

NWB Annual Report

Year being reported: 2016

License No: 1BR-SIM1520 Issued Date: August 17, 2015
 Expiry Date: August 16, 2020

Project Name: CAM-D Simpson 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):

CAM-D Simpson Lake, an intermediate Distant Early Warning (DEW) Line site, is located on the Boothia Peninsula, approximately 120 km from Taloyoak 100 km from Gjoa Haven and 80 km from Kugaaruk. The DEW Line site was constructed in 1957 and abandoned in 1963.

Remediation of the CAM-D site commenced between 2010 and 2012. A non-hazardous waste landfill (NHWL) was constructed to contain non-hazardous material. In 2011, 4 groundwater monitoring wells were installed around the perimeter of the NHWL.

As per departmental commitments to monitor the NHWL post-closure, a long term monitoring (LTM) program was initiated at CAM-D in 2012 and includes visual inspection, groundwater sampling, soil sampling (as required), and natural environment monitoring. Refer to the *CAM-D (Simpson Lake) Long Term Monitoring Plan (2010)* for additional information.

Year 5 of the 25-year LTM Plan was completed in August 2016. The attached report *Long Term Monitoring, 2016 CAM-D, Simpson Lake, Nunavut (CAM-D Simpson Lake 2016 LTM Report)* contains 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, 2026, and 2036 (an additional LTM event was added to the LTM Plan to monitor deterioration observed at the northern corner of the NHWL).

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 NHL (See GPS Coordinates Page)	
Water Quantity:	1/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:

Groundwater samples were collected from 4 monitoring wells (MW01-MW04). The total volume of groundwater used was less than 20 litres.

Monitoring activities were conducted within a single day and was based out of Cambridge Bay 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 *CAM-D (Simpson Lake) Lake Long Term Monitoring Plan (2010)* and the *CAM-D 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)

Year 5 of LTM occurred on August 20, 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 marginal condition and the monitoring schedule will be adjusted (to include an additional monitoring event) to determine if further deterioration (that may impact NHWL stability) is observed. A total of 5 groundwater samples were collected (4 samples plus 1 blind duplicate) 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. Soil samples were not collected because there was no indication of seepage or staining. Please refer to the *CAM-D Simpson Lake 2016 LTM Report* for additional information.

As per the *CAM-D (Simpson Lake) Long Term Monitoring Plan (2010)*, future LTM events are scheduled for 2018, 2020, 2022, 2026, and 2036 (years 7, 9, 11, 15, 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 *CAM-D (Simpson Lake) Long Term Monitoring Plan (2010)*.

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 2012 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

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 2016 LTM event indicate that the NHWL at CAM-D is in marginal condition and is currently performing as designed to contain enclosed waste. While the northern corner of the NHWL continues to deteriorate, no significant impact on NHWL stability has been observed to date. Continued monitoring at an increased frequency is recommended at CAM-D to determine if further deterioration is observed.

Date Submitted:

March 28, 2017

Submitted/Prepared by:

Jean Allen, A/Contaminants Specialist, INAC

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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):						
MW01	68	35	35.29	91	58	50.51
MW02	68	35	37.35	91	58	48.83
MW03	68	35	37.54	91	58	54.21
MW04	68	35	35.58	91	58	56.07

GPS Locations of areas of waste disposal

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