

# **2003 Executive Overview**

**For**

**Starfield Resources Ltd.  
Ferguson Lake Project**

**Nunavut Territories**

**Located at**

**62° 55' N and 97° 00' W  
NTS sheet 65I/14E and 65I/15W.**

**January 26<sup>th</sup>, 2003**

## **Introduction**

The Ferguson Lake Project is a copper, nickel, cobalt, platinum and palladium prospect currently being explored by Starfield Resources Inc.

Exploration and development performed by INCO in the early 1950's and by Starfield Resources in 1999-2002 has successfully delineated a mineral resource estimated to contain: 60.1 million tonnes, grading 0.93 % copper, 0.59% nickel and 1.51 grams per tonne palladium and platinum with an estimated value using historic average metal prices of over \$9 Billion Canadian.

The property is located 240 kilometres west of Rankin Inlet and 180 kilometres south of Baker Lake. It is found between Yathkyed and Kaminuriak Lakes at Latitude 62° 55' N and Longitude 97° 00' W on NTS sheet 65I/14E and 65I/15W on the Western shores of Ferguson Lake.

Access to the property is by fixed wing or by helicopter out of Rankin Inlet, Baker Lake. or Thompson. Manitoba. In the winter, access is also possible by overland routes.

Work can be conducted on the property year round and is limited only by extreme blizzard and cold weather conditions that prevail during the months of December-and January.

Facilities at Ferguson Lake consist of a 600-metre gravel airstrip and a hard camp consisting of several wooden structures and portable Weather Haven Structures, which allow for 25-30 men. Communications in the camp are via real time satellite uplink.

## **Exploration History**

Exploration in the Ferguson Lake area dates back to the early turn of the century when Geological Survey of Canada reconnaissance crews working in the area noted it.

Airborne reconnaissance by the Canadian Nickel Company (INCO) in 1949 identified the same showings. Ground crews later staked these that same year. Follow up work in 1950 by Canadian Nickel (INCO) Geologists resulted in a 100 person camp being built. An aggressive program of mapping, prospecting, blast trenching and drilling took place from 1951-1954.

The property was taken to a Mineral Lease Status by INCO in 1960. A 6 Ton Bulk Sample was taken out and sent to Copper Cliff Ontario for metallurgical testing. The property remained dormant until the 1970's when ESSO Minerals took out a further 9-ton bulk sample via Cat Train.

Homestake Minerals undertook a program of surface mapping and sampling in the mid 1980's focusing upon the platinum and palladium potential that existed in the area.

No further work was undertaken and the ground was allowed to lapse in 1996. The ground remained dormant until it was acquired by the Ferguson Lake Syndicate and optioned off to Starfield Resources Inc.

Starfield Resources acquired the 25 mineral claims from the Ferguson Lake Syndicate in 1999 and commenced exploration work that year.

Exploration work carried out on the property has been carried out under Land Use Permit KVL 399 C150.

Exploration on the property since 1999 has consisted of: grid construction utilizing flagging tape and wooden pickets, airborne magnetic surveys, geological mapping and prospecting, ground geophysical surveys and over 60,000 metres of diamond drilling using fly drill rigs.

Since acquiring the property in 1999, Starfield has spent over \$19 million in exploration costs.

Exploration and development work to date has successfully delineated a mineral resource estimated to contain 60.1 million tonnes grading 0.93 % copper, 0.59% nickel and 1.51 grams per tonne palladium and platinum with an estimated value using historic average metal prices of over \$9 billion Canadian. 93% of the resource currently occurs in an area known as the West Zone and the West Zone Extension.

The company has identified that the mineralized zone is still open to the west. Additional higher-grade platinum and palladium zones appear to exist parallel to the main zone in the east. These higher-grade platinum and palladium zones remain untested and are the focus of the 2003 Exploration Program.

Starfield has completed initial water surveys (Rescan-ongoing), wildlife studies (EBA) and has begun initial baseline environmental impact studies (Starfield).

## **Location and Access**

The Ferguson Lake Project is located 240 kilometres west of Rankin Inlet and 180 kilometres south of Baker Lake between Yathkyed and Kaminuriak Lakes at Latitude 62° 55' N and Longitude 97° 00' W on NTS sheet 65I/14E and 65I/15W on the Western shores of Ferguson Lake.

Access to the property is via fixed wing aircraft or helicopter out of Rankin Inlet and or Baker Lake. Access by overland routes is limited to the winter months.

Topography on the property consists of low rolling hills. Elevation is under 150 metres above MSL with a maximum of 200 metres above MSL.

Moss, lichen, dwarf birch, alder, Labrador tea and an assortment of low ground cover make up the area's vegetation.

Wildlife observed in the area consists of caribou, arctic fox, arctic hare, marmot, ptarmigan and an assortment of wild birds. Wildlife is migratory and is limited from May to October.

## **Exploration and Development Program 2003**

The proposed Exploration and Development program of 2003 will consist mainly of diamond drilling. Approximately 20,000 metres of drilling are being budgeted for. Of the 20,000 metres, all but 1000 metres will be allocated to the West Zone and West Zone Extension.

The proposed 2003 drilling program will focus on the area known as the West Zone. Work will be focused on delineating high-grade platinum and palladium grades, which were discovered in 2002.

The program is anticipated to start April 15<sup>th</sup> 2003. All movement of crews, drills and equipment up until late May will be by skidoo and tractor. From Mid May until Mid October, movement of crews, equipment and drills will be performed by Helicopter.

Anticipated cost for the 2003 Exploration program is approximately \$6,000,000.

Respectfully submitted this 1<sup>st</sup> day of February, 2002

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**Robert Krause B.Sc.**  
**VP Exploration**

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**John A. Nicholson, P.Geo, B.Sc.**  
**Project Manager**

**WATER LICENCE**  
**APPLICATION FORM**

# WATER LICENCE APPLICATION FORM

Application for: (check one) ☐ New ☐ Amendment ☒ **Renewal** ☐ Assignment

<b>LICENCE NO:</b> (for NWB use only)			
<b>1. NAME AND MAILING ADDRESS OF APPLICANT/LICENSEE</b>  STARFIELD RESOURCES INC 420-625 Howe Street Vancouver, BC V6C-2T6 Phone: (604)608-0400 Fax (604)608-0344 e-mail: <a href="mailto:john_nicholson@telus.net">john_nicholson@telus.net</a> <a href="mailto:krause@starfieldres.com">krause@starfieldres.com</a>	<b>2. ADDRESS OF CORPORATE OFFICE IN CANADA (if applicable)</b>  Same as Applicant/Licensee  Phone: Fax: e-mail:		
<b>3. LOCATION OF UNDERTAKING</b> (describe and attach a topographical map, indicating the main components of the undertaking)  Area of Exploration will be focused in an area located in the vicinity of Ferguson Lake, approximately .5-14 kilometers inland from the lakeshore edge. (See attached map)  Latitude: 62 50' – 63 00' North      Longitude: 96 45' – 97 04' West      NTS Map No 65I15. Scale 1:50,000			
<b>4. DESCRIPTION OF UNDERTAKING</b> (attach plans and drawings)  Exploration program that is being proposed is a continuum of the drilling programs that have successfully been performed over the past 3 years. Program will consist entirely of land based diamond drilling. All drilling will be focused in an area known as the West Zone and South Discovery Zone (See map)			
<b>5. TYPE OF UNDERTAKING</b> (A supplementary questionnaire <u>must</u> be submitted with the application for undertakings listed in “ <b>bold</b> ”)			
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Industrial  <input type="checkbox"/> Mine Development  <input type="checkbox"/> Advanced Exploration  <input checked="" type="checkbox"/> <b>Exploratory Drilling</b> </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Remote/Tourism Camps  <input type="checkbox"/> Municipal  <input type="checkbox"/> Power  <input checked="" type="checkbox"/> <b>Other (describe):</b> <u>See attached supplementary questionnaire</u> </td> </tr> </table>		<input type="checkbox"/> Industrial <input type="checkbox"/> Mine Development <input type="checkbox"/> Advanced Exploration <input checked="" type="checkbox"/> <b>Exploratory Drilling</b>	<input type="checkbox"/> Remote/Tourism Camps <input type="checkbox"/> Municipal <input type="checkbox"/> Power <input checked="" type="checkbox"/> <b>Other (describe):</b> <u>See attached supplementary questionnaire</u>
<input type="checkbox"/> Industrial <input type="checkbox"/> Mine Development <input type="checkbox"/> Advanced Exploration <input checked="" type="checkbox"/> <b>Exploratory Drilling</b>	<input type="checkbox"/> Remote/Tourism Camps <input type="checkbox"/> Municipal <input type="checkbox"/> Power <input checked="" type="checkbox"/> <b>Other (describe):</b> <u>See attached supplementary questionnaire</u>		



**6. WATER USE**

**X To obtain water**

☐ To modify the bed or bank of a watercourse

☐ To alter the flow of , or store, water

☐ To cross a watercourse

☐ To divert a watercourse

☐ Flood control

☐ Other (describe):

**7. QUANTITY OF WATER INVOLVED** (liters per second, liters per day or cubic metres per year, including both quantity to be used and quality to be returned to source.

**Water that is to be used will be used for the purposes of:**

**(a) Drilling**

**(b) Domestic use**

**Amounts of water that will be used are as follows:**

**Drilling Units:** 0.40-0.50L/Sec

**Water Source:** 34,560-43,200L/day (24hrs)

**Domestic Units:** 48L/day/person

**Water Source:** 720L/day (24hrs)

**Amounts of Water that will be returned to source is as follows:**

**Drilling Units:** Water is pumped up to 2000 meters from source to drill. Water used for drilling will not return to original water source. Water is circulated in hole and re-used. Quality of water being returned would be slightly muddied and discolored by drill fines.

**Domestic Use:** N/A-water for domestic use will not be returned to source. Water will be disposed of in local sump. Water would be classified as Grey Water. Quality of water would not be suitable for consumption.

**8. WASTE** (for each type of waste describe: composition, quantity, methods of treatment and disposal, etc.)

**X Sewage**

-All sewage is burnt daily in STORMBURN INCINERATORY WASTE STATIONS. Quantity of sewage in conjunction with the Solid Waste is approximately 40 liters per day. Ash from INCINERATOR WASTE STATION is further burnt in Garbage Incinerator

**X Waste oil**

-All waste oil is used as an incineratory agent in the aid of burning garbage in the garbage incinerator on site.

**X Solid Waste**

-All solid waste like the Sewage is burnt daily in a STORMBURN INCINERATORY WASTE STATION. All ash from waste stations are then re-burnt in the Garbage Incinerator.

**X Grey Water**

-Grey Water consists entirely of wash water, shower water and kitchen water. All grey water is piped via heated grey water line to a local sump measuring approximately 12m x 12m in area.

**X Hazardous Waste**

-There are no Hazardous Waste Materials on site.

**X Sludges**

-Any and all sludges that are produced on site are bagged and flown off site along with rock samples to Thompson Manitoba.

**X Bulky Items/Scrap Metal**

-No bulky Items have been brought on site by Starfield Resources.

-Scrap Metal in the form of drill rods is the responsibility of Major-Midwest Drilling of Thompson, Manitoba. All scrap rods and or drill related material is shipped out by plane as back hauls to Thompson Manitoba.

☐ Other (describe)

**9. PERSONS OR PROPERTIES AFFECTED BY THIS UNDERTAKING** (give name, mailing address and location; attach if necessary).

**Land Use Permit**

DIAND ☐ Yes ☐ No If no, date expected

-DIAND Permit to cover drilling in areas outside of KIA permit has been closed off.

**Regional Inuit Association** ☒ Yes ☐ No If no, date expected

-Permit with local KIA is current. Permit # is KVL399C150.

Commissioner ☐ Yes ☐ No If no, date expected

**10. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES** (direct, indirect, cumulative impacts, etc.)

NIRB Screening ☐ Yes ☐ No If no, date expected

**11. CONTRACTORS AND SUB-CONTRACTORS** (name, address and functions)

**Contractors on site are as follows:**

- Major Drilling:** 35 Station Road, Thompson, Manitoba, R8N-0N6: Drilling Contractors
- Nicholson & Associates,** 1210-675 West Hastings Street, Vancouver BC. V6B-1N2: Geological Crews
- 1984 Inc.,** 201-750 Denman Street, Vancouver BC, V6G-2L5: First Aid-Catering Staff
- Northern Air Support,** 6285 Kelowna Airport, Kelowna BC, V1V-1S1: Helicopter Support

**12. STUDIES UNDERTAKEN TO DATE** (list and attach copies of studies, reports, research, etc.)

-Studies performed to date are as follows:

- 2001: Wildlife Baseline Studies-Prepared by: EBA Engineering Consultants Ltd, Yellowknife, NT**
- 2002-2003: Daily Weather Observations-Starfield Resources**

**13. THE FOLLOWING DOCUMENTS MUST BE INCLUDED WITH THE APPLICATION FOR THE REGULATORY PROCESS TO BEGIN**

Supplementary Questionnaire (where applicable: see section 5) ☒ Yes ☐ No If no, date expected

Inuktitut/English Summary of Project ☐ Yes ☐ No If no, date expected

Application fee \$30.00 (c/o of Receiver General for Canada) ☒ Yes ☐ No If no, date expected

**14. PROPOSED TIME SCHEDULE**

☐ Annual (or) ☒ Multi Year

**Start Date: April 15<sup>th</sup>, 2003 Completion Date: December 31<sup>st</sup> 2004**

\_\_\_\_\_  
Name (Print)

\_\_\_\_\_  
Title (Print)

\_\_\_\_\_  
Signature

Date

For Nunavut Water Board use only

APPLICATION FEE

Amount: \$\_\_\_\_\_

Receipt No.:

WATER USE DEPOSIT

Amount: \$\_\_\_\_\_

Receipt No.:

SCHEDULE 2

APPLICATION FOR ASSIGNMENT OF LICENCE

APPLICATION FOR AUTHORIZATION

TO ASSIGN LICENCE NO. \_\_\_\_\_

=====

NAME OF LICENSEE \_\_\_\_\_

ADDRESS \_\_\_\_\_

TELEPHONE NO. \_\_\_\_\_

LOCATION \_\_\_\_\_

PURPOSE OF LICENCE \_\_\_\_\_

PROPOSED ASSIGNEE \_\_\_\_\_

ADDRESS \_\_\_\_\_

TELEPHONE NO. \_\_\_\_\_

PROPOSED DATE OF ASSIGNMENT \_\_\_\_\_

WATER USE FEES PAID (current year)

Amount: \$ \_\_\_\_\_ Receipt No.: \_\_\_\_\_ Date: \_\_\_\_\_

APPLICATION FEES \$30.00 to be submitted with the application form by  
cheque, bank, draft, or money order payable to:

RECEIVER GENERAL FOR CANADA

\_\_\_\_\_  
Office use only \_\_\_\_\_ Receipt No.: \_\_\_\_\_ Date: \_\_\_\_\_

DECLARATION OF LICENSEE

ASSIGNMENT OF LICENCE NO. \_\_\_\_\_

=====

I, \_\_\_\_\_, \_\_\_\_\_  
(Full name and initials) (Title and name of Corporation)

Representing \_\_\_\_\_  
(Name of Licensee)

Hereby request the Nunavut Water Board to approve the assignment of Licence No.

\_\_\_\_\_described in this application.

DATED this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ In the  
(Day) (Month) (Year)

\_\_\_\_\_, \_\_\_\_\_, Canada.  
(City or Town) (Province or Territory)

\_\_\_\_\_  
Signature of Licensee

\_\_\_\_\_  
Name of Corporation

DECLARATION OF ASSIGNEE

ASSIGNMENT OF LICENCE NO. \_\_\_\_\_

=====

I, \_\_\_\_\_, \_\_\_\_\_  
(Full name and initials) (Title and name of Corporation)

hereby declare that I am a signing authority for the Assignee and

THAT

the Assignee, if a corporate entity, is registered to carry on business in the Nunavut Settlement Area as defined in the Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada, and

THAT

I request the Nunavut Water Board to approve the assignment of License No. \_\_\_\_\_ described in the application and

THAT

as of \_\_\_\_\_, \_\_\_\_\_, I accept on behalf of \_\_\_\_\_  
(Date) (Name of Assignee)

All legal rights and obligations conferred by the Licence referred to in this application, including any obligations of the Licensee which may be outstanding with respect to compliance with the said Licence, but excluding the payment of water use fees for the year \_\_\_\_\_.

DATED this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ in this  
(Day) (Month) (Year)

\_\_\_\_\_, \_\_\_\_\_, Canada.  
(City or Town) (Province or Territory)

\_\_\_\_\_  
Name of Assignee

\_\_\_\_\_  
Signature of Assignee



**EXPLORATION/REMOTE CAMP**

**SUPPLEMENTARY**

**QUESTIONNAIRE**



P.O. Box 119

GJOA HAVEN, NT X0E 1J0

TEL: (867) 360-6338

FAX: (867) 360-6369

kNK5 wmoEp5 vtmpq

NUNAVUT WATER BOARD

NUNAVUT IMALIRIYIN KATIMAYINGI

## EXPLORATION/REMOTE CAMP SUPPLEMENTARY QUESTIONNAIRE

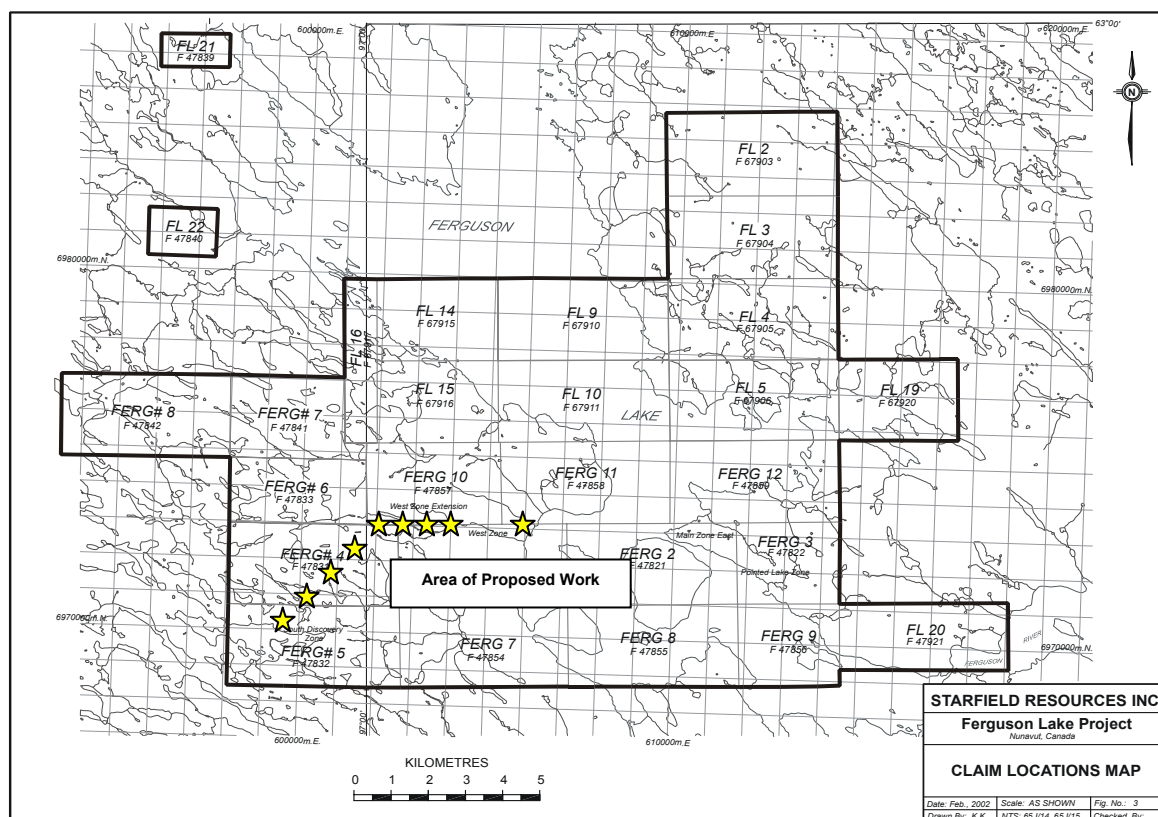
**Applicant: Starfield Resources**

**Licence No: NWB2FER0102**

(For NWB Use Only)

### ADMINISTRATIVE INFORMATION

- Environment Manager: Robert Krause** Tel: 604-608-0400 Fax: 604-608-0400 E-mail: [krause@starfieldres.com](mailto:krause@starfieldres.com)
- Project Manager: John A. Nicholson** Tel: 604-608-0400 Fax: 604-608-0344 E-mail: [john\\_nicholson@telus.net](mailto:john_nicholson@telus.net) / [sfield@skycomip.com](mailto:sfield@skycomip.com)
- Does the applicant hold the necessary property rights? **Yes. Currently all claims are held by Starfield Resources. Ownership is 100%**



- Is the applicant an 'operator' for another company (i.e., the holder of the property rights)?

If so, please provide letter of authorization.

5. Duration of the Project

☐ Annual

☒ Multi Year:

If Multi-Year indicate proposed schedule of on site activities

**Start: April 2003 Completion: April 2005**

**CAMP CLASSIFICATION**

6. Type of Camp

☐ Mobile (self-propelled)

☐ Temporary

☐ Seasonally Occupied: \_\_\_\_\_

☐ Permanent

☒ **Other: Presently leasing Ferguson Lake Fishing Lodge**



7. What are the design population of the camp and the maximum population expected on site at one time? What will be the fluctuations in personnel?

**-Ferguson Lake Fishing Lodge has been designed to accommodate up to 30 people. Maximum amount of Starfield Personal on site at any given time would be 15-20 people.**

8. Provide history of the site if it has been used in the past.

**-1950: Camp brought in from Churchill Manitoba and constructed by INCO.**

**-1950-1953: Camp used by INCO for Exploration Purposes on the Ferguson Lake Project and surrounding areas.**

**-1953-1984: Camp remained on care and maintenance by INCO.**

**-1984-1986: Camp maintained by Eco-Tour group who operated the camp.**

**-1986: Camp purchased by Keith Sharp and moved from mainland to present site.**

**-1986-1996: Camp operated as Ferguson Lake Lodge-Fishing Camp.**

**-1996-1999: Camp remained dormant.**

**-1999-present: Starfield Resources entered into a lease agreement with Keith Sharp to lease the camp and the facilities for the purposes of exploration on the Ferguson Lake Project.**

## **CAMP LOCATION**

9. Please describe proposed camp location in relation to biogeographical and geomorphological features, and water bodies.

**-Camp is located on NTS Map Sheet 65 I/15**

**Latitude 62-52.64"N Longitude 96-50.72"W  
UTM 609340N/6972828E NAD 83**



-Camp is presently located on an island within the confines of Ferguson Lake bound on all sides by water. Camp is located approximately 600-3000 metres from water at an elevation of 175 metres above sea level. Camp is located on good rocky ground with some sandy sections.





10. How was the location of the camp selected? Was the site previously used? Was assistance from the Regional Inuit Association Land Manager sought? Include maps and/or aerial photographs.

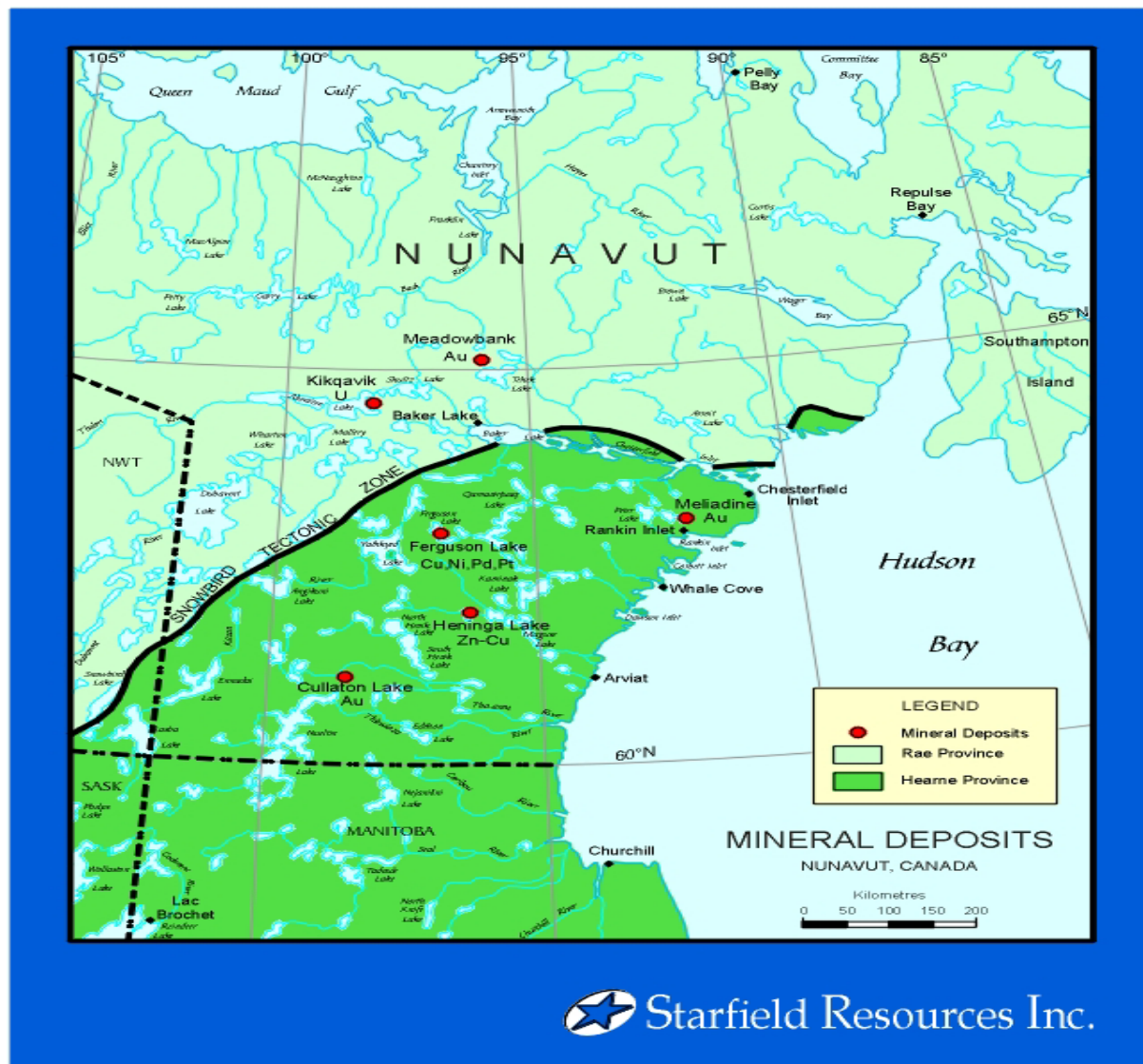
**-Not Applicable**

11. Is the camp or any aspect of the project located on:
- ☐ Crown Lands Permit Number (s)/Expiry Date: \_\_\_\_\_
  - ☐ Commissioners Lands Permit Number (s)/Expiry Date: \_\_\_\_\_
  - ☐ Inuit Owned Lands Permit Number (s)/Expiry Date: \_\_\_\_\_

**Ferguson Lake Lodge is located on KIA administered land. Lodge is on land under lease number #3372 (personal communiqué Keith Sharp)**

12. Closest Communities (distance in km):

<b>-Baker Lake</b>	<b>200 kilometers</b>
<b>-Rankin Inlet</b>	<b>275 kilometers</b>
<b>-Whale Cove</b>	<b>275 kilometers</b>
<b>-Arviat</b>	<b>300 kilometers</b>



13. Has the proponent notified and consulted the nearby communities and potentially interested parties about the proposed work?

**-Work on the site has been ongoing since 1999. Discussions with the various KIA authorities have been an on going process.**

14. Will the project have impacts on traditional water use areas used by the nearby communities? Will the project have impacts on local fish and wildlife habitats?

**-Project will not have an impact on traditional water use areas as water drainage flows to Hudson Bay. Closet community to outflow is Arviat, located approximately 300 kilometers downstream.**

**-Project area does not impact on local fish habitats.**

**-Project area does not impact on local wildlife habitats. Project Area is outside of designated Caribou Calving grounds which are located approximately 40 kilometers to the east of the present day Ferguson Lake Lodge site in the Kaminurak Lake area. During Caribou migration, operations are curtailed.**

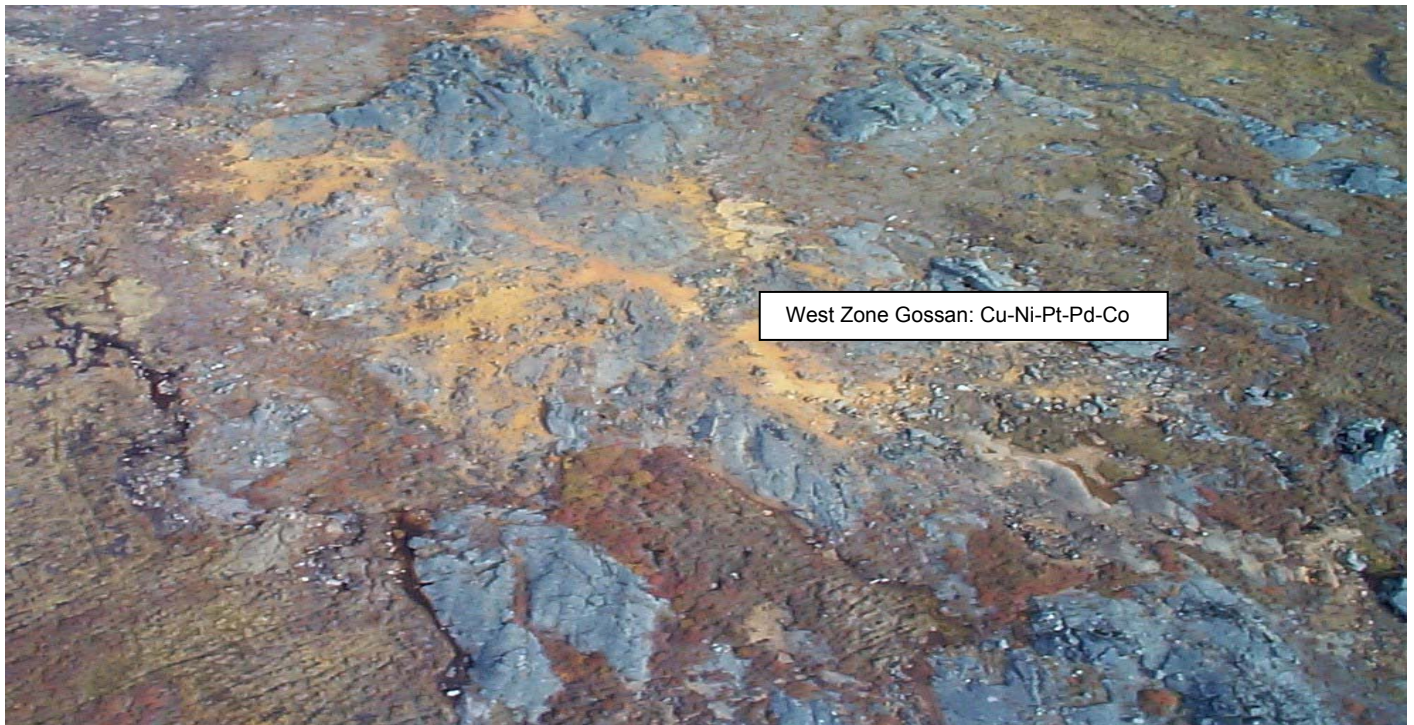
## **PURPOSE OF THE CAMP**

15. **X Mining**

- ☐ Tourism (hunting, fishing, wildlife observation, adventure/expedition, etc.)  
(Omit questions # 16 to 21)
- ☐ Other \_\_\_\_\_ (Omit questions # 16 to 22)

- 16.
- ☐ Preliminary site visit
  - X Prospecting**
  - X Geological mapping**
  - X Geophysical survey**
  - X Diamond drilling**
  - ☐ Reverse circulation drilling
  - ☐ Evaluation Drilling/Bulk Sampling (also complete separate questionnaire)
  - ☐ Other: \_\_\_\_\_

17. Type of deposit:
- ☐ Lead Zinc
  - ☐ Diamond
  - ☐ Gold
  - ☐ Uranium
  - X Other: Cu, Ni, Co, Pt, Pd,**





## DRILLING INFORMATION

### 18. Drilling Activities

- ☒ **Land Based drilling**
- ☐ Drilling on ice



### 19. Describe what will be done with drill cuttings?

**-Drill cuttings at present are being collected in local sumps. Once cuttings are dried, cuttings are bagged and removed from site by helicopter.**

### 20. Describe what will be done with drill water?

**-Drill water is presently being circulated and collected into natural sumps. Filtration of drill water is through onsite filtrations in drill and through natural sumps. Sludges are then removed offsite helicopter**

### 21. List the brand names and constituents of the drill additives to be used? Includes MSDS sheets and provide confirmation that the additives are non-toxic and biodegradable.

**-Drill additives to be used are as follows:**

- Big Bear Rod Grease
- Linseed Soap
- Poly Drill-133X
- Poly Drill-CTTP
- Matex-Ultravis
- Matex-Torqless

-(MSDS sheets attached see Appendix 1)

22. Will any core testing be done on site? Describe.

-At present core testing is confined to Core Logging and Core Sawing. All samples are sent off site for analyses.



## SPILL CONTINGENCY PLANNING

23. Does the proponent have a spill contingency plan in place? Please include for review.

-At present spill contingency plan consists of Spill Kits at each drill and also Spill Kits at fuel sites. In the event of a fuel spill, plans call for the immediate notification of proper

**authorities at 1-867-920-8130 and the notification of WCB in Rankin Inlet at 1-867-645-5601.**

24. How many spill kits will be on site and where will they be located?

**-A total of 5 Spill Kits are on site. Spill kits are presently in place at each drill (3), fuel supply area on the airstrip (1) and at the Heli-pad (1).**

**As well, all fuel barrels used for oil stoves have blue absorbent underlay for any fuel spillage. All fuel tanks, diesel engines and pumps at drill have blue absorbent underlay. Camp Generator and fueling station for Four Trax has blue absorbent matting for any fuel spillage.**

25. Please describe the types, quantities, and method of storage of fuel and chemicals on site, and provide MSDS sheets.

### **Fuel**

**The method of fuel storage is confined to 205L sealed barrels. All fuels (P-50, Jet B, Gasoline and Propane) are stored at the Ferguson Lake Airstrip.**

**The airstrip is located in the middle of the island and the closet water is 2000 metres away.**

**All of the fuel is stored in 100-barrel allotments and are all stored on graveled surfaces.**

**Fuel that will be stored on site is as follows:**

- |                              |                                |
|------------------------------|--------------------------------|
| <b>- P-50 Diesel Motive</b>  | <b>(700 barrels)</b>           |
| <b>- Jet B Aviation Fuel</b> | <b>(250 barrels)</b>           |
| <b>- Gasoline</b>            | <b>(10 barrels)</b>            |
| <b>- Propane</b>             | <b>(100-100 pound bottles)</b> |





Bulk Hauling Fuel to Ferguson Lake using Skyward Cessna Caravan  
Note Camp in background.

(See attached MSDS Sheets Appendix 2)

### Chemicals

Chemicals that will be stored on site will consist entirely of household cleaners and detergents. All chemicals and detergents are stored in Lodge Area. Quantities that would exist on site at any given time would be a maximum of 12 bottles and or containers each of the following:

- Fantastic
- Windex
- Tilex
- Comet
- Orange Hand Cleaner
- Mr. Clean Floor Cleaner

(See attached MSDS Sheets: Appendix 2)

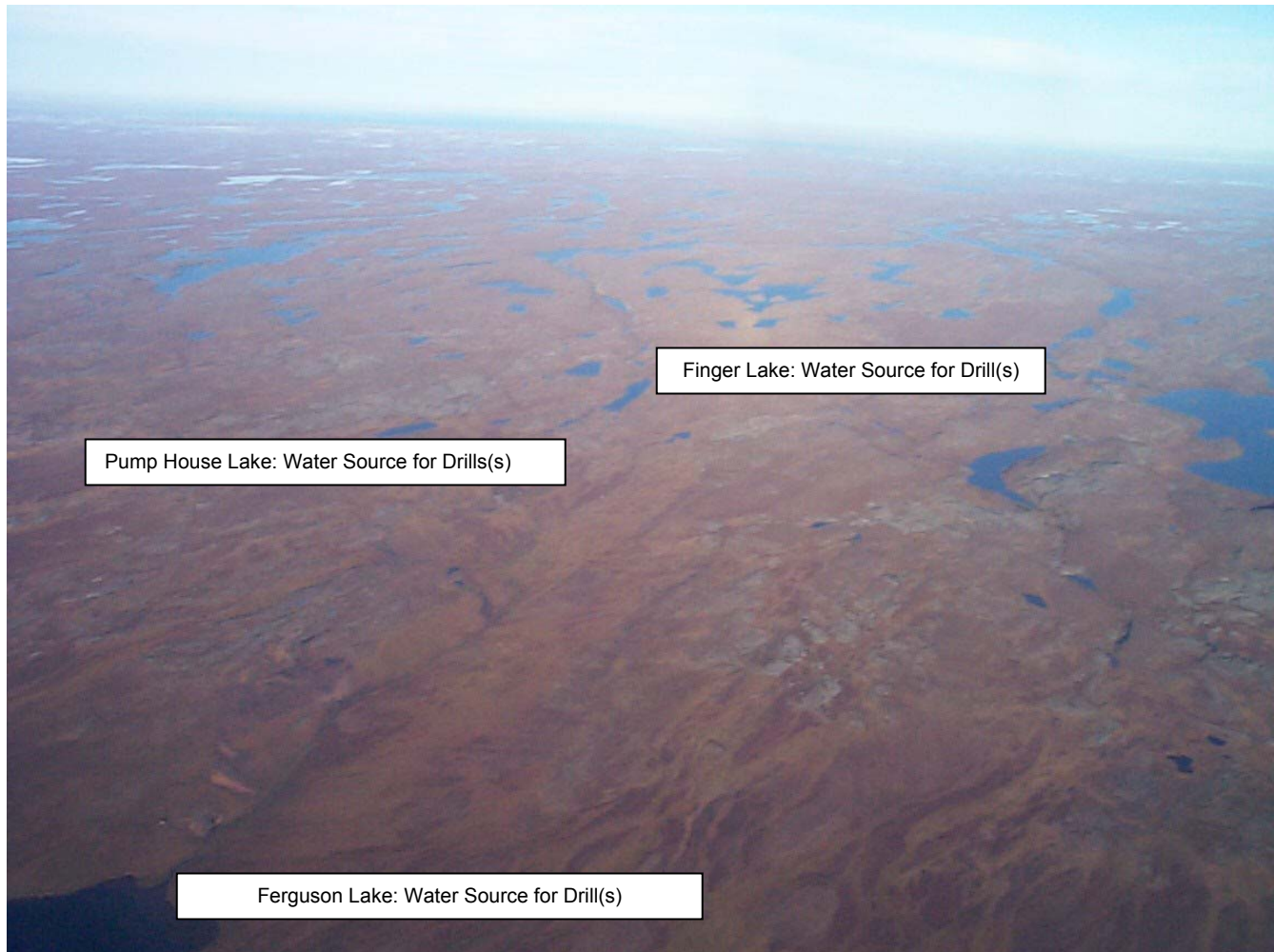
## **WATER SUPPLY AND TREATMENT**

26. Describe the location of water sources.

- Water source for camp is approximately 600 metres from camp.

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27. Estimated demand (in L/day \* person):

<input checked="" type="checkbox"/> Domestic Use: 48L/day/person	<b>Water Source: 720L/day</b>
<input checked="" type="checkbox"/> Drilling Units: 0.4-0.5L/Sec	<b>Water Source: 34,560-43,200L/day(24hrs)</b>
<input type="checkbox"/> Other: _____	Water Source: _____

28. Describe water intake for camp operations? Is the water intake equipped with a mesh screen to prevent entrapment of fish? Describe:

**-Water intake for camp during summer months utilizes an electrical Submersible Jacuzzi Style Water Pump. During winter months a diesel pump equipped with a coil stove heater, pumps water approximately 600 metres up a 175-metre lift into plastic storage tanks.**

**All water pumps are equipped with a mesh screen to prevent entrapment of fish.**

29. Will drinking water quality be monitored? What parameters will be analyzed and at what frequency?

**-No, drinking water will not be monitored. At present all drinking water is bottled water brought in from outside sources.**



30. Will drinking water be treated? How?

**-Drinking water will not be treated. Water that is used in camp is used for washing and cleaning purposes only.**

31. Will water be stored on site?

**-Water at present is being stored on site in 9 - 400 gallon plastic water tanks. Water Tanks are FDA approved for potable water use. Tanks are stored in a heated building. Water stored also is used for Fire Suppression should the need arise.**

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## **WASTE TREATMENT AND DISPOSAL**

32. Describe the characteristics, quantities, and treatment and disposal methods for:

**X      Camp Sewage (blackwater)**

**-All camp sewage is presently stored in STORMBURN Wilderness Propane Incinerator Toilet Units. Each unit is capable of holding 20 Liters of raw sewage. Raw sewage is burnt daily in incinerator units. Ash is then bagged and re burnt in garbage incinerator unit. All garbage is then flown out monthly on back hauls to either Baker Lake and or Thompson, Manitoba.**

**X      Camp Greywater**

**-Grey water consisting of shower water and wash water is piped approximately 30 metres in a heated Grey Water line to an isolated sump area.**

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**X      Solid Waste**

**-All solid waste is burnt daily in STORMBURN Wilderness Propane Incinerator Toilet Units. Ash form units is then collected and re-burnt in Camp Incinerator Unit. Ashes are then collected in barrels and flown out on back haul flights to either Baker Lake and or Thompson Manitoba.**

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**X      Bulky Items/Scrap Metal**

**-At present there are no Bulky Items**

**-All scrap metal (tin cans etc) is burnt in incinerator unit. Ashes and burnt cans are then collected and flown out of camp to landfill sites in either Rankin Inlet and or Baker Lake.**

**-Larger bulkier pieces such as I-Beams, drill rods, drill steel are re-used and or sent back to Major-Midwest Drilling in Thompson Manitoba for disposal.**

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**X Waste Oil/Hazardous Waste**

- All Waste Oil is burnt in incinerator.**
  - At present there are no Hazardous Waste products on site.**
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**X Empty Barrels/Fuel Drums**

- All Empty Barrels/Fuel Drums are presently re-used for additional fuel storage. Any barrels unfit for re-use are used as garbage barrels and are used to back haul garbage out to landfill sites in either Baker Lake or Thompson.**
- 

☐ Other:

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33. Please describe incineration system if used on site. What types of wastes will be incinerated?

- Incineration unit that is used on site is of steel fabrication with diesel and or propane being used as the incineratory combustant.**

- Waste material that will be incinerated will include but not limited to:**

- Wood products**
- Waste oil**
- Kitchen refuse**
- General camp refuse**

34. Where and how will non-combustible waste be disposed of? If in a municipality in Nunavut, has authorization been granted?

- All non-combustible material is drill related and is currently sent back to Thompson, Manitoba to be disposed of by Major-Midwest Drilling.**

35. Describe location (relative to water bodies and camp facilities ) dimensions and volume, and freeboard for sumps (if applicable).

- Location of Grey water sump is approximately 30 metres from camp. Dimension of natural sump is approximately 12m x 12m. Depth is unknown as it is a natural sump. Sump is located approximately 600 metres and 75 metres vertically from the nearest body of water.**

36. Will leachate monitoring be done? What parameters will be sampled and analyzed, and at what frequency?

- At present, no leachate monitoring is being done.**



## OPERATION AND MAINTENANCE

37. Have the water supply and waste treatment and disposal methods been used and proven in cold climate? What known O&M problems may occur? What contingency plans are in place?

**Water Supply has been utilized for the past 3 years in extreme winter conditions. O&M problems that occur are freezing water lines. Solutions to this have been rectified by putting inline heaters in place to “super heat” the water at source and then pumped to holding tanks.**

**Waste treatment system has also has been utilized for the past 3 years in extreme cold conditions. O&M problems that arise are propane tanks freezing. Solutions to this have been to isolate tanks into a semi-heated ventilated room.**

**Contingency for water is hauling water on Skidoo and or in water storage tanks in water slop behind tractor.**

**Contingency for waste treatment consists of Portable Sanitation Stations. Waste is removed once a day and burnt in Garbage Incinerator.**

## ABANDONMENT AND RESTORATION

38. Provide a detailed description of progressive and final abandonment and restoration activities at the site.

**At present, Ferguson Lake Lodge is a leased site. Reclamation of site by Starfield personal consists of trail remediation, burning of old refuse and general upkeep of camp facilities.**

**Upon termination of lease, any temporary structures built will be removed. Wood products brought in will be burnt and waste will be removed.**

**All drill sites are cleaned of refuse. All garbage is removed from site and taken back to camp and burnt in Garbage Incinerator.**

**All drilling equipment, and equipment on site will be removed via Hercules C-130 aircraft back to Thompson Manitoba (winter months) and or via barge out of Rankin during shipping season (summer)**

**All barrels for fuel storage will be removed back to Churchill for deposit return.**

## BASELINE DATA

39. Has or will any baseline information be collected as part of this project? Provide bibliography.

- ☐ Physical Environment (Landscape and Terrain, Air, Water, etc.)
- ☒ **Biological Environment (Vegetation, Wildlife, Birds, Fish and Other Aquatic**
- ☐ Organisms, etc.)

- Socio-Economic Environment (Archaeology, Land and Resources Use,
- Demographics, Social and Culture Patterns, etc.)
- Other:

**-Wildlife studies were performed in 2001 and 2002. EBA Engineering Consultants of Yellowknife and Vancouver performed the studies.**

**-Starfield personal on a daily basis is currently performing weather observations.**

## **REGULATORY INFORMATION**

40. Do you have a copy of

- Article 13 - Nunavut Land Claims Agreement
- NWB - Water Licensing in Nunavut - Interim Procedures and Information Guide For Applicants
- NWB - Interim Rules of Practice and Procedure for Public Hearings
- NWTWB - Guidelines for the Discharge of Treated Municipal Wastewater in the NWT
- NWTWB - Guidelines for Contingency Planning
- DFO - Freshwater Intake End of Pipe Fish Screen Guideline
- Fisheries Act - s.35
- RWED - Environment Protection- Spill Contingency Regulations
- Canadian Drinking Water Quality Guidelines
- Public Health Act Camp Sanitation Regulations
- Public Health Act Water Supply Regulations
- Territorial Land Use Act and Regulations

You should consult the above document, guidelines, and legislation for compliance with existing regulatory requirements.