

March 16, 2012

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

Dear Phyllis:

**Project No: Water Use License 1BR-LON0813 2011 Annual Report**  
**Regarding: FOX-2, Longstaff Bluff 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.

In addition to the annual report form, we are providing a summary of the work completed to date at the site. The following is a summary of the work completed and of the samples collected as part of the wastewater monitoring and sewage effluent monitoring:

The remediation construction work at FOX-2 was completed in August 2011. The following is a summary of the work items completed:

- All demolition activities were completed.
- All contaminated soil excavations were completed.
- The Hangar Non-Hazardous Waste Landfill (NHWL) was completed in 2011. Construction activities included berm shaping, landfilling, and granular fill placement. In addition, two ponded areas were backfilled. Closure activities consisted of the following:
  - Final layers of debris were placed and compacted with pad foot compactor.
  - Type 3 granular fill was placed over the completed waste layers capped with intermediate fill and compacted. Between 4 and 6 layers of fill were placed and compacted to meet the design requirements. Field density testing was carried out on each lift to ensure the compaction specifications were met.
  - Two areas were backfilled in the vicinity to reduce or eliminate water ponding around the landfill.
- The Tier II Disposal Facility was completed in 2011. Construction activities at this facility consisted of landfilling Tier II soils, berm shaping, top liner installation and granular cover construction. Four ground temperature cables were installed in 2011.

- One 300 mm lift of Tier II soils were placed in the facility and compacted in 2011. The compacted Tier II soils were covered with a 300 mm thick lift of compacted granular material.
- The Tier II soils in 2011 came from the module train contaminated soil excavation.
- Regrades were completed at the following areas: East Landing Debris Area (Lobes B and D); Borrow Area e (Lobes A and B); Apron Debris Area (Lobe B); Station Camp Debris Area (Lobes C and D); Airstrip Camp Debris Area (Lobes A, D, and E); West Landfill (Lobe E); Inuit House (Lobes A, B, and C).
- Remediation of the Upper Site Landfill was completed. Work included placement of granular fill cover and installation of monitoring instrumentation.
- Baseline monitoring was carried out at the landfills which remain on-site.

The work remaining in 2012 includes demobilization of the PCB material currently in temporary storage at the site.

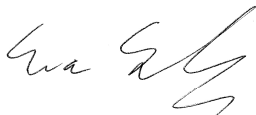
**Community Consultations:** The results of the community meetings held by DCC were submitted with the Project Description. The contractor typically holds a project start up meeting prior to each season; however a copy of the presentation has not been provided.

**Spill Incidences:** None.

**Monitoring Results:** The monitoring reports are attached.

We trust the information provided is sufficient. Please feel free to contact the undersigned if you require any additional information.

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; Selected Site Photographs

## NWB Annual Report

Year being reported:

2011

License No: 1BR-LON0813

Issued Date: July 19, 2008

Expiry Date: July 31, 2013

Project Name: FOX-2, Longstaff Bluff 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  
 Engineering Design Consultant

## 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	
Water Quantity:	12/day	Quantity Allowable Domestic (cu.m)
	893 cu.m/51 days	Actual Quantity Used Domestic (cu.m)
	40/day for industrial	Quantity Allowable Drilling (cu.m)
	n/a	Total Quantity Used Drilling (cu.m)

## Waste Management and/or Disposal

- ☒ Solid Waste Disposal  
☒ Sewage  
☐ Drill Waste  
☒ Greywater  
☒ Hazardous  
☒ Other:

sewage &amp; greywater for 2010 season=714 cu.m

## Additional Details:

Details of the waste management and disposal were provided with the application form.

## 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)

### Revisions to the Spill Contingency Plan

SCP submitted and approved - no revision required or proposed ▼

Additional Details:

### Revisions to the Abandonment and Restoration Plan

AR plan submitted and approved - no revision required or proposed ▼

Additional Details:

The entire project is an abandonment and restoration plan.

### 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:**

Details attached ▼

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 deposited:**

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 16, 2012

Submitted/Prepared by:

Eva Schulz

Contact Information:

Tel: 403-270-9220

Fax: 403-270-9196

email: [eva.schulz@aecom.com](mailto:eva.schulz@aecom.com)

### GPS Coordinates for water sources utilized

Source Description	UTM Zone 18N, NAD83	
	Northing	Easting
Water Supply Lake	7642850	493400

### GPS Locations of areas of waste disposal

Location Description (type)	UTM Zone 18N, NAD83	
	Northing	Easting
Landfarm (H01)	7646868.5	489093.5
Landfarm (H02)	7646692.5	489225.5
Landfarm (H05)	7646642.7	489130.3
Landfarm (H06)	7646803.4	489008
Hangar Non-Hazardous Waste Landfill (J10)	7646438.4	489315.9
Hangar Non-Hazardous Waste Landfill (J11)	7646428.2	489353
Hangar Non-Hazardous Waste Landfill (J12)	7646390.1	489341
Hangar Non-Hazardous Waste Landfill (J13)	7646402.4	489304
Station Non-Hazardous Waste Landfill (T10)	7643078.5	494111.5
Station Non-Hazardous Waste Landfill (T11)	7643096.6	494161.4
Station Non-Hazardous Waste Landfill (T12)	7643059	494175
Station Non-Hazardous Waste Landfill (T13)	7643040.9	494125.2
Tier II Landfill (U10)	7643260.4	494258.2
Tier II Landfill (U11)	7643254.6	494312.9
Tier II Landfill (U12)	7643197	494306.8
Tier II Landfill (U13)	7643202.7	494252.1
Sewage Lagoon	7646024	491084

**Kathryn Eagles  
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**

**Tuesday, January 10, 2012**

**RE: 2011 Report for Water Use License Number: 1BR-LON0813**

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-2 (Longstaff Bluff).

**1. CAMP SEWAGE LAGOON**

A 3 cell sewage lagoon was constructed to service the FOX-2 construction camp in 2009. The sewage lagoon was constructed a minimum of 100 m from drainage courses and water bodies.

During the Aboriginal Affairs and Northern Development Canada (AANDC, formally Indian and Northern Affairs Canada) inspection of FOX-2, on July 18<sup>th</sup>, 2009, a standard operating procedure (SOP) was developed to utilize the construction camp sewage treatment facility. Once three consecutive sets of results from the sewage treatment facility were below the maximum allowable levels of the sewage discharge criteria (SDC), the effluent from the facility could be directly discharged to an AANDC approved location. Samples were collected on a bi-weekly basis to ensure the continued successful operation of the sewage treatment facility.

Cells 1 and 2 were closed on August 25<sup>th</sup>, 2010 due to the ongoing successful operation of the sewage treatment facility (Memo ESG-FOX-2-239). Cell 3 remained open until July 26<sup>th</sup>, 2011, when it was closed as part of routine camp closeout activity (Memo ESG-FOX-2-286).

**2. SEWAGE EFFLUENT SAMPLES**

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. The AANDC SOP requires that samples be collected from the sewage treatment plant in three consecutive rounds and on a bi-weekly basis. A total of seven sewage effluent samples were collected during the 2011 field season from the sewage treatment facility, and one sewage effluent sample was collected from the FOX-2 sewage lagoon. A summary of the 2011 sewage effluent sample collection locations and dates follows.

Sample Number	Sample Location	Sampling Date
11-09078	Sewage Treatment Facility	June 24, 2011
11-09119	Sewage Treatment Facility	June 30, 2011
11-09124	Sewage Treatment Facility	July 1, 2011
11-09142	Sewage Treatment Facility	July 4, 2011
11-09177	Sewage Treatment Facility	July 7, 2011
11-09195	Sewage Treatment Facility	July 11, 2011
11-09198	Sewage Lagoon, Cell 3	July 13, 2011
11-09255	Sewage Treatment Facility	July 30, 2011

A summary of the details of these results follows. Laboratory results are provided in Appendix A.

**Location: Sewage Treatment Facility at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09078

**DATE:** June 24, 2011

Parameter	Sewage Treatment Concentration	Units	Sample # 11-09078
<b>pH</b>	6.0-9.0	pH units	8.0
<b>Oil &amp; Grease</b>	None visible	-	None
<b>Total Suspended Solids (TSS)</b>	180	mg/L	<3.3
<b>BOD</b>	120	mg/L	>500*
<b>Faecal coliforms</b>	10,000	CFU/dL	N/A*

\*Samples must be received at the laboratory within 48 hours of collection for bacterial analysis. These samples expired in shipping.

N/A = Not applicable.

**Location: Sewage Treatment Facility at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09119

**DATE:** June 30, 2011

Parameter	Sewage Treatment Concentration	Units	Sample # 11-09119
<b>pH</b>	6.0-9.0	pH units	8.4
<b>Oil &amp; Grease</b>	None visible	-	None
<b>Total Suspended Solids (TSS)</b>	180	mg/L	<2
<b>BOD</b>	120	mg/L	<3
<b>Faecal coliforms</b>	10,000	CFU/dL	<100



**Location: Sewage Treatment Facility at Fox-2**

**GPS COORDINATES: N/A**

**SAMPLE: 11-09124**

**DATE: July 1, 2011**

Parameter	Sewage Treatment Concentration	Units	Sample # 11-09124
pH	6.0-9.0	pH units	8.0
Oil & Grease	None visible	-	None
Total Suspended Solids (TSS)	180	mg/L	<2
BOD	120	mg/L	10
Faecal coliforms	10,000	CFU/dL	<10



**Photo 1:** Sample 11-09124 Discharge point in FOX-2 sewage treatment facility.

**Location: Sewage Treatment Facility at Fox-2**

**GPS COORDINATES: N/A**

**SAMPLE: 11-09142**

**DATE: July 4, 2011**

<b>Parameter</b>	<b>Sewage Treatment Concentration</b>	<b>Units</b>	<b>Sample # 11-09142</b>
<b>pH</b>	6.0-9.0	pH units	8.3
<b>Oil &amp; Grease</b>	None visible	-	None
<b>Total Suspended Solids (TSS)</b>	180	mg/L	<1.7
<b>BOD</b>	120	mg/L	<4.5
<b>Faecal coliforms</b>	10,000	CFU/dL	19

**Location: Sewage Treatment Facility at Fox-2**

**GPS COORDINATES: N/A**

**SAMPLE: 11-09177**

**DATE: July 7, 2011**

<b>Parameter</b>	<b>Sewage Treatment Concentration</b>	<b>Units</b>	<b>Sample # 11-09177</b>
<b>pH</b>	6.0-9.0	pH units	8.4
<b>Oil &amp; Grease</b>	None visible	-	None
<b>Total Suspended Solids (TSS)</b>	180	mg/L	<5
<b>BOD</b>	120	mg/L	<3
<b>Faecal coliforms</b>	10,000	CFU/dL	<100

**Location: Sewage Treatment Facility at Fox-2**

**GPS COORDINATES: N/A**

**SAMPLE: 11-09195**

**DATE: July 20, 2011**

<b>Parameter</b>	<b>Sewage Treatment Concentration</b>	<b>Units</b>	<b>Sample # 11-09195</b>
<b>pH</b>	6.0-9.0	pH units	8.3
<b>Oil &amp; Grease</b>	None visible	-	None
<b>Total Suspended Solids (TSS)</b>	180	mg/L	<2
<b>BOD</b>	120	mg/L	<3
<b>Faecal coliforms</b>	10,000	CFU/dL	N/A*

\*Samples must be received at the laboratory within 48 hours of collection for bacterial analysis. These samples expired in shipping.

**Location: Sewage Treatment Facility at Fox-2**

**GPS COORDINATES: N/A**

**SAMPLE: 11-09255**

**DATE: July 30, 2011**

<b>Parameter</b>	<b>Sewage Treatment Concentration</b>	<b>Units</b>	<b>Sample # 11-09255</b>
<b>pH</b>	6.0-9.0	pH units	7.9
<b>Oil &amp; Grease</b>	None visible	-	None
<b>Total Suspended Solid (TSS)</b>	180	mg/L	<2
<b>BOD</b>	120	mg/L	3
<b>Faecal coliforms</b>	10,000	CFU/dL	0

**Location: Sewage Treatment Facility at Fox-2**

**GPS COORDINATES: N/A**

**SAMPLE: 11-09198**

**DATE: July 13, 2011**

<b>Parameter</b>	<b>Sewage Treatment Concentration</b>	<b>Units</b>	<b>Sample # 11-09198</b>
<b>pH</b>	6.0-9.0	pH units	9.4†
<b>Oil &amp; Grease</b>	None visible	-	None
<b>Total Suspended Solid (TSS)</b>	180	mg/L	31
<b>BOD</b>	120	mg/L	23
<b>Faecal coliforms</b>	10,000	CFU/dL	4,400

N/A = Not applicable.

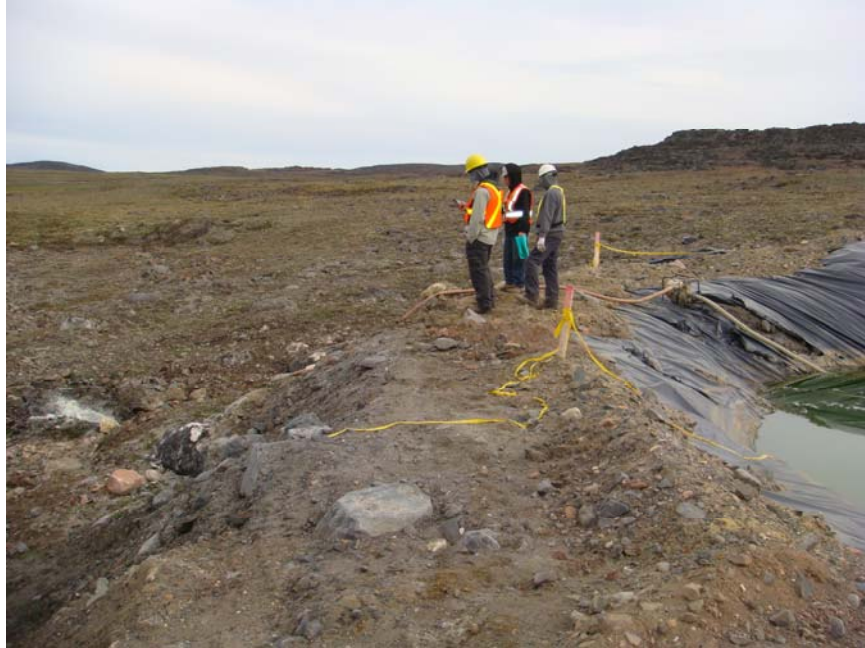
† The southern result for pH indicates a pH of 9.4, which exceeds the maximum allowable concentration. However, as pH results vary during transit between collection and southern testing, onsite results are often more representative of conditions found within the sewage lagoon. ESG tested the sewage lagoon using indicator paper on July 21<sup>st</sup>. The onsite pH testing found the sewage lagoon to have a pH of 8.0 to 8.5.



**Photo 2:** Sample 11-09198: Sewage Lagoon, southwest corner of cell 3, facing northeast. Photo was taken on July 13.



**Photo 3:** Close up of indicator paper used to test the pH of sewage lagoon cell 3. The indicator paper specifies a pH of 8.0 to 8.5. The photo was taken at the time of testing on July 21<sup>st</sup>.



**Photo 4:** Sewage Lagoon, northeast corner of cell 3, facing east. Photo was taken on July 25<sup>th</sup>, during the discharge event of cell 3. The discharge location is immediately north of the sewage lagoon cell 3 berm at an AANDC approved location, and is visible on the left side of the photo.



**Photo 5:** Sewage discharge from the sewage treatment facility at the AANDC approved location. Photo taken on July 25<sup>th</sup>, facing west towards the ocean.

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

Sincerely,

Kathryn Eagles  
Environmental Sciences Group

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

**ANALYTICAL SCIENCES GROUP AND SLOWPOKE-2 FACILITY AT RMC**  
**GROUP DES SCIENCES ANALYTIQUES ET FACILITÉ SLOWPOKE-2 AU CMR**  
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Tel: 613-541-6000 x6684 / Fax: 613-545-8341

**Client:** ESG  
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P.O. Box 17000, Stn. Forces  
Kingston, Ontario K7K 7B4  
(613) 541-6000 ext 6567  
Fax: (613) 541-6596

ASG Login No: 21764  
Site: FOX-2  
Client No: 11-032  
Samples Received: 28-Jun-11  
Date of analysis: 28-Jun-11  
Method No: ASG 037  
Date Reported: 28-Jun-11  
Page: 1 of 1

**RESULTS OF pH ANALYSIS**

Sample I.D.	pH
11-09078*	8.01

\* Averaged result of duplicates

**LABORATORY QA/QC**

Sample I.D.	pH
11-09078* ; Duplicate	8.01 ; 8.00
Control	6.99
Control Target	7.00

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Natasha Richard, Analyst

Authorization: \_\_\_\_\_  
Julie McDonald, Laboratory Manager  
Copy of pHw-21764r1.xls



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ASG Login No: 21775  
Site: FOX-2  
Client No: 11-056  
Samples Received: 02-Jul-11  
Date of analysis: 04-Jul-11  
Method No: ASG 037  
Date Reported: 04-Jul-11  
Page: 1 of 1

**RESULTS OF pH ANALYSIS**

Sample I.D.	pH
11-09119*	8.42

\* Averaged result of duplicates

**LABORATORY QA/QC**

Sample I.D.	pH
11-09119* ; Duplicate	8.42 ; 8.42
Control	7.00
Control Target	7.00

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Natasha Richard, Analyst

Authorization: \_\_\_\_\_  
Steve White, Senior Laboratory Analyst  
pHw-21775r1.xls



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ASG Login No: 21776  
Site: FOX-2  
Client No: 11-058  
Samples Received: 03-Jul-11  
Date of analysis: 04-Jul-11  
Method No: ASG 037  
Date Reported: 04-Jul-11  
Page: 1 of 1

**RESULTS OF pH ANALYSIS**

Sample I.D.	pH
11-09124*	7.98

\* Averaged result of duplicates

**LABORATORY QA/QC**

Sample I.D.	pH
11-09124* ; Duplicate	7.97 ; 7.98
Control	7.00
Control Target	7.00

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Natasha Richard, Analyst

Authorization: \_\_\_\_\_  
Steve White, Senior Laboratory Analyst  
Copy of pHw-21776r1.xls

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Fax: (613) 541-6596

ASG Login No: 217804  
Site: FOX-2  
Client No: 11-064  
Samples Received: 06-Jul-11  
Date of analysis: 07-Jul-11  
Method No: ASG 037  
Date Reported: 07-Jul-11  
Page: 1 of 1

**RESULTS OF pH ANALYSIS**

Sample I.D.	pH
11-09142*	8.28

\* Averaged result of duplicates

**LABORATORY QA/QC**

Sample I.D.	pH
11-09142* ; Duplicate	8.27 ; 8.28
Control	7.01
Control Target	7.00

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Natasha Richard, Analyst

Authorization: \_\_\_\_\_  
Steve White, Senior Laboratory Analyst  
Copy of pHw-21804r1.xls

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ASG Login No: 21814  
Site: FOX-2  
Client No: 11-075  
Samples Received: 09-Jul-11  
Date of analysis: 13-Jul-11  
Method No: ASG 037  
Date Reported: 13-Jul-11  
Page: 1 of 1

### RESULTS OF pH ANALYSIS

Sample I.D.	pH
9177*	8.37

\* Averaged result of duplicates

### LABORATORY QA/QC

Sample I.D.	pH
9177* ; Duplicate	8.37 ; 8.37
Control	7.01
Control Target	7.00

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Natasha Richard, Analyst

Authorization: \_\_\_\_\_  
Steve White, Senior Laboratory Analyst  
Copy of pHw-21814r1.xls

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Fax: (613) 541-6596

ASG Login No: 21829  
Site: FOX-2  
Client No: 11-085  
Samples Received: 13-Jul-11  
Date of analysis: 13-Jul-11  
Method No: ASG 037  
Date Reported: 13-Jul-11  
Page: 1 of 1

**RESULTS OF pH ANALYSIS**

Sample I.D.	pH
9195*	8.33

\* Averaged result of duplicates

**LABORATORY QA/QC**

Sample I.D.	pH
9195* ; Duplicate	8.32 ; 8.33
Control	7.01
Control Target	7.00

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Natasha Richard, Analyst

Authorization: \_\_\_\_\_  
Steve White, Senior Laboratory Analyst  
Copy of pHw-21829r1.xls

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Fax: (613) 541-6596

ASG Login No: 21861  
Site: FOX-2  
Client No: 11-094  
Samples Received: 15-Jul-11  
Date of analysis: 15-Jul-11  
Method No: ASG 037  
Date Reported: 15-Jul-11  
Page: 1 of 1

**RESULTS OF pH ANALYSIS**

Sample I.D.	pH
9198*	9.36

\* Averaged result of duplicates

**LABORATORY QA/QC**

Sample I.D.	pH
9195* ; Duplicate	9.37 ; 9.35
Control	7.00
Control Target	7.00

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Natasha Richard, Analyst

Authorization: \_\_\_\_\_  
Julie McDonald, Laboratory Manager  
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ASG Login No: 21914  
Site: Fox-2  
Client No: 11-157  
Samples Received: 01-Aug-11  
Date of analysis: 05-Aug-11  
Method No: ASG 037  
Date Reported: 05-Aug-11  
Page: 1 of 1

**RESULTS OF pH ANALYSIS**

Sample I.D.	pH
9255	7.92

\* Averaged result of duplicates

**LABORATORY QA/QC**

Sample I.D.	pH
Control	6.99
Control Target	7.00

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Yi Wang, Analyst

Authorization: \_\_\_\_\_  
Julie McDonald, Laboratory Manager  
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ASG Login No: 21764  
Site: FOX-2  
Client Login No: 11-032  
Samples Received: 28-Jun-11  
Date of analysis: 29-Jun-11  
Method No: ASG 039  
Date Reported: 30-Jun-11  
Sheet: 1 of 1

**RESULTS OF TOTAL SUSPENDED SOLIDS ANALYSIS**

Sample I.D.	Sample Type^	Unit	Total Suspended Solids
11-09078*	SE	mg/L	< 3.3

**LABORATORY QA/QC**

Duplicate ; 11-09078*	SE ; SE	mg/L	<3.3 ; <3.3
Control	Control	mg/L	200
Control Target	Control	mg/L	200
Blank	Control	mg/L	< 1

^SW =Surface Water, SI = Sewage Influent SE = Sewage Effluent  
\* Averaged result of duplicates

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Yi Wang ; Analyst

Authorization: \_\_\_\_\_  
Steve White; Senior Laboratory Analyst

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ASG Login No: 21775  
Site: FOX-2  
Client Login No: 11-056  
Samples Received: 03-Jul-11  
Date of analysis: 07-Jul-11  
Method No: ASG 039  
Date Reported: 08-Jul-11  
Sheet: 1 of 1

**RESULTS OF TOTAL SUSPENDED SOLIDS ANALYSIS**

Sample I.D.	Sample Type^	Unit	Total Suspended Solids
9119	SE	mg/L	< 2

**LABORATORY QA/QC**

Control	Control	mg/L	190
Control Target	Control	mg/L	200
Blank	Control	mg/L	< 1

^SW =Surface Water, SI = Sewage Influent SE = Sewage Effluent

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Yi Wang ; Analyst

Authorization: \_\_\_\_\_  
Julie McDonald ; Laboratory Manager



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ASG Login No: 21776  
Site: FOX-2  
Client Login No: 11-058  
Samples Received: 03-Jul-11  
Date of analysis: 05-Jul-11  
Method No: ASG 039  
Date Reported: 06-Jul-11  
Sheet: 1 of 1

**RESULTS OF TOTAL SUSPENDED SOLIDS ANALYSIS**

Sample I.D.	Sample Type^	Unit	Total Suspended Solids
11-09124	SE	mg/L	< 2

**LABORATORY QA/QC**

Control	Control	mg/L	200
Control Target	Control	mg/L	200
Blank	Control	mg/L	< 1

^SW =Surface Water, SI = Sewage Influent SE = Sewage Effluent  
\* Averaged result of duplicates

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Yi Wang ; Analyst

Authorization: \_\_\_\_\_  
Steve White; Senior Laboratory Analyst  
Test Report I.D.: Copy of TSS-21776r1.xls

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ASG Login No: 21804  
Site: FOX-2  
Client Login No: 11-064  
Samples Received: 06-Jul-11  
Date of analysis: 07-Jul-11  
Method No: ASG 039  
Date Reported: 08-Jul-11  
Sheet: 1 of 1

**RESULTS OF TOTAL SUSPENDED SOLIDS ANALYSIS**

Sample I.D.	Sample Type^	Unit	Total Suspended Solids
9142	SE	mg/L	< 1.7

**LABORATORY QA/QC**

Control	Control	mg/L	190
Control Target	Control	mg/L	200
Blank	Control	mg/L	< 1

^SW =Surface Water, SI = Sewage Influent SE = Sewage Effluent

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Yi Wang ; Analyst

Authorization: \_\_\_\_\_  
Julie McDonald ; Laboratory Manager

Test Report I.D.: Copy of TSS-21804r1.xls

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ASG Login No: 21814  
Site: Fox-2  
Client Login No: 11-075  
Samples Received: 09-Jul-11  
Date of analysis: 13-Jul-11  
Method No: ASG 039  
Date Reported: 14-Jul-11  
Sheet: 1 of 1

**RESULTS OF TOTAL SUSPENDED SOLIDS ANALYSIS**

Sample I.D.	Sample Type^	Unit	Total Suspended Solids
9177	SE	mg/L	< 5

**LABORATORY QA/QC**

Control	Control	mg/L	200
Control Target	Control	mg/L	200
Blank	Control	mg/L	< 1

^SW =Surface Water, SI = Sewage Influent SE = Sewage Effluent

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Yi Wang ; Analyst

Authorization: \_\_\_\_\_  
Julie McDonald ; Laboratory Manager

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ASG Login No: 21829  
Site: Fox-2  
Client Login No: 11-085  
Samples Received: 13-Jul-11  
Date of analysis: 13-Jul-11  
Method No: ASG 039  
Date Reported: 14-Jul-11  
Sheet: 1 of 1

**RESULTS OF TOTAL SUSPENDED SOLIDS ANALYSIS**

Sample I.D.	Sample Type^	Unit	Total Suspended Solids
9195	SE	mg/L	< 2

**LABORATORY QA/QC**

Control	Control	mg/L	200
Control Target	Control	mg/L	200
Blank	Control	mg/L	< 1

^SW =Surface Water, SI = Sewage Influent SE = Sewage Effluent

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Yi Wang ; Analyst

Authorization: \_\_\_\_\_  
Julie McDonald ; Laboratory Manager

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ASG Login No: 21861  
Site: Fox-2  
Client Login No: 11-094  
Samples Received: 15-Jul-11  
Date of analysis: 18-Jul-11  
Method No: ASG 039  
Date Reported: 19-Jul-11  
Sheet: 1 of 1

**RESULTS OF TOTAL SUSPENDED SOLIDS ANALYSIS**

Sample I.D.	Sample Type^	Unit	Total Suspended Solids
9198	SE	mg/L	31

**LABORATORY QA/QC**

Control	Control	mg/L	200
Control Target	Control	mg/L	200
Blank	Control	mg/L	< 1

^SW =Surface Water, SI = Sewage Influent SE = Sewage Effluent

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Yi Wang ; Analyst

Authorization: \_\_\_\_\_  
Julie McDonald ; Laboratory Manager

Test Report I.D.: Copy of TSS-21861r1.xls

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ASG Login No: 21914  
Site: Fox-2  
Client Login No: 11-157  
Samples Received: 01-Aug-11  
Date of analysis: 03-Aug-11  
Method No: ASG 039  
Date Reported: 04-Aug-11  
Sheet: 1 of 1

**RESULTS OF TOTAL SUSPENDED SOLIDS ANALYSIS**

Sample I.D.	Sample Type^	Unit	Total Suspended Solids
9255	SE	mg/L	< 2

**LABORATORY QA/QC**

Control	Control	mg/L	190
Control Target	Control	mg/L	200
Blank	Control	mg/L	< 1

^SW =Surface Water, SI = Sewage Influent SE = Sewage Effluent

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Yi Wang ; Analyst

Authorization: \_\_\_\_\_  
Julie McDonald ; Laboratory Manager

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ASG Login No: 21764  
Site: FOX-2  
Client Login No: 11-032  
Samples Received: 28-Jun-11  
Date of analysis: 04-Jul-11  
Method No: ASG 042  
Date Reported: 04-Jul-11  
Page: 1 of 1

**RESULTS OF BOD ANALYSIS**

Sample I.D.	Unit	BOD
9078	mg/L	>500

**LABORATORY QA/QC**

Sample I.D.	Unit	BOD
Blank	mg/L	< 3
Control	mg/L	192
Control Target	mg/L	165

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Natasha Richard ; Analyst

Authorization: \_\_\_\_\_  
Steve White, Senior Laboratory Analyst  
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ASG Login No: 21775

Site: Fox-2

Client Login No: 11-056

Samples Received: 02-Jul-11

Date of analysis: 04-Jul-11

Method No: ASG 042

Date Reported: 09-Jul-11

Page: 1 of 1

**RESULTS OF BOD ANALYSIS**

Sample I.D.	Unit	BOD
11-09119	mg/L	< 3

**LABORATORY QA/QC**

Sample I.D.	Unit	BOD
Blank	mg/L	< 3
Duplicate ; 11-09119	mg/L	< 3 ; < 3
Control	mg/L	174
Control Target	mg/L	165

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Chad Hind ; Analyst

Authorization: \_\_\_\_\_  
Julie McDonald, Laboratory Manager  
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ASG Login No: 21776

Site: Fox-2

Client Login No: 11-058

Samples Received: 03-Jul-11

Date of analysis: 04-Jul-11

Method No: ASG 042

Date Reported: 09-Jul-11

Page: 1 of 1

**RESULTS OF BOD ANALYSIS**

Sample I.D.	Unit	BOD
11-09124	mg/L	10

**LABORATORY QA/QC**

Sample I.D.	Unit	BOD
Blank	mg/L	< 3
Control	mg/L	174
Control Target	mg/L	165

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Chad Hind ; Analyst

Authorization: \_\_\_\_\_  
Julie McDonald, Laboratory Manager  
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ASG Login No: 21804  
Site: Fox-2  
Client Login No: 11-064  
Samples Received: 06-Jul-11  
Date of analysis: 12-Jul-11  
Method No: ASG 042  
Date Reported: 12-Jul-11  
Page: 1 of 1

**RESULTS OF BOD ANALYSIS**

Sample I.D.	Unit	BOD
9142	mg/L	< 4.5

**LABORATORY QA/QC**

Sample I.D.	Unit	BOD
Blank	mg/L	< 3
Control	mg/L	225
Control Target	mg/L	165

**\*\*Note: Control was outside of range and re-analysis could not be conducted due to insufficient sample volume**

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Natasha Richard ; Analyst

Authorization: \_\_\_\_\_  
Julie McDonald, Laboratory Manager  
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ASG Login No: 21814  
Site: FOX-2  
Client Login No: 11-075  
Samples Received: 09-Jul-11  
Date of analysis: 14-Jul-11  
Method No: ASG 042  
Date Reported: 14-Jul-11  
Page: 1 of 1

**RESULTS OF BOD ANALYSIS**

Sample I.D.	Unit	BOD
9177*	mg/L	< 3

**LABORATORY QA/QC**

Sample I.D.	Unit	BOD
Duplicate ; 9177*	mg/L	<3 ; <3
Blank	mg/L	< 3
Control	mg/L	220
Control Target	mg/L	165

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Yi Wang; Analyst

Authorization: \_\_\_\_\_  
Julie McDonald, Laboratory Manager  
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ASG Login No: 21829

Site: Fox-2

Client Login No: 11-085

Samples Received: 12-Jul-11

Date of analysis: 13-Jul-11

Method No: ASG 042

Date Reported: 18-Jul-11

Page: 1 of 1

**RESULTS OF BOD ANALYSIS**

Sample I.D.	Unit	BOD
9195	mg/L	< 3

**LABORATORY QA/QC**

Sample I.D.	Unit	BOD
Blank	mg/L	< 3
Control	mg/L	198
Control Target	mg/L	165

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Yi Wang; Analyst

Authorization: \_\_\_\_\_  
Julie McDonald, Laboratory Manager  
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ASG Login No: 21861

Site: Fox-2

Client Login No: 11-094

Samples Received: 15-Jul-11

Date of analysis: 15-Jul-11

Method No: ASG 042

Date Reported: 20-Jul-11

Page: 1 of 1

**RESULTS OF BOD ANALYSIS**

Sample I.D.	Unit	BOD
9198*	mg/L	23

**LABORATORY QA/QC**

Sample I.D.	Unit	BOD
9198; duplicate	mg/L	23; 23
Blank	mg/L	< 3
Control	mg/L	209
Control Target	mg/L	165

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Yi Wang; Analyst

Authorization: \_\_\_\_\_  
Julie McDonald, Laboratory Manager  
Copy of BOD-21861r1.xls

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ASG Login No: 21914  
Site: Fox-2  
Client Login No: 11-157  
Samples Received: 01-Aug-11  
Date of analysis: 03-Aug-11  
Method No: ASG 042  
Date Reported: 08-Aug-11  
Page: 1 of 1

**RESULTS OF BOD ANALYSIS**

Sample I.D.	Unit	BOD
9255	mg/L	3

**LABORATORY QA/QC**

Sample I.D.	Unit	BOD
Blank	mg/L	< 3
Control	mg/L	188
Control Target	mg/L	165

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Yi Wang; Analyst

Authorization: \_\_\_\_\_  
Julie McDonald, Laboratory Manager  
BOD-21914r1.xls

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ASG Login No: 21775  
Site: Fox-2  
Client No: 11-056  
Samples Received: 02-Jul-11  
Date of analysis: 02-Jul-11  
Date Reported: 04-Jul-11  
Sheet: 1 of 1

**RESULTS OF MICROBIOLOGICAL ANALYSIS**

Sample Identification	Method: ASG 036 Total Coliforms (CFU/100 mL)	Method: ASG 036 <i>E. coli</i> (CFU/100 mL)	Method: ASG 036 Background (CFU/100 mL)	Method: ASG 044 Fecal Coliforms (CFU/mL)
9119	200	< 100	> 20,000	< 100

\* Averaged results of duplicates

RTF- Results to follow

**LABORATORY QA/QC**

Sample Identification	Method: ASG 036 Total Coliforms (CFU/100 mL)	Method: ASG 036 <i>E. coli</i> (CFU/100 mL)	Method: ASG 036 Background (CFU/100 mL)	Method: ASG 044 Fecal Coliforms (CFU/mL)
Blank	0	0	0	0
Control Sample	38	38	0	34
Control Target	38	38	0	38

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Steve White ; Senior Analyst

Authorization: \_\_\_\_\_  
Julie McDonald ; Laboratory Manager  
Test Report I.D: BacT21775r2.xls

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ASG Login No: 21776  
Site: Fox-2  
Client No: 11-058  
Samples Received: 03-Jul-11  
Date of analysis: 03-Jul-11  
Date Reported: 04-Jul-11  
Sheet: 1 of 1

**RESULTS OF MICROBIOLOGICAL ANALYSIS**

Sample Identification	Method: ASG 036 Total Coliforms (CFU/100 mL)	Method: ASG 036 <i>E. coli</i> (CFU/100 mL)	Method: ASG 036 Background (CFU/100 mL)	Method: ASG 044 Fecal Coliforms (CFU/mL)
9124	< 10	< 10	2,000	< 10

\* Averaged results of duplicates

RTF- Results to follow

**LABORATORY QA/QC**

Sample Identification	Method: ASG 036 Total Coliforms (CFU/100 mL)	Method: ASG 036 <i>E. coli</i> (CFU/100 mL)	Method: ASG 036 Background (CFU/100 mL)	Method: ASG 044 Fecal Coliforms (CFU/mL)
Blank	0	0	0	0
Control Sample	38	38	0	34
Control Target	38	38	0	38

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Steve White ; Senior Analyst

Authorization: \_\_\_\_\_  
Julie McDonald ; Laboratory Manager  
Test Report I.D: BacT21776r1 (1).xls



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ASG Login No: 21804  
Site: Fox-2  
Client No: 11-064  
Samples Received: 06-Jul-11  
Date of analysis: 07-Jul-11  
Date Reported: 08-Jul-11  
Sheet: 1 of 1

**RESULTS OF MICROBIOLOGICAL ANALYSIS**

Sample Identification	Method: ASG 036 Total Coliforms (CFU/100 mL)	Method: ASG 036 <i>E. coli</i> (CFU/100 mL)	Method: ASG 036 Background (CFU/100 mL)	Method: ASG 044 Fecal Coliforms (CFU/100mL)
11-09142*	20	0	>200	19

\* Averaged results of duplicates

RTF- Results to follow

**LABORATORY QA/QC**

Sample Identification	Method: ASG 036 Total Coliforms (CFU/100 mL)	Method: ASG 036 <i>E. coli</i> (CFU/100 mL)	Method: ASG 036 Background (CFU/100 mL)	Method: ASG 044 Fecal Coliforms (CFU/mL)
11-09142* ; Duplicate	40 ; 0	0	>200 ; >200	16 ; 21
Blank	0	0	0	0
Control Sample	27	27	0	27
Control Target	35	35	0	35

**\*\*Note: Sample was received at 10°C**

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Natasha Richard ; Analyst

Authorization: \_\_\_\_\_  
Julie McDonald ; Laboratory Manager  
Test Report I.D: Copy of BacT21804r1.xls

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ASG Login No: 21814  
Site: Fox-2  
Client No: 11-075  
Samples Received: 09-Jul-11  
Date of analysis: 09-Jul-11  
Date Reported: 10-Jul-11  
Sheet: 1 of 1

**RESULTS OF MICROBIOLOGICAL ANALYSIS**

Sample Identification	Method: ASG 036 Total Coliforms (CFU/100 mL)	Method: ASG 036 <i>E. coli</i> (CFU/100 mL)	Method: ASG 036 Background (CFU/100 mL)	Method: ASG 044 Fecal Coliforms (CFU/100mL)
9177*	< 100	< 100	200	< 100

\* Averaged results of duplicates

RTF- Results to follow

**LABORATORY QA/QC**

Sample Identification	Method: ASG 036 Total Coliforms (CFU/100 mL)	Method: ASG 036 <i>E. coli</i> (CFU/100 mL)	Method: ASG 036 Background (CFU/100 mL)	Method: ASG 044 Fecal Coliforms (CFU/mL)
Blank	0	0	0	0
Control Sample	30	30	0	28
Control Target	30	30	0	30

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Chad Hind ; Analyst

Authorization: \_\_\_\_\_  
Julie McDonald ; Laboratory Manager  
Test Report I.D: Copy of BacT21814r1.xls

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ASG Login No: 21861  
Site: Fox-2  
Client No: 11-094  
Samples Received: 15-Jul-11  
Date of analysis: 15-Jul-11  
Date Reported: 16-Jul-11  
Sheet: 1 of 1

**RESULTS OF MICROBIOLOGICAL ANALYSIS**

Sample Identification	Method: ASG 036 Total Coliforms (CFU/100 mL)	Method: ASG 036 <i>E. coli</i> (CFU/100 mL)	Method: ASG 036 Background (CFU/100 mL)	Method: ASG 044 Fecal Coliforms (CFU/100mL)
9198	23000	1000	32000	4400

RTF- Results to follow

**LABORATORY QA/QC**

Sample Identification	Method: ASG 036 Total Coliforms (CFU/100 mL)	Method: ASG 036 <i>E. coli</i> (CFU/100 mL)	Method: ASG 036 Background (CFU/100 mL)	Method: ASG 044 Fecal Coliforms (CFU/100mL)
Blank	0	0	0	0
Control Sample	34	34	0	34
Control Target	34	34	0	34

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Steve White ; Senior Analyst

Authorization: \_\_\_\_\_  
Julie McDonald ; Laboratory Manager  
Test Report I.D: Copy of BacT21861r1.xls

**ANALYTICAL SCIENCES GROUP AND SLOWPOKE-2 FACILITY AT RMC**  
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ASG Login No: 21914  
Site: Fox-2  
Client No: 11-157  
Samples Received: 01-Aug-11  
Date of analysis: 01-Aug-11  
Date Reported: 02-Aug-11  
Sheet: 1 of 1

**RESULTS OF MICROBIOLOGICAL ANALYSIS**

Sample Identification	Method: ASG 036 Total Coliforms (CFU/100 mL)	Method: ASG 036 <i>E. coli</i> (CFU/100 mL)	Method: ASG 036 Background (CFU/100 mL)	Method: ASG 041 Fecal Coliforms (CFU/100mL)
9255	10	0	520	0

RTF- Results to follow

**LABORATORY QA/QC**

Sample Identification	Method: ASG 036 Total Coliforms (CFU/100 mL)	Method: ASG 036 <i>E. coli</i> (CFU/100 mL)	Method: ASG 036 Background (CFU/100 mL)	Method: ASG 041 Fecal Coliforms (CFU/100mL)
Blank	0	0	0	0
Control Sample	47	47	0	39
Control Target	40	40	0	40

The results reported here relate only to the items tested.

Prepared By: \_\_\_\_\_  
Stephanie Trickey ; Analyst

Authorization: \_\_\_\_\_  
Julie McDonald ; Laboratory Manager  
Test Report I.D: BacT21914r1.xls

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Wednesday, February 22, 2012

**RE: Analytical Results for Wastewater Samples Collected at FOX-2 in July and August 2011**

The following report summarizes results of the analysis of wastewater samples as per the **FOX-2 () DEW Line Cleanup Project (DLCU) Specifications**.

The FOX-2 specifications require that “wash water, rinse water resulting from barrel processing activities and cleaning of fuel tanks and pipelines, water in contact with contaminated soils or site debris and/or any other liquid stream generated during site clean-up activities” meet the following guidelines prior to their discharge to land (01560.1):

Parameter	Maximum Allowable Concentration	Units
pH	6-9	pH units
Total arsenic (As)	0.100	mg/L
Dissolved cadmium (Cd)	0.010	mg/L
Dissolved chromium (Cr)	0.100	mg/L
Dissolved cobalt (Co)	0.050	mg/L
Dissolved copper (Cu)	0.200	mg/L
Dissolved lead (Pb)	0.050	mg/L
Total mercury (Hg)	0.0006	mg/L
Dissolved nickel (Ni)	0.200	mg/L
Total zinc (Zn)	0.5	mg/L
Oil & grease	5	mg/L
PCB (total)*	1.0	mg/L

\*In respect to application to a road surface

**WASTEWATER SAMPLES**

All wastewater at FOX-2, stored in tank W19F, was sampled multiple times during treatment. Twenty-five samples were collected from different sampling points at tank W19F and the treatment system (Tank W19F, polypropylene sock filters, and carbon filters) and

analyzed in July 2011. On July 30<sup>th</sup>, some of the water in tank W19F was transferred into three poly tanks for further treatment. The poly tanks were sampled twice prior to review of analytical results by the Waste Water Working Group (WWWG). On August 5<sup>th</sup> the WWWG recommended the discharge of the wastewater stored in the three poly tanks and tank W19F at an AANDC approved location (WWWG Memo Re: FOX-2 Waste Water (W19F, Poly Tanks 1,2,3)). A summary of the details of these results follows. Laboratory results are provided in Appendix A. The WWWG memo is provided in Appendix B.

**Location: W19F- Sock Filter at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09125

**DATE:** July 1, 2011

<b>Parameter</b>	<b>Maximum Allowable Concentration</b>	<b>Units</b>	<b>Sample # 11-09125</b>
pH	6-9	pH units	8.5
Total Arsenic	0.100	mg/L	0.005
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	<0.005
Dissolved Cobalt	0.050	mg/L	<0.003
Dissolved Copper	0.200	mg/L	<0.005
Dissolved Lead	0.050	mg/L	<0.010
Mercury	0.0006	µg/L	<0.0004
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	0.5	mg/L	0.5
Oil & Grease	None Visible and 5	mg/L	<b>35</b>
PCBs	1.0	µg/L	<0.003

*Waste water sample 11-09125 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Sock Filter at Fox-2**

**GPS COORDINATES: N/A**

**SAMPLE: 11-09196**

**DATE: July 11, 2011**

<b>Parameter</b>	<b>Maximum Allowable Concentration</b>	<b>Units</b>	<b>Sample # 11-09196</b>
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>26</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09196 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Sock Filter at Fox-2**

**GPS COORDINATES: N/A**

**SAMPLE: 11-09200/01**

**DATE: July 13, 2011**

<b>Parameter</b>	<b>Maximum Allowable Concentration</b>	<b>Units</b>	<b>Sample # 11-09200/01</b>
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>56</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09200/01 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Sock Filter at Fox-2**

**GPS COORDINATES: N/A**

**SAMPLE: 11-09202**

**DATE: July 14, 2011**

<b>Parameter</b>	<b>Maximum Allowable Concentration</b>	<b>Units</b>	<b>Sample # 11-09202</b>
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>46</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09202 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Sock Filter at Fox-2**

**GPS COORDINATES: N/A**

**SAMPLE: 11-09212**

**DATE: July 15, 2011**

<b>Parameter</b>	<b>Maximum Allowable Concentration</b>	<b>Units</b>	<b>Sample # 11-09212</b>
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>27</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09212 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*



**Location: W19F- Sock Filter at Fox-2**

**GPS COORDINATES: N/A**

**SAMPLE: 11-09217**

**DATE: July 16, 2011**

<b>Parameter</b>	<b>Maximum Allowable Concentration</b>	<b>Units</b>	<b>Sample # 11-09217</b>
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>34</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09217 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Sock Filter at Fox-2**

**GPS COORDINATES: N/A**

**SAMPLE: 11-09218**

**DATE: July 17, 2011**

<b>Parameter</b>	<b>Maximum Allowable Concentration</b>	<b>Units</b>	<b>Sample # 11-09218</b>
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>39</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09218 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Sock Filter at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09220/21

**DATE:** July 17, 2011

Parameter	Maximum Allowable Concentration	Units	Sample # 11-09220/21
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>44</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09220/21 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Sock Filter at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09223

**DATE:** July 19, 2011

Parameter	Maximum Allowable Concentration	Units	Sample # 11-09223
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>69</b>
PCBs	1.0	µg/L	N/A



**Photo 1:** Sample collected at the polypropylene sock filters at tank W19F. Photo taken facing south on July 19.

*Waste water sample 11-09223 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Sock Filter at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09226

**DATE:** July 20, 2011

Parameter	Maximum Allowable Concentration	Units	Sample # 11-09226
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>34</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09226 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Sock Filter at Fox-2**

**GPS COORDINATES: N/A**

**SAMPLE: 11-09228**

**DATE: July 21, 2011**

<b>Parameter</b>	<b>Maximum Allowable Concentration</b>	<b>Units</b>	<b>Sample # 11-09228</b>
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>55</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09228 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Sock Filter at Fox-2**

**GPS COORDINATES: N/A**

**SAMPLE: 11-09230/31**

**DATE: July 22, 2011**

<b>Parameter</b>	<b>Maximum Allowable Concentration</b>	<b>Units</b>	<b>Sample # 11-09204</b>
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>53</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09204 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Sock Filter at Fox-2**

**GPS COORDINATES: N/A**

**SAMPLE: 11-09233**

**DATE: July 23, 2011**

<b>Parameter</b>	<b>Maximum Allowable Concentration</b>	<b>Units</b>	<b>Sample # 11-09233</b>
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>48</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09233 did not comply with Oil and Grease criterion and therefore was not discharged to land but pumped into 3 poly tanks for farther treatment.*

**Location: W19F- Tank at Fox-2**

**GPS COORDINATES: N/A**

**SAMPLE: 11-09163**

**DATE: July 4, 2011**

<b>Parameter</b>	<b>Maximum Allowable Concentration</b>	<b>Units</b>	<b>Sample # 11-09163</b>
pH	6-9	pH units	8.0
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	<0.005
Dissolved Cobalt	0.050	mg/L	<0.003
Dissolved Copper	0.200	mg/L	<0.005
Dissolved Lead	0.050	mg/L	<0.010
Mercury	0.0006	µg/L	<0.0004
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	0.5	mg/L	<0.010
Oil & Grease	None Visible and 5	mg/L	<b>67</b>
PCBs	1.0	µg/L	<0.003



**Photo 2:** Tank W19F at the FOX-2 wastewater storage area. Photo was taken facing west on July 4.

*Waste water sample 11-09163 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Tank at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09178

**DATE:** July 7, 2011

Parameter	Maximum Allowable Concentration	Units	Sample # 11-09178
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	<0.010
Oil & Grease	None Visible and 5	mg/L	N/A
PCBs	1.0	µg/L	N/A



**Photo 3:** Sample collected at tank W19F. Photo was taken facing southeast on July 7.

*Waste water sample 11-09178 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Tank at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09199

**DATE:** July 13, 2011

Parameter	Maximum Allowable Concentration	Units	Sample # 11-09199
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>58</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09199 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Tank at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09203

**DATE:** July 15, 2011

Parameter	Maximum Allowable Concentration	Units	Sample # 11-09203
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>38</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-0923 did not comply with Oil and Grease criterion and therefore was not discharged to land but pumped into 3 poly tanks for farther treatment.*

**Location: W19F- Carbon Filter at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09204

**DATE:** July 15, 2011

Parameter	Maximum Allowable Concentration	Units	Sample # 11-09204
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>36</b>
PCBs	1.0	µg/L	N/A





**Photo 4:** Sample collected at the carbon filter at tank W19F. Photo taken facing northwest on July 15.

*Waste water sample 11-09204 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Carbon Filter at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09219

**DATE:** July 17, 2011

Parameter	Maximum Allowable Concentration	Units	Sample # 11-09219
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>38</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09219 did not comply with Oil and Grease criterion and therefore*

*was not discharged to land. Additional treatment was required.*

**Location: W19F- Carbon Filter at Fox-2**

**GPS COORDINATES: N/A**

**SAMPLE: 11-09222**

**DATE: July 18, 2011**

<b>Parameter</b>	<b>Maximum Allowable Concentration</b>	<b>Units</b>	<b>Sample # 11-09222</b>
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>62</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09222 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Carbon Filter at Fox-2**

**GPS COORDINATES: N/A**

**SAMPLE: 11-09224**

**DATE: July 19, 2011**

<b>Parameter</b>	<b>Maximum Allowable Concentration</b>	<b>Units</b>	<b>Sample # 11-09224</b>
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>55</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09224 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Carbon Filter at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09227

**DATE:** July 20, 2011

Parameter	Maximum Allowable Concentration	Units	Sample # 11-09227
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	39
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09227 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Carbon Filter at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09229

**DATE:** July 21, 2011

Parameter	Maximum Allowable Concentration	Units	Sample # 11-09229
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>41</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09229 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Carbon Filter at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09232

**DATE:** July 22, 2011

Parameter	Maximum Allowable Concentration	Units	Sample # 11-09232
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>57</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09232 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: W19F- Carbon Filter at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09234

**DATE:** July 23, 2011

Parameter	Maximum Allowable Concentration	Units	Sample # 11-09234
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>51</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09234 did not comply with Oil and Grease criterion and therefore was not discharged to land but pumped into 3 poly tanks for farther treatment.*

**Location: Poly Tank 1 (2000 G) at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09247

**DATE:** July 30, 2011

Parameter	Maximum Allowable Concentration	Units	Sample # 11-09247
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>31</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09247 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: Poly Tank 1 (2000 G) at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09275

**DATE:** Aug 2, 2011

Parameter	Maximum Allowable Concentration	Units	Sample # 11-09275
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>34</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09275 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: Poly Tank 1 (2000 G) at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09283

**DATE:** Aug 2, 2011

Parameter	Maximum Allowable Concentration	Units	Sample # 11-09283
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>6.5</b>
PCBs	1.0	µg/L	N/A



**Photo 5:** Sample collected from Poly Tank 1. Photo taken facing west on August 2.

**Location: Poly Tank 2 (2000 G) at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09248

**DATE:** July 20, 2011

<b>Parameter</b>	<b>Maximum Allowable Concentration</b>	<b>Units</b>	<b>Sample # 11-09248</b>
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>8.7</b>
PCBs	1.0	µg/L	N/A

*Waste water sample 11-09248 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*

**Location: Poly Tank 2 (2000 G) at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09276

**DATE:** Aug 2, 2011

<b>Parameter</b>	<b>Maximum Allowable Concentration</b>	<b>Units</b>	<b>Sample # 11-09276</b>
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>23</b>
PCBs	1.0	µg/L	N/A

**Location: Poly Tank 3 (1000 G) at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09249

**DATE:** July 30, 2011

Parameter	Maximum Allowable Concentration	Units	Sample # 11-09249
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>30</b>
PCBs	1.0	µg/L	N/A



**Photo 6:** Poly Tanks at the FOX-2 wastewater storage area. Poly tank 3 is in the foreground followed by Poly tank 1 and 2. Photo was taken facing west on July 30.

*Waste water sample 11-09249 did not comply with Oil and Grease criterion and therefore was not discharged to land. Additional treatment was required.*



**Location: Poly Tank 3 (1000 G) at Fox-2**

**GPS COORDINATES:** N/A

**SAMPLE:** 11-09277

**DATE:** Aug 2, 2011

Parameter	Maximum Allowable Concentration	Units	Sample # 11-09277
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Mercury	0.0006	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	0.5	mg/L	N/A
Oil & Grease	None Visible and 5	mg/L	<b>17</b>
PCBs	1.0	µg/L	N/A



**Photo 7:** Discharge of wastewater from tank W19F at an AANDC approved location. Poly tanks 1, 2, and 3, are visible in the background on the right. Photo taken facing southwest on August 6.

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

Sincerely,

Kathryn Eagles  
Environmental Sciences Group

cc: Eva Schulz (UMA)  
Daniela Loock, Darren White, Kathryn Eagles (ESG)

ASU #	13697		Report ID:	FOX-2 W5				
Client:	ESG		Date Submitted:	04-Jul-11				
			Date tested:	06-Jul-11				
Site:	FOX-2		Date:	06-Jul-11				
	11-059		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
11-09125	-	-	-	-	-	0.498	-	0.005
Blank	-	-	-	-	-	<0.010	-	<0.003
Control	-	-	-	-	-	3.28	-	0.81
Control Target	-	-	-	-	-	3.00	-	0.80
Dissolved Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
11-09125	<0.005	<0.005	<0.003	<0.001	<0.010	-	<0.005	-
Blank	<0.005	<0.005	<0.003	<0.001	<0.010	-	<0.005	-
Control	1.69	1.73	1.73	0.85	8.73	-	0.89	-
Control Target	1.60	1.60	1.60	0.80	8.00	-	0.80	-

ASU #	13697		Report ID:	FOX-2W6				
Client:	ESG		Date Submitted:	04-Jul-11				
			Date tested:	05-Jul-11				
Site:	FOX-2		Date:	05-Jul-11				
	11-059		Matrix:	water				
Report of Analysis								
Sample	Oil & Grease							
	mg/L							
11-09125	34.5							
Blank	<2.0							
Control	15.5							
Control Target	15.8							
Results relate only to the items tested								

<b>ASU #</b>	13709		<b>Report ID:</b>	FOX-2W7				
<b>Client:</b>	ESG		<b>Date Submitted:</b>	06-Jul-11				
			<b>Date tested:</b>	08-Jul-11				
<b>Site:</b>	FOX-2		<b>Date:</b>	11-Jul-11				
	11-065		<b>Matrix:</b>	water				
Report of Analysis								
Sample	Oil & Grease							
	mg/L							
11-09163	66.6							
Blank	<2.0							
Control	15.7							
Control Target	15.8							
Results relate only to the items tested								

ASU #	13709		Report ID:	FOX-2 W8					
Client:	ESG		Date Submitted:	06-Jul-11					
			Date tested:	11-Jul-11					
Site:	FOX-2		Date:	11-Jul-11					
	11-065		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	
11-09163	-	-	-	-	-	0.015	-	<0.003	*
Blank	-	-	-	-	-	<0.010	-	<0.003	
Control						2.91	-	0.76	
Control Target						3.00	-	0.80	
11-09163	-	-	-	-	-	0.014	-	<0.003	
11-09163	-	-	-	-	-	0.017	-	<0.003	
Dissolved Metals	Results in mg/L								
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
11-09163	<0.005	<0.005	<0.003	<0.001	<0.010	-	<0.005	-	*
Blank	<0.005	<0.005	<0.003	<0.001	<0.010	-	<0.005	-	
Control	1.64	1.62	1.61	0.82	8.25	-	0.83	-	
Control Target	1.60	1.60	1.60	0.80	8.00	-	0.80	-	
11-09163	<0.005	<0.005	<0.003	<0.001	<0.010	-	<0.005	-	
11-09163	<0.005	<0.005	<0.003	<0.001	<0.010	-	<0.005	-	

<b>ASU #</b>	13718		<b>Report ID:</b>	FOX-2 W9	
<b>Client:</b>	ESG		<b>Date Submitted:</b>	10-Jul-11	
			<b>Date tested:</b>	11-Jul-11	
<b>Site:</b>	FOX-2		<b>Date:</b>	11-Jul-11	
	11-076		<b>Matrix:</b>	Water	
Report of Analysis					
Results relate only to the items tested					
<b>Total Metals</b>	Results in mg/L				
<b>SAMPLE</b>	<b>Zn</b>				
11-09178	0.016	*			
Blank	<0.010				
Control	2.91				
Control Target	3.00				
11-09178	0.016				
11-09178	0.016				

ASU #	13718		Report ID:	FOX-2W10				
Client:	ESG		Date Submitted:	10-Jul-11				
			Date tested:	11-Jul-11				
Site:	FOX-2		Date:	11-Jul-11				
	11-076		Matrix:	water				
Report of Analysis								
Sample	Oil & Grease							
	mg/L							
11-09178	36.0							
Blank	<2.0							
Control	15.6							
Control Target	15.8							
Results relate only to the items tested								



<b>ASU #</b>	13727		<b>Report ID:</b>	FOX-2W11				
<b>Client:</b>	ESG		<b>Date Submitted:</b>	13-Jul-11				
			<b>Date tested:</b>	13-Jul-11				
<b>Site:</b>	FOX-2		<b>Date:</b>	14-Jul-11				
	11-086		<b>Matrix:</b>	water				
Report of Analysis								
Sample	Oil & Grease							
	mg/L							
11-09196	26.4							
Blank	<2.0							
Control	16.0							
Control Target	15.8							
Results relate only to the items tested								

<b>ASU #</b>	13731		<b>Report ID:</b>	FOX-2W12				
<b>Client:</b>	ESG		<b>Date Submitted:</b>	15-Jul-11				
			<b>Date tested:</b>	15-Jul-11				
<b>Site:</b>	FOX-2		<b>Date:</b>	18-Jul-11				
	11-095		<b>Matrix:</b>	water				
Report of Analysis								
Sample	Oil & Grease							
	mg/L							
11-09199	58.4							
11-09200	55.0							
11-09201	56.2							
Blank	<2.0							
Control	14.0							
Control Target	15.8							
Results relate only to the items tested								

<b>ASU #</b>	13733		<b>Report ID:</b>	FOX-2W13				
<b>Client:</b>	ESG		<b>Date Submitted:</b>	18-Jul-11				
			<b>Date tested:</b>	19-Jul-11				
<b>Site:</b>	FOX-2		<b>Date:</b>	20-Jul-11				
	11-108		<b>Matrix:</b>	water				
Report of Analysis								
Sample	Oil & Grease							
	mg/L							
11-09202	45.6							
11-09203	38.2							
11-09204	35.6							
11-09212	27.1							
Blank	<2.0							
Control	13.3							
Control Target	16.2							
Results relate only to the items tested								

<b>ASU #</b>	13749		<b>Report ID:</b>	FOX-2W14				
<b>Client:</b>	ESG		<b>Date Submitted:</b>	21-Jul-11				
			<b>Date tested:</b>	21-Jul-11				
<b>Site:</b>	FOX-2		<b>Date:</b>	22-Jul-11				
	11-124		<b>Matrix:</b>	water				
Report of Analysis								
Sample	Oil & Grease							
	mg/L							
11-09217	33.5							
11-09218	38.5							
11-09219	37.8							
11-09220	27.1							
11-09221	61.3							
11-09222	62.1							
11-09223	69.1							
11-09224	55.3							
Blank	<2.0							
Control	15.0							
Control Target	16.2							
Results relate only to the items tested								

<b>ASU #</b>	13762		<b>Report ID:</b>	FOX-2W15				
<b>Client:</b>	ESG		<b>Date Submitted:</b>	26-Jul-11				
			<b>Date tested:</b>	26-Jul-11				
<b>Site:</b>	FOX-2		<b>Date:</b>	27-Jul-11				
	11-135		<b>Matrix:</b>	water				
Report of Analysis								
Sample	Oil & Grease							
	mg/L							
11-09226	34.2							
11-09227	39.2							
11-09228	54.8							
11-09229	41.0							
11-09230	42.9							
11-09231	62.0							
11-09232	56.5							
11-09233	47.6							
11-09234	50.5							
Blank	<2.0							
Control	15.4							
Control Target	15.8							
Results relate only to the items tested								

<b>ASU #</b>	13769		<b>Report ID:</b>	FOX-2W16				
<b>Client:</b>	ESG		<b>Date Submitted:</b>	01-Aug-11				
			<b>Date tested:</b>	01-Aug-11				
<b>Site:</b>	FOX-2		<b>Date:</b>	01-Aug-11				
	11-145		<b>Matrix:</b>	water				
Report of Analysis								
Sample	Oil & Grease							
	mg/L							
11-09247	31.2							
11-09248	8.7							
11-09249	29.9							
Blank	<2.0							
Control	14.4							
Control Target	15.8							
Results relate only to the items tested								

<b>ASU #</b>	13784		<b>Report ID:</b>	FOX-2W17				
<b>Client:</b>	ESG		<b>Date Submitted:</b>	04-Aug-11				
			<b>Date tested:</b>	04-Aug-11				
<b>Site:</b>	FOX-2		<b>Date:</b>	04-Aug-11				
	11-165		<b>Matrix:</b>	water				
Report of Analysis								
Sample	Oil & Grease							
	mg/L							
11-09275	33.8							
11-09276	22.5							
11-09277	17.4							
11-09283	6.5							
Blank	<2.0							
Control	13.1							
Control Target	15.8							
Results relate only to the items tested								



**MEMO**

**To : Imad Jaradat, Stephanie LeBlond, Darren White, Barry  
Fedorak, Cameron King, Kathryn Eagles**

***Mentionner le dossier  
Refer to file number***

**From: WWWG (Nahed Farah, Dave Mitchell, Eva Schulz, Kat  
White)**

**Date : August 5, 2011**

**Re : FOX-2 Waste Water (W19F, Poly Tanks 1,2,3)**

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The WWWG has reviewed and discussed the analytical results for the FOX-2 waste water in W19F, and in poly tanks 1,2 and 3.

Samples were collected on Aug 2<sup>nd</sup> from the four tanks on site by Quantum Murray and submitted for analysis at Maxxam Laboratory in B.C. Samples were analyzed according to the CALA accredited method for CCME in water. Results for the analysis indicate that the samples are below detection limits.

A second set of samples were collected from poly tanks 1,2, and 3 and analyzed for oil and grease at ASU in Kingston. The method used at ASU is similar to the CCME F4G method (both gravimetric methods), but uses dichloromethane instead of hexane for the extraction. This typically will extract more of the hydrocarbon compounds available in the water sample. The results from the test show levels of oil and grease above the discharge criteria in poly tanks 1,2 and 3 ranging from 6.5mg/L to 34mg/L for the tanks.

Due to the inherent sample heterogeneity with un-dissolved oil and grease products, as well as accounting for the acceptable error range when looking at interlaboratory comparisons, it is reasonable to expect different results from the two methods.

Based on the test results received from the two labs, the WWWG recommends that the water in the four tanks can be discharged according to the site Water Use License and permits.

Please let us know if there are any concerns.  
Thanks,  
WWWG



# PHOTOGRAPHIC LOG



**Site Name:**  
FOX-2, Longstaff Bluff

**Site Location:**  
Nunavut

**Project No.**  
60212727

**Photo No.**  
1

**Date:**  
10-jul-11

**Direction Photo Taken:**

**Description:**  
Placing Tier II soils within the Tier II Disposal Facility

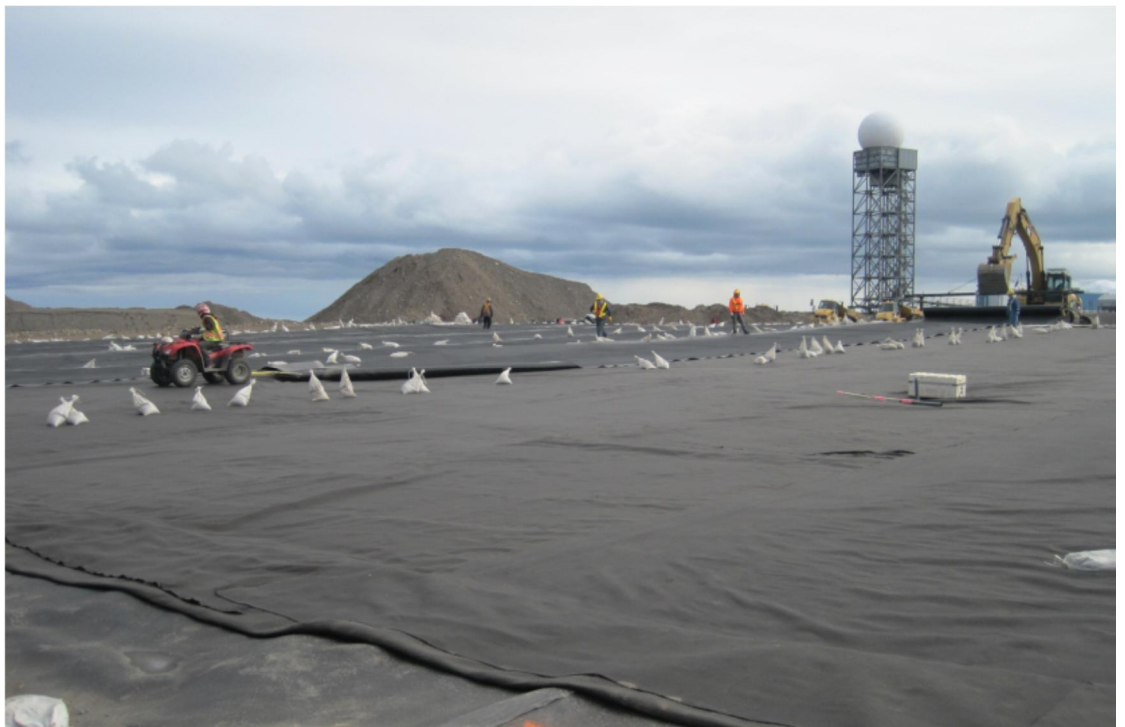


**Photo No.**  
2

**Date:**  
20-jul-11

**Direction Photo Taken:**

**Description:**  
Installation of the upper geomembranes at the Tier II Disposal Facility



# PHOTOGRAPHIC LOG



**Site Name:**  
FOX-2, Longstaff Bluff

**Site Location:**  
Nunavut

**Project No.**  
60212727

**Photo No.**  
3

**Date:**  
20-aug-11

**Direction Photo Taken:**

**Description:**

Tier II Disposal Facility at the end of the season.



**Photo No.**  
4

**Date:**  
14-jul-11

**Direction Photo Taken:**

**Description:**

Burying debris in the Hangar Non-Hazardous Waste Landfill





# PHOTOGRAPHIC LOG



**Site Name:**  
FOX-2, Longstaff Bluff

**Site Location:**  
Nunavut

**Project No.**  
60212727

**Photo No.**  
5

**Date:**  
11-aug-11

**Direction Photo Taken:**

**Description:**  
Closed Hangar Non-Hazardous Waste Landfill.



**Photo No.**  
6

**Date:**  
29-jun-11

**Direction Photo Taken:**

**Description:**  
Granular fill placement at the start of the season at the Upper Site Landfill.



# PHOTOGRAPHIC LOG



**Site Name:**  
FOX-2, Longstaff Bluff

**Site Location:**  
Nunavut

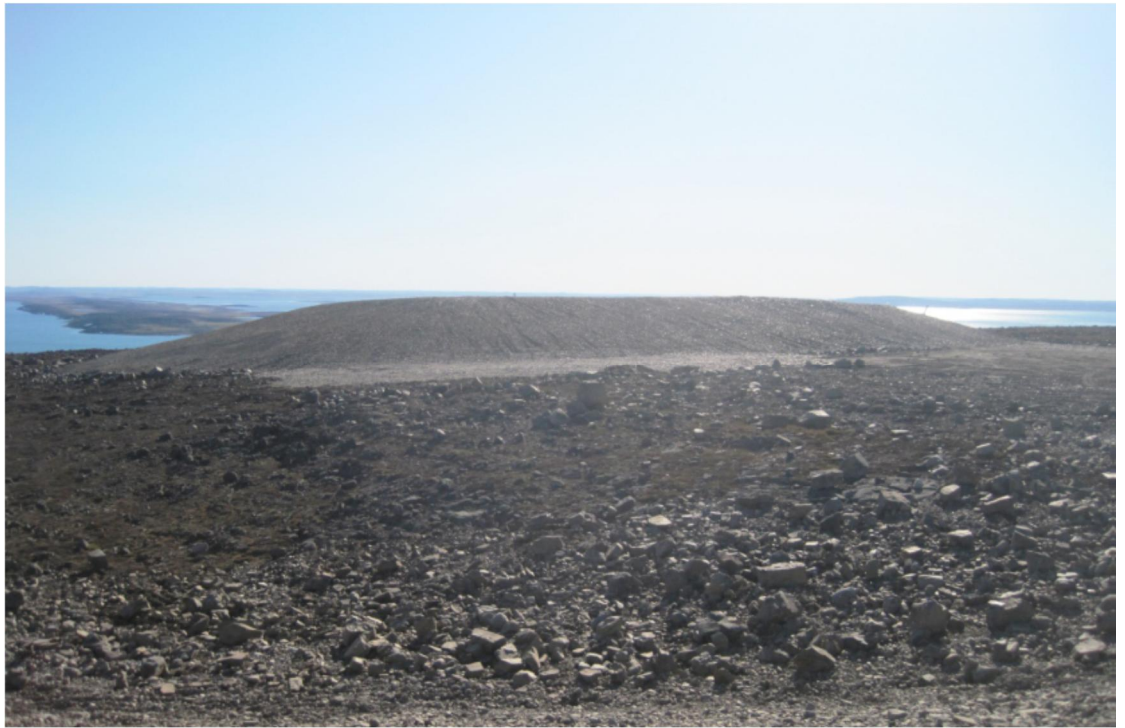
**Project No.**  
60212727

**Photo No.**  
7

**Date:**  
8-aug-11

**Direction Photo Taken:**

**Description:**  
Closed Upper Site Landfill.



**Photo No.**  
8

**Date:**  
9-aug-11

**Direction Photo Taken:**

**Description:**  
Reclaimed borrow area.





# PHOTOGRAPHIC LOG



**Site Name:**  
FOX-2, Longstaff Bluff

**Site Location:**  
Nunavut

**Project No.**  
60212727

**Photo No.**  
9

**Date:**  
11-aug-11

**Direction Photo Taken:**

**Description:**

Aerial view of the completed Hangar Non-Hazardous Waste Landfill



**Photo No.**  
10

**Date:**  
11-aug-11

**Direction Photo Taken:**

**Description:**

Aerial view of the completed Tier II Disposal Facility and Upper Site Landfill

