



**2008 Annual Report
to the
Nunavut Water Board**

**Licensee: Department of National Defence,
Government of Canada**

Licence: NWB6SHE0409 - Type "B"

**Location: CAM-3 North Warning System Site,
Shepherd Bay, Kitikmeot Region, Nunavut**

**Report submitted by: Nasittuq Corporation,
31 March 2009**



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Executive Summary

This 2008 Annual Report to the Nunavut Water Board (NWB) is submitted as required by Licence Number NWB6SHE0409 – Type "B", Part B. General Conditions, para. 1.

CAM-3 is an unattended (unmanned) North Warning System radar site 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. The site was temporarily attended (manned) due to project activity at the end of June, in July, and at the start of August.

CAM-3 was attended for the entire month of July 2008. 44 cubic meters of water were drawn from the water supply lake in July.

Hazardous waste was removed from the site for disposal outside of Nunavut. The waste went to Clean Harbors, Ryley, Alberta. The waste was 51 drums of assorted waste (oil, glycol, etc.), 2 crates of batteries, and 3 cylinders.

Nonhazardous domestic solid waste was flown out to CAM-M and disposed of through a contract with the Cambridge Bay community at the local landfill.

The sewage effluent was sent for laboratory analysis.

One outdoor spill (glycol) occurred and was immediately cleaned up.

The Spill Contingency Plan was revised. The main changes were: spills are now immediately reported to the NWSCC, and the Nasittuq Emergency Contact List (used only by Nasittuq Corp. staff) was updated to reflect changes in personnel.

Introduction

This 2008 Annual Report to the Nunavut Water Board (NWB) is submitted as required by Licence Number NWB6SHE0409 – Type “B”, Part B. General Conditions, para. 1.

CAM-3 is an unattended (unmanned) North Warning System radar site 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. The site was temporarily attended (manned) due to project activity at the end of June, in July, and at the start of August.

Water Pumped from SHE-1

CAM-3 was attended for the entire month of July 2008. 44 cubic meters of water were drawn from the water supply lake, SHE-1, in July.

Hazardous Waste and Waste Oil Disposal

Hazardous waste and waste oil were sent to an approved hazardous waste disposal site outside of Nunavut as required by the licence. The waste was sent to Clean Harbors, P.O. Box 309, 2km North Hwy 14, Secondary Rd 854, Ryley, Alberta, T0B 4A0.

Table 1 below lists the items sent for disposal.

Table 1. Summary of waste sent for disposal in 2008 from CAM-3.

Site	Description	Quantity
CAM-3	Waste glycol	32 drums
CAM-3	Waste oil	13 drums
CAM-3	Waste hydraulic fluid	1 drum
CAM-3	Waste fuel	4 drums
CAM-3	Waste fuel and oil mixture	1 drum
CAM-3	Waste batteries, wet, non-spillable	1 crate of 148 kg
CAM-3	Waste batteries, wet, filled with acid	1 crate of 320 kg
CAM-3	Acetylene	2 cylinders
CAM-3	Oxygen	1 cylinder

Nonhazardous Solid Waste Disposal

Nonhazardous domestic solid waste was flown out to CAM-M and disposed of through a contract with the Cambridge Bay community at the local landfill. A small amount of solid waste was deposited in an on-site landfill (see Annex C).

Monitoring Program

See Annex A for the location of the sewage effluent outfall, SHE-2.

See Annex B for analysis of sewage effluent.

See Annex C for the location of the landfill used in 2008.

Spills (Unauthorized Discharges)

One outdoor spill occurred. It is in Table 2 below.

Table 2. Outdoor spills in 2008 at CAM-3.

Date	Product	Quantity	Cause and follow-up action	Location at CAM-3
31 Jul 2008	Antifreeze (ethylene glycol)	20 to 22 liters	Loose clamp on vehicle radiator hose. Contaminated soil was placed in drums.* Vehicle was repaired.	Kilometer 4 on road between site summit and beach.

* Drums are retrograded to a licensed waste disposal company outside of Nunavut.



Revisions to the Spill Contingency Plan

The Spill Contingency Plan was revised as follows:

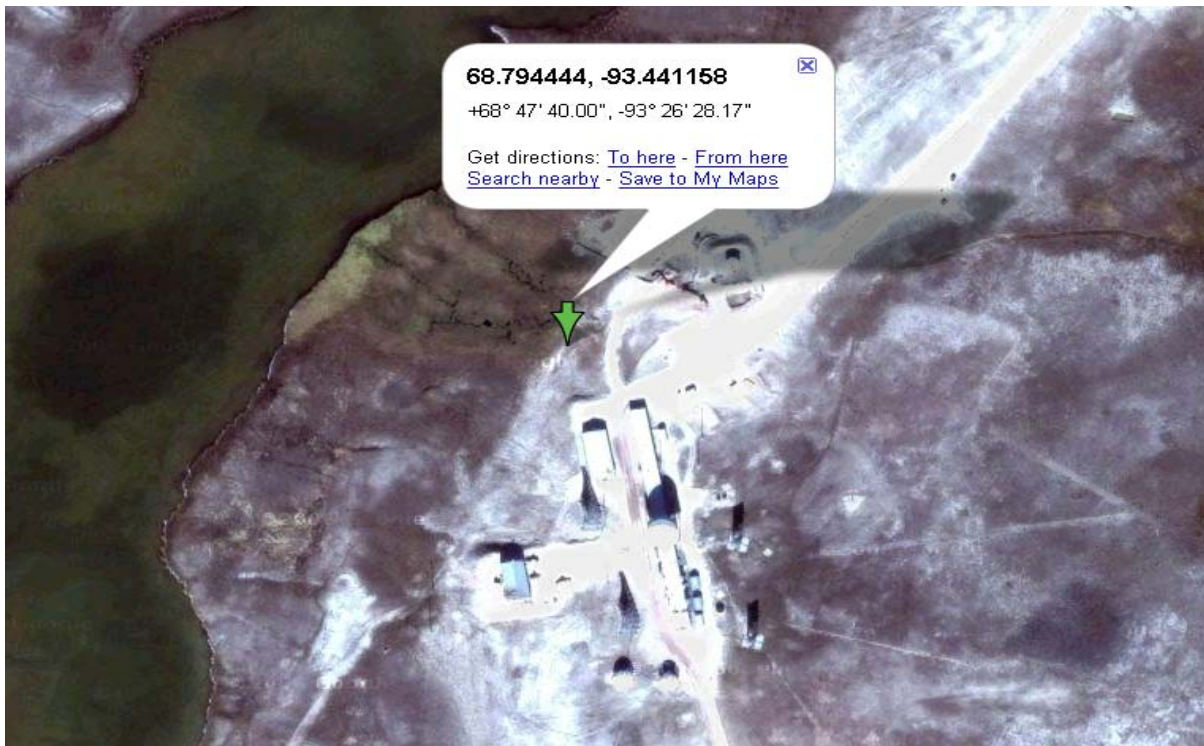
- spills are immediately reported to the NWSCC instead of the LSS Manager;
- Spill Response Flow Chart was updated to show the immediate report to NWSCC;
- all spills, indoors and outdoors, must be reported;
- all statements about burning (i.e. burning recovered fuel, fuel soaked sorbent, etc.) and burn bins were removed; and
- two names (I. Wawryk, S. Cheng) were removed from the Nasittuq Emergency Contact List. This List is used only by Nasittuq Corp. staff.

Progressive reclamation work undertaken

None required.

Annex A

CAM-3 Sewage Outfall Location with GPS Co-ordinates



Annex B

Analysis of Sewage Effluent in 2008 for CAM-3 (samples taken monthly when sewage actively discharged)

March 2008 – page 1 of 2

REPORT OF ANALYSIS

ACCUTEST LABORATORIES - A New Bodycote Company

Client: Nasittuq Corp. (Ottawa)
100-170 Laurier Ave. West
Ottawa, ON
K1P 5V5

Attention: Mr. Sam Cheng

Report Number: 2808338

Date: 2008-04-25

Date Submitted: 2008-04-16

Project: CAM-3 (Sheppard Bay)

P.O. Number: 270439

Matrix: Sewage

Chain of Custody Number: 28143

PARAMETER	UNITS	MRL	LAB ID: Sample Date: Sample ID:	617788 2008-03-12 CAM-3 (Raw Sewage Discharge)	GUIDELINE		
					TYPE	LIMIT	UNITS
Biochemical Oxygen Demand	mg/L	1		151			
Conductivity	uS/cm	5		2060			
N-NH3 (Ammonia)	mg/L	2.0		139			
NO2 + NO3 as N	mg/L	0.10		<0.10			
pH				7.16			
Phenols	mg/L	0.001		0.459			
Sulphate	mg/L	1		2			
Total Suspended Solids	mg/L	2		66			
Calcium	mg/L	1		42			
Magnesium	mg/L	1		35			
Potassium	mg/L	1		51			
Sodium	mg/L	2		109			
Arsenic	mg/L	0.05		<0.05			
Cadmium	mg/L	0.01		<0.01			
Chromium	mg/L	0.05		<0.05			
Copper	mg/L	0.01		6.82			
Iron	mg/L	0.1		2.6			
Lead	mg/L	0.01		1.00			
Mercury	mg/L	0.05		<0.05			
Nickel	mg/L	0.01		0.05			
Zinc	mg/L	0.05		0.52			

MRL = Method Reporting Limit INC = Incomplete AO = Aesthetic Objective OG = Operational Guideline MAC = Maximum Allowable Concentration IMAC = Interim Maximum Allowable Concentration

Comment:

617788: Holding time for N-NO2 + N-NO3 analysis was exceeded. Metals analysis performed on aqua-regia digest of sample material.

APPROVAL:

Ewan McRobbie
Inorganic Lab Supervisor

REPORT OF ANALYSIS

ACCUTEST LABORATORIES - A New Bodycote Company

Client: Nasittuq Corp. (Ottawa)
100-170 Laurier Ave. West
Ottawa, ON
K1P 5V5

Attention: Mr. Sam Cheng

Chain of Custody Number: 26143

Report Number: 2808338

Date: 2008-04-25

Date Submitted: 2008-04-16

Project: CAM-3 (Sheppard Bay)

P.O. Number: 270439

Matrix: Sewage

LAB ID: 617788		GUIDELINE	
Sample Date: 2008-03-12			
Sample ID: CAM-3 (Raw Sewage Discharge)			
PARAMETER	UNITS	MRL	
Oil & Grease			
Oil & Grease - Mineral	mg/L	1	6
Oil & Grease - Non-mineral	mg/L	1	47
Oil & Grease - Total	mg/L	1	53

MRL = Method Reporting Limit INC = Incomplete AO = Aesthetic Objective OG = Operational Guideline MAC = Maximum Allowable Concentration IAC = Interim Maximum Allowable Concentration

Comment:

APPROVAL:

Mina Nasirai
Organic Lab Supervisor

Benefits relate only to the employee listed on the schedule for available Organic Lab Supervisor

ACCUTEST LABORATORIES - A New Bodycote Company				REPORT OF ANALYSIS			
Client: Nasittuq Corp. (Ottawa) 100-170 Laurier Ave. West Ottawa, ON K1P 5V5 Attention: Barb Thomson				Report Number: 2818757 Date: 2008-08-27 Date Submitted: 2008-07-31 Project: P.O. Number: 280472 Matrix: Sewage			
Chain of Custody Number: 81643				LAB ID: 646789 Sample Date: 2008-07-22 Sample ID: CAM-3 Sewage Outfall			
PARAMETER	UNITS	MRL	TYPE	LIMIT	UNITS		
Biochemical Oxygen Demand	mg/L	1					
Conductivity	uS/cm	5					
N-NH3 (Ammonia)	mg/L	2.0					
NO2 + NO3 as N	mg/L	0.10					
pH							
Phenols	mg/L	0.001					
Sulphate	mg/L	1					
Total Suspended Solids	mg/L	49					
Calcium	mg/L	2					
Magnesium	mg/L	1					
Potassium	mg/L	1					
Sodium	mg/L	2					
Arsenic	mg/L	0.05					
Cadmium	mg/L	0.01					
Chromium	mg/L	0.05					
Copper	mg/L	0.01					
Iron	mg/L	0.1					
Lead	mg/L	0.01					
Mercury	mg/L	0.05					
Nickel	mg/L	0.01					
Zinc	mg/L	0.05					
MRL = Method Reporting Limit INC = Incomplete AO = Aesthetic Objective OG = Operational Guideline MAC = Maximum Allowable Concentration IMAC = Interim Maximum Allowable Concentration Comment: Metals analysis performed on aque-regia digest of sample material. N/A = Not Available. 646789: Holding time for N-NO2+N-NO3 analysis was exceeded. Phenols MRL elevated due to matrix interference. Holding time for BOD5 analysis was exceeded.							
APPROVAL: Ewan McRobbie Inorganic Lab Supervisor							

REPORT OF ANALYSIS

ACCUTEST LABORATORIES - A New Bodycote Company

Client: Nasittuq Corp. (Ottawa)
100-170 Laurier Ave. West
Ottawa, ON
K1P 5V5

Attention: Barb Thomson

Report Number:	2818757
Date:	2008-08-27
Date Submitted:	2008-07-31

Project:

P.O. Number:	280472
Matrix:	Sewage

Chain of Custody Number: 81643

LAB ID:						GUIDELINE	
Sample Date:							
Sample ID:							
PARAMETER						TYPE	LIMIT
UNITS							UNITS
Oil & Grease							
Oil & Grease - Mineral							
Oil & Grease - Non-mineral							
Oil & Grease - Total							

MRL = Method Reporting Limit INC = Incomplete AO = Aesthetic Objective OG = Operational Guideline MAC = Maximum Allowable Concentration IMAC = Interim Maximum Allowable Concentration

Comment:

APPROVAL:

Mina Nasirai
Organic Lab Supervisor

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REPORT OF ANALYSIS

ACCUTEST LABORATORIES - A New Bodycote Company

Client: Nasittuq Corp. (Ottawa)
100-170 Laurier Ave. West
Ottawa, ON
K1P 5V5
Attention: Barb Thomson

Report Number: 2818714
Date: 2008-08-03
Date Submitted: 2008-07-31

Project:

P.O. Number:
Matrix:

Chain of Custody Number: 81643

PARAMETER	UNITS	MRL	LAB ID: Sample Date: Sample ID:	GUIDELINE	TYPE	LIMIT	UNITS
Faecal Coliforms	cf/100mL	76100000	648649 2008-07-22 CAM-3 Sewage Outfall	Sewage			

MRL = Method Reporting Limit INC = Incomplete AO = Aesthetic Objective OG = Operational Guideline MAC = Maximum Allowable Concentration IMAC = Interim Maximum Allowable Concentration
Comment:

APPROVAL:

Jennifer Mitchell
Microbiology Lab Supervisor

Annex C

Location of Landfill Used in 2008 at CAM-3 with GPS Co-ordinates

