



## **QA/QC Plan for Sampling from SHE-2 (Final Discharge Point from Sewage Disposal Facility) at CAM-3**

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

**Licence:** 3BC-SHE0919 Type “B”

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

**Plan submitted by:** Nasittuq Corporation

**Date:** 26 January 2010

### **Objective**

This QA/QC plan applies to CAM-3’s Monitoring Station Number SHE-2, the final discharge point from the Sewage Disposal Facility. It has been prepared to ensure that sampling, sample preservation, and analyses are done in accordance with methods in the current edition of the Standard Methods for the Examination of Water and Wastewater as required by the Nunavut Water Board Water Licence 3BC-SHE0919 Type “B”.

### **Review**

This plan shall be reviewed annually by Nasittuq’s Environmental Services and will be updated as required. Updated plans will be submitted to the NWB with an approval letter from a laboratory accredited to ISO/IEC Standard 17025.

### **Feedback**

Feedback such as comments, complaints, and suggestions for improvements are to be submitted to: Nasittuq Corp., 100-170 Laurier Ave. W., Ottawa, ON, K1P 5V5, Attention: Supervisor, Environmental Services.

### **Approval**

This plan has been reviewed and accepted.

Original signed by Barb Thomson

26 Jan 2010

\_\_\_\_\_  
Supervisor, Environmental Services  
Nasittuq Corp.

\_\_\_\_\_  
Date (dd/mm/yy)



## **Background**

Effluent from the Sewage Disposal Facility is discharged from a pipe to the designated outfall area.

Samples are taken of the effluent as it flows out of the pipe. This sampling point is Monitoring Station Number SHE-2, the final discharge point from the Sewage Disposal Facility. The liquid is adequately represented by single grab samples.

## **Equipment**

The Sewage Testing Kit is a cooler which contains:

- a Chain of Custody form which includes an area for the sample analysis request;
- cold packs; and
- sample bottles

provided by Exova Accutest Laboratories. The sample bottles are listed in the table below. The sample bottles are clean and free of contaminants.

**Table 1. Sample bottle requirements**

<b>Bottle</b>	<b>Parameters</b>	<b>Sampling</b>	<b>Storage Instructions</b>
2 x 500 ml wide-mouth plastic chem. bottles (no preservative)	General chemistry (pH, BOD, TSS)	Grab	Keep cool. Return to the laboratory within 7 days of sampling.
1 liter amber glass (no preservative)	Oil & Grease (total, mineral, and non-mineral), Visible sheen.	Grab	Keep cool. Return to the laboratory within 7 days of sampling.
300 ml plastic bacteria bottle with sodium thiosulphate preservative	Faecal coliforms	No rinsing. Be careful not to touch open top of sterile bottle.	Keep cool. Arrange shipping so that laboratory receives sample within 24 hours (48 hours max) from the time of sampling.

## **Personal Protective Equipment (PPE)**

Eye protection (safety glasses or goggles) and disposable gloves are to be worn.



## **Sample Collection**

1. Co-ordinate taking the samples with the air cargo flight schedule to minimize sample storage time.
2. The day before sampling, get the cold packs from the sewage testing kit and place in freezer overnight.
3. The day of sampling, gather these items:
  - a. eye protection (safety glasses or goggles);
  - b. disposable gloves;
  - c. Sewage Testing Kit from Logistics;
  - d. plastic bag (garbage bag is OK); and
  - e. permanent marker.
4. Go to SHE-2.
5. Put on PPE. Remove caps from bottles.
6. Fill all bottles in kit leaving a little headspace at the top.  
Note 1: Don't rinse the bottles before collecting the sample.  
Note 2: Don't touch the open top of the 300 ml sterile bottle (the smallest bottle).
7. Cap bottles.
8. With permanent marker, mark each bottle with site, unique sample #, time, and date.
9. Put bottles in garbage bag and place in cooler. Add cold packs.
10. Complete Chain of Custody form. See attached example. Keep the pink sampler copy. Place the remaining copies in the cooler.
11. Seal cooler with packing tape and air freight as soon as possible to: Exova Accutest Laboratories, 146 Colonnade Rd, Unit 8, Nepean, ON, Tel 613-727-5692.  
If any delay, keep samples cool (4 degrees C.).

## **Analyses**

Exova Accutest Laboratories is accredited to ISO/IEC Standard 17025. Exova has an established QA/QC program for the analyses required under this water licence (pH, Oil and Grease, Biological Oxygen Demand (BOD5), Total Suspended Solids (TSS), and Faecal Coliforms).

## **Results**

Results are sent to Nasittuq's Supervisor, Environmental Services.



**LABORATORY USE ONLY**  
Report # \_\_\_\_\_

□ 380 Vansickle Rd., Unit 630  
St. Catharines, ON L2R 6P7  
Ph: (905) 680-8887 Fax: (905) 680-4258

☐ 608 Norris Court  
Kingston, ON K7P 2R9  
Ph: (613) 634-9307 Fax: (613) 634-9308

146 Colonnade Rd., Unit 8  
Ottawa, ON K2E 7Y1  
Ph: (613) 727-5692 Fax: (613) 727-5222

Software Type	Percentage
EX Accu	100%
Other	~85%
Other	~75%
Other	~65%
Other	~55%
Other	~45%
Other	~35%
Other	~25%
Other	~15%
Other	~5%

☐ Fax Results to: \_\_\_\_\_

☒ E-mail Results to: bos.b.thomson@nswtting.com

☐ Copy of Results to: \_\_\_\_\_

*Note that for drinking water samples, all exceedances will be reported where (and how) the applicable legislation requires.*

Address:	100-770 Laurier Ave. W.
City/Prov:	Ottawa, ON
Postal Code:	K1P 5V5
Project #	* Quotation #
CAM-3	290603
* Waterworks Number:	N/A

Company Name:	Naesthus Corp
Report Attention:	Barb Thomson (Spr, Enval Services)
Phone:	613-787-3867
Ext:	
* Waterworks Name:	N/A

Invoice to:  
(if different from above)

**SAMPLE ANALYSIS REQUIRED**

[illegible]

Copies: White - Laboratory, Yellow - With Report, Pink - Sampler

AFCOCR.2

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Ottawa  
Ontario  
Canada  
K2E 7Y1

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F: +1 (613) 727-5222  
E: [sales@exova.com](mailto:sales@exova.com)  
W: [www.exova.com](http://www.exova.com)



Testing. Advising. Assuring.

26 January, 2010

**Nasittuq Corporation**  
100-170 Laurier Ave. W.,  
Ottawa, ON,  
K1P 5V5

Ms. Barb Thomson  
Supervisor, Environmental Services

Re: QA/QC Plan for Sampling from SHE-2, 26 Jan 2010  
License Number 3BC-SHE0919 Type "B"  
CAM-3, Shepherd Bay, NU

Dear Ms. Barb Thomson,

This letter is to confirm that we accept the QA/QC plan submitted for the project.

We are an ISO17025 accredited laboratory through Canadian Association of Laboratory Accreditation (CALA). We are committed to fulfill the QA/QC requirement outlined in your letter.

Thank you for interested in our analytical services.

Sincerely,

A handwritten signature in black ink, appearing to read "HY", written over a horizontal line.

Herbert Yu  
Quality Assurance Coordinator  
Exova Accutest Laboratories