions contained therein. (Motion #: 2007-13-12)

SIGNED this 8th day of November, 2007 at Gjoa Haven, NU.

Original signed by:

Thomas Kabloona
A/Chief Executive Officer

TABLE OF CONTENTS

| | |
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| TABLE OF CONTENTS | II |
| I. INTRODUCTION..... | III |
| II. PROCEDURAL HISTORY | III |
| III. GENERAL CONSIDERATIONS | IV |
| A. TERM OF THE LICENCE | IV |
| B. WATER USE..... | IV |
| C. DEPOSIT OF WASTE | IV |
| D. ANNUAL REPORT | V |
| E. SPILL CONTINGENCY PLANNING..... | V |
| F. ABANDONMENT AND RESTORATION (A&R)..... | V |
| G. MONITORING PROGRAM | VI |
| LICENCE 8BC-HIG0712..... | 1 |
| PART A: SCOPE, DEFINITIONS AND ENFORCEMENT..... | 2 |
| A. SCOPE..... | 2 |
| B. DEFINITIONS | 2 |
| C. ENFORCEMENT | 4 |
| PART B: GENERAL CONDITIONS | 5 |
| PART C: CONDITIONS APPLYING TO WATER USE | 6 |
| PART D: CONDITIONS APPLYING TO WASTE DISPOSAL..... | 7 |
| PART E: CONDITIONS APPLYING TO THE UNDERTAKING | 9 |
| PART F: CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURES AND OPERATIONS | 11 |
| PART G: CONDITIONS APPLYING TO CONSTRUCTION AND MODIFICATIONS | 12 |
| PART H: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING | 13 |
| PART I: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION.. | 14 |
| PART J: CONDITIONS APPLYING TO THE MONITORING PROGRAM | 15 |

I. INTRODUCTION

On September 25, 2006, Zinifex Canada Inc. (formerly Wolfden Resources Inc.) filed an application for a new water licence with the NWB, to allow for camp operations, access road with related watercourse crossings and airstrip construction associated with the Re-licensing Program for the High Lake Exploration Project, located approximately 50 km south of Gray's Bay, Coronation Gulf, and 175 km east southeast of Kugluktuk, in the Kitikmeot region of Nunavut (generally located at latitude 67°22'24"N, longitude 110°51'33"W, Weatherhaven Camp and latitude 67°29'12"N, longitude 110°49'16"W, construction camp, Sand Lake). The Project is bordered on its eastern edge by the Kennarctic River.

This Application addressed the following contemplated activities:

- Mobilization from Ulu to the High Lake and Sand Lake sites;
- Development of a 12 km all-season access road, including three watercourse crossings;
- Construction of a 1450m gravel airstrip near Sand Lake;
- Construction of a 30-person temporary construction camp at Sand Lake (Sand Lake camp);
- Construction of a 70-person seasonal camp near High Lake (Weatherhaven camp); and
- Surface compaction and dust suppression for road/airstrip construction and maintenance activities.

II. PROCEDURAL HISTORY

The application for a new water licence was filed with the Nunavut Water Board by Zinifex Canada Inc. and distributed for review by interested Parties on November 16, 2006, with a deadline for comments of December 16, 2006. Comments were received from Indian and Northern Affairs Canada (INAC), Environment Canada (EC), the Department of Fisheries and Oceans (DFO), the Department of the Environment-Government of Nunavut (DOE-GN) and the Department of Culture, Language Elders and Youth-Government of Nunavut (CLEY-GN).

The Licensee is directed to the written submissions received during the public review period for this new application, which can be found on the NWB ftp site at the following address:

<http://nunavutwaterboard.org/ftp/8BC-CONSTRUCTION/8BC-HIG/Comments & Interveners>.

In addition, the NWB recommends that the Licensee confirm with the Department of Fisheries and Oceans (DFO) the regulatory requirements related to any harmful alteration, disruption, or destruction of fish habitat (HADD) issues which may exist with the undertaking.

The Licensee is also reminded that compliance with the terms and conditions of this Licence does not absolve the Licensee from the responsibility for compliance with the requirements of all

other applicable Federal, Territorial and Municipal legislation.

III. 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 Applicant requested a five year licence term. No comments were received discussing the term of the Licence and as such the NWB concurs that a term of approximately five (5) years is appropriate. The licence term will allow the Licensee to properly carry out the terms and conditions of the licence, to the satisfaction of the NWB.

B. Water Use

The Licensee has stated that water use will be required during the term of this Licence, with potable water for a seventy (70) person Weatherhaven Camp being obtained from Lake L22 at a rate of approximately 17.5 m³ *per* day and an additional source from Sand Lake for the temporary camp at a rate of approximately 75 m³ *per* day. Water requirements for airstrip, road construction and maintenance purposes have been identified to be approximately 75 m³ *per* day from Sand Lake. Total water usage requested by the Applicant is 100 m³ *per* day.

Based upon the stated requirements of the Applicant, 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 licence and for all purposes, has been set at a total of 100m³ *per* day from the sources indicated.

C. Deposit of Waste

Sewage

The Licensee has indicated that all domestic sewage and greywater generated from the Weatherhaven camp will be treated onsite to acceptable standards utilizing a Rotating Biological Contactor system (Biodisk Corporation) designed to meet the following effluent criteria: BOD 40 mg/L; Suspended Solids 60 mg/L; Fecal Coliforms 10,000 CFU/100mL; Oil and Grease <5 mg/L; and pH 6-9.

Treated effluent from the Weatherhaven camp will be discharged into Lake L20. Recent studies indicate that this lake does not support fish.

The Sand Lake camp will be equipped with Pacto toilets. Toilet waste will be incinerated. Greywater from the kitchen and shower drains will be discharged to a sump located a minimum of thirty (30) metres from the high water mark of surrounding surface water bodies.

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 treatment and disposal of sewage effluent during the proposed undertaking.

Solid Waste

The Licensee has stated that solid waste disposal will be through utilization of a high efficiency incinerator for combustible, non-hazardous solid waste, located 0.5 km from camp. All combustible waste, including all food waste, will be incinerated on a regular basis to eliminate attractants to wildlife. Non-combustible waste and any hazardous waste generated in the course of the undertaking will be backhauled to an approved disposal facility.

D. 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. The requirements of this Annual Report can be found in Part B, Item 1. A standard form for annual reporting can be downloaded from the NWB ftp site at <http://nunavutwaterboard.org/ftp/> in the administration folder.

E. Spill Contingency Planning

The Board generally requires, and in this particular case as a requirement of the Nunavut Impact Review Board, that the Licensee prepare a comprehensive Spill Contingency Plan to be approved by the Board, that will 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 Plan submitted September 25, 2006 by the Licensee has been approved by the Board with a requirement to submit a brief addendum as indicated in Part H, Item 1.

F. Abandonment and Restoration (A&R)

To ensure that all facilities associated with this undertaking are reclaimed in an appropriate manner upon abandonment, the NWB requires an approved Abandonment and Reclamation Plan. The Licensee has submitted a conceptual plan within the Project Description provided, however upon review, there are a number of areas that need to be addressed and reassessed due to the change in scope from the time of submission to the NIRB and submission to the NWB. Therefore, the NWB is requiring the submission of a revised Abandonment and Reclamation Plan that is specific to the scope of this Licence, prepared in accordance with the *Mine Site Reclamation Guidelines for the Northwest Territories (INAC), 2006* and consistent with the *INAC Mine Site Reclamation Policy for Nunavut, 2002*. The Plan shall include a section on

reclamation liability complete with the assessment and estimate of costs based on the most recent version of RECLAIM, or other methods acceptable to the Board. This requirement is included under Part I, Item 1 of this Licence.

G. Monitoring Program

The Monitoring Program to be carried out under this Licence has been included to address the use of water and disposal of waste associated with the undertaking. Wastes associated with the project include sewage, potentially contaminated water associated with Bulk Fuel Storage Facilities, site run-off associated with aggregate use, combustible and non-combustible solid wastes and hazardous wastes. Monitoring under this licence is included within Part J. In order to assist in determining whether effluent limits are indeed protective of the environment, Environment Canada has recommended additional monitoring below Lake L20 for specific parameters. The NWB concurs with this recommendation, and has included this requirement for monitoring under Part J, Items 5 and 6.

LICENCE 8BC-HIG0712

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

ZINIFEX CANADA INC.

(Licensee)

Of

401 – 1113 JADE COURT, THUNDER BAY, ON P7B 6M7

(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:

8BC-HIG0712

License Number

NUNAVUT 07

Water Management Area

HIGH LAKE PROPERTY, KITIKMEOT REGION, NUNAVUT

Location

**WATER USE AND WASTE DISPOSAL ASSOCIATED WITH THE HIGH LAKE CAMP
OPERATIONS, ROAD AND AIRSTRIP CONSTRUCTION ACTIVITIES**

Purpose

INDUSTRIAL – TYPE “B”

Classification of Undertaking

100 CUBIC METRES PER DAY

Quantity of Water Not to Exceed

NOVEMBER 8th , 2007

Date of Licence

DECEMBER 31st , 2012

Expiry Date of Licence

Dated this 8th day of November 2007 at Gjoa Haven, NU.

Original signed by:

Thomas Kabloona
A/Chief Executive Officer

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

A. Scope

- a. This Licence allows for camp operations, access road with related watercourse crossings and airstrip construction associated with the Re-licensing Program for the High Lake Exploration Project, located approximately 50 km south of Gray's Bay, Coronation Gulf and 175km east southeast of Kugluktuk, in the Kitikmeot region of Nunavut (generally located at latitude 67°22'24"N, longitude 110°51'33"W, Weatherhaven Camp and latitude 67°29'12"N, longitude 110°49'16"W, construction camp, Sand Lake).
- 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.

B. Definitions

In this Licence: **8BC-HIG0712**

“Act” means the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*

“Analyst” means an Analyst designated by the Minister under Section 85 (1) of the *Act*;

“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*;

“Bulk Fuel Storage Facility” means the facilities, constructed at the Sand Lake Airstrip, to contain a combined nominal capacity of approximately 500,000 litres of diesel fuel,

storage of 205L drums of Jet-B aviation fuel and gasoline and all associated infrastructure, and the 50,000L diesel fuel storage at the Weatherhaven Camp, as described in the Application dated September 25, 2006 and all supporting documentation;

“CCME” means the Canadian Council of Ministers of the Environment;

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

“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 Engineering, Geological and Geophysical Act (Nunavut) S.N.W.T. 1998, c.38, s.5;

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

“Hazardous waste” means waste classified as “hazardous” by Nunavut Territorial or Federal Legislation, or as “dangerous goods” under the *Transportation of Dangerous Goods Act*;

“Inspector” means an Inspector designated by the Minister under Section 85 (1) of the *Act*;

“Infrastructure” means all construction necessary for mining, such as watercourse crossings, piping, sewage and water systems, reservoirs, and roads;

“Licensee” means the individual or organization to which Licence 8BC-HIG0712 Type “B” is issued or assigned;

“Maximum Average Concentration” means the arithmetic means of any four consecutive analytical results submitted to the Board in accordance with the sampling and analysis requirements specified in the “Monitoring Program”;

“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;

“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;

Sewage Treatment Facility means the treatment system described in the application submitted September 25, 2006, comprising the area and engineered structures, including the Roto-Disk™ treatment unit designed to contain and treat sewage;

Sewage means all toilet wastes and greywater;

Solid Waste means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operation, and from community activities, but not including Hazardous Waste;

Solid Waste Disposal Facility comprises the incinerator and associated structures designed to incinerate combustible solid waste, as described in the Application for Water Licence filed by the Applicant on September 25, 2006;

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

Waste means waste as defined in Section 85 (1) of the *Act*;

Water Supply Facilities comprises the L22 Lake and Sandy Lake water supply area and associated infrastructure designed to collect and supply water, as described in the Application filed by the Applicant on September 25, 2006;

Waste Disposal Facilities means all facilities designated for the disposal of waste, and includes the Sewage Treatment Facilities and Solid Waste Disposal Facilities, as described in the Application for Water Licence filed by the Applicant on September 25, 2006.

C. Enforcement

- i. 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*;
- ii. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*; and

- iii. 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. Licensee shall file an Annual Report on the appurtenant undertaking with the Board no later than March 31st of the year following the calendar year being reported, which shall include the following information:
 - i. Tabular summaries for all data and information generated under the “Monitoring Program”;
 - ii. An analysis of data collected during the “Monitoring Program” and a brief description of any future studies planned by the Licensee;
 - iii. A summary of any abandonment and restoration work undertaken during the year and an outline of any work anticipated for the next year;
 - iv. 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;
 - v. A list of unauthorized discharges and summary of follow-up actions taken;
 - vi. If applicable, a description of any trenches and collection sumps excavated, including but not limited to the following: GPS coordinates, dimensions, depth below active layer, and secondary containment features;
 - vii. A description of all progressive and or final reclamation work undertaken, presented with photographic records of site conditions before, during and after completion of operations;
 - viii. An updated estimate of the current restoration liability required under Part I, Item 1, based upon the results of restoration research, project development monitoring, and any changes or modifications to the Appurtenant Undertaking;
 - ix. A public consultation/participation report describing consultation with local organizations and the residents of the nearby communities;
 - x. A brief summary of work done to address concerns or deficiencies listed in the inspection reports and/or compliance reports prepared by an Inspector;
 - xi. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence; and
 - xii. Any other details on water use or waste disposal requested by the Board by November 1st 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. 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:

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@nunavutwaterboard.org

Inspector Contact:

Water Resources Officer
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4295
Fax: (867) 979-6445

4. 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.
5. The Licensee shall ensure that any document(s) or correspondence submitted to the Board, with respect to this Licence, is received and acknowledged by the Manager of Licensing.
6. This Licence is not assignable except as provided in Section 44 of the *Act*.

PART C: CONDITIONS APPLYING TO WATER USE

1. The Licensee shall obtain water for domestic purposes for the Weatherhaven Camp from Lake L22 at a rate that shall not exceed 17.5 m³ *per* day, for domestic purposes at the temporary airstrip construction camp from Sand Lake at a rate that shall not exceed 7.5 m³ *per* day and for water requirements for airstrip and road construction and maintenance at a rate that shall not exceed 75 m³ *per* day from Sand Lake. The volume of water for the purposes of this Licence shall not exceed 100 m³ *per* day.
2. The Licensee shall maintain the Water Supply Facilities to the satisfaction of the Inspector.
3. Streams cannot be used as a water source unless authorized and approved by the Board.
4. If the Licensee requires water in sufficient volume that the source water body may be

drawn down the Licensee shall, at least thirty (30) days prior to commencement of use of water, submit to the Board for approval the following: volume required, hydrological overview of the water body, details of impacts, and proposed mitigation measures.

5. The Licensee shall equip all water intake hoses with a screen of an appropriate mesh size to ensure that fish are not entrained and shall withdraw water at a rate such that fish do not become impinged on the screen.
6. The Licensee shall not remove any material from below the ordinary high water mark of any water body.
7. The Licensee shall not conduct activities that will cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
8. The Licensee shall implement sediment and erosion control measures prior to and maintained during activities to prevent the deposition of dust and/or sediment into water, arising from contractor activities or on-site vehicular travel.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

1. The Licensee shall locate areas designated for waste disposal at a minimum distance of thirty (30) metres from the ordinary high water mark of any water body such that the direct flow into a water body is not possible and the quality, quantity or flow of water is not impaired, unless otherwise authorized by the Board.
2. The Licensee shall not practice open burning of domestic waste, unless otherwise approved by the Board.
3. The Licensee shall direct all acceptable food waste, paper waste and untreated wood product waste to a CCME-compliant incinerator with all ash generated by the incineration of waste to be disposed of at an approved facility, or as otherwise approved by the Board.
4. The Licensee shall implement a comprehensive waste management strategy, with emphasis on waste segregation that is designed to reduce and control the volumes of wastes produced, transported, and requiring disposal.
5. The Licensee shall provide to the Board documented authorization from any Hamlet within Nunavut where waste generated as a result of this undertaking may be disposed of in an approved Solid Waste Disposal Facility, prior to the backhauling of any waste.
6. The Licensee shall maintain records of all waste backhauled and records of confirmation of proper disposal of backhauled waste. These records shall be made available to an

Inspector upon request.

7. The Licensee shall contain and treat all domestic sewage from the Sand Lake Camp through the use of Pacto toilets and incineration. Any remaining residue generated through the course of the operation shall be backhauled and disposed of at an approved waste disposal site.
8. The Licensee shall contain all Greywater generated at the Sand Lake Camp in a sump, located a minimum of thirty (30) metres from the high water mark of any surrounding surface water body in a manner to ensure that direct flow into a water body is not possible and no additional impacts are created, unless otherwise approved by the Board.
9. The Licensee shall direct all domestic sewage and greywater generated from the Weatherhaven Camp to the Sewage Treatment Facility, or as otherwise approved by the Board. Treated effluent from the Sewage Treatment Facility shall be directed to Lake L20.
10. The Licensee shall collect all sludge removed from the Sewage Treatment Facility, for proper disposal at an approved disposal facility or as approved within the Operation and Maintenance Manual prepared under Part G, Item 4.
11. The Licensee shall, for initial seasonal commissioning of the camp and any future seasonal shutdown and startup of the facility, notify an Inspector at least ten (10) days prior to start-up of the Sewage Treatment Facility and subsequent discharge of effluent from the facility.
12. All effluent discharged from the Sewage Treatment Facility at monitoring station HIG-3, shall not exceed the following effluent quality limits:

| PARAMETER | MAXIMUM AVERAGE CONCENTRATION |
|------------------------|-------------------------------|
| Total Suspended Solids | 60 mg/L |
| BOD | 40 mg/L |
| Fecal Coliforms | 10,000 CFU/100mL |
| pH | pH between 6.0 and 9.0 |
| Oil and Grease | 5 mg/L |

13. The discharge location for all treated effluent and greywater described in Part D, Items 8 and 9 shall be to the satisfaction of an Inspector.
14. The Licensee shall notify an Inspector at least ten (10) days prior to planned discharge of water collected within the Bulk Fuel Storage Facilities.
15. The Licensee shall ensure that all effluent being discharged from the containment sumps

at the Bulk Fuel Storage Facilities, is directed to a location a minimum of thirty (30) metres from the high water mark of any surrounding water body and in a manner to ensure that direct flow into a water body is not possible and no additional impacts are created.

16. All effluent discharged at monitoring station HIG-5a and HIG-5b shall meet the following effluent quality limits:

| Parameter | Maximum Average Concentration (MAC) | Maximum Concentration of any single Grab Sample |
|-------------------------------|-------------------------------------|---|
| Benzene (ug/L) | 370 | |
| Toluene (ug/L) | 2 | |
| Ethylbenzene (ug/L) | 90 | |
| Lead (ug/L) | 1 | |
| Total Suspended Solids (mg/L) | 15.0 | 30.0 |
| Oil & Grease (mg/L) | 5.0 and no visible sheen | |
| pH | between 6.0 and 9.5 | |

17. The Licensee shall direct all pump out water from excavation and borrow pit aggregate sources to an area located a minimum of thirty (30) metres from the high water mark of any surrounding water body and in a manner to ensure that direct flow into a water body is not possible and no additional impacts are created, unless otherwise approved by the Board.
18. The licensee shall ensure that, where any effluent being discharged under Part D, Items 9, 15 and 17, is to waters that are frequented by fish or in such a manner that the effluent may enter such waters, is demonstrated to be non-acutely toxic in accordance with Part J, Item 7.

PART E: CONDITIONS APPLYING TO THE UNDERTAKING

1. The Licensee shall ensure that all fill material utilized in construction is from an approved source and free of fines and contaminants.
2. The Licensee shall, in developing aggregate sources for construction, observe a minimum setback and buffer zone of at least one hundred (100) metres between the quarry operations and the normal high water mark of any water body.

3. The Licensee shall not deposit any waste in any body of water, or on the banks thereof, which may impair the quality, quantity, or flow of water.
4. The Licensee shall ensure that any chemicals, fuel or wastes associated with the undertaking do not enter any water body.
5. 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 a distance of at least thirty (30) metres from the ordinary high water mark of any water body in such a fashion that they cannot enter the water.
6. The Licensee shall ensure that all sites are stabilized, landscaped as necessary, and suitable erosion control measures implemented to minimize sediment deposition into watercourses located on or adjacent to the site, to the satisfaction of an Inspector
7. To minimize impacts on surface drainage, the Licensee shall prepare all sites in such manner as to prevent rutting of the ground surface.
8. The Licensee shall not utilize any equipment or vehicles in the course of this undertaking unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting or gouging. Overland travel of equipment or vehicles shall cease if rutting occurs.
9. Equipment storage holding areas should be located on gravel, sand or other durable land, a distance of at least thirty (30) metres above the ordinary high water mark of any water body in order to minimize impacts on surface drainage and water quality.
10. The Licensee shall minimize disturbance to terrain, permafrost and drainage during movement of contractor's equipment and personnel around the site during construction activities.
11. The Licensee shall ensure that all activities are 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.
12. The Licensee shall not cut any stream bank or remove any material from below the ordinary high water mark of any water body.
13. 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.
14. The Licensee shall ensure that sediment control measures are implemented prior to and maintained during construction and operation to prevent entry of sediment into water.

15. The Licensee shall limit in-stream activity to low water periods. In-stream work activity is prohibited during fish migration.
16. The Licensee shall locate stream crossings to minimize approach grades. Approaches shall be stabilized during construction and upon completion of the project, to control runoff, erosion and subsequent siltation to any water body.
17. Machinery is not permitted to travel up the stream bed and fording of any water body is to be kept to a minimum and limited to one area and a one-time event. Equipment used should be well cleaned and free of oil and grease and maintained free of fluid leaks.
18. The Licensee shall ensure that pollutants from machinery fording the crossings do not enter water.
19. Mechanized clearing is not licensed within thirty (30) metres of the normal high water mark of any water body in order to maintain a vegetative mat for bank stabilization.
20. The Licensee shall construct all winter lake and stream crossings, including ice bridges, entirely of water, ice or snow. Disturbance shall be minimized by locating ice bridges in an area that requires the minimum approach grading and the shortest crossing route. Stream crossings shall be removed or the ice notched prior to spring break-up.

PART F: 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 including immediate banks except what is for immediate use. Camps shall be located such as to minimize impacts on surface drainage.
2. With respect to all activities described in the scope of this Licence including access roads, pad construction or other earthworks, the deposition of debris or sediment into any water body is prohibited. These materials shall be disposed of at a location at least thirty (30) metres above the ordinary high water mark of any water body and in such a manner as to prevent erosion and the resulting sedimentation of any surrounding water body.
3. The Licensee shall repair immediately, any failure of any constructed facilities associated with the appurtenant undertaking, to the satisfaction of an Inspector.
4. The Licensee shall submit to the Board for approval, within ninety (90) days of the issuance of this Licence, an Operation and Maintenance Manual for the Waste Water Treatment Facility prepared in accordance with the *“Guidelines for the Preparation of an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories; 1996”* and adapted for the use of a mechanical sewage

treatment facility.

5. Should the Plan referred to in Part F, Item 4 not be approved, the Licensee shall make the necessary revisions and resubmit the Plan within thirty (30) days following notification from the Board.
6. The Licensee shall implement the Plan referred to in Part F, Item 4, as and when approved by the Board.

PART G: CONDITIONS APPLYING TO CONSTRUCTION AND MODIFICATIONS

1. The Licensee may, without written consent from the Board, carry out Modifications to the Waste Disposal Facilities provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
 - i. the Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
 - ii. such Modifications do not place the Licensee in contravention of the Licence or the *Act*;
 - iii. 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
 - iv. 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 may 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.
4. The Licensee shall provide to the Board for review, ninety (90) days prior to construction, final design and construction drawings and plans signed and stamped by a qualified Engineer, for the Bulk Fuel Storage Facilities located at Sand Lake and at the Weatherhaven Camp.
5. Licensee shall ensure that the construction and operation of the Bulk Fuel Storage Facility meets, at a minimum, all applicable legislation and industry standards. Industry standards include the following:
 - i. *Environmental Code of Practice for Aboveground Storage Tank Systems Containing Petroleum Products, 2003; CCME*; and

- ii. *National Fire Code, 1995.*
6. The Licensee shall submit to the Board for review, within ninety (90) days of the final construction of the Bulk Fuel Storage Facility, a report prepared and signed by the Engineer responsible for supervision of the construction, that shall include the following:
 - i. Where required, the Approval for Construction issued by the Fire Marshal;
 - ii. As-built drawings (signed and stamped by an Engineer);
 - iii. A summary of the construction, including the documentation of field decisions that deviate from construction drawings and specifications; and
 - iv. Any data used to support these decisions.
7. Licensee shall submit to the Board for review, within ninety (90) days of completion of all construction works, as-built plans and drawings, signed and stamped by a professional Engineer registered in Nunavut, that includes the following:
 - i. Air strip and road alignment and all stream crossings and installations;
 - ii. Water Supply Facilities; and
 - iii. Sewage Treatment Facilities.

PART H: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

1. The Board has approved the Plan entitled “Spill Contingency Plan, High Lake Relicensing Project” dated May, 2006 that was submitted as supplemental information with the Application.
2. The Licensee shall submit within thirty (30) days of issuance of the Licence, an Addendum to the Plan referred to in Part H, Item 1, to address issues identified during the review of the application as follows:
 - i. Revisions to take into account the change in scope as presented in the letter response to the NWB dated February 26, 2007;
 - ii. Reportable quantities for Nunavut have been provided in Appendix 1.2, however, the NIRB Screening Decision Report, Item 30, requires that all spills be reported. Reference and requirements are to be revised accordingly;
 - iii. Correct the INAC Inspectors contact number to 867-975-4295;
 - iv. Provide all figures referenced in the Plan;
 - v. Provide a new Nunavut Spill Report Form to be available for Reporting;
 - vi. Include the Environment Canada Emergency Pager contact of 867-766-3737;
 - vii. Provide the main contact for the Government of Nunavut, Department of the Environment, Environmental Protection at 867-982-7455(Kugluktuk) and 867-975-5910 (Iqaluit);
 - viii. Include additional information requirements for spills from vehicles and transport

of petroleum products with respect to the 12km road and the mobilization trail from Ulu to High Lake, as identified in the comments received during the review of the application; and

ix. Any other deficiencies identified by reviewers during the comment period.

3. The Licensee shall implement the Plan specified in Part H, Item 1 as and when approved by the Board.

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 and inspected on a regular basis. The Licensee is encouraged to use some form of secondary containment on fuel and chemical storage facilities associated with this undertaking.

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 measures to minimize the unauthorized discharge of waste, and to mitigate the effects of any such spill as may occur;
- ii. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the DIAND Water Resources Inspector at (867) 975-4295; 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 I: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION

1. The Licensee shall submit to the Board for approval, within ninety (90) days of issuance of this Licence, a revised Abandonment and Reclamation Plan that is specific to the scope of this Licence and prepared in accordance with the *Mine Site Reclamation Guidelines for the Northwest Territories (INAC), 2006* and consistent with the *INAC Mine Site Reclamation Policy for Nunavut, 2002*. The Plan shall address reclamation liability complete with an assessment and estimate of costs based on the most recent version of RECLAIM or other equivalent method as approved by the Board. The Licensee shall refer to comments submitted by interested parties as part of the development of the Plan.

2. If the Plan referred to in Part I, Item 1 is not approved, the Licensee shall make the necessary revisions and resubmit the Plan within thirty (30) days following notification from the Board.
3. The Licensee shall implement the Plan specified in Part I, Item 1 as and when approved by the Board.
4. The Licensee shall ensure that, upon completion of work, any areas disturbed as a result of the undertaking are stabilized and re-vegetated as required and restored as practically as possible to a pre-disturbed state, to the satisfaction of an Inspector.
5. The Licensee shall carry out progressive reclamation of any components of the project no longer required for the Licensee's operations.

PART J: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Licensee shall undertake monitoring at the following locations:

| Monitoring Program Station Number | Description |
|--|---|
| HIG-1 | Raw water supply intake at Lake L22 |
| HIG-2 | Raw water supply intake at Sandy Lake |
| HIG-3 | Discharge from the Sewage Treatment Facilities at the final control or point of release following treatment |
| HIG-4 | Outlet flow of Lake L20 |
| HIG-5a | Secondary containment sump at the Sand Lake Bulk Fuel Storage Facility |
| HIG-5b | Secondary containment sump at the Weatherhaven Camp Bulk Fuel Storage Facility |

2. The Licensee shall ensure that all sampling, sample preservation and 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 approved by the Board.
3. The Licensee shall measure and record in cubic metres, the monthly and annual quantities of water pumped at Monitoring Program Stations HIG-1 and HIG-2, for all purposes.
4. The Licensee shall measure and record in cubic metres, the monthly and annual quantities of effluent discharged at Monitoring Program Station HIG-3.
5. The Licensee shall sample monthly during discharge at Monitoring Program Station

HIG-3 and monthly during periods of observed flow at Station HIG-4, to be analyzed for the following parameters:

| | |
|--------------------------------------|-----------------|
| Biochemical Oxygen Demand (BOD) | Fecal Coliforms |
| Total Suspended Solids (TSS) | pH |
| Oil and Grease (analysis and visual) | |

6. The Licensee shall, prior to the deposition of effluent from Sewage Treatment Facilities at Monitoring Program Station HIG-3 to Lake L20, determine background water quality at Monitoring Program Station HIG-4 though the collection of representative samples during open water and analyzing for the parameters as outlined in Part J, Item 5.
7. The Licensee shall, where required by Part D, Item 18, ensure that effluent is demonstrated to be Not Acutely Toxic under the following tests:
 - i. Acute lethality to Rainbow Trout, *Oncorhynchus mykiss* (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/13); and
 - ii. Acute lethality to the crustacean, *Daphnia magna* (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/14)
8. The Licensee shall, prior to the discharge of any effluent from Monitoring Station HIG-5a and HIG-5b, collect representative samples and analyze for the following parameters:

| |
|---|
| TPH (Total Petroleum Hydrocarbons) |
| PAH (Polycyclic Aromatic Hydrocarbons) |
| BTEX (Benzene, Toluene, Ethylbenzene, Xylene) |

| | |
|-----------------|------------------|
| Nitrate-Nitrite | Oil and Grease |
| Total Phenols | Total Alkalinity |
| Total Hardness | Calcium |
| Magnesium | Potassium |
| Sodium | Sulphate |
| Total Arsenic | Total Cadmium |
| Total Copper | Total Chromium |
| Total Iron | Total Lead |
| Total Mercury | Total Nickel |

9. 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 monitoring activities, are provided to the Board in the Annual Report, in accordance with Part B, Item 1 (i and ii).

10. The Licensee shall, within six (6) months following completion of construction of the Bulk Fuel Storage Facility, submit to the Board for approval, a plan for the environmental monitoring of the Bulk fuel Storage Facility. The Plan shall include the following:
 - i. Methods for the geotechnical assessment of the performance of the containment facility;
 - ii. Location, environmental setting and the potential for leaks or seepage that could impact water;
 - iii. An assessment of the need for, and if required, the design for installation, monitoring and maintenance of vertical Groundwater Monitoring Wells to be installed in accordance with the *Environmental Code of Practice for Aboveground Storage Tank Systems Containing Petroleum Products, 2003; CCME*; and
 - iv. Recommended sampling for ongoing monitoring of the integrity of the secondary containment.
11. If the Plan referred to in Part J, Item 10 is not approved, the Licensee shall make the necessary revisions and resubmit the Plan within thirty (30) days following notification from the Board.
12. The Licensee shall implement the Plan specified in Part J, Item 10 as and when approved by the Board.
13. The Licensee shall, upon approval of the Bulk Fuel Storage Facility Monitoring Plan, submit the results of the monitoring carried out under the Plan as part of the Annual Report required under Part B, Item 1.
14. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
15. An Inspector may impose additional monitoring requirements.