



**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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Shepherd Bay, Kitikmeot Region, Nunavut

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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:

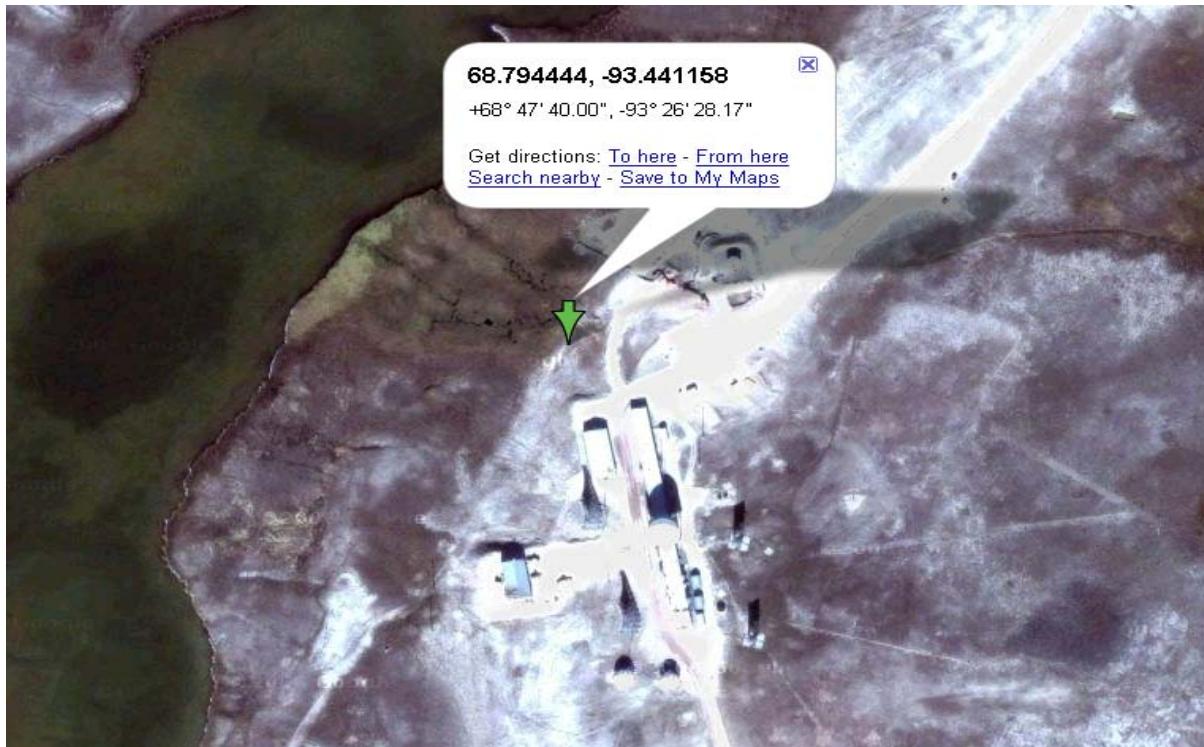
- spills are immediately reported to the NWSCC instead of the LSS Manager;
- Spill Response Flow Chart was updated to show the immediate report to NWSCC;
- all spills, indoors and outdoors, must be reported;
- all statements about burning (i.e. burning recovered fuel, fuel soaked sorbent, etc.) and burn 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)



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ACCUTEST LABORATORIES - A New Bodycote Company

Client: Nasittuq Corp. (Ottawa)
100-170 Laurier Ave. West
Ottawa, ON
K1P 3V5

Attention: Mr. Sam Cheng

REPORT OF ANALYSIS

PARAMETER	UNITS	MRL	Sewage Discharge)			TYPE	LIMIT	UNITS
			Sample Date:	Sample ID:	GUIDELINE			
Biochemical Oxygen Demand	mg/L	1	151					
Conductivity	µS/cm	5	2060					
NaNH3 (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					
Trial Suspended Solids	mg/L	2	66					
Calcium	mg/L	1	42					
Magnesium	mg/L	1	35					
Phosphorus	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	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 IAC = Interim Maximum Allowable Concentration

Comment:

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

APPROVAL:

Ewan McRobbie

Inorganic Lab Supervisor



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REPORT OF ANALYSIS

ACCUTEST LABORATORIES - A New Bodycote Company

Client: Nasituuq Corp. (Ottawa)
100-170 Laurier Ave. West
Ottawa, ON
K1P 5V5
Attention: Mr. Sam Cheng
Chain of Custody Number: 28143
PARAME
iii & Grease
iii & Grease - Mineral
iii & Grease - Non-mineral
iii & Grease - Total

Parameter	Units	MRL	Type	Limit	Units	Guideline
						Sewage
Oil & Grease	mg/L	1		6		
Oil & Grease - Mineral	mg/L	1		47		
Oil & Grease - Non-mineral	mg/L	1		53		
Oil & Grease - Total	mg/L	1				

Method Reporting Limit, INC = Incomplete, AD = Anesthetic Objective, OG = Operational Guideline, MAC = Maximum Allowable Concentration, IMAc = Interim Maximum Allowable Concentration

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APPROVAL: _____ **Mina Nasirai** **Organic Lab Supervisor**

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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

Chain of Custody Number: 81643

PARAMETER	UNITS	MRL	TYPE	LIMIT	UNITS
Biochemical Oxygen Demand	mg/L	1	3870		
Conductivity	µS/cm	5	1840		
NH3 (Ammonia)	mg/L	2.0	160		
NO2 + NO3 as N	mg/L	0.10	N/A		
pH					
Phenols	mg/L	0.001	0.095		
Sulphate	mg/L	1	49		
Total Suspended Solids	mg/L	2	10800		
Calcium	mg/L	1	129		
Magnesium	mg/L	1	29		
Potassium	mg/L	1	36		
Sodium	mg/L	2	77		
Arsenic	mg/L	0.05	<0.05		
Cadmium	mg/L	0.01	0.01		
Chromium	mg/L	0.05	0.29		
Copper	mg/L	0.01	40.6		
Iron	mg/L	0.1	87.0		
Lead	mg/L	0.01	0.87		
MERCURY	mg/L	0.05	<0.05		
Nickel	mg/L	0.01	1.33		
Zinc	mg/L	0.05	5.61		

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

Comment: Metals analysis performed on aqueous 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 McRobie
Inorganic Lab Supervisor

Printed: Mon, 2010-01-11 10:45:00 AM by: Ewan McRobie



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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

Chain of Custody Number: 81643

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

Project:

PARAMETER	UNITS	MRRL	TYPE	LIMIT	UNITS
Oil & Grease	mg/L	1		6	
Oil & Grease - Mineral	mg/L	1		102	
Oil & Grease - Non-mineral	mg/L	1		108	
Oil & Grease - Total	mg/L	1			

MRRL = Method Reporting Limit INC = Incomplete AO = Aesthetic Objective OG = Operational Guideline MAC = Maximum Allowable Concentration (MAC = Interim Maximum Allowable Concentration)

Comment:

APPROVAL: Mina Natural
Organic Lab Supervisor



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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

Chain of Custody Number: 81543

Report Number: 2818714
Date: 2008-08-13
Date Submitted: 2008-07-31
Project:

PARAMETER	UNITS	MRL	TYPE	LIMIT	UNITS	P.O. Number: Matrix: Seawage GUIDELINE
						cfu/100mL 2008-07-22 CAM-3 Sewage Outfall
Faecal Coliforms	cfu/100mL	7810000				

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

