2024 FOX-M ANNUAL NUNAVUT WATER BOARD REPORT

FOR THE

NORTH WARNING SYSTEM

Contract # W8485-157352/001/NX
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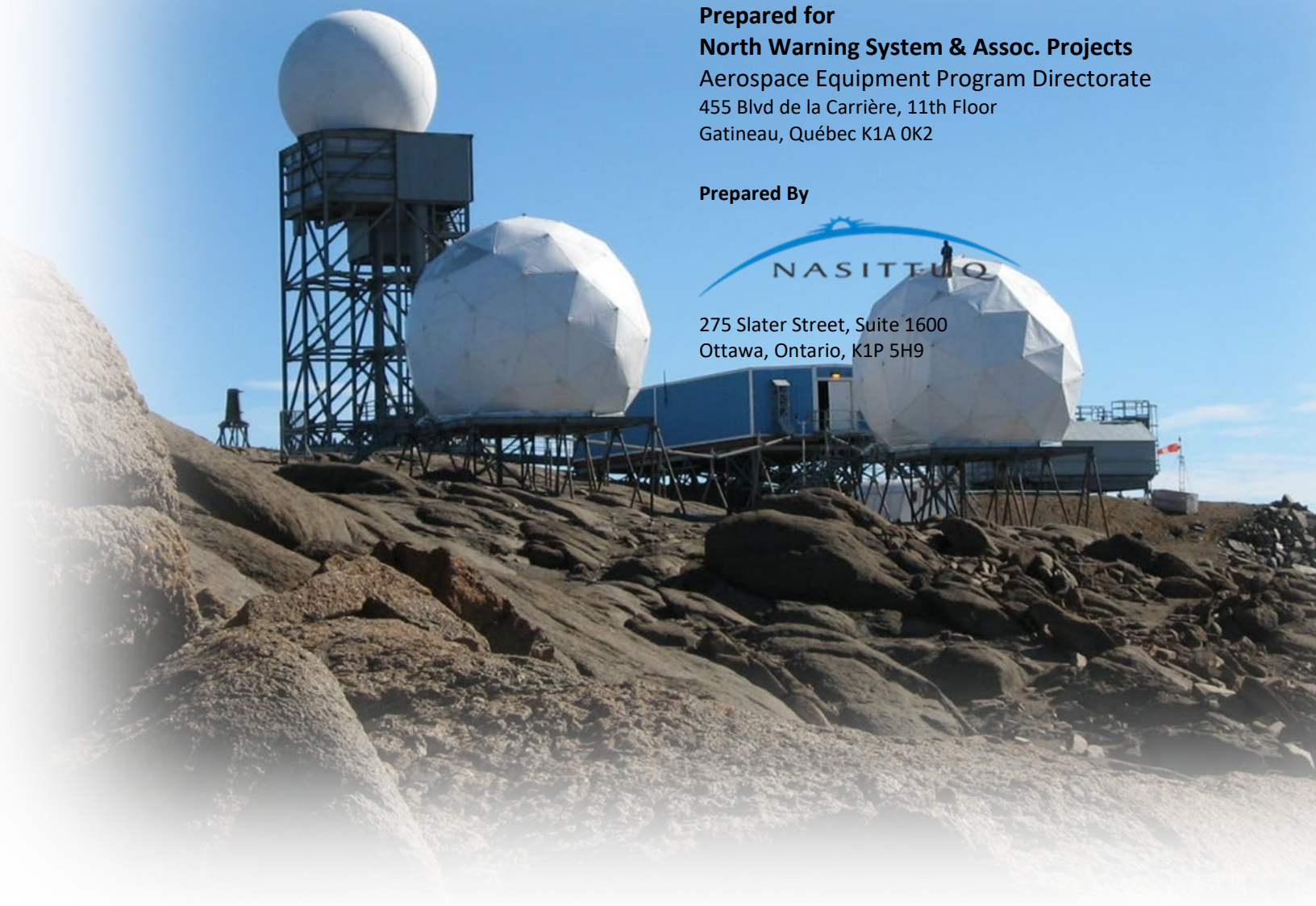

Prepared for
North Warning System & Assoc. Projects
Aerospace Equipment Program Directorate
455 Blvd de la Carrière, 11th Floor
Gatineau, Québec K1A 0K2

Prepared By

NASITTUQ

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

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EXECUTIVE SUMMARY IN ENGLISH FOLLOWS

FOX-M ᐊᐅᓚᑦᑎᔾᓂᖒᖅᑐᑦ ᓇᐃᓈᖅᓯᐌᑦ

ᑖᓐᓇ 2024–ᒥ ᐊᕐᕋᒍᓕᒫᖅᓯᐅᑦ ᐅᓂᒃᑳᖅ ᓄᓇᕗᒻᒥ ᐃᒪᓕᕆᔩᑦ ᑲᑎᒪᔩᖏᓐᓄᑦ (NWB) ᐱᕙᖅᔭᖅᑕᐅᓚᐅᖅᐳᖅ ᓇᓯᑦᑐᕐᒧᑦ ᑲᓇᑕᒥ ᐅᓇᑕᖅᑐᒃᓵᕆᔨᒃᑯᓐᓄᑦ (DND) ᓈᒻᒪᒃᓯᓕᖅᑕᐅᓇᓱᒃᑐᑎᒃ ᐱᔭᐅᒋᐊᓕᖕᓄᑦ ᐃᓚᖓᑦ B "ᑭᓱᑐᐃᓐᓇᑦ ᒪᓕᒋᐊᓖᑦ", ᑎᑎᕋᖅᓯᒪᐌᑦ ᐊᑲᖕᓂᖓ 1 ᐱᐌᓐᓇᐅᑎᖓ 8BC-FOH1929. ᑖᓐᓇ ᐅᓂᒃᑳᖅ ᐃᓗᓕᖃᖅᑐᖅ 01 ᔭᓄᐊᕆᒥᑦ 31 ᑎᓯᐱᕆ 2024-ᒧᑦ.

ᓇᓯᑦᑐᖅ ᐊᐅᓚᔾᔪᑎᖏᑦ ᐋᖅᑭᐅᒪᔾᔪᑎᖏᓪᓗ (O&M) ᐊᖏᖃᑎᒌᒍᑎᒃᑯᑦ ᐃᖅᑲᓇᐃᔮᖅᑖᑎᑕᖅ ᐅᑭᐅᖅᑕᖅᑐᒥ ᐅᓗᕆᐊᓇᖅᑐᓂᒃ ᖃᐅᔨᓴᖅᑎᓄᑦ (NWS), ᐃᓚᐅᓪᓗᑎᒃ FOX-M, ᓄᓇᕗᒻᒥ ᐃᒪᓕᕆᔩᒃᑯᑦ ᖃᐅᔨᓴᕈᑎᖃᕐᕕᖓ ᓴᓂᕋᔭᒃ (ᓴᓂᕋᔭᒃ), ᓄᓇᕗᑦ.

ᐃᒪᕐᒥᒃ ᐊᑐᕐᓂᖅ FOX-M–ᒥ 2024–ᒥ **911.0–ᖑᓚᐅᖅᐳᖅ ᑭᐸᓈᕆᒃᑐᑦ ᒦᑕᐃᑦ**, ᑕᒪᓐᓇᓗ ᐃᒪᓐᓇᐸᓘᕙᒃᑐᓂ, **2.5 ᑭᐸᓈᕆᒃᑐᑦ ᒦᑕᐃᑦ** ᐅᓪᓗᒧᑦ ᐊᑕᐅᓯᕐᒧᑦ. ᐃᒪᕐᒥᒃ ᐊᑐᕐᓂᕐᒧᑦ ᑮᓕᖅᑎᑕᐅᖕᒋᑦᑐᑦ ᓚᐃᓴᓐᓯᒧᑦ FOX-M–ᒧᑦ.

ᑭᓈᓗᒃ FOX-M-ᒥᑦ ᐱᓕᕆᐊᖑᓚᐅᖅᑐᖅ ᐃᒪᓕᕆᔾᔪᑎᒧᑦ. ᐃᓚᖏᑦ ᓴᓗᒻᒪᖅᓴᖅᓯᒪᐌᑦ ᑯᕕᑎᑕᐅᒃᑲᓂᖅᑖᖅᑐᑦ ᐃᑎᕈᐃᑦ/ᖁᕐᕕᐅᑉ ᑯᕙᕝᕕᖓ. ᑭᓈᓗᒃ ᖃᐅᔨᓴᖅᑕᐅᖃᑦᑕᓚᐅᖅᐳᖅ ᑕᖅᑭᑕᒫᑦ. ᖃᐅᔨᓴᕐᓴᐃᑦ ᔮᓐᓄᐊᕆᒧᑦ ᐊᒻᒪ ᒫᑦᓯᒧᑦ ᑎᑭᐅᑎᓚᐅᖏᑦᑐᑦ ᖃᐅᔨᓴᕐᕕᒻᒧᑦ ᖃᐅᔨᓴᖅᑕᐅᓗᑎ.

ᖃᐅᔨᓴᕐᓴᐃᑦ ᐃᒥᐅᑉ ᐃᓗᐊᓂ ᐊᕙᓗᖏᓐᓂᑦ ᐅᖅᓱᐊᓗᒃᑲᕐᕖᑦ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᑐᑦ ᓇᐌᖅᑕᐅᐌᒥᑦ ᐊᑐᖅᑐᑎ ᐅᖅᓱᐊᓗᒃᓴᓂᑦ ᖃᐅᔨᓴᓂᕐᒥᑦ ᐊᒻᒪ ᓇᓗᓇᐃᖅᑕᐅᓪᓗᑎ ᐃᓗᐊᓃᒋᐊᖏᓐᓂᑦ ᑯᕕᑎᑕᐅᐌᑦ ᐱᐅᓂᖏᓐᓄᑦ ᑭᓪᓕᖏᑦ ᓄᓇᕗᒻᒥ ᐃᒪᖃᐅᑏᑦ ᐱᐌᓐᓇᐅᑎᖓ ᐃᒥᖅ ᑯᕕᑎᑕᐅᓚᐅᖅᑎᓐᓇᒍ.

ᖁᐊᖕᓵᕐᓇᖅᑐᑦ ᐊᒃᑕᑯᑦ, ᐃᓚᐅᓪᓗᑎᒃ ᐊᑐᖅᓯᒪᐌᓄᑦ ᐅᖅᓱᖅᑎᕈᐃᑦ, ᓇᒃᓯᐅᔾᔭᐅᓚᐅᖅᑐᑦ ᐊᖏᖅᑕᐅᓯᒪᐌᒧᑦ ᐅᓗᕆᐊᓇᖅᑐᓄᑦ ᐊᒃᑕᑯᓄᑦ ᐊᒃᑕᕐᕕᖕᒧᑦ ᓄᓇᕗᑦ ᓯᓚᑖᓂ ᐱᔭᕆᐊᖃᕐᓂᖓᓄᑦ ᓚᐃᓴᓐᓯᒧᑦ. ᖁᐊᖕᓵᕐᓇᖅᑐᑦ ᐊᒃᑕᑯᑦ **118–ᓂᒃ ᖃᑦᑕᐅᔭᕐᐌᐊᓂᒃ** ᐱᑕᖃᓚᐅᖅᐳᑦ ᐊᒃᑕᑯᓂᒃ (ᐅᖅᓱᕐᒥᒃ, ᐅᖅᓱᕐᒥᒃ, ᖁᐊᔾᔭᐃᒃᑯᑎᒥᒃ, ᐊᓱᐃᓐᓂᓪᓗ), **6–ᓂᒡᓗ** ᐹᑖᓂᒃ.

ᖁᐊᖕᓵᕐᓇᙱᑦᑐᑦ ᓄᓇᓕᖕᓂ ᐊᒃᑕᑯᐃᑦ ᐃᒋᑕᐅᓚᐅᖅᑐᑦ ᓄᓇᓕᖕᒥ ᐊᒃᑕᑰᓯᕗᕕᖕᒥᑦ ᐊᖏᖃᑎᒌᒍᑎᒃᑯᑦ Hᐋᒻᒪᓚᒃᑯᓐᓄᑦ ᓴᓂᕋᔭᖕᒥ (ᓴᓂᕋᔭᒃ). ᓇᓯᑦᑐᖅ ᑎᑎᕋᖅᓯᒪᕗᖅ ᐱᐌᓐᓇᖅᑎᑦᑎᓂᕐᒥᒃ ᓄᓇᓕᖕᓂ ᐊᒃᑕᑯᓂᒃ ᐱᑎᑕᐅᓂᐊᖅᑎᓪᓗᒋᑦ.

ᐊᑕᐅᓯᕐᒥᒃ ᑯᕙᐌᖃᓚᐅᖅᐳᖅ ᐊᕙᑎᒧᑦ FOX-M–ᒥ 2024–ᖑᑎᓪᓗᒍ:

05-ᐊᐃᕆᓕ-2024, ᑯᕙᐌᖅ # 2024-092: ᑯᕙᐌᖅ 2 ᓖᑕᓂᑦ ᖃᖓᑕᓲᖅᓯᐅᑎᒥᑦ-A1 ᖃᖓᑕᓲᒧᑦ ᐅᖅᓴᒃᓴᐃᔾᔪᑎᒥᑦ. ᖃᐅᓯᓕᓚᐅᕐᒪᑦ ᐊᒻᒪᓗ ᑐᐊᐸᒃ ᐲᔭᖅᑕᐅᓪᓗᓂ.

ᑯᕙᐌᖃᕐᓂᖅᐸᑦ ᐅᐸᓗᖓᐃᔭᖅᓯᒪᔾᔪᐌᑎᑦ ᐱᕙᖅᔭᐅᑦ ᐊᑐᓕᖅᑎᑕᐅᑎᐊᓚᐅᖅᑐᖅ, ᓄᑖᙳᕆᐊᖅᑕᐅᓪᓗᓂᓗ 27-ᒫᑦᓯ-2025–ᒥ.

2024–ᒥ ᐅᑎᖅᑎᑦᑎᐌᖃᓚᐅᙱᑦᑐᖅ.

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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 (DND) in order to meet the requirements of Part B "General Conditions", paragraph 1 of its licence 8BC-FOH1929. 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 FOX-M, the NWS radar site located at Sanirajak (Hall Beach), Nunavut.

The water usage at FOX-M in 2024 was **911.0 cubic metres**, which is an average of **2.5 cubic metres** per day. There is no water usage limit in the licence for FOX-M.

Sewage at FOX-M was processed by the tertiary wastewater treatment system. Some of the treated effluent is recycled as on-site urinal/toilet flush water. The treated sewage was sampled monthly. The samples for January and March did not reach the laboratory in time for analysis.

Samples of the water contained in the berms of fuel storage facilities was tested on-site using hydrocarbon test strips and confirmed to be within effluent quality limits of the NWB licence before the water was discharged.

Hazardous waste, including waste oil, was sent to an approved hazardous waste disposal site outside of Nunavut as required by the licence. The hazardous waste consisted of **118 drums** of assorted waste (oil, fuel, glycol, etc.), **2 crates** asbestos and **6 crates** of waste batteries.

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

One spill to the environment occurred at FOX-M in 2024:

- 05-Apr-2024, Spill # 2024-092: A spill of 2 L of Jet-A1 caused by a weeping component at the aviation refueler. The weep was stopped and the impacted gravel was removed.

The Spill Contingency Plan was successfully implemented, and updated on 27-Mar-2025.

No progressive reclamation work was undertaken in 2024.

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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 (DND) in order to meet the requirements of Part B "General Conditions", paragraph 1 of its licence 8BC-FOH1929 issued 01 September 2019. This report covers 01 January to 31 December 2024.

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

FOX-M is a North Warning System radar site located at Sanirajak (Hall Beach), Nunavut. The site is staffed year-round.

1.1 Report Details

Licensee:	Department of National Defence, Government of Canada
Licence:	8BC-FOH1929 – Type "B"
Location:	FOX-M North Warning System Site, Sanirajak (Hall Beach), Qikiqtani Region, Nunavut
Report Prepared by:	Alaina Leslie and reviewed by Don Beattie Nasittuq Corporation, 14-Mar-2025
Time period covered:	01 January to 31 December 2024

2.0 WATER USE

The water usage at FOX-M in 2024 was **911.0 cubic metres,** which is an average of **2.5 cubic metres** per day. See Table 2-1 for the volume of water drawn at FOX-M each month in 2024.

There is no water usage limit in the licence for FOX-M because water is drawn from an artificial (man-made) reservoir and not from a natural source.

Table 2-1: Monthly Raw Water Usage at FOX-M in 2024

Month	Raw water usage (m^3)
January	61.7
February	63.2
March	70
April	69.3
May	89
June	83.6
July	74.3
August	73.6
September	69.6
October	119.8
November	79.3
December	57.6
TOTAL	**911.0**

3.0 TREATED SEWAGE DISCHARGE

At FOX-M, the sewage and grey water were both processed through a Cycle-let® advanced tertiary wastewater treatment system. Some of the treated water is recycled as urinal/toilet flush water; the remainder is discharged at the designated outfall and is potable water quality. See Table 3-1 for the volume of sewage and grey water treated by the Cycle-let® system. See **Section 6.0 – Monitoring Program** for details on sewage effluent monitoring.

The location and coordinates of treated sewage effluent outfall location (FOH-2) is contained in **Annex B.** Sewage sample analytical results and certificates of analysis are contained in **Annex C.**

Table 3-1: Monthly and Annual Volume of Sewage and Grey Water Treated at FOX-M in 2024

Month	Volume of sewage and greywater treated then discharged or recycled (m^3)
January	61.7
February	63.2
March	70
April	69.3
May	89
June	83.6
July	74.3
August	73.6
September	69.6
October	119.8
November	79.3
December	57.6
TOTAL	**911.0**

4.0 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 FOX-M were 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 4-1 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 XBR and non-regulated waste.

The hazardous waste shipped from FOX-M in 2024 consisted of **118 drums of various hazardous waste** (waste oil, waste oil filters etc.), **2 crates asbestos**, and **8 crates of waste batteries.**

Table 4-1: Hazardous Waste and Waste Oil Sent for Disposal from FOX-M in 2024

TDG shipping name	Description	Manifest # (TCN)	Movement Document	Quantity
Waste Fuel, Aviation, Turbine Engine	WASTE - FUEL	48469, 49055, 49059, 49063	OD01487-2	12 Drums*
Waste Fuel, Aviation, Turbine Engine Mixture	WASTE - FUEL AND OIL MIXTURE (DRUM)	49059	OD01487-2	1 Drum
Waste Fuel, Aviation, Turbine Engine Mixture	WASTE - FUEL AND WATER MIXTURE (DRUM)	49063,	OD01487-2	2 Drums
Waste Solids Containing Flammable Liquid, N.O.S. (Fuel, Aviation, Turbine Engine)	WASTE - OILY RAGS	49057, 49058, 49066, 49172, 49176,	OD01487-2	8 Drums
Waste Polychlorinated Biphenyls, Solid	WASTE - PCB CONTAINING MATERIAL (Light Ballasts)	49293	OE01487-1	1 Drum
Waste Solids Containing Flammable Liquid, N.O.S. (Fuel, Aviation, Turbine Engine)	WASTE - POL SOAKED ABSORBENT	49172	OE01487-1	1 Drum
Waste Solids Containing Flammable Liquid, N.O.S. (Fuel, Aviation, Turbine Engine)	WASTE - FUEL FILTERS (DRUM)	49122,	OE01487-1	2 Drums
Waste Solids Containing Flammable Liquid, N.O.S. (Fuel, Aviation, Turbine Engine)	WASTE - FUEL SOAKED ABSORBENT	49066, 49129, 49141,	OE01487-1	5 Drums
Waste Batteries, Wet, Non-Spillable	Waste batteries, wet, non-spillable	49168	OE01487-1	3 Crates
Waste Batteries, Wet, filled with acid	Waste Batteries, Wet, filled with acid	49168	OE01487-1	5 Crates
Not TDG Regulated	WASTE - ACTIVATED CARBON FILTER (DRUM)	49067, 49068, 49120, 46973	OE01487-2	16 Drums
Not TDG Regulated	WASTE - ASBESTOS (DRUM)	48379,	OE01487-1	2 Drums
Not TDG Regulated	WASTE - GLYCOL (DRUM)	49174	OD01487-2	1 Drum*
Not TDG Regulated	WASTE - OIL FILTERS (DRUM)	49121,	OD01487-2	2 Drums
Not TDG Regulated	WASTE - OIL CONTAMINATED SOIL (DRUM)	49004,	OD01487-2	2 Drums
Not TDG Regulated	WASTE - GLYCOL CONTAMINATED RAGS (DRUM)	49174	OD01487-2	1 Drum*
Not TDG Regulated	WASTE – DRIVEWAY SEALNT NR	48426	OD01487-2	1 Drum

TDG shipping name	Description	Manifest # (TCN)	Movement Document	Quantity
Not TDG Regulated	WASTE – OIL	48355, 48463, 48465, 48467, 48468, 48975, 49048, 49050, 49051, 49056, 49059, 49060, 49062, 49064, 49139, 49144	OC01487-3	61 Drums*

*Movement Document incorrectly lists 16 drums waste fuel (should be 12) and 60 drums waste oil (should be 61). Glycol and glycol rags were grouped together on the Movement Document.

5.0 NON-HAZARDOUS SOLID WASTE DISPOSAL

Non-hazardous domestic solid waste was disposed of at the local landfill through a contract with the Municipality of Sanirajak (Hall Beach). Nasittuq has documented authorization from the community for receiving the waste. See Table 5-1, below, for the quantity of non-hazardous waste generated.

Table 5-1: Non-hazardous Domestic Solid Waste Sent for Disposal from FOX-M in 2024

Month	Waste Generated (kg)
January	2921
February	1194
March	1624
April	900
May	1023
June	837
July	901
August	1921*
September	633
October	646
November	900
December	658
TOTAL	**14,158**
*Tracking sheet for August was misplaced so waste was estimated based on site loading.	

6.0 MONITORING PROGRAM

In 2024, a monitoring program was implemented at FOX-M as required by the water licence. The monitoring program included the following:

1. Volume of raw water drawn from the reservoir (FOH-1). The raw water monitoring information is shown in **Section 2.0 Water Use**.

2. Quality of sewage discharged from the final discharge point of the sewage treatment facility (FOH-2). The location of the sewage effluent outfall is shown in **Annex B**, including coordinates. The treated

sewage was sampled monthly with the exception of June to November. The sample was not sent to the laboratory during these months due to miscommunications during the NWS contract transition.

The results of the analyses are shown in **Annex C.**

3. Quality of the water contained in the berms of fuel storage facilities prior to discharge (FOH-3) was analyzed using hydrocarbon test strips and confirmed within the effluent quality limits listed in the water licence, Part D. The coordinates and the results of the analysis are shown in **Location of** Bermed Fuel Storage Facilities . All samples met the effluent requirements of the water licence, Part D.

4. Final Discharge Point from the Landfarm (FOH-4). No landfarm has been established at FOX-M, so this monitoring station remains inactive.

7.0 SPILLS (UNAUTHORIZED DISCHARGES)

One spill to the environment occurred at FOX-M in 2024. Table 7-1, below, describes the spill (unauthorized discharge) details. The Spill Contingency Plan was successfully implemented.

Table 7-1: Unauthorized Discharges at FOX-M in 2024

Date, NT-NU Spill #	Product	Quantity	Cause and follow-up action	On-site location
05-Apr-2024, Spill # 2024-092	Jet-A1	2 L	A leaking connection on the refueler caused a spill. Impacted soil was removed and containerized for off-site disposal. The connection was repaired and the leak was stopped.	Airstrip apron at aircraft refueler (68°46'16"N, 81°13'52"W)

8.0 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.

9.0 PROGRESSIVE RECLAMATION WORK UNDERTAKEN

No progressive reclamation work was undertaken in 2024.

10.0 ACRONYMS

Table 10-1: Acronyms

Acronym	Definition
n.o.s	Not Otherwise Specified
NWB	Nunavut Water Board
NWS	North Warning System
O&M	Operations and Maintenance
PCB	Polychlorinated Biphenyl
POL	Petroleum, Oil & Lubricant

Acronym	Definition
TDGR	Transportation of Dangerous Goods Regulations
XBR	Cross-border Movement of Hazardous Waste and Hazardous Recyclable Material Regulations

ANNEX A. HAZARDOUS WASTE AND WASTE OIL DISPOSAL

The 2024 Movement Document for TDG Regulated waste and non-TDG Regulated waste (as previously described in Table 4-1) are included in the following pages.

The following documents are enclosed:

1. Movement Document OE01487-1
2. Movement Document OD01487-2
3. Movement Document OC01487-3

OE01487-1

MOVEMENT DOCUMENT / MANIFEST
DOCUMENT DE MOUVEMENT / MANIFESTE

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

A Generator / consignor name / Nom de producteur / expéditeur — Unique Identification Number / Numéro d'identification unique: NUG100003

NASITTUQ CORP

Mailing addr. / Adr. postale: 22 WING BLDG 109 — City / Ville: NORNELL HEIGHTS — Prov.: — Country / Pays: CAN — Postal code / Code postal: P0H1P0

E-mail / Courrier électronique: NWS-ENVIRONMENT@NASITTUQ.COM — Tel. No. / N° de tél: 705-494-2011X 3400

Shipping facility company name / Nom de l'entreprise du installation de l'envoi: NWS FOX-M

Shipping facility addr. / Adr. de l'installation d'envoi: SANIRAJAK, NU — City / Ville: NU — Country / Pays: CAN — Postal code / Code postal: X0A0K0

E-mail / Courrier électronique — Tel. No. / N° de tél

Intended receiver / consignee name / Nom de réceptionnaire / destinataire prévu: QIKIQTAALUK ENVIRONMENTAL — Unique Identification Number / Numéro d'identification unique: 7610-16-01-9348154 401694006

Mailing addr. / Adr. postale: 9905 CHEATEAUNEUF ENTRANCE 1 SUITE 200 — City / Ville: BROSSARD — Prov.: QC — Country / Pays: CAN — Postal code / Code postal: J4Z 3V4

E-mail / Courrier électronique — Tel. No. / N° de tél

Receiving facility company name / Nom de l'entreprise du installation de réception — Unique Identification Number / Numéro d'identification unique

Receiving facility addr. / Adr. de l'installation de réception — City / Ville — Prov.: QC — Country / Pays — Postal code / Code postal

E-mail / Courrier électronique — Tel. No. / N° de tél

B Carrier name / Nom de transporteur — Unique Identification Number / Numéro d'identification unique

Mailing addr. / Adr. postale — City / Ville — Prov. — Country / Pays — Postal code / Code postal

E-mail / Courrier électronique — Tel. No. / N° de tél

Vehicle / Véhicule	Registration No. / N° d'immatriculation	Prov.
Trailer - Rail car No. 1 / 1e remorque - wagon		
Trailer - Rail car No. 2 / 2e remorque - wagon		

Port of entry / Point d'entrée — Date — Port of exit / Point de sortie — Date

Carrier Certification: *I certify that I have received waste or recyclable material from the generator/consignor for delivery to the receiver/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 matières recyclables du producteur/expéditeur en vue de leur livraison au réceptionnaire/destinataire, 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 (caractère d'imprimerie) — Tel. No. / N° de tél — Year / Année — Month / Mois — Day / Jour — Signature

Reference Nos. of other movement documents/manifests used / N° de référence des autres documents de mouvement/manifestes utilisés: OD01487-2, OC01487-3,

Receiver/consignee information same as in Part A / Les renseignements du réceptionnaire/destinataire sont les mêmes qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

C Receiver/consignee name / Nom de réceptionnaire/destinataire — Unique Identification Number / Numéro d'identification unique

Receiving facility addr. / Adr. de l'installation de réception — City / Ville — Prov. — Country / Pays — Postal code / Code postal

E-mail / Courrier électronique — Tel. No. / N° de tél

Delivery date / Date de livraison — Year / Année — Month / Mois — Day / Jour — Time / Heure — ☐ A.M. ☐ P.M.

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier)

Prov. code / Code prov.	UN No. / N° NU	Shipping name / Appellation réglementaire	Class / Classe Sub. Class(es) / Classe(s) sub.	Packing/categor / Gr. d'emballage/ catégorie	Toxic by inhalation / Toxique par inhalation	Quantity shipped / Quantité expédiée	Units / L or / ou kg / Unités	Packaging / Contenant No. / N°	Packaging / Contenant Codes int. - ext.	Phys. state / État phys.
(i)	UN3175	WASTE SOLIDS CONTAINING FLAMMABLE LIQUID, NOS (fuel, aviation, turbine engine) fuel soaked absorbent	4.1	II		390	kg	2	01	S
(ii)	UN3175	WASTE SOLIDS CONTAINING FLAMMABLE LIQUID, N.OS (fuel, aviation, turbine engine) fuel filters	4.1	II		450	kg	2	01	S
(iii)	UN3432	WASTE POLYCHLORINATED BIPHENYLS, SOLID	9	II		150	kg	1	01	S
(iv)	UN3175	WASTE SOLIDS CONTAINING FLAMMABLE LIQUID, NOS (fuel, aviation, turbine engine) oil soaked absorbent	4.1	II		515	kg	4	01	S

Quantity received / Quantité reçue	Units / L or / ou kg / Unités	Comments / Commentaires	Handling Code / Code de manutention	Shipment / Envoi Accepted / Accepté	Shipment / Envoi Refused / Refusé	Decont. Pack. / Cont	Decont. Veh. / Véh.

Permit No. / N° de permis	Permit Line No. / N° de ligne de la permis	Shipment / Envoi	Or / De	D or R code / Code D ou R	C code / Code C	Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE	H code / Code H	Y code / Code Y	National code in country of / Code national du pays d' Export / Exportation	Import / Importation	Customs codes / Codes de douanes
(i)											
(ii)											
(iii)											
(iv)											

Generator/consignor certification: *I certify that the information contained in Part A is correct and complete. I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.*
Attestation du producteur/expéditeur : *J'atteste que tous les renseignements à la partie A sont exacts et complets. Je déclare que le contenu de ce chargement est décrit ci - dessus de façon complète et exacte par la désignation officielle de transport et qu'il est convenablement classé, emballé, marqué, étiqueté, muni de plaques-étiquettes et à tous égards bien conditionné pour être transporté conformément aux réglementations internationales et nationales applicables.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): 705-494-2011x3400 — Tel. No. / N° de tél — Signature

Receiver/consignee certification: *I certify that the information contained in Part C is correct and complete.*
Attestation du réceptionnaire/destinataire : *J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie) — Signature — Tel. No. / N° de tél

TDGR additional info / Info additionnelle RTMD: 1-888-CAN-UTEC OR 613-996-6666

Special Handling / Manutention spéciale: ☐ Attached / Ci-joint ☐ As follows / Ci-contre

24-Hour Number / Numéro 24 heures: 705-494-2011 X3400

Date Shipped / Date d'expédition: Year / Année 2 4 — Month / Mois 0 9 — Day / Jour 1 0 — Time / Heure ☐ A.M. ☐ P.M.

Scheduled arrival date / Date d'arrivée prévue — Year / Année — Month / Mois — Day / Jour

ECCC XBR v1.1 (2022/08) — Additional carriers and waste lines on reverse / Transporteurs et lignes de déchets additionnels au verso — Copy / Copie___ / Colour / Couleur_____

Movement Document / Manifest Reference No. / N° de référence du document de mouvement / manifeste: OE01487-1

B Carrier name / Nom de transporteur	Unique Identification Number / Numéro d'identification unique (23)	Mailing addr. / Adr. postale	City / Ville	Prov.	Country / Pays	Postal code / Code postal	E-mail / Courrier électronique	Tel. No. / N° de tél

Vehicle / Véhicule	Registration No. / N° d'immatriculation	Prov. (24)
Trailer - Rail car No. 1 / 1e remorque - wagon		
Trailer - Rail car No. 2 / 2e 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 receiver/consignee as set out in Part A and that the information contained in Part B is complete and correct. (26)
Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur/expéditeur en vue de leur livraison au réceptionnaire/destinataire, 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 (caractère 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

(3) Prov. code / Code prov.	(4) UN No. / N° NU	(4) Shipping name / Appellation réglementaire	(5) Class / Classe Sub. Class(es) / Classe(s) sub.	(7) Packing group / Gr. d'emballage / catégorie	(30) Toxic by inhalation / Toxique par inhalation	(8) Quantity shipped / Quantité expédiée	(8) Units / L or / ou kg / Unités	(9) Packaging / Contenant No. / N°	(9) Codes int.-ext.	(10) Phys. state / État phys.
(V)	----	----------	--	-	----	---	--	--	--	--
(M)	UN2800	WASTE BATTERIES, WET, NON-SPILLABLE, electric storage	8			4835	kg	4	07	S
(MI)	UN2794	WASTE BATTERIES, WET, FILLED WITH ACID, electric storage	8			2525	kg	4	07	S
(MI)	UN2590	WASTE ASBESTOS, CHRYSOTILE	9	II		315	kg	2	07	S

(11) Permit No. / N° de permis	Permit Line No. / N° de ligne de la permis	(12) Shipment / Envoi	Or / De	(13) D or R code / Code D ou R	(14) C code / Code C	Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE (15)	(16) H code / Code H	(17) Y code / Code Y	National code in country of / Code national du pays d' (18) Export / Exportation	Import / Importation	(19) Customs codes / Codes de douanes
(V)											
(M)											
(MI)											
(MI)											

C

Quantity received / Quantité reçue (31)	Units / L or / ou kg / Unités	(32) Comments / Commentaires	Handling / Code / Code de manutention (33)	Shipment / Envoi (34) Accepted / Accepté	Refused / Refusé	Decont. (35) Packi. / Cont.	Veh. / Veh.

OD01487-2

MOVEMENT DOCUMENT / MANIFEST
DOCUMENT DE MOUVEMENT / MANIFESTE

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

A Generator / consignor name / Nom de producteur / expéditeur — Unique Identification Number / Numéro d'identification unique: NUG100003

NASITTUQ CORP

Mailing addr. / Adr. postale: 22 WING BLDG 109 — City / Ville: NORNELL HEIGHTS — Prov.: — Country / Pays: CAN — Postal code / Code postal: P0H1P0

E-mail / Courrier électronique: NWS-ENVIRONMENT@NASITTUQ.COM — Tel. No. / N° de tél: 705-494-2011 X 3400

Shipping facility company name / Nom de l'entreprise du installation de l'envoi: NWS FOX-M

Shipping facility addr. / Adr. de l'installation d'envoi: SANIRAJAK, NU — City / Ville: — Prov.: NU — Country / Pays: CAN — Postal code / Code postal: X0A0K0

E-mail / Courrier électronique — Tel. No. / N° de tél

Intended receiver / consignee name / Nom de réceptionnaire / destinataire prévu: QIKIQTAALUK ENVIRONMENTAL — Unique Identification Number / Numéro d'identification unique: 7610-16-01-0348154-401694006

Mailing addr. / Adr. postale: 9955 CHEATEAUNEUF ENTRANCE 1 SUITE 200 — City / Ville: BROSSARD — Prov.: QC — Country / Pays: CAN — Postal code / Code postal: J4Z 3V4

E-mail / Courrier électronique — Tel. No. / N° de tél

Receiving facility company name / Nom de l'entreprise du installation de réception — Unique Identification Number / Numéro d'identification unique

Receiving facility addr. / Adr. de l'installation de réception — City / Ville — Prov.: QC — Country / Pays — Postal code / Code postal

E-mail / Courrier électronique — Tel. No. / N° de tél

B Carrier name / Nom de transporteur — Unique Identification Number / Numéro d'identification unique

Mailing addr. / Adr. postale — City / Ville — Prov. — Country / Pays — Postal code / Code postal

E-mail / Courrier électronique — Tel. No. / N° de tél

Vehicle / Véhicule	Registration No. / N° d'immatriculation	Prov.
Trailer - Rail car No. 1 / 1e remorque - wagon		
Trailer - Rail car No. 2 / 2e remorque - wagon		

Port of entry / Point d'entrée — Date — Port of exit / Point de sortie — Date

Carrier Certification: *I certify that I have received waste or recyclable material from the generator/consignor for delivery to the receiver/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 matières recyclables du producteur/expéditeur en vue de leur livraison au réceptionnaire/destinataire, 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 (caractère d'imprimerie) — Tel. No. / N° de tél — Year / Année — Month / Mois — Day / Jour — Signature

Reference Nos. of other movement documents/manifests used / N° de référence des autres documents de mouvement/manifestes utilisés: OE01487-1, OC01487-3

Receiver/consignee information same as in Part A / Les renseignements du réceptionnaire/destinataire sont les mêmes qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

C Receiver/consignee name / Nom de réceptionnaire/destinataire — Unique Identification Number / Numéro d'identification unique

Receiving facility addr. / Adr. de l'installation de réception — City / Ville — Prov. — Country / Pays — Postal code / Code postal

E-mail / Courrier électronique — Tel. No. / N° de tél

Delivery date / Date de livraison — Year / Année — Month / Mois — Day / Jour — Time / Heure — ☐ A.M. ☐ P.M.

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier)

Prov. code / Code prov.	UN No. / N° NU	Shipping name / Appellation réglementaire	Class / Classe Sub. Classes / Classes sub.	Packing/category / Gr. d'emballage/ catégorie	Toxic by inhalation / Toxique par inhalation	Quantity shipped / Quantité expédiée	Units / L or / ou kg / Unités	Packaging / Conteneur No. / N°	Codes	Phys. state / État phys.
(i)	UN1863	WASTE FUEL, AVIATION, TURBINE ENGINE	3	III		2480	L	16	01	L
(ii)		WASTE OIL CONTAMINATED SOIL - NR				680	kg	2	01	S
(iii)		WASTE - EWASTE NON-REGULATED				355	kg	2	07	S
(iv)		WASTE - SEALANT, NR				285	kg	1	01	L

Quantity received / Quantité reçue	Units / L or / ou kg / Unités	Comments / Commentaires	Handling Code / Code de manutention	Shipment / Envoi: Accepted / Accepté	Shipment / Envoi: Refused / Refusé	Decont.: Pack. / Cont.	Decont.: Veh.

Permit No. / N° de permis	Permit Line No. / N° de ligne de la permis	Shipment / Envoi	Of / De	D or R code / Code D ou R	C code / Code C	Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE	H code / Code H	Y code / Code Y	National code in country of / Code national du pays d': Export / Exportation	Import / Importation	Customs codes / Codes de douanes
(i)											
(ii)											
(iii)											
(iv)											

Receiver/consignee certification: *I certify that the information contained in Part C is correct and complete.*
Attestation du réceptionnaire/destinataire : *J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie) — Signature — Tel. No. / N° de tél

TDGR additional info / Info additionnelle RTMD: 1-888-CAN-UTEC OR 613-996-6666

Special Handling / Manutention spéciale: ☐ Attached / Ci-joint ☐ As follows / Ci-contre:

24-Hour Number / Numéro 24 heures: 705-494-2011 X3400

Generator/consignor certification: *I certify that the information contained in Part A is correct and complete. I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.*
Attestation du producteur/expéditeur : *J'atteste que tous les renseignements à la partie A sont exacts et complets. Je déclare que le contenu de ce chargement est décrit ci - dessus de façon complète et exacte par la désignation officielle de transport et qu'il est convenablement classé, emballé, marqué, étiqueté, muni de plaques-étiquettes et à tous égards bien conditionné pour être transporté conformément aux réglementations internationales et nationales applicables.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie) — Signature — Tel. No. / N° de tél: 705-494-2011x3400

Date Shipped / Date d'expédition — Year / Année: 24 — Month / Mois: 09 — Day / Jour: 10 — Time / Heure: ☐ A.M. ☐ P.M.

Scheduled arrival date / Date d'arrivée prévue — Year / Année — Month / Mois — Day / Jour

ECCC XBR v1.1 (2022/08) — Additional carriers and waste lines on reverse / Transporteurs et lignes de déchets additionnels au verso — Copy / Copie ___ / Colour / Couleur _____

Movement Document / Manifest Reference No. / N° de référence du document de mouvement / manifeste: OD01487-2

B Carrier name / Nom de transporteur	Unique Identification Number / Numéro d'identification unique	22
Mailing addr. / Adr. postale	City / Ville	Prov.	Country / Pays	Postal code / Code postal
E-mail / Courrier électronique	Tel. No. / N° de tél

Vehicle / Véhicule	Registration No. / N° d'immatriculation	Prov. 24
Trailer - Rail car No. 1 / 1e remorque - wagon		
Trailer - Rail car No. 2 / 2e 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 receiver/consignee as set out in Part A and that the information contained in Part B is complete and correct. 26
Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur/expéditeur en vue de leur livraison au réceptionnaire/destinataire, 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 (caractère 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

	Prov. code / Code prov. 3	UN No. / N° NU 6	Shipping name / Appellation réglementaire 4	Class / Classe Sub. Class(es) / Classe(s) sub. 5	Packing group / Gr. d'emballage 7	Toxic by inhalation / Toxique par inhalation 30	Quantity shipped / Quantité expédiée	Units / L or / ou kg / Unités 8	Packaging / Contenant No. / N° 9	Codes Int'l - ext.	Phys. state / État phys. 10
(V)			WASTE - GLYCOL - NR				650	L	2	01	L
(M)			WASTE - ACTIVATED CARBON FILTER - NR				2680	kg	16	01	S
(Mi)			WASTE OIL FILTERS - NR				510	kg	2	01	S
(Mi)			WASTE OILY RAGS - NR				1165	kg	6	01	S

	Permit No. / N° de permis 11	Permit Line No. / N° de ligne de la permis	Shipment / Envoi 12	Or / De	D or R code / Code D ou R 13	C code / Code C 14	Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15	H code / Code H 16	Y code / Code Y 17	National code in country of / Code national du pays d' 18 Export / Exportation	Import / Importation	Customs codes / Codes de douanes 19
(V)												
(M)												
(Mi)												
(Mi)												

C

Quantity received / Quantité reçue	Units / L or / ou kg / Unités 31	Comments / Commentaires 32	Handling Code / Code de manutention 33	Shipment / Envoi 34 Accepted / Accepté	Refused / Refusé	Decont. 35 Pack. / Cont.	Veh. / Véh.

MOVEMENT DOCUMENT / MANIFEST
DOCUMENT DE MOUVEMENT / MANIFESTE

OC01487-3

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

A Generator / consignor name / Nom de producteur / expéditeur
NASITTUQ CORP

Unique Identification Number / Numéro d'identification unique: NUG100003

Mailing addr. / Adr. postale: 22 WING BLDG 109 | City / Ville: HORNELL HEIGHTS | Prov.: | Country / Pays: CAN | Postal code / Code postal: P9H1P0

E-mail / Courrier électronique: NWS-ENVIRONMENT@NASITTUQ.COM | Tel. No. / N° de tél: 705-494-2011 X 3400

Shipping facility company name / Nom de l'entreprise du installation de l'envoi: NWS FOX-M

Unique Identification Number / Numéro d'identification unique: 40

Shipping facility addr. / Adr. de l'installation d'envoi: SANIRAJAK, NU | Prov.: NU | Country / Pays: CAN | Postal code / Code postal: X0A0K0

E-mail / Courrier électronique | Tel. No. / N° de tél

Intended receiver / consignee name / Nom de réceptionnaire / destinataire prévu: QIKIQTAALUK ENVIRONMENTAL

Unique Identification Number / Numéro d'identification unique: 7610-16-01-0548154 401694906

Mailing addr. / Adr. postale: 9915 CHEATEAUNEUF ENTRANCE 1 SUITE 200 | City / Ville: BROSSARD | Prov.: QC | Country / Pays: CAN | Postal code / Code postal: J4Z 3V4

E-mail / Courrier électronique | Tel. No. / N° de tél

Receiving facility company name / Nom de l'entreprise du installation de réception | Unique Identification Number / Numéro d'identification unique: 41

Receiving facility addr. / Adr. de l'installation de réception | City / Ville | Prov.: QC | Country / Pays | Postal code / Code postal

E-mail / Courrier électronique | Tel. No. / N° de tél

B Carrier name / Nom de transporteur | Unique Identification Number / Numéro d'identification unique: 23

Mailing addr. / Adr. postale | City / Ville | Prov. | Country / Pays | Postal code / Code postal

E-mail / Courrier électronique | Tel. No. / N° de tél

Vehicle / Véhicule	Registration No. / N° d'immatriculation	Prov. 24
Trailer - Rail car No. 1 / 1e remorque - wagon		
Trailer - Rail car No. 2 / 2e remorque - wagon		

Port of entry / Point d'entrée | Date | Port of exit / Point de sortie | Date: 25

Carrier Certification: *I certify that I have received waste or recyclable material from the generator/consignor for delivery to the receiver/consignee as set out in Part A and that the information contained in Part B is complete and correct.* 26
Attestation du transporteur : *J'atteste avoir reçu les déchets ou matières recyclables du producteur/expéditeur en vue de leur livraison au réceptionnaire/destinataire, 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 (caractère d'imprimerie) | Tel. No. / N° de tél

Year / Année | Month / Mois | Day / Jour | Signature

Reference Nos. of other movement documents/manifests used / N° de référence des autres documents de mouvement/manifestes utilisés: 27
OE01487-1, OD01487-2

Receiver/consignee information same as in Part A / Les renseignements du réceptionnaire/destinataire sont les mêmes qu'à la Partie A

☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

C Receiver/consignee name / Nom de réceptionnaire/destinataire | Unique Identification Number / Numéro d'identification unique: 28

Receiving facility addr. / Adr. de l'installation de réception | City / Ville | Prov. | Country / Pays | Postal code / Code postal

E-mail / Courrier électronique | Tel. No. / N° de tél

Delivery date / Date de livraison: 29
Year / Année | Month / Mois | Day / Jour | Time / Heure | ☐ A.M. ☐ P.M.

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier): 36

3 Prov. code / Code prov.	6 UN No. / N° NU	4 Shipping name / Appellation réglementaire	5 Class / Classe Sub. Class(es) / Classe(s) sub.	7 Packing (category) / Gr. d'emballage / catégorie	30 Toxic by inhalation / Toxique par inhalation	Quantity shipped / Quantité expédiée	8 Units / L or / ou kg / Unités	9 Packaging / Contenant No. / N°	Codes Int. - ext.	10 Phys. state / Etat phys.	Quantity received / Quantité reçue	31 Units / L or / ou kg / Unités	32 Comments / Commentaires	33 Handling Code / Code de manutention	34 Shipment / Envoi Accepted / Accepté	Refused / Refusé	35 Decont. Pack. / Cont.	Veh.
(i)		WASTE - OIL NR				11795	L	60	-	-								
(ii)							-		-	-								
(iii)							-		-	-								
(iv)							-		-	-								

11 Permit No. / N° de permis	Permit Line No. / N° de ligne de la permis	12 Shipment / Envoi	Of / De	13 D or R code / Code D ou R	14 C code / Code C	Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE	15	16 H code / Code H	17 Y code / Code Y	National code in country of / Code national du pays d' 18 Export / Exportation	Import / Importation	Customs codes / Codes de douanes
(i)												
(ii)												
(iii)												
(iv)												

Receiver/consignee certification: *I certify that the information contained in Part C is correct and complete.* 37
Attestation du réceptionnaire/destinataire : *J'atteste que tous les renseignements à la partie C sont exacts et complets.*
Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)
Signature | Tel. No. / N° de tél

TDGR additional info / Info additionnelle RTMD: 1-888-CAN-UTEC OR 613-996-6666 38

Special Handling / Manutention spéciale: 22
☐ Attached / Ci-joint ☐ As follows / Ci-contre

24-Hour Number / Numéro 24 heures: 39
705-494-2011 X3400

Date Shipped / Date d'expédition: 21
Year / Année: 2 4 | Month / Mois: 0 9 | Day / Jour: 1 0 | Time / Heure: ☐ A.M. ☐ P.M.

Scheduled arrival date / Date d'arrivée prévue
Year / Année | Month / Mois | Day / Jour

Generator/consignor certification: *I certify that the information contained in Part A is correct and complete. I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.*
Attestation du producteur/expéditeur : *J'atteste que tous les renseignements à la partie A sont exacts et complets. Je déclare que le contenu de ce chargement est décrit ci - dessus de façon complète et exacte par la désignation officielle de transport et qu'il est convenablement classé, emballé, marqué, étiqueté, muni de plaques-étiquettes et à tous égards bien conditionné pour être transporté conformément aux réglementations internationales et nationales applicables.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): 705-494-2011x3400 | Tel. No. / N° de tél: 20

Signature

ECCC XBR v1.1 (2022/08) **Additional carriers and waste lines on reverse / Transporteurs et lignes de déchets additionnels au verso** **Copy / Copie___ / Colour / Couleur_____**

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

Figure 1: Location and coordinates of sewage treatment outfall: 68° 45’39.50” N, 81°13’28.40” W

ANNEX C. ANALYSIS OF TREATED SEWAGE EFFLUENT

Table C-1 contains the results of sampling analysis of treated sewage effluent. Samples were collected monthly. The laboratory certificates of analysis are included in the pages which follow.

Table C-2: Summary of Analysis of Treated Sewage Effluent at FOX-M in 2024

Sample Date	Parameter				
	pH	Oil and Grease (Present - P / Absent - A)	Biological Oxygen Demand (mg/L)	Total Suspended Solids (mg/L)	Faecal Coliforms[1]
Maximum Concentration	6.0 to 9.0 (pH units)	No visible sheen	120 mg/L	180 mg/L	10,000 CFU/100 mL
Jan 2024**	-	-	-	-	-
5-Feb-24	7.74	A	<5.0	<3.0	7.67
4-Mar-2024	8.19	A	<5.0	<3.0	1.50
Apr 2024**	-	-	-	-	-
3-May-24	8.27	A	<5.0	<10.0	260.00
3-Jun-24	8.29	A	<5.0	21.6	1,000.00
8-Jul-24	8.05	A	<5.0	<3.0	133.33
6-Aug-24	7.96	A	<5.0	15.6	285.00
9-Sep-24	8.29	A	<5.0	<3.0	1,720.00
17-Oct-24	7.85	A	<5.0	<3.0	566.67
7-Nov-24	7.77	A	<5.0	<3.0	196.67
17-Dec-24	7.85	A	<5.0	<3.0	253.33

Notes:
** The January and April sample did not reach the laboratory within sample hold times. Nasittuq is investigating ways to resolve this issue.

The following documents are enclosed:

1. ALS Certificate of Analysis Feb-24
2. ALS Certificate of Analysis Mar-24
3. ALS Certificate of Analysis May-24
4. ALS Certificate of Analysis Jun-24
5. ALS Certificate of Analysis Jul-24
6. ALS Certificate of Analysis Aug-24
7. ALS Certificate of Analysis Sep-24
8. ALS Certificate of Analysis Oct-24
9. ALS Certificate of Analysis Nov-24
10. ALS Certificate of Analysis Dec-24

[1] This column contains the average of the Cyclet 1A, Cyclet 1B, and Cyclet 1C

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right partner.

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: **WT2403096**	Page	: 1 of 4
Client	: **NASITTUQ CORPORATION**	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage Fox Main	Date Samples Received	: 12-Feb-2024 12:35
PO	: ----	Date Analysis Commenced	: 13-Feb-2024
C-O-C number	: ----	Issue Date	: 20-Feb-2024 16:26
Sampler	: Alex Kelly		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Greg Pokocky	Manager - Inorganics	Inorganics, Waterloo, Ontario
Kaitlyn Lammers	Lab Assistant	Microbiology, Waterloo, Ontario
Manuel TavaraTello	Supervisor - Semi-Volatile Extractions	Organics, Waterloo, Ontario
Nik Perkio	Inorganics Analyst	Inorganics, Waterloo, Ontario

No Breaches Found

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.
Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

Unit	*Description*
CFU/100mL	
mg/L	
pH units	

>: greater than.
<: less than.
Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Qualifiers

Qualifier	Description
BODL	Limit of Reporting for BOD was increased to account for the largest volume of sample tested.
PEHR	Parameter exceeded recommended holding time on receipt: Proceeded with analysis as requested.

Analytical Results Evaluation

Matrix: **Water**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	CYCLE-LET GEN CHEM AND O&G	CYCLE-LET FAECAL A	CYCLE-LET FAECAL B	CYCLE-LET FAECAL C	----	----	----
				Sampling date/time	05-Feb-2024 09:30	05-Feb-2024 09:31	05-Feb-2024 09:32	05-Feb-2024 09:33	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					WT2403096-001	WT2403096-002	WT2403096-003	WT2403096-004	--------	--------	--------
Physical Tests											
pH	----	E108/WT	pH units		7.74	----	----	----	----	----	----
Solids, total suspended [TSS]	----	E160/WT	mg/L		<3.0	----	----	----	----	----	----
Microbiological Tests											
Coliforms, thermotolerant [fecal]	----	E012.FC/WT	CFU/100 mL		----	8 PEHR	4 PEHR	11 PEHR	----	----	----
Aggregate Organics											
Biochemical oxygen demand [BOD]	----	E550/WT	mg/L		<3.0 BODL, PEHR	----	----	----	----	----	----
Oil & grease (gravimetric)	----	E567/WT	mg/L		<5.0	----	----	----	----	----	----
Oil & grease, animal/vegetable (gravimetric)	----	EC567A.SG/WT	mg/L		<5.0	----	----	----	----	----	----
Oil & grease, mineral (gravimetric)	----	E567SG/WT	mg/L		<5.0	----	----	----	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Limits

Analyte	*CAS Number*	*Unit*	**NWS Sewage Limits**						
Physical Tests									
pH	----	pH units	**6 - 9 pH units**						
Solids, total suspended [TSS]	----	mg/L	**180 mg/L**						
Microbiological Tests									
Coliforms, thermotolerant [fecal]	----	CFU/100mL	**10000 CFU/100mL**						
Aggregate Organics									
Biochemical oxygen demand [BOD]	----	mg/L	**120 mg/L**						
Oil & grease (gravimetric)	----	mg/L	**--**						
Oil & grease, animal/vegetable (gravimetric)	----	mg/L	**--**						
Oil & grease, mineral (gravimetric)	----	mg/L	**--**						

Please refer to the General Comments section for an explanation of any qualifiers detected.

Key:

NWS Sewage Limits NWS Sewage Limits

NWS Sewage Limits NWS Sewage Limits

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **WT2403096**	Page	: 1 of 4
Client	: NASITTUQ CORPORATION	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	:	Telephone	: 613 225 8279
Project	: NWS Sewage Fox Main	Date Samples Received	: 12-Feb-2024 12:35
PO	: ----	Date Analysis Commenced	: 13-Feb-2024
C-O-C number	: ----	Issue Date	: 20-Feb-2024 16:26
Sampler	: Alex Kelly 613 223 0629		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Greg Pokocky	Manager - Inorganics	Waterloo Inorganics, Waterloo, Ontario
Kaitlyn Lammers	Lab Assistant	Waterloo Microbiology, Waterloo, Ontario
Manuel TavaraTello	Supervisor - Semi-Volatile Extractions	Waterloo Organics, Waterloo, Ontario
Nik Perkio	Inorganics Analyst	Waterloo Inorganics, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 1330940)											
WT2403049-003	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	58.9	56.5	4.16%	20%	----
Physical Tests (QC Lot: 1332547)											
WT2403117-001	Anonymous	pH	----	E108	0.10	pH units	7.77	7.77	0.00%	4%	----
Aggregate Organics (QC Lot: 1332837)											
WT2403019-001	Anonymous	Biochemical oxygen demand [BOD]	----	E550	2.0	mg/L	<2.0	<2.0	0.0%	30%	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1330940)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Microbiological Tests (QCLot: 1331651)						
Coliforms, thermotolerant [fecal]	----	E012.FC	1	CFU/100mL	<1	----
Aggregate Organics (QCLot: 1332287)						
Oil & grease (gravimetric)	----	E567	5	mg/L	<5.0	----
Aggregate Organics (QCLot: 1332288)						
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	<5.0	----
Aggregate Organics (QCLot: 1332837)						
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	<2.0	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1330940)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	99.2	85.0	115	----
Physical Tests (QCLot: 1332547)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Aggregate Organics (QCLot: 1332287)									
Oil & grease (gravimetric)	----	E567	5	mg/L	200 mg/L	99.1	70.0	130	----
Aggregate Organics (QCLot: 1332288)									
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	100 mg/L	93.9	70.0	130	----
Aggregate Organics (QCLot: 1332837)									
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	198 mg/L	98.0	85.0	115	----

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **WT2403096**	Page	: 1 of 6
Client	: **NASITTUQ CORPORATION**	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage Fox Main	Date Samples Received	: 12-Feb-2024 12:35
PO	: ----	Issue Date	: 20-Feb-2024 16:27
C-O-C number	: ----		
Sampler	: Alex Kelly		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers occur - please see following pages for full details.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [BOD HT-4d] CYCLE-LET GEN CHEM AND O&G	E550	05-Feb-2024	----	----	----		14-Feb-2024	4 days	8 days	× EHTR
Aggregate Organics : Mineral Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) CYCLE-LET GEN CHEM AND O&G	E567SG	05-Feb-2024	16-Feb-2024	28 days	11 days	✓	16-Feb-2024	28 days	11 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) CYCLE-LET GEN CHEM AND O&G	E567	05-Feb-2024	16-Feb-2024	28 days	11 days	✓	16-Feb-2024	28 days	11 days	✓
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] CYCLE-LET FAECAL A	E012.FC	05-Feb-2024	----	----	----		13-Feb-2024	48 hrs	196 hrs	× EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] CYCLE-LET FAECAL B	E012.FC	05-Feb-2024	----	----	----		13-Feb-2024	48 hrs	196 hrs	× EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] CYCLE-LET FAECAL C	E012.FC	05-Feb-2024	----	----	----		13-Feb-2024	48 hrs	196 hrs	× EHTR
Physical Tests : pH by Meter										
HDPE [ON MECP] CYCLE-LET GEN CHEM AND O&G	E108	05-Feb-2024	14-Feb-2024	14 days	9 days	✓	14-Feb-2024	14 days	9 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TSS by Gravimetry										
HDPE [ON MECP]										
CYCLE-LET GEN CHEM AND O&G	E160	05-Feb-2024	----	----	----		13-Feb-2024	7 days	8 days	× EHTL

Legend & Qualifier Definitions

EHTR: Exceeded ALS recommended hold time prior to sample receipt.

EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: ✗ = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Biochemical Oxygen Demand - 5 day	E550	1332837	1	7	14.2	5.0	✓
pH by Meter	E108	1332547	1	16	6.2	5.0	✓
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC	1331651	0	3	0.0	5.0	✗
TSS by Gravimetry	E160	1330940	1	10	10.0	4.7	✓
Laboratory Control Samples (LCS)							
Biochemical Oxygen Demand - 5 day	E550	1332837	1	7	14.2	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1332288	1	16	6.2	5.0	✓
Oil & Grease by Gravimetry	E567	1332287	1	20	5.0	5.0	✓
pH by Meter	E108	1332547	1	16	6.2	5.0	✓
TSS by Gravimetry	E160	1330940	1	10	10.0	4.7	✓
Method Blanks (MB)							
Biochemical Oxygen Demand - 5 day	E550	1332837	1	7	14.2	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1332288	1	16	6.2	5.0	✓
Oil & Grease by Gravimetry	E567	1332287	1	20	5.0	5.0	✓
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC	1331651	1	3	33.3	5.0	✓
TSS by Gravimetry	E160	1330940	1	10	10.0	4.7	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC ALS Environmental - Waterloo	Water	APHA 9222 D (mod)	Following filtration (0.45 µm), and incubation at 44.5 ±0.2°C for 22-26 hours, colonies exhibiting characteristic morphology of the target organism are enumerated and confirmed.
pH by Meter	E108 ALS Environmental - Waterloo	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
TSS by Gravimetry	E160 ALS Environmental - Waterloo	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
Biochemical Oxygen Demand - 5 day	E550 ALS Environmental - Waterloo	Water	APHA 5210 B (mod)	Samples are diluted and incubated for a specified time period, after which the oxygen depletion is measured using a dissolved oxygen meter. Free chlorine is a negative interference in the BOD method; please advise ALS when free chlorine is present in samples.
Oil & Grease by Gravimetry	E567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane and the extract is evaporated to dryness. The residue is then weighed to determine Oil and Grease.
Mineral Oil & Grease by Gravimetry	E567SG ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane, followed by silica gel treatment after which the extract is evaporated to dryness. The residue is then weighed to determine Mineral Oil and Grease.
Animal & Vegetable Oil & Grease by Gravimetry	EC567A.SG ALS Environmental - Waterloo	Water	APHA 5520 (mod)	Animal & vegetable oil and grease is calculated as follows: Oil & Grease (gravimetric) minus Mineral Oil & Grease (gravimetric)

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Oil & Grease Extraction for Gravimetry	EP567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane by liquid-liquid extraction.

Request Form

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here (lab use only)

Page ___ of ___

ort To

pany:	Nasittuq Corp
tact:	Alaina Leslie
ress:	275 Slater St
	Ottawa ON K1P 5H9
ne:	613-223-0629

Report Format / Distribution

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Quality Control (QC) Report with Report ☑ Yes ☐ No

☑ Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax alaina.leslie@nasittuq.com

Email 2 labresults@nasittuq.com

Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)

- R ☑ Regular (Standard TAT if received by 3 pm - business days)
- P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
- E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT
- E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge

Specify Date Required for E2,E or P

Environmental Division
Waterloo
Work Order Reference
WT2403096

Telephone : +1 519 886 6910

ice To

Same as Report To ☐ Yes ☐ No

Copy of Invoice with Report ☐ Yes ☐ No

pany:

tact:

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax labresults@nasittuq.com

Email 2 accounting@nasittuq.com

Project Information

Quote #: Q89840

#: NWS Sewage Fox Main

/ AFE:

:

Oil and Gas Required Fields (client use)

Approver ID:	Cost Center:
GL Account:	Routing Code:
Activity Code:	
Location:	

LS Lab Work Order # (lab use only)

ALS Contact: E. Dobbin

Sampler: Alex Kelly

Indicate Filtered (F), Preserved

S Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BOD, pH, TSS	O&G	Faecal Coliforms	Number of Containers
	- Cycle-let Gen Chem and O&G	05-Feb-24	09:30	Effluent	R	R		3
	- Cycle-let Faecal A	05-Feb-24	09:31	Effluent			R	1
	- Cycle-let Faecal B	05-Feb-24	09:32	Effluent			R	1
	- Cycle-let Faecal C	05-Feb-24	09:33	Effluent			R	1

Drinking Water (DW) Samples[1] (client use)

samples taken from a Regulated DW System? ☐ Yes ☑ No

samples for human drinking water use? ☐ Yes ☑ No

Special Instructions / Specify Criteria to add on report (client Use)

NWS Nunavut Water Board Licence Criteria

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice packs Yes ☒ No ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C: 13.8

FINAL COOLER TEMPERATURES °C: 6.6

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
eased by: *	Date:	Time:	Received by: COSTA F.	Date: 12/2/24	Time: 12:35	Received by: [signature]	Date: 02/13/24	Time: 9:00

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right solutions.
right partner.

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: **WT2405181**	Page	: 1 of 4
Client	: **NASITTUQ CORPORATION**	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 07-Mar-2024 10:20
PO	: ----	Date Analysis Commenced	: 08-Mar-2024
C-O-C number	: ----	Issue Date	: 14-Mar-2024 12:37
Sampler	: Alex Kelly		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Hannah Lewis	Inorganics Analyst	Inorganics, Waterloo, Ontario
Jon Fisher	Production Manager, Environmental	Inorganics, Waterloo, Ontario
Kaitlyn Lammers	Lab Assistant	Microbiology, Waterloo, Ontario
Manuel TavaraTello	Supervisor - Semi-Volatile Extractions	Organics, Waterloo, Ontario
Nik Perkio	Inorganics Analyst	Inorganics, Waterloo, Ontario

No Breaches Found

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.
Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

Unit	*Description*
CFU/100mL	
mg/L	
pH units	

>: greater than.
<: less than.
Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Workorder Comments

Sample(s) XL-Cycle-let Faecal A, B and C: Exceeded Recommended Holding Time prior to receipt at the lab for Microbiology analysis.

Qualifiers

Qualifier	Description
BODL	Limit of Reporting for BOD was increased to account for the largest volume of sample tested.
PEHR	Parameter exceeded recommended holding time on receipt: Proceeded with analysis as requested.

Analytical Results Evaluation

Matrix: **Water**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	XL-Cycle-let Gen Chem and O&G	XL-Cycle-let Faecal A	XL-Cycle-let Faecal B	XL-Cycle-let Faecal C	----	----	----
				Sampling date/time	04-Mar-2024 08:40	04-Mar-2024 08:45	04-Mar-2024 08:50	04-Mar-2024 08:55	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
				WT2405181-001	WT2405181-002	WT2405181-003	WT2405181-004	--------	--------	--------	
Physical Tests											
pH	----	E108/WT	pH units	8.19	----	----	----	----	----	----	----
Solids, total suspended [TSS]	----	E160/WT	mg/L	<3.0	----	----	----	----	----	----	----
Microbiological Tests											
Coliforms, thermotolerant [fecal]	----	E012.FC/WT	CFU/100 mL	----	2 PEHR	Not Detected PEHR	1 PEHR	----	----	----	----
Aggregate Organics											
Biochemical oxygen demand [BOD]	----	E550/WT	mg/L	<3.0 BODL	----	----	----	----	----	----	----
Oil & grease (gravimetric)	----	E567/WT	mg/L	<5.0	----	----	----	----	----	----	----
Oil & grease, animal/vegetable (gravimetric)	----	EC567A.SG/WT	mg/L	<5.0	----	----	----	----	----	----	----
Oil & grease, mineral (gravimetric)	----	E567SG/WT	mg/L	<5.0	----	----	----	----	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Limits

Analyte	*CAS Number*	*Unit*	**NWS Sewage Limits**						
Physical Tests									
pH	----	pH units	**6 - 9 pH units**						
Solids, total suspended [TSS]	----	mg/L	**180 mg/L**						
Microbiological Tests									
Coliforms, thermotolerant [fecal]	----	CFU/100mL	**10000 CFU/100mL**						
Aggregate Organics									
Biochemical oxygen demand [BOD]	----	mg/L	**120 mg/L**						
Oil & grease (gravimetric)	----	mg/L	**--**						
Oil & grease, animal/vegetable (gravimetric)	----	mg/L	**--**						
Oil & grease, mineral (gravimetric)	----	mg/L	**--**						

Please refer to the General Comments section for an explanation of any qualifiers detected.

Key:

NWS Sewage Limits NWS Sewage Limits

NWS Sewage Limits NWS Sewage Limits

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **WT2405181**	Page	: 1 of 4
Client	: NASITTUQ CORPORATION	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	:	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 07-Mar-2024 10:20
PO	: ----	Date Analysis Commenced	: 08-Mar-2024
C-O-C number	: ----	Issue Date	: 14-Mar-2024 12:37
Sampler	: Alex Kelly 613 223 0629		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Hannah Lewis	Inorganics Analyst	Waterloo Inorganics, Waterloo, Ontario
Jon Fisher	Production Manager, Environmental	Waterloo Inorganics, Waterloo, Ontario
Kaitlyn Lammers	Lab Assistant	Waterloo Microbiology, Waterloo, Ontario
Manuel TavaraTello	Supervisor - Semi-Volatile Extractions	Waterloo Organics, Waterloo, Ontario
Nik Perkio	Inorganics Analyst	Waterloo Inorganics, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 1359072)											
WT2405245-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1359500)											
WT2405181-001	XL-Cycle-let Gen Chem and O&G	pH	----	E108	0.10	pH units	8.19	8.37	2.17%	4%	----
Aggregate Organics (QC Lot: 1359490)											
WT2405219-001	Anonymous	Biochemical oxygen demand [BOD]	----	E550	3.0	mg/L	<3.0	<3.0	0.0%	30%	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1359072)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Microbiological Tests (QCLot: 1359394)						
Coliforms, thermotolerant [fecal]	----	E012.FC	1	CFU/100mL	<1	----
Aggregate Organics (QCLot: 1359490)						
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	<2.0	----
Aggregate Organics (QCLot: 1363814)						
Oil & grease (gravimetric)	----	E567	5	mg/L	<5.0	----
Aggregate Organics (QCLot: 1363815)						
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	<5.0	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1359072)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	95.3	85.0	115	----
Physical Tests (QCLot: 1359500)									
pH	----	E108	----	pH units	7 pH units	101	98.0	102	----
Aggregate Organics (QCLot: 1359490)									
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	198 mg/L	100	85.0	115	----
Aggregate Organics (QCLot: 1363814)									
Oil & grease (gravimetric)	----	E567	5	mg/L	200 mg/L	99.9	70.0	130	----
Aggregate Organics (QCLot: 1363815)									
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	100 mg/L	95.2	70.0	130	----

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **WT2405181**	Page	: 1 of 6
Client	: **NASITTUQ CORPORATION**	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 07-Mar-2024 10:20
PO	: ----	Issue Date	: 14-Mar-2024 12:37
C-O-C number	: ----		
Sampler	: Alex Kelly		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers occur - please see following pages for full details.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [BOD HT-4d] XL-Cycle-let Gen Chem and O&G	E550	04-Mar-2024	----	----	----		08-Mar-2024	4 days	4 days	✓
Aggregate Organics : Mineral Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) XL-Cycle-let Gen Chem and O&G	E567SG	04-Mar-2024	14-Mar-2024	28 days	10 days	✓	14-Mar-2024	28 days	10 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) XL-Cycle-let Gen Chem and O&G	E567	04-Mar-2024	14-Mar-2024	28 days	10 days	✓	14-Mar-2024	28 days	10 days	✓
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL-Cycle-let Faecal A	E012.FC	04-Mar-2024	----	----	----		08-Mar-2024	48 hrs	101 hrs	× EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL-Cycle-let Faecal B	E012.FC	04-Mar-2024	----	----	----		08-Mar-2024	48 hrs	101 hrs	× EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL-Cycle-let Faecal C	E012.FC	04-Mar-2024	----	----	----		08-Mar-2024	48 hrs	101 hrs	× EHTR
Physical Tests : pH by Meter										
HDPE [ON MECP] XL-Cycle-let Gen Chem and O&G	E108	04-Mar-2024	08-Mar-2024	14 days	4 days	✓	12-Mar-2024	14 days	8 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / **Container / Client Sample ID(s)**	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times*		*Eval*	*Analysis Date*	*Holding Times*		*Eval*
				Rec	*Actual*			*Rec*	*Actual*	
Physical Tests : TSS by Gravimetry										
HDPE [ON MECP]										
XL-Cycle-let Gen Chem and O&G	E160	04-Mar-2024	----	----	----		08-Mar-2024	7 days	4 days	✓

Legend & Qualifier Definitions

EHTR: Exceeded ALS recommended hold time prior to sample receipt.

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: ✗ = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Biochemical Oxygen Demand - 5 day	E550	1359490	1	16	6.2	5.0	✓
pH by Meter	E108	1359500	1	13	7.6	5.0	✓
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC	1359394	0	3	0.0	5.0	✗
TSS by Gravimetry	E160	1359072	1	19	5.2	4.7	✓
Laboratory Control Samples (LCS)							
Biochemical Oxygen Demand - 5 day	E550	1359490	1	16	6.2	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1363815	1	10	10.0	5.0	✓
Oil & Grease by Gravimetry	E567	1363814	1	17	5.8	5.0	✓
pH by Meter	E108	1359500	1	13	7.6	5.0	✓
TSS by Gravimetry	E160	1359072	1	19	5.2	4.7	✓
Method Blanks (MB)							
Biochemical Oxygen Demand - 5 day	E550	1359490	1	16	6.2	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1363815	1	10	10.0	5.0	✓
Oil & Grease by Gravimetry	E567	1363814	1	17	5.8	5.0	✓
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC	1359394	1	3	33.3	5.0	✓
TSS by Gravimetry	E160	1359072	1	19	5.2	4.7	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC ALS Environmental - Waterloo	Water	APHA 9222 D (mod)	Following filtration (0.45 µm), and incubation at 44.5 ±0.2°C for 22-26 hours, colonies exhibiting characteristic morphology of the target organism are enumerated and confirmed.
pH by Meter	E108 ALS Environmental - Waterloo	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
TSS by Gravimetry	E160 ALS Environmental - Waterloo	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
Biochemical Oxygen Demand - 5 day	E550 ALS Environmental - Waterloo	Water	APHA 5210 B (mod)	Samples are diluted and incubated for a specified time period, after which the oxygen depletion is measured using a dissolved oxygen meter. Free chlorine is a negative interference in the BOD method; please advise ALS when free chlorine is present in samples.
Oil & Grease by Gravimetry	E567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane and the extract is evaporated to dryness. The residue is then weighed to determine Oil and Grease.
Mineral Oil & Grease by Gravimetry	E567SG ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane, followed by silica gel treatment after which the extract is evaporated to dryness. The residue is then weighed to determine Mineral Oil and Grease.
Animal & Vegetable Oil & Grease by Gravimetry	EC567A.SG ALS Environmental - Waterloo	Water	APHA 5520 (mod)	Animal & vegetable oil and grease is calculated as follows: Oil & Grease (gravimetric) minus Mineral Oil & Grease (gravimetric)

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Oil & Grease Extraction for Gravimetry	EP567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane by liquid-liquid extraction.

066301
B-448
61-596

Chain of Custody (COC) / Analytical Request Form

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here
(lab use only)

Environmental Division
Waterloo
Work Order Reference
WT2405181

Telephone : +1 519 886 6910

Report To		Report Format / Distribution	Select Service Level Below (Re
Company:	Nasittuq Corp	Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	R ☑ Regular (Standard TAT if receiv
Contact:	Alaina Leslie	Quality Control (QC) Report with Report ☑ Yes ☐ No	P ☐ Priority (2-4 bus. days if receive
Address:	275 Slater St Ottawa ON K1P 5H9	☑ Criteria on Report - provide details below if box checked	E ☐ Emergency (1-2 bus. days if re
		Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	E2 ☐ Same day or weekend emerge
Phone:	613-223-0629	Email 1 or Fax alaina.leslie@nasittuq.com	Specify Date Required for E2,E o
		Email 2 labresults@nasittuq.com	

Invoice To	Same as Report To ☐ Yes ☐ No	Invoice Distribution
	Copy of Invoice with Report ☐ Yes ☐ No	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Company:		Email 1 or Fax labresults@nasittuq.com
Contact:		Email 2 naccounting@nasittuq.com

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q89840	Approver ID:	Cost Center:
Job #:	NWS Sewage FOX-M	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	

ALS Lab Work Order # (lab use only) | **ALS Contact:** E. Dobbin | **Sampler:** Alex Kelly

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BOD, pH, TSS	O&G	Faecal Coliforms										Number of Containers
	XL-Cycle-let Gen Chem and O&G	*04-MAR-24	08:40	Effluent	R	R											3
	XL-Cycle-let Faecal A	*04-MAR-24	08:45	Effluent			R										1
	XL-Cycle-let Faecal B	*04-MAR-24	08:50	Effluent			R										1
	XL-Cycle-let Faecal C	*04-MAR-24	08:55	Effluent			R										1

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)
Are samples taken from a Regulated DW System? ☐ Yes ☑ No Are samples for human drinking water use? ☐ Yes ☑ No	Please apply NWS Sewage Limits Threshold

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ | SIF Observations Yes ☐ No ☐
Ice packs Yes ☑ No ☐ | Custody seal intact Yes ☐ No ☐
Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
5.0			1.6		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: *	Date:	Time:	Received by:	Date: 07 03 /24	Time: 10:20	Received by:	Date: 4 Mar 24	Time: 12:10

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

NA-FM-0326e v09 Front/04 January 2014

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

ALS Canada Ltd.

right solutions. right partner.

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: **WT2411315**	Page	: 1 of 4
Client	: **NASITTUQ CORPORATION**	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 07-May-2024 11:40
PO	: ----	Date Analysis Commenced	: 08-May-2024
C-O-C number	: ----	Issue Date	: 14-May-2024 16:51
Sampler	: Alex Kelly		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Hannah Lewis	Inorganics Analyst	Inorganics, Waterloo, Ontario
Kaitlyn Lammers	Lab Assistant	Microbiology, Waterloo, Ontario
Manuel TavaraTello	Supervisor - Semi-Volatile Extractions	Organics, Waterloo, Ontario
Nik Perkio	Inorganics Analyst	Inorganics, Waterloo, Ontario

No Breaches Found

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.
Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

Unit	*Description*
CFU/100mL	
mg/L	
pH units	

>: greater than.
<: less than.
Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Workorder Comments

Samples -002 XL-CYCLE-LET FAECAL A, -003 XL-CYCLE-LET FAECAL B, -004 XL-CYCLE-LET FAECAL C: Exceeded Recommended Holding Time prior to receipt at the lab for Microbiology analysis.

Qualifiers

Qualifier	Description
BODL	Limit of Reporting for BOD was increased to account for the largest volume of sample tested.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
PEHR	Parameter exceeded recommended holding time on receipt: Proceeded with analysis as requested.

Analytical Results Evaluation

Matrix: **Water**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	XL-CYCLE-LET GEN CHEM AND O&G	XL-CYCLE-LET FAECAL A	XL-CYCLE-LET FAECAL B	XL-CYCLE-LET FAECAL C	----	----	----
				Sampling date/time	03-May-2024 08:30	03-May-2024 08:31	03-May-2024 08:31	03-May-2024 08:31	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					WT2411315-001	WT2411315-002	WT2411315-003	WT2411315-004	--------	--------	--------
Physical Tests											
pH	----	E108/WT	pH units		8.27	----	----	----	----	----	----
Solids, total suspended [TSS]	----	E160/WT	mg/L		<3.0	----	----	----	----	----	----
Microbiological Tests											
Coliforms, thermotolerant [fecal]	----	E012.FC/WT	CFU/100 mL		----	240 DLM, PEHR	280 DLM, PEHR	260 DLM, PEHR	----	----	----
Aggregate Organics											
Biochemical oxygen demand [BOD]	----	E550/WT	mg/L		<10.0 BODL, PEHR	----	----	----	----	----	----
Oil & grease (gravimetric)	----	E567/WT	mg/L		<5.0	----	----	----	----	----	----
Oil & grease, animal/vegetable (gravimetric)	----	EC567A.SG/WT	mg/L		<5.0	----	----	----	----	----	----
Oil & grease, mineral (gravimetric)	----	E567SG/WT	mg/L		<5.0	----	----	----	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Limits

Analyte	*CAS Number*	*Unit*	**NWS Sewage Limits**						
Physical Tests									
pH	----	pH units	**6 - 9 pH units**						
Solids, total suspended [TSS]	----	mg/L	**180 mg/L**						
Microbiological Tests									
Coliforms, thermotolerant [fecal]	----	CFU/100mL	**10000 CFU/100mL**						
Aggregate Organics									
Biochemical oxygen demand [BOD]	----	mg/L	**120 mg/L**						
Oil & grease (gravimetric)	----	mg/L	**--**						
Oil & grease, animal/vegetable (gravimetric)	----	mg/L	**--**						
Oil & grease, mineral (gravimetric)	----	mg/L	**--**						

Please refer to the General Comments section for an explanation of any qualifiers detected.

Key:

NWS Sewage Limits NWS Sewage Limits

NWS Sewage Limits NWS Sewage Limits

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **WT2411315**	Page	: 1 of 4
Client	: NASITTUQ CORPORATION	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 07-May-2024 11:40
PO	: ----	Date Analysis Commenced	: 08-May-2024
C-O-C number	: ----	Issue Date	: 14-May-2024 16:52
Sampler	: Alex Kelly		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Hannah Lewis	Inorganics Analyst	Waterloo Inorganics, Waterloo, Ontario
Kaitlyn Lammers	Lab Assistant	Waterloo Microbiology, Waterloo, Ontario
Manuel TavaraTello	Supervisor - Semi-Volatile Extractions	Waterloo Organics, Waterloo, Ontario
Nik Perkio	Inorganics Analyst	Waterloo Inorganics, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 1434570)											
WT2411229-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	6.4	7.4	1.0	Diff <2x LOR	----
Physical Tests (QC Lot: 1435153)											
WT2411475-012	Anonymous	pH	----	E108	0.10	pH units	7.87	7.95	1.01%	4%	----
Microbiological Tests (QC Lot: 1433615)											
WT2411315-003	XL-CYCLE-LET FAECAL B	Coliforms, thermotolerant [fecal]	----	E012.FC	10	CFU/100mL	280	260	7.41%	65%	----
Aggregate Organics (QC Lot: 1433052)											
WT2411275-003	Anonymous	Biochemical oxygen demand [BOD]	----	E550	3.0	mg/L	<3.0	<3.0	0.0%	30%	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1434570)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Microbiological Tests (QCLot: 1433615)						
Coliforms, thermotolerant [fecal]	----	E012.FC	1	CFU/100mL	<1	----
Aggregate Organics (QCLot: 1433052)						
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	<2.0	----
Aggregate Organics (QCLot: 1434266)						
Oil & grease (gravimetric)	----	E567	5	mg/L	<5.0	----
Aggregate Organics (QCLot: 1434267)						
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	<5.0	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1434570)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	97.3	85.0	115	----
Physical Tests (QCLot: 1435153)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Aggregate Organics (QCLot: 1433052)									
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	198 mg/L	101	85.0	115	----
Aggregate Organics (QCLot: 1434266)									
Oil & grease (gravimetric)	----	E567	5	mg/L	200 mg/L	96.3	70.0	130	----
Aggregate Organics (QCLot: 1434267)									
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	100 mg/L	93.6	70.0	130	----

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **WT2411315**	Page	: 1 of 6
Client	: **NASITTUQ CORPORATION**	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 07-May-2024 11:40
PO	: ----	Issue Date	: 14-May-2024 16:51
C-O-C number	: ----		
Sampler	: Alex Kelly		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [BOD HT-4d] XL-CYCLE-LET GEN CHEM AND O&G	E550	03-May-2024	----	----	----		08-May-2024	4 days	4 days	✓
Aggregate Organics : Mineral Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) XL-CYCLE-LET GEN CHEM AND O&G	E567SG	03-May-2024	09-May-2024	28 days	6 days	✓	09-May-2024	28 days	6 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) XL-CYCLE-LET GEN CHEM AND O&G	E567	03-May-2024	09-May-2024	28 days	6 days	✓	09-May-2024	28 days	6 days	✓
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL-CYCLE-LET FAECAL A	E012.FC	03-May-2024	----	----	----		08-May-2024	48 hrs	127 hrs	× EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL-CYCLE-LET FAECAL B	E012.FC	03-May-2024	----	----	----		08-May-2024	48 hrs	127 hrs	× EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL-CYCLE-LET FAECAL C	E012.FC	03-May-2024	----	----	----		08-May-2024	48 hrs	127 hrs	× EHTR
Physical Tests : pH by Meter										
HDPE [ON MECP] XL-CYCLE-LET GEN CHEM AND O&G	E108	03-May-2024	09-May-2024	14 days	6 days	✓	10-May-2024	14 days	7 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / **Container / Client Sample ID(s)**	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times*		*Eval*	*Analysis Date*	*Holding Times*		*Eval*
				Rec	*Actual*			*Rec*	*Actual*	
Physical Tests : TSS by Gravimetry										
HDPE [ON MECP]										
XL-CYCLE-LET GEN CHEM AND O&G	E160	03-May-2024	----	----	----		09-May-2024	7 days	6 days	✓

Legend & Qualifier Definitions

EHTR: Exceeded ALS recommended hold time prior to sample receipt.

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: × = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Biochemical Oxygen Demand - 5 day	E550	1433052	1	20	5.0	5.0	✓
pH by Meter	E108	1435153	1	18	5.5	5.0	✓
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC	1433615	1	3	33.3	5.0	✓
TSS by Gravimetry	E160	1434570	1	20	5.0	4.7	✓
Laboratory Control Samples (LCS)							
Biochemical Oxygen Demand - 5 day	E550	1433052	1	20	5.0	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1434267	1	8	12.5	5.0	✓
Oil & Grease by Gravimetry	E567	1434266	1	11	9.0	5.0	✓
pH by Meter	E108	1435153	1	18	5.5	5.0	✓
TSS by Gravimetry	E160	1434570	1	20	5.0	4.7	✓
Method Blanks (MB)							
Biochemical Oxygen Demand - 5 day	E550	1433052	1	20	5.0	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1434267	1	8	12.5	5.0	✓
Oil & Grease by Gravimetry	E567	1434266	1	11	9.0	5.0	✓
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC	1433615	1	3	33.3	5.0	✓
TSS by Gravimetry	E160	1434570	1	20	5.0	4.7	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC ALS Environmental - Waterloo	Water	APHA 9222 D (mod)	Following filtration (0.45 µm), and incubation at 44.5 ±0.2°C for 22-26 hours, colonies exhibiting characteristic morphology of the target organism are enumerated and confirmed.
pH by Meter	E108 ALS Environmental - Waterloo	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
TSS by Gravimetry	E160 ALS Environmental - Waterloo	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
Biochemical Oxygen Demand - 5 day	E550 ALS Environmental - Waterloo	Water	APHA 5210 B (mod)	Samples are diluted and incubated for a specified time period, after which the oxygen depletion is measured using a dissolved oxygen meter. Free chlorine is a negative interference in the BOD method; please advise ALS when free chlorine is present in samples.
Oil & Grease by Gravimetry	E567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane and the extract is evaporated to dryness. The residue is then weighed to determine Oil and Grease.
Mineral Oil & Grease by Gravimetry	E567SG ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane, followed by silica gel treatment after which the extract is evaporated to dryness. The residue is then weighed to determine Mineral Oil and Grease.
Animal & Vegetable Oil & Grease by Gravimetry	EC567A.SG ALS Environmental - Waterloo	Water	APHA 5520 (mod)	Animal & vegetable oil and grease is calculated as follows: Oil & Grease (gravimetric) minus Mineral Oil & Grease (gravimetric)

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Oil & Grease Extraction for Gravimetry	EP567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane by liquid-liquid extraction.

Chain of Custody (COC) / Analytical Request Form

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here (lab use only)

COC Number: 14 -

Environmental Division Waterloo

Work Order Reference

WT2411315

Telephone : +1 519 886 6910

Report To		Report Format / Distribution	Select Service Level Below (R
Company:	Nasittuq Corp	Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	R ☑ Regular (Standard TAT if receiv
Contact:	Alaina Leslie	Quality Control (QC) Report with Report ☑ Yes ☐ No	P ☐ Priority (2-4 bus. days if receiv
Address:	275 Slater St Ottawa ON K1P 5H9	☑ Criteria on Report - provide details below if box checked	E ☐ Emergency (1-2 bus. days if re
Phone:	613-223-0629	Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	E2 ☐ Same day or weekend emerge
		Email 1 or Fax alaina.leslie@nasittuq.com	Specify Date Required for E2,E or
		Email 2 labresults@nasittuq.com	

Invoice To	Same as Report To ☐ Yes ☐ No	Invoice Distribution	Indicate Filtered (F), Preserved
	Copy of Invoice with Report ☐ Yes ☐ No	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	
Company:		Email 1 or Fax labresults@nasittuq.com	
Contact:		Email 2 naccounting@nasittuq.com	

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q89840	Approver ID:	Cost Center:
Job #:	NWS Sewage FOX-M	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	

ALS Lab Work Order # (lab use only) | **ALS Contact:** E. Dobbin | **Sampler:** Alex Kelly

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BOD, pH, TSS	O&G	Faecal Coliforms	Number of Containers
	XL-Cycle-let Gen Chem and O&G	*03-May-24	08:30	Effluent	R	R		3
	XL-Cycle-let Faecal A	*03-May-24	08:31	Effluent			R	1
	XL-Cycle-let Faecal B	*03-May-24	08:31	Effluent			R	1
	XL-Cycle-let Faecal C	*03-May-24	08:31	Effluent			R	1

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)
Are samples taken from a Regulated DW System? ☐ Yes ☑ No	Please apply NWS Sewage Limits Threshold
Are samples for human drinking water use? ☐ Yes ☑ No	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ | SIF Observations Yes ☐ No ☐

Ice packs Yes ☑ No ☐ | Custody seal intact Yes ☐ No ☐

Cooling Initiated ☑

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
19.3			12.9		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: *	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
	3MAY23	11 AM		03/05/24	11:40		MAY 4 24	8:55 AM

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

NA-FM-0326e v09 Front/04 January 2014

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

OGG-455
B-639 GC-883

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right partner.

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: **WT2414975**	Page	: 1 of 4
Client	: **NASITTUQ CORPORATION**	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 06-Jun-2024 11:00
PO	: ----	Date Analysis Commenced	: 07-Jun-2024
C-O-C number	: ----	Issue Date	: 13-Jun-2024 20:59
Sampler	: Alex Kelly		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Hannah Lewis	Inorganics Analyst	Inorganics, Waterloo, Ontario
Jeremy Gingras	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Inorganics, Waterloo, Ontario
Rachel Cameron	Supervisor - Semi-Volatile Extractions	Organics, Waterloo, Ontario
Zeba Patel	Analyst	Microbiology, Waterloo, Ontario

No Breaches Found

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.
Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

Unit	*Description*
CFU/100mL	
mg/L	
pH units	

>: greater than.
<: less than.
Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Qualifiers

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
PEHR	Parameter exceeded recommended holding time on receipt: Proceeded with analysis as requested.

Analytical Results Evaluation

Matrix: **Water**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	XL-CYCLE-LET GEN CHEM AND O&G	XL-CYCLE-LET FAECAL A	XL-CYCLE-LET FAECAL B	XL-CYCLE-LET FAECAL C	----	----	----
				Sampling date/time	03-Jun-2024 11:37	03-Jun-2024 01:35	03-Jun-2024 01:35	03-Jun-2024 01:36	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
				WT2414975-001	WT2414975-002	WT2414975-003	WT2414975-004	--------	--------	--------	
Physical Tests											
pH	----	E108/WT	pH units	8.29	----	----	----	----	----	----	
Solids, total suspended [TSS]	----	E160/WT	mg/L	<3.0	----	----	----	----	----	----	
Microbiological Tests											
Coliforms, thermotolerant [fecal]	----	E012.FC/WT	CFU/100 mL	----	650 DLM, PEHR	1600 DLM, PEHR	750 DLM, PEHR	----	----	----	
Aggregate Organics											
Biochemical oxygen demand [BOD]	----	E550/WT	mg/L	21.6	----	----	----	----	----	----	
Oil & grease (gravimetric)	----	E567/WT	mg/L	<5.0	----	----	----	----	----	----	
Oil & grease, animal/vegetable (gravimetric)	----	EC567A.SG/WT	mg/L	<5.0	----	----	----	----	----	----	
Oil & grease, mineral (gravimetric)	----	E567SG/WT	mg/L	<5.0	----	----	----	----	----	----	

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Limits

Analyte	*CAS Number*	*Unit*	**NWS Sewage Limits**						
Physical Tests									
pH	----	pH units	**6 - 9 pH units**						
Solids, total suspended [TSS]	----	mg/L	**180 mg/L**						
Microbiological Tests									
Coliforms, thermotolerant [fecal]	----	CFU/100mL	**10000 CFU/100mL**						
Aggregate Organics									
Biochemical oxygen demand [BOD]	----	mg/L	**120 mg/L**						
Oil & grease (gravimetric)	----	mg/L	**--**						
Oil & grease, animal/vegetable (gravimetric)	----	mg/L	**--**						
Oil & grease, mineral (gravimetric)	----	mg/L	**--**						

Please refer to the General Comments section for an explanation of any qualifiers detected.

Key:

NWS Sewage Limits NWS Sewage Limits

NWS Sewage Limits NWS Sewage Limits

QUALITY CONTROL REPORT

Work Order	: **WT2414975**	Page	: 1 of 4
Client	: NASITTUQ CORPORATION	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 06-Jun-2024 11:00
PO	: ----	Date Analysis Commenced	: 07-Jun-2024
C-O-C number	: ----	Issue Date	: 13-Jun-2024 17:12
Sampler	: Alex Kelly		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Hannah Lewis	Inorganics Analyst	Waterloo Inorganics, Waterloo, Ontario
Jeremy Gingras	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Waterloo Inorganics, Waterloo, Ontario
Rachel Cameron	Supervisor - Semi-Volatile Extractions	Waterloo Organics, Waterloo, Ontario
Zeba Patel	Analyst	Waterloo Microbiology, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 1481062)											
WT2414459-002	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	97.4	115	16.2%	20%	----
Physical Tests (QC Lot: 1486453)											
WT2414816-003	Anonymous	pH	----	E108	0.10	pH units	7.68	7.71	0.390%	4%	----
Aggregate Organics (QC Lot: 1481263)											
WT2414923-001	Anonymous	Biochemical oxygen demand [BOD]	----	E550	2.0	mg/L	2.3	2.6	12.4%	30%	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1481062)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Microbiological Tests (QCLot: 1481802)						
Coliforms, thermotolerant [fecal]	----	E012.FC	1	CFU/100mL	<1	----
Aggregate Organics (QCLot: 1481263)						
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	<2.0	----
Aggregate Organics (QCLot: 1485127)						
Oil & grease (gravimetric)	----	E567	5	mg/L	<5.0	----
Aggregate Organics (QCLot: 1485128)						
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	<5.0	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1481062)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	92.7	85.0	115	----
Physical Tests (QCLot: 1486453)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Aggregate Organics (QCLot: 1481263)									
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	198 mg/L	96.7	85.0	115	----
Aggregate Organics (QCLot: 1485127)									
Oil & grease (gravimetric)	----	E567	5	mg/L	200 mg/L	91.3	70.0	130	----
Aggregate Organics (QCLot: 1485128)									
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	100 mg/L	76.3	70.0	130	----

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **WT2414975**	Page	: 1 of 6
Client	: **NASITTUQ CORPORATION**	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 06-Jun-2024 11:00
PO	: ----	Issue Date	: 13-Jun-2024 17:21
C-O-C number	: ----		
Sampler	: Alex Kelly		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers occur - please see following pages for full details.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [BOD HT-4d] XL-CYCLE-LET GEN CHEM AND O&G	E550	03-Jun-2024	----	----	----		07-Jun-2024	4 days	4 days	✓
Aggregate Organics : Mineral Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) XL-CYCLE-LET GEN CHEM AND O&G	E567SG	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	11-Jun-2024	28 days	8 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) XL-CYCLE-LET GEN CHEM AND O&G	E567	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	11-Jun-2024	28 days	8 days	✓
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL-CYCLE-LET FAECAL A	E012.FC	03-Jun-2024	----	----	----		07-Jun-2024	48 hrs	107 hrs	× EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL-CYCLE-LET FAECAL B	E012.FC	03-Jun-2024	----	----	----		07-Jun-2024	48 hrs	107 hrs	× EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL-CYCLE-LET FAECAL C	E012.FC	03-Jun-2024	----	----	----		07-Jun-2024	48 hrs	107 hrs	× EHTR
Physical Tests : pH by Meter										
HDPE [ON MECP] XL-CYCLE-LET GEN CHEM AND O&G	E108	03-Jun-2024	11-Jun-2024	14 days	8 days	✓	11-Jun-2024	14 days	8 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TSS by Gravimetry										
HDPE [ON MECP]										
XL-CYCLE-LET GEN CHEM AND O&G	E160	03-Jun-2024	----	----	----		07-Jun-2024	7 days	4 days	✓

Legend & Qualifier Definitions

EHTR: Exceeded ALS recommended hold time prior to sample receipt.

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: ✗ = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Biochemical Oxygen Demand - 5 day	E550	1481263	1	20	5.0	5.0	✓
pH by Meter	E108	1486453	1	16	6.2	5.0	✓
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC	1481802	0	3	0.0	5.0	✗
TSS by Gravimetry	E160	1481062	1	20	5.0	4.7	✓
Laboratory Control Samples (LCS)							
Biochemical Oxygen Demand - 5 day	E550	1481263	1	20	5.0	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1485128	1	9	11.1	5.0	✓
Oil & Grease by Gravimetry	E567	1485127	1	17	5.8	5.0	✓
pH by Meter	E108	1486453	1	16	6.2	5.0	✓
TSS by Gravimetry	E160	1481062	1	20	5.0	4.7	✓
Method Blanks (MB)							
Biochemical Oxygen Demand - 5 day	E550	1481263	1	20	5.0	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1485128	1	9	11.1	5.0	✓
Oil & Grease by Gravimetry	E567	1485127	1	17	5.8	5.0	✓
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC	1481802	1	3	33.3	5.0	✓
TSS by Gravimetry	E160	1481062	1	20	5.0	4.7	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC ALS Environmental - Waterloo	Water	APHA 9222 D (mod)	Following filtration (0.45 µm), and incubation at 44.5 ±0.2°C for 22-26 hours, colonies exhibiting characteristic morphology of the target organism are enumerated and confirmed.
pH by Meter	E108 ALS Environmental - Waterloo	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
TSS by Gravimetry	E160 ALS Environmental - Waterloo	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
Biochemical Oxygen Demand - 5 day	E550 ALS Environmental - Waterloo	Water	APHA 5210 B (mod)	Samples are diluted and incubated for a specified time period, after which the oxygen depletion is measured using a dissolved oxygen meter. Free chlorine is a negative interference in the BOD method; please advise ALS when free chlorine is present in samples.
Oil & Grease by Gravimetry	E567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane and the extract is evaporated to dryness. The residue is then weighed to determine Oil and Grease.
Mineral Oil & Grease by Gravimetry	E567SG ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane, followed by silica gel treatment after which the extract is evaporated to dryness. The residue is then weighed to determine Mineral Oil and Grease.
Animal & Vegetable Oil & Grease by Gravimetry	EC567A.SG ALS Environmental - Waterloo	Water	APHA 5520 (mod)	Animal & vegetable oil and grease is calculated as follows: Oil & Grease (gravimetric) minus Mineral Oil & Grease (gravimetric)

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Oil & Grease Extraction for Gravimetry	EP567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane by liquid-liquid extraction.

Chain of Custody (COC) / Analytical Request Form

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here
(lab use only)

COC Number: 14 -

Page ____ of ____

Environmental Division
Waterloo
Work Order Reference
WT2414975

Telephone : +1 519 886 6910

Report To		Report Format / Distribution	Select Service Level Below
Company:	Nasittuq Corp	Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	R ☑ Regular (Standard TAT if re
Contact:	Alaina Leslie	Quality Control (QC) Report with Report ☑ Yes ☐ No	P ☐ Priority (2-4 bus. days if rec
Address:	275 Slater St Ottawa ON K1P 5H9	☑ Criteria on Report - provide details below if box checked	E ☐ Emergency (1-2 bus. days if
Phone:	613-223-0629	Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	E2 ☐ Same day or weekend emer
		Email 1 or Fax alaina.leslie@nasittuq.com	Specify Date Required for E2,E
		Email 2 labresults@nasittuq.com	

Invoice To		Invoice Distribution
	Same as Report To ☐ Yes ☐ No	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
	Copy of Invoice with Report ☐ Yes ☐ No	Email 1 or Fax labresults@nasittuq.com
Company:		Email 2 naccounting@nasittuq.com
Contact:		

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q89840	Approver ID:	Cost Center:
Job #:	NWS Sewage FOX-M	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	

ALS Lab Work Order # (lab use only): WT2414975 **ALS Contact:** E. Dobbin **Sampler:** Alex Kelly

Indicate Filtered (F), Preserv

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BOD, pH, TSS	O&G	Faecal Coliforms	Number of Containers
	XL-Cycle-let Gen Chem and O&G	*03-Jun-24	1:37	Effluent	R	R		3
	XL-Cycle-let Faecal A	*03-Jun-24	01:35	Effluent			R	1
	XL-Cycle-let Faecal B	*03-Jun-24	01:35	Effluent			R	1
	XL-Cycle-let Faecal C	*03-Jun-24	01:36	Effluent			R	1

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ Yes ☑ No

Are samples for human drinking water use? ☐ Yes ☑ No

Special Instructions / Specify Criteria to add on report (client Use)

Please apply NWS Sewage Limits Threshold

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen	☐		SIF Observations	Yes ☐	No ☐
Ice packs	Yes ☒	No ☐	Custody seal intact	Yes ☐	No ☐
Cooling Initiated	☒				

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
22.6			8.3		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: *	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
Dion Akearok	June 3'24	3:26	Eric Dobbins	06/04/24	6:00	BB	06/07/24	8:40

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

NA-FM-0326e v09 Front/04 January 2014

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

OGG-536 GL-115
B-713

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right solutions.
right partner.

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: **WT2421315**	Page	: 1 of 4
Client	: **NASITTUQ CORPORATION**	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 25-Jul-2024 12:15
PO	: ----	Date Analysis Commenced	: 26-Jul-2024
C-O-C number	: ----	Issue Date	: 31-Jul-2024 18:43
Sampler	: D.R		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Organics, Waterloo, Ontario
Kaitlyn Lammers	Lab Assistant	Microbiology, Waterloo, Ontario
Nik Perkio	Senior Analyst	Inorganics, Waterloo, Ontario
Rachel Cameron	Supervisor - Semi-Volatile Extractions	Organics, Waterloo, Ontario

No Breaches Found

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.
Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

Unit	*Description*
CFU/100mL	
mg/L	
pH units	

>: greater than.
<: less than.
Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Qualifiers

Qualifier	Description
BODL	Limit of Reporting for BOD was increased to account for the largest volume of sample tested.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
PEHR	Parameter exceeded recommended holding time on receipt: Proceeded with analysis as requested.

Analytical Results Evaluation

Matrix: **Water**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	XL-Cycle-let Gen Chem and O&G	XL-Cycle-let Faecal A	XL-Cycle-let Faecal B	XL-Cycle-let Faecal C	----	----	----
				Sampling date/time	08-Jul-2024 09:30	08-Jul-2024 09:30	08-Jul-2024 09:30	08-Jul-2024 09:30	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
				WT2421315-001	WT2421315-002	WT2421315-003	WT2421315-004	--------	--------	--------	
Physical Tests											
pH	----	E108/WT	pH units		8.05	----	----	----	----	----	----
Solids, total suspended [TSS]	----	E160/WT	mg/L		<3.0	----	----	----	----	----	----
Microbiological Tests											
Coliforms, thermotolerant [fecal]	----	E012.FC/WT	CFU/100 mL		----	140 DLM	160 DLM	100 DLM	----	----	----
Aggregate Organics											
Biochemical oxygen demand [BOD]	----	E550/WT	mg/L		<3.0 BODL, PEHR	----	----	----	----	----	----
Oil & grease (gravimetric)	----	E567/WT	mg/L		<5.0	----	----	----	----	----	----
Oil & grease, animal/vegetable (gravimetric)	----	EC567A.SG/WT	mg/L		<5.0	----	----	----	----	----	----
Oil & grease, mineral (gravimetric)	----	E567SG/WT	mg/L		<5.0	----	----	----	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Limits

Analyte	*CAS Number*	*Unit*	**NWS Sewage Limits**						
Physical Tests									
pH	----	pH units	**6 - 9 pH units**						
Solids, total suspended [TSS]	----	mg/L	**180 mg/L**						
Microbiological Tests									
Coliforms, thermotolerant [fecal]	----	CFU/100mL	**10000 CFU/100mL**						
Aggregate Organics									
Biochemical oxygen demand [BOD]	----	mg/L	**120 mg/L**						
Oil & grease (gravimetric)	----	mg/L	**--**						
Oil & grease, animal/vegetable (gravimetric)	----	mg/L	**--**						
Oil & grease, mineral (gravimetric)	----	mg/L	**--**						

Please refer to the General Comments section for an explanation of any qualifiers detected.

Key:

NWS Sewage Limits NWS Sewage Limits

NWS Sewage Limits NWS Sewage Limits

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **WT2421315**	Page	: 1 of 4
Client	: NASITTUQ CORPORATION	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 25-Jul-2024 12:15
PO	: ----	Date Analysis Commenced	: 26-Jul-2024
C-O-C number	: ----	Issue Date	: 31-Jul-2024 18:43
Sampler	: D.R		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Waterloo Organics, Waterloo, Ontario
Kaitlyn Lammers	Lab Assistant	Waterloo Microbiology, Waterloo, Ontario
Nik Perkio	Senior Analyst	Waterloo Inorganics, Waterloo, Ontario
Rachel Cameron	Supervisor - Semi-Volatile Extractions	Waterloo Organics, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 1566097)											
WT2421076-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	10.9	10.5	0.4	Diff <2x LOR	----
Physical Tests (QC Lot: 1567132)											
HA2401663-001	Anonymous	pH	----	E108	0.10	pH units	7.15	7.19	0.558%	4%	----
Aggregate Organics (QC Lot: 1565895)											
WT2420913-001	Anonymous	Biochemical oxygen demand [BOD]	----	E550	3.0	mg/L	<3.0	<3.0	0.0%	30%	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1566097)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Microbiological Tests (QCLot: 1566082)						
Coliforms, thermotolerant [fecal]	----	E012.FC	1	CFU/100mL	<1	----
Aggregate Organics (QCLot: 1565895)						
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	<2.0	----
Aggregate Organics (QCLot: 1568341)						
Oil & grease (gravimetric)	----	E567	5	mg/L	<5.0	----
Aggregate Organics (QCLot: 1568342)						
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	<5.0	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1566097)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	109	85.0	115	----
Physical Tests (QCLot: 1567132)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Aggregate Organics (QCLot: 1565895)									
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	198 mg/L	95.9	85.0	115	----
Aggregate Organics (QCLot: 1568341)									
Oil & grease (gravimetric)	----	E567	5	mg/L	200 mg/L	90.3	70.0	130	----
Aggregate Organics (QCLot: 1568342)									
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	100 mg/L	81.0	70.0	130	----

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **WT2421315**	Page	: 1 of 6
Client	: **NASITTUQ CORPORATION**	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 25-Jul-2024 12:15
PO	: ----	Issue Date	: 31-Jul-2024 18:43
C-O-C number	: ----		
Sampler	: D.R		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers occur - please see following pages for full details.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [ON MECP] XL-Cycle-let Gen Chem and O&G	E550	08-Jul-2024	----	----	----		26-Jul-2024	4 days	17 days	× EHTR
Aggregate Organics : Mineral Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) XL-Cycle-let Gen Chem and O&G	E567SG	08-Jul-2024	31-Jul-2024	28 days	23 days	✓	31-Jul-2024	28 days	23 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) XL-Cycle-let Gen Chem and O&G	E567	08-Jul-2024	31-Jul-2024	28 days	23 days	✓	31-Jul-2024	28 days	23 days	✓
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL-Cycle-let Faecal A	E012.FC	08-Jul-2024	----	----	----		26-Jul-2024	48 hrs	435 hrs	× EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL-Cycle-let Faecal B	E012.FC	08-Jul-2024	----	----	----		26-Jul-2024	48 hrs	435 hrs	× EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL-Cycle-let Faecal C	E012.FC	08-Jul-2024	----	----	----		26-Jul-2024	48 hrs	435 hrs	× EHTR
Physical Tests : pH by Meter										
HDPE [ON MECP] XL-Cycle-let Gen Chem and O&G	E108	08-Jul-2024	26-Jul-2024	14 days	18 days	× EHTR	27-Jul-2024	14 days	19 days	× EHTR

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TSS by Gravimetry										
HDPE [ON MECP]										
XL-Cycle-let Gen Chem and O&G	E160	08-Jul-2024	----	----	----		29-Jul-2024	7 days	21 days	× EHTR

Legend & Qualifier Definitions

EHTR: Exceeded ALS recommended hold time prior to sample receipt.

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: ✗ = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Biochemical Oxygen Demand - 5 day	E550	1565895	1	19	5.2	5.0	✓
pH by Meter	E108	1567132	1	3	33.3	5.0	✓
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC	1566082	0	3	0.0	5.0	✗
TSS by Gravimetry	E160	1566097	1	20	5.0	4.7	✓
Laboratory Control Samples (LCS)							
Biochemical Oxygen Demand - 5 day	E550	1565895	1	19	5.2	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1568342	1	13	7.6	5.0	✓
Oil & Grease by Gravimetry	E567	1568341	1	15	6.6	5.0	✓
pH by Meter	E108	1567132	1	3	33.3	5.0	✓
TSS by Gravimetry	E160	1566097	1	20	5.0	4.7	✓
Method Blanks (MB)							
Biochemical Oxygen Demand - 5 day	E550	1565895	1	19	5.2	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1568342	1	13	7.6	5.0	✓
Oil & Grease by Gravimetry	E567	1568341	1	15	6.6	5.0	✓
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC	1566082	1	3	33.3	5.0	✓
TSS by Gravimetry	E160	1566097	1	20	5.0	4.7	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC ALS Environmental - Waterloo	Water	APHA 9222 D (mod)	Following filtration (0.45 µm), and incubation at 44.5 ±0.2°C for 22-26 hours, colonies exhibiting characteristic morphology of the target organism are enumerated and confirmed.
pH by Meter	E108 ALS Environmental - Waterloo	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
TSS by Gravimetry	E160 ALS Environmental - Waterloo	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
Biochemical Oxygen Demand - 5 day	E550 ALS Environmental - Waterloo	Water	APHA 5210 B (mod)	Samples are diluted and incubated for a specified time period, after which the oxygen depletion is measured using a dissolved oxygen meter. Free chlorine is a negative interference in the BOD method; please advise ALS when free chlorine is present in samples.
Oil & Grease by Gravimetry	E567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane and the extract is evaporated to dryness. The residue is then weighed to determine Oil and Grease.
Mineral Oil & Grease by Gravimetry	E567SG ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane, followed by silica gel treatment after which the extract is evaporated to dryness. The residue is then weighed to determine Mineral Oil and Grease.
Animal & Vegetable Oil & Grease by Gravimetry	EC567A.SG ALS Environmental - Waterloo	Water	APHA 5520 (mod)	Animal & vegetable oil and grease is calculated as follows: Oil & Grease (gravimetric) minus Mineral Oil & Grease (gravimetric)

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Oil & Grease Extraction for Gravimetry	EP567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane by liquid-liquid extraction.

GC-457

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

Affix ALS barcode label here (lab use only)

COC Number: 14 -

Page 1 of 1

Environmental Division Waterloo
Work Order Reference
WT2421315

Telephone : +1 519 886 6910

Report To		Report Format / Distribution	Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)
Company:	Nasittuq Corp -- NATTIOO	Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	R ☑ Regular (Standard TAT if re
Contact:	Alaina Leslie	Quality Control (QC) Report with Report ☑ Yes ☐ No	P ☐ Priority (2-4 bus. days if rec
Address:	275 Slater St Ottawa ON K1P 5H9	☑ Criteria on Report - provide details below if box checked	E ☐ Emergency (1-2 bus. days i
Phone:	613-223-0629	Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	E2 ☐ Same day or weekend emer
		Email 1 or Fax alaina.leslie@nasittuq.com	Specify Date Required for E2,E
		Email 2 labresults@nasittuq.com	

Invoice To	Same as Report To ☐ Yes ☐ No	Invoice Distribution	Indicate Filtered (F), Preserv
	Copy of Invoice with Report ☐ Yes ☐ No	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	
Company:		Email 1 or Fax labresults@nasittuq.com	
Contact:		Email 2 naccounting@nasittuq.com	

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q89840 WT2023NATT1000004	Approver ID:	Cost Center:
Job #:	NWS Sewage FOX-M	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	

ALS Lab Work Order # (lab use only)

ALS Contact: E. Dobbin **Sampler:** * D.R.

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BOD, pH, TSS	O&G	Faecal Coliforms	Number of Containers
	XL-Cycle-let Gen Chem and O&G	*08/07/24	9:30	Effluent	R	R		3
	XL-Cycle-let Faecal A	* "	9:30	Effluent			R	1
	XL-Cycle-let Faecal B	* "	9:30	Effluent			R	1
	XL-Cycle-let Faecal C	*08/07/24	9:30	Effluent			R	1

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)
Are samples taken from a Regulated DW System? ☐ Yes ☑ No Are samples for human drinking water use? ☐ Yes ☑ No	Please apply NWS Sewage Limits Threshold

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen	☐	SIF Observations	Yes ☐	No ☐	
Ice packs	Yes ☒	No ☐	Custody seal intact	Yes ☐	No ☐
Cooling Initiated	☐				

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
17.8			9.9		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: *	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
	Jul 8 2024	11:00 AM	POSTAT F	25/7/24	12:15	BB	07/24/24	900

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

NA-FM-0326e v08 Front/04 January 2014

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

ALS Canada Ltd.

right solutions.
right partner.

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: **WT2423156**	Page	: 1 of 4
Client	: **NASITTUQ CORPORATION**	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 12-Aug-2024 12:15
PO	: ----	Date Analysis Commenced	: 13-Aug-2024
C-O-C number	: ----	Issue Date	: 19-Aug-2024 17:15
Sampler	: Alex Kelly		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Greg Pokocky	Manager - Inorganics	Inorganics, Waterloo, Ontario
Kaitlyn Lammers	Lab Assistant	Microbiology, Waterloo, Ontario
Manuel TavaraTello	Supervisor - Semi-Volatile Extractions	Organics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Inorganics, Waterloo, Ontario

No Breaches Found

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.
Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

Unit	*Description*
CFU/100mL	
mg/L	
pH units	

>: greater than.
<: less than.
Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Qualifiers

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
PEHR	Parameter exceeded recommended holding time on receipt: Proceeded with analysis as requested.

Analytical Results Evaluation

Matrix: **Water**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	XL-Cycle-let Gen Chem and O&G	XL-Cycle-let Faecal A	XL-Cycle-let Faecal B	XL-Cycle-let Faecal C	----	----	----
				Sampling date/time	06-Aug-2024 09:30	06-Aug-2024 09:31	06-Aug-2024 09:32	06-Aug-2024 09:33	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
				WT2423156-001	WT2423156-002	WT2423156-003	WT2423156-004	--------	--------	--------	
Physical Tests											
pH	----	E108/WT	pH units	7.96	----	----	----	----	----	----	----
Solids, total suspended [TSS]	----	E160/WT	mg/L	<3.0	----	----	----	----	----	----	----
Microbiological Tests											
Coliforms, thermotolerant [fecal]	----	E012.FC/WT	CFU/100 mL	----	390 DLM, PEHR	Not Detected DLM, PEHR	180 DLM, PEHR	----	----	----	----
Aggregate Organics											
Biochemical oxygen demand [BOD]	----	E550/WT	mg/L	15.6 PEHR	----	----	----	----	----	----	----
Oil & grease (gravimetric)	----	E567/WT	mg/L	<5.0	----	----	----	----	----	----	----
Oil & grease, animal/vegetable (gravimetric)	----	EC567A.SG/WT	mg/L	<5.0	----	----	----	----	----	----	----
Oil & grease, mineral (gravimetric)	----	E567SG/WT	mg/L	<5.0	----	----	----	----	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Limits

Analyte	*CAS Number*	*Unit*	**NWS Sewage Limits**						
Physical Tests									
pH	----	pH units	**6 - 9 pH units**						
Solids, total suspended [TSS]	----	mg/L	**180 mg/L**						
Microbiological Tests									
Coliforms, thermotolerant [fecal]	----	CFU/100mL	**10000 CFU/100mL**						
Aggregate Organics									
Biochemical oxygen demand [BOD]	----	mg/L	**120 mg/L**						
Oil & grease (gravimetric)	----	mg/L	**--**						
Oil & grease, animal/vegetable (gravimetric)	----	mg/L	**--**						
Oil & grease, mineral (gravimetric)	----	mg/L	**--**						

Please refer to the General Comments section for an explanation of any qualifiers detected.

Key:

NWS Sewage Limits NWS Sewage Limits

NWS Sewage Limits NWS Sewage Limits

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **WT2423156**	Page	: 1 of 4
Client	: NASITTUQ CORPORATION	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 12-Aug-2024 12:15
PO	: ----	Date Analysis Commenced	: 13-Aug-2024
C-O-C number	: ----	Issue Date	: 19-Aug-2024 17:15
Sampler	: Alex Kelly		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Greg Pokocky	Manager - Inorganics	Waterloo Inorganics, Waterloo, Ontario
Kaitlyn Lammers	Lab Assistant	Waterloo Microbiology, Waterloo, Ontario
Manuel TavaraTello	Supervisor - Semi-Volatile Extractions	Waterloo Organics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Waterloo Inorganics, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 1592689)											
WT2422849-016	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	10.4	11.4	1.0	Diff <2x LOR	----
Physical Tests (QC Lot: 1594622)											
HA2401870-001	Anonymous	pH	----	E108	0.10	pH units	7.78	7.80	0.257%	4%	----
Microbiological Tests (QC Lot: 1594900)											
WT2423156-002	XL-Cycle-let Faecal A	Coliforms, thermotolerant [fecal]	----	E012.FC	10	CFU/100mL	390	230	51.6%	65%	----
Aggregate Organics (QC Lot: 1592829)											
WT2423063-003	Anonymous	Biochemical oxygen demand [BOD]	----	E550	3.0	mg/L	3.3	<3.0	9.5%	30%	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1592689)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Microbiological Tests (QCLot: 1594900)						
Coliforms, thermotolerant [fecal]	----	E012.FC	1	CFU/100mL	<1	----
Aggregate Organics (QCLot: 1592829)						
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	<2.0	----
Aggregate Organics (QCLot: 1596492)						
Oil & grease (gravimetric)	----	E567	5	mg/L	<5.0	----
Aggregate Organics (QCLot: 1596493)						
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	<5.0	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1592689)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	94.3	85.0	115	----
Physical Tests (QCLot: 1594622)									
pH	----	E108	----	pH units	7 pH units	101	98.0	102	----
Aggregate Organics (QCLot: 1592829)									
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	198 mg/L	104	85.0	115	----
Aggregate Organics (QCLot: 1596492)									
Oil & grease (gravimetric)	----	E567	5	mg/L	200 mg/L	96.0	70.0	130	----
Aggregate Organics (QCLot: 1596493)									
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	100 mg/L	81.3	70.0	130	----

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **WT2423156**	Page	: 1 of 6
Client	: **NASITTUQ CORPORATION**	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 12-Aug-2024 12:15
PO	: ----	Issue Date	: 19-Aug-2024 17:15
C-O-C number	: ----		
Sampler	: Alex Kelly		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [ON MECP] XL-Cycle-let Gen Chem and O&G	E550	06-Aug-2024	----	----	----		13-Aug-2024	4 days	6 days	× EHTR
Aggregate Organics : Mineral Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) XL-Cycle-let Gen Chem and O&G	E567SG	06-Aug-2024	15-Aug-2024	28 days	9 days	✓	15-Aug-2024	28 days	9 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) XL-Cycle-let Gen Chem and O&G	E567	06-Aug-2024	15-Aug-2024	28 days	9 days	✓	15-Aug-2024	28 days	9 days	✓
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL-Cycle-let Faecal A	E012.FC	06-Aug-2024	----	----	----		14-Aug-2024	48 hrs	192 hrs	× EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL-Cycle-let Faecal B	E012.FC	06-Aug-2024	----	----	----		14-Aug-2024	48 hrs	192 hrs	× EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL-Cycle-let Faecal C	E012.FC	06-Aug-2024	----	----	----		14-Aug-2024	48 hrs	192 hrs	× EHTR
Physical Tests : pH by Meter										
HDPE [ON MECP] XL-Cycle-let Gen Chem and O&G	E108	06-Aug-2024	14-Aug-2024	14 days	8 days	✓	14-Aug-2024	14 days	8 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TSS by Gravimetry										
HDPE [ON MECP]										
XL-Cycle-let Gen Chem and O&G	E160	06-Aug-2024	----	----	----		14-Aug-2024	7 days	8 days	× EHT

Legend & Qualifier Definitions

EHTR: Exceeded ALS recommended hold time prior to sample receipt.

EHT: Exceeded ALS recommended hold time prior to analysis.

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: × = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Biochemical Oxygen Demand - 5 day	E550	1592829	1	7	14.2	5.0	✓
pH by Meter	E108	1594622	1	13	7.6	5.0	✓
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC	1594900	1	3	33.3	5.0	✓
TSS by Gravimetry	E160	1592689	1	19	5.2	4.7	✓
Laboratory Control Samples (LCS)							
Biochemical Oxygen Demand - 5 day	E550	1592829	1	7	14.2	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1596493	1	8	12.5	5.0	✓
Oil & Grease by Gravimetry	E567	1596492	1	15	6.6	5.0	✓
pH by Meter	E108	1594622	1	13	7.6	5.0	✓
TSS by Gravimetry	E160	1592689	1	19	5.2	4.7	✓
Method Blanks (MB)							
Biochemical Oxygen Demand - 5 day	E550	1592829	1	7	14.2	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1596493	1	8	12.5	5.0	✓
Oil & Grease by Gravimetry	E567	1596492	1	15	6.6	5.0	✓
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC	1594900	1	3	33.3	5.0	✓
TSS by Gravimetry	E160	1592689	1	19	5.2	4.7	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC ALS Environmental - Waterloo	Water	APHA 9222 D (mod)	Following filtration (0.45 µm), and incubation at 44.5 ±0.2°C for 22-26 hours, colonies exhibiting characteristic morphology of the target organism are enumerated and confirmed.
pH by Meter	E108 ALS Environmental - Waterloo	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
TSS by Gravimetry	E160 ALS Environmental - Waterloo	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
Biochemical Oxygen Demand - 5 day	E550 ALS Environmental - Waterloo	Water	APHA 5210 B (mod)	Samples are diluted and incubated for a specified time period, after which the oxygen depletion is measured using a dissolved oxygen meter. Free chlorine is a negative interference in the BOD method; please advise ALS when free chlorine is present in samples.
Oil & Grease by Gravimetry	E567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane and the extract is evaporated to dryness. The residue is then weighed to determine Oil and Grease.
Mineral Oil & Grease by Gravimetry	E567SG ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane, followed by silica gel treatment after which the extract is evaporated to dryness. The residue is then weighed to determine Mineral Oil and Grease.
Animal & Vegetable Oil & Grease by Gravimetry	EC567A.SG ALS Environmental - Waterloo	Water	APHA 5520 (mod)	Animal & vegetable oil and grease is calculated as follows: Oil & Grease (gravimetric) minus Mineral Oil & Grease (gravimetric)

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Oil & Grease Extraction for Gravimetry	EP567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane by liquid-liquid extraction.

B-860
GC-549

Request Form

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here (lab use only)

Environmental Division Waterloo
Work Order Reference
WT2423156

Telephone : +1 519 886 6910

Report To		Report Format / Distribution	Select Service Level Be ests)
Company:	Nasittuq Corp	Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	R ☑ Regular (Standard TAT i
Contact:	Alaina Leslie	Quality Control (QC) Report with Report ☑ Yes ☐ No	P ☐ Priority (2-4 bus. days if TAT
Address:	275 Slater St Ottawa ON K1P 5H9	☑ Criteria on Report - provide details below if box checked Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	E ☐ Emergency (1-2 bus. days firm TAT E2 ☐ Same day or weekend em
Phone:	613-223-0629	Email 1 or Fax alaina.leslie@nasittuq.com	Specify Date Required for E2,E
		Email 2 labresults@nasittuq.com	
Invoice To	Same as Report To ☐ Yes ☐ No	**Invoice Distribution**	Indicate Filtered (F), Preserv
	Copy of Invoice with Report ☐ Yes ☐ No	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	
Company:		Email 1 or Fax labresults@nasittuq.com	
Contact:		Email 2 naccounting@nasittuq.com	
Project Information		**Oil and Gas Required Fields (client use)**	
ALS Quote #:	Q89840	Approver ID:	Cost Center:
Job #:	NWS Sewage FOX-M	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	
ALS Lab Work Order # (lab use only)		**ALS Contact:** E. Dobbin	**Sampler:** Alex* Kelly

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BOD, pH, TSS	O&G	Faecal Coliforms	Number of Containers
	XL-Cycle-let Gen Chem and O&G	*06-Aug-24	09:30	Effluent	R	R		3
	XL-Cycle-let Faecal A	*06-Aug-24	09:31	Effluent			R	1
	XL-Cycle-let Faecal B	*06-Aug-24	09:32	Effluent			R	1
	XL-Cycle-let Faecal C	*06-Aug-24	09:33	Effluent			R	1

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ Yes ☑ No

Are samples for human drinking water use? ☐ Yes ☑ No

Special Instructions / Specify Criteria to add on report (client Use)

Please apply NWS Sewage Limits Threshold

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐
Ice packs Yes ☑ No ☐ Custody seal intact Yes ☐ No ☐
Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
19.8			9.2		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: *	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
Dion Akearok	Aug 6 '24	11:30AM	Eric Dobbin	12/08/24	12:15	BB	8/13/24	700

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION WHITE - LABORATORY COPY YELLOW - CLIENT COPY

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form.**

ALS Canada Ltd.

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right partner.

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: **WT2431883**	Page	: 1 of 4
Client	: **NASITTUQ CORPORATION**	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 24-Oct-2024 12:30
PO	: ----	Date Analysis Commenced	: 25-Oct-2024
C-O-C number	: ----	Issue Date	: 31-Oct-2024 12:33
Sampler	: AK		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Greg Pokocky	Manager - Inorganics	Inorganics, Waterloo, Ontario
Rachel Cameron	Supervisor - Semi-Volatile Extractions	Organics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Inorganics, Waterloo, Ontario
Zeba Patel	Analyst	Microbiology, Waterloo, Ontario

No Breaches Found

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.
Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

Unit	*Description*
CFU/100mL	
mg/L	
pH units	

>: greater than.
<: less than.
Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Qualifiers

Qualifier	Description
BODL	Limit of Reporting for BOD was increased to account for the largest volume of sample tested.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
PEHR	Parameter exceeded recommended holding time on receipt: Proceeded with analysis as requested.

Analytical Results Evaluation

Matrix: **Effluent**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	XL- CYCLE- LET GEN CHEM and O&G	XL- CYCLE- LET Faecal A	XL- CYCLE- LET Faecal B	XL- CYCLE- LET Faecal C	----	----	----
				Sampling date/time	17-Oct-2024 09:30	17-Oct-2024 09:30	17-Oct-2024 09:31	17-Oct-2024 09:32	----	----	----
				Sub-Matrix	Effluent	Effluent	Effluent	Effluent	----	----	----
					WT2431883-001	WT2431883-002	WT2431883-003	WT2431883-004	--------	--------	--------
Physical Tests											
pH	----	E108/WT	pH units		7.85	----	----	----	----	----	----
Solids, total suspended [TSS]	----	E160/WT	mg/L		<3.0	----	----	----	----	----	----
Microbiological Tests											
Coliforms, thermotolerant [fecal]	----	E012.FC/WT	CFU/100 mL		----	510 DLM, PEHR	570 DLM, PEHR	620 DLM, PEHR	----	----	----
Aggregate Organics											
Biochemical oxygen demand [BOD]	----	E550/WT	mg/L		<3.0 BODL, PEHR	----	----	----	----	----	----
Oil & grease (gravimetric)	----	E567/WT	mg/L		<5.0	----	----	----	----	----	----
Oil & grease, animal/vegetable (gravimetric)	----	EC567A.SG/WT	mg/L		<5.0	----	----	----	----	----	----
Oil & grease, mineral (gravimetric)	----	E567SG/WT	mg/L		<5.0	----	----	----	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Limits

Analyte	*CAS Number*	*Unit*	**NWS Sewage Limits**						
Physical Tests									
pH	----	pH units	**6 - 9 pH units**						
Solids, total suspended [TSS]	----	mg/L	**180 mg/L**						
Microbiological Tests									
Coliforms, thermotolerant [fecal]	----	CFU/100mL	**10000 CFU/100mL**						
Aggregate Organics									
Biochemical oxygen demand [BOD]	----	mg/L	**120 mg/L**						
Oil & grease (gravimetric)	----	mg/L	**--**						
Oil & grease, animal/vegetable (gravimetric)	----	mg/L	**--**						
Oil & grease, mineral (gravimetric)	----	mg/L	**--**						

Please refer to the General Comments section for an explanation of any qualifiers detected.

Key:

NWS Sewage Limits NWS Sewage Limits

NWS Sewage Limits NWS Sewage Limits

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **WT2431883**	Page	: 1 of 4
Client	: NASITTUQ CORPORATION	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 24-Oct-2024 12:30
PO	: ----	Date Analysis Commenced	: 25-Oct-2024
C-O-C number	: ----	Issue Date	: 31-Oct-2024 12:33
Sampler	: AK		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Greg Pokocky	Manager - Inorganics	Waterloo Inorganics, Waterloo, Ontario
Rachel Cameron	Supervisor - Semi-Volatile Extractions	Waterloo Organics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario
Zeba Patel	Analyst	Waterloo Microbiology, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 1731654)											
WT2431791-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	4.8	3.6	1.2	Diff <2x LOR	----
Physical Tests (QC Lot: 1732581)											
WT2431726-001	Anonymous	pH	----	E108	0.10	pH units	6.98	7.01	0.429%	4%	----
Aggregate Organics (QC Lot: 1731754)											
WT2431731-002	Anonymous	Biochemical oxygen demand [BOD]	----	E550	2.0	mg/L	<2.0	<2.0	0.0%	30%	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1731654)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Microbiological Tests (QCLot: 1733622)						
Coliforms, thermotolerant [fecal]	----	E012.FC	1	CFU/100mL	<1	----
Aggregate Organics (QCLot: 1731754)						
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	<2.0	----
Aggregate Organics (QCLot: 1734449)						
Oil & grease (gravimetric)	----	E567	5	mg/L	<5.0	----
Aggregate Organics (QCLot: 1734450)						
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	<5.0	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1731654)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	93.3	85.0	115	----
Physical Tests (QCLot: 1732581)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Aggregate Organics (QCLot: 1731754)									
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	198 mg/L	102	85.0	115	----
Aggregate Organics (QCLot: 1734449)									
Oil & grease (gravimetric)	----	E567	5	mg/L	200 mg/L	94.4	70.0	130	----
Aggregate Organics (QCLot: 1734450)									
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	100 mg/L	83.7	70.0	130	----

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **WT2431883**	Page	: 1 of 6
Client	: **NASITTUQ CORPORATION**	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 24-Oct-2024 12:30
PO	: ----	Issue Date	: 31-Oct-2024 12:32
C-O-C number	: ----		
Sampler	: AK		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers occur - please see following pages for full details.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [BOD HT-4d] XL- CYCLE- LET GEN CHEM and O&G	E550	17-Oct-2024	----	----	----		25-Oct-2024	4 days	8 days	× EHTR
Aggregate Organics : Mineral Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) XL- CYCLE- LET GEN CHEM and O&G	E567SG	17-Oct-2024	27-Oct-2024	28 days	10 days	✓	29-Oct-2024	28 days	12 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) XL- CYCLE- LET GEN CHEM and O&G	E567	17-Oct-2024	27-Oct-2024	28 days	10 days	✓	29-Oct-2024	28 days	12 days	✓
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL- CYCLE- LET Faecal A	E012.FC	17-Oct-2024	----	----	----		26-Oct-2024	48 hrs	220 hrs	× EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL- CYCLE- LET Faecal B	E012.FC	17-Oct-2024	----	----	----		26-Oct-2024	48 hrs	220 hrs	× EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL- CYCLE- LET Faecal C	E012.FC	17-Oct-2024	----	----	----		26-Oct-2024	48 hrs	220 hrs	× EHTR
Physical Tests : pH by Meter										
HDPE [ON MECP] XL- CYCLE- LET GEN CHEM and O&G	E108	17-Oct-2024	25-Oct-2024	14 days	8 days	✓	29-Oct-2024	14 days	12 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TSS by Gravimetry										
HDPE [ON MECP]										
XL- CYCLE- LET GEN CHEM and O&G	E160	17-Oct-2024	----	----	----		25-Oct-2024	7 days	8 days	× EHTL

Legend & Qualifier Definitions

EHTR: Exceeded ALS recommended hold time prior to sample receipt.

EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: × = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Biochemical Oxygen Demand - 5 day	E550	1731754	1	19	5.2	5.0	✓
pH by Meter	E108	1732581	1	15	6.6	5.0	✓
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC	1733622	0	4	0.0	5.0	×
TSS by Gravimetry	E160	1731654	1	20	5.0	4.7	✓
Laboratory Control Samples (LCS)							
Biochemical Oxygen Demand - 5 day	E550	1731754	1	19	5.2	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1734450	1	6	16.6	5.0	✓
Oil & Grease by Gravimetry	E567	1734449	1	19	5.2	5.0	✓
pH by Meter	E108	1732581	1	15	6.6	5.0	✓
TSS by Gravimetry	E160	1731654	1	20	5.0	4.7	✓
Method Blanks (MB)							
Biochemical Oxygen Demand - 5 day	E550	1731754	1	19	5.2	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1734450	1	6	16.6	5.0	✓
Oil & Grease by Gravimetry	E567	1734449	1	19	5.2	5.0	✓
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC	1733622	1	4	25.0	5.0	✓
TSS by Gravimetry	E160	1731654	1	20	5.0	4.7	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC ALS Environmental - Waterloo	Water	APHA 9222 D (mod)	Following filtration (0.45 µm), and incubation at 44.5 ±0.2°C for 22-26 hours, colonies exhibiting characteristic morphology of the target organism are enumerated and confirmed.
pH by Meter	E108 ALS Environmental - Waterloo	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
TSS by Gravimetry	E160 ALS Environmental - Waterloo	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
Biochemical Oxygen Demand - 5 day	E550 ALS Environmental - Waterloo	Water	APHA 5210 B (mod)	Samples are diluted and incubated for a specified time period, after which the oxygen depletion is measured using a dissolved oxygen meter. Free chlorine is a negative interference in the BOD method; please advise ALS when free chlorine is present in samples.
Oil & Grease by Gravimetry	E567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane and the extract is evaporated to dryness. The residue is then weighed to determine Oil and Grease.
Mineral Oil & Grease by Gravimetry	E567SG ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane, followed by silica gel treatment after which the extract is evaporated to dryness. The residue is then weighed to determine Mineral Oil and Grease.
Animal & Vegetable Oil & Grease by Gravimetry	EC567A.SG ALS Environmental - Waterloo	Water	APHA 5520 (mod)	Animal & vegetable oil and grease is calculated as follows: Oil & Grease (gravimetric) minus Mineral Oil & Grease (gravimetric)

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Oil & Grease Extraction for Gravimetry	EP567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane by liquid-liquid extraction.

VM

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

Affix ALS barcode label here (lab use only)

COC Number: 14 -

Page 1 of 1

Environmental Division
Waterloo
Work Order Reference
WT2431883

Telephone : +1 519 886 6910

Report To	
Company:	Nasittuq Corp
Contact:	Alaina Leslie
Address:	275 Slater St, Ottawa ON K1P 5H9
Phone:	613-223-0629
Invoice To	Same as Report To ☑ Yes ☐ No
	Copy of Invoice with Report ☑ Yes ☐ No
Company:	
Contact:	

Project Information

ALS Quote #:	Q89840 WT2023NATT1000004
Job #:	NWS Sewage FOX-M
PO / AFE:	
LSD:	JD

Report Format / Distribution

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)
Quality Control (QC) Report with Report ☑ Yes ☐ No
☑ Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax alaina.leslie@nasittuq.com
Email 2 labresults@nasittuq.com

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax labresults@nasittuq.com
Email 2 naccounting@nasittuq.com

Oil and Gas Required Fields (client use)

Approver ID:	Cost Center:
GL Account:	Routing Code:
Activity Code:	
Location:	

Select Service Level Below (Rush Turnaround Tim

R ☑ Regular (Standard TAT if received by 3 pm - busine
P ☐ Priority (2-4 bus. days if received by 3pm) 50% sur
E ☐ Emergency (1-2 bus. days if received by 3pm) 100
E2 ☐ Same day or weekend emergency - contact ALS to

Specify Date Required for E2,E or P:

Analysis Requ

Indicate Filtered (F), Preserved (P) or Filtered and P

ALS Lab Work Order # (lab use only)

ALS Contact: E. Dobbin   Sampler: Alex Kelly

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BOD, pH, TSS	O&G	Faecal Coliforms	Number of C
	XL Cycle-let Gen Chem and O&G	17-oct-24	09:30	Effluent	R	R		3
	XL - Cycle-let Faecal A	17-oct-24	09:30	Effluent			R	1
	XL - Cycle-let Faecal B	17-oct-24	09:31	Effluent			R	1
	XL - Cycle-let Faecal C	17-oct-24	09:32	Effluent			R	1

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ Yes ☑ No

Are samples for human drinking water use? ☐ Yes ☑ No

Special Instructions / Specify Criteria to add on report (client Use)

NWS Nunavut Water Board Licence Criteria

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐   SIF Observations Yes ☐ No ☐
Ice packs Yes ☒ No ☐   Custody seal intact Yes ☐ No ☐
Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C: 12.6
FINAL COOLER TEMPERATURES °C: 7.2

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: [signature]	Date: AUG 2024	Time: 11:00AM	Received by: CUSTAR F	Date: 24/10/24	Time: 12:30	Received by: [signature]	Date: 25 OCT 24	Time: 10:00

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION   WHITE - LABORATORY COPY   YELLOW - CLIENT COPY

NA-FM-0326e v09 Front/04 January 2014

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

R-old   SC-073   066-989

ALS Canada Ltd.

right solutions. right partner.

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: **WT2433968**	Page	: 1 of 4
Client	: **NASITTUQ CORPORATION**	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage	Date Samples Received	: 13-Nov-2024 10:25
PO	: ----	Date Analysis Commenced	: 14-Nov-2024
C-O-C number	: ----	Issue Date	: 20-Nov-2024 14:11
Sampler	: ALEX KELLY		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Hannah Lewis	Inorganics Analyst	Inorganics, Waterloo, Ontario
Jeminikumari Patel		Microbiology, Waterloo, Ontario
Kelly Fischer	Technical Specialist	Inorganics, Waterloo, Ontario
Manuel TavaraTello	Supervisor - Semi-Volatile Extractions	Organics, Waterloo, Ontario

No Breaches Found

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.
Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

Unit	*Description*
CFU/100mL	
mg/L	
pH units	

>: greater than.
<: less than.
Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Workorder Comments

Samples: Exceeded Recommended Holding Time prior to receipt at the lab for Microbiology analysis.

Qualifiers

Qualifier	Description
BODL	Limit of Reporting for BOD was increased to account for the largest volume of sample tested.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
PEHR	Parameter exceeded recommended holding time on receipt: Proceeded with analysis as requested.

Analytical Results Evaluation

Matrix: **Water**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	Cycle-let Gen Chem and O&G	Cycle-let Faecal A	Cycle-let Faecal B	Cycle-let Faecal C	----	----	----
				Sampling date/time	07-Nov-2024 09:00	07-Nov-2024 09:02	07-Nov-2024 09:02	07-Nov-2024 09:03	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					WT2433968-001	WT2433968-002	WT2433968-003	WT2433968-004	--------	--------	--------
Physical Tests											
pH	----	E108/WT	pH units		7.77	----	----	----	----	----	----
Solids, total suspended [TSS]	----	E160/WT	mg/L		<3.0	----	----	----	----	----	----
Microbiological Tests											
Coliforms, thermotolerant [fecal]	----	E012.FC/WT	CFU/100 mL		----	200 DLM, PEHR	250 DLM, PEHR	140 DLM, PEHR	----	----	----
Aggregate Organics											
Biochemical oxygen demand [BOD]	----	E550/WT	mg/L		<3.0 BODL, PEHR	----	----	----	----	----	----
Oil & grease (gravimetric)	----	E567/WT	mg/L		<5.0	----	----	----	----	----	----
Oil & grease, animal/vegetable (gravimetric)	----	EC567A.SG/WT	mg/L		<5.0	----	----	----	----	----	----
Oil & grease, mineral (gravimetric)	----	E567SG/WT	mg/L		<5.0	----	----	----	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Limits

Analyte	*CAS Number*	*Unit*	**NWS Sewage Limits**						
Physical Tests									
pH	----	pH units	**6 - 9 pH units**						
Solids, total suspended [TSS]	----	mg/L	**180 mg/L**						
Microbiological Tests									
Coliforms, thermotolerant [fecal]	----	CFU/100mL	**10000 CFU/100mL**						
Aggregate Organics									
Biochemical oxygen demand [BOD]	----	mg/L	**120 mg/L**						
Oil & grease (gravimetric)	----	mg/L	**--**						
Oil & grease, animal/vegetable (gravimetric)	----	mg/L	**--**						
Oil & grease, mineral (gravimetric)	----	mg/L	**--**						

Please refer to the General Comments section for an explanation of any qualifiers detected.

Key:

NWS Sewage Limits NWS Sewage Limits

NWS Sewage Limits NWS Sewage Limits

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **WT2433968**	Page	: 1 of 4
Client	: NASITTUQ CORPORATION	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage	Date Samples Received	: 13-Nov-2024 10:25
PO	: ----	Date Analysis Commenced	: 14-Nov-2024
C-O-C number	: ----	Issue Date	: 20-Nov-2024 14:11
Sampler	: ALEX KELLY		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Hannah Lewis	Inorganics Analyst	Waterloo Inorganics, Waterloo, Ontario
Jeminikumari Patel		Waterloo Microbiology, Waterloo, Ontario
Kelly Fischer	Technical Specialist	Waterloo Inorganics, Waterloo, Ontario
Manuel TavaraTello	Supervisor - Semi-Volatile Extractions	Waterloo Organics, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 1766039)											
WT2433710-002	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1767633)											
WT2433946-001	Anonymous	pH	----	E108	0.10	pH units	8.22	8.08	1.72%	4%	----
Aggregate Organics (QC Lot: 1766480)											
WT2433895-003	Anonymous	Biochemical oxygen demand [BOD]	----	E550	3.0	mg/L	<3.0	<3.0	0.0%	30%	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1766039)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Microbiological Tests (QCLot: 1766345)						
Coliforms, thermotolerant [fecal]	----	E012.FC	1	CFU/100mL	<1	----
Aggregate Organics (QCLot: 1766480)						
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	<2.0	----
Aggregate Organics (QCLot: 1767323)						
Oil & grease (gravimetric)	----	E567	5	mg/L	<5.0	----
Aggregate Organics (QCLot: 1767324)						
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	<5.0	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1766039)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	96.5	85.0	115	----
Physical Tests (QCLot: 1767633)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Aggregate Organics (QCLot: 1766480)									
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	198 mg/L	93.1	85.0	115	----
Aggregate Organics (QCLot: 1767323)									
Oil & grease (gravimetric)	----	E567	5	mg/L	200 mg/L	102	70.0	130	----
Aggregate Organics (QCLot: 1767324)									
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	100 mg/L	93.2	70.0	130	----

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **WT2433968**	Page	: 1 of 6
Client	: **NASITTUQ CORPORATION**	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage	Date Samples Received	: 13-Nov-2024 10:25
PO	: ----	Issue Date	: 20-Nov-2024 14:11
C-O-C number	: ----		
Sampler	: ALEX KELLY		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers occur - please see following pages for full details.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [ON MECP] Cycle-let Gen Chem and O&G	E550	07-Nov-2024	----	----	----		14-Nov-2024	4 days	7 days	× EHTR
Aggregate Organics : Mineral Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) Cycle-let Gen Chem and O&G	E567SG	07-Nov-2024	14-Nov-2024	28 days	8 days	✓	15-Nov-2024	28 days	8 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) Cycle-let Gen Chem and O&G	E567	07-Nov-2024	14-Nov-2024	28 days	8 days	✓	15-Nov-2024	28 days	8 days	✓
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] Cycle-let Faecal A	E012.FC	07-Nov-2024	----	----	----		14-Nov-2024	48 hrs	171 hrs	× EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] Cycle-let Faecal B	E012.FC	07-Nov-2024	----	----	----		14-Nov-2024	48 hrs	171 hrs	× EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] Cycle-let Faecal C	E012.FC	07-Nov-2024	----	----	----		14-Nov-2024	48 hrs	171 hrs	× EHTR
Physical Tests : pH by Meter										
HDPE [ON MECP] Cycle-let Gen Chem and O&G	E108	07-Nov-2024	15-Nov-2024	14 days	8 days	✓	19-Nov-2024	14 days	12 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TSS by Gravimetry										
HDPE [ON MECP]										
Cycle-let Gen Chem and O&G	E160	07-Nov-2024	----	----	----		14-Nov-2024	7 days	7 days	✓

Legend & Qualifier Definitions

EHTR: Exceeded ALS recommended hold time prior to sample receipt.

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: ✗ = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Biochemical Oxygen Demand - 5 day	E550	1766480	1	20	5.0	5.0	✓
pH by Meter	E108	1767633	1	19	5.2	5.0	✓
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC	1766345	0	3	0.0	5.0	✗
TSS by Gravimetry	E160	1766039	1	19	5.2	4.7	✓
Laboratory Control Samples (LCS)							
Biochemical Oxygen Demand - 5 day	E550	1766480	1	20	5.0	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1767324	1	13	7.6	5.0	✓
Oil & Grease by Gravimetry	E567	1767323	1	20	5.0	5.0	✓
pH by Meter	E108	1767633	1	19	5.2	5.0	✓
TSS by Gravimetry	E160	1766039	1	19	5.2	4.7	✓
Method Blanks (MB)							
Biochemical Oxygen Demand - 5 day	E550	1766480	1	20	5.0	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1767324	1	13	7.6	5.0	✓
Oil & Grease by Gravimetry	E567	1767323	1	20	5.0	5.0	✓
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC	1766345	1	3	33.3	5.0	✓
TSS by Gravimetry	E160	1766039	1	19	5.2	4.7	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC ALS Environmental - Waterloo	Water	APHA 9222 D (mod)	Following filtration (0.45 µm), and incubation at 44.5 ±0.2°C for 22-26 hours, colonies exhibiting characteristic morphology of the target organism are enumerated and confirmed.
pH by Meter	E108 ALS Environmental - Waterloo	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
TSS by Gravimetry	E160 ALS Environmental - Waterloo	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
Biochemical Oxygen Demand - 5 day	E550 ALS Environmental - Waterloo	Water	APHA 5210 B (mod)	Samples are diluted and incubated for a specified time period, after which the oxygen depletion is measured using a dissolved oxygen meter. Free chlorine is a negative interference in the BOD method; please advise ALS when free chlorine is present in samples.
Oil & Grease by Gravimetry	E567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane and the extract is evaporated to dryness. The residue is then weighed to determine Oil and Grease.
Mineral Oil & Grease by Gravimetry	E567SG ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane, followed by silica gel treatment after which the extract is evaporated to dryness. The residue is then weighed to determine Mineral Oil and Grease.
Animal & Vegetable Oil & Grease by Gravimetry	EC567A.SG ALS Environmental - Waterloo	Water	APHA 5520 (mod)	Animal & vegetable oil and grease is calculated as follows: Oil & Grease (gravimetric) minus Mineral Oil & Grease (gravimetric)

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Oil & Grease Extraction for Gravimetry	EP567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane by liquid-liquid extraction.

0919-30
HC-216

WO 1123533

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

Affix ALS barcode label here (lab use only)

Environmental Division
Waterloo
Work Order Reference
WT2433968

Telephone : +1 519 886 6910

Report To	
Company:	Nasittuq Corp
Contact:	Alaina Leslie
Address:	275 Slater St Ottawa ON K1P 5H9
Phone:	613-223-0629

Report Format / Distribution

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Quality Control (QC) Report with Report ☑ Yes ☐ No
☑ Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax alaina.leslie@nasittuq.com
Email 2 labresults@nasittuq.com

Select Service Level Below

R ☑ Regular (Standard TAT if recei
P ☐ Priority (2-4 bus. days if receiv
E ☐ Emergency (1-2 bus. days if re
E2 ☐ Same day or weekend emerge
Specify Date Required for E2,E o

TAT

Invoice To	
Same as Report To	☐ Yes ☐ No
Copy of Invoice with Report	☐ Yes ☐ No
Company:	
Contact:	

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax labresults@nasittuq.com
Email 2 accounting@nasittuq.com

Project Information	
ALS Quote #:	Q89840
Job #:	NWS Sewage
PO / AFE:	
LSD:	

Oil and Gas Required Fields (client use)

Approver ID: | Cost Center:
GL Account: | Routing Code:
Activity Code:
Location:

ALS Lab Work Order # (lab use only)

ALS Contact: E. Dobbin | Sampler: Alex Kelly

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BOD, pH, TSS	O&G	Faecal Coliforms	Number of Containers
	- Cycle-let Gen Chem and O&G	07-Nov-24	9:00	Effluent	R	R		3
	- Cycle-let Faecal A	07-Nov-24	9:02	Effluent			R	1
	- Cycle-let Faecal B	07-Nov-24	9:02	Effluent			R	1
	- Cycle-let Faecal C	07-Nov-24	9:03	Effluent			R	1

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System?
☐ Yes ☑ No

Are samples for human drinking water use?
☐ Yes ☑ No

Special Instructions / Specify Criteria to add on report (client Use)

NWS Nunavut Water Board Licence Criteria

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ | SIF Observations Yes ☐ No ☐
Ice packs Yes ☒ No ☐ | Custody seal intact Yes ☐ No ☐
Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C	FINAL COOLER TEMPERATURES °C
11.0	10.3

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: [redacted] Frag's	Date: 7 Nov 24	Time: 10:15	Received by: Gustav F.	Date: 13/11/24	Time: 10:25	Received by: [illegible]	Date: 14 Nov 24	Time: 9:00

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

NA-FM-0326a v09 Front/04 January 2014

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

ALS Canada Ltd.

right solutions.
right partner.

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: **WT2436736**	Page	: 1 of 4
Client	: **NASITTUQ CORPORATION**	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 10-Dec-2024 12:45
PO	: ----	Date Analysis Commenced	: 11-Dec-2024
C-O-C number	: ----	Issue Date	: 16-Dec-2024 17:22
Sampler	: DR		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Greg Pokocky	Manager - Inorganics	Inorganics, Waterloo, Ontario
Rachel Cameron	Supervisor - Semi-Volatile Extractions	Organics, Waterloo, Ontario
Ruby Sujeepan	Analyst	Microbiology, Waterloo, Ontario

No Breaches Found

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.
Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

Unit	*Description*
CFU/100mL	
mg/L	
pH units	

>: greater than.
<: less than.
Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Workorder Comments

Sample(s) XL Cycle let Faecal A, B, C: Exceeded Recommended Holding Time prior to receipt at the lab for Microbiology analysis.

Qualifiers

Qualifier	Description
BODL	Limit of Reporting for BOD was increased to account for the largest volume of sample tested.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
PEHR	Parameter exceeded recommended holding time on receipt: Proceeded with analysis as requested.

Analytical Results Evaluation

Matrix: **Water**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	XL Cycle-let Genchem and O&G	XL Cycle let Faecal A	XL Cycle let Faecal B	XL Cycle let Faecal C	----	----	----
				Sampling date/time	03-Dec-2024 15:00	03-Dec-2024 15:00	03-Dec-2024 15:00	03-Dec-2024 15:00	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					WT2436736-001	WT2436736-002	WT2436736-003	WT2436736-004	--------	--------	--------
Physical Tests											
pH	----	E108/WT	pH units		7.96	----	----	----	----	----	----
Solids, total suspended [TSS]	----	E160/WT	mg/L		<3.0	----	----	----	----	----	----
Microbiological Tests											
Coliforms, thermotolerant [fecal]	----	E012.FC/WT	CFU/100 mL		----	260 DLM, PEHR	170 DLM, PEHR	330 DLM, PEHR	----	----	----
Aggregate Organics											
Biochemical oxygen demand [BOD]	----	E550/WT	mg/L		<3.0 BODL, PEHR	----	----	----	----	----	----
Oil & grease (gravimetric)	----	E567/WT	mg/L		<5.0	----	----	----	----	----	----
Oil & grease, animal/vegetable (gravimetric)	----	EC567A.SG/WT	mg/L		<5.0	----	----	----	----	----	----
Oil & grease, mineral (gravimetric)	----	E567SG/WT	mg/L		<5.0	----	----	----	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Limits

Analyte	*CAS Number*	*Unit*	**NWS Sewage Limits**						
Physical Tests									
pH	----	pH units	**6 - 9 pH units**						
Solids, total suspended [TSS]	----	mg/L	**180 mg/L**						
Microbiological Tests									
Coliforms, thermotolerant [fecal]	----	CFU/100mL	**10000 CFU/100mL**						
Aggregate Organics									
Biochemical oxygen demand [BOD]	----	mg/L	**120 mg/L**						
Oil & grease (gravimetric)	----	mg/L	**--**						
Oil & grease, animal/vegetable (gravimetric)	----	mg/L	**--**						
Oil & grease, mineral (gravimetric)	----	mg/L	**--**						

Please refer to the General Comments section for an explanation of any qualifiers detected.

Key:

NWS Sewage Limits NWS Sewage Limits

NWS Sewage Limits NWS Sewage Limits

QUALITY CONTROL REPORT

Work Order	: **WT2436736**	Page	: 1 of 4
Client	: NASITTUQ CORPORATION	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 10-Dec-2024 12:45
PO	: ----	Date Analysis Commenced	: 11-Dec-2024
C-O-C number	: ----	Issue Date	: 16-Dec-2024 17:22
Sampler	: DR		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Greg Pokocky	Manager - Inorganics	Waterloo Inorganics, Waterloo, Ontario
Rachel Cameron	Supervisor - Semi-Volatile Extractions	Waterloo Organics, Waterloo, Ontario
Ruby Sujeepan	Analyst	Waterloo Microbiology, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 1805489)											
WT2436532-001	Anonymous	pH	----	E108	0.10	pH units	7.93	7.96	0.378%	4%	----
Physical Tests (QC Lot: 1806455)											
WT2436404-004	Anonymous	Solids, total suspended [TSS]	----	E160	5.0	mg/L	225	261	15.0%	20%	----
Aggregate Organics (QC Lot: 1804624)											
WT2436572-002	Anonymous	Biochemical oxygen demand [BOD]	----	E550	2.0	mg/L	<2.0	<2.0	0.0%	30%	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1806455)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Microbiological Tests (QCLot: 1805380)						
Coliforms, thermotolerant [fecal]	----	E012.FC	1	CFU/100mL	<1	----
Aggregate Organics (QCLot: 1804624)						
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	<2.0	----
Aggregate Organics (QCLot: 1807017)						
Oil & grease (gravimetric)	----	E567	5	mg/L	<5.0	----
Aggregate Organics (QCLot: 1807018)						
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	<5.0	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1805489)									
pH	----	E108	----	pH units	7 pH units	101	98.0	102	----
Physical Tests (QCLot: 1806455)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	98.5	85.0	115	----
Aggregate Organics (QCLot: 1804624)									
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	198 mg/L	106	85.0	115	----
Aggregate Organics (QCLot: 1807017)									
Oil & grease (gravimetric)	----	E567	5	mg/L	200 mg/L	96.8	70.0	130	----
Aggregate Organics (QCLot: 1807018)									
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	100 mg/L	86.0	70.0	130	----

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **WT2436736**	Page	: 1 of 6
Client	: **NASITTUQ CORPORATION**	Laboratory	: ALS Environmental - Waterloo
Contact	: Alaina Leslie	Account Manager	: Costas Farassoglou
Address	: 275 Slater Street Suite 1600 Ottawa ON Canada K1P 5H9	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 223 0629	Telephone	: 613 225 8279
Project	: NWS Sewage FOX-M	Date Samples Received	: 10-Dec-2024 12:45
PO	: ----	Issue Date	: 16-Dec-2024 17:22
C-O-C number	: ----		
Sampler	: DR		
Site	: ----		
Quote number	: NWS SEWAGE TESTING - FOX-M		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers occur - please see following pages for full details.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [BOD HT-4d] XL Cycle-let Genchem and O&G	E550	03-Dec-2024	----	----	----		11-Dec-2024	4 days	7 days	× EHTR
Aggregate Organics : Mineral Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) XL Cycle-let Genchem and O&G	E567SG	03-Dec-2024	12-Dec-2024	28 days	9 days	✓	13-Dec-2024	28 days	10 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) XL Cycle-let Genchem and O&G	E567	03-Dec-2024	12-Dec-2024	28 days	9 days	✓	13-Dec-2024	28 days	10 days	✓
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL Cycle let Faecal A	E012.FC	03-Dec-2024	----	----	----		11-Dec-2024	48 hrs	192 hrs	× EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL Cycle let Faecal B	E012.FC	03-Dec-2024	----	----	----		11-Dec-2024	48 hrs	192 hrs	× EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (MF-mFC)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] XL Cycle let Faecal C	E012.FC	03-Dec-2024	----	----	----		11-Dec-2024	48 hrs	192 hrs	× EHTR
Physical Tests : pH by Meter										
HDPE [ON MECP] XL Cycle-let Genchem and O&G	E108	03-Dec-2024	11-Dec-2024	14 days	8 days	✓	12-Dec-2024	14 days	9 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TSS by Gravimetry										
HDPE [ON MECP]										
XL Cycle-let Genchem and O&G	E160	03-Dec-2024	----	----	----		12-Dec-2024	7 days	9 days	× EHTL

Legend & Qualifier Definitions

EHTR: Exceeded ALS recommended hold time prior to sample receipt.

EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: ✗ = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Biochemical Oxygen Demand - 5 day	E550	1804624	1	16	6.2	5.0	✓
pH by Meter	E108	1805489	1	18	5.5	5.0	✓
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC	1805380	0	3	0.0	5.0	✗
TSS by Gravimetry	E160	1806455	1	20	5.0	4.7	✓
Laboratory Control Samples (LCS)							
Biochemical Oxygen Demand - 5 day	E550	1804624	1	16	6.2	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1807018	1	14	7.1	5.0	✓
Oil & Grease by Gravimetry	E567	1807017	1	17	5.8	5.0	✓
pH by Meter	E108	1805489	1	18	5.5	5.0	✓
TSS by Gravimetry	E160	1806455	1	20	5.0	4.7	✓
Method Blanks (MB)							
Biochemical Oxygen Demand - 5 day	E550	1804624	1	16	6.2	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1807018	1	14	7.1	5.0	✓
Oil & Grease by Gravimetry	E567	1807017	1	17	5.8	5.0	✓
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC	1805380	1	3	33.3	5.0	✓
TSS by Gravimetry	E160	1806455	1	20	5.0	4.7	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Thermotolerant (Fecal) Coliform (MF-mFC)	E012.FC ALS Environmental - Waterloo	Water	APHA 9222 D (mod)	Following filtration (0.45 µm), and incubation at 44.5 ±0.2°C for 22-26 hours, colonies exhibiting characteristic morphology of the target organism are enumerated and confirmed.
pH by Meter	E108 ALS Environmental - Waterloo	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
TSS by Gravimetry	E160 ALS Environmental - Waterloo	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
Biochemical Oxygen Demand - 5 day	E550 ALS Environmental - Waterloo	Water	APHA 5210 B (mod)	Samples are diluted and incubated for a specified time period, after which the oxygen depletion is measured using a dissolved oxygen meter. Free chlorine is a negative interference in the BOD method; please advise ALS when free chlorine is present in samples.
Oil & Grease by Gravimetry	E567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane and the extract is evaporated to dryness. The residue is then weighed to determine Oil and Grease.
Mineral Oil & Grease by Gravimetry	E567SG ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane, followed by silica gel treatment after which the extract is evaporated to dryness. The residue is then weighed to determine Mineral Oil and Grease.
Animal & Vegetable Oil & Grease by Gravimetry	EC567A.SG ALS Environmental - Waterloo	Water	APHA 5520 (mod)	Animal & vegetable oil and grease is calculated as follows: Oil & Grease (gravimetric) minus Mineral Oil & Grease (gravimetric)

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Oil & Grease Extraction for Gravimetry	EP567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane by liquid-liquid extraction.

OGG-121
QC-364

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

Affix ALS barcode label here (lab use only)

COC Number: 14 -

Page 1 of 1

Report To		Report Format / Distribution		Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)
Company:	Nasittuq Corp - NATTIOO	Select Report Format:	☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)	R ☑ Regular (Standard TAT if received by 3 pm - business days)
Contact:	Alaina Leslie	Quality Control (QC) Report with Report	☑ Yes ☐ No	P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
Address:	275 Slater St Ottawa ON K1P 5H9	☑ Criteria on Report - provide details below if box checked		E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT
Phone:	613-223-0629	Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX	E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
		Email 1 or Fax	alaina.leslie@nasittuq.com	Specify Date Required for E2,E or P:
		Email 2	labresults@nasittuq.com	

Invoice To		Invoice Distribution	
	Same as Report To ☐ Yes ☐ No	Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
	Copy of Invoice with Report ☐ Yes ☐ No	Email 1 or Fax	labresults@nasittuq.com
Company:		Email 2	naccounting@nasittuq.com
Contact:			

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q89840 WT23NATT1000004	Approver ID:	Cost Center:
Job #:	NWS Sewage FOX-M	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	
ALS Lab Work Order # (lab use only)	WT2436736 FH	ALS Contact: E. Dobbin	Sampler: Darrell Russell

Analysis Request — Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BOD, pH, TSS	O&G	Faeca Coliforms		Number of Containers
	XL Cycle-let Gen Chem and O&G	03/12/24	3:00	Effluent	R	R			3
	XL - Cycle-let Faecal A	03/12/24	3:00	Effluent			R		1
	XL - Cycle-let Faecal B	03/12/24	3:00	Effluent			R		1
	XL - Cycle-let Faecal C	03/12/24	3:00	Effluent			R		1

Environmental Division
Waterloo
Work Order Reference
WT2436736

Telephone : +1 519 886 6910

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)
Are samples taken from a Regulated DW System? ☐ Yes ☑ No	NWS Nunavut Water Board Licence Criteria
Are samples for human drinking water use? ☐ Yes ☑ No	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen	☐	SIF Observations	Yes ☐	No ☐	
Ice packs	Yes ☑	No ☐	Custody seal intact	Yes ☐	No ☐
Cooling Initiated	☐				

INITIAL COOLER TEMPERATURES °C		FINAL COOLER TEMPERATURES °C	
5.0			3.8

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: *	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
Dion Alcorn K	03/12/24	4:00PM	COSTAS F	10/12/24	12:45		12/12/24	1030

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

NAFN-0329e v09 Front/BA January 2014

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

PH Level: 6

INTAKE AND LOGIN VERIFICATION FORM

IS IT RUSH???		**YES**	~~NO~~
Time Sensitive Hold Time		**YES**	**NO**
Client:	Nasithug		

SAMPLE RECEIPT INFORMATION			
Mode of Delivery:	Courier		~~Drop Off~~
Temperature	5.0		
Cooling Method	~~None~~	Ice	~~Ice Packs~~

SAMPLE MATRIX/BOTTLE INFORMATION					
Matrix:	~~Water~~	Soil	Air	Biota	Other

# of Bottles:	
Green/White	2X250
Orange/Black	
Warm red/White	
Yellow/Black	2X250
Purple/White	
Pink/White	
Dark green/White	
Grey/White	
Blue/White	
Light Blue/White	3XMICRO

Other Details:

MICRO Expired

Comments on Samples and Bottles:

Layout Staff Initials	
Date and Time of Layout	12/11/24 1145

DUE DATE

RECEIPT DETAIL	**INITIALS**
Received date/time as per Initial Shipment on COC	FH
Cooler Custody Seals Intact	N/A
Temperature Entered - Ice or Ice Packs	FH
CINT Qualifier Added	N/A
~~Correct Quote/Account~~	~~FH~~
Project / PO / Site ID Added	FH
All Containers Received Added	FH
Check WO Comments	N/A
Sample ID, Date & Time Added	FH
All tests requested on COC are added	FH
Bottle Allocation checked to ensure correct	FH
Extra emails added to WO	FH
Yellow Dot Required (Special Notes from Client)	N/A
Run CLOCK and check overall due date	FH
Requested Criteria Added	FH
WSI entered	~~to~~ FH
BINS & COMMIT	
Send RUSH Email if applicable	
Peer Review of WO Completed - Please Initial	

WO #: WT2436736

Login Staff Initials	FH
Labeling Staff Initials	
Bin & Commit Staff Initials	

ANNEX D. LOCATION OF BERMED FUEL STORAGE FACILITIES

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

Table D-3: Location of Bermed Fuel Storage Facilities and Date Sampled in 2024

Berm	Location on-site	Discharge Latitude[2]	Discharge Longitude	Date
HAL W20B	Beach	68°46'23.93"N	81°12'51.11"W	04-Jul-2024
HAL W20D&E	Airstrip	68°46'15.85"N	81°13'58.33"W	04-Jul-2024
HAL W20F	Beach	68°46'23.75"N	81°12'46.12"W	04-Jul-2024
HAL W22A	Summit	68°45'42.24"N	81°13'25.04"W	04-Jul-2024
HAL W22B	Summit	68°45'43.00"N	81°13'27.27"W	04-Jul-2024

[2] Final discharge point of bermed fuel storage facility

ANNEX E. ANALYSIS OF BERM WATER [3]

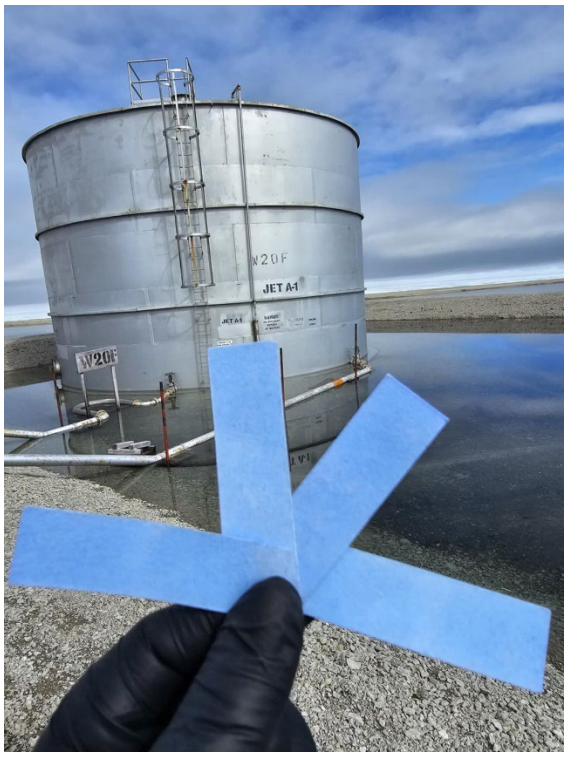
The berms at FOX-M were sampled using hydrocarbon test strips as per the approved QA/QC Plan for Berm Water Sampling as stated in the water licence 8BC-FOH1929, PART D, Item 11. The photo log of the hydrocarbon test strips is included below.

Photo Log

Beach W20B

[3] Effluent from bermed fuel storage facilities.

Aviation W20D and W20E



Beach - W20F

Summit PGS W22A

Summit PGS W22B