

## NWB Annual Report

Year being reported: 2016

License No: 1BR-ELR1419 Issued Date: March 31, 2014  
 Expiry Date: March 30, 2019

Project Name: Ennadai Lake Long Term Monitoring

Licensee: Indigenous and Northern Affairs Canada (INAC)  
 Contaminated Sites

Mailing Address: PO Box 2200  
 Iqaluit NU  
 X0A 0H0

Name 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 Ennadai Lake site was a former weather station, located approximately 370 km west of Arviat (the nearest community) and 500 km southwest of Rankin Inlet, Nunavut, at approximately 61° 07' 51" N latitude and 100° 53' 14" W longitude. The site was developed in the 1950s and was operated both as a manned and unmanned station, at different times since its construction and was abandoned in the late 1980s to early 1990s.

Remediation activities at the site were undertaken between 2014-2015, and included the construction of a non-hazardous waste landfill (NHWL), demolition and disposal of onsite structures, and clean-up of hazardous materials and contaminated soil.

As per departmental commitments to monitor the NHWL post-closure, a long term monitoring (LTM) program was initiated at Ennadai Lake in 2016 and includes visual inspection, groundwater sampling, and natural environment monitoring. Please refer to the attached *Ennadai Lake Long Term Monitoring Plan* (2016) for more details.

Year 1 of the 25-year LTM Plan was completed in August 2016. The attached report *Long Term Monitoring, 2016 Ennadai Lake Former Weather Station, Nunavut (Ennadai Lake 2016 LTM Report)* provides more details and results of the LTM activities undertaken in 2016.

The next LTM event is scheduled for the fall of 2018. Future events will occur in 2020, 2022, 2025, 2030, 2035, and 2040.

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

Part B

▼ Item 1 ▼

**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)	
Water Quantity:	6/year	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:**

A total of 2 groundwater samples (1 sample and one blind duplicate) were collected from MWLF-3 and compared to background samples collected in 2015. No samples were collected from MWLF-1 or MWLF-2 since they were both frozen. The total volume of groundwater used from MWLF-3 was < 10 litres.

Monitoring activities were conducted within a single day and was based out of Rankin Inlet so no camp was required. Solid wastes (packaging, paper towels, paper, kimwipes, filters, Teflon tubing) generated (< 0.5 m<sup>3</sup>) were collected and removed from the site at the completion of monitoring activities.

Refer to the *Ennadai Lake Lake Long Term Monitoring Plan (2016)* and *Ennadai Lake 2016 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)

N/A

### Revisions to the Spill Contingency Plan

N/A - not applicable



Additional Details:

N/A

### 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)

The first LTM event at Ennadai Lake occurred on August 24, 2016. A visual inspection of the NHWL and surrounding area was conducted in accordance with the Abandoned Military Site Remediation Protocol (AMSRP). The NHWL was found to be in acceptable condition, with some minor features observed. Groundwater was collected from MWLF-3, and exceedances of the Federal Interim Groundwater Quality Guidelines (FIGQGs) for some metals were observed and will be closely monitored as the LTM program continues. Please refer to the *Ennadai 2016 LTM Report* for additional information.

As per the *Ennadai Lake Lake Long Term Monitoring Plan* (2016), future LTM events are scheduled for 2018, 2020, 2022, 2025, 2030, 2035, and 2040 (years 3, 5, 7, 10, 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 can be found in the *Ennadai Lake Long Term Monitoring Plan* (2016).

**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 2015 and the only structure remaining at the site is the NHWL. No waste was deposited on site in 2016. Any solid waste generated was removed from site at the completion of monitoring 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**

Inspection Report received by the Licensee (Date): ▼

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

The last inspection at Ennadai Lake was in 2015. The 2015 Inspection Report is available on the NWB ftp site. The majority of issues were identified during remediation and no issues remain applicable to post-remediation monitoring activities.

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

Physical observations of the NHWL conducted during the first LTM event indicate that the NHWL at Ennadai Lake is in acceptable condition, is performing as designed, and is containing the enclosed waste.

Date Submitted:

March 21, 2017

Submitted/Prepared by:

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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):						
MWLF-1	61	7	56.64	-100	53	0.632
MWLF-2	61	7	56.68	-100	53	4.553
MWLF-3	61	7	58.02	-100	53	1.082

### GPS Locations of areas of waste disposal

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