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SOW Ref: 16.F.5.d

2021 ANNUAL NUNAVUT WATER BOARD REPORT FOR FOX-M FOR THE North Warning System

Contract # W8485-100224/001/NX
SOW Ref: 16.F.5.d

Document Number
NWB-XL-2021, Rev 2, 22-Mar-2022

Prepared for
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EXECUTIVE SUMMARY

This 2021 Annual Report for the Nunavut Water Board (NWB) has been prepared by Raytheon Canada (RC) for the Department of National Defence 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 2021.

RC is the Operations and Maintenance Contractor for the North Warning System (NWS), including FOX-M, the attended (manned) NWS radar site located at Sanirajak (Hall Beach), Nunavut.

The water usage at FOX-M in 2021 was 928.4 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 because water is drawn from an artificial (man-made) reservoir and not from a natural source.

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.

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 131 drums of assorted waste (oil, fuel, glycol, etc.), and two 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). RC has documented authorization from the community for receiving the waste.

Two spills to the environment occurred at FOX-M in 2021:

- 7-Jul-2021, NT-NU Spill #2021-286: A spill of <1 L of Jet-A1 occurred from the nozzle of the aircraft refueller hose during refuelling operations. Impacted soil was excavated and backfilled with clean fill.
- 25-Aug-2021, NT-NU Spill #2021-365: A hydraulic line rupture caused a spill of 5 L of hydraulic fluid. Contaminated gravel was excavated and backfilled with clean fill. The hydraulic line has been repaired.

The Spill Contingency Plan was successfully implemented, and updated on 20-Jul-21.

No progressive reclamation work was undertaken in 2021.





1.0 INTRODUCTION

This 2021 Annual Report for the Nunavut Water Board (NWB) has been prepared by Raytheon Canada (RC) 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 2021.

RC is the Operations and Maintenance Contractor for the North Warning System (NWS), including FOX-M. FOX-M is an attended (manned) North Warning System radar site located at Sanirajak (Hall Beach), Nunavut.

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
Raytheon Canada, 22-Mar-2022
Time period covered: 01 January to 31 December 2021

2.0 WATER USE

The water usage at FOX-M in 2021 was 928.4 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 2021.

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 2021

Month	Raw water usage (m ³)
January	58.5
February	59
March	84
April	93
May	85
June	77
July	75
August	109
September	61.4
October	103
November	73
December	50.5
TOTAL	928.4



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 2021

Month	Volume of sewage and greywater treated then discharged or recycled (m³)
January	59
February	59
March	84
April	93
May	85
June	77
July	75
August	109
September	61
October	103
November	73
December	51
TOTAL	928

4.0 HAZARDOUS WASTE AND WASTE OIL DISPOSAL

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 was shipped to Qikiqtaaluk Environmental, through their subcontractor Veolia, 2630, boul. Industriel, Chambly, QC J3L 4V2. The hazardous waste consisted of 131 drums of assorted waste (oil, fuel, glycol, etc.), and two crates of waste batteries.

See Table 4-1, below, for the list of items sent for disposal. See **Annex A** for the shipping documents including the completed movement documents for waste regulated under the Transportation of Dangerous Goods Regulations (TDGR) and NWS Manifests for non-regulated waste.

Table 4-1: Hazardous Waste and Waste Oil Sent for Disposal from FOX-M in 2021

Description	TDG shipping name	Movement Document	Manifest #	Quantity
Waste batteries, wet, filled with acid	Waste Batteries, Wet, Filled With Acid	2581553-1	43830,44110	2 Crates
Waste batteries, wet, non-spillable	Waste Batteries, Wet, Non-Spillable*	2581553-1	43833,44111, 44266	4 Drums
Waste Fuel, Aviation, Turbine Engine	Waste Fuel, Aviation, Turbine Engine**	2581553-1	44259,44263,44265	10 Drums

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Description	TDG shipping name	Movement Document	Manifest #	Quantity
Waste Fuel, Aviation, Turbine Engine Mixture	Waste Fuel, Aviation, Turbine Engine Mixture***	2581553-1	44135,44137,44138,44139,44237,44238,44239,44240	25 Drums
Waste tank bottom water/tank cleaning effluent	Waste Fuel, Aviation, Turbine Engine Mixture	2581553-1	44249,44250,44251,44252,44253,44254	24 Drums
Waste oily rags	Waste Solids Containing Flammable Liquid, N.O.S. (Fuel, Aviation, Turbine Engine)	2581553-1	43677,44255,44256,44260	7 Drums
Waste - glycol soaked absorbent	Not Regulated	N/A	43677	2 Drums
Waste Activated Carbon Filter	Not Regulated	N/A	43659,43660,43847	10 Drums
Waste Asbestos-containing Material	Not Regulated	N/A	44257	3 Drums
Waste oil filters	Not Regulated	N/A	44260	1 Drum
Waste oil	Not Regulated	N/A	43657,43661,43674,43835,43836,43857,44120,44121,44122,44123,44261,44262	44 Drums
Waste aerosols (flammable)	Waste Aerosols****	N/A	44257	1 Drum
Notes: * 4 drums of waste batteries on 1 pallet, were listed on the Movement Document as 1 drum in error ** 10 drums of waste fuel were omitted from the Movement Document in error but included on the shipping manifest. Refer to TCNs 44259, 44263, 44265 *** One drum of waste fuel, aviation, turbine engine mixture was omitted from the Movement Document in error but included on the shipping manifest. Refer to TCN 44135 **** 1 drum of waste aerosols was omitted from the Movement Document in error but included on the shipping manifest. Refer to TCN 44257				

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). RC 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 2021

Month	Waste Generated (kg)
January	1027
February	1011
March	904
April	1181
May	963
June	675
July	1461
August	3154
September	1106
October	2658

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Month	Waste Generated (kg)
November	1072
December	1040
TOTAL	16,259

6.0 MONITORING PROGRAM

In 2021, 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. The sample for January was above criteria for faecal coliforms. The subsequent sample in February was below criteria. Due to a laboratory error, the results for January 2021 did not reach the correct recipients until February 2022. At that time the CIRNAC water inspector was notified. RC has since corrected the errors that led to the emails not getting delivered. The RC Life Cycle Maintenance Manager (LCMM) is currently investigating the treatment system to identify ways to prevent any future exceedances.

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 **Annex D**. 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)

Two spill to the environment occurred at FOX-M in 2021. 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 2021

Date, NT-NU Spill #	Product	Quantity	Cause and follow-up action	On-site location
7-Jul-2021, NT-NU Spill #2021-286:	JET-A1	1 L	On 7-Jul-21 staff at FOX-M were refueling a Twin Otter on the airstrip apron and <1L of fuel spilled on the ground. Staff removed the impacted soil and placed it in a drum for off-site disposal. The impacted soil was replaced with clean fill.	Aircraft Refueler (68°46'15"N, 81°13'50"W)
25-Aug-2021, NT-NU Spill #2021-365:	Hydraulic Fluid	5 L	On 25Aug2021, technicians were using a loader when the hydraulic line ruptured resulting in a spill of 5L of hydraulic fluid. The spill impacted an area of 0.5m2 of	Front of Warehouse (68°45'43.4"N 81°13'34.9"W)

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Date, NT-NU Spill #	Product	Quantity	Cause and follow-up action	On-site location
			gravel. The loader was taken offline right away. Technicians on site shoveled the contaminated gravel which they then containerized for off-site disposal. The hydraulic line was repaired.	

8.0 REVISIONS TO THE SPILL CONTINGENCY PLAN

The Spill Contingency Plan was updated on 20-Jul-21. 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 2021.

10.0 ACRONYMS

Table 10-1: Acronyms

Acronym	Definition
n.o.s	Not Otherwise Specified
NWB	Nunavut Water Board
NWS	North Warning System
PCB	Polychlorinated Biphenyl
RC	Raytheon Canada
TDGR	Transportation of Dangerous Goods Regulations

**ANNEX A. HAZARDOUS WASTE AND WASTE OIL DISPOSAL IN 2021**

The 2021 Movement Document for TDG Regulated waste and NWS Manifests for 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 2581553-1
2. NWS Manifest 43657
3. NWS Manifest 43659
4. NWS Manifest 43660
5. NWS Manifest 43661
6. NWS Manifest 43674
7. NWS Manifest 43677
8. NWS Manifest 43835
9. NWS Manifest 43836
10. NWS Manifest 43847
11. NWS Manifest 43857
12. NWS Manifest 44120
13. NWS Manifest 44121
14. NWS Manifest 44122
15. NWS Manifest 44123
16. NWS Manifest 44135
17. NWS Manifest 44257
18. NWS Manifest 44259
19. NWS Manifest 44260
20. NWS Manifest 44261
21. NWS Manifest 44262
22. NWS Manifest 44263
23. NWS Manifest 44265



SOW Ref: 16.F.5.d

This Movement documentaries confirms to all federal and provincial transport and environmental legislation. Ce document de mouvement/transport est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

A Generator / fournisseur Producteur / fournisseur Registration No. / Permis d'ID No. N° d'identification - 015 provided NUG 1 00003		B Carrier Transporteur Registration No. / Permis d'ID No. N° d'identification - 015 provided A16 0904	
DEPARTMENT OF NATIONAL DEFENSE / RCL 22 WING BLVD 109 HORNELL HEIGHTS ON PATH C-MAIL / Courriel électronique TEL NO. / N° de tél. 705 494 200 ext 2861		Company name / Nom de l'entreprise ALUMINUM ESTERIL ARCTIC SHIPPING Address / Adresse postale 3100 10th Ave City / Ville Fairbanks, AK 99701 Postal code / Code postal 99701 Tel No. / N° de tél. 907 457 0186	
Shipping address / Adresse de lieu de livraison WMSLS HALL BEACH PO BOX 416 City / Ville HALL BEACH NV X0A0KO		Vehicle / Véhicule Trailer - Ref or No. 1 Container - Number 2 - Ref or No. 2 2 - Number Registration No. / N° d'identification 5M 577 0186	
Recipient / destinataire Recipient address / Adresse postale ALIKOTRAUK ENVIRONMENTAL HOLDING City / Ville 995 DEGRATEWUENFENTRAN 15U 7200 E-mail / Courriel électronique BRESEBOC 142 344 186 154 16 367 NEOLA 263 BOY INDUSTRIAL City / Ville CHAMBY & 3BL 4N2		Port of entry / Point d'entrée Port of origin / Port d'origine Port of destination / Port de destination Port of exit / Point de sortie International unit / Unité internationale 25	
Item code / Code de l'article Description / Description 1. WASTE BATTERIES WET NON-TOXIC ASIDE 2. WASTE BATTERIES WET 3. WASTE, FUSE, AVIATION 4. THE ENGINE, AVIATION 5. WASTE, FUSE, AVIATION 6. THE ENGINE, AVIATION 7. THE ENGINE, AVIATION 8. THE ENGINE, AVIATION		Quantity / Quantité Unit / Unité 8 8 3 3 3 3 3	
Net weight / Poids net Gross weight / Poids brut 1. 4N 2. 4N 3. 4N 4. 4N 5. 4N 6. 4N 7. 4N 8. 4N		Net weight / Poids net Gross weight / Poids brut 1. 366 2. 366 3. 2636 4. 2636 5. 2636 6. 2636 7. 2636 8. 2636	
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2581553-1

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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Jul 5, 2021, 8:36 AM	Project ID:	Task ID: TCN-43657
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS	HALL BEACH/VALLETFIELD		1	1000 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1			2002406	WASTE - OIL, 45 GAL	EIN 354939		PALLET # 1 FM021-04 48" x 48" x 42"
1			2002406	WASTE - OIL, 45 GAL	EIN 353556		PALLET # 1 FM021-04 48" x 48" x 42"

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Jul 5, 2021, 10:36 AM	Project ID:	Task ID: TCN-43659
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS	HALL BEACH/VALLETFIELD		1	1500 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1			2002351	WASTE - ACTIVATED CARBON FILTE	EIN 358834		PALLET # 2 FM021-05 48" x 40" x 42".
1			2002351	WASTE - ACTIVATED CARBON FILTE	EIN 358833		PALLET # 2 FM021-05 48" x 40" x 42".
1			2002351	WASTE - ACTIVATED CARBON FILTE	EIN 358835		PALLET # 2 FM021-05 48" x 40" x 42".
1			2002351	WASTE - ACTIVATED CARBON FILTE	EIN 358836		PALLET # 2 FM021-05 48" x 40" x 42".

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Jul 5, 2021, 10:49 AM	Project ID:	Task ID: TCN-43660
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS	HALL BEACH/VALLETFIELD		1	900 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1			2002351	WASTE - ACTIVATED CARBON FILTE	EIN 358832		PALLET # 3 FM021-06 40" x 48" x 42"
1			2002351	WASTE - ACTIVATED CARBON FILTE	EIN 358829		PALLET # 3 FM021-06 40" x 48" x 42"

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Jul 5, 2021, 11:05 AM	Project ID:	Task ID: TCN-43661
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS	HALL BEACH/VALLETFIELD		1	1900 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1			2002406	WASTE - OIL, 45 GAL	EIN 352129		PALLET # 4 FM021-07 48" x 48" x 42"
1			2002406	WASTE - OIL, 45 GAL	EIN 354177		PALLET # 4 FM021-07 48" x 48" x 42"
1			2002406	WASTE - OIL, 45 GAL	EIN 351576		PALLET # 4 FM021-07 48" x 48" x 42"
1			2002406	WASTE - OIL, 45 GAL	EIN 352925		PALLET # 4 FM021-07 48" x 48" x 42"

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Jul 7, 2021, 9:43 AM	Project ID:	Task ID: TCN-43674
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS			1	1800 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1			2002406	WASTE - OIL, 45 GAL	EIN 354138		PALLET # 5 FM021-08 48" X 48" X 42"
1			2002406	WASTE - OIL, 45 GAL	EIN 355017		PALLET # 5 FM021-08 48" X 48" X 42"
1			2002406	WASTE - OIL, 45 GAL	EIN 355654		PALLET # 5 FM021-08 48" X 48" X 42"
1			2002406	WASTE - OIL, 45 GAL	EIN 349836		PALLET # 5 FM021-08 48" X 48" X 42"

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Jul 7, 2021, 11:02 AM	Project ID:	Task ID: TCN-43677
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS	HALL BEACH/VALLETFIELD/ CHAMBLY		1	1800 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1			2002505	WASTE - OILY RAGS	EIN 355970		PALLET # 6 FM021-09 56" X 56" x 46"
1			2002505	WASTE - OILY RAGS	EIN 355020		PALLET # 6 FM021-09 56" X 56" x 46"
1			3005411	WASTE - GLYCOL SOAKED ABSORBEN	EIN 355023		PALLET # 6 FM021-09 56" X 56" x 46"
1			3005411	WASTE - GLYCOL SOAKED ABSORBEN	EIN 359473		PALLET # 6 FM021-09 56" X 56" x 46"

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Jul 24, 2021, 2:23 PM	Project ID:	Task ID: TCN-43835
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS			1	1800 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1			2002406	WASTE - OIL, 45 GAL	EIN 354181		PALLET # 10 FM021-19 48" X 48" X 42"
1			2002406	WASTE - OIL, 45 GAL	EIN 356690		PALLET # 10 FM021-19 48" X 48" X 42"
1			2002406	WASTE - OIL, 45 GAL	EIN 352376		PALLET # 10 FM021-19 48" X 48" X 42"
1			2002406	WASTE - OIL, 45 GAL	EIN 354190		PALLET # 10 FM021-19 48" X 48" X 42"

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Jul 24, 2021, 2:29 PM	Project ID:	Task ID: TCN-43836
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS			1	1650 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1			2002406	WASTE - OIL, 45 GAL	EIN 352815		PALLET # 11 FM021-20 48" X 48" X 42"
1			2002406	WASTE - OIL, 45 GAL	EIN 352816		PALLET # 11 FM021-20 48" X 48" X 42"
1			2002406	WASTE - OIL, 45 GAL	EIN 345856		PALLET # 11 FM021-20 48" X 48" X 42"
1			2002406	WASTE - OIL, 45 GAL	EIN 358847		PALLET # 11 FM021-20 48" X 48" X 42"

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Jul 26, 2021, 10:57 AM	Project ID:	Task ID: TCN-43847
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS			1	1300 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1			2002351	WASTE - ACTIVATED CARBON FILTE	EIN 359474		PALLET # 12 FM021-21 48" X 49" X 40"
1			2002351	WASTE - ACTIVATED CARBON FILTE	EIN 359475		PALLET # 12 FM021-21 48" X 49" X 40"
1			2002351	WASTE - ACTIVATED CARBON FILTE	EIN 359476		PALLET # 12 FM021-21 48" X 49" X 40"
1			2002351	WASTE - ACTIVATED CARBON FILTE	EIN 359477		PALLET # 12 FM021-21 48" X 49" X 40"

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Jul 26, 2021, 1:03 PM	Project ID:	Task ID: TCN-43857
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS			1	1600 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1			2002406	WASTE - OIL, 45 GAL	EIN 358779		PALLET # 13 FM021-22 48" X 48" 42"
1			2002406	WASTE - OIL, 45 GAL	EIN 358756		PALLET # 13 FM021-22 48" X 48" 42"
1			2002406	WASTE - OIL, 45 GAL	EIN 358757		PALLET # 13 FM021-22 48" X 48" 42"
1			2002406	WASTE - OIL, 45 GAL	EIN 353556		PALLET # 13 FM021-22 48" X 48" 42"

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: RDUBEAU	Date: Aug 21, 2021, 3:59 PM	Project ID:	Task ID: TCN-44120
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS			1	1800 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1	DRUM ON PALLET	1800 LBS	2002406	WASTE - OIL, 45 GAL	EIN 354968		48" X 42" X 43" PALLET # 14 XL021-24
1	DRUM ON PALLET		2002406	WASTE - OIL, 45 GAL	EIN 354962		
1	DRUM ON PALLET		2002406	WASTE - OIL, 45 GAL	EIN 354969		
1	DRUM ON PALLET		2002406	WASTE - OIL, 45 GAL	EIN 359839		

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: RDUBEAU	Date: Aug 21, 2021, 4:15 PM	Project ID:	Task ID: TCN-44121
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS			1 PC	1800 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1	DRUM ON PALLET	1800 LBS	2002406	WASTE - OIL, 45 GAL	EIN 359890		48" X 48" X 41" PALLET # 15 XL021-25
1	DRUM ON PALLET		2002406	WASTE - OIL, 45 GAL	EIN 359891		
1	DRTUM ON PALLET		2002406	WASTE - OIL, 45 GAL	EIN 359892		
1	DRUM ON PALLET		2002406	WASTE - OIL, 45 GAL	EIN 359893		

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: RDUBEAU	Date: Aug 21, 2021, 4:25 PM	Project ID:	Task ID: TCN-44122
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS			1 PC	1500 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1	DRUM ON PALLET	1500 LBS	2002406	WASTE - OIL, 45 GAL	EIN 352377		48" X 42" X 41" PALLET# 16 XL021-26
1	DRUM ON PALLET		2002406	WASTE - OIL, 45 GAL	EIN 359505		
1	DRUM ON PALLET		2002406	WASTE - OIL, 45 GAL	EIN 358847		
1	DRUM ON PALLET		2002406	WASTE - OIL, 45 GAL	EIN 359895		

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: RDUBEAU	Date: Aug 21, 2021, 4:36 PM	Project ID:	Task ID: TCN-44123
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS			1 PC	800 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1	DRUM ON PALLET	800 LBS	2002406	WASTE - OIL, 45 GAL	EIN 352353		48" X 23" X 43" PALLET # 17 XL021-27

1			2002406	WASTE - OIL, 45 GAL	EIN 354941		
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NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: RDUBEAU	Date: Aug 23, 2021, 1:12 PM	Project ID:	Task ID: TCN-44135
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS			1 PC	400 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1	DRUM ON PALLET	400 LBS	2006405	WASTE - FUEL AND WATER MIXTURE	EIN 359920		36" X 26" X 41" PALLET # 18 XL021-28 (UN 1863)

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Sep 3, 2021, 11:28 AM	Project ID:	Task ID: TCN-44257
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS			1	150 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
3			4004961	WASTE - Asbestos Containing Ma	EIN 359327, 359328, 359329		PALLET # 7 F3-021-14 54" X 54" X 45"
1			2002345	WASTE - AEROSOLS, FLAMMABLE (D	352515		PALLET # 7 F3-021-14 54" X 54" X 45"

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Sep 3, 2021, 11:35 AM	Project ID:	Task ID: TCN-44259
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS			1	300 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
2			2002343	WASTE - FUEL	EIN 358900, 355103		PALLET # 06 F3-021-13 47" X 40" X 41".

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Sep 3, 2021, 11:38 AM	Project ID:	Task ID: TCN-44260
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS			1	1000 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1			2002356	WASTE - OIL FILTERS	EIN 352491		PALLET # 5 F2-021-05 54" X 54" X 44"
3			2002505	WASTE - OILY RAGS	EIN 345760, 352493, 359324		PALLET # 5 F2-021-05 54" X 54" X 44"

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Sep 3, 2021, 12:58 PM	Project ID:	Task ID: TCN-44261
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS			1	1800 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1			2002406	WASTE - OIL, 45 GAL	EIN 352036		PALLET # 4 F3-021-04 51" X 48" X 43"
1			2002406	WASTE - OIL, 45 GAL	EIN 354117		PALLET # 4 F3-021-04 51" X 48" X 43"
1			2002406	WASTE - OIL, 45 GAL	EIN 352924		PALLET # 4 F3-021-04 51" X 48" X 43"
1			2002406	WASTE - OIL, 45 GAL	EIN 352133		PALLET # 4 F3-021-04 51" X 48" X 43"

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Sep 3, 2021, 1:05 PM	Project ID:	Task ID: TCN-44262
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS			1	1600 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1			2002406	WASTE - OIL, 45 GAL	EIN 359314		PALLET # 03 F3-021-03 48" X 47" X 40" ""
1			2002406	WASTE - OIL, 45 GAL	EIN 359315		PALLET # 03 F3-021-03 48" X 47" X 40"
1			2002406	WASTE - OIL, 45 GAL	EIN 359316		PALLET # 03 F3-021-03 48" X 47" X 40"
1			2002406	WASTE - OIL, 45 GAL	EIN 359317		PALLET # 03 F3-021-03 48" X 47" X 40"

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Sep 3, 2021, 1:08 PM	Project ID:	Task ID: TCN-44263
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS			1	1000 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1			2002343	WASTE - FUEL	EIN 358898		PALLET # 2 F3-021-02 48" X 48' x 41"
1			2002343	WASTE - FUEL	EIN 358597		PALLET # 2 F3-021-02 48" X 48' x 41"
1			2002343	WASTE - FUEL	EIN 358899		PALLET # 2 F3-021-02 48" X 48' x 41"
1			2002343	WASTE - FUEL	EIN 358896		PALLET # 2 F3-021-02 48" X 48' x 41"

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Sep 3, 2021, 1:17 PM	Project ID:	Task ID: TCN-44265
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Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 0
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Attention:		Attention:	
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Carrier:	Routing:	Waybill #:	Total Pcs.	Total Weight:
NEAS			1	1500 LBS

QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1			2002343	WASTE - FUEL	EIN 358893		PALLET # 01 F3-021-01 48" X 48' x 41"
1			2002343	WASTE - FUEL	EIN 358894		PALLET # 01 F3-021-01 48" X 48' x 41"
1			2002343	WASTE - FUEL	EIN 358953		PALLET # 01 F3-021-01 48" X 48' x 41"
1			2002343	WASTE - FUEL	EIN 358892		PALLET # 01 F3-021-01 48" X 48' x 41"

NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.

Received By:	Date
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Received By:	Date
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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 2021

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
5-Jan-21	7.70	A	12	50	45,333.33*
24-Feb-21	7.45	A	2	<2	0.33
29-Mar-21	8.12	A	1	<2	10.00
26-Apr-21	7.40	A	3	<2	48.33
20-May-21	7.67	A	1	<2	0.00
30-Jun-21	7.77	A	<1	<2	0.00
28-Jul-21	6.48	A	<1	<2	17.67
6-Aug-21	7.66	A	2	2	36.67
7-Sep-21	7.50	A	<1	<2	67.00
8-Oct-21	7.48	A	<1	<2	13.00
8-Nov-21	7.10	A	2	<2	86.33
9-Dec-21	7.57	A	8	114	830.00
Notes: *The sewage result for January exceeded the NWB guideline for faecal coliforms. The subsequent month, February, was below criteria. Due to a laboratory error this sample result was not received by RCL Environmental Services until February 2022. At this point the CIRNAC water inspector was informed, and RCL took measures to ensure future emails were delivered to the correct recipients.					

The following documents are enclosed:

1. Eurofins Certificate of Analysis 5-Jan-21
2. Eurofins Certificate of Analysis 24-Feb-21
3. Eurofins Certificate of Analysis 29-Mar-21
4. Eurofins Certificate of Analysis 26-Apr-21
5. Eurofins Certificate of Analysis 20-May-21
6. Eurofins Certificate of Analysis 30-Jun-21
7. Eurofins Certificate of Analysis 28-Jul-21
8. Eurofins Certificate of Analysis 6-Aug-21
9. Eurofins Certificate of Analysis 7-Sep-21
10. Eurofins Certificate of Analysis 8-Oct-21
11. Eurofins Certificate of Analysis 8-Nov-21
12. Eurofins Certificate of Analysis 9-Dec-21

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



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Don Beattie
PO#: 17-00919
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1946508
Date Submitted: 2021-01-19
Date Reported: 2021-01-26
Project:
COC #: 210207

Page 1 of 3

Dear Don Beattie:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Charlie
Long Qu
2021.01.26
16:04:47
-05'00'

APPROVAL:

Long Qu, Organics Supervisor

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at: <http://www.cala.ca/scopes/2602.pdf>.

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Don Beattie
PO#: 17-00919
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1946508
Date Submitted: 2021-01-19
Date Reported: 2021-01-26
Project:
COC #: 210207

Group	Analyte	MRL	Units	Guideline	1538661 WW 2021-01-05 Fox-Main Cycle-Let
General Chemistry	BOD5	1	mg/L		12
	pH	1.00			7.70
Oil and Grease	Total Suspended Solids	2	mg/L		50
	Oil & Grease - Mineral	1	mg/L		<1
	Oil & Grease - Non-mineral	1	mg/L		<1
	Oil & Grease - Total	1	mg/L		<1
	Visible Sheen		P/A		A

Guideline =

* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Don Beattie
PO#: 17-00919
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1946508
Date Submitted: 2021-01-19
Date Reported: 2021-01-26
Project:
COC #: 210207

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 395290 Method SM 5210B	Analysis/Extraction Date 2021-01-25	Analyst Z S	
BOD5	<1 mg/L	93	75-125
Run No 395332 Method C SM2540	Analysis/Extraction Date 2021-01-21	Analyst SKH	
Total Suspended Solids	<2 mg/L	101	90-110
Run No 395343 Method SM2320,2510,4500H/F	Analysis/Extraction Date 2021-01-21	Analyst AET	
pH		100	90-110
Run No 395517 Method MOE E3421	Analysis/Extraction Date 2021-01-25	Analyst N C	
Oil & Grease - Mineral	<1 mg/L	70	60-120
Oil & Grease - Non-mineral	<1 mg/L		60-120
Oil & Grease - Total	<1 mg/L	80	60-120
Run No 395531 Method SHEEN	Analysis/Extraction Date 2021-01-25	Analyst N C	
Visible Sheen			

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Don Beattie
PO#: 007264-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1946529
Date Submitted: 2021-01-19
Date Reported: 2021-01-21
Project: 210207
COC #:

Page 1 of 3

Dear Don Beattie:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Jason
Kennedy
2021.01.21
14:30:16
-05'00'

APPROVAL:

Jason Kennedy, Project Manager

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8

Attention: Mr. Don Beattie
PO#: 007264-OT

Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1946529
Date Submitted: 2021-01-19
Date Reported: 2021-01-21
Project:
COC #: 210207

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	Guideline
Microbiology	Faecal Coliforms	0	ct/100mL	1538741 Sewage 2021-01-05 Fox-Main Cycle-Let A	38000
				1538742 Sewage 2021-01-05 Fox-Main Cycle-Let B	45000
				1538743 Sewage 2021-01-05 Fox-Main Cycle-Let C	53000

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Don Beattie
PO#: 007264-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1946529
Date Submitted: 2021-01-19
Date Reported: 2021-01-21
Project:
COC #: 210207

Sample Comment Summary

Sample ID: 1538741 Fox-Main Cycle-Let A Deviation from standard protocol. All bacteria samples on report are past hold time.

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1948672
Date Submitted: 2021-03-03
Date Reported: 2021-03-09
Project:
COC #: 210204

Page 1 of 3

Dear Andrea Burrill:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Addrine
Thomas
2021.03.09
15:12:06
-05'00'

APPROVAL: _____
Addrine Thomas, Inorganics Supervisor

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at: <http://www.cala.ca/scopes/2602.pdf>.

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1948672
Date Submitted: 2021-03-03
Date Reported: 2021-03-09
Project:
COC #: 210204

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
General Chemistry	BOD5	1	mg/L		1544390 Sewage 2021-02-24 Hall Beach Sewage 1-2
	pH	1.00			
Oil and Grease	Total Suspended Solids	2	mg/L		
	Oil & Grease - Mineral	1	mg/L		
	Oil & Grease - Non-mineral	1	mg/L		
	Oil & Grease - Total	1	mg/L		
	Visible Sheen		P/A		

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1948672
Date Submitted: 2021-03-03
Date Reported: 2021-03-09
Project:
COC #: 210204

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 208523 Method SHEEN	Analysis/Extraction Date 2021-03-09	Analyst C M	
Visible Sheen			
Run No 396885 Method C SM2540	Analysis/Extraction Date 2021-03-09	Analyst SKH	
Total Suspended Solids	<2 mg/L	97	90-110
Run No 396919 Method SM 5210B	Analysis/Extraction Date 2021-03-09	Analyst AET	
BOD5	<1 mg/L	85	75-125
Run No 397013 Method MOE E3421	Analysis/Extraction Date 2021-03-08	Analyst YH	
Oil & Grease - Mineral	<1 mg/L	80	60-120
Oil & Grease - Non-mineral	<1 mg/L		60-120
Oil & Grease - Total	<1 mg/L	80	60-120
Run No 397049 Method SM2320,2510,4500H/F	Analysis/Extraction Date 2021-03-08	Analyst AET	
pH		100	90-110

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1948667
Date Submitted: 2021-03-03
Date Reported: 2021-03-04
Project: Project:
COC #: 210204

Page 1 of 3

Dear Andrea Burrill:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Steven
Tosh
2021.03.0
4 18:01:00
-05'00'

APPROVAL:

Steven Tosh, Operations Manager

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

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Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1948667
Date Submitted: 2021-03-03
Date Reported: 2021-03-04
Project:
COC #: 210204

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	Guideline
Microbiology	Faecal Coliforms	0	ct/100mL	1544376 Sewage 2021-02-24 Hall Beach Sewage 3	1544377 Sewage 2021-02-24 Hall Beach Sewage 4 1544378 Sewage 2021-02-24 Hall Beach Sewage 5
				1	0

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1948667
Date Submitted: 2021-03-03
Date Reported: 2021-03-04
Project:
COC #: 210204

Sample Comment Summary

Sample ID: 1544376 Hall Beach Sewage 3 Deviation from standard protocol. All bacteria samples on report are past hold time.

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1950970
Date Submitted: 2021-04-09
Date Reported: 2021-04-16
Project:
COC #: 872326

Page 1 of 3

Dear Andrea Burrill:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:


Addrine Thomas
2021.04.16
15:44:59 -04'00'

APPROVAL:

Addrine Thomas, Inorganics Supervisor

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1950970
Date Submitted: 2021-04-09
Date Reported: 2021-04-16
Project:
COC #: 872326

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
General Chemistry	BOD5	1	mg/L		1550906 Sewage 2021-03-29 HB Cyclic LET
	pH	1.00			
Oil and Grease	Total Suspended Solids	2	mg/L		
	Oil & Grease - Mineral	1	mg/L		
	Oil & Grease - Non-mineral	1	mg/L		
	Oil & Grease - Total	1	mg/L		
	Visible Sheen		P/A		

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1950970
Date Submitted: 2021-04-09
Date Reported: 2021-04-16
Project:
COC #: 872326

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 208523 Method SHEEN	Analysis/Extraction Date 2021-04-10 Analyst C M		
Visible Sheen			
Run No 398660 Method SM2320,2510,4500H/F	Analysis/Extraction Date 2021-04-13 Analyst AET		
pH		100	90-110
Run No 398738 Method SM 5210B	Analysis/Extraction Date 2021-04-14 Analyst AET		
BOD5	<1 mg/L	78	75-125
Run No 398795 Method MOE E3421	Analysis/Extraction Date 2021-04-14 Analyst R G		
Oil & Grease - Mineral	<1 mg/L	70	60-120
Oil & Grease - Non-mineral	<1 mg/L		60-120
Oil & Grease - Total	<1 mg/L	85	60-120
Run No 398884 Method C SM2540	Analysis/Extraction Date 2021-04-16 Analyst K B		
Total Suspended Solids	<2 mg/L	96	90-110

Guideline = * = Guideline Exceedence

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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 007264-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1950979
Date Submitted: 2021-04-09
Date Reported: 2021-04-12
Project: 872326
COC #:

Page 1 of 3

Dear Andrea Burrill:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Dragana
Dzeletovic
2021.04.12
14:05:14
-04'00'

APPROVAL:

Dragana Dzeletovic-Andric, Microbiology Team Lead

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Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 007264-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1950979
Date Submitted: 2021-04-09
Date Reported: 2021-04-12
Project:
COC #: 872326

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	Guideline
Microbiology	Faecal Coliforms	10	ct/100mL	1550929 Sewage 2021-03-29 HB Cycle-LET 3	1550930 Sewage 2021-03-29 HB Cycle-LET 4
				1550931 Sewage 2021-03-29 HB Cycle-LET 5	

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 007264-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1950979
Date Submitted: 2021-04-09
Date Reported: 2021-04-12
Project:
COC #: 872326

Sample Comment Summary

Sample ID: 1550929 HB Cycle-LET 3 Deviation from standard protocol. All bacteria samples on report are past hold time.

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Don Beattie
PO#: 17-00919
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1952301
Date Submitted: 2021-04-30
Date Reported: 2021-05-06
Project:
COC #: 212796

Page 1 of 3

Dear Don Beattie:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Addrine
Thomas
2021.05.06
17:06:28 -04'00'

APPROVAL:

Addrine Thomas, Inorganics Supervisor

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Don Beattie
PO#: 17-00919
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1952301
Date Submitted: 2021-04-30
Date Reported: 2021-05-06
Project:
COC #: 212796

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
General Chemistry	BOD5	1	mg/L		1554665 Sewage 2021-04-26 Fox-Main Cycle-LET
	pH	1.00			
Oil and Grease	Total Suspended Solids	2	mg/L		
	Oil & Grease - Mineral	1	mg/L		
	Oil & Grease - Non-mineral	1	mg/L		
	Oil & Grease - Total	1	mg/L		
	Visible Sheen		P/A		
					A

Guideline = * = **Guideline Exceedence**
Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Don Beattie
PO#: 17-00919
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1952301
Date Submitted: 2021-04-30
Date Reported: 2021-05-06
Project:
COC #: 212796

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 400012 Analysis/Extraction Date 2021-05-04	Analyst AET		
Method SM2320,2510,4500H/F			
pH		100	90-110
Run No 400043 Analysis/Extraction Date 2021-05-05	Analyst AET		
Method SM 5210B			
BOD5	<1 mg/L	89	75-125
Run No 400047 Analysis/Extraction Date 2021-05-05	Analyst R G		
Method MOE E3421			
Oil & Grease - Mineral	<1 mg/L	70	60-120
Oil & Grease - Non-mineral	<1 mg/L		60-120
Oil & Grease - Total	<1 mg/L	90	60-120
Run No 400096 Analysis/Extraction Date 2021-05-05	Analyst R G		
Method SHEEN			
Visible Sheen			
Run No 400112 Analysis/Extraction Date 2021-05-06	Analyst K B		
Method C SM2540			
Total Suspended Solids	<2 mg/L	86	90-110

Guideline = * = **Guideline Exceedence**

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Don Beattie
PO#: 17-00919
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1952306
Date Submitted: 2021-04-30
Date Reported: 2021-05-02
Project: 212796
COC #:

Page 1 of 3

Dear Don Beattie:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Dragana
Dzeletovic
2021.05.02
11:30:25
-04'00'

APPROVAL:

Dragana Dzeletovic-Andric, Microbiology Team Lead

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Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Don Beattie
PO#: 17-00919
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1952306
Date Submitted: 2021-04-30
Date Reported: 2021-05-02
Project:
COC #: 212796

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	Guideline
Microbiology	Faecal Coliforms	0	ct/100mL	1554673 Sewage 2021-04-26 Fox-Main Cycle-Let-1	1554674 Sewage 2021-04-26 Fox-Main Cycle-Let-2
				1554675 Sewage 2021-04-26 Fox-Main Cycle-Let-3	

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Don Beattie
PO#: 17-00919
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1952306
Date Submitted: 2021-04-30
Date Reported: 2021-05-02
Project:
COC #: 212796

Sample Comment Summary

Sample ID: 1554673 Fox-Main Cycle-Let-1 Deviation from standard protocol. All bacteria samples on report are past hold time.

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1954056
Date Submitted: 2021-05-27
Date Reported: 2021-06-03
Project: NWS
COC #: 212787

Page 1 of 3

Dear Andrea Burrill:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Approval: 
Addrine Thomas, Inorganics Supervisor
2021.06.03
16:29:40 -04'00'

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1954056
Date Submitted: 2021-05-27
Date Reported: 2021-06-03
Project: NWS
COC #: 212787

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
General Chemistry	BOD5	1	mg/L		1559250 Sewage 2021-05-20 FOX-M Cycle-Let 1
	pH	1.00			
Oil and Grease	Total Suspended Solids	2	mg/L		
	Oil & Grease - Mineral	1	mg/L		
	Oil & Grease - Non-mineral	1	mg/L		
	Oil & Grease - Total	1	mg/L		
	Visible Sheen		P/A		

Guideline =

* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1954056
Date Submitted: 2021-05-27
Date Reported: 2021-06-03
Project: NWS
COC #: 212787

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 401481 Analysis/Extraction Date 2021-05-28	Analyst SWS		
Method SM2320,2510,4500H/F			
pH		99	90-110
Run No 401510 Analysis/Extraction Date 2021-05-31	Analyst SWS		
Method C SM2540			
Total Suspended Solids	<2 mg/L	105	90-110
Run No 401633 Analysis/Extraction Date 2021-06-01	Analyst AX		
Method MOE E3421			
Oil & Grease - Mineral	<1 mg/L	80	60-120
Oil & Grease - Non-mineral	<1 mg/L		60-120
Oil & Grease - Total	<1 mg/L	95	60-120
Run No 401672 Analysis/Extraction Date 2021-06-02	Analyst AET		
Method SM 5210B			
BOD5	<1 mg/L	96	75-125
Run No 401744 Analysis/Extraction Date 2021-06-02	Analyst AX		
Method SHEEN			
Visible Sheen			

Guideline = * = **Guideline Exceedence**

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1954055
Date Submitted: 2021-05-27
Date Reported: 2021-05-28
Project: NWS
COC #: 212787

Page 1 of 3

Dear Andrea Burrill:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Steven
Tosh
2021.05.28
12:50:23
-04'00'

APPROVAL:

Steven Tosh, Operations Manager

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1954055
Date Submitted: 2021-05-27
Date Reported: 2021-05-28
Project: NWS
COC #: 212787

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	Guideline
Microbiology	Faecal Coliforms	0	ct/100mL	1559247 Sewage 2021-05-20 FOX-M Cycle-Let 3	1559248 Sewage 2021-05-20 FOX-M Cycle-Let 4
				1559249 Sewage 2021-05-20 FOX-M Cycle-Let 5	

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1954055
Date Submitted: 2021-05-27
Date Reported: 2021-05-28
Project: NWS
COC #: 212787

Sample Comment Summary

Sample ID: 1559247 FOX-M Cycle-Let 3 Deviation from standard protocol. All bacteria samples on report are past hold time.

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1957086
Date Submitted: 2021-07-07
Date Reported: 2021-07-13
Project: NWS
COC #: 212786

Page 1 of 3

Dear Andrea Burrill:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Addrine
Thomas
2021.07.13
14:51:46
-04'00'

APPROVAL: _____
Addrine Thomas, Inorganics Supervisor

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1957086
Date Submitted: 2021-07-07
Date Reported: 2021-07-13
Project: NWS
COC #: 212786

Group					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1567031 WW 2021-06-30 Fox-M Cycle-let-1
General Chemistry	Analyte	MRL	Units	Guideline		
	BOD5	1	mg/L	<1		
	pH	1.00		7.77		
Oil and Grease	Total Suspended Solids	2	mg/L	<2		
	Oil & Grease - Mineral	1	mg/L	<1		
	Oil & Grease - Non-mineral	1	mg/L	<1		
	Oil & Grease - Total	1	mg/L	<1		
	Visible Sheen		P/A	A		

Guideline =

* = Guideline Exceedence

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Methods references and/or additional QA/QC information available on request.

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Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1957086
Date Submitted: 2021-07-07
Date Reported: 2021-07-13
Project: NWS
COC #: 212786

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 208523 Method SHEEN	Analysis/Extraction Date 2021-07-08	Analyst C M	
Visible Sheen			
Run No 404025 Method SM 5210B	Analysis/Extraction Date 2021-07-12	Analyst AET	
BOD5	1 mg/L	97	75-125
Run No 404044 Method SM2320,2510,4500H/F	Analysis/Extraction Date 2021-07-08	Analyst SWS	
pH		99	90-110
Run No 404134 Method C SM2540	Analysis/Extraction Date 2021-07-10	Analyst AK	
Total Suspended Solids	<2 mg/L	97	90-110
Run No 404175 Method MOE E3421	Analysis/Extraction Date 2021-07-12	Analyst R G	
Oil & Grease - Mineral	<1 mg/L	90	60-120
Oil & Grease - Non-mineral	<1 mg/L		60-120
Oil & Grease - Total	<1 mg/L	85	60-120

Guideline = * = **Guideline Exceedence**

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1957098
Date Submitted: 2021-07-07
Date Reported: 2021-07-08
Project: NWS
COC #: 212786

Page 1 of 3

Dear Andrea Burrill:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Steven Tosh
2021.07.08
12:23:53
-04'00'

APPROVAL:

Steven Tosh, Operations Manager

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Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1957098
Date Submitted: 2021-07-07
Date Reported: 2021-07-08
Project: NWS
COC #: 212786

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	Guideline
Microbiology	Faecal Coliforms	0	ct/100mL	1567069 WW 2021-06-30 Fox-M Cycle-let-3	1567070 WW 2021-06-30 Fox-M Cycle-let-4
				1567071 WW 2021-06-30 Fox-M Cycle-let-5	

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1957098
Date Submitted: 2021-07-07
Date Reported: 2021-07-08
Project: NWS
COC #: 212786

Sample Comment Summary

Sample ID: 1567069 Fox-M Cycle-Iet-3 Deviation from standard protocol. All bacteria samples on report are past hold time.

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1959184
Date Submitted: 2021-08-04
Date Reported: 2021-08-11
Project: NWS
COC #: 212785

Page 1 of 3

Dear Andrea Burrill:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Charlie
Long Qu
2021.08.11 17:47:10
-04'00'

APPROVAL:

Long Qu, Organics Supervisor

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1959184
Date Submitted: 2021-08-04
Date Reported: 2021-08-11
Project: NWS
COC #: 212785

Group		Analyte	MRL	Units	Guideline	1573168 WW 2021-07-28 Fox-M Cycle-Let 1
General Chemistry	BOD5		1	mg/L		
		pH	1.00			
		Total Suspended Solids	2	mg/L		
Oil and Grease		Oil & Grease - Mineral	1	mg/L		
		Oil & Grease - Non-mineral	1	mg/L		
		Oil & Grease - Total	1	mg/L		
		Visible Sheen		P/A		
					A	

Guideline = * = **Guideline Exceedence**
Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1959184
Date Submitted: 2021-08-04
Date Reported: 2021-08-11
Project: NWS
COC #: 212785

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 405741 Method SM 5210B	Analysis/Extraction Date 2021-08-09 Analyst AK		
BOD5	<1 mg/L	99	75-125
Run No 405992 Method SM2320,2510,4500H/F	Analysis/Extraction Date 2021-08-06 Analyst SWS		
pH		99	90-110
Run No 406032 Method C SM2540	Analysis/Extraction Date 2021-08-09 Analyst SWS		
Total Suspended Solids	<2 mg/L	98	90-110
Run No 406232 Method MOE E3421	Analysis/Extraction Date 2021-08-11 Analyst AX		
Oil & Grease - Mineral	<1 mg/L	70	60-120
Oil & Grease - Non-mineral	<1 mg/L		60-120
Oil & Grease - Total	<1 mg/L	85	60-120
Run No 406235 Method SHEEN	Analysis/Extraction Date 2021-08-11 Analyst AX		
Visible Sheen			

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1959182
Date Submitted: 2021-08-04
Date Reported: 2021-08-05
Project: NWS
COC #: 212785

Page 1 of 3

Dear Andrea Burrill:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Dragana
Dzeletovic
2021.08.05
12:33:47
-04'00'
APPROVAL: _____
Dragana Dzeletovic-Andric, Microbiology Team Lead

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at: <http://www.cala.ca/scopes/2602.pdf>.

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1959182
Date Submitted: 2021-08-04
Date Reported: 2021-08-05
Project: NWS
COC #: 212785

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	Guideline
Microbiology	Faecal Coliforms	0	ct/100mL	1573165 WW 2021-07-28 Fox-M Cycle-Let 3	1573166 WW 2021-07-28 Fox-M Cycle-Let 4
				1573167 WW 2021-07-28 Fox-M Cycle-Let 5	28

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1959182
Date Submitted: 2021-08-04
Date Reported: 2021-08-05
Project: NWS
COC #: 212785

Sample Comment Summary

Sample ID: 1573165 Fox-M Cycle-Let 3 Deviation from standard protocol. All bacteria samples on report are past hold time.

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1959798
Date Submitted: 2021-08-11
Date Reported: 2021-08-18
Project: NWS
COC #: 878023

Page 1 of 3

Dear Andrea Burrill:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Approval: 
Addrine Thomas, Inorganics Supervisor
2021.08.18
15:15:23 -04'00'

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at: <http://www.cala.ca/scopes/2602.pdf>.

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1959798
Date Submitted: 2021-08-11
Date Reported: 2021-08-18
Project: NWS
COC #: 878023

Group					Lab I.D.	1575241 WW 2021-08-06 FOX-M Cycle-Let-1
Analyte		MRL	Units	Guideline		
General Chemistry	BOD5	1	mg/L			
	pH	1.00				
Oil and Grease	Total Suspended Solids	2	mg/L			
	Oil & Grease - Mineral	1	mg/L			
	Oil & Grease - Non-mineral	1	mg/L			
	Oil & Grease - Total	1	mg/L			
	Visible Sheen		P/A			

Guideline =

* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1959798
Date Submitted: 2021-08-11
Date Reported: 2021-08-18
Project: NWS
COC #: 878023

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 406393 Analysis/Extraction Date 2021-08-13	Analyst SWS		
Method SM2320,2510,4500H/F			
pH		99	90-110
Run No 406472 Analysis/Extraction Date 2021-08-18	Analyst SWS		
Method SM 5210B			
BOD5	<1 mg/L	87	75-125
Run No 406615 Analysis/Extraction Date 2021-08-17	Analyst AK		
Method C SM2540			
Total Suspended Solids	<2 mg/L	96	90-110
Run No 406771 Analysis/Extraction Date 2021-08-18	Analyst AX		
Method MOE E3421			
Oil & Grease - Mineral	<1 mg/L	70	60-120
Oil & Grease - Non-mineral	<1 mg/L		60-120
Oil & Grease - Total	<1 mg/L	95	60-120
Visible Sheen			

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1959794
Date Submitted: 2021-08-11
Date Reported: 2021-08-12
Project: NWS
COC #: 878023

Page 1 of 3

Dear Andrea Burrill:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Dragana
Dzeletovic
2021.08.12
13:10:12
-04'00'

APPROVAL: _____
Dragana Dzeletovic-Andric, Microbiology Team Lead

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at: <http://www.cala.ca/scopes/2602.pdf>.

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Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1959794
Date Submitted: 2021-08-11
Date Reported: 2021-08-12
Project: NWS
COC #: 878023

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	Guideline
Microbiology	Faecal Coliforms	0	ct/100mL	1575230 WW 2021-08-06 FOX-M Cycle-Let 3	1575231 WW 2021-08-06 FOX-M Cycle-Let 4
				1575232 WW 2021-08-06 FOX-M Cycle-Let 5	

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1959794
Date Submitted: 2021-08-11
Date Reported: 2021-08-12
Project: NWS
COC #: 878023

Sample Comment Summary

Sample ID: 1575230 FOX-M Cycle-Let 3 Deviation from standard protocol. All bacteria samples on report are past hold time.

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1962344
Date Submitted: 2021-09-14
Date Reported: 2021-09-21
Project: NWS
COC #: 212790

Page 1 of 3

Dear Andrea Burrill:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Addrine
Thomas
2021.09.21
12:37:52
-04'00'

APPROVAL: _____
Addrine Thomas, Inorganics Supervisor

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at: <http://www.cala.ca/scopes/2602.pdf>.

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1962344
Date Submitted: 2021-09-14
Date Reported: 2021-09-21
Project: NWS
COC #: 212790

Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.						1582601 WW 2021-09-07 FOX-M Cycle-Let
Group	Analyte	MRL	Units	Guideline		
General Chemistry	BOD5	1	mg/L		<1	
	pH	1.00			7.50	
	Total Suspended Solids	2	mg/L		<2	
Oil and Grease	Oil & Grease - Mineral	1	mg/L		<1	
	Oil & Grease - Non-mineral	1	mg/L		<1	
	Oil & Grease - Total	1	mg/L		<1	
	Visible Sheen		P/A		A	

Guideline =

* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1962344
Date Submitted: 2021-09-14
Date Reported: 2021-09-21
Project: NWS
COC #: 212790

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 408583 Method SM 5210B	Analysis/Extraction Date 2021-09-20 Analyst AK		
BOD5	<1 mg/L	95	75-125
Run No 408619 Method SM2320,2510,4500H/F	Analysis/Extraction Date 2021-09-15 Analyst AsA		
pH		100	90-110
Run No 408680 Method C SM2540	Analysis/Extraction Date 2021-09-17 Analyst AK		
Total Suspended Solids	<2 mg/L	98	90-110
Run No 408824 Method MOE E3421	Analysis/Extraction Date 2021-09-20 Analyst RHH		
Oil & Grease - Mineral	<1 mg/L	90	60-120
Oil & Grease - Non-mineral	<1 mg/L		60-120
Oil & Grease - Total	<1 mg/L	100	60-120
Visible Sheen			

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1962360
Date Submitted: 2021-09-14
Date Reported: 2021-09-17
Project: NWS
COC #: 212790

Page 1 of 3

Dear Andrea Burrill:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Jason
Kennedy
2021.09.17
13:12:10
-04'00'

APPROVAL:

Jason Kennedy, Project Manager

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

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Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1962360
Date Submitted: 2021-09-14
Date Reported: 2021-09-17
Project: NWS
COC #: 212790

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	Guideline
Microbiology	Faecal Coliforms	0	ct/100mL	1582645 WW 2021-09-07 FOX-M Cycle-Let 3	1582646 WW 2021-09-07 FOX-M Cycle-Let 4
				1582647 WW 2021-09-07 FOX-M Cycle-Let 5	

Guideline =

* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Andrea Burrill
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1962360
Date Submitted: 2021-09-14
Date Reported: 2021-09-17
Project: NWS
COC #: 212790

Sample Comment Summary

Sample ID: 1582645 FOX-M Cycle-Let 3 Deviation from standard protocol. All bacteria samples on report are past hold time.

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 008887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1965021
Date Submitted: 2021-10-19
Date Reported: 2021-10-20
Project: NWS
COC #: 881485

Page 1 of 3

Dear Alaina Leslie:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Dragana
Dzeletovic
2021.10.20
16:02:50

APPROVAL: 04'00'
Dragana Dzeletovic-Andric, Microbiology Team Lead

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Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 008887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1965021
Date Submitted: 2021-10-19
Date Reported: 2021-10-20
Project: NWS
COC #: 881485

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	Guideline
Microbiology	Faecal Coliforms	0	ct/100mL	1590070 Sewage 2021-10-08 FOX-M Cycle-Let 3	1590071 Sewage 2021-10-08 FOX-M Cycle-Let 4
				1590072 Sewage 2021-10-08 FOX-M Cycle-Let 5	

Guideline =

* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 008887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1965021
Date Submitted: 2021-10-19
Date Reported: 2021-10-20
Project: NWS
COC #: 881485

Sample Comment Summary

Sample ID: 1590070 FOX-M Cycle-Let 3 Deviation from standard protocol. All bacteria samples on report are past hold time.

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 008887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1964950
Date Submitted: 2021-10-19
Date Reported: 2021-10-26
Project: NWS
COC #: 881485

Page 1 of 4

Dear Alaina Leslie:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Addrine
Thomas
2021.10.26
16:02:15

APPROVAL:  04:00
Addrine Thomas, Inorganics Supervisor

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1964950
Date Submitted: 2021-10-19
Date Reported: 2021-10-26
Project: NWS
COC #: 881485

Group					Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D. 1589872 WW 2021-10-08 FOX-M-Cycle-Let 1-2
General Chemistry	BOD5	1	mg/L	<1					
	pH	1.00		7.48					
	Total Suspended Solids	2	mg/L	<2					
Oil and Grease	Oil & Grease - Mineral	1	mg/L	<1					
	Oil & Grease - Non-mineral	1	mg/L	<1					
	Oil & Grease - Total	1	mg/L	<1					
	Visible Sheen		P/A	A					

Guideline =

* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

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400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1964950
Date Submitted: 2021-10-19
Date Reported: 2021-10-26
Project: NWS
COC #: 881485

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 410701 Method MOE E3421	Analysis/Extraction Date 2021-10-20 Analyst RHH		
Oil & Grease - Mineral	<1 mg/L	80	60-120
Oil & Grease - Non-mineral	<1 mg/L		60-120
Oil & Grease - Total	<1 mg/L	90	60-120
Visible Sheen			
Run No 410785 Method SM 5210B	Analysis/Extraction Date 2021-10-26 Analyst AK		
BOD5	<1 mg/L	76	75-125
Run No 410793 Method SM2320,2510,4500H/F	Analysis/Extraction Date 2021-10-21 Analyst ASA		
pH		99	90-110
Run No 410910 Method C SM2540	Analysis/Extraction Date 2021-10-24 Analyst AK		
Total Suspended Solids	<2 mg/L	97	90-110

Guideline =

* = Guideline Exceedence

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Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1964950
Date Submitted: 2021-10-19
Date Reported: 2021-10-26
Project: NWS
COC #: 881485

Sample Comment Summary

Sample ID: 1589872	FOX-M-Cycle-Let 1-2	Holding time for pH exceeded.
--------------------	---------------------	-------------------------------

Guideline = * = **Guideline Exceedence**
Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 008887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1967591
Date Submitted: 2021-11-26
Date Reported: 2021-12-02
Project: Sewage (Site: FOX-M WO:982347)
COC #: 883401

Page 1 of 4

Dear Alaina Leslie:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Addrine
Thomas
2021.12.02
15:26:02 -05'00'

APPROVAL:

Addrine Thomas, Inorganics Supervisor

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1967591
Date Submitted: 2021-11-26
Date Reported: 2021-12-02
Project: Sewage (Site: FOX-M WO:982347)
COC #: 883401

Group					Lab I.D.	1598211
Analyte					Sample Matrix	WW
MRL					Sample Type	
Units					Sampling Date	2021-11-08
Guideline					Sample I.D.	FOX-M Cyclelet
General Chemistry	BOD5	1	mg/L	2		
	pH	1.00		7.10		
	Total Suspended Solids	2	mg/L	<2		
Oil and Grease	Oil & Grease - Mineral	1	mg/L	<1		
	Oil & Grease - Non-mineral	1	mg/L	<1		
	Oil & Grease - Total	1	mg/L	<1		
	Visible Sheen		P/A	A		

Guideline =

* = Guideline Exceedence

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Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1967591
Date Submitted: 2021-11-26
Date Reported: 2021-12-02
Project: Sewage (Site: FOX-M WO:982347)
COC #: 883401

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 413233 Method SM 5520B/F	Analysis/Extraction Date 2021-11-29 Analyst RHH		
Oil & Grease - Mineral	<1 mg/L	90	60-120
Oil & Grease - Non-mineral	<1 mg/L		60-120
Oil & Grease - Total	<1 mg/L	95	60-120
Visible Sheen			
Run No 413287 Method C SM2540	Analysis/Extraction Date 2021-12-01 Analyst AK		
Total Suspended Solids	<2 mg/L	100	90-110
Run No 413291 Method SM 5210B	Analysis/Extraction Date 2021-12-01 Analyst AK		
BOD5	<1 mg/L	81	75-125
Run No 413340 Method SM2320,2510,4500H/F	Analysis/Extraction Date 2021-12-01 Analyst ASA		
pH		101	90-110

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 008887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1967591
Date Submitted: 2021-11-26
Date Reported: 2021-12-02
Project: Sewage (Site: FOX-M WO:982347)
COC #: 883401

Sample Comment Summary

Sample ID: 1598211 FOX-M Cyclelet O&G: Sulphuric acid was added in lab.

Guideline = * = **Guideline Exceedence**
Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 008887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1967583
Date Submitted: 2021-11-26
Date Reported: 2021-12-06
Project: Sewage (Site: FOX-M WO:982347)
COC #: 883401

Page 1 of 3

Dear Alaina Leslie:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Dragana
Dzeletovic
2021.12.06
16:37:17
-05'00'

APPROVAL:

Dragana Dzeletovic-Andric, Microbiology Team Lead

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Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 008887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1967583
Date Submitted: 2021-11-26
Date Reported: 2021-12-06
Project: Sewage (Site: FOX-M WO:982347)
COC #: 883401

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	Guideline
Microbiology	Faecal Coliforms	0	ct/100mL	1598178 WW 2021-11-08 FOX-M Cyclelet A	1598179 WW 2021-11-08 FOX-M Cyclelet B
				1598180 WW 2021-11-08 FOX-M Cyclelet C	

Guideline =

* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 008887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1967583
Date Submitted: 2021-11-26
Date Reported: 2021-12-06
Project: Sewage (Site: FOX-M WO:982347)
COC #: 883401

Sample Comment Summary

Sample ID: 1598178 FOX-M Cyclelet A Deviation from standard protocol. All bacteria samples on report are past hold time.

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 008887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1968800
Date Submitted: 2021-12-15
Date Reported: 2021-12-22
Project: Sewage (Site: FOX-M WO: _983491_)
COC #: 884255

Page 1 of 3

Dear Alaina Leslie:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:



Addrine Thomas
2021.12.22
14:21:43 -05'00'

APPROVAL:

Addrine Thomas, Inorganics Supervisor

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Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 008887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1968800
Date Submitted: 2021-12-15
Date Reported: 2021-12-22
Project: Sewage (Site: FOX-M WO:_983491_)
COC #: 884255

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
Group	Analyte	MRL	Units	Guideline	
General Chemistry	BOD5	1	mg/L		1602207 Sewage
	pH	1.00			2021-12-09 FOX-M-Cyclelet
	Total Suspended Solids	2	mg/L		
Oil and Grease	Oil & Grease - Mineral	1	mg/L		8
	Oil & Grease - Non-mineral	1	mg/L		7.57
	Oil & Grease - Total	1	mg/L		114
	Visible Sheen		P/A		<1
					<1
					A

Guideline = *** = Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
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400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 008887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1968800
Date Submitted: 2021-12-15
Date Reported: 2021-12-22
Project: Sewage (Site: FOX-M WO: _983491_)
COC #: 884255

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 414251 Analysis/Extraction Date 2021-12-21 Analyst Z S Method SM 5210B			
BOD5	<1 mg/L	95	75-125
Run No 414364 Analysis/Extraction Date 2021-12-17 Analyst AsA Method SM2320,2510,4500H/F			
pH		99	90-110
Run No 414424 Analysis/Extraction Date 2021-12-20 Analyst AsA Method C SM2540			
Total Suspended Solids	<2 mg/L	102	90-110
Run No 414511 Analysis/Extraction Date 2021-12-21 Analyst RHH Method SM 5520B/F			
Oil & Grease - Mineral	<1 mg/L	60	60-120
Oil & Grease - Non-mineral	<1 mg/L		60-120
Oil & Grease - Total	<1 mg/L	95	60-120
Visible Sheen			

Guideline = * = **Guideline Exceedence**

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Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1968688
Date Submitted: 2021-12-15
Date Reported: 2021-12-16
Project: Sewage (Site: FOX-M WO: _983491_)
COC #: 884255

Page 1 of 3

Dear Alaina Leslie:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:



Jason
Kennedy
2021.12.16
16:57:09
-05'00'

APPROVAL:

Jason Kennedy, Project Manager

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Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1968688
Date Submitted: 2021-12-15
Date Reported: 2021-12-16
Project: Sewage (Site: FOX-M WO: _983491_)
COC #: 884255

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1601944 Sewage 2021-12-09 FOX-M Cyclelet-A	1601945 Sewage 2021-12-09 FOX-M Cyclelet-B	1601946 Sewage 2021-12-09 FOX-M Cyclelet-C
Group	Analyte	MRL	Units	Guideline				
Microbiology	Faecal Coliforms	0	ct/100mL			530	970	990

Guideline = *** = Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

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400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Ms. Alaina Leslie
PO#: 00887-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1968688
Date Submitted: 2021-12-15
Date Reported: 2021-12-16
Project: Sewage (Site: FOX-M WO: _983491_)
COC #: 884255

Sample Comment Summary

Sample ID: 1601944 FOX-M Cyclelet-A Deviation from standard protocol. All bacteria samples on report are past hold time.
--

Guideline = *** = Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.

Analytical Method: AMBCOLM1

additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



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 2021

Berm	Location on-site	Discharge Latitude ²	Discharge Longitude	Date
HAL W20B	Beach	68°46'23.93"N	81°12'51.11"W	29-Jun-2021
HAL W20D&E	Airstrip	68°46'15.85"N	81°13'58.33"W	29-Jun-2021
HAL W20F	Beach	68°46'23.75"N	81°12'46.12"W	29-Jun-2021
HAL W22A	Summit	68°45'42.24"N	81°13'25.04"W	29-Jun-2021
HAL W22B	Summit	68°45'43.00"N	81°13'27.27"W	29-Jun-2021

² Final discharge point of bermed fuel storage facility

**ANNEX E. ANALYSIS OF BERM WATER³**

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 in pages which follow.

The following documents are enclosed:

1. Hydrocarbon Test Strip Photo Log

³ Effluent from bermed fuel storage facilities.

Photo Log of Hydrocarbon Test Strips



Photo E 1: Hydrocarbon test strips used in berm of tank W20B (29-Jun-2021)



Photo E 2: Hydrocarbon test strips used in berm of tank W20B (29-Jun-2021)

UNCONTROLLED WHEN PRINTED

SOW Ref: 16.F.5.d



Photo E 3: Hydrocarbon test strips used in berm of tank W20B (29-Jun-2021)



Photo E 4: Hydrocarbon test strips used in berm of tank W20B (29-Jun-2021)

UNCONTROLLED WHEN PRINTED



Photo E 5: Hydrocarbon test strips used in berm of tank W220D & W20E (29-Jun-2021)



Photo E 6: Hydrocarbon test strips used in berm of tank W20E & W20D (29-Jun-2021)



Photo E 7: Hydrocarbon test strips used in berm of tank W20F (29-Jun-2021)



Photo E 8: Hydrocarbon test strips used in berm of tank W22A (29-Jun-2021)

SOW Ref: 16.F.5.d



Photo E 9: Hydrocarbon test strips used in berm of tank W22A (29-Jun-2021)



Photo E 10: Hydrocarbon test strips used in berm of tank W22B (29-Jun-2021)

UNCONTROLLED WHEN PRINTED