

# 2025 FOX-3 ANNUAL NUNAVUT WATER BOARD REPORT

## FOR THE NORTH WARNING SYSTEM

Contract # W8485-157352/001/NX  
SOW Ref: 17.7

**Document Number**  
17.7 NWB-F3-2025 , 16-Mar-2026

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## EXECUTIVE SUMMARY

This 2025 Annual Report for the Nunavut Water Board (NWB) has been prepared by Nasittuq for the Department of National Defence (DND) in order to meet the requirements of the licence issued 08 June 2018, 8BC-FOD1828 – Type “B”, Part B “General Conditions”, paragraph 1 of its licence. This report covers 01 January to 31 December 2025.

Nasittuq is the Operations and Maintenance (O&M) Contractor for the North Warning System (NWS) including FOX-3, the North Warning System radar site at Dewar Lakes, Nunavut. The site is attended year-round and visited by additional staff from FOX-M, Sanirajak (Hall Beach), Nunavut for preventive maintenance inspections and as required for other work.

A total of **696.8** cubic meters was drawn from the water lake. This is below the annual maximum of 3,000 cubic meters allowed by the licence.

As FOX-3 is a landlocked site, all hazardous waste, including waste oil, is transported to FOX-M (Sanirajak) before being shipped to an approved hazardous waste disposal site outside of Nunavut as required by the licence. A total of 4 drums and 3 crates of waste HAZMAT were shipped from FOX-3 in 2025.

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

In 2025, a monitoring program was implemented at FOX-3 as required by the water licence, Part I. Rain and melt water that accumulated in the berms of fuel storage facilities was tested with hydrocarbon test strips and confirmed to be within effluent quality limits before the water was pumped out of the berms.

Two spill to the environment occurred at FOX-3 in 2025.

The Spill Contingency Plan was successfully implemented, and updated on 27-Mar-2026.

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## 1.0 INTRODUCTION

This 2025 Annual Report for the Nunavut Water Board (NWB) has been prepared by Nasittuq for the Department of National Defence (DND) in order to meet the requirements of the licence, 8BC-FOD1828 – Type “B”, Part B “General Conditions”, paragraph 1 of its licence, issued 08 June 2018 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 2025.

Nasittuq is the Operations and Maintenance (O&M) Contractor for the North Warning System (NWS), including FOX-3.

FOX-3 is a North Warning System radar site located at Dewar Lakes, Nunavut. In 2025 the site was attended (staffed) full time throughout the year. The site is also visited quarterly by Nasittuq staff from FOX-M, Hall Beach, Nunavut for preventive maintenance inspections and as required for other work.

### 1.1 Report Details

Licensee:	Department of National Defence, Government of Canada
Licence:	8BC-FOD1828 – Type “B”
Location:	FOX-3 North Warning System Site, Dewar Lakes, Qikiqtani Region, Nunavut
Report Prepared by:	Alaina Leslie and reviewed by Don Beattie Nasittuq Corporation, 16-Mar-2026
Time period covered:	01 January to 31 December 2025

## 2.0 WATER USE

A total of **696.8 m<sup>3</sup>** of water was drawn from the supply lake in 2024, with a daily average of **1.91 m<sup>3</sup>**. This is below the annual maximum of 3,000 m<sup>3</sup> allowed by the licence.

See Table 2-1 for the volume of water usage at FOX-3 each month in 2025.

**Table 2-1: Monthly Raw Water Usage at FOX-3 in 2025**

Month	Raw water usage (m <sup>3</sup> )
January	47.6
February	40.5
March	67.1
April	48.4
May	51.2
June	48.6
July	75.7
August	32.7
September	126.8
October	39.8
November	62
December	56.4
<b>TOTAL</b>	<b>696.8</b>

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### 3.0 HAZARDOUS WASTE AND WASTE OIL DISPOSAL

As FOX-3 is a landlocked site, all hazardous waste, including waste oil, is transported to FOX-M (Sanirajak) before being shipped to an approved hazardous waste disposal site outside of Nunavut as required by the licence.

The movement of hazardous waste outside of Nunavut is regulated under both the *Transportation of Dangerous Goods Regulations* (TDG) and the *Cross-border Movement of Hazardous Waste and Hazardous Recyclable Material Regulations* (XBR). The waste from FOX-3 is manifested as part of FOX-M's waste and therefore the Movement Documents as required by the XBR are included in the FOX-M report.

See **Annex A** for the shipping documents including the NWS Manifests. A total of 4 drums and 1 crate of waste HAZMAT were shipped from FOX-3 in 2025.

**Table 3-1: Hazardous Waste and Waste Oil Sent for Disposal from FOX-3 in 2025**

TDG shipping name	Description	Manifest # (TCN)	Quantity
Waste Batteries, Wet, Non-Spillable	Waste batteries, wet, non-spillable	50917	1 Crate
Waste Fuel, Aviation, Turbine Engine	Waste Fuel, Aviation, Turbine Engine	50930, 50931	3 Drums
Waste Fuel, Aviation, Turbine Engine Mixture	Waste Fuel, Aviation, Turbine Engine Mixture	50930	1 Drum

### 4.0 NON-HAZARDOUS SOLID WASTE DISPOSAL

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

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

The FOX-3 landfill still exists, but no new materials have been landfilled in the reporting period. See **Annex B** for its location on-site.

**Table 4-1: Non-hazardous Domestic Solid Waste Sent for Disposal from FOX-3 in 2025**

Month	Waste Generated (kg)
January	0
February	400
March	0
April	565
May	240
June	1660
July	150
August	600
September	1600
October	255
November	0
December	0

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Month	Waste Generated (kg)
<b>TOTAL</b>	<b>5,470</b>

## 5.0 MONITORING PROGRAM

In 2025, a monitoring program was implemented at FOX-3 as required by the water licence, Part I. The monitoring program included the following:

1. Volume of raw water drawn from the Water Supply Lake (FOD-1). The information from monitoring water use is shown in **Section 2.0 Water Use**. The 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. The location of the sewage effluent outfall is shown in **Annex B**. A sump for the sewage outfall was constructed in 2010.

Monitoring Station FOD-2 was discontinued in water licence 8BC-FOD1828.

3. Accumulated rain and melt water contained in the berms of fuel storage facilities was analyzed using hydrocarbon test strips and confirmed within the effluent quality limits listed in the water licence, Part D prior to discharge (FOD-3). The coordinates and the results of the analysis are shown in **Annex D and Annex E**. All samples met the effluent requirements of the water licence, Part D.
4. Final Discharge Point from the Landfarm (FOD-4). The water accumulated in the landfarm was not discharged in 2025 and therefore no samples were collected.

## 6.0 SPILLS (UNAUTHORIZED DISCHARGES)

One spill to the environment occurred at FOX-3 in 2025. Table 7-1, below, describes the spill (unauthorized discharge) details.

The Spill Contingency Plan was successfully implemented.

**Table 6-1: Unauthorized Discharges at FOX-3 in 2025**

Date, NT-NU Spill #	Product	Quantity	Cause and follow-up action	On-site location
28-Apr-2025, Spill # NTNU 2025-199	Hydraulic fluid	30 L	A leaking connection on heavy equipment caused a spill on to a gravel pad. Impacted gravel was removed and containerized for off-site disposal. The connection was repaired and the leak was stopped.	Outside Garage (68o 39' 1"N, 71o 13' 57" W)

## 7.0 REVISIONS TO THE SPILL CONTINGENCY PLAN

The Spill Contingency Plan was updated on **24-Mar-2026**. 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 reclamation work was undertaken.

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## 9.0 ACRONYMS

**Table 9-1: Acronyms**

Acronym	Definition
BTEX	benzene toluene ethylbenzene xylene
CCME	Canadian Council of Ministers of the Environment
DCC	Defence Construction Canada
DND	Department of National Defence
n.o.s.	not otherwise specified
NWB	Nunavut Water Board
NWS	North Warning System
O&M	Operations and Maintenance
PCB	Polychlorinated Biphenyl
PHC CWS	Canada-Wide Standards for Petroleum Hydrocarbons
SQG	Soil Quality Guidelines
TDGR	Transportation of Dangerous Goods Regulations
QA/QC	Quality Assurance/Quality Control
XBR	Cross-border Movement of Hazardous Waste and Hazardous Recyclable Material Regulations

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## **ANNEX A. HAZARDOUS WASTE AND WASTE OIL DISPOSAL**

The 2025 NWS Manifests for waste shipments (as previously described Table 4-1) are included in the following pages.

The following documents are enclosed:

NWS Manifests (TCNs): 50917, 50930, and 50931.



# SHIPPING MANIFEST

Suite 1600, 275 Slater Street, Ottawa, ON K1P 5H9

**NON NEGOTIABLE**

Filled By: <b>00007065</b>	Date: <b>Jul 2, 2025 10:47 AM</b>	Project ID:	Task ID: <b>TCN-50917</b>
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: FOX-3, DEWAR LAKES, DND Storeroom Nasittuq, NWS LSS Hall Beach, P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority <b>0</b>
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Attention:	Attention:
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<b>Carrier:</b>	<b>Routing:</b> F3-XL-NEAS	<b>Waybill #:</b>	<b>Total Pcs.:</b> 1	<b>Total Weight:</b> 1500
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QTY	Type	Line	Item	Description	WO or PO	B/Code or S/N	Remarks
1	crate	1500	2002346	WASTE - BATTERIES, WET, NON-SP			DIMS 48x48x16 - ASSET 371040

**NOTE: All claims related to this shipment have to be filled with Nasittuq within 45 hours of receipt.**

Received By:	Date
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Received By:	Date
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# SHIPPING MANIFEST

Suite 1600, 275 Slater Street, Ottawa, ON K1P 5H9

**NON NEGOTIABLE**

Filled By: <b>00007065</b>	Date: <b>Jul 2, 2025 10:50 AM</b>	Project ID:	Task ID: <b>TCN-50930</b>
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: FOX-3, DEWAR LAKES, DND Storeroom Nasittuq, NWS LSS Hall Beach, P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority <b>0</b>
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Attention:	Attention:
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<b>Carrier:</b> NEAS	<b>Routing:</b> F3-XL-NEAS	<b>Waybill #:</b>	<b>Total Pcs.:</b> 1	<b>Total Weight:</b> 600
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QTY	Type	Line	Item	Description	WO or PO	B/Code or S/N	Remarks
1			PALLET		56X29X47		ASSETS 368830,367828

**NOTE: All claims related to this shipment have to be filled with Nasittuq within 45 hours of receipt.**

Received By:	Date
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Received By:	Date
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# SHIPPING MANIFEST

Suite 1600, 275 Slater Street, Ottawa, ON K1P 5H9

**NON NEGOTIABLE**

Filled By: <b>00007065</b>	Date: <b>Jul 2, 2025 11:03 AM</b>	Project ID:	Task ID: <b>TCN-50931</b>
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Nasittuq, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority: <b>0</b>
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Attention:	Attention:
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<b>Carrier:</b>	<b>Routing:</b> F3-XL-NEAS	<b>Waybill #:</b>	<b>Total Pcs.:</b> 1	<b>Total Weight:</b> 500
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QTY Order	Type	Line Weigh	Item	Description	WO or PO	B/Code or S/N	Remarks
1			PALLET		48X24X42		ASSET 368236,370694

**NOTE: All claims related to this shipment have to be filled with Nasittuq within 45 hours of receipt.**

Received By:	Date
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Received By:	Date
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## ANNEX B. LOCATION OF EFFLUENT OUTFALL AND LANDFILL WITH COORDINATES



Figure B-1: Coordinates of landfill : 68° 39' 1.50"N, 71° 14' 35.00"W



Figure B-2: Coordinates of Sewage Outfall Location: 68° 39' 6.38"N, 71° 14' 6.44"W

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## **ANNEX C. ANALYSIS OF DISCHARGED SEWAGE EFFLUENT**

Monitoring Station FOD-2 was discontinued in water licence 8BC-FOD1828.

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## ANNEX D. LOCATION OF BERMED FUEL STORAGE FACILITIES<sup>1</sup>

Table D-1 contains the locations and sampling dates for the wastewater discharged from the bermed fuel storage facilities.

**Table D-2: Location of Bermed Fuel Storage Facilities and Date Sampled**

Berm	Location on-site	Discharge Latitude <sup>2</sup>	Discharge Longitude	Date
DEW W22A&B	Summit	68°39'05.43"N	71°14'03.23"W	Not discharged
DEW W22C&D	Summit	68°39'03.67"N	71°13'49.97"W	Not Discharged
DEW W20D&E	Airstrip	68°37'24.90"N	71°08'05.62"W	25-Jun-2025

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<sup>1</sup> Effluent from bermed fuel storage facilities.

<sup>2</sup> Final discharge point of bermed fuel storage facility

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## ANNEX E. ANALYSIS OF BERM WATER <sup>3</sup>

The berms at FOX-3 were sampled using hydrocarbon test strips as per the approved QA/QC Plan for Berm Water Sampling as stated in the water licence 8BC-FOD1929, PART D, Item 11. The photo log of the hydrocarbon test strips is included in pages, which follow.

### Photo Log



Photo E 1: Hydrocarbon test strips used in berm of tanks W22A & W22B (25-Jun-2025)

<sup>3</sup> Effluent from bermed fuel storage facilities.

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## ANNEX F. MONITORING ACTIVITIES

n/a