



2022 CAM-3 ANNUAL NUNAVUT WATER BOARD REPORT

FOR THE NORTH WARNING SYSTEM

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EXECUTIVE SUMMARY IN ENGLISH FOLLOWS

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ከጥጥብ 66.0 ሦረጌጋር ፐርረፍ (m³) ለካህናት ልግግርና ልግግር 2022-፡፡ ርዕሰ ልግግር ለግግርና ልግግር 3,000 m³ ርዕሰ ልግግር፡፡

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᠔᠕ᠠᠳᠤᠰᠤᠯᠤᠰᠤᠨ ᠠᠨᠠᠭᠤᠨ CAM-3-ᠤᠨ 2022-ᠤ.

▷ᠨᠭᠢᠨᠴᠣᠷᠦᠳᠤᠰᠡᠵᠡᠢᠱᠲᠤᠶ᠋ᠢᠨᠪᠴᠤᠳᠤᠸᠥᠬᠡᠰᠢᠰᠢ CAM-3-Г.



EXECUTIVE SUMMARY

This 2022 Annual Report for the Nunavut Water Board (NWB) has been prepared by Nasittuq for the Department of National Defence in order to meet the requirements of Part B “General Conditions”, paragraph 1 of its licence 8BC-SHE1929. This report covers 01 January to 31 December 2022.

As of 1-Aug-2022, Nasittuq is the Operations and Maintenance (O&M) Contractor for the North Warning System (NWS) including CAM-3. CAM-3 is an unattended (unmanned) North Warning System (NWS) radar site located at Shepherd Bay, Nunavut. The site is visited quarterly for preventive maintenance inspections and as required for other work by Nasittuq staff from CAM-M, Cambridge Bay, Nunavut.

A total of 66.0 cubic meters (m³) was drawn from the water supply lake in 2022. This is below the annual maximum of 3,000 m³ allowed by the licence.

No hazardous waste and waste oil were shipped off-site in 2022 due to the NWS contract transition. In 2023 hazardous waste and waste oil will be sent to an approved hazardous waste disposal site outside of Nunavut as required by the licence.

Non-hazardous domestic solid waste was disposed of through a contract with the Hamlet of Cambridge Bay at the local landfill. Nasittuq has documented authorization from the community for receiving the waste.

Prior to discharge, water contained in the berms of the fuel storage facilities was assessed using hydrocarbon test strips. The test strips confirmed the water was within the effluent quality limits listed in the water licence, Part D. The coordinates and the photo log of the test strips after analysis are shown in **Annex D**

No spills to the environment occurred at CAM-3 in 2022.

No progressive reclamation work was completed at CAM-3.

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1.0 INTRODUCTION

This 2022 Annual Report for the Nunavut Water Board (NWB) has been prepared by Nasittuq for the Department of National Defence in order to meet the requirements of Part B “General Conditions”, paragraph 1 of its licence 8BC-SHE1929 issued on 01 September 2019 and amended effective 14 April 2022. The amendment now allows for 3,000 cubic metres per year.

This report covers 01 January to 31 December 2022.

As of 1-Aug-2022, Nasittuq is the Operations and Maintenance (O&M) Contractor for the North Warning System (NWS) including CAM-3. An O&M contract transition occurred over the summer of 2022.

CAM-3 is an unattended (unmanned) North Warning System radar site located at Shepherd Bay, Nunavut. The site is visited quarterly for preventive maintenance inspections and as required for other work by Nasittuq staff from CAM-M, Cambridge Bay, Nunavut.

1.1 Report Details

Licensee: Department of National Defence, Government of Canada
Licence: 8BC-SHE1929 – Type “B”
Location: CAM-3 North Warning System Site, Shepherd Bay, Kitikmeot Region, Nunavut
Report Prepared by: Alaina Leslie and reviewed by Don Beattie
Nasittuq Corporation, 21-Mar-2023
Time period covered: 01 January to 31 December 2022

2.0 WATER USE

A total of **66.0 cubic meters** (m³) was drawn from the water supply lake in 2022. The daily water usage was below the maximum of **299 m³ per day** allowed by the licence. The total water used in 2022 was below the threshold set in the licence of **3,000 m³ per year**. See Table 2-1 for the volume of water drawn at CAM-3 each month in 2022.

Table 2-1: Monthly Raw Water Usage at CAM-3 in 2022

Month	Raw water usage (m ³)
January	0
February	0
March	21.4
April	0
May	0
June	0
July	0
August	19.3
September	12.6
October	12.7
November	0
December	0
TOTAL	66.0

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3.0 HAZARDOUS WASTE AND WASTE OIL DISPOSAL

No hazardous waste and waste oil were shipped off-site in 2022 due to the NWS contract transition. In 2023 hazardous waste and waste oil will be sent to an approved hazardous waste disposal site outside of Nunavut as required by the licence.

4.0 NON-HAZARDOUS SOLID WASTE DISPOSAL

Non-hazardous domestic solid waste was flown from CAM-3 to CAM-M and disposed of through a contract with the Municipality of Cambridge Bay at the local landfill. Nasittuq has documented authorization from the community for receiving the waste.

See Table 4-1 for the quantity of waste generated.

Table 4-1: Non-hazardous Domestic Solid Waste Sent for Disposal from CAM-3 in 2022

Month	Waste Generated (kg)
January	0
February	0
March	113
April	0
May	91
June	163
July	0
August	907
September	184
October	510
November	0
December	0
TOTAL	1,968

5.0 MONITORING PROGRAM

In 2022 a monitoring program was implemented at CAM-3 as required by the water licence.

The monitoring program included the following:

1. Volume of raw water drawn from the water Supply Lake (SHE-1). The raw water monitoring information is shown in **Section 2.0 Water Use**. The volume of water drawn was within the limit stated in the water licence.
2. Quality of sewage discharged from the final discharge point of the sewage disposal facility (SHE-2). The location of the sewage effluent outfall is shown in **Annex B: Sewage Effluent Outfall (CDL-2) Location with Coordinates**, including coordinates. A sump for the sewage outfall was constructed in 2010.

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The sewage outfall was not discharged in 2022 and therefore no samples were required. **Annex C: Analysis of Discharged Sewage Effluent** has been left blank.

3. Accumulated rain and meltwater contained in the berms of fuel storage facilities was analyzed with hydrocarbon test strips and confirmed to be within the effluent quality limits listed in the water licence, Part D, prior to discharge (SHE-3). The coordinates of the facilities are shown in **Annex D: Location of Bermed Fuel Storage Facilities**.
4. Final Discharge Point from the Landfarm (SHE-4). No landfarm has been established at CAM-3, so this monitoring station remains inactive.

6.0 SPILLS (UNAUTHORIZED DISCHARGES)

No spills occurred at CAM-3 in 2022.

7.0 REVISIONS TO THE SPILL CONTINGENCY PLAN

The Spill Contingency Plan was updated on **1-Aug-2022**. An updated copy of the Spill Contingency Plan has been submitted to the NWB with this annual report.

8.0 PROGRESSIVE RECLAMATION WORK UNDERTAKEN

No progressive reclamation work was undertaken in 2022.

9.0 ACRONYMS

Table 9-1: Acronyms

Acronym	Definition
CO2	Carbon Dioxide
n.o.s.	Not Otherwise Specified
NWB	Nunavut Water Board
NWS	North Warning System
O&M	Operations and Maintenance
POL	Petroleum, Oil & Lubricant
TDGR	Transportation of Dangerous Goods Regulations

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ANNEX A. HAZARDOUS WASTE AND WASTE OIL DISPOSAL

n/a

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ANNEX B. SEWAGE EFFLUENT OUTFALL (CDL-2) LOCATION WITH COORDINATES



Figure 9.0.0-1: Coordinates of sewage outfall: 68°47'40"N, 93°26'28.17"W

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ANNEX C. ANALYSIS OF DISCHARGED SEWAGE EFFLUENT

The sewage outfall was not discharged in 2022 and therefore sampling was not required. This annex has been left blank.

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ANNEX D. LOCATION OF BERMED FUEL STORAGE FACILITIES

Table D-1, below, shows the locations of the bermed facilities.

Table D-1: Location of Bermed Fuel Storage Facilities at CAM-3

Berm	Location on-site	Discharge Latitude ¹	Discharge Longitude	Date
SHE W22A	Summit	68°47'42.00"N	93°26'19.58"W	Jul-22
SHE W22D	Beach	68°48'07.82"N	93°36'50.12"W	Jul-22

¹ Final discharge point of bermed fuel storage facility

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ANNEX E. ANALYSIS OF BERM WATER

The berm water² at CAM-3 was tested using hydrocarbon test strips as per the approved QA/QC Plan for Berm Water Sampling as stated in the water licence 8BC-FOH1929, PART D, Item 11. The photo log of the hydrocarbon test strips was misplaced due to the NWS contract transition.

² Effluent from bermed fuel storage facilities.

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