

2024 CAM-3 ANNUAL NUNAVUT WATER BOARD REPORT

**FOR THE
NORTH WARNING SYSTEM**

Contract # W8485-157352/001/NX
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Prepared for
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EXECUTIVE SUMMARY

This 2024 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 2024.

Nasittuq is the Operations and Maintenance (O&M) Contractor for the North Warning System (NWS) including CAM-3. CAM-3 is a North Warning System (NWS) radar site located at Shepherd Bay, Nunavut. In 2024 the site was transitioned to year-round staffing.

A total of 260.0 cubic meters (m³) was drawn from the water supply lake in 2024. This is below the annual maximum of 3,000 m³ allowed by the licence.

In 2024 hazardous waste and waste oil was be sent to an approved hazardous waste disposal site outside of Nunavut as required by the licence. Waste consisted of 47 drums of various hazardous waste, 3 crates of batteries, and 3 drums of scrap metal.

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.

Accumulated rain and meltwater contained in the berms of fuel storage facilities was planned to be analyzed with hydrocarbon test strips. Water did not accumulate in the berms enough to require discharge, and therefore was not tested.

No spills to the environment occurred at CAM-3 in 2024.

No progressive reclamation work was completed at CAM-3.

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1.0 INTRODUCTION

This 2024 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 2024.

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

CAM-3 is a North Warning System radar site located at Shepherd Bay, Nunavut and is typically staffed year-round.

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, 26-Mar-2025
Time period covered: 01 January to 31 December 2024

2.0 WATER USE

A total of **260.0 cubic metres (m³)** was drawn from the water supply lake in 2024. The daily water usage (a maximum of **16 m³ per day**) was below the maximum of **299 m³ per day** allowed by the licence. The total water used in 2024 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 2024.

Table 2-1: Monthly Raw Water Usage at CAM-3 in 2024

Month	Raw water usage (m ³)
January	0
February	0
March	13.5
April	4.7
May	28.7
June	29.3
July	33.3
August	26.7
September	27.7
October	27.4
November	34.1
December	34.6
TOTAL	260.0

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3.0 HAZARDOUS WASTE AND WASTE OIL DISPOSAL

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).

Hazardous waste, including waste oil, from CAM-3 was sent to an approved hazardous waste disposal facility outside of Nunavut as required by the licence. The hazardous waste was shipped to Qikiqtaaluk Environmental.

See Table 3-1 for the list of items sent for disposal.

See Annex A for the shipping documents including the completed movement documents for waste regulated under the Transportation of Dangerous Goods Regulations (TDGR) and non-regulated waste.

The hazardous waste shipped from CAM-3 in 2024 consisted of **47 drums of various hazardous waste (waste oil, waste oil filters etc.), 3 crates of waste batteries, and 3 drums of scrap metal.**

Notes: 8 carbon dioxide cylinders were mistakenly included on the Movement Document however these are not waste as they were being sent for refill.

Table 3-1: Hazardous Waste and Waste Oil Sent for Disposal from CAM-3 in 2024

TDG shipping name	Description	Manifest # (TCN)	Movement Document	Quantity
Waste Gasoline	WASTE - GASOLINE, UN 1203	48668	1Z01407-9	1 Drum
Waste Aerosols	WASTE - AEROSOLS, FLAMMABLE (DRUM OR CRATE)	48677	1Z01407-9	1 Drum
Waste Batteries, Wet, Filled With Acid	WASTE - BATTERIES, WET, FILLED WITH ACID (CONTAINER)	48695, 46596, 46597	1Z01407-9	3 Crates
Waste Fuel, Aviation, Turbine Engine Mixture	WASTE - FUEL AND WATER MIXTURE (DRUM)	48668, 48675	1Z01407-9	4 Drums*
Waste Solids Containing Flammable Liquid, N.O.S. (Fuel, Aviation, Turbine Engine)	WASTE - FUEL FILTERS (DRUM)	48673, 48679	1Z01407-9	2 Drums
Waste Solids Containing Flammable Liquid, N.O.S. (Fuel, Aviation, Turbine Engine)	WASTE - FUEL SOAKED ABSORBENT	48673	1Z01407-9	1 Drum
<i>Not TDG Regulated</i>	WASTE - OILY RAGS	48671, 48671, 48672	1Z01407-9	3 Drums
<i>Not TDG Regulated</i>	Scrap metal	48310, 48696, 48681	1Z01407-9	3 Drums*
<i>Not TDG Regulated</i>	WASTE - OIL (45 GALLON DRUM)	48708, 48709, 48674, 48676	1Z01407-9	13 Drums
<i>Not TDG Regulated</i>	WASTE - GLYCOL (DRUM)	48670, 48670	1Z01407-9	2 Drums
<i>Not TDG Regulated</i>	WASTE - OIL FILTERS (DRUM)	48672, 46566	1Z01407-9	3 Drums*
<i>Not TDG Regulated</i>	WASTE - COOKING OIL	48676	1Z01407-9	1 Drum

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* The Movement Document mistakenly lists 3 drums fuel/water mix, 2 drums oil filters, and 5 drum scrap metal. Movement Document to be updated.

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 2024

Month	Waste Generated (kg)
January	0
February	1030
March	0
April	625
May	818
June	1015
July	753
August	652
September	1406
October	1006
November	1068
December	1633
TOTAL	10,006

5.0 MONITORING PROGRAM

In 2024 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.

The sewage outfall was not discharged in 2024 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 planned to be analyzed with hydrocarbon test strips in order to confirm it was within the effluent quality limits listed in the water licence, Part D, prior to discharge (SHE-3). Water did not accumulate in the berms enough

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to require discharge, and therefore was not tested. 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 2024.

7.0 REVISIONS TO THE SPILL CONTINGENCY PLAN

The Spill Contingency Plan was updated on **27-Mar-2025**. An updated copy of the Spill Contingency Plan has been submitted to the NWB with this annual report.

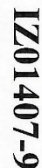
8.0 PROGRESSIVE RECLAMATION WORK UNDERTAKEN

No progressive reclamation work was undertaken in 2024.

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



Additional waste lines information / Lignes d'informations supplémentaires de déche

[illegible]

IZ01407-9

MOVEMENT DOCUMENT / MANIFEST
DOCUMENT DE MOUVEMENT / MANIFESTE[illegible]



IZ01407-9

Movement Document / Manifest Reference No.
N° de référence du document de mouvement / manifeste

B Carrier name Nom de transporteur		Unique Identification Number Numéro d'identification unique	
Mailing addr. / Adr. postale		City / Ville	Prov. / Country / Postal code / Pays / Code postal
E-mail / Courriel électronique		Tel. No. / N° de tél	
Vehicle / Véhicule		Registration No. / N° d'immatriculation	Prov. / 24
1. Trailer - Rail car No. 1 1. remorque - wagon			
2. Trailer - Rail car No. 2 2. remorque - wagon			
Port of entry Point d'entrée		Port of exit Point de sortie	25
Date		Date	
Carrier Certification: I certify that I have received waste or recyclable material from the generator/consignor for delivery to the recipient/consignee as set out in Part A and that the information contained in Part B is complete and correct. Attestation du transporteur : J'atteste avoir reçu les déchets ou matériaux recyclables du producteur/vendeur en vue de leur livraison au récepteur/acheteur, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets. Name of authorized person (print) Nom de l'agent autorisé (caractères d'imprimerie) Tel. No. / N° de tél			
Year / Année	Month / Mois	Day / Jour	Signature

B Carrier name Nom de transporteur		Unique Identification Number Numéro d'identification unique	
Mailing addr. / Adr. postale		City / Ville	Prov. / Country / Postal code / Pays / Code postal
E-mail / Courriel électronique		Tel. No. / N° de tél	
Vehicle / Véhicule		Registration No. / N° d'immatriculation	Prov. / 24
1. Trailer - Rail car No. 1 1. remorque - wagon			
2. Trailer - Rail car No. 2 2. remorque - wagon			
Port of entry Point d'entrée		Port of exit Point de sortie	25
Date		Date	
Carrier Certification: I certify that I have received waste or recyclable material from the generator/consignor for delivery to the recipient/consignee as set out in Part A and that the information contained in Part B is complete and correct. Attestation du transporteur : J'atteste avoir reçu les déchets ou matériaux recyclables du producteur/vendeur en vue de leur livraison au récepteur/acheteur, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets. Name of authorized person (print) Nom de l'agent autorisé (caractères d'imprimerie) Tel. No. / N° de tél			
Year / Année	Month / Mois	Day / Jour	Signature

B Carrier name Nom de transporteur		Unique Identification Number Numéro d'identification unique	
Mailing addr. / Adr. postale		City / Ville	Prov. / Country / Postal code / Pays / Code postal
E-mail / Courriel électronique		Tel. No. / N° de tél	
Vehicle / Véhicule		Registration No. / N° d'immatriculation	Prov. / 24
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2. Trailer - Rail car No. 2 2. remorque - wagon			
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Date		Date	
Carrier Certification: I certify that I have received waste or recyclable material from the generator/consignor for delivery to the recipient/consignee as set out in Part A and that the information contained in Part B is complete and correct. Attestation du transporteur : J'atteste avoir reçu les déchets ou matériaux recyclables du producteur/vendeur en vue de leur livraison au récepteur/acheteur, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets. Name of authorized person (print) Nom de l'agent autorisé (caractères d'imprimerie) Tel. No. / N° de tél			
Year / Année	Month / Mois	Day / Jour	Signature

Additional waste lines information / Lignes d'informations supplémentaires de déchet

A													C			
3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Prox. code	UN No. / N° NU	Shipping name / Appellation réglementaire	Class / Classe (Or: categorie)	Prox. code	Prox. code	Prox. code	Prox. code	Prox. code	Prox. code	Prox. code	Prox. code	Prox. code	Prox. code	Prox. code	Prox. code	Prox. code
(v)	-	WASTE GLYCOL - NR	-	-	435	L	3	01	L							
(vi)	-	WASTE OIL - NR	-	-	4430	L	29	01	L							
(vii)	-	WASTE - COOKING OIL - NR	-	-	125	L	1	01	L							
(viii)	---															
Permit No. / N° de permis	11	12	13	14	15	16	17	18	19							
Shipment / Envoyé	Or / De	D or R code / Code D ou R	C code / Code C	Annex VIII or OECD code / Code Annexe VIII ou Code OCDE	H code / Code H	Y code / Code Y	Export / Import / Exportation / Importation	Customs codes / Codes de douanes								
(vi)																
(vii)																
(viii)																

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

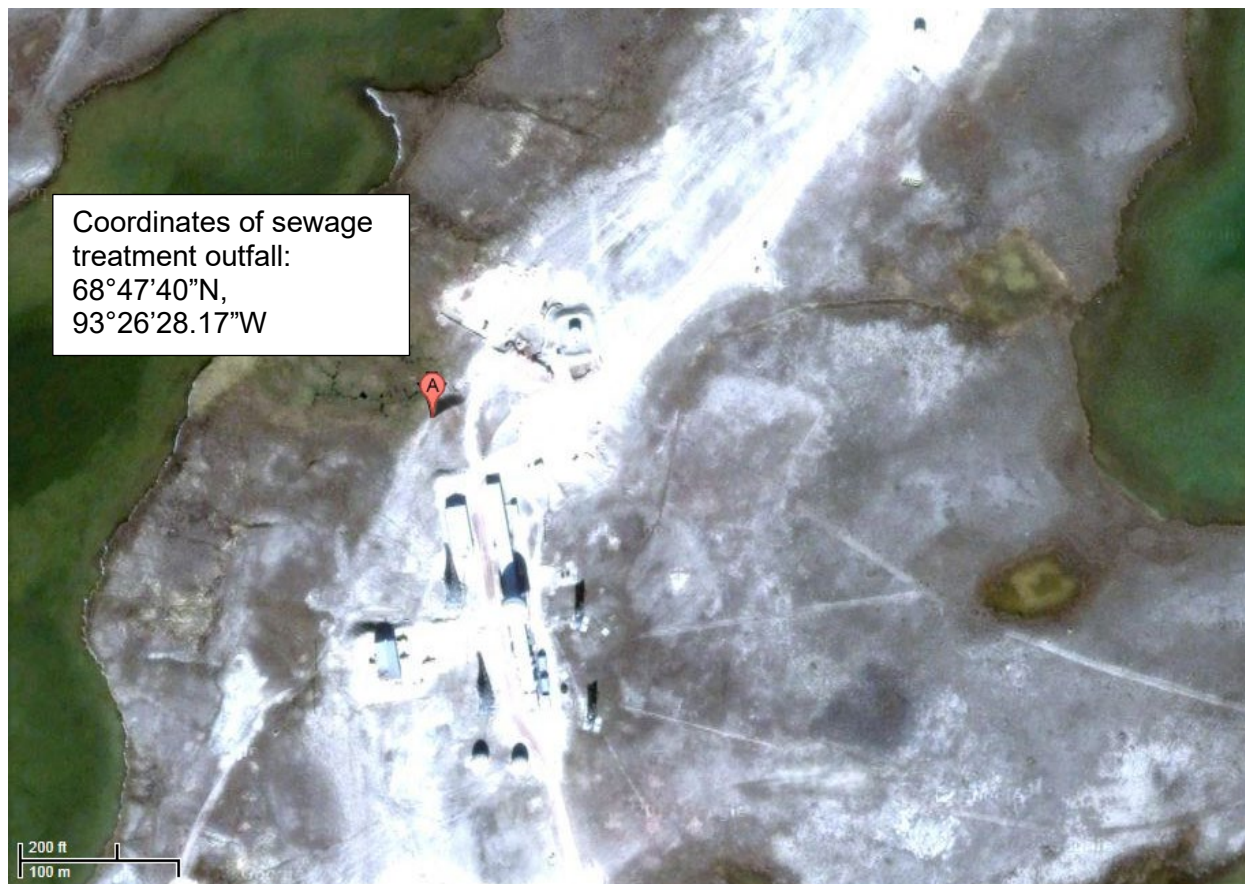


Figure 9.0.0-1: Coordinates of sewage outfall: 68°47'40"N, 93°26'28.17"W



ANNEX C. ANALYSIS OF DISCHARGED SEWAGE EFFLUENT

The sewage outfall was not discharged in 2024 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	Berm Latitude ¹	Berm Longitude	Date
SHE W22A	Summit	68°47'42.00"N	93°26'19.58"W	n/a
SHE W22D	Beach	68°48'07.82"N	93°36'50.12"W	n/a

¹ Final discharge point of bermed fuel storage facility



ANNEX E. ANALYSIS OF BERM WATER

The berms at CAM-3 were monitored over the winter and it was noted that snow did not accumulate in the berms due to wind. As no snow accumulated, only a few inches of water accumulated in the berms which was not enough to discharge.

In the future, if berm water² at CAM-3 requires discharge, it will be 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.

² Effluent from bermed fuel storage facilities.