



2019 ANNUAL NUNAVUT WATER BOARD REPORT FOR CAM-M

FOR THE
North Warning System

Contract # W8485-100224/001/NX
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EXECUTIVE SUMMARY

This 2019 Annual Report for the Nunavut Water Board (NWB) has been prepared by Raytheon Canada Limited (RCL) for the Department of National Defence in order to meet the requirements of Part B "General Conditions", paragraph 1 of its licence. Water licence 3BC-CAM0919 was in effect from 01 January until it was replaced with licence 8BC-CAM1929 on 01-Sep-2019. This report covers 01 January to 31 December 2019.

RCL is the Operation and Maintenance (O&M) Contractor for the North Warning System (NWS), including CAM-M, the attended (manned) NWS radar site located at Cambridge Bay, Nunavut.

The water usage for CAM-M in 2019 was 1263.9 cubic meters. This is an average of 3.4 cubic meters per day, below the maximum of 10 cubic meters per day allowed by the licence 3BC-CAM0919. On one occasion, more than the daily maximum was drawn due to increased site activity. The total water use is below the threshold set in the licence issued in 2019 of 3650 m³ and less than 300 m³ per day allowed by the licence 8BC-CAM1929.

Sewage at CAM-M is processed by the tertiary wastewater treatment system. Some of the treated effluent is recycled as on-site urinal/toilet flush water. The discharged treated effluent is of potable water quality. A sample of the treated effluent was sent for laboratory analysis each month in 2019.

Samples of the water contained in the berms of fuel storage facilities were sent for laboratory analysis and confirmed to be within effluent quality limits of the NWB licence 8BC-CAM1929, Part D, item 11 before the water was pumped out of the berms.

Hazardous waste and waste oil were 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. Waste sent for disposal included 4 crates of waste batteries and 59 drums of assorted waste.

Non-hazardous domestic solid waste was disposed of at the local landfill through a contract with the Hamlet of Cambridge Bay. RCL has documented authorization from the community for receiving the waste.

One outdoor spill occurred at CAM-M in 2019. NT-NU Report Number 19-467. On 21-Nov-2019, staff were refuelling buildings on-site and inadvertently left a valve open. The open valve allowed a day tank to overfill, spilling approximately 481 L. Remediation work was executed until 06Dec2019. An impacted area remains that will be remediated in 2020.

The Spill Contingency Plan was successfully implemented.

No progressive reclamation work was completed at CAM-M in 2019 other than the response to the 21-Nov-2019 spill.



TABLE OF CONTENTS

Executive Summary	4
List of Tables	5
List of Figures	5
1.0 Introduction	7
1.1 Report Details	7
2.0 Water Use	7
3.0 Treated Sewage Discharge	8
4.0 Hazardous Waste and Waste Oil Disposal	9
5.0 Non-Hazardous Solid Waste Disposal	10
6.0 Monitoring Program	10
7.0 Spills (Unauthorized Discharges)	11
8.0 Revisions to the Spill Contingency Plan	12
9.0 Progressive Reclamation Work UnderTaken	12
10.0 Acronyms	12
Annex A: Hazardous Waste and Waste Oil Disposal in 2019	13
Annex B: Treated Sewage Effluent Outfall (CDL-2) Location with Coordinates	23
Annex C: Analysis of Treated Sewage Effluent	24
Annex D: Location of Bermed Fuel Storage Facilities and Analysis of Berm Water	37

LIST OF TABLES

Table 2-1: Monthly Raw Water Usage at CAM-M in 2019	8
Table 3-1: Monthly and Annual Volume of Sewage and Grey Water Treated at CAM-M in 2019	8
Table 4-1: Hazardous Waste and Waste Oil Sent for Disposal from CAM-M in 2019	9
Table 5-1: Non-hazardous Domestic Solid Waste Sent for Disposal from CAM-M in 2019	10
Table 7-1: Unauthorized Discharges at CAM-M in 2019	11
Table 10-1: Acronyms	12
Table C-1: Summary of Analysis of Treated Sewage Effluent at CAM-M in 2019	24
Table D-1: Analysis of Berm Water at CAM-M in 2019	37

LIST OF FIGURES

Figure 1: Movement Document 2581515-0	13
Figure 2: Movement Document 2539510-4	14
Figure 3: NWS Shipping Manifest TCN-39867	15
Figure 4: NWS Shipping Manifest TCN-39868	15
Figure 5: NWS Shipping Manifest TCN-39860	16
Figure 6: NWS Shipping Manifest TCN-39861	16
Figure 7: NWS Shipping Manifest TCN-39863	17

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Figure 8: NWS Shipping Manifest TCN-39864.....	17
Figure 9: NWS Shipping Manifest TCN-39865.....	18
Figure 10: NWS Shipping Manifest TCN-39870.....	18
Figure 11: NWS Shipping Manifest TCN-39877.....	19
Figure 12: NWS Shipping Manifest TCN-39878.....	19
Figure 13: NWS Shipping Manifest TCN-39879.....	20
Figure 14: NWS Shipping Manifest TCN-39886.....	20
Figure 15: NWS Shipping Manifest TCN-40133.....	21
Figure 16: NWS Shipping Manifest TCN-40194.....	21
Figure 17: NWS Shipping Manifest TCN-40402.....	22
Figure 18: January 2019, sewage effluent laboratory results page 1 of 2.....	25
Figure 19: January 2019, sewage effluent laboratory results page 2 of 2.....	25
Figure 20: February 2019, sewage effluent laboratory results page 1 of 2.....	26
Figure 21: February 2019, sewage effluent laboratory results page 2 of 2.....	26
Figure 22: March 2019, sewage effluent laboratory results page 1 of 2.....	27
Figure 23: March 2019, sewage effluent laboratory results page 2 of 2.....	27
Figure 24: April 2019, sewage effluent laboratory results page 1 of 2.....	28
Figure 25: April 2019, sewage effluent laboratory results page 2 of 2.....	28
Figure 26: May 2019, sewage effluent laboratory results page 1 of 2.....	29
Figure 27: May 2019, sewage effluent laboratory results page 2 of 2.....	29
Figure 28: June 2019, sewage effluent laboratory results page 1 of 2.....	30
Figure 29: June 2019, sewage effluent laboratory results page 2 of 2.....	30
Figure 30: July 2019, sewage effluent laboratory results page 1 of 2.....	31
Figure 31: July 2019, sewage effluent laboratory results page 2 of 2.....	31
Figure 32: August 2019, sewage effluent laboratory results page 1 of 2.....	32
Figure 33: August 2019, sewage effluent laboratory results page 2 of 2.....	32
Figure 34: September 2019, sewage effluent laboratory results page 1 of 2.....	33
Figure 35: September 2019, sewage effluent laboratory results page 2 of 2.....	33
Figure 36: October 2019, sewage effluent laboratory results page 1 of 2.....	34
Figure 37: October 2019, sewage effluent laboratory results page 2 of 2.....	34
Figure 38: November 2019, sewage effluent laboratory results page 1 of 2.....	35
Figure 39: November 2019, sewage effluent laboratory results page 2 of 2.....	35
Figure 40: December 2019, sewage effluent laboratory results page 1 of 2.....	36
Figure 41: December 2019, sewage effluent laboratory results page 2 of 2.....	36
Figure 42: CAM W22A berm water laboratory results (14-Jun-2019).....	38
Figure 43: CAM W20B&C berm water laboratory results (14-Jun-2019).....	38
Figure 44: CAM W22C and W20D berm water laboratory results page 1 of 2 (19-Jun-2019).....	39
Figure 45: CAM W22C and W20D berm water laboratory results page 2 of 2 (19-Jun-2019).....	39



1.0 INTRODUCTION

This 2019 Annual Report for the Nunavut Water Board (NWB) has been prepared by Raytheon Canada Limited (RCL) for the Department of National Defence in order to meet the requirements of Part B “General Conditions”, paragraph 1 of its licence. Water licence 3BC-CAM0919 was in effect from 01 January until it was replaced with licence 8BC-CAM1929 on 01-Sep-2019. This report covers 01 January to 31 December 2019.

RCL is the Operation and Maintenance (O&M) Contractor for the North Warning System (NWS), including CAM-M. CAM-M is the attended (manned) NWS radar site located at Cambridge Bay, Nunavut.

1.1 Report Details

Licensee:	Department of National Defence, Government of Canada
Licence:	3BC-CAM0919 – Type “B” from 01-Jan-2019 until it was replaced on 01-Sep-2019 with 8BC-CAM1929 – Type “B”
Location:	CAM-M North Warning System Site, Cambridge Bay, Kitikmeot Region, Nunavut
Report Prepared by:	Raytheon Canada Limited, 18-Mar-2020
Time period covered:	01 January to 31 December 2019

2.0 WATER USE

A total of 1263.9 cubic meters was drawn from the water supply lake in 2019. The water usage from January to 01-April averaged 3.4 cubic meters (m³) per day which is below the maximum of 10 m³ per day allowed by the licence 3BC-CAM0919. The 10m³ limit was exceeded once in 2019 while licence 3BC-CAM0919 was in effect. On 29-Jan-2019, 12.4 m³ of water was taken. 3.4 m³ of water was pumped to the site as usual and an additional 9 m³ of water was taken in the water truck. The total water used in 2019 was below the threshold set in the licence issued in 2019 of 3650 m³ per year and 300 m³ per day allowed by the licence 8BC-CAM1929.

See Table 2-1 for the volume of water drawn at CAM-M each month in 2019.



Table 2-1: Monthly Raw Water Usage at CAM-M in 2019

Month	Raw water usage (m ³)
January	108.1
February	98.8
March	99.1
April	87.7
May	97
June	102.3
July	117.6
August	109.4
September	110.6
October	95.9
November	130.2
December	107.2
TOTAL	1263.9

3.0 TREATED SEWAGE DISCHARGE

At CAM-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 of 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.

Table 3-1: Monthly and Annual Volume of Sewage and Grey Water Treated at CAM-M in 2019

Month	Volume of sewage and greywater treated then discharged or recycled (m ³)
January	103.2
February	98.8
March	99.1
April	87.7
May	97.0
June	102.3
July	117.6
August	113.9
September	110.6
October	95.9
November	130.2
December	107.2
TOTAL	1263.5



4.0 HAZARDOUS WASTE AND WASTE OIL DISPOSAL

Hazardous waste and waste oil were sent to an approved hazardous waste disposal site outside of Nunavut as required by the licence. The hazardous waste was shipped to Qikiqtaaluk Environmental, through their subcontractor Veolia, 2630, boul. Industriel, Chambly, QC J3L 4V2.

Waste sent for disposal included 4 crates of waste batteries and 59 drums of assorted waste (waste fuel, waste oil, etc.). See Table 4-1 for the list of items sent for disposal.

See **Annex A: Hazardous Waste and Waste Oil Disposal in 2019** 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 CAM-M in 2019

Description, TDG shipping name	Quantity	Movement Document or Manifest #
Waste batteries, wet, filled with acid	2 Crates	Movement Document 2539510-4
Waste batteries, wet, non-spillable	2 Crates	Movement Document 2539510-4
Waste Jet A1 fuel and water mixture	5 Drums	Movement Document 2539510-4
Waste fuel, aviation, turbine engine mixture		
Waste oily rags	5 Drums	Movement Document 2539510-4
Waste solids containing flammable liquids, n.o.s (fuel, aviation, turbine engine)		
Waste POL soaked absorbent	4 Drums	Movement Document 2539510-4
Waste solids containing flammable liquids, n.o.s (fuel, aviation, turbine engine)		
Waste paint flammable	2 Drums	Movement Document 2581515-0
Waste paint		
Waste Activated Carbon Filter	8 Drums	NWS Manifest TCN39867, TCN39868
Not Regulated		
Waste oil	28 Drums	NWS Manifest TCN39863, TCN39864, TCN39865, TCN39870, TCN39886, TCN40133, TCN40194, TCN40402
Not TDG regulated		
Waste oil filters	4 Drums	NWS Manifest TCN39860, TCN39861
Not TDG regulated		
Waste oil soaked sorbent	2 Drums	NWS Manifest TCN39844
Not TDG regulated		
Waste glycol (drum)	1 Drum	NWS Manifest TCN39877, TCN39878, TCN39879
Not TDG Regulated		

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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 Cambridge Bay. RCL has documented authorization from the community for receiving the waste. See Table 5-1 for the quantity of non-hazardous waste generated.

Table 5-1: Non-hazardous Domestic Solid Waste Sent for Disposal from CAM-M in 2019

Month	Waste Generated (kg)
January	1137
February	1763
March	884
April	1533
May	1672
June	1461
July	1323
August	1551
September	1086
October	1334
November	973
December	1182
TOTAL	15,899

6.0 MONITORING PROGRAM

In 2019, a monitoring program was implemented at CAM-M as required by the water licence, Part I of licence 3BC-CAM0919 and Part J of licence 8BC-CAM1929. The monitoring program included the following:

1. Volume of raw water drawn from the water Supply Lake (CDL-1). The information from this monitoring is shown in **Section 2.0 Water Use**.
2. Quality of sewage discharged from the final discharge point of the sewage treatment facility (CDL-2). The location of the sewage effluent outfall is shown in **Annex B: Treated Sewage Effluent Outfall (CDL-2) Location with Coordinates**, including coordinates. The treated sewage was sampled monthly. The results of the analyses are shown in **Annex C: Analysis of Treated Sewage Effluent**.
3. Quality of the water contained in the berms of fuel storage facilities prior to discharge (CDL-3) was analyzed and confirmed as being 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: Location of Bermed Fuel Storage Facilities and Analysis of Berm Water**. All samples met the effluent requirements of the water licence, Part D.
4. No landfarm has been built on-site, so no samples have been collected from the final discharge point from the landfarm (CDL-4).



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7.0 SPILLS (UNAUTHORIZED DISCHARGES)

Table 7-1: Unauthorized Discharges at CAM-M in 2019

Date, NT-NU Spill #	Product	Quantity	Cause and follow-up action	On-site location
21-Nov-2019, Spill # 19-467	Jet A1	481 L	<p>On 21-Nov-2019, staff were refilling day tanks in various buildings on-site. Two technicians completed the fuel transfers. They were in communication by radio, and completed the following steps at each building:</p> <ul style="list-style-type: none">• Open the valves to a tank;• Start the pump;• Monitor the transfer;• When the tank is full, stop the pump;• Close the valve. <p>Another site employee noticed the spill. The spill was immediately stopped and reported. No free product was visible, but impacted snow was collected and absorbent pads were laid down and some placed in the near-by sump. Upon review, it was determined that the cause of the spill was that the valves to the day tanks in Warehouse 2 had not been shut when the fuel transfer was complete and the employees moved on to transfer fuel to other buildings.</p> <p>Impacted snow was cleaned up immediately. A temporary shelter was built around the spill area. The shelter was heated and from 26-Nov-2019 to 06-Dec-2019 and 30m³ of impacted soil/gravel was removed. A Photo-Ionizing Detector (PID) was used for field-screening the impacted material. When the PID showed clean samples, confirmatory samples for laboratory analysis were taken and heating of the shelter around the spill area was halted. There is still an area that exceeds the Canadian Council of Ministers of the Environment (CCME) Soil Quality Guidelines (SQG) and the CCME Canada-wide Standard for Petroleum Hydrocarbons (PHC CWS) so remediation will continue in 2020.</p>	Warehouse B13B (69° 6'53.10"N, 105° 7'11.22"W)

The Spill Contingency Plan was successfully implemented.

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8.0 REVISIONS TO THE SPILL CONTINGENCY PLAN

The Spill Contingency Plan was updated on 29-Mar-2019. 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 completed at CAM-M in 2019 other than the response to the 21-Nov-2019 spill as stated in Table 7-1.

10.0 ACRONYMS

Table 10-1: Acronyms

Acronym	Definition
CWS for PHC	Canada-Wide Standards for Petroleum Hydrocarbons (PHC) in Soil
CCME	Canadian Council of Ministers of the Environment
m ³	Cubic metre
n.o.s.	Not Otherwise Specified
NWB	Nunavut Water Board
NWS	North Warning System
O&M	Operations and Maintenance
PHC	Petroleum Hydrocarbons
PID	Photo Ionizing Detector
RCL	Raytheon Canada Limited
SQG	Soil Quality Guidelines
TDGR	Transportation of Dangerous Goods Regulations



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ANNEX A: HAZARDOUS WASTE AND WASTE OIL DISPOSAL IN 2019

The 2019 Movement Documents for TDG Regulated waste and NWS Manifests for non-TDG Regulated waste described in Table 4-1 are below.

MOVEMENT DOCUMENT / MANIFEST
DOCUMENT DE MOUVEMENT / MANIFESTE

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

2581515-0

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

2539510-4

A Generator / consigneur
Producteur / expéditeur
Registration No. / Provincial ID No.
N° d'immatriculation - d'id. provincial
MUG100003

Company name / Nom de l'entreprise
DEPARTMENT OF NATIONAL DEFENCE C/O RCL
Mailing address / Adresse postale
22 Wing, Bldg 109, Hornell Heights, ON, L9P
City / Ville
Hornell Heights
Province
ON
Postal code / Code postal
M9M 1P0
E-mail / Courriel électronique
(705) 494-2011
Tel. No. / N° de tél.
ext: 2840

Shipping site address / Adresse du lieu de l'expédition
NWS LSS Cambridge Bay P.O. Box 1239
City / Ville
Cambridge Bay
Province
NU
Postal code / Code postal
X0A 0C0

Intended Receiver / consignee
Réceptionnaire / destinataire prévu
Registration No. / Provincial ID No.
N° d'immatriculation - d'id. provincial
Chikitaaluk Environmental
Mailing address / Adresse postale
Entrance, Suite 200 Brossard QC J4Z 3V4
City / Ville
Brossard
Province
QC
Postal code / Code postal
J4Z 3V4
E-mail / Courriel électronique
()
Tel. No. / N° de tél.
()

Receiving site address / Adresse du lieu de destination
Veolia 2630, boul. Industriel
City / Ville
Chambly
Province
QC
Postal code / Code postal
J3B 8V2

B Carrier / transporteur
Transporteur
Registration No. / Provincial ID No.
N° d'immatriculation - d'id. provincial
543760

Company name / Nom de l'entreprise
NEAL

Mailing address / Adresse postale
City / Ville
Province
Postal code / Code postal
E-mail / Courriel électronique
Tel. No. / N° de tél.
Vehicle / Véhicule
Trailer - Rail car No. 1
1^{re} remorque - wagon
Trailer - Rail car No. 2
2^e remorque - wagon
Registration No. / N° d'immatriculation
Port of entry / Point d'entrée
International use only
Port of exit / Point de sortie
International use only

Carrier Certification / I certify that I have received waste or recyclable material from the generator / consigneur for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.
Attestation du transporteur / J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie)
Signature
Year / Année
Month / Mois
Day / Jour

C Receiver / consignee
Réceptionnaire / destinataire
Registration No. / Provincial ID No.
N° d'immatriculation - d'id. provincial

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

Company name / Nom de l'entreprise
Mailing address / Adresse postale
City / Ville
Province
Postal code / Code postal
E-mail / Courriel électronique
Tel. No. / N° de tél.
Receiving site address / Adresse du lieu de destination
Date received / Date de réception
Year / Année
Month / Mois
Day / Jour
Time / Heure
A.M. P.M.

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire
Registration No. / Provincial ID No.
N° d'immatriculation / d'id. provincial

Quantity received / Quantité reçue
Units / Unités
Comments / Commentaires
Handling Code / Code de manutention
Shipment / Envoi
Accepted / Refusé
Decort / Vols
Pack / Vols

Quantity shipped / Quantité expédiée
Units / Unités
Packaging / Contenant
Codes
Phys. state / État phys.

Notice No. / N° de notification
Notice Line No. / N° de ligne de la notification
Shipment / Envoi
C/D De
D or R code / Code D ou R
C code / Code C
Base Annex VIII or OECD Code / Annexe VIII de la Bâle ou Code OCDE
H code / Code H
Y code / Code Y
Export / Exportation
Import / Importation
Customs code(s) / Code(s) de douane

Notice No. / N° de notification
Notice Line No. / N° de ligne de la notification
Shipment / Envoi
C/D De
D or R code / Code D ou R
C code / Code C
Base Annex VIII or OECD Code / Annexe VIII de la Bâle ou Code OCDE
H code / Code H
Y code / Code Y
Export / Exportation
Import / Importation
Customs code(s) / Code(s) de douane

24 Hour Number: 1-888-226-3832 or 613-996-6866

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

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie)
Signature
Tel. No. / N° de tél.
Date shipped / Date d'expédition
Year / Année
Month / Mois
Day / Jour
Time / Heure
A.M. P.M.
Scheduled arrival date / Date d'arrivée prévue
Year / Année
Month / Mois
Day / Jour

Retained by Carrier / Gardée par le transporteur
Copy / Copie 4 (pink / rose)

Figure 1: Movement Document 2581515-0

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SOW Ref: 16.F.5.d

MOVEMENT DOCUMENT / MANIFEST
DOCUMENT DE MOUVEMENT / MANIFESTE

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

2539510-4

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

A Generator / consigneur Producteur / expéditeur Company name / Nom de l'entreprise Mailing address / Adresse postale City / Ville Province Postal code / Code postal E-mail / Courriel électronique Shipping site address / Adresse du lieu de l'expédition City / Ville Province Postal code / Code postal Intended Receiver / consignee Réceptionnaire / destinataire prévu Mailing address / Adresse postale City / Ville Province Postal code / Code postal E-mail / Courriel électronique Receiving site address / Adresse du lieu de l'expédition City / Ville Province Postal code / Code postal			B Carrier Transporteur Company name / Nom de l'entreprise Mailing address / Adresse postale City / Ville Province Postal code / Code postal E-mail / Courriel électronique Vehicles / Véhicule Trailer - Rail car No 1 1 st remorque - wagon Trailer - Rail car No 2 2 nd remorque - wagon Port of entry / Point d'entrée International use only Port of exit / Point de sortie International use only Carrier Certification / I certify that I have received waste or recyclable material from the generator / consigneur for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au récepteur / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets. Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie) Year / Année Month / Mois Day / Jour Signature			Registration No. / Provincial ID No. N° d'immatriculation - c/d provincial 25815-15-0 Reference No. / other movement document(s) used / N° de référence des autres documents de mouvement émis/émissables C Receiver / consignee Réceptionnaire / destinataire Receiver / consignee information same as in Part A. Les renseignements du récepteur / destinataire est le même qu'à la Partie A. <input type="checkbox"/> Yes / Oui <input type="checkbox"/> No, complete the box below / Non, remplir la case ci-dessous Company name / Nom de l'entreprise Mailing address / Adresse postale City / Ville Province Postal code / Code postal E-mail / Courriel électronique Receiving site address / Adresse du lieu de destination Date received / Date de réception Year / Année Month / Mois Day / Jour Time / Heure <input type="checkbox"/> A.M. <input type="checkbox"/> P.M. If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire Registration No. / Provincial ID No. N° d'immatriculation / N° d provincial		
Prox. code prov. Shipping name Appellation réglementaire Class / Classes Sub. classes UN No. Packing risk gr. G. d'emballage de danger Quantity shipped Quantité expédiée Units L or / kg Unités Packaging Contain. No. / N° Comments Cont. Int. - ext. Phys. state État phys.			National code in country of / Code du pays Export Exportation Import Importation Customs code(s) Code(s) de douanes Name of authorized person (print) Nom de l'agent autorisé (caractères d'imprimerie) Year / Année Month / Mois Day / Jour Time / Heure <input type="checkbox"/> A.M. <input type="checkbox"/> P.M. If handling code "Other" (specify) / Si code de manutention "autre" (spécifier) Receiver / consignee certification / I certify that the information contained in Part C is correct and complete / Attestation du récepteur / destinataire / J'atteste que tous les renseignements à la partie C sont exacts et complets. Signature Special handling / Manutention spéciale <input type="checkbox"/> Attached / ci-joint <input type="checkbox"/> As follows / Ci-dessous					
Notice No. N° de notification Notice Line No. N° de ligne de la notification Shipment Envoi D or R code Code É ou R C code Code C Base Area VIII or OCEDO Code Base Area VIII or OCEDO Code H code Code H Y code Code Y Export Exportation Import Importation Customs code(s) Code(s) de douanes Name of authorized person (print) Nom de l'agent autorisé (caractères d'imprimerie) Year / Année Month / Mois Day / Jour Time / Hour <input type="checkbox"/> A.M. <input type="checkbox"/> P.M. Scheduled arrival date / Date d'arrivée prévue Year / Année Month / Mois Day / Jour			24 Hour Number / Numéro 1-888-276-0837 or 613-996-6666 Generator / consigneur certification / I certify that the information contained in Part A is correct and complete / Attestation du producteur / expéditeur / J'atteste que tous les renseignements à la partie A sont exacts et complets. Name of authorized person (print) Nom de l'agent autorisé (caractères d'imprimerie) Signature Year / Année Month / Mois Day / Jour Time / Hour <input type="checkbox"/> A.M. <input type="checkbox"/> P.M. Scheduled arrival date / Date d'arrivée prévue Year / Année Month / Mois Day / Jour					

MOE 04-1917 (07/07)

Retained by Carrier - Gardée par le transporteur

Copy / Copie 4 (pink / rose)

Figure 2: Movement Document 2539510-4

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UNCLASSIFIED

SOW Ref: 16.F.5.d



SHIPPING MANIFEST

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

NON NEGOTIABLE

Filled By: RRANSOM		Date: Jul 12, 2019, 3:55 PM		TCN-39867	
Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367		From: LSS-C/CAM-M CAMBRIDGE BAY, DND Storeroom Raytheon Canada Limited, LSS Cambridge Bay: P.O. Box 1239 Cambridge Bay, NU, X0B 0C0 867-983- 3001		Priority 0	
Attention:		Attention:		RRANSOM	
Carrier: NEAS		Routing: SHIP TO CONSIGNEE		Waybill #: 1 PALLET	
				Total Pcs. 753.5 KG	
QTY Order	Type Line Weight	Item Description	WO or PO	B/Code or S/N	Remarks
4		2002351 WASTE - ACTIVATED CARBON FILTE	1.69 M3		NON-REGULATED WASTE... 4 DRUMS ON 1 PALLET: ASSETS 352292 / 352293 / 352290 / 352291

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

Received By: _____ Date _____

Received By: _____ Date _____

20-Jan-2020 8:02 PM

Figure 3: NWS Shipping Manifest TCN-39867



SHIPPING MANIFEST

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

NON NEGOTIABLE

Filled By: RRANSOM		Date: Jul 12, 2019, 4:03 PM		TCN-39868	
Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367		From: LSS-C/CAM-M CAMBRIDGE BAY, DND Storeroom Raytheon Canada Limited, LSS Cambridge Bay: P.O. Box 1239 Cambridge Bay, NU, X0B 0C0 867-983- 3001		Priority 0	
Attention:		Attention:		RRANSOM	
Carrier: NEAS		Routing: SHIP TO CONSIGNEE		Waybill #: 1 PALLET	
				Total Pcs. 713 KG	
QTY Order	Type Line Weight	Item Description	WO or PO	B/Code or S/N	Remarks
4		2002351 WASTE - ACTIVATED CARBON FILTE	1.69 M3		NON-REGULATED WASTE... 4 DRUMS ON 1 PALLET: ASSETS: 352288 / 352289 / 352294 / 352287

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

Received By: _____ Date _____

Received By: _____ Date _____

Figure 4: NWS Shipping Manifest TCN-39868

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UNCLASSIFIED

SOW Ref: 16.F.5.d



SHIPPING MANIFEST

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

NON NEGOTIABLE

Filled By: RRANSOM		Date: Jul 12, 2019, 12:48 PM		TCN-39860	
Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367		From: LSS-C/CAM-M CAMBRIDGE BAY, DND Storeroom Raytheon Canada Limited, LSS Cambridge Bay: P.O. Box 1239 Cambridge Bay, NU, X0B 0C0 867-983- 3001		Priority 0	
Attention:		Attention: RRANSOM			
Carrier: NEAS		Routing: SHIP TO CONSIGNEE		Waybill #:	Total Pcs. 1 PALLET
				Total Weight: 170 KG	
QTY Order	Type	Line Weight	Item	Description	WO or PO B/Code or S/N
2			2002356	WASTE - OIL FILTERS	1.23 M3
					NON-REGULATED WASTE... 2 DRUMS ON 1 PALLET: ASSETS 351164 / 352095

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

Received By:	Date
Received By:	Date

Figure 5: NWS Shipping Manifest TCN-39860



SHIPPING MANIFEST

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

NON NEGOTIABLE

Filled By: RRANSOM		Date: Jul 12, 2019, 12:54 PM		TCN-39861	
Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367		From: LSS-C/CAM-M CAMBRIDGE BAY, DND Storeroom Raytheon Canada Limited, LSS Cambridge Bay: P.O. Box 1239 Cambridge Bay, NU, X0B 0C0 867-983- 3001		Priority 0	
Attention:		Attention: RRANSOM			
Carrier: NEAS		Routing: SHIP TO CONSIGNEE		Waybill #:	Total Pcs. 1 PALLET
				Total Weight: 169 KG	
QTY Order	Type	Line Weight	Item	Description	WO or PO B/Code or S/N
2			2002356	WASTE - OIL FILTERS	1.23 M3
					NON-REGULATED WASTE... 2 DRUMS ON 1 PALLET: ASSETS 352127 / 350074

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

Received By:	Date
Received By:	Date

Figure 6: NWS Shipping Manifest TCN-39861

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UNCLASSIFIED

SOW Ref: 16.F.5.d

SHIPPING MANIFEST							
Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8						NON NEGOTIABLE	
Filled By: RRANSOM		Date: Jul 12, 2019, 1:10 PM		TCN-39863			
Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367		From: LSS-C/CAM-M CAMBRIDGE BAY, DND Storeroom Raytheon Canada Limited, LSS Cambridge Bay: P.O. Box 1239 Cambridge Bay, NU, X0B 0C0 867-983- 3001			Priority 0		
Attention:				Attention:		RRANSOM	
Carrier: NEAS		Routing: SHIP TO CONSIGNEE		Waybill #:		Total Pcs. 1 PALLET	
						Total Weight: 817 KG	
QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
4			2002406	WASTE - OIL, 45 GAL	1.62 M3		NON-REGULATED WASTE... 4 DRUMS ON 1 PALLET: ASSET: 349842 / 345355 / 346916 / 346915
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.					Received By:		Date
					Received By:		Date

Figure 7: NWS Shipping Manifest TCN-39863

SHIPPING MANIFEST							
Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8						NON NEGOTIABLE	
Filled By: RRANSOM		Date: Jul 12, 2019, 1:20 PM		TCN-39864			
Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367		From: LSS-C/CAM-M CAMBRIDGE BAY, DND Storeroom Raytheon Canada Limited, LSS Cambridge Bay: P.O. Box 1239 Cambridge Bay, NU, X0B 0C0 867-983- 3001			Priority 0		
Attention:				Attention:		RRANSOM	
Carrier: NEAS		Routing: SHIP TO CONSIGNEE		Waybill #:		Total Pcs. 1 PALLET	
						Total Weight: 444 KG	
QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
2		444 KG	2002406	WASTE - OIL, 45 GAL	V=1.18M3		NON-REGULATED WASTE... 2 DRUMS ON 1 PALLET: ASSETS 349839 / 349844
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.					Received By:		Date
					Received By:		Date

Figure 8: NWS Shipping Manifest TCN-39864

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UNCLASSIFIED

Raytheon
Canada Limited

SOW Ref: 16.F.5.d

**SHIPPING MANIFEST**

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

NON NEGOTIABLE

Filled By: RRANSOM		Date: Jul 12, 2019, 1:48 PM		TCN-39865			
Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367		From: LSS-C/CAM-M CAMBRIDGE BAY, DND Storeroom Raytheon Canada Limited, LSS Cambridge Bay: P.O. Box 1239 Cambridge Bay, NU, X0B 0C0 867-983- 3001		Priority 0			
Attention:		Attention:		RRANSOM			
Carrier: NEAS		Routing: SHIP TO CONSIGNEE		Waybill #: 1 PALLET			
Total Pcs. 785 KG		Total Weight:					
QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
4		2002406		WASTE - OIL, 45 GAL	1.62 M3		NON-REGULATED WASTE... 4 DRUMS ON 1 PALLET; ASSETS 350637 / 347475 / 350936 / 350638
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.						Received By: _____ Date _____	
						Received By: _____ Date _____	

Figure 9: NWS Shipping Manifest TCN-39865

**SHIPPING MANIFEST**

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

NON NEGOTIABLE

Filled By: RRANSOM		Date: Jul 12, 2019, 6:00 PM		TCN-39870			
Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367		From: LSS-C/CAM-M CAMBRIDGE BAY, DND Storeroom Raytheon Canada Limited, LSS Cambridge Bay: P.O. Box 1239 Cambridge Bay, NU, X0B 0C0 867-983- 3001		Priority 0			
Attention:		Attention:		RRANSOM			
Carrier: NEAS		Routing: SHIP TO CONSIGNEE		Waybill #: 1 PALLET			
Total Pcs. 705 KG		Total Weight:					
QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
4		2002406		WASTE - OIL, 45 GAL	1.56M3		NON-REGULATED WASTE... 4 DRUMS ON 1 PALLET; ASSETS: 349841 / 350937 / 349843 / 348402
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.						Received By: _____ Date _____	
						Received By: _____ Date _____	

Figure 10: NWS Shipping Manifest TCN-39870

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SOW Ref: 16.F.5.d



SHIPPING MANIFEST

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

NON NEGOTIABLE

Filled By: RRANSOM		Date: Jul 15, 2019, 11:30 AM		TCN-39877	
Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367		From: LSS-C/CAM-M CAMBRIDGE BAY, DND Storeroom Raytheon Canada Limited, LSS Cambridge Bay: P.O. Box 1239 Cambridge Bay, NU, X0B 0C0 867-983- 3001		Priority 0	
Attention:		Attention: RRANSOM			
Carrier: NEAS		Routing: SHIP TO CONSIGNEE		Waybill #: Total Pcs. Total Weight: 1 PALLET 686 KG	
QTY Order	Type	Line Weight	Item	Description	WO or PO B/Code or S/N Remarks
2		4003858		WASTE - SILICA BLAST MATERIAL	0.80 M3 NON-REGULATED WASTE... 2 DRUMS ON 1 PALLET: ASSETS: 352398 / 352399
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.					
Received By:				Date	
Received By:				Date	

Figure 11: NWS Shipping Manifest TCN-39877



SHIPPING MANIFEST

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

NON NEGOTIABLE

Filled By: RRANSOM		Date: Jul 15, 2019, 11:42 AM		TCN-39878	
Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367		From: LSS-C/CAM-M CAMBRIDGE BAY, DND Storeroom Raytheon Canada Limited, LSS Cambridge Bay: P.O. Box 1239 Cambridge Bay, NU, X0B 0C0 867-983- 3001		Priority 0	
Attention:		Attention: RRANSOM			
Carrier: NEAS		Routing: SHIP TO CONSIGNEE		Waybill #: Total Pcs. Total Weight: 1 PALLET 716 KG	
QTY Order	Type	Line Weight	Item	Description	WO or PO B/Code or S/N Remarks
2		4003858		WASTE - SILICA BLAST MATERIAL	0.80 M3 NON-REGULATED WASTE... 2 DRUMS ON 1 PALLET: ASSETS: 352400 / 352401
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.					
Received By:				Date	
Received By:				Date	

Figure 12: NWS Shipping Manifest TCN-39878

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SOW Ref: 16.F.5.d

SHIPPING MANIFEST						
Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8					NON NEGOTIABLE	
Filled By: RRANSOM		Date: Jul 15, 2019, 11:47 AM		TCN-39879		
Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367		From: LSS-C/CAM-M CAMBRIDGE BAY, DND Storeroom Raytheon Canada Limited, LSS Cambridge Bay: P.O. Box 1239 Cambridge Bay, NU, X0B 0C0 867-983- 3001			Priority 0	
Attention:		Attention: RRANSOM				
Carrier: NEAS		Routing: SHIP TO CONSIGNEE		Waybill #:	Total Pcs. 1 PALLET	Total Weight: 328 KG
QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N
1			4003858	WASTE - SILICA BLAST MATERIAL	0.58 M3	NON-REGULATED WASTE... 1 DRUM ON 1 PALLET: ASSETS: 352402
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.				Received By: _____ Date _____		
				Received By: _____ Date _____		

Figure 13: NWS Shipping Manifest TCN-39879

SHIPPING MANIFEST						
Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8					NON NEGOTIABLE	
Filled By: RRANSOM		Date: Jul 15, 2019, 4:21 PM		TCN-39886		
Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367		From: LSS-C/CAM-M CAMBRIDGE BAY, DND Storeroom Raytheon Canada Limited, LSS Cambridge Bay: P.O. Box 1239 Cambridge Bay, NU, X0B 0C0 867-983- 3001			Priority 0	
Attention:		Attention: RRANSOM				
Carrier: NEAS		Routing: SHIP TO CONSIGNEE		Waybill #:	Total Pcs. 1 PALLET	Total Weight: 764 KG
QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N
4			2002406	WASTE - OIL, 45 GAL	1.62 M3	NON-REGULATED WASTE... 4 DRUMS ON 1 PALLET: ASSETS: 346017 / 344606 / 347876 / 340723
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.				Received By: _____ Date _____		
				Received By: _____ Date _____		

Figure 14: NWS Shipping Manifest TCN-39886

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SOW Ref: 16.F.5.d



SHIPPING MANIFEST

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

NON NEGOTIABLE

Filled By: DTRUSSLER		Date: Aug 15, 2019, 8:15 PM		TCN-40133			
Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367			From: LSS-C/CAM-M CAMBRIDGE BAY, DND Storeroom Raytheon Canada Limited, LSS Cambridge Bay: P.O. Box 1239 Cambridge Bay, NU, X0B 0C0 867-983- 3001		Priority 0		
Attention:			Attention: DTRUSSLER				
Carrier: NEAS		Routing: SHIP TO CONSIGNEE		Waybill #:	Total Pcs. 1-PALLET		
				Total Weight: 860 KGS			
QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
4	DRUM	860 KGS	2002406	WASTE - OIL, 45 GAL	1.62 M3		NON-REGULATED WASTE, ASSETS:351790, 347759, 352474, 347695

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

Received By:	Date
Received By:	Date

Figure 15: NWS Shipping Manifest TCN-40133



SHIPPING MANIFEST

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

NON NEGOTIABLE

Filled By: DTRUSSLER		Date: Aug 21, 2019, 3:22 PM		TCN-40194			
Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367			From: LSS-C/CAM-M CAMBRIDGE BAY, DND Storeroom Raytheon Canada Limited, LSS Cambridge Bay: P.O. Box 1239 Cambridge Bay, NU, X0B 0C0 867-983- 3001		Priority 0		
Attention:			Attention: DTRUSSLER				
Carrier: NEAS		Routing: SHIP TO CONSIGNEE		Waybill #:	Total Pcs. 1-PALLET		
				Total Weight: 789 KGS G			
QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
4	DRUM		2002406	WASTE - OIL, 45 GAL	1.67 M3		NON-REGULATED WASTE, ASSETS:348845, 346360, 350452, 350501

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

Received By:	Date
Received By:	Date

Figure 16: NWS Shipping Manifest TCN-40194

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UNCLASSIFIED

SOW Ref: 16.F.5.d



SHIPPING MANIFEST

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

NON NEGOTIABLE

Filled By: MRICHARD		Date: Sep 6, 2019, 1:48 PM		TCN-40402	
Ship To: QIKIQTAAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367		From: LSS-C/CAM-M CAMBRIDGE BAY, DND Storeroom Raytheon Canada Limited, LSS Cambridge Bay: P.O. Box 1239 Cambridge Bay, NU, X0B 0C0 867-983- 3001		Priority 0	
Attention:		Attention:			
Carrier: NEAS		Routing: SHIP TO CONSIGNEE		Waybill #: 1	
QTY		Type		Total Pcs.	
Order		Line Weight		Total Weight:	
2		384 KG 2002406		384 KG	
Item		Description		Remarks	
		WASTE - OIL, 45 GAL		NON-REGULATED WASTE... 2 DRUMS ON 1 PALLET; ASSETS 349846 / 349840	
		V=0.85M			
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.					
Received By:				Date	
Received By:				Date	

Figure 17: NWS Shipping Manifest TCN-40402

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SOW Ref: 16.F.5.d

ANNEX B: TREATED SEWAGE EFFLUENT OUTFALL (CDL-2) LOCATION WITH COORDINATES



Coordinates of sewage treatment outfall: 69°7'3.20"N, 105°7'11.3"W

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**ANNEX C: ANALYSIS OF TREATED SEWAGE EFFLUENT**

Table C-1: Summary of Analysis of Treated Sewage Effluent at CAM-M in 2019

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
7-Jan-19	5.37 ²	A	<1	2	0.3
5-Feb-19	7.35	A	<1	<2	0.7
11-Mar-19	6.9	A	13	<2	0
1-Apr-19	8.07	A	2	<2	0
6-May-19	7.29	A	<1	2	0.3
4-Jun-19	7.41	A	5	11	1
1-Jul-19	7.94	A	16	<2	3.3
9-Aug-19	7.92	A	35	2	330
5-Sep-19	7.58	A	9	3	5.3
7-Oct-19	7.59	A	32	12	7.7
5-Nov-19	8.2	A	5	<2	<10
16-Dec-19	7.88	A	<1	<2	106.7

¹ This column contains the average of the Cyclet 1A, Cyclet 1B, and Cyclet 1C.² The pH probe was not registering in the bio-reactor. Staff monitored the pH from 01-Feb-2019 onwards and found the pH was steady at 7. When the result from the 05-Feb-2019 probe reading was recorded, it confirmed that the output was once again within limits.



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SOW Ref: 16.F.5.d



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1901138
Date Submitted: 2019-01-23
Date Reported: 2019-01-29
Project:
COC #: 839911

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1408602 Sewage 2019-01-07 CAM-Main-Cyclelet 1
Group	Analyte	MRL	Units	Guideline	
General Chemistry	BOD5	1	mg/L		<1
	pH	1.00			5.37
	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

Figure 18: January 2019, sewage effluent laboratory results page 1 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1901122
Date Submitted: 2019-01-23
Date Reported: 2019-01-24
Project:
COC #: 839911

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.			
					1408501 Sewage 2019-01-07 CAM-Main Cyclelet 1A	1408502 Sewage 2019-01-07 CAM-Main Cyclelet 1B	1408503 Sewage 2019-01-07 CAM-Main Cyclelet 1C	
Group	Analyte	MRL	Units	Guideline				
Microbiology	Faecal Coliforms	0	ct/100mL		0	1	0	

Figure 19: January 2019, sewage effluent laboratory results page 2 of 2

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1902160
Date Submitted: 2019-02-14
Date Reported: 2019-02-21
Project:
COC #: 840472

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1411148 WW 2019-02-05 CAM-Main Cyclet 1
Group	Analyte	MRL	Units	Guideline	
General Chemistry	BOD5	1	mg/L		<1
	pH	1.00			7.35
	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

Figure 20: February 2019, sewage effluent laboratory results page 1 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1902166
Date Submitted: 2019-02-14
Date Reported: 2019-02-15
Project:
COC #: 840472

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.			
					1411158 Sewage 2019-02-05 Cam-Main Cyclet 1A	1411159 Sewage 2019-02-05 Cam-Main Cyclet 1B	1411160 Sewage 2019-02-05 Cam-Main Cyclet 1C	
Group	Analyte	MRL	Units	Guideline				
Microbiology	Faecal Coliforms	0	ct/100mL		0	0	2	

Figure 21: February 2019, sewage effluent laboratory results page 2 of 2

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Environment Testing

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Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1903624
Date Submitted: 2019-03-14
Date Reported: 2019-03-20
Project:
COC #: 841232

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
General Chemistry	BOD5	1	mg/L		1415234 Sewage
	pH	1.00			2019-03-11 CAM-Main Cyclet 1
	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		

Figure 22: March 2019, sewage effluent laboratory results page 1 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1903625
Date Submitted: 2019-03-14
Date Reported: 2019-03-15
Project:
COC #: 841232

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1415235 Sewage 2019-03-11 CAM-MAIN CYCLET 1A	1415236 Sewage 2019-03-11 CAM-MAIN CYCLET 1B	1415237 Sewage 2019-03-11 CAM-MAIN CYCLET 1C
Microbiology	Faecal Coliforms	0	ct/100mL			0	0	0

Figure 23: March 2019, sewage effluent laboratory results page 2 of 2

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1904728
Date Submitted: 2019-04-03
Date Reported: 2019-04-10
Project: COC #: 841868

Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.					1418470 Sewage 2019-04-01 CAM-MAIN CYCLET 1
Group	Analyte	MRL	Units	Guideline	
General Chemistry	BOD5	1	mg/L		2
	pH	1.00			8.07
	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

Figure 24: April 2019, sewage effluent laboratory results page 1 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1904760
Date Submitted: 2019-04-03
Date Reported: 2019-04-04
Project: COC #: 841868

Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.					1418563 WW 2019-04-01 Cam-Main Cyclet 1A	1418564 WW 2019-04-01 Cam-Main Cyclet 1B	1418565 WW 2019-04-01 Cam-Main Cyclet 1C
Group	Analyte	MRL	Units	Guideline			
Microbiology	Faecal Coliforms	0	ct/100mL		0	0	0

Figure 25: April 2019, sewage effluent laboratory results page 2 of 2

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1907322
Date Submitted: 2019-05-13
Date Reported: 2019-05-21
Project:
COC #: 843418

Group		Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
General Chemistry		BOD5	1	mg/L		1425937 Sewage
		pH	1.00			2019-05-06 CAM-Main Cyclet 1
		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		

Figure 26: May 2019, sewage effluent laboratory results page 1 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1907323
Date Submitted: 2019-05-13
Date Reported: 2019-05-14
Project:
COC #: 843418

Group		Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
Microbiology		Faecal Coliforms	0	ct/100mL		1425938 Sewage
						2019-05-06 CAM-Main Cyclet 1 A
						1425939 Sewage
						2019-05-06 CAM-Main Cyclet 1 B
						1425940 Sewage
						2019-05-06 CAM-Main Cyclet 1 C

Figure 27: May 2019, sewage effluent laboratory results page 2 of 2

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 004438-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1909205
Date Submitted: 2019-06-07
Date Reported: 2019-06-17
Project:
COC #: 844585

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
General Chemistry	BOD5	1	mg/L		1431476 Sewage 2019-06-04 CAM-MAIN CYCLET 1
	pH	1.00			5
	Total Suspended Solids	2	mg/L		7.41
Oil and Grease	Oil & Grease - Mineral	1	mg/L		11
	Oil & Grease - Non-mineral	1	mg/L		<1
	Oil & Grease - Total	1	mg/L		<1
	Visible Sheen		P/A		A

Figure 28: June 2019, sewage effluent laboratory results page 1 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1909137
Date Submitted: 2019-06-07
Date Reported: 2019-06-11
Project:
COC #: 844585

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
Microbiology	Faecal Coliforms	0	ct/100mL		1431326 WW 2019-06-04 Cammain Cyclet 1A
					1431327 WW 2019-06-04 Cammain Cyclet 1B
					1431328 WW 2019-06-04 Cammain Cyclet 1C
					0
					0
					3

Figure 29: June 2019, sewage effluent laboratory results page 2 of 2

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 004438-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1911813
Date Submitted: 2019-07-09
Date Reported: 2019-07-16
Project:
COC #: 845889

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1439727 Sewage 2019-07-01 Cam-Main Cyclet 1
Group	Analyte	MRL	Units	Guideline	
General Chemistry	BOD5	1	mg/L		16
	pH	1.00			7.94
	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	0	P/A		A

Figure 30: July 2019, sewage effluent laboratory results page 1 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1911838
Date Submitted: 2019-07-09
Date Reported: 2019-07-10
Project:
COC #: 845889

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.			
					1439814 WW 2019-07-01 Cam-Main Cyclet 1 A	1439815 WW 2019-07-01 Cam-Main Cyclet 1 B	1439816 WW 2019-07-01 Cam-Main Cyclet 1 C	
Group	Analyte	MRL	Units	Guideline				
Microbiology	Faecal Coliforms		ct/100mL		4	3		
		0	ct/100mL				3	

Figure 31: July 2019, sewage effluent laboratory results page 2 of 2

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 004438-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1914439
Date Submitted: 2019-08-13
Date Reported: 2019-08-20
Project:
COC #: 847494

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
General Chemistry	BOD5	1	mg/L		1446627 Sewage
	pH	1.00			2019-08-09 CAM-Main Cyclet 1
	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		

Figure 32: August 2019, sewage effluent laboratory results page 1 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 004438-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1914461
Date Submitted: 2019-08-13
Date Reported: 2019-08-14
Project:
COC #: 847494

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
Microbiology	Faecal Coliforms	0	ct/100mL		1446722 Sewage
					2019-08-09 CAM Main Cyclet 1A
					280
					1446723 Sewage
					2019-08-09 CAM Main Cyclet 1B
					450
					1446724 Sewage
					2019-08-09 CAM Main Cyclet 1C
					260

Figure 33: August 2019, sewage effluent laboratory results page 2 of 2

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Canada Limited

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**Environment Testing****Certificate of Analysis**

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 004438-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1916397
Date Submitted: 2019-09-10
Date Reported: 2019-09-16
Project:
COC #: 848533

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1452527 Sewage 2019-09-05 Cam-Main Cyclet 1
Group	Analyte	MRL	Units	Guideline	
General Chemistry	BOD5	1	mg/L		9
	pH	1.00			7.58
	Total Suspended Solids	2	mg/L		3
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		ug/L		A

Figure 34: September 2019, sewage effluent laboratory results page 1 of 2

**Environment Testing****Certificate of Analysis**

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1916420
Date Submitted: 2019-09-10
Date Reported: 2019-09-11
Project:
COC #: 848533

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.			
					1452574 WW 2019-09-05 Cam-Main Cyclet 1A	1452575 WW 2019-09-05 Cam-Main Cyclet 1B	1452576 WW 2019-09-05 Cam-Main Cyclet 1C	
Group	Analyte	MRL	Units	Guideline				
Microbiology	Faecal Coliforms	0	ct/100mL		3	7	6	

Figure 35: September 2019, sewage effluent laboratory results page 2 of 2

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Environment Testing

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Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 004438-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1918881
Date Submitted: 2019-10-15
Date Reported: 2019-10-23
Project:
COC #: 850217

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1459713 Sewage 2019-10-07 CAM-Main Cyclet 1
Group	Analyte	MRL	Units	Guideline	
General Chemistry	BOD5	1	mg/L		32
	pH	1.00			7.59
	Total Suspended Solids	2	mg/L		12
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		ug/g		A

Figure 36: October 2019, sewage effluent laboratory results page 1 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 004438-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1918882
Date Submitted: 2019-10-15
Date Reported: 2019-10-16
Project:
COC #: 850217

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1459714 Sewage 2019-10-07 CAM-Main Cyclet 1A	1459715 Sewage 2019-10-07 CAM-Main Cyclet 1B	1459716 Sewage 2019-10-07 CAM-Main Cyclet 1C
Group	Analyte	MRL	Units	Guideline				
Microbiology	Faecal Coliforms	0	ct/100mL			8	9	6

Figure 37: October 2019, sewage effluent laboratory results page 2 of 2

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 004438-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1920659
Date Submitted: 2019-11-08
Date Reported: 2019-11-15
Project:
COC #: 851229

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
General Chemistry	BOD5	1	mg/L		1465550 Sewage
	pH	1.00			2019-11-05 Cam-Main Cyclet 1
	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		

Figure 38: November 2019, sewage effluent laboratory results page 1 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1920632
Date Submitted: 2019-11-08
Date Reported: 2019-11-18
Project:
COC #: 851229

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
Microbiology	Faecal Coliforms	10	ct/100mL		1465398 Sewage
					2019-11-05 Cam-Main Cyclet 1A
					1465399 Sewage
					2019-11-05 Cam-Main Cyclet 1B
					1465400 Sewage
					2019-11-05 Cam-Main Cyclet 1C

Figure 39: November 2019, sewage effluent laboratory results page 2 of 2

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 004438-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1923073
Date Submitted: 2019-12-20
Date Reported: 2020-01-02
Project:
COC #: 852715

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1473115 Sewage 2019-12-16 Cam-Main Cyclet 1
Group	Analyte	MRL	Units	Guideline	
General Chemistry	BOD5	1	mg/L		<1
	pH	1.00			7.88
	Total Suspended Solids	2	mg/L		<2
Oil and Grease	Oil & Grease - Mineral	1	mg/L		<1
	Oil & Grease - Non-mineral	1	mg/L		2
	Oil & Grease - Total	1	mg/L		2
	Visible Sheen		P/A		A

Figure 40: December 2019, sewage effluent laboratory results page 1 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1923090
Date Submitted: 2019-12-20
Date Reported: 2019-12-23
Project:
COC #: 852715

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.			
					1473179 WW 2019-12-16 Cam-Main Cyclet 1A	1473180 WW 2019-12-16 Cam-Main Cyclet 1B	1473181 WW 2019-12-16 Cam-Main Cyclet 1C	
Group	Analyte	MRL	Units	Guideline				
Microbiology	Faecal Coliforms	0	ct/100mL		63	86	171	

Figure 41: December 2019, sewage effluent laboratory results page 2 of 2

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ANNEX D: LOCATION OF BERMED FUEL STORAGE FACILITIES AND ANALYSIS OF BERM WATER

The samples were analyzed for the parameters listed in the water licence 8BC-CAM1929, Part D, Item 11.

Table D-1: Analysis of Berm Water at CAM-M in 2019

Berm	Maximum concentration of any grab sample (ug/L)	CAM W22A	CAM W20B&C	CAM W22C & W20D
Location on-site		Summit	Airstrip	Beach
Discharge Latitude³		69° 7'2.76"N	69° 6'12.01"N	69° 6'11.41"N
Discharge Longitude		105° 7'2.69"W	105° 7'36.60"W	105° 5'50.26"W
Date		14-Jun-2019	14-Jun-2019	19-Jun-2019
pH (pH Units)	6 to 9	7.44	7.41	7.89
Oil and Grease (ug/L)	5000	<1000	<1000	<1000
Lead (dissolved) (ug/L)	50	<1	<1	<1
Benzene (ug/L)	370	<0.5	<0.5	<0.5
Toluene (ug/L)	2	<0.5	<0.5	<0.5
Ethyl benzene (ug/L)	90	<0.5	<0.5	<0.5

³ Final discharge point of bermed fuel storage facility

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Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1910134
Date Submitted: 2019-06-19
Date Reported: 2019-06-21
Project: CAM Main
COC #: 844981

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1434285 Water 2019-06-14 ML-W22A-Berm Water
Group	Analyte	MRL	Units	Guideline	
General Chemistry	pH	1.00			7.44
Metals	Pb	0.001	mg/L		<0.001
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
VOCs Surrogates	Toluene-d8	0	%		93
Volatiles	Benzene	0.5	ug/L		<0.5
	Ethylbenzene	0.5	ug/L		<0.5
	m/p-xylene	0.4	ug/L		<0.4
	o-xylene	0.4	ug/L		<0.4
	Toluene	0.5	ug/L		<0.5

Figure 42: CAM W22A berm water laboratory results (14-Jun-2019)



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1910132
Date Submitted: 2019-06-19
Date Reported: 2019-06-26
Project: CAM Main
COC #: 844979

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1434283 Water 2019-06-14 ML-W20B+C Berm Water
Group	Analyte	MRL	Units	Guideline	
General Chemistry	pH	1.00			7.41
Metals	Pb	0.001	mg/L		<0.001
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
VOCs Surrogates	Toluene-d8	0	%		95
Volatiles	Benzene	0.5	ug/L		<0.5
	Ethylbenzene	0.5	ug/L		<0.5
	m/p-xylene	0.4	ug/L		<0.4
	o-xylene	0.4	ug/L		<0.4
	Toluene	0.5	ug/L		<0.5

Figure 43: CAM W20B&C berm water laboratory results (14-Jun-2019)

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SOW Ref: 16.F.5.d



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 004438-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1911191
Date Submitted: 2019-07-03
Date Reported: 2019-07-09
Project:
COC #: 845587

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
General Chemistry	pH	1.00			1437228 Water
Mercury	Hg	0.0001	mg/L		2019-06-19 MLW 22C+W20D Berm Water
Metals	Aqua-Regia Digest				
	As	0.02	mg/L		
	Zn	0.04	mg/L		
Oil and Grease	Oil & Grease - Total	1	mg/L		
PCBs	Polychlorinated Biphenyls (PCBs)	0.1	ug/L		
Subcontract-Inorg	Phenols	0.001	mg/L		
VOCs Surrogates	Toluene-d8	0	%		
Volatiles	Benzene	0.5	ug/L		
	Ethylbenzene	0.5	ug/L		
	Toluene	0.5	ug/L		

Figure 44: CAM W22C and W20D berm water laboratory results page 1 of 2 (19-Jun-2019)



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 004438-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1911192
Date Submitted: 2019-07-03
Date Reported: 2019-07-05
Project:
COC #: 845587

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
Metals	Cd	0.0001	mg/L		1437229 Water
	Co	0.0002	mg/L		2019-06-19 MLW 22C+W20D
	Cr	0.001	mg/L		
	Cu	0.001	mg/L		
	Ni	0.005	mg/L		
	Pb	0.001	mg/L		

Figure 45: CAM W22C and W20D berm water laboratory results page 2 of 2 (19-Jun-2019)

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