

## YUKON WATER BOARD

Pursuant to the *Waters Act* and *Waters Regulation*, the Yukon Water Board hereby grants a Type B water licence for a municipal undertaking to:

First Nation of Nacho Nyak Dun  
Box 220  
Mayo, Yukon Y0B 1M0

**LICENCE NUMBER:** MN06-068

**LICENCE TYPE:** B **UNDERTAKING:** MUNICIPAL

**LOCATION:** Mayo, YT

**MAP CO-ORDINATES:** Minimum Latitude: 63° 35' 57"N Maximum Latitude: 63° 36' 5"N  
Minimum Longitude: 135° 54' 33"W Maximum Longitude: 135° 54' 53"W  
Centre Latitude: 63° 36' 1" N Centre Longitude: 135° 54' 42"W

**PURPOSE:** To obtain and return a flow of water for a geoexchange system, to obtain, store and alter the flow of water for a municipal water supply, and to deposit a waste.

**EFFECTIVE DATE:** The effective date of this Licence shall be the date on which the signature of the Chairperson of the Yukon Water Board is affixed.

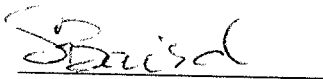
**EXPIRY DATE:** December 31, 2032

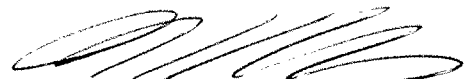
This Licence shall be subject to the restrictions and conditions contained herein and to the restrictions and conditions contained in the *Waters Act* and the *Waters Regulation* made thereunder.

Dated this 23 day of

March, 2008

Approved by:

  
Witness

  
Chairperson  
YUKON WATER BOARD

## PART A - DEFINITIONS

“Act” means *Waters Act* and any amendments thereto.

“Application” means Water Use Application MN06-068, including any additional submissions and/or revisions submitted to the Yukon Water Board by the Licensee, up to the date of the Board’s decision.

“Board” means the Yukon Water Board.

"Inspector" means any person designated as an Inspector under the Act.

"Natural Boundary" means the visible high water mark of any lake, river, stream or other body of water where the presence and action of water is so common and usual and so long continued as to mark upon the soil of the bed of the lake, river, stream or other body of water a character distinct from that of the banks thereof, both in respect to vegetation and in respect to the nature of the soil itself. In addition, the best estimates of the edge of dormant or old side channels and marsh areas are considered to be Natural Boundaries.

“Regulation” means the *Waters Regulation* made under the Act.

“Spill Contingency Plan” means the Emergency Response Plan that was submitted as part of the Application and included in Water Use Register MN06-068 as exhibit 1.3, and any subsequent revisions.

“Waste” means any substance as defined in the Act.

“Watercourse” means any stream, lake, pond, river, creek, spring, ravine or swamp whether ordinarily containing water or not.

## PART B - GENERAL CONDITIONS

### Representations, Warranties and Undertakings

1. In this licence, the Board has relied on the representations, warranties and undertakings provided by the applicant in the material filed in the Application.
2. Where there is a discrepancy between the Application and this licence, the conditions of this licence shall prevail.

### Other Laws

3. No condition of this licence limits the application of any other federal, territorial, first nation or municipal legislation.

4. All construction or installation of works authorized by this licence shall occur on property that the Licensee has the right to enter upon and use for that purpose.

Correspondence

5. Where any direction, notice, order or report under this licence is required to be in writing, it shall be given:
  - a) To the Licensee, if delivered, faxed or mailed by registered mail to the following address:

First Nation of Nacho Nyak Dun  
Box 220  
Mayo, Yukon Y0B 1M0  
Fax: 867 996 2107

and shall be deemed to have been given to the Licensee on the day it was delivered or faxed, or 7 days after the day it was mailed, as the case may be.

- b) To the Board, if delivered, faxed or mailed by registered mail to the following address:

Yukon Water Board  
Suite 106, 419 Range Road  
Whitehorse, YT Y1A 3V1  
Fax: 867 456 3890

and shall be deemed to have been given to the Board on the day it was delivered or faxed, or 7 days after the day it was mailed, as the case may be.

- c) The Board or the Licensee may, by notice in writing, change its address for delivery.

Non-Compliance

6. In the event that the Licensee fails to comply with any provision or condition of this licence, the Board may, subject to the Act, cancel the licence.

Other Uses

7. If, subsequent to the issuing of this licence, the Licensee uses water and/or deposits Waste in one or more ways not authorized in this licence, and the combined effect of those uses and/or deposits of Wastes, as determined by an Inspector:
  - a) has no potential for significant adverse environmental effects; and
  - b) does not interfere with existing rights of other water users or Waste depositors; and
  - c) satisfies the criteria set out in column 2 of Schedule 8 of the Regulation,

no amendment to this licence will be required for that use of water and/or deposit of Waste.

Spills and Unauthorized Discharges

8. The Licensee shall immediately contact the 24-hour Yukon Spill Report number, 867 667 7244, and implement the Spill Contingency Plan should a spill or an unauthorized discharge occur. A detailed written report on any such event including, but not limited to, dates, quantities, parameters, causes and other relevant details and explanations, shall be submitted to the Board not later than 10 days after the occurrence.
9. All personnel shall be trained in procedures to be followed and the equipment to be used in the containment of a spill.
10. The Spill Contingency Plan shall be posted on site for the duration of the works.

Fuel Storage and Transfer

11. Fuel, lubricants, hydraulic fluids, coolants and similar substances shall be stored and/or transferred a minimum of 30 metres from the Natural Boundary of any Watercourse, in such a way that said substances are not deposited in or allowed to be deposited in waters.

Annual Reports

12. On or before the anniversary of the date of issuance of this licence, and for each year during which this licence is in effect, the Licensee shall submit an annual report to the Board. The report shall include the information required by the Regulation including, but not necessarily limited to:
  - a) a description of the water use operations carried out during the year reported; and
  - b) the quantity of water used each day; and
  - c) the results of all analysis required by the monitoring program; and
  - d) the hours of pumping for each day; and
  - e) copies of all orders, directions and correspondence relating to drinking water sampling or analysis from the Medical Health Officer or from a Health Officer.

Reports

13. Unless otherwise specified in this licence, all reports shall be submitted to the Board in an unbound form that is reproducible by standard photocopier and shall be accompanied by 5 copies.
14. All reports shall be submitted in digital form on computer diskette using an IBM compatible format that is readable using commonly available software.

Term of Licence

15. The term of this licence is for the period from the effective date to December 31, 2032.

**PART C - OPERATING CONDITIONS**Description of Water Use

16. The Licensee is hereby authorized to:
  - a) obtain groundwater from an existing well, known as PW05-01, at a rate not exceeding 900 cubic metres per day,
  - b) convey water via pumps and pipes to the government administration building and the central services building,
  - c) distribute water for residential use by truck,
  - d) use and treat 75 cubic metres of water per day for municipal purposes,
  - e) use and treat 825 cubic metres of water per day for the purpose of a geoexchange heating and cooling system,
  - f) construct infiltration well IW08-02,
  - g) discharge treated water from the geoexchange heating and cooling system into infiltration well, IW08-02,
  - h) construct and discharge wastewater to ground via a sub-surface sewage disposal system,

as described in the Application, and subject to the conditions of this licence.

17. Notification, including the name and phone number of the field supervisor, shall be provided to the Board, in writing, 10 days prior to the start of construction.

**PART D – EFFLUENT QUALITY STANDARDS**

18. No Waste discharged from the geexchange heating and cooling system shall exceed the following discharge quality standards in the discharge line to the injection wellhead.

<b>Parameter</b>	<b>Maximum Concentration in a Grab Sample Measured in mg/L</b>
Chloride	50 mg/L
Sodium	100 mg/L

**PART E – MONITORING AND SURVEILLANCE**

19. The Licensee shall comply with the following water quality monitoring and surveillance program:

<b>Monitoring Location/Parameter</b>	<b>Discharge line to the injection wellhead</b>
Chloride (mg/L)	Monthly
Sodium (mg/L)	Monthly

20. All data collection and analysis shall be conducted in accordance with current edition of “Standard Methods for the Examination of Water and Wastewater”, prepared and published jointly by the American Water Works Association and the Water Pollution Control Federation.

**PART F - DESIGN AND CONSTRUCTION**

Design

21. The sewage disposal system shall be constructed in accordance with the design drawings which were sealed by a Professional Engineer licensed to practice in Yukon and submitted as part of the Application.
22. Ten days prior to the commencement of construction, the Licensee shall submit to the Board final detailed design construction drawings for the water supply system and the geexchange system. The final detailed design drawings must be consistent with the drawings which were submitted as part of the Application and sealed by a Professional Engineer licensed to practice in Yukon. All construction shall be carried out in accordance with the final design drawings.

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23. The Licensee shall submit as-built design drawings and specifications for the water supply system and the geexchange system sealed by a Professional Engineer licensed to practice in the Yukon. All drawings are to be submitted to the Board within 60 days of completion of construction of each structure.

Construction

24. All works associated with the undertaking shall be maintained in good repair.
25. Construction and/or maintenance equipment shall be mechanically sound and free of leaks.
26. Waste substances shall be used, transported, stored or disposed of in such a manner that they are not deposited, or allowed to be deposited, into any Watercourse or on any surrounding land.
27. Except as authorized by this licence, no Waste shall enter any Watercourse as a result of any operation carried out by the Licensee.
28. All disturbed ground surfaces shall be stabilized in such a manner so as to prevent erosion and surface runoff from carrying sediment into any Watercourse.
29. Where an artesian well is encountered the Licensee shall take immediate action to:
- a) control the flow of water to prevent any further outflow of water on the ground surface; and
  - b) submit a report to the Board of the occurrence and details of measures taken; and
  - c) notify an Inspector.

**PART G - SITE DECOMMISSIONING AND RESTORATION**

30. All disturbed ground surfaces shall be regraded in a manner which is consistent with the topography of the site and which prevents erosion and surface runoff from carrying sediment into any Watercourse. Where soil conditions permit, disturbed areas shall be re-vegetated with appropriate reclamation seeds and/or plant species that are native in Yukon.
31. All construction materials, equipment, temporary structures and debris shall be removed from the site upon completion of the work.
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