



P.O. Box 119

GJOA HAVEN, NU X0B 1J0

TEL: (867) 360-6338

FAX: (867) 360-6369

kNK5 wmoEp5 vtmp5

NUNAVUT WATER BOARD

NUNAVUT IMALIRIYIN KATIMAYIT

OFFICE DES EAUX DU NUNAVUT

### GENERAL WATER LICENCE APPLICATION (APPLICATION FOR NEW WATER LICENCE)

The applicant is referred to the NWB's Guide 4: Guide to Completing and Submitting a Water Licence Application for a New Licence for more information about this application form.

LICENCE NO: (for NWB use only)	
<b>1. APPLICANT (PROPOSED LICENSEE) CONTACT INFORMATION</b> (name, address)  Mark Yetman, Senior Project Advisor Aboriginal Affairs and Northern Development Canada 10 <sup>th</sup> floor, 25 Eddy Street Gatineau, QC K1A 0H4  Phone: <u>819-934-1188</u> Fax: <u>819-934-9229</u> e-mail: <u>mark.yetman@aandc.gc.ca</u>	<b>2. APPLICANT REPRESENTATIVE CONTACT INFORMATION</b> if different from Block 1 (name, address)  Phone: _____ Fax: _____ e-mail: _____ (Attach authorization letter.)
<b>3. NAME OF PROJECT</b> (including the name of the project location)  FOX-D (Kivitoo, Nunavut) Site Remediation Project	
<b>4. LOCATION OF UNDERTAKING</b>  <b>Project Extents</b>  NW: Latitude: (67°57'42.31"N) Longitude: 64°55'13.18"W) NE: Latitude: (67°56'25.39"N) Longitude: (64°51'1.34"W) SE: Latitude: (67°55'41.33"N) Longitude: (64°51'44.69"W) SW: Latitude: (67°55'45.36"N) Longitude: (64°57'58.30"W)  <b>Camp Location(s)</b>  Primary Camp 1: Latitude: (67°56'3.42"N) Longitude: (64°53'24.56"W)	

**Backup Camp 2:**

Latitude: (67°57'2.23"N)

Longitude: (64°54'35.47"W)

**5. MAP** - Attach a topographical map, indicating the main components of the undertaking.

NTS Map Sheet No.: 026P15 Map Name: \_\_\_\_\_ Map Scale: \_\_\_\_\_

**6. NATURE OF INTEREST IN THE LAND** - Check any of the following that are applicable to the proposed undertaking (at least one box under the 'Surface' header must be checked).

**Sub-surface**

☐ Mineral Lease from Nunavut Tunngavik Incorporated (NTI)

Date (expected date) of issuance: \_\_\_\_\_ Date of expiry: \_\_\_\_\_

☐ Mineral Lease from Indian and Northern Affairs Canada (INAC)

Date (expected date) of issuance: \_\_\_\_\_ Date of expiry: \_\_\_\_\_

**Surface**

✓ Crown Land Use Authorization from Indian and Northern Affairs Canada (INAC)

Date (expected date) of issuance: Fall 2016 Date of expiry: \_\_\_\_\_

☐ Inuit Owned Land (IOL) Authorization from Kitikmeot Inuit Association (KIA)

Date (expected date) of issuance: \_\_\_\_\_ Date of expiry: \_\_\_\_\_

☐ IOL Authorization from Kivalliq Inuit Association (KivIA)

Date (expected date) of issuance: \_\_\_\_\_ Date of expiry: \_\_\_\_\_

✓ IOL Authorization from Qikiqtani Inuit Association (QIA)

Date (expected date) of issuance: Fall 2016 Date of expiry: \_\_\_\_\_

☐ Commissioner's Land Use Authorization

Date (expected date) of issuance: \_\_\_\_\_ Date of expiry: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Date (expected date) of issuance: \_\_\_\_\_ Date of expiry: \_\_\_\_\_

Name of entity(s) holding authorizations: \_\_\_\_\_

**7. NUNAVUT PLANNING COMMISSION (NPC) DETERMINATION**

Indicate the land use planning area in which the project is located.

☐ North Baffin

X South Baffin

☐ Akunnig

☐ Keewatin

☐ Sanikiluaq

☐ West Kitikmeot

Is a land use plan conformity determination required?

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<p>If Yes, indicate date issued and attach copy _____</p> <p>If No, provide written confirmation from NPC confirming that a land use plan conformity review is not required.</p> <p>Written confirmation from the NPC confirming that a land use plan conformity determination is not required is provided in Appendix 1.</p>
<p><b>8. NUNAVUT IMPACT REVIEW BOARD (NIRB) DETERMINATION</b></p> <p>Is an Article 12 Part 4 screening determination required?</p> <p style="text-align: center;"> <input checked="" type="checkbox"/> Yes           <input type="checkbox"/> No         </p> <p>If Yes, indicate date issued and attach copy _____</p> <p>If No, provide written confirmation from NIRB confirming that a screening determination is not required.</p> <p>The Nunavut Impact Review Board (NIRB) Part 1 and 2 Forms are being submitted concurrently with this application. Copies of the forms can be found in Appendices 2 and 3.</p>		
<p><b>9. DESCRIPTION OF UNDERTAKING – List and attach plans and drawings or project proposal.</b></p> <p>Please see the FOX-D Remedial Action Plan (RAP) provided in Appendix 5. Contained at the end of this document are site maps and drawings that are relevant to the project. The principle activities of the project are:</p> <ul style="list-style-type: none"> <li>-access to the site via sealift, fixed wing aircraft and/or helicopter.</li> <li>-establish a temporary camp to support site operations.</li> <li>-PCB and metal contaminated soil will be excavated and disposed of at an off-site licensed disposal facility.</li> <li>-hydrocarbon contaminated soil will be treated using biological and/or aeration treatment on-site combined with off-site disposal at an approved disposal facility.</li> <li>-existing site infrastructure will be demolished and demolition wastes will be sorted into hazardous and non-hazardous materials and disposed of properly.</li> <li>-non-hazardous waste materials (14,834 m<sup>3</sup>, excluding materials to remain in APECs 9 and 10) to be collected, consolidated and packaged for off-site disposal. APECs 9 and 10 will be regraded and remain in place.</li> <li>-hazardous materials (with the exception of Asbestos Containing Materials) will be containerized and labelled in accordance with the Transportation of Dangerous Goods Act in Accordance with the INAC Abandoned Military Sites Remediation protocol and disposed of off-site.</li> <li>-asbestos-containing materials will be containerized and disposed off-site.</li> <li>-lead and PCB amended paint materials that are tested to be hazardous, will be dismantled and disposed off-site.</li> <li>-materials in existing class C landfills will be remediated as described in the RAP.</li> <li>-roads and airstrips will be reconstructed and repaired as necessary</li> <li>-several borrow sources will be developed and the material will be used to assist in the remediation work.</li> <li>-Waste Handling Facility (WHF) will be required at the FOX-D site to receive and sort various waste items.</li> <li>-construction of a biological and/or aeration treatment cell.</li> </ul>		
<p><b>10. OPTIONS – Provide a brief explanation of the alternative methods or locations that were considered to carry out the project.</b></p>		

The Remediation Action Plan (RAP) provided in appendix 5, considers alternative remedial methods for handling the environmental issues on this site.

**11. CLASSIFICATION OF PRIMARY UNDERTAKING** - Indicate the primary classification of undertaking by checking one of the following boxes.

- |   |  |
|---|--|
| <input type="checkbox"/> Industrial   | <input type="checkbox"/> Agricultural                                      |
| <input type="checkbox"/> Mining and Milling (includes exploration/drilling/exploration camps) |  |
| <input type="checkbox"/> Conservation   |  |
| <input type="checkbox"/> Municipal (includes camps/lodges)                                    | <input type="checkbox"/> Recreational                                      |
| <input type="checkbox"/> Power  | <input checked="" type="checkbox"/> <b>Miscellaneous (describe below):</b> |
- Remediation Project

See Schedule II of *Northwest Territories Waters Regulations* for Description of Undertakings.

Information in accordance with applicable Supplemental Information Guidelines (SIG) must be submitted with a New Water Licence Application. Indicate which SIG(s) are applicable to your application.

- |  |
|--|
| <input type="checkbox"/> Hydrostatic Testing   |
| <input type="checkbox"/> Tannery   |
| <input checked="" type="checkbox"/> <b>Tourist / Remote Camp</b>   |
| <input checked="" type="checkbox"/> <b>Landfarm &amp; On-Site Storage of Hydrocarbon Contaminated Soil</b> |
| <input type="checkbox"/> Onshore Oil and Gas Exploration Drilling  |
| <input type="checkbox"/> Mineral Exploration / Remote Camp   |
| <input type="checkbox"/> Advanced Exploration  |
| <input type="checkbox"/> Mine Development  |
| <input type="checkbox"/> Municipal   |
| <input type="checkbox"/> General Water Works   |
| <input type="checkbox"/> Power   |

**12. WATER USE** - Check the appropriate box(s) to indicate the type(s) of water use(s) being applied for.

- ☒ **To obtain water for camp/ municipal purposes**
- |  |   |
|--|---|
| <input type="checkbox"/> To obtain water for industrial purposes | <input type="checkbox"/> To divert a watercourse                    |
| <input type="checkbox"/> To cross a watercourse                  | <input type="checkbox"/> To modify the bed or bank of a watercourse |
| <input type="checkbox"/> To alter the flow of, or store water    | <input type="checkbox"/> Flood control                              |
| <input type="checkbox"/> Other: _____                            |   |

**13. QUANTITY AND QUALITY OF WATER INVOLVED** - For each type of water use indicated in Block 12, provide the source of water, the quality of the water source and available capacity, the estimated quantity to be used in cubic meters per day, method of extraction, as well as the quantities and qualities of water to be returned to source.

Name of water source(s) (show location(s) on map):

-fresh water lake (see appendix 5, Remedial Action Plan, figure 1 and 3.

-GPS coordinates are: latitude: 67°56'15.96"N longitude: 64°53'33.44"W

Describe the quality of the water source(s) and the available capacity:

A water sample was collected by Dillon from the freshwater lake and submitted for routine potable and total metals analysis in 2013. Results for major ion and total metals in the water sample were found to be below the *Health Canada Guidelines for Canadian Drinking Water Quality*. Ongoing monitoring of the water source will occur during remediation activities.

Provide the overall estimated quantity of water to be used: **4.7 m<sup>3</sup>/day**

**115 Litres/day/person x 30 people (max) = 3,450 Litres/day**  
**1,250 Litres/day for miscellaneous activities (ex. washing equipment and drums)**

Provide the estimated quantity(s) of water to be used from each source:

**Fresh water lake 4.7 m<sup>3</sup>/day**

Indicate the estimated quantities to be used for each purpose (camp, drilling, etc.)

**Camp operations = 3,450 Litres/day**  
**Miscellaneous activities (ex. washing equipment and drums) = 1,250 litres/day**

Describe the method of extraction(s):

**Water will be extracted using an intake hose with a screen to ensure that no fish become trapped. Water will be pumped from the lake into a tank on either a truck or trailer and transported to the camp where it will be pumped into the camp tank.**

Estimated quantity(s) of water returned to source(s) **0\_ m<sup>3</sup>/day**

Describe the quality of water(s) returned to source(s): **not applicable**

**14. WASTE** – Check the appropriate box(s) to indicate the types of waste(s) generated and deposited.

☒ Sewage  
☒ Solid Waste  
☒ Hazardous  
☒ Bulky Items/Scrap Metal  
☐ Animal Waste  
☐ Other (describe): \_\_\_\_\_

☒ Waste oil  
☒ Greywater  
☐ Sludges  
☒ Contaminated soil and/or water

**15. QUANTITY AND QUALITY OF WASTE INVOLVED** – For each type of waste indicated in Block 14, describe its composition, quantity in cubic meters/day, method of treatment and method of disposal.

Type of Waste	Composition	Quantity Generated	Treatment Method	Disposal Method
Sewage	Black water	30 litres/day x 30 people (max) = 900 litres/day	Sewage lagoon	Sewage lagoon
Waste oil	oil	0.001 m <sup>3</sup>	Collected in drums	Shipped south for recycling and/or disposal
Solid waste	Camp waste (Paper, packaging, food, etc.)	1.0 m <sup>3</sup> /day	Incineration (combustibles only)	Shipped south for recycling and/or disposal
greywater	Grey water	80 litres/day x 30 people	Sewage lagoon	Sewage lagoon

		(max) = 2,400 litres/day		
Hazardous materials	Asbestos containing tiles, insulation, etc., and lead- acid batteries	Total = 1.54 m <sup>3</sup> Asbestos= 1.32 m <sup>3</sup> Lead acid= 0.22m <sup>3</sup>	Double- bagged in Yellow bags, placed in a barge container to be shipped south for proper disposal.	Disposal at a southern licensed disposal facility
PCB/Lead Amended Paint Products	PCB/Lead Amended Paint Products	0.031 m <sup>3</sup>	Dismantle contaminated paint items and ship off- site to an appropriate disposal facility.	Dismantle contaminated paint items and ship off- site to an appropriate disposal facility.
Contaminated soil- metals, PCB	Soil lightly contaminated with metals and PCB	Total = 194 m <sup>3</sup> PCB= 1 m <sup>3</sup> Metal= 193 m <sup>3</sup>	Excavated, containerized, labelled in accordance with the Transportation of Dangerous Goods Act	Disposal at a southern licensed disposal facility
Contaminated Soil- PHC	Soils lightly contaminated with PHC	PHC= 3,205 m <sup>3</sup>	Screen PHC Type A soils and treat in on-site constructed biological and/or aeration treatment unit (3,005 m3).	Excavate PHC Type B soils (200 m3) and place into containers, and ship off- site to a licensed disposal facility.
Non- hazardous	heavy equipment, barrels, scrap metal, scrap wood, concrete, electrical equipment and plumbing parts	14,834 m <sup>3</sup>	Treatment off- site	14,834 m3 excavated, sorted and separated into different waste types where it is safe and practical to do so, and disposed off- site in an appropriate licensed facility.
Non-	Debris in	6,645 m <sup>3</sup>	Buried debris	Buried debris

hazardous	existing class C dumps		that is inaccessible for excavation in Class C dumps (APECs 9 and 10) should be buried and re-stabilized in-situ. Rocks and concrete foundations from APECs 1-4 to be used as rip-rap and fill in void space at APEC 9. Area will be covered with rip rap and erosion resistant material for stability.	that is inaccessible for excavation in Class C dumps (APECs 9 and 10) should be buried and re-stabilized in-situ. Rocks and concrete foundations from APECs 1-4 to be used as rip-rap and fill in void space at APEC 9. Area will be covered with rip rap and erosion resistant material for stability.
Water in barrels	Analysis of collected water in the abandoned barrels indicates that the dissolved metals meet DLCU barrel protocol.		Disposal on ground is permitted once water has been polished with an absorbent materials, additional sampling of more barrels during remediation program is required.	Disposal on ground is permitted once water has been polished with an absorbent materials, additional sampling of more barrels during remediation program is required.

**16. OTHER AUTHORIZATIONS** – In addition to the sub-surface and surface land use authorizations provided in Block 6, indicate any other authorizations required in relation to the proposed undertaking. For each provide the following:

Authorization: \_\_\_\_\_ None \_\_\_\_\_

Administering Agency: \_\_\_\_\_ N/A \_\_\_\_\_

Project Activity: \_\_\_\_\_ N/A \_\_\_\_\_

Date (expected date) of issuance: \_\_\_\_\_ Date of expiry: \_\_\_\_\_

**17. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES** - Describe direct, indirect, and cumulative impacts related to water and waste.

A final Environmental Impact Assessment for the project was completed in November 2014. A copy of the report "Environmental Impact Assessment of the FOX-D Remedial Action Plan Kivitoo, NU" is provided in appendix 6.

**18. WATER RIGHTS OF EXISTING AND OTHER USERS OF WATER**

Provide the names, addresses and nature of use for any known persons or properties that may be adversely affected by the proposed undertaking, including those that hold licences for water use in precedent to the application, domestic users, in-stream users, authorized waste depositors, owners of property, occupiers of property, and/or holders of outfitting concessions, registered trapline holders, and holders of other rights of a similar nature.

None

Advise the Board if compensation has been paid and/or agreement(s) for compensation have been reached with any existing or other users.

N/A

**19. INUIT WATER RIGHTS**

Advise the Board of any substantial affect of the quality, quantity or flow of waters flowing through Inuit Owned Land (IOL), and advise the Board if negotiations have commenced or an agreement to pay compensation for any loss or damage has been reached with one or more Designated Inuit Organization (DIO).

None

**20. CONSULTATION** – Provide a summary of any consultation meetings including when the meetings were held, where and with whom. Include a list of concerns expressed and measures to address concerns.

A community consultation was scheduled for January 28, 2014, but was postponed and rescheduled to January 29, 2014 due to weather. The event was advertised locally over the radio and by posters. Presentation handouts were printed in English and Inuktitut. Information on AANDC's contaminated sites program were made available in English, French and Inuktitut. All information was presented on a table near the entrance. A sign-in sheet was also provided.

The consultation was attended by 58 individuals from the community of Qikiqtarjuaq. A presentation was given outlining:

- ☐ AANDC's contaminated sites program;
- ☐ The bidding and tender process;
- ☐ The applicable guidelines and site criteria relevant to the FOX-D site;
- ☐ Environmental concerns at FOX-D;
- ☐ Archaeological areas of interest near the site; and,
- ☐ The proposed remedial action plan and the project timeline.

**21. SECURITY INFORMATION**

Provide an estimate of the total financial security for final reclamation equal to the total outstanding reclamation liability for land and water combined sufficient to cover the highest liability over the life of the undertaking. Estimates of reclamation costs must be based on the cost of having the necessary reclamation work done by a third party contractor if the operator defaults. The estimate must also include contingency factors appropriate to the particular work to be undertaken.



Where applicable, the financial security assessment should be prepared in a manner consistent with the principals respecting mine site reclamation and implementation found in the *Mine Site Reclamation Policy for Nunavut*, Indian and Northern Affairs Canada, 2002.

N/A

## 22. FINANCIAL INFORMATION

Provide a statement of financial responsibility.

If the applicant is a business entity, provide a list of the officers of the company.

If the applicant is a business entity attach a copy of the Certificate of Incorporation or evidence of registration of the company name.

N/A

## 23. STUDIES UNDERTAKEN TO DATE - List and attach copies of studies, reports, research, etc.

DATE	TITLE	AUTHOR
2014	Remedial Action Plan for FOX-D (Kivitoo, NU)	Dillon Consulting Limited
2014	Final Environmental Impact Assessment Report for FOX-D (Kivitoo, NU)	Dillon Consulting Limited
2014	FOX-D Archaeological Impact Assessment	Golder Associates Ltd.

## 24. PROPOSED TIME SCHEDULE – Indicate the proposed start and completion dates for each applicable phase of development (construction, operation, closure, and post closure).

### Construction

Proposed Start Date: July/2016 Proposed Completion Date: September/2016  
(month/year) (month/year)

### Operation

Proposed Start Date: July/2017 Proposed Completion Date: October/2018  
(month/year) (month/year)

### Closure

Proposed Start Date: June/2019 Proposed Completion Date: August/2019  
(month/year) (month/year)

### Post - Closure

Proposed Start Date: \_\_\_\_\_ **September/2019** \_\_\_\_\_ Proposed Completion Date: \_\_\_\_\_ **March/2020** \_\_\_\_\_  
(month/year) (month/year)

For each applicable phase of development indicate which season(s) activities occur.

Construction

☐ Winter ☐ Spring ☒ **Summer** ☐ Fall ☐ All season

Operation

☐ Winter ☐ Spring ☒ **Summer** ☐ Fall ☐ All season

Closure

☐ Winter ☐ Spring ☒ **Summer** ☐ Fall ☐ All season

Post - Closure

☒ **Winter** ☐ Spring ☐ Summer ☒ **Fall** ☐ All season

**25. PROPOSED TERM OF LICENCE**

Number of years (maximum of 25 years): \_\_\_\_\_ **five (5)** \_\_\_\_\_ years

Requested Date of Issuance: \_\_\_\_\_ **July/2016** \_\_\_\_\_ Requested Expiry Date: \_\_\_\_\_ **September/2020** \_\_\_\_\_  
(month/year) (month/year)

(The requested date of issuance must be at least three (3) months from the date of application for a type B water licence and at least one (1) year from the date of application for a type A water licence, to allow for processing of the water licence application. These timeframes are approximate and do not account for the time to complete any pre-licensing land use planning or development impact requirements, time for the applicant to prepare and submit a water licence application in accordance with any project specific guidelines issued by the NWB, or the time for the applicant to respond to requests for additional information. See the NWB's *Guide 5: Processing Water Licence Applications* for more information)

**26. ANNUAL REPORTING** – If not using the NWB's *Standardized Form for Annual Reporting*, provide details regarding the content of annual reports and a proposed outline or template of the annual report.

**Will use the NWB Standardized Form for Annual Reporting.**

**27. CHECKLIST** – The following must be included with the application for the water licensing process to begin.

Written confirmation from the NPC confirming that NPC's requirements regarding land use plan conformity have been addressed.

☒ **Yes**                      ☐ **No**                      If no, date expected \_\_\_\_\_

Written confirmation from the NIRB confirming that NIRB's requirements regarding development impact assessment have been addressed.

☐ **Yes**                      ☒ **No**                      If no, date expected \_\_\_\_\_ **October/2015** \_\_\_\_\_

Completed General Water Licence Application form.

☒ **Yes**                      ☐ **No**                      If no, date expected \_\_\_\_\_

Information addressing Supplemental Information Guideline (SIG) , where applicable (see Block 11)

☒ **Yes**                      ☐ **No**                      If no, date expected \_\_\_\_\_

English Summary of Application.

☒ **Yes**                      ☐ **No**                      If no, date expected \_\_\_\_\_


Inuktitut and/or Inuinnaqtun Summary of Application.

☒ **Yes**                      ☐ **No**                      If no, date expected \_\_\_\_\_

Application Fee of \$30.00 CDN (Payee Receiver General for Canada).

☐ **Yes**                      ☒ **No**                      If no, date expected \_\_\_\_\_

Water Use Fee Deposit of \$30.00 CDN (Payee Receiver General for Canada). The actual water use fee will be calculated by the NWB based upon the amount of water authorized for use in

accordance with the Regulations at the time of issuance of the licence.			
<input type="checkbox"/> Yes	<input type="checkbox"/> No	If no, date expected _____	
<b>28. SIGNATURE</b>			
<u>Mark Yetman</u>	<u>Project Manager</u>	<u></u>	<u>2015-09-21</u>
Name (Print)	Title (Print)	Signature	Date