

NWB Annual Report

Year being reported: 2018

License No: 1BR-EKA1734

Issued Date: September 22, 2017

Expiry Date: September 21, 2034

Project Name: FOX-C Ekalugad Fjord Long Term Monitoring

Licensee: Crown-Indigenous Relations and Northern Affairs Canada  
(CIRNAC) Contaminated SitesMailing Address: PO Box 2200  
Iqaluit NU  
X0A 0H0Name of Company filing Annual Report (if different from Name of Licensee please clarify  
relationship between the two entities, if applicable):

N/A

**General Background Information on the Project (\*optional):**

The FOX-C Intermediate Distant Early Warning (DEW) Line Site was constructed in 1957 and subsequently abandoned in 1963. It is located on the Northeast coast of Baffin Island on the south shore of Ekalugad Fjord and is approximately 240 km from Qikiqtarjuaq and 260 km from Clyde River. Remediation at the FOX-C site was completed between 2006-2008 and involved the construction of a non-hazardous waste landfill (NHWL), the only structure remaining onsite.

As per departmental commitments to monitor the NHWL post-closure, a long term monitoring (LTM) program was initiated at FOX-C in 2009 and includes visual inspection, groundwater sampling, soil sampling (as required), and natural environment monitoring. Please refer to the attached *FOX-C Ekalugad Fjord Long Term Monitoring Plan (2008)* for additional information.

Year 10 of the 25-year LTM Plan was completed in August 2018. The attached report *FOX-C Ekalugad Fjord 2018 LTM Report* contains more details and results of the LTM activities undertaken in 2018.

The next LTM event is scheduled for the fall of 2021 and future events will occur in 2023, 2028 and 2033.

**Licence Requirements: the licensee must provide the following information in accordance with**

Part B	▼	Item 1	▼
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**A summary report of water use and waste disposal activities, including, but not limited to: methods of obtaining water; sewage and greywater management; drill waste management; solid and hazardous waste management.**

Water Source(s):	Monitoring Wells at the NHWL (See GPS Coordinates Page)		
	Surface Water Sample (SW-East)		
Water Quantity:	1/day	Quantity Allowable Domestic (cu.m)	
	<0.05	Actual Quantity Used Domestic (cu.m)	
	0	Quantity Allowable Drilling (cu.m)	
	0	Total Quantity Used Drilling (cu.m)	

**Waste Management and/or Disposal**

- ☒ Solid Waste Disposal  
☐ Sewage  
☐ Drill Waste  
☐ Greywater  
☐ Hazardous  
☐ Other:

**Additional Details:**

CIRNAC was onsite on August 12th, 2018. Three of the five groundwater monitoring wells contained adequate water for sampling, but due to a lack of time on the site caused by weather conditions, only MW North and MW Northwest could be sampled. A duplicate sample was collected from MW-North as well as a field blank. Additionally, one surface water sample (SW-East) was collected during the 2018 monitoring event. The total volume of water used/collected was less than 17 litres. Excess purge water was disposed in the center of the NHWL.

Monitoring activities were conducted within a single day and was based out of Clyde River, NU so no camp was required. Solid wastes (packaging, paper towels, paper, kimwipes, filters, Teflon tubing) generated (< 0.5 m3) were collected and removed from the site at the completion of monitoring activities.

Refer to the *FOX-C Ekalugad Fjord Lake Long Term Monitoring Plan (2008)* and *FOX-C Ekalugad Fjord 2018 LTM Report* for details.

**A list of unauthorized discharges and a summary of follow-up actions taken.**

Spill No.:  (as reported to the Spill Hot-line)  
 Date of Spill:   
 Date of Notification to an Inspector:   
 Additional Details: (impacts to water, mitigation measures, short/long term monitoring, etc)

**Revisions to the Spill Contingency Plan**

No Spill Contingency Plan (SCP) submitted or approved ▼

**Additional Details:**

**Revisions to the Abandonment and Restoration Plan**

N/A - not applicable

Additional Details:

N/A

**Progressive Reclamation Work Undertaken**

Additional Details (i.e., work completed and future works proposed)

No progressive reclamation work was undertaken in 2018.

Year 10 of LTM occurred on August 12, 2018. A visual inspection of the NHWL and surrounding area was conducted in accordance with the Abandoned Military Site Remediation Protocol (AMSRP) and the site-specific LTM Plan. The NHWL was found to be in acceptable condition. No new staining or seepage points were observed, and all other features previously identified have either decreased in size and extent, or have remained relatively stable. A new area of settlement and ponded water was observed north of the northeast corner of the NHWL. None of the features noted in the report are considered to affect the physical integrity of the NHWL. A surface water sample was collected from the location where two seepage points converge on the eastern side of the NHWL. While this feature does not currently appear to affect the stability or integrity of the NHWL, it is recommended to closely monitor it during future site visits and surface water samples should continue to be collected.

A total of 3 groundwater samples were collected (2 samples and 1 blind duplicate) and 1 field blank was also collected. The samples were submitted for analysis and detailed results can be found in the *FOX-C Ekalugad Fjord 2018 LTM Report*. Soil samples were not collected because there was no indication of new seepage or staining.

As per the *FOX-C Ekalugad Fjord Long Term Monitoring Plan (2008)* and additional recommendations from 2018 site visit, future LTM events are scheduled for 2021, 2023, 2028, and 2033 (years 13, 15, 20, and 25 respectively).

**Results of the Monitoring Program including:**

**The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where sources of water are utilized;**

Details attached

Additional Details:

Additional details regarding water sources (monitoring wells) can be found in the *FOX-C Ekalugad Fjord Long Term Monitoring Plan (2008)*.

**The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where wastes associated with the licence are deposited;**

Not Applicable (N/A)

Additional Details:

Remediation was completed in 2008 and the only structure remaining at the site is the NHWL. No waste was deposited on site in 2018. Any solid waste generated is removed from the site at the completion of LTM activities.

**Results of any additional sampling and/or analysis that was requested by an Inspector**

No additional sampling requested by an Inspector or the Board ▼

Additional Details: (date of request, analysis of results, data attached, etc)

N/A

**Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported.**

No additional sampling requested by an Inspector or the Board ▼

Additional Details: (Attached or provided below)

N/A

**Any responses or follow-up actions on inspection/compliance reports**

No inspection and/or compliance report issued by INAC ▼

Additional Details: (Dates of Report, Follow-up by the Licensee)

N/A

**Any additional comments or information for the Board to consider**

Physical observations of the NHWL conducted during the 2018 LTM event indicate that the NHWL at FOX-C Ekalugad Fjord is in acceptable condition, is performing as designed, and is containing the enclosed waste. However, given the parameters reporting exceedances against the Federal Interim Groundwater Quality Guidelines (FIGQG) and the upper limit of acceptability (ULA) calculated, it is recommended to increase the frequency of monitoring compared to what was originally set out in the *FOX-C Ekalugad Fjord Long Term Monitoring Plan* (2008). The next monitoring event was scheduled to be at Year 15 (2023), but an additional site visit will be conducted at Year 13 (2021).

**Date Submitted:**

March 15, 2018

**Submitted/Prepared by:**

Rachel Theoret-Gosselin, CIRNAC

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### GPS Coordinates for water sources utilized

Source Description	Latitude			Longitude		
	° Deg	' Min	" Sec	° Deg	' Min	" Sec
Non-Hazardous Landfill Monitoring Wells (MW):						
MW South	68	43	46.9	-68	39	12.76
MW East	68	43	50.02	-68	39	7.523
MW North	68	43	50.71	-68	39	15.45
MW Northwest	68	43	48.54	-68	39	17.39
MW Southwest	68	43	47.66	-68	39	16.36
Surface Water Sample (SW)						
SW- East	68	43	50.03	68	39	7.39

### GPS Locations of areas of waste disposal

Location Description (type)	Latitude			Longitude		
	° Deg	' Min	" Sec	° Deg	' Min	" Sec
N/A						