

March 18, 2013

Phyllis Beaulieu
Licensing Manager
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0

Dear Phyllis:

Project No: Water Use License 1BR-FOX0713

Regarding: 2011 Annual Report: FOX-4, Cape Hooper DEW Line Site

AECOM Canada Ltd. is providing the attached annual report form as per Section B.1 of the above-noted water use license. The report is being submitted on behalf of Defence Construction Canada and the Department of National Defence.

During the 2012 field season at the FOX-4 Cape Hooper DEW Line Site, construction activities included grading and completion of the Landfarm, Non-Hazardous Waste Landfill (NHWL), partial completion of the expansion to the Tier II Disposal Facility, and contaminated soil excavation. The following is a detailed summary of the work items completed during the 2012 summer construction season at FOX-4:

- Contaminated soil excavation work was completed at the following locations:
 - Barrel Dump Landfill
 - Garage Pad
 - HVS Buried Debris Area
 - Pallet Line Landfill
 - Station POL Area
 - Beach POL
- General site grading included:
 - Repair of airstrip
 - Temporary Storage Area of the former Pallet Line
 - Water Supply Lake and the Station Area access roads were improved to allow construction equipment access
 - Construction of small access road along the northern edge of Borrow Area 10
- Existing Tier II Disposal Facility construction activity:
 - Excavation of south berm to expose Type 4 Granular Fill
 - Type 2 granular fill was added to cap to bring facility to revised design grade
 - External slopes of the facility was armoured with Type 1 granular fill, except in the location where the New Tier II Disposal Facility ties into the Existing Tier II Disposal Facility

- Expanded Tier II Disposal Facility construction activity:
 - Excavation of key trench to zone of saturation and backfilled with Type 4 granular fill
 - Construction of berms with type 2 and 4 granular fill and armoured with Type 1 granular fill and armoured with Type 1 granular fill
- Non-Hazardous Waste Landfill construction activity:
 - Berms constructed and armoured with Type 1 granular fill at all locations, except the the northeast access ramp
- Landfarm construction activity:
 - Base and berms constructed
 - Placement of final lift was delayed in some locations due to heavy rainfall events
 - Type B contaminated soils were placed and spread to a maximum thickness of 400 mm
 - Application of nutrients and tilling was initiated at the end of the 2012 construction season
- Thermokarst Remediation:
 - Diversion of water across the Water Supply Lake access road to reduce soil erosion and prepare for backfill
 - Thermokarst backfilled with Type 3 granular fill
 - Runoff water has been re-directed to the approximate original channel

The work remaining in 2013 includes:

- Completion of contaminated soil excavation at BP-08048 and the Beach POL area
- Excavation of debris discovered in northern portion of BD-18040B
- New Tier II Disposal Facility:
 - Placement of Type 5 granular fill and liner is required before waste is placed in facility
- Existing Tier II Disposal Facility:
 - Extension of existing thermistors and compaction of surrounding fill
 - Confirmation of Type 2 granular fill compaction required

Community Consultations: The results of the community meetings held by DCC were submitted with the Project Description. The contractor typically holds a project start up meeting prior to each season; however, a copy of the presentation has not been provided.

Spill Incidences: None reported.

Monitoring Reports: See attached.

We trust the information provided is sufficient. Please feel free to contact the undersigned if you have any questions or comments.

Sincerely,
AECOM Canada Ltd.



Eva Schulz, P.Ag.
Senior Environmental Scientist
Eva.Schulz@aecom.com

EMS

cc: Tamara Van Dyck, DCC

Encl: Annual Report Form; Monitoring Reports; Updated Site Figures; Selected Site Photos

NWB Annual Report

Year being reported:

2012

License No: 1BR-FOX0713

Issued Date: July 23, 2007

Expiry Date: December 31, 2013

Project Name: FOX-4, CApe Hooper DEW Line Site Clean Up

Licensee: Defence Construction Canada

Mailing Address: Defence Construction Canada
 DGME
 101 Colonel By Drive,
 Ottawa, Ontario, Canada. K1A 0K2

Name of Company filing Annual Report (if different from Name of Licensee please clarify relationship between the two entities, if applicable):

AECOM
 Design Engineering and Regulatory Support

General Background Information on the Project (*optional):

Licence Requirements: the licensee must provide the following information in accordance with

Part B ▼ Item 1 ▼

A summary report of water use and waste disposal activities, including, but not limited to: methods of obtaining water; sewage and greywater management; drill waste management; solid and hazardous waste management.

Water Source(s):	Water Supply Lake (FOX4-1)	
Water Quantity:	18 per day	Quantity Allowable Domestic (cu.m)
	809	Actual Quantity Used Domestic (cu.m)
		Quantity Allowable Drilling (cu.m)
		Total Quantity Used Drilling (cu.m)

Waste Management and/or Disposal

- ☒ Solid Waste Disposal
☒ Sewage 728.1 cu.m of sewage and greywater discharged to sewage lagoon
☐ Drill Waste
☒ Greywater
☐ Hazardous
☒ Other:

Additional Details:

Details of the waste management were provided in the application supporting documents.

A list of unauthorized discharges and a summary of follow-up actions taken.

Spill No.: (as reported to the Spill Hot-line)

Date of Spill:

Date of Notification to an Inspector:

Additional Details: (impacts to water, mitigation measures, short/long term monitoring, etc)

N/A

N/A

Revisions to the Spill Contingency Plan

SCP submitted and approved - no revision required or proposed

Additional Details:

Revisions to the Abandonment and Restoration Plan

N/A - not applicable

Additional Details:

The project is an Abandonment and Restoration project.

Progressive Reclamation Work Undertaken

Additional Details (i.e., work completed and future works proposed)

n/a

Results of the Monitoring Program including:**The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where sources of water are utilized:**

Select

Additional Details:

The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where wastes associated with the licence are

Details attached

Additional Details:

Results of any additional sampling and/or analysis that was requested by an Inspector

No additional sampling requested by an Inspector or the Board

Additional Details: (date of request, analysis of results, data attached, etc)

Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported.

No additional sampling requested by an Inspector or the Board ▼

Additional Details: (Attached or provided below)

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Any responses or follow-up actions on inspection/compliance reports

No inspection and/or compliance report issued by INAC ▼

Additional Details: (Dates of Report, Follow-up by the Licensee)

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Any additional comments or information for the Board to consider

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Date Submitted:

March 18, 2013

Submitted/Prepared by:

Eva Schulz

Contact Information:**Tel:** 403-270-9220**Fax:** 403-270-9196**email:** eva.schulz@aecom.com

**Andrea Ellis
Environmental Sciences Group
The Royal Military College of Canada
PO Box 17000 Stn. Forces
Kingston, ON K7K 7B4**



**Tamara Van Dyck
Environmental Officer
Defence Construction Canada
DEW Line Cleanup PMO
101 Colonel By Drive
Ottawa ON K1A 0K2**

Wednesday February 13, 2013

Re: 2012 Report for Water Use License Number: IBR-FOX1118

The following results of the Monitoring Program (MP) and/or Water Use License are provided by the Environmental Sciences Group to meet the requirements of the above-noted license for *FOX-4 (Cape Hooper)*.

1. SEWAGE EFFLUENT

Two sewage lagoons were constructed at FOX-4 in September 2011 and July 2012. The lagoons were constructed a minimum of 100 m from drainage courses and water bodies.

The Water Use License and MP require that samples from treated sewage lagoon effluent at the point of discharge to the receiving water be collected prior to each discharge event.

Sampling was not completed at the FOX-4 sewage lagoons during the 2012 field season. The level of liquid in the lagoons remained low and discharge was not required.



Photograph 1 (09-12-2012): FOX-4 west sewage lagoon, facing west.



Photograph 2 (09-12-2012): FOX-4 east sewage lagoon, facing east.

We trust that the information provided meets current requirements. Please contact the undersigned if you have any questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrea Ellis". The signature is fluid and cursive, with the first name "Andrea" written in a larger, more prominent script than the last name "Ellis".

Andrea Ellis
Environmental Sciences Group

cc: Eva Schulz (UMA)
Daniela Loock, Darren White, Dean Morrow, Shari Reed, Rob Williams (ESG)

Andrea Ellis
Environmental Sciences Group
The Royal Military College of Canada
PO Box 17000 Stn. Forces
Kingston, ON K7K 7B4



Tamara Van Dyck
Environmental Officer
Defence Construction Canada
DEW Line Cleanup PMO
350 Albert Street, Suite 1720
Ottawa ON K1A 0K3

Tuesday, February 19, 2013

RE: Analytical Results for Wastewater Samples Collected at FOX-4 in July 2012

The following report summarizes results of the analysis of wastewater samples as per the FOX-4 (Cape Hooper) DEW Line Cleanup Project (DLCU) Specifications.

The FOX-4 specifications require that “wash water, melt water collection, rinse water resulting from the cleaning of fuel tanks and pipelines, and/or any other liquid effluent stream” meet the following guidelines prior to their discharge to land (01560.4.1):

Parameter	Maximum Allowable Concentration	Units
pH	<6.0 , >9.0	pH units
Total Arsenic	0.10	mg/L
Dissolved Cadmium	0.01	mg/L
Dissolved Chromium	0.10	mg/L
Dissolved Cobalt	0.05	mg/L
Dissolved Copper	0.20	mg/L
Dissolved Lead	0.05	mg/L
Total Mercury	0.60	µg/L
Dissolved Nickel	0.20	mg/L
Total Zinc	0.50	mg/L
Total Iron	1.0	mg/L
Oil & Grease	5.0	mg/L
PCBs	1,000	µg/L
Phenols	20	µg/L
Benzene	370	µg/L
Toluene	2.0	µg/L
Ethyl benzene	90	µg/L

WASTEWATER SAMPLES

One wastewater sample was collected at FOX-4 and analyzed in July 2012. A summary of the details of these results follows. Laboratory results are provided in Appendix A.

LOCATION: AVIATION LIGHTING BOX - NORTHWEST CORNER OF THE AIRSTRIP
GPS COORDINATES: 0588029/ 7595981
SAMPLE: 12- 15457
DATE: JULY 26 AND 28, 2012

Parameter	Maximum Allowable Concentration	Units	Sample # 12-15457
pH	<6.0, >9.0	pH units	6.8
Total Arsenic	0.10	mg/L	<0.001
Dissolved Cadmium	0.01	mg/L	0.42
Total Chromium	0.10	mg/L	<0.005
Dissolved Cobalt	0.05	mg/L	<0.003
Dissolved Copper	0.20	mg/L	<0.005
Dissolved Lead	0.05	mg/L	<0.005
Total Mercury	0.60	µg/L	<0.40
Dissolved Nickel	0.20	mg/L	0.015
Total Zinc	0.50	mg/L	1.1
Total Iron	1.0	mg/L	32
Oil & Grease	5.0	mg/L	30
PCBs	1,000	µg/L	<3.0
Phenols	20	µg/L	<1.0
Benzene	370	µg/L	<2.0
Toluene	2.0	µg/L	<2.0
Ethyl benzene	90	µg/L	<2.0



Photograph 1 (07-28-2012): Sample 12-15457- collected from the aviation lighting box at the northwest corner of the airstrip.

Wastewater sample 12-15457 did not comply with the discharge criteria and therefore was not discharged to land.

We trust that the information provided meets current requirements. Please contact the undersigned if you have any questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrea Ellis". The signature is fluid and cursive, with the first name "Andrea" written in a larger, more prominent script than the last name "Ellis".

Andrea Ellis
Environmental Sciences Group

cc: Eva Schulz (AECOM)
Daniela Loock, Darren White, Dean Morrow, Shari Reed, Rob Williams (ESG)

APPENDIX A

LABORATORY RESULTS

ASU #	14272		Report ID:	FOX-4 W3				
Client:	ESG		Date Submitted:	30-Jul-12				
Site:	FOX-4		Date tested:	31-Jul-12				
	12-105		Date:	31-Jul-12				
			Matrix:	Water				
Report of Analysis								
Results relate only to the items tested								
Total Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
12-15457	-	-	-	-	-	1.1	-	<0.001
Blank	-	-	-	-	-	<0.005	-	<0.001
Control	-	-	-	-	-	0.046	-	0.047
Control Target	-	-	-	-	-	0.048	-	0.048
Dissolved Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
12-15457	<0.005	0.015	<0.003	0.42	<0.005	-	<0.005	-
Blank	<0.005	<0.005	<0.003	<0.001	<0.005	-	<0.005	-
Control	0.085	0.084	0.086	0.015	0.083	-	0.015	-
Control Target	0.088	0.088	0.088	0.016	0.088	-	0.016	-
** reporting limits lowered for certain elements - analysis by ICP-MS								

ASU #	14272		Report ID:	FOX-4 W4
Client:	ESG		Date Submitted:	30-Jul-12
			Date tested:	31-Jul-12
Site:	FOX-4		Date:	1-Aug-12
	12-105		Matrix:	water
Report of Analysis				
Sample	Oil & Grease			
	mg/L			
12-15457	29.8			
Blank	<2.0			
Control	16.1			
Control Target	15.8			
Results relate only to the items tested				

ASU #	14272		Report ID:	FOX-4 W5
Client:	ESG		Date Submitted:	30-Jul-12
			Date tested:	2-Aug-12
Site:	FOX-4		Date:	2-Aug-12
	12-105		Matrix:	water
Report of Analysis				
Sample	Phenols			
	ug/L			
12-15457	<1.0			
Blank	<1.0			
Control	10.9			
Control Target	10.0			
Results relate only to the items tested				

ASU #	14272		Report ID:	FOX-4 W6
Client:	ESG		Date Submitted:	30-Jul-12
			Date tested:	31-Jul-12
Site:	FOX-4		Date:	3-Aug-12
	12-105		Matrix:	water
Report of Analysis				
Sample	Total Fe			
	mg/L			
12-15457	31.9			
Blank	<0.05			
Control	16.0			
Control Target	15.1			
Results relate only to the items tested				

ANALYTICAL SCIENCES GROUP AND SLOWPOKE-2 FACILITY AT RMC
GROUP DES SCIENCES ANALYTIQUES ET FACILITÉ SLOWPOKE-2 AU CMR

Dept. of Chem. and Chem. Eng. - Dépt. de chimie et de génie chimique

Royal Military College of Canada - Collège militaire royal du Canada

P.O. Box 17000 Stn. Forces, Kingston, ON, K7K 7B4

Tel: 613-541-6000 x6684 / Fax: 613-545-8341

Client :	ESG					ASG Login No:	22882
	12 Verite Ave					Site:	Fox-4
	Dept. of Chem. / Chem. Eng., RMC					Client No:	12-105
	P.O. Box 17000, Stn. Forces					Samples Received:	30-Jul-12
	Kingston, Ontario K7K 7B4					Date of analysis:	31-Jul-12
	(613) 541-6000 ext 6567					Method No:	ASG 021
	Fax: (613) 541-6596					Date Reported:	31-Jul-12
						Sheet:	1 of 1

RESULTS OF MERCURY IN WATER ANALYSIS

Sample ID	Mercury^ µg/L
15457*	< 0.4

LABORATORY QA/QC

Sample ID	Mercury^ µg/L
Duplicate ; 15457*	< 0.4 ; < 0.4
Blank	< 0.4
Control Target	4.0
Control Sample	4.1

* Averaged result of duplicates

^ Acid digestion performed

Reported at 0.4 µg/L detection limit

**ANALYTICAL SCIENCES GROUP AND SLOWPOKE-2 FACILITY AT RMC
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Client:	ESG
----------------	------------

12 Verite Ave

Dept. of Chem. / Chem. Eng., RMC

P.O. Box 17000, Stn. Forces

Kingston, Ontario K7K 7B4

(613) 541-6000 ext 6567

Fax: (613) 541-6596

ASG Login No: 22882

Site:	Fox-4
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Client No:	12-105
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Samples Received:	30-Jul-12
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Date of analysis: 31-Jul-12

Method No:	ASG 015
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Date Reported:	1-Aug-12
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Sheet No: 1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	15457	mg/L	< 0.003	< 0.003

*Average result of duplicate

****Report Values in PPM****

LABORATORY QA/QC

	Blank	mg/L	< 0.003	< 0.003
	Control Sample	mg/L	< 0.003	0.013
	Control Sample Target	mg/L	< 0.003	0.015

** S = Soil , C = Concrete , PC = Paint Chip , SW = Swab , P = Plant , W = Water, L = Leachate

All results corrected for the recovery of the surrogate decachlorobiphenyl

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(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 22882
Site: Fox-4
Client No: 12-105
Samples Received: 30-Jul-12
Date of analysis: 31-Jul-12
Method No: ASG 037
Date Reported: 1-Aug-12
Page: 1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
15457	6.82

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
Control	7.01
Control Target	7.00

**ANALYTICAL SCIENCES GROUP AND SLOWPOKE-2 FACILITY AT RMC
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Client : ESG
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Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 22882
Site: Fox-4
Client Login No: 12-105
Samples Received: 30-Jul-12
Date of analysis: 31-Jul-12
Method No: ASG 023
Date Reported: 1-Aug-12
Page: 1 of 1

RESULTS OF BTEX IN WATER ANALYSIS

Compound	15457 mg/L	Blank mg/L	Control Sample mg/L	Control Target mg/L
Benzene	< 0.002	< 0.002	0.010	0.010
Toluene	< 0.002	< 0.002	0.010	0.010
Ethylbenzene	< 0.002	< 0.002	0.010	0.010
m+p-Xylene	< 0.002	< 0.002	0.020	0.020
o-Xylene	< 0.002	< 0.002	0.010	0.010

Results in PPM

Andrea Ellis
Environmental Sciences Group
The Royal Military College of Canada
PO Box 17000 Stn. Forces
Kingston, ON K7K 7B4



Tamara Van Dyck
Environmental Officer
Defence Construction Canada
DEW Line Cleanup PMO
350 Albert Street, Suite 1720
Ottawa ON K1A 0K3

Tuesday, February 19, 2013

RE: Analytical Results for Waste water Samples Collected at FOX-4 in August 2012

The following report summarizes results of the analysis of wastewater samples as per the FOX-4 (Cape Hooper) DEW Line Cleanup Project (DLCU) Specifications.

The FOX-4 specifications require that “wash water, melt water collection, rinse water resulting from the cleaning of fuel tanks and pipelines, and/or any other liquid effluent stream” meet the following guidelines prior to their discharge to land (01560.4.1):

Parameter	Maximum Allowable Concentration	Units
pH	<6, >9	pH units
Total Arsenic	0.1	mg/L
Dissolved Cadmium	0.01	mg/L
Dissolved Chromium	0.1	mg/L
Dissolved Cobalt	0.05	mg/L
Dissolved Copper	0.2	mg/L
Dissolved Lead	0.05	mg/L
Total Mercury	0.6	µg/L
Dissolved Nickel	0.2	mg/L
Total Zinc	0.5	mg/L
Total Iron	1.0	mg/L
Oil & Grease	5.0	mg/L
PCBs	1,000	µg/L
Phenols	20	µg/L
Benzene	370	µg/L
Toluene	2.0	µg/L
Ethyl benzene	90	µg/L

WASTEWATER SAMPLES

Four wastewater samples were collected at FOX-4 and analyzed in August 2012. A summary of the details of these results follows. Laboratory results are provided in Appendix A.

LOCATION: POLY TANK ON THE EAST SIDE OF THE TIER II DISPOSAL FACILITY
GPS COORDINATES: 588457/ 7595949
SAMPLE: 12-15473
DATE: AUGUST 19, 2012

Parameter	Maximum Allowable Concentration	Units	Sample # 12-15473
pH	<6, >9	pH units	6.3
Total Arsenic	0.1	mg/L	0.06
Dissolved Cadmium	0.01	mg/L	<0.001
Dissolved Chromium	0.1	mg/L	<0.005
Dissolved Cobalt	0.05	mg/L	<0.003
Dissolved Copper	0.2	mg/L	<0.005
Dissolved Lead	0.05	mg/L	<0.005
Total Mercury	0.6	µg/L	<0.0004
Dissolved Nickel	0.2	mg/L	<0.005
Total Zinc	0.5	mg/L	0.17
Total Iron	1.0	mg/L	76
Oil & Grease	5.0	mg/L	<2.0
PCBs	1,000	µg/L	<0.003
Phenols	20	µg/L	<1.0
Benzene	370	µg/L	<0.002
Toluene	2.0	µg/L	<0.002
Ethyl benzene	90	µg/L	<0.002



Photograph 1 (08-19-2012): Sample 12-15473 collected from the poly tank on the east side of the Tier II Disposal Facility.

Wastewater from the poly tank was discharged to the ground on September 9, 2012. The water was discharged on the east side of the Tier II (588507, 7595961).

LOCATION: BP-08048

GPS COORDINATES: 589377/ 7596028

SAMPLE: 12-15474

DATE: AUGUST 22, 2012

Parameter	Maximum Allowable Concentration	Units	Sample # 12-15474
pH	<6, >9	pH units	N/A
Total Arsenic	0.1	mg/L	N/A
Dissolved Cadmium	0.01	mg/L	N/A
Dissolved Chromium	0.1	mg/L	N/A
Dissolved Cobalt	0.05	mg/L	N/A
Dissolved Copper	0.2	mg/L	N/A
Dissolved Lead	0.05	mg/L	N/A
Total Mercury	0.6	µg/L	<0.0004
Dissolved Nickel	0.2	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Total Iron	1.0	mg/L	N/A
Oil & Grease	5.0	mg/L	<2.0
PCBs	1,000	µg/L	<0.003
Phenols	20	µg/L	N/A
Benzene	370	µg/L	<0.002
Toluene	2.0	µg/L	0.0082
Ethyl benzene	90	µg/L	<0.002

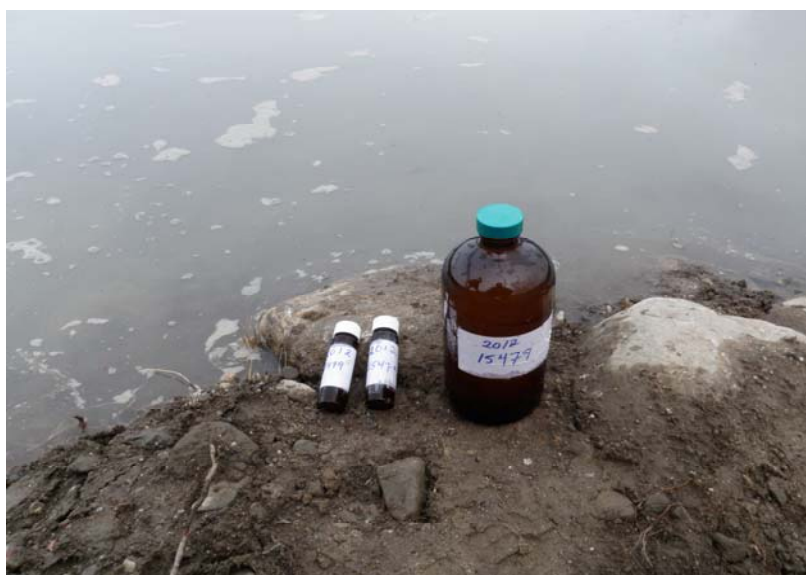


Photograph 1 (08-22-2012): Sample 12-15474 collected from pooled water in the BP-08048 excavation.

Wastewater sample 12-15474 did not comply with the discharge criteria and therefore was not discharged to land.

LOCATION: LANDFARM
GPS COORDINATES: 588099/ 7595896
SAMPLE: 12-15479
DATE: AUGUST 22, 2012

Parameter	Maximum Allowable Concentration	Units	Sample # 12-15479
pH	<6, >9	pH units	N/A
Total Arsenic	0.1	mg/L	N/A
Dissolved Cadmium	0.01	mg/L	N/A
Dissolved Chromium	0.1	mg/L	N/A
Dissolved Cobalt	0.05	mg/L	N/A
Dissolved Copper	0.2	mg/L	N/A
Dissolved Lead	0.05	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.2	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Total Iron	1.0	mg/L	N/A
Oil & Grease	5.0	mg/L	<2.0
PCBs	1,000	µg/L	N/A
Phenols	20	µg/L	N/A
Benzene	370	µg/L	<0.002
Toluene	2.0	µg/L	<0.002
Ethyl benzene	90	µg/L	<0.002



Photograph 1 (08-22-2012): Sample 12-15479 collected from pooled water in the Landfarm.

Wastewater from the Landfarm was discharged to the ground on August 23, 2012. The water was discharged on the southwest side of the Landfarm (588080, 7595873 and 588089, 7595868).

LOCATION: LANDFARM
GPS COORDINATES: 588099/ 7595896
SAMPLE: 12-15486
DATE: AUGUST 31, 2012

Parameter	Maximum Allowable Concentration	Units	Sample # 12-15486
pH	<6, >9	pH units	N/A
Total Arsenic	0.1	mg/L	N/A
Dissolved Cadmium	0.01	mg/L	N/A
Dissolved Chromium	0.1	mg/L	N/A
Dissolved Cobalt	0.05	mg/L	N/A
Dissolved Copper	0.2	mg/L	N/A
Dissolved Lead	0.05	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.2	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Total Iron	1.0	mg/L	N/A
Oil & Grease	5.0	mg/L	<2.0
PCBs	1,000	µg/L	N/A
Phenols	20	µg/L	N/A
Benzene	370	µg/L	<0.002
Toluene	2.0	µg/L	<0.002
Ethyl benzene	90	µg/L	<0.002



Photograph 1 (08-31-2012): Sample 12-15486 collected from pooled water in the Landfarm.

Wastewater from the Landfarm was discharged to the ground on September 8, 2012. The water was discharged on the southwest side of the Landfarm (588080, 7595873 and 588089, 7595868).

We trust that the information provided meets current requirements. Please contact the undersigned if you have any questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrea Ellis". The signature is fluid and cursive, with the first name "Andrea" written in a larger, more prominent script than the last name "Ellis".

Andrea Ellis
Environmental Sciences Group

cc: Eva Schulz (AECOM)
Daniela Loock, Darren White, Dean Morrow, Shari Reed, Rob Williams (ESG)

APPENDIX A LABORATORY RESULTS

ASU #	14322		Report ID:	FOX-4 W8					
Client:	ESG		Date Submitted:	24-Aug-12					
			Date tested:	27-Aug-12					
Site:	FOX-4		Date:	27-Aug-12					
	12-134		Matrix:	Water					
Report of Analysis									
Results relate only to the items tested									
Total Metals	Results in mg/L								
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	Fe
12-15473	-	-	-	-	-	0.17	-	0.060	76.4
Blank	-	-	-	-	-	<0.005	-	<0.001	<0.05
Control	-	-	-	-	-	0.049	-	0.049	16.3
Control Target	-	-	-	-	-	0.048	-	0.048	16.0
Dissolved Metals	Results in mg/L								
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
12-15473	<0.005	<0.005	<0.003	<0.001	<0.005	-	<0.005	-	
Blank	<0.005	<0.005	<0.003	<0.001	<0.005	-	<0.005	-	
Control	0.088	0.087	0.086	0.016	0.086	-	0.016	-	
Control Target	0.088	0.088	0.088	0.016	0.088	-	0.016	-	
** reporting limits lowered for certain elements - analysis by ICP-MS and OES									

ASU #	14322		Report ID:	FOX-4 W7-amend
Client:	ESG		Date Submitted:	24-Aug-12
			Date tested:	27-Aug-12
Site:	FOX-4		Date:	28-Aug-12
	12-134		Matrix:	water
Report of Analysis				
AMENDED REPORT				
Sample	Phenols ug/L	Oil & Grease mg/L		
12-15473	<1.0*	<2.0		
12-15474	-	<2.0		
12-15479	-	<2.0		
Blank	<1.0	<2.0		
Control	9.5	14.5		
Control Target	10.0	15.8		
12-15473	<1.0	-		
12-15473	<1.0	-		
Results relate only to the items tested				

ANALYTICAL SCIENCES GROUP AND SLOWPOKE-2 FACILITY AT RMC
GROUP DES SCIENCES ANALYTIQUES ET FACILITÉ SLOWPOKE-2 AU CMR

Dept. of Chem. and Chem. Eng. - Dépt. de chimie et de génie chimique

Royal Military College of Canada - Collège militaire royal du Canada

P.O. Box 17000 Stn. Forces, Kingston, ON, K7K 7B4

Tel: 613-541-6000 x6684 / Fax: 613-545-8341

Client : **ESG**

12 Verite Ave

Dept. of Chem. / Chem. Eng., RMC

P.O. Box 17000, Stn. Forces

Kingston, Ontario K7K 7B4

(613) 541-6000 ext 6567

Fax: (613) 541-6596

ASG Login No: 22953

Site: Fox-4

Client No: 12-134

Samples Received: 24-Aug-12

Date of analysis: 27-Aug-12

Method No: ASG 021

Date Reported: 27-Aug-12

Sheet: 1 of 1

RESULTS OF MERCURY IN WATER ANALYSIS

Sample ID	Mercury^ µg/L
15473*	< 0.4
15474	< 0.4

LABORATORY QA/QC

Sample ID	Mercury^ µg/L
Duplicate ; 15473*	< 0.4 ; < 0.4
Blank	< 0.4
Control Target	4.00
Control Sample	4.50

* Averaged result of duplicates

^ Acid digestion performed

Reported at 0.4 µg/L detection limit

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Client:	ESG
---------	-----

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Kingston, Ontario K7K 7B4

(613) 541-6000 ext 6567

Fax: (613) 541-6596

ASG Login No: 22953

Site:	Fox-4
-------	-------

Client No:	12-134
------------	--------

Samples Received:	24-Aug-12
-------------------	-----------

Date of analysis: 24-Aug-12

Method No:	ASG 015
------------	---------

Date Reported: 27-Aug-12

Sheet No: 1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	15473	mg/L	< 0.003	< 0.003
W	15474	mg/L	< 0.003	< 0.003

*Average result of duplicate

****Report Values in PPM****

LABORATORY QA/QC

	Blank	mg/L	< 0.003	< 0.003
	Control Sample	mg/L	< 0.003	0.016
	Control Sample Target	mg/L	< 0.003	0.015

** S = Soil , C = Concrete , PC = Paint Chip , SW = Swab , P = Plant , W = Water, L = Leachate

All results corrected for the recovery of the surrogate decachlorobiphenyl

ASU #	14355		Report ID:	FOX-4 W10
Client:	ESG		Date Submitted:	6-Sep-12
			Date tested:	6-Sep-12
Site:	FOX-4		Date:	6-Sep-12
	12-176		Matrix:	water
Report of Analysis				
Sample	Oil & Grease			
	mg/L			
12-15486	<2.0			
Blank	<2.0			
Control	15.3			
Control Target	15.7			

**ANALYTICAL SCIENCES GROUP AND SLOWPOKE-2 FACILITY AT RMC
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Royal Military College of Canada - Collège militaire royal du Canada

Royal Military College of Canada - Collège militaire royal du Canada

P.O. Box 17000 Stn. Forces, Kingston, ON, K7K 7B4

Tel: 613-541-6000 x6684 / Fax: 613-545-8341

Client :	ESG
----------	-----

12 Verite Ave

Dept. of Chem. / Chem. Eng., RMC

P.O. Box 17000, Stn. Forces

Kingston, Ontario K7K 7B4

(613) 541-6000 ext 6567

Fax: (613) 541-6596

ASG Login No: 22998

Site: Fox-4

Client Login No:	12-176
------------------	--------

Samples Received:	6-Sep-12
-------------------	----------

Date of analysis: 6-Sep-12

Method No:	ASG 023
------------	---------

Date Reported: 7-Sep-12

Page: 1 of 1

RESULTS OF BTEX IN WATER ANALYSIS

Compound	15486	Blank	Control Sample	Control Target
	mg/L	mg/L	mg/L	mg/L
Benzene	< 0.002	< 0.002	0.010	0.010
Toluene	< 0.002	< 0.002	0.010	0.010
Ethylbenzene	< 0.002	< 0.002	0.010	0.010
m+p-Xylene	< 0.002	< 0.002	0.020	0.020
o-Xylene	< 0.002	< 0.002	0.010	0.010

Results in PPM

Andrea Ellis
Environmental Sciences Group
The Royal Military College of Canada
PO Box 17000 Stn. Forces
Kingston, ON K7K 7B4



Tamara Van Dyck
Environmental Officer
Defence Construction Canada
DEW Line Cleanup PMO
350 Albert Street, Suite 1720
Ottawa ON K1A 0K3

Tuesday, February 19, 2013

RE: Analytical Results for Wastewater Samples Collected at FOX-4 in September 2012

The following report summarizes results of the analysis of wastewater samples as per the FOX-4 (Cape Hooper) DEW Line Cleanup Project (DLCU) Specifications.

The FOX-4 specifications require that “wash water, melt water collection, rinse water resulting from the cleaning of fuel tanks and pipelines, and/or any other liquid effluent stream” meet the following guidelines prior to their discharge to land (01560.4.1):

Parameter	Maximum Allowable Concentration	Units
pH	<6, >9	pH units
Total Arsenic	0.1	mg/L
Dissolved Cadmium	0.01	mg/L
Dissolved Chromium	0.1	mg/L
Dissolved Cobalt	0.05	mg/L
Dissolved Copper	0.2	mg/L
Dissolved Lead	0.05	mg/L
Total Mercury	0.6	µg/L
Dissolved Nickel	0.2	mg/L
Total Zinc	0.5	mg/L
Total Iron	1.0	mg/L
Oil & Grease	5.0	mg/L
PCBs	1,000	µg/L
Phenols	20	µg/L
Benzene	370	µg/L
Toluene	2.0	µg/L
Ethyl benzene	90	µg/L

WASTEWATER SAMPLES

Two wastewater samples were collected at FOX-4 and analyzed in September 2012. A summary of the details of these results follows. Laboratory results are provided in Appendix A.

LOCATION: LANDFARM
GPS COORDINATES: 588103/ 7595895
SAMPLE: 12- 15499
DATE: SEPTEMBER 4, 2012

Parameter	Maximum Allowable Concentration	Units	Sample # 12-15499
pH	<6, >9	pH units	N/A
Total Arsenic	0.1	mg/L	N/A
Dissolved Cadmium	0.01	mg/L	N/A
Dissolved Chromium	0.1	mg/L	N/A
Dissolved Cobalt	0.05	mg/L	N/A
Dissolved Copper	0.2	mg/L	N/A
Dissolved Lead	0.05	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.2	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Total Iron	1.0	mg/L	N/A
Oil & Grease	5.0	mg/L	<2.0
PCBs	1,000	µg/L	N/A
Phenols	20	µg/L	N/A
Benzene	370	µg/L	<0.002
Toluene	2.0	µg/L	<0.002
Ethyl benzene	90	µg/L	<0.002



Photograph 1 (09-04-2012): Sample 12-15499 collected from pooled water in the northwest corner of the Landfarm.

Wastewater from the Landfarm was discharged to the ground on September 8, 2012. The water was discharged on the southwest side of the Landfarm (588080, 7595873 and 588089, 7595868).

LOCATION: LANDFARM
GPS COORDINATES: 588103/ 7595895
SAMPLE: 12- 15506
DATE: SEPTEMBER 8, 2012

Parameter	Maximum Allowable Concentration	Units	Sample # 12-15506
pH	<6, >9	pH units	N/A
Total Arsenic	0.1	mg/L	N/A
Dissolved Cadmium	0.01	mg/L	N/A
Dissolved Chromium	0.1	mg/L	N/A
Dissolved Cobalt	0.05	mg/L	N/A
Dissolved Copper	0.2	mg/L	N/A
Dissolved Lead	0.05	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.2	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Total Iron	1.0	mg/L	N/A
Oil & Grease	5.0	mg/L	<2.0
PCBs	1,000	µg/L	N/A
Phenols	20	µg/L	N/A
Benzene	370	µg/L	<0.002
Toluene	2.0	µg/L	<0.002
Ethyl benzene	90	µg/L	<0.002



Photograph 2 (09-09-2012): Sample 12-15506 collected from pooled water in the northwest corner of the Landfarm.

Wastewater from the Landfarm was discharged to the ground on September 14, 2012. The water was discharged on the southwest side of the Landfarm (588080, 7595873 and 588089, 7595868).

We trust that the information provided meets current requirements. Please contact the undersigned if you have any questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrea Ellis". The signature is fluid and cursive, with the first name "Andrea" written in a larger, more prominent script than the last name "Ellis".

Andrea Ellis
Environmental Sciences Group

cc: Eva Schulz (AECOM)
Daniela Loock, Darren White, Dean Morrow, Shari Reed, Rob Williams

APPENDIX A

LABORATORY RESULTS

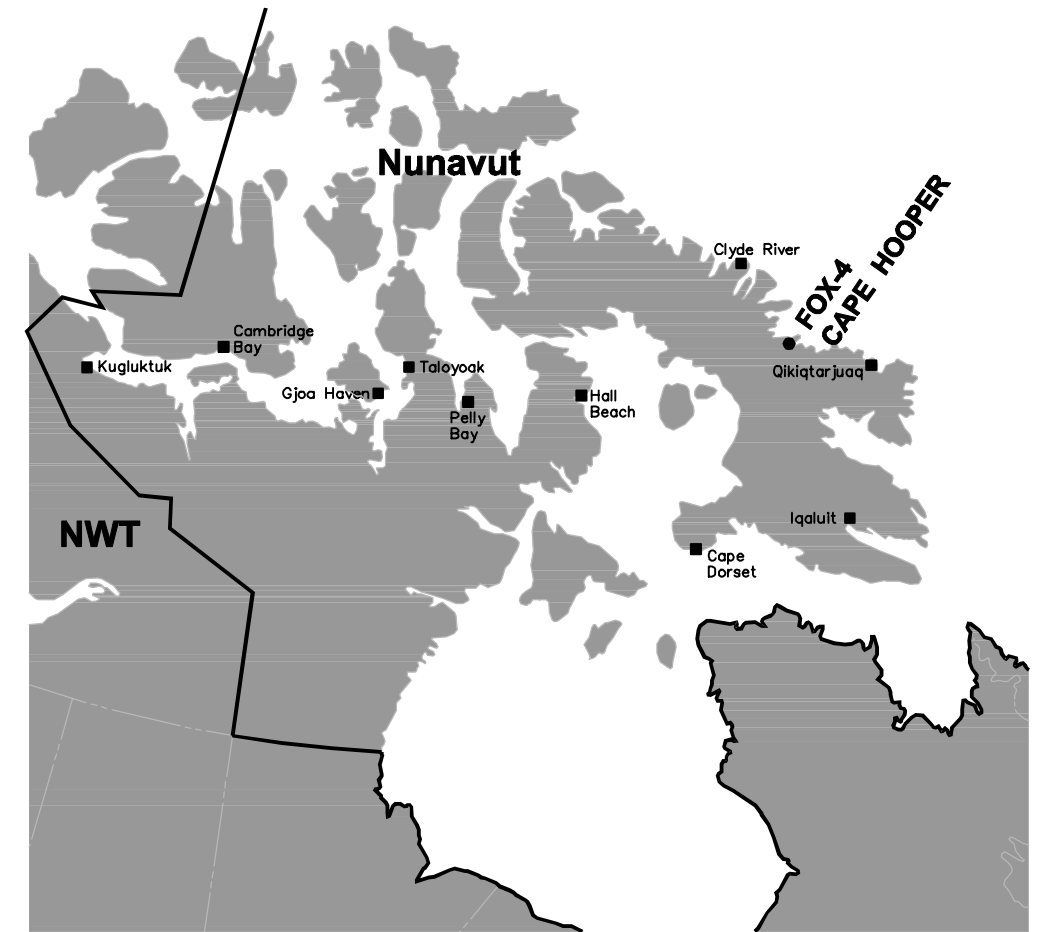
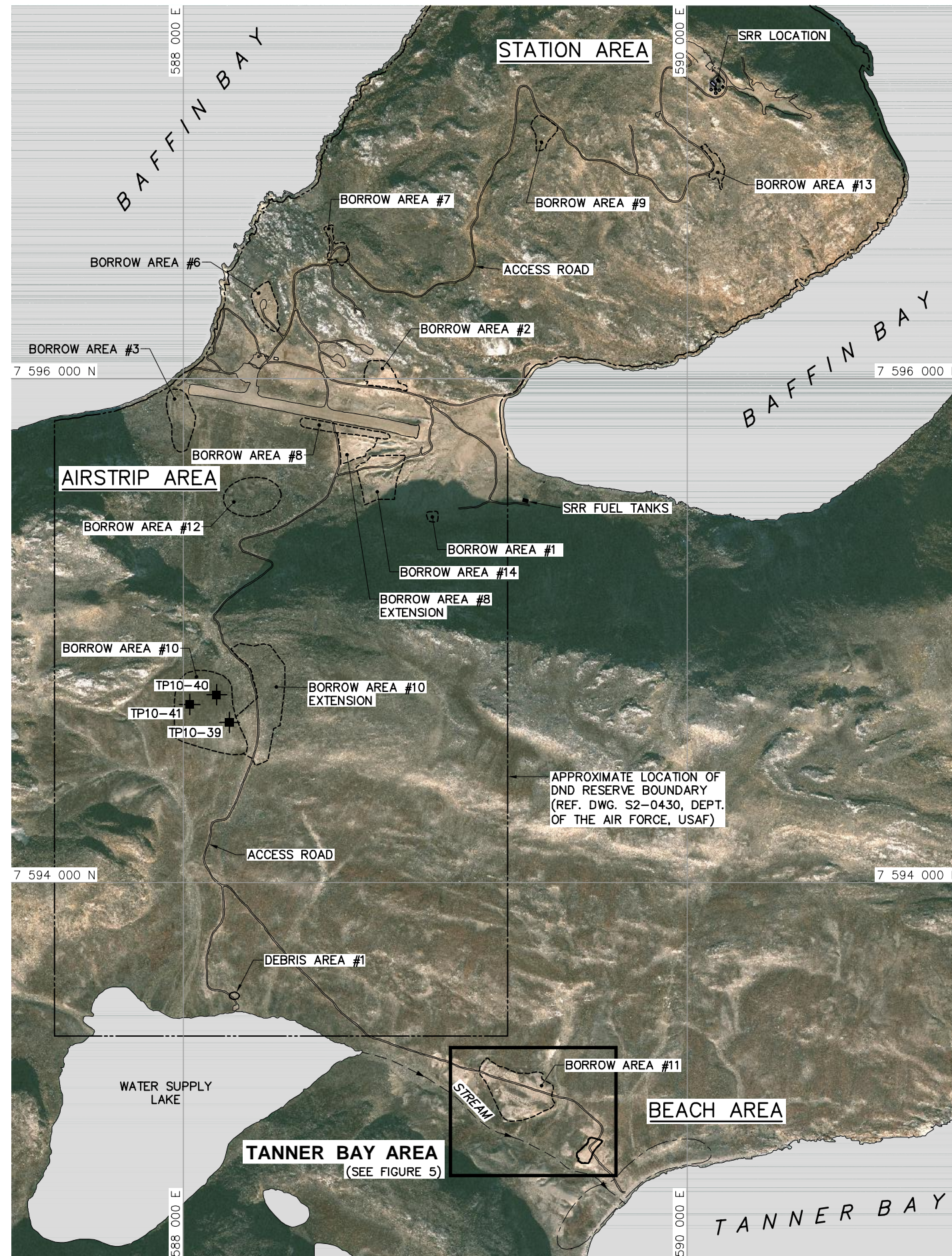
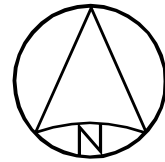
ANALYTICAL SCIENCES GROUP AND SLOWPOKE-2 FACILITY AT RMC				
GROUP DES SCIENCES ANALYTIQUES ET FACILITÉ SLOWPOKE-2 AU CMR				
Dept. of Chem. and Chem. Eng. - Dépt. de chimie et de génie chimique				
Royal Military College of Canada - Collège militaire royal du Canada				
P.O. Box 17000 Stn. Forces, Kingston, ON, K7K 7B4				
Tel: 613-541-6000 x6684 / Fax: 613-545-8341				
Client :	ESG			ASG Login No: 22989
	12 Verite Ave			Site: Fox-4
	Dept. of Chem. / Chem. Eng., RMC			Client Login No: 12-180
	P.O. Box 17000, Stn. Forces			Samples Received: 5-Sep-12
	Kingston, Ontario K7K 7B4			Date of analysis: 6-Sep-12
	(613) 541-6000 ext 6567			Method No: ASG 023
	Fax: (613) 541-6596			Date Reported: 7-Sep-12
				Page: 1 of 1
RESULTS OF BTEX IN WATER ANALYSIS				
Compound	15499 mg/L	Blank mg/L	Control Sample mg/L	Control Target mg/L
Benzene	< 0.002	< 0.002	0.010	0.010
Toluene	< 0.002	< 0.002	0.010	0.010
Ethylbenzene	< 0.002	< 0.002	0.010	0.010
m+p-Xylene	< 0.002	< 0.002	0.020	0.020
o-Xylene	< 0.002	< 0.002	0.010	0.010

Results in PPM

ASU #	14351		Report ID:	FOX-4 W9
Client:	ESG		Date Submitted:	5-Sep-12
			Date tested:	5-Sep-12
Site:	FOX-4		Date:	6-Sep-12
	12-180		Matrix:	water
Report of Analysis				
Sample	Oil & Grease			
	mg/L			
12-15499	<2.0			
Blank	<2.0			
Control	14.4			
Control Target	15.8			

ANALYTICAL SCIENCES GROUP AND SLOWPOKE-2 FACILITY AT RMC																																				
GROUP DES SCIENCES ANALYTIQUES ET FACILITÉ SLOWPOKE-2 AU CMR																																				
Dept. of Chem. and Chem. Eng. - Dépt. de chimie et de génie chimique																																				
Royal Military College of Canada - Collège militaire royal du Canada																																				
P.O. Box 17000 Stn. Forces, Kingston, ON, K7K 7B4																																				
Tel: 613-541-6000 x6684 / Fax: 613-545-8341																																				
Client : ESG					ASG Login No:	23003																														
12 Verite Ave					Site:	Fox-4																														
Dept. of Chem. / Chem. Eng., RMC					Client Login No:	12-189																														
P.O. Box 17000, Stn. Forces					Samples Received:	10-Sep-12																														
Kingston, Ontario K7K 7B4					Date of analysis:	11-Sep-12																														
(613) 541-6000 ext 6567					Method No:	ASG 023																														
Fax: (613) 541-6596					Date Reported:	13-Sep-12																														
					Page:	1 of 1																														
RESULTS OF BTEX IN WATER ANALYSIS																																				
<table border="1"> <thead> <tr> <th>Compound</th> <th>15506 mg/L</th> <th>Blank mg/L</th> <th>Control Sample mg/L</th> <th>Control Target mg/L</th> </tr> </thead> <tbody> <tr> <td>Benzene</td> <td>< 0.002</td> <td>< 0.002</td> <td>0.011</td> <td>0.010</td> </tr> <tr> <td>Toluene</td> <td>< 0.002</td> <td>< 0.002</td> <td>0.011</td> <td>0.010</td> </tr> <tr> <td>Ethylbenzene</td> <td>< 0.002</td> <td>< 0.002</td> <td>0.011</td> <td>0.010</td> </tr> <tr> <td>m+p-Xylene</td> <td>< 0.002</td> <td>< 0.002</td> <td>0.023</td> <td>0.020</td> </tr> <tr> <td>o-Xylene</td> <td>< 0.002</td> <td>< 0.002</td> <td>0.011</td> <td>0.010</td> </tr> </tbody> </table>							Compound	15506 mg/L	Blank mg/L	Control Sample mg/L	Control Target mg/L	Benzene	< 0.002	< 0.002	0.011	0.010	Toluene	< 0.002	< 0.002	0.011	0.010	Ethylbenzene	< 0.002	< 0.002	0.011	0.010	m+p-Xylene	< 0.002	< 0.002	0.023	0.020	o-Xylene	< 0.002	< 0.002	0.011	0.010
Compound	15506 mg/L	Blank mg/L	Control Sample mg/L	Control Target mg/L																																
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Ethylbenzene	< 0.002	< 0.002	0.011	0.010																																
m+p-Xylene	< 0.002	< 0.002	0.023	0.020																																
o-Xylene	< 0.002	< 0.002	0.011	0.010																																
Results in PPM																																				

ASU #	14361		Report ID:	FOX-4 W12
Client:	ESG		Date Submitted:	10-Sep-12
			Date tested:	10-Sep-12
Site:	FOX-4		Date:	11-Sep-12
	12-189		Matrix:	water
Report of Analysis				
Sample	Oil & Grease			
	mg/L			
12-15506	<2.0			
Blank	<2.0			
Control	14.0			
Control Target	15.7			



LOCATION OF CAPE HOOPER WITHIN NUNAVUT TERRITORY
SCALE: NTS

LEGEND:

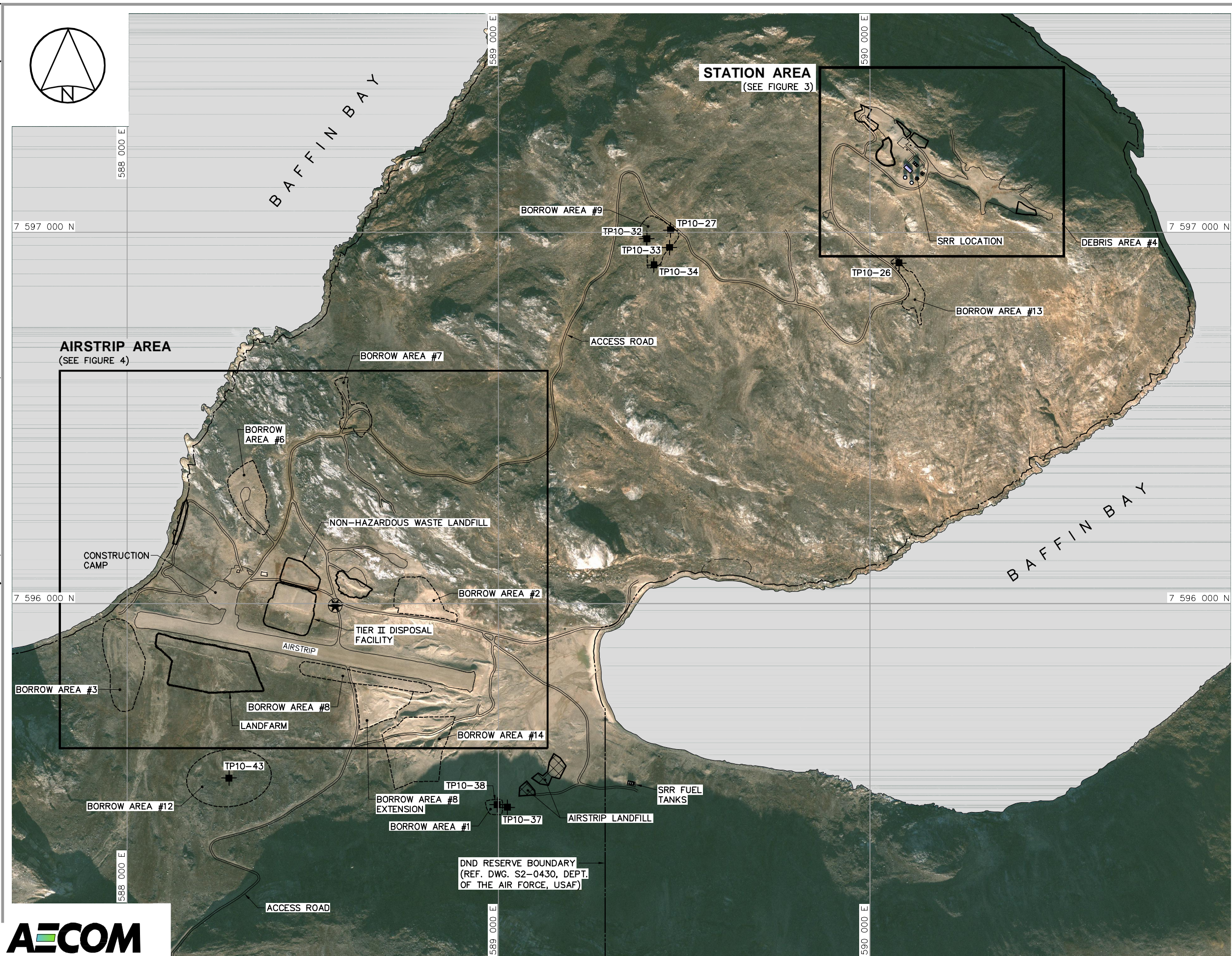
- TEST PIT LOCATION
- APPROXIMATE EXTENT OF BORROW AREAS
- ARCHAEOLOGICAL FEATURES
- BODY OF WATER

0 200 400 m SCALE 1:20000

National Defence **Défense nationale**


DEW LINE CLEAN UP
FOX-4 CAPE HOOPER

GEOTECHNICAL QA
SUMMARY REPORT
OVERALL SITE PLAN



- LEGEND:
- ★ APPROXIMATE LOCATION OF COMMEMORATIVE PLAQUE
 - ✚ TEST PIT LOCATION
 - APPROXIMATE EXTENT OF BORROW AREAS
 - ARCHAEOLOGICAL FEATURES
 - ▣ LANDFILL EXCAVATION AREA
 - ☾ BODY OF WATER

0 100 200 m SCALE 1:10000

 National Defence Défense nationale
DEW LINE CLEAN UP
FOX-4 CAPE HOOPER

GEOTECHNICAL QA
SUMMARY REPORT
PROJECT LAYOUT
FIGURE 2

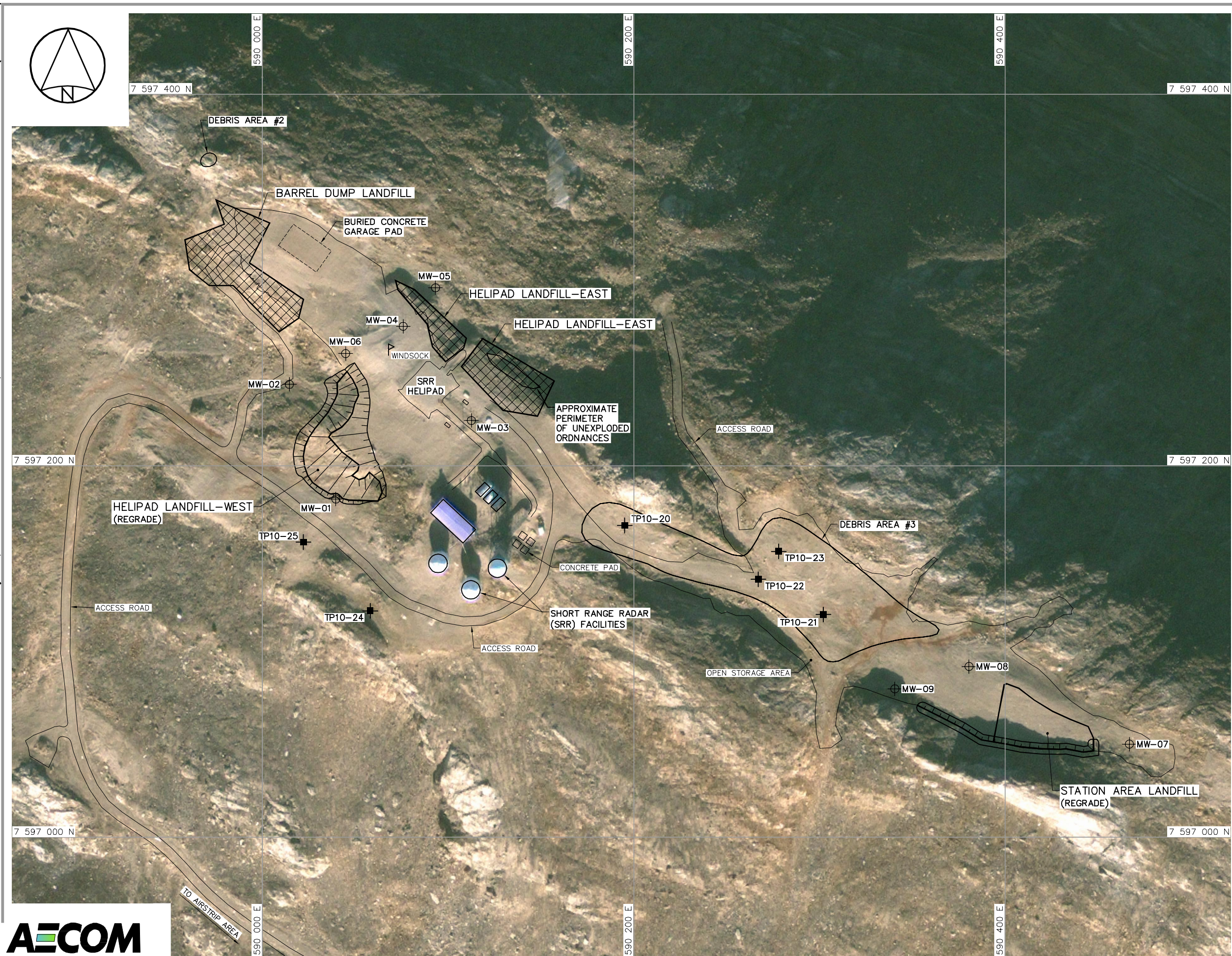


Sheet Size: 11 x 17 (432mm x 279mm)

PLOT: December 3, 2012 10:43:47 AM

Saved by: Cech, Ione

AECOM FILE NO.: FOX-4 2012 Geotech QA Summary Figure 3.dwg



- LEGEND:
- TEST PIT LOCATION
 - EXISTING MONITORING WELL LOCATION (9)
 - LANDFILL EXCAVATION AREA

0 20 40 m SCALE 1:2000

 National Defence Défense nationale

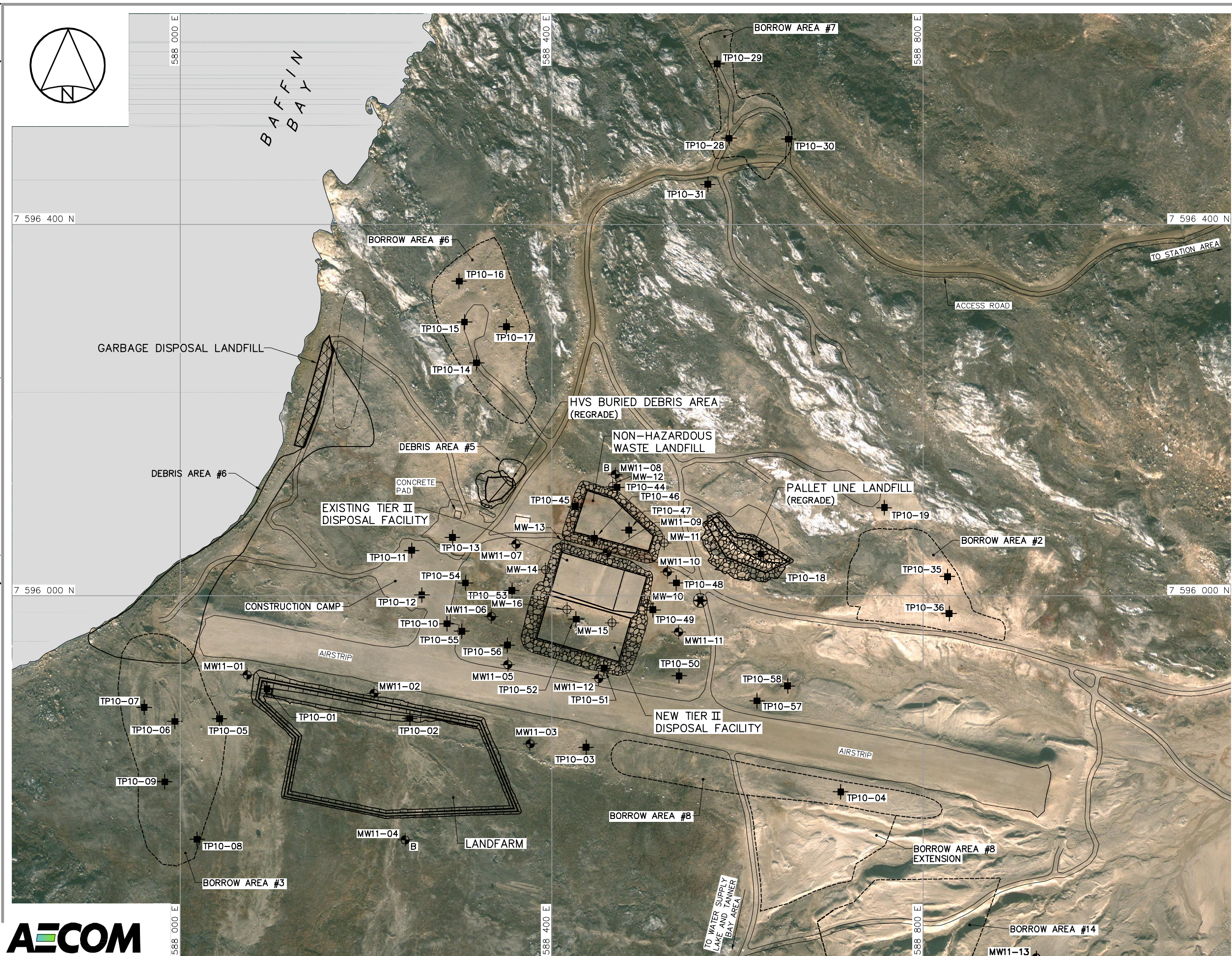
DEW LINE CLEAN UP
FOX-4 CAPE HOOPER

GEOTECHNICAL QA
SUMMARY REPORT

STATION AREA


FIGURE 3





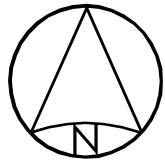
- LEGEND:
- APPROXIMATE LOCATION OF COMMEMORATIVE PLAQUE
 - TEST PIT LOCATION
 - APPROXIMATE EXTENT OF BORROW AREAS
 - ARCHAEOLOGICAL FEATURES
 - NEW MONITORING WELL LOCATION (13)
 - EXISTING MONITORING WELL LOCATION (7)
 - LANDFILL EXCAVATION AREA
 - BODY OF WATER

0 40 80 m SCALE 1:4000

 National Defence Défense nationale
DEW LINE CLEAN UP
FOX-4 CAPE HOOPER

GEOTECHNICAL QA
SUMMARY REPORT
AIRSTRIP AREA
FIGURE 4





LEGEND:

- TEST PIT LOCATION
- APPROXIMATE EXTENT OF BORROW AREAS

0 20 40 m SCALE 1:2000

 National Defence Défense nationale

DEW LINE CLEAN UP
FOX-4 CAPE HOOPER

GEOTECHNICAL QA
SUMMARY REPORT

TANNER BAY AREA

FIGURE 5

PHOTOGRAPHIC LOG



Site Name: FOX-4

Site Location: Cape Hooper, NU

Project No.
60263359

Photo No.
1

Date:
June 25,
2012

**Direction Photo
Taken:**

East

Description:

General site: Airstrip and
upper site at the start of
the construction season.



Photo No.
2

Date:
June 25,
2012

**Direction Photo
Taken:**

North

Description:

Upper site access road



PHOTOGRAPHIC LOG



Site Name: FOX-4

Site Location: Cape Hooper, NU

Project No.
60263359

Photo No.
3

Date:
June 27,
2012

Direction Photo Taken:

South-West

Description:

Beach Area: fuel tanks and rangers cabin



Photo No.
4

Date:
June 30,
2012

Direction Photo Taken:

Southeast

Description:

Water Supply Lake access road



PHOTOGRAPHIC LOG



Site Name: FOX-4

Site Location: Cape Hooper, NU

Project No.
60263359

Photo No.
5

Date:
July 1,
2012

**Direction Photo
Taken:**

Southeast

Description:

Tanner Bay, Tanner Bay
Landfill



Photo No.
6

Date:
July 3,
2012

**Direction Photo
Taken:**

Northeast

Description:

Borrow Area 14; access
road in foreground after
placement of material
from borrow Area 8



PHOTOGRAPHIC LOG



Site Name: FOX-4

Site Location: Cape Hooper, NU

Project No.
60263359

Photo No.
7

Date:
July 5,
2012

Direction Photo
Taken:

South

Description:

Borrow Area 10 Extension



Photo No.
8

Date:
July 5,
2012

Direction Photo
Taken:

Southeast

Description:

Construction Camp



PHOTOGRAPHIC LOG



Site Name: FOX-4

Site Location: Cape Hooper, NU

Project No.
60263359

Photo No.
9

Date:
July 7,
2012

Direction Photo Taken:

Northwest

Description:

Excavation of Borrow Area 3 (left) and spreading of Type 2 Granular fill on Landfarm base.



Photo No.
10

Date:
July 19,
2012

Direction Photo Taken:

East

Description:

Non-Hazardous Waste Landfill



PHOTOGRAPHIC LOG



Site Name: FOX-4

Site Location: Cape Hooper, NU

Project No.
60263359

Photo No.
11

Date:
July 20,
2012

Direction Photo Taken:

South

Description:

Existing Tier II Disposal Facility



Photo No.
12

Date:
July 22,
2012

Direction Photo Taken:

East

Description:

Landfarm containment berm.



PHOTOGRAPHIC LOG

AECOM

Site Name: FOX-4

Site Location: Cape Hooper, NU

Project No.
60263359

Photo No.
13

Date:
July 26,
2012

**Direction Photo
Taken:**

West

Description:

Arming Non-Hazardous
Waste Landfill with Type 1
Granular Fill



Photo No.
14

Date:
July 26,
2012

**Direction Photo
Taken:**

West

Description:

Non-Hazardous Waste
Landfill



PHOTOGRAPHIC LOG



Site Name: FOX-4

Site Location: Cape Hooper, NU

Project No.
60263359

Photo No.
15

Date:
Aug 4,
2012

Direction Photo
Taken:

South

Description:

Key trench at Tier II
Disposal Facility, north
portion of west trench



Photo No.
16

Date:
Aug 22,
2012

Direction Photo
Taken:

Southeast

Description:

Trimming of Existing Tier
II Disposal Facility berm to
tie into Tier II Disposal
Facility



PHOTOGRAPHIC LOG



Site Name: FOX-4

Site Location: Cape Hooper, NU

Project No.
60263359

Photo No.
17

Date:
Aug 23,
2012

Direction Photo Taken:

West

Description:

Tier II Disposal Facility
and Existing Tier II
Disposal Facility



Photo No.
18

Date:
Aug 24,
2012

Direction Photo Taken:

Northwest

Description:

Beach POL excavation



PHOTOGRAPHIC LOG



Site Name: FOX-4

Site Location: Cape Hooper, NU

Project No.
60263359

Photo No.
19

Date:
Aug 29,
2012

**Direction Photo
Taken:**

West

Description:

Upper site contaminated
soil excavation



Photo No.
20

Date:
Sep 7,
2012

**Direction Photo
Taken:**

Northeast

Description:

Overall lower site at the
end of the construction
season

