

Defence Construction Canada

FOX-M Hall Beach Year 4 Landfill Monitoring

Prepared by:

AECOM

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www.aecom.com

Project Number:

60212745 (0171-000-00)

Date:

March 5, 2012

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March 5, 2012

Mr. Nahed Farah
Defence Construction Canada
Director General Military Engineering
National Defence Headquarters
101 Colonel By Drive
Ottawa, ON K1A 0K2

Dear Mr. Farah:

Project No: 60212745

Regarding: FOX-M Hall Beach

Year 4 Landfill Monitoring Report

AECOM is pleased to submit our FOX-M Year 4 Landfill Monitoring Report to Defence Construction Canada.

Should you have any queries, please contact Katie Scott at (780) 930-0033.

Sincerely,

AECOM Canada Ltd.

Roland Merkosky, P.Eng. Senior Project Manager

roland.merkosky@aecom.com

KS:cn

Distribution List

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1	X	Draft Copy - Defence Construction Canada			
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8	X	Final – Defence Construction Canada			
1	Х	Final – Environmental Sciences Group			

Revision Log

Revision #	Revised By	Date	Issue / Revision Description
1	Katie Scott	February 9, 2012	DRAFT
2	Katie Scott	March 5, 2012	FINAL

AECOM Signatures

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Katie Scott, B.Sc. Environmental Scientist

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Report Reviewed By:

Cathy Corrigan, M.Sc., P.Eng. Senior Geological Engineer PERMIT TO PRACTICE
AECOM CANADA LTD.
Signature

Date March 9, 2012

PERMIT NUMBER: P 639
NWT/NU Association of Professional
Engineers and Geoscientists

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Annex 3 – Field Notes

1. Introduction

1.1 Background

The FOX-M Hall Beach DEW Line site is located on the east coast of the Melville Peninsula at 68°46' north latitude and 81°12' west longitude in the Foxe Basin Area. The community of Hall Beach is located approximately two kilometres (km) north of the site, has full services, and can be reached by commercial airline. The FOX-M has been converted to a North Warning System (NWS) Long Range Radar (LRR) and Logistical Support Site (LSS). The site is still active and is manned year-round. The clean-up of the site occurred between 2003 and 2007 and was completed on behalf of Department of National Defence (DND) as part of the DEW Line Clean-up (DLCU) Project. Remediation of the site included the demolition of site infrastructure not required for the operation of the NWS LRR site, closing and remediation of seven existing landfills (East Beach – north, East Beach – South, Communications – North, Communication – Northwest, G217, Billboards and Hazmat Storage), construction of a Non-Hazardous Waste Landfill and a Tier II Disposal Facility, and collection of site debris

1.2 Field Conditions

The 2011 field program was conducted on August 13 and 15, 2011 by the Environmental Sciences Group (ESG) and AECOM. ESG conducted the environmental component of the monitoring activities, while AECOM performed the geotechnical duties.

Weather conditions at site on August 13th, 2011 were slightly cool (5°C) with a slight breeze, overcast and fog patches. On August 15th, 2011 the temperature was 9°C, overcast with some light rain.

1.3 Scope of Work

The general components of the landfill monitoring program at FOX-M include:

VISUAL INSPECTION

At each landfill location, a field inspection was conducted to observe any visual signs of impact (such as seepage or stressed vegetation caused by the landfill) and for physical stability. Photographic records were taken to show the condition of the landfill and any area of concern that was observed. The observations and the photographic records for each landfill are discussed in detail below. Additional photos and photo logs are located on the CD included with this report. Field notes from the on-site teams have been included in Annex 3 at the end of this report.

Drawings with the location of noted landfill features and photo viewpoints can be found in each landfill discussion section below. AutoCAD versions of the drawings are included on the CD.

SURFACE AND SHALLOW DEPTH SOIL SAMPLING AND ANALYSES

Soil sampling was conducted at the Tier II Soil Disposal Facility and the East Beach Landfill in 2011. Two soil samples were collected at depths between 0-10 centimetres (cm) and 30-40 cm at each sample location. The soil sample were analysed for Polychlorinated Biphenyls (PCBs), Total Petroleum Hydrocarbons (TPH) Fraction 1 to 3 (using the Canada-Wide Standard method, 2001) and nine inorganic elements analysed for copper, nickel, cobalt, cadmium, lead, zinc, chromium, arsenic, and mercury. The analytical results for each sample landfill are discussed below.

Quality Assurance and Quality Control (QA/QC) procedures can be found in Annex 2. Laboratory reports can be found in Annex 1.

GROUNDWATER SAMPLING AND ANALYSES

Groundwater elevations were measured at each observation well. The monitoring conditions and field measurements were documented and collected at each monitoring well. The field measurements included the following: presence and thickness of free product (if present), depth to bottom of well, stick up height and visual condition of the well. Prior to sampling, wells were purged to remove at least one well volume of water, and field chemistry was monitored using a digital probe for the following parameters: temperature, pH, conductivity, and turbidity. Following purging, groundwater samples were collected from wells that had sufficient water volumes. The groundwater samples were analysed for PCB, TPH, and the suite of nine inorganic elements listed above. Further discussion regarding the groundwater sample results can be found in the landfill sections below.

The majority of the monitoring wells at the FOX-M site had insufficient volume to sample. During the 2011 monitoring event, samples were collected from the following wells;

Table 1.1: Summary of Groundwater Sampling

Landfill	Monitoring Well		
Tier II Disposal Facility	MW-1, MW-2, MW-3, MW-4, MW-5		
East Beach Landfill	MW-29, MW-30		

QA/QC procedures can be found in Annex 2. Laboratory reports can be found in Annex 1.

GROUND TEMPERATURE MONITORING

Thermal monitoring was conducted at the Tier II Disposal Facility and the East Beach Landfill. The data was downloaded from the dataloggers using the provided Lakewood Systems Ltd. software. Manual resistance readings were collected at each of the thermistors with the exception of VT-1, VT-3 and VT-4. There appears to have been an error in the thermistors, and they could require reprogramming during the next monitoring event. The thermistor data from 2011 has been included on the CD.

The requirements for landfill monitoring, as laid out in Environmental Provisions of the NTI-DND Co-operation Agreement, are summarized in Table 1.1. Detailed landfill monitoring requirements are described in the Landfill Monitoring Plan - Part B - Nunavut Settlement Region.

Table 1.2: General Landfill Monitoring Requirements

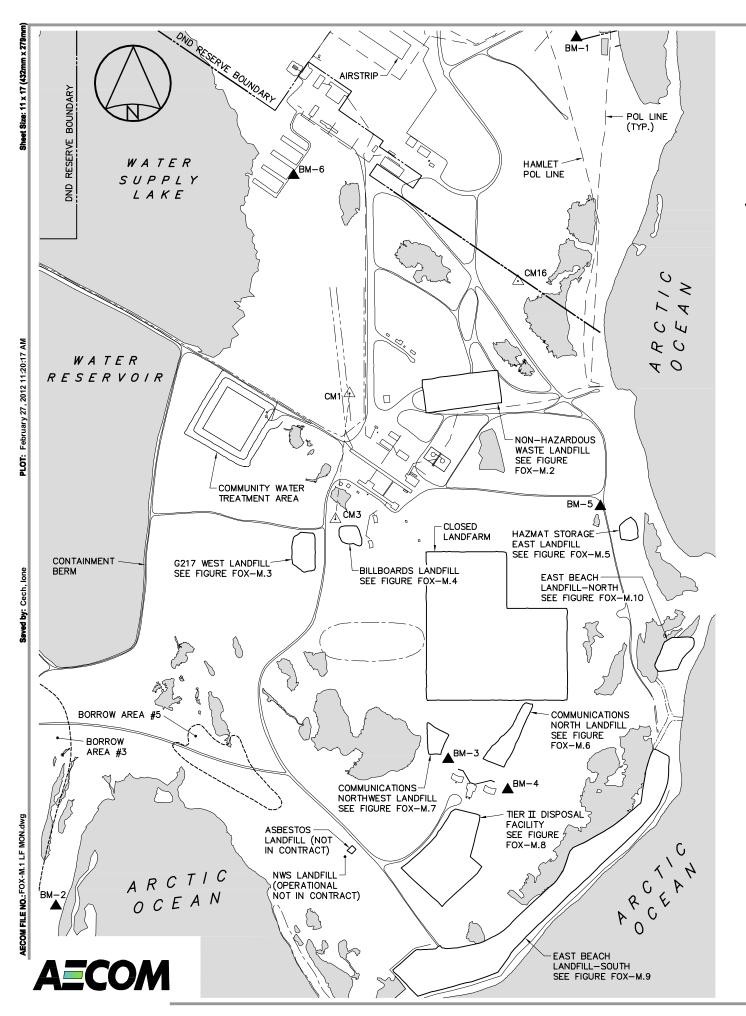
Landfill Classification	Visual Inspection	Groundwater Sampling	Soil Sampling	Thermal Monitoring
Existing Landfill, High Potential Environmental Risk (Class A)		Not required, as landfill to	be excavated.	
Existing Landfills, Moderate Potential Environmental Risk (Class B)	V	V	√	V
Existing Landfills, Low Potential Environmental Risk (Class C)	V		V	
New Landfill, Non-Hazardous Waste Landfill	V	V	√	
New Landfill, DCC Tier II Disposal Facility	V	V	√	√

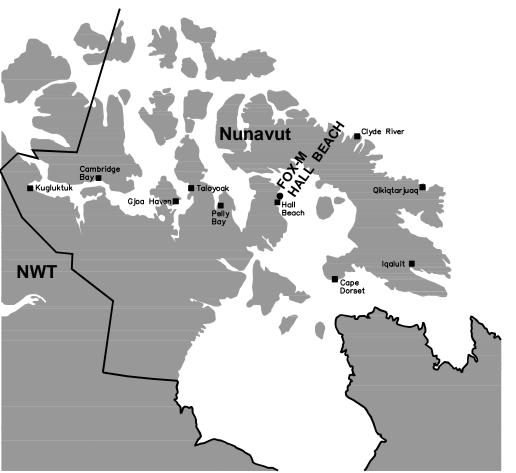
A summary of these requirements, as related to the specific landfills and 2011 monitoring program at FOX-M, is provided in Table 1.3.

Table 1.3: FOX-4 Cape Hooper Landfill Monitoring Requirements

Landfill Designation	Visual Inspection	Groundwater Sampling	Soil Sampling	Thermal Monitoring
Billboards Landfill	√			
Communications Northwest Landfill	√			
East Beach Landfill - North	√	√	√	V
East Beach Landfill - South	√	√	√	V
G217 West Landfill	√			
Communications North Landfill	√			
Non-Hazardous Waste Landfill	√			
Hazmat Storage East Landfill	√ ·			
Tier II Disposal Facility	V	V	V	V

Detailed discussions related to the completed monitoring at each landfill are provided in the landfill-specific report sections that follow.





LOCATION OF HALL BEACH WITHIN NUNAVUT TERRITORY

SURVEY CONTROL MONUMENTS								
NO.	итм соо	RDINATES	ELEV.	DECODIDATION				
NO.	NORTHING EASTING		ELEV.	DESCRIPTION				
CM1	7 628 008.274 490 743.723		3.577	FOX-M BASELINE STA. 36+00				
СМЗ	7 627 675.453	490 706.281	5.291	FOX-M BASELINE STA. 47+00				
CM16	7 628 305.218	491 189.319	1.190	C.L.S. MONUMENT				

NOTE: BASELINE STATIONS SHOWN ARE IN IMPERIAL UNITS.

PERMANENT BENCHMARK								
NO.	итм соо	RDINATES	ELEV.	DESCRIPTION				
NO.	NORTHING	EASTING		DESCRIP HON				
BM-1	7 628 948.528	491 344.124	-0.243	25mm DIA. STEEL PIPE				
BM-2	7 626 652.600	489 967.120	-0.221	25mm DIA. STEEL PIPE				
вм-3	7 627 040.589	491 004.505	2.949	25mm DIA. STEEL PIPE				
BM-4	7 626 960.190	491 162.103	3.265	25mm DIA. STEEL PIPE				
BM-5	7 627 709.111	491 407.009	0.514	25mm DIA. STEEL PIPE				
BM-6	7 628 584.719	490 596.130	1.229	25mm DIA. STEEL PIPE				

GENERAL NOTES:

- 1. ALL COORDINATES ARE REFERENCED TO NAD83 (CSRS), UTM ZONE 17. ALL ELEVATIONS REFER TO GEODETIC DATUM.
- 2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.

LEGEND:

△CM1 SURVEY CONTROL MONUMENT

▲BM-5 PERMANENT BENCHMARK LOCATION (6)

____ APPROXIMATE LOCATION OF

PROPERTY BOUNDARY

ARCHAEOLOGICAL FEATURE

,

BODY OF WATER

RECORD DRAWING

NOT FOR CONSTRUCTION



DEW LINE CLEAN UP LANDFILL MONITORING PLAN

FOX-M HALL BEACH

LOCATION PLANFIGURE FOX-M.1

2. Non-Hazardous Waste Landfill (NHWL)

The NHWL is located just north of the Station Area. Monitoring requirements in 2011 consisted of a visual inspection only.

2.1 Visual Inspection

The visual inspection of the NHWL was conducted on August 15-16, 2011. The Visual Inspection Checklist/Report has been completed as per the Landfill Monitoring Contract Terms of Reference (ToR) and is included below.

Identified features and photo viewpoints can be found on Figure FOX-M.2.

2.1.1 Settlement

Settlement was observed in two areas on the landfills side slopes. The first area observed was on the eastern side slope in the in the northeast corner of the landfill and is approximately six metres (m) in length by two m wide with a depth of approximately 50 millimetres (mm). The second area observed was on the southern side slope near the south eastern corner of the landfill and is approximately seven m in length by 0.5 m wide with a depth of approximately 100 mm.

2.1.2 Erosion

Indications of erosion were not observed.

2.1.3 Frost Action

Indications of frost action were not observed.

2.1.4 Evidence of Burrowing Animals

Indications of burrowing animals were not observed.

2.1.5 Re-establishment of Vegetation

Trace amounts of vegetation on the north side slope.

2.1.6 Staining

Indications of staining were not observed.

2.1.7 Seepage Points

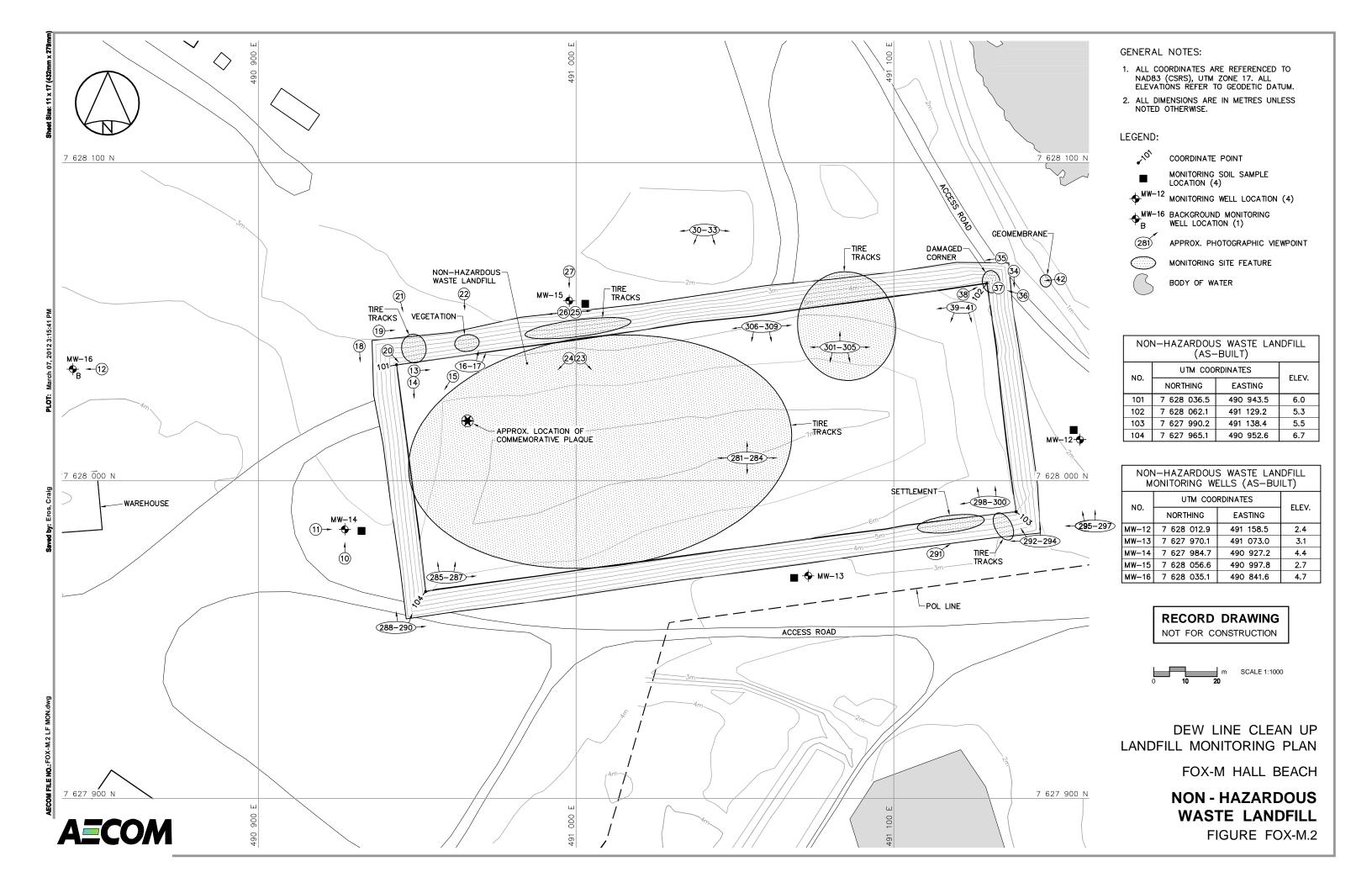
Indications of seepage were not observed.

2.1.8 Debris

A small piece of geomembrane was noted adjacent to the landfill. It does not appear to have originated from the landfill.

2.1.9 Discussion

Overall, the landfill is in good condition. The two areas of settlement should be of little consequence to the landfill performing as designed. Tire tracks were observed in several areas on the landfill; however the depth of the track marks were negligible. The noted damage to the corner of the landfill appears to be the result of tire tracks and was not present during the 2010 monitoring event. The landfill is considered stable.



2.2 Photographic Record



Photograph 1. Non-Hazardous Waste Landfill: Looking E from SW Corner of Landfill (Photo 285)↑



Photograph 2. Non-Hazardous Waste Landfill: Looking N From SW Corner of Landfill (Photo 287)↑



Photograph 3. Settlement at NE corner of landfill (Photo 020)↑



Photograph 4. Vegetation on northern side slope of landfill (Photo 022)↑

2.3 Visual Inspection Checklist and Stability Assessment

DEW Line Cleanup: Post-Construction - Landfill Monitoring Visual Inspection Checklist and Preliminary Stability Assessment

Site Name:	FOX-M Hall Beach
Landfill Designation:	Non-Hazardous Waste Landfill
Date of Inspection:	15-Aug-11
Inspected By:	David Elwood, M.Sc., P.Eng. (AB)
Report Prepared By:	Shaun Hughes, P.Eng (AB)
Report Reviewed By:	Cathy Corrigan, M.Sc., P.Eng.
The inspector/reporter re	presents to the best of their knowledge, the following statement and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or
misstated.	
Signature:	
	ang -

Checklist Item Settlement Erosion Frost Action	Present Yes/No Yes No	Location (Describe relative to existing monuments/features and relative to landfill design i.e. surface, berms, toe) Area 1: southern side slope	Length A1: 7m	Width A1: 0.5m	Depth A1: 100mm	Extent relative to Area of Landfill (%) <1%	Description A1: minimal settlement	Photographic Records Focal length, location, view point & direction (relative to magnetic north) Feature of note Scale A1: Photo 291	Additional Comments	Severity Rating
Sloughing and Cracking	No No									
Animal Burrows	No									
Vegetation Staining	Yes No	A1: northern side slope A2: eastern side slope	A1: 1m A2: 6m	A1: 1m A2: 1.5m	n/a	<1% (occasional)		A1: Photo 022 A2: Photos 295 and 296		
Vegetation Stress	No									
Seepage Points	No									
Debris Exposed	No					Isolated		Photo 042	A small amount of debris is located next to the landfill. Did not originate from landfill	Acceptable
Presence/Condition -										
Monitoring Instruments	No									
Features of Note	Yes	A1: side slopes and top cover A2: Side slope at northeast corner	A2: 6 m	A2: 2 m	A2: 50mm	A1: Numerous A2: occasional	A1: Track marks at various locations on the landfill with varying depths A2: corner damaged by vehicles	A1: Photos 283, 286, 287 and 302 A2: Photo 37 and 38		A1: Acceptable A2: Acceptable
Landfill Performance										Acceptable

3. G217 West Landfill

The G217 West Landfill is located west of the main access road, south of the Station Area. Monitoring requirements for 2011 included a visual inspection of the landfill only.

3.1 Visual Inspection

The visual inspection of the G217 West Landfill was conducted on August 15-16, 2011. The Visual Inspection Checklist/Report has been completed as per the ToR and is included below.

Noted features and photo viewpoints can be found on Figure FOX-M.3.

3.1.1 Settlement

Two tension cracks were observed along the western side slope of the landfill measuring roughly eight m and four m; each crack was observed mid-slope.

3.1.2 Erosion

Indications of erosion were not observed.

3.1.3 Frost Action

Indications of frost action were not observed.

3.1.4 Evidence of Burrowing Animals

Indications of burrowing animals were not observed.

3.1.5 Re-establishment of Vegetation

Indications of vegetation were not observed.

3.1.6 Staining

Indications of staining were not observed.

3.1.7 Seepage Points

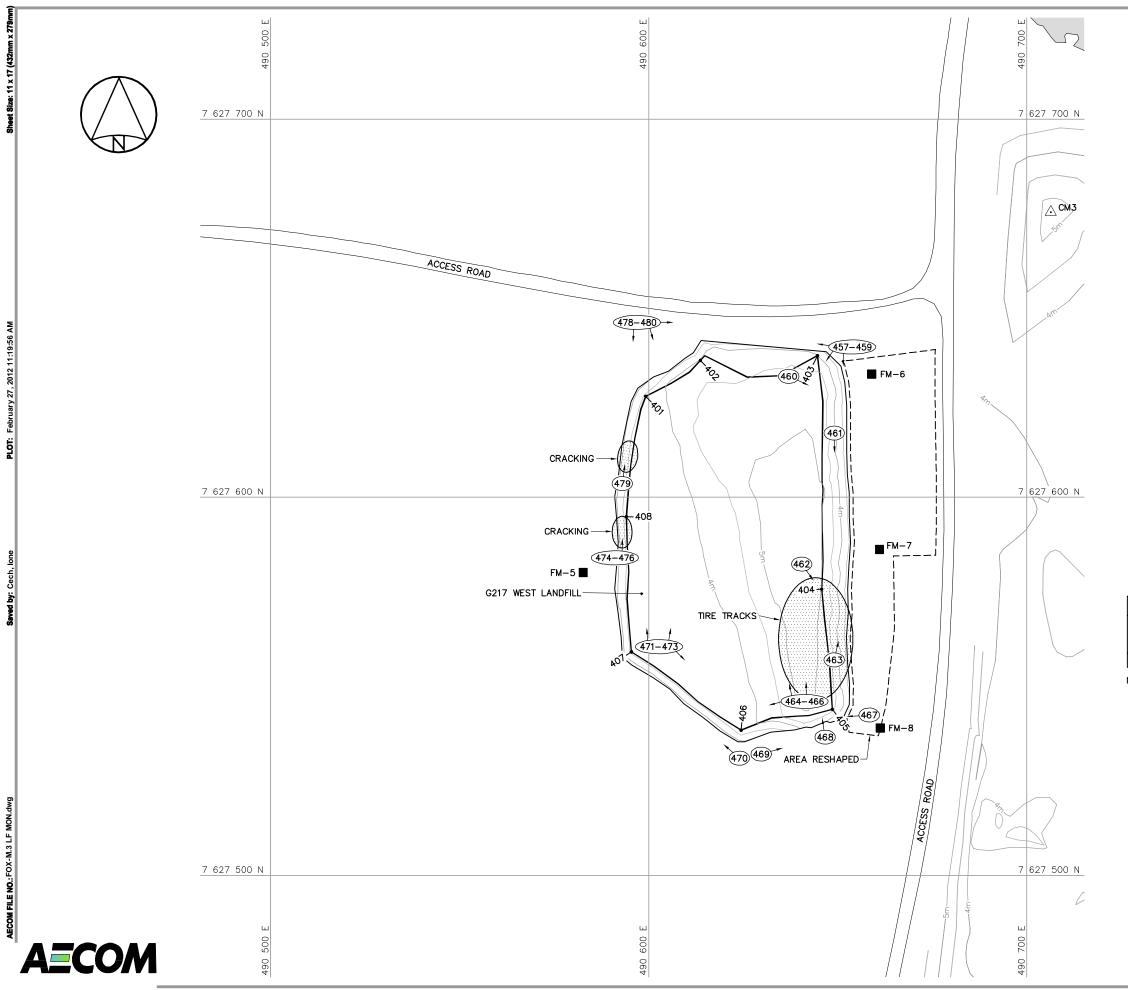
Indications of seepage were not observed.

3.1.8 Debris

Indications of debris were not observed.

3.1.9 Discussion

The two tension cracks should be of little consequence to the landfill performing as designed. The landfill is considered stable.



GENERAL NOTES:

- ALL COORDINATES ARE REFERENCED TO NAD83 (CSRS), UTM ZONE 17. ALL ELEVATIONS REFER TO GEODETIC DATUM.
- 2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.

LEGEND:

△CM3 SURVEY CONTROL MONUMENT

COORDINATE POINT

MONITORING SOIL SAMPLE LOCATION (4)

APPROX. PHOTOGRAPHIC VIEWPOINT

MONITORING SITE FEATURE

BODY OF WATER

G217 WEST LANDFILL REGRADED (AS—BUILT)									
NO.	итм соо	ELEV.							
	NORTHING	EASTING	ELEV.						
401	7 627 626.7	490 599.2	3.6						
402	7 627 636.2	490 613.6	4.0						
403	7 627 637.5	490 644.6	3.9						
404	7 627 575.7	490 645.7	5.0						
405	7 627 543.9	490 648.5	4.7						
406	7 627 538.4	490 624.4	3.8						
407	7 627 559.1	490 595.4	3.6						
408	7 627 594 9	490 594 0	3.7						

SURVEY CONTROL MONUMENTS									
NO.	итм соо	RDINATES	ELEV.	DESCRIPTION					
NO.	NORTHING	EASTING							
СМЗ	7 627 675.453	490 706.281	5.291	FOX-M BASELINE STA. 47+00					

NOTE: BASELINE STATIONS SHOWN ARE IN IMPERIAL UNITS.

RECORD DRAWING

NOT FOR CONSTRUCTION



DEW LINE CLEAN UP LANDFILL MONITORING PLAN

FOX-M HALL BEACH

G217 WEST LANDFILL FIGURE FOX-M.3

3.2 Photographic Record



Photograph 5. G217 West Landfill: Looking S from NE Corner of Landfill (Photo 457)↑



Photograph 6. G217 West Landfill: Looking W from NE Corner of Landfill (Photo 459)↑



Photograph 7. G217 West Landfill: Looking NW From SE Corner of Landfill (Photo 465)↑



Photograph 8. G217 West Landfill: Looking N at Cracking Along the W Side Slope of Landfill (Photo 475)↑

3.3 Visual Inspection Checklist and Stability Assessment

DEW Line Cleanup: Post-Construction - Landfill Monitoring Visual Inspection Checklist and Preliminary Stability Assessment

Site Name:	FOX-M Hall Beach
Landfill Designation:	G217 West Landfill
Date of Inspection:	15-Aug-11
Inspected By:	David Elwood, M.Sc., P.Eng. (AB)
Report Prepared By:	Shaun Hughes, P.Eng (AB)
Report Reviewed By:	Cathy Corrigan, M.Sc., P.Eng.
The inspector/reporter rep	resents to the best of their knowledge, the following statement and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or
misstated.	
Signature:	

	0									
Checklist Item	Present Yes/No	Location (Describe relative to existing monuments/features and relative to landfill design i.e. surface, berms, toe)	Length	Width	Depth	Extent relative to Area of Landfill (%)	Description	Photographic Records Focal length, location, view point & direction (relative to magnetic north) Feature of note Scale	Additional Comments	Severity Rating
Settlement	No									
Erosion	No									
Frost Action	No									
Sloughing and Cracking	Yes	Area 1: western side slope Area 2: western side slope	A1: 4m A2: 8m	A1: ~50mm A2: ~10mm	A1: ~100mm A2: ~20mm	<1% (occasional)	Occurring in two midslope locations	Photos: 474, 475, and 477		Acceptable
Animal Burrows	No									
Vegetation	No									
Staining	No									
Vegetation Stress	No									
Seepage Points	No									
Debris Exposed	No									
Presence/Condition - Monitoring Instruments	No									
Features of Note	-									
Landfill Performance										Acceptable

4. Billboards Landfill

The landfill is located east of the main access road, south of the Station Area. Monitoring requirements for 2011 included a visual inspection of the landfill only.

4.1 Visual Inspection

The visual inspection of the Billboards Landfill was conducted on August 15-16, 2011. The Visual Inspection Checklist/Report has been completed as per the ToR and is included below.

Noted features and photo viewpoints can be found on Figure FOX-M.4.

4.1.1 Settlement

A small crack (approximately two m length by 40 mm width by 25 mm depth) was noted in the landfill cap near the access roadway in the northwest corner. The crack is considered minor and does not affect the stability of the landfill.

4.1.2 Erosion

Indications of erosion were not observed.

4.1.3 Frost Action

Indications of frost action were not observed.

4.1.4 Evidence of Burrowing Animals

Indications of burrowing animals were not observed.

4.1.5 Re-establishment of Vegetation

Indications of vegetation were not observed.

4.1.6 Staining

Indications of staining were not observed.

4.1.7 Seepage Points

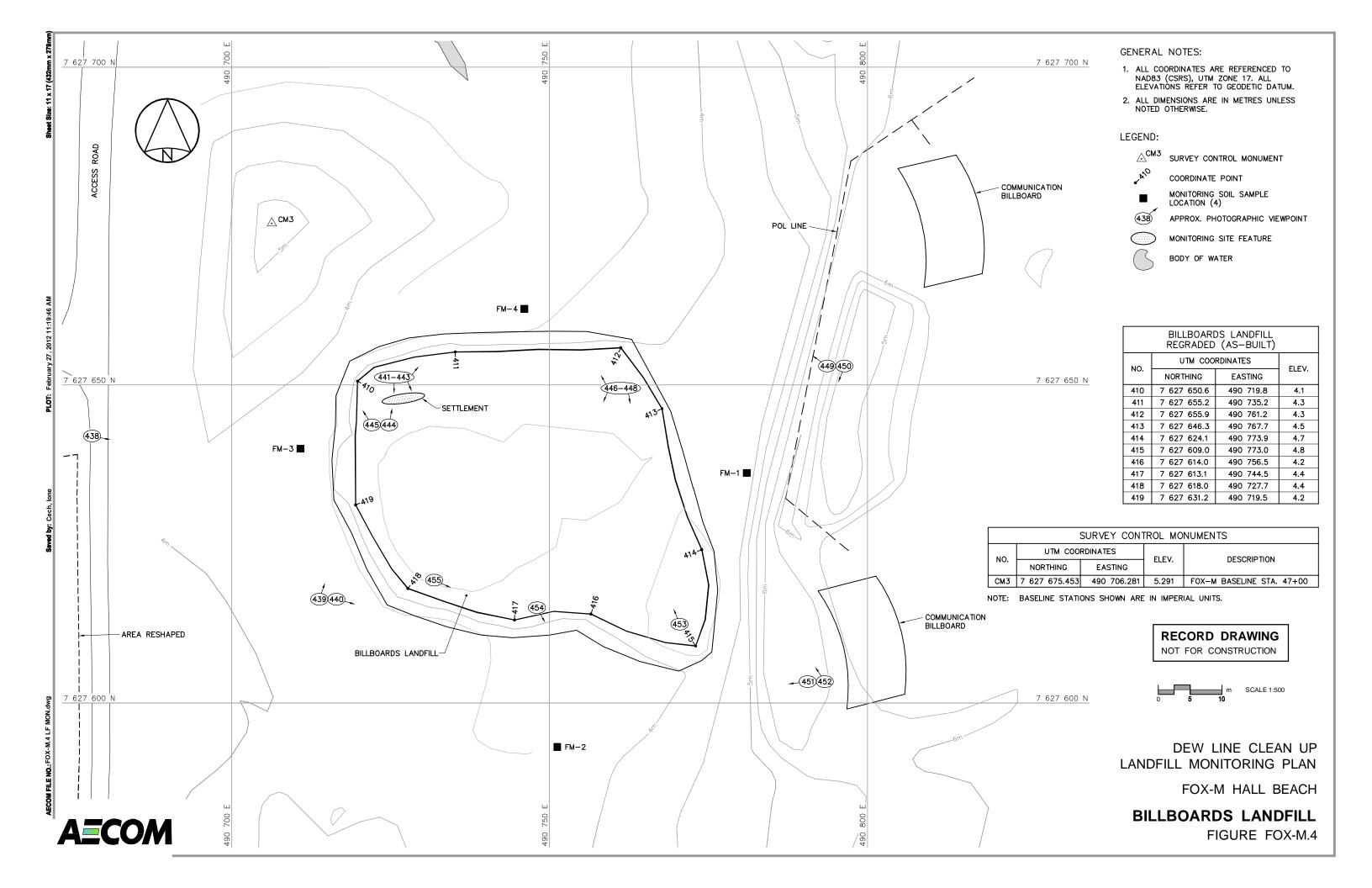
Indications of seepage points were not observed.

4.1.8 Debris

Indications of exposed debris were not observed.

4.1.9 Discussion

There was no evidence of anything that may call into question the integrity of the landfill and therefore, the landfill is considered stable.



4.2 Photographic Record



Photograph 9. Billboards Landfill: Looking E at Entire Landfill (Photo 438)↑



Photograph 10. Billboards Landfill: Looking SE from NW corner of landfill (Photo 442)♠



Photograph 11. Billboards Landfill: Looking W from NE Corner of Landfill (Photo 446)↑



Photograph 12. Billboards Landfill: Looking S from NE Corner of Landfill (Photo 448)↑

4.3 Visual Inspection Checklist and Stability Assessment

DEW Line Cleanup: Post-Construction - Landfill Monitoring Visual Inspection Checklist and Preliminary Stability Assessment

Site Name:	FOX-M Hall Beach
Landfill Designation:	Billboards Landfill
Date of Inspection:	15-Aug-11
Inspected By:	David Elwood, M.Sc., P.Eng. (AB)
Report Prepared By:	Shaun Hughes, P.Eng (AB)
Report Reviewed By:	Cathy Corrigan, M.Sc., P.Eng.
The inspector/reporter rep	resents to the best of their knowledge, the following statement and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been
suppressed or misstated.	

Signature:

							•	1		
Checklist Item	Present Yes/No	Location (Describe relative to existing monuments/features and relative to landfill design i.e. surface, berms, toe)	Length	Width	Depth	Extent relative to Area of Landfill (%)	Description	Photographic Records Focal length, location, view point & direction (relative to magnetic north) Feature of note Scale	Additional Comments	Severity Rating
Cattlana	V	Near access roadway, in the	2	40	25		Cattlemant and by landfill and	Disates 442 and 442		A t - l - l -
Settlement	Yes	northwest corner	2 m	40 mm	25 mm		Settlement crack in landfill cap	Photos 442 and 443		Acceptable
Erosion	No									
Frost Action	No									
Sloughing and Cracking	Yes									
Animal Burrows	No									
Vegetation	No									
Staining	No									
Vegetation Stress	No									
Seepage Points	No									
Debris Exposed	No									
Presence/Condition - Monitoring Instruments	No									
Features of Note	-									
Landfill Performance										Acceptable

5. Hazmat Storage - East Landfill

The landfill is located east of the main access road, east of the Station Area. Monitoring requirements for 2011 included a visual inspection of the landfill only.

5.1 Visual Inspection

The visual inspection of the Hazmat Storage - East Landfill was conducted on August 15-16, 2011. The Visual Inspection Checklist/Report has been completed as per the ToR and is included below.

Noted features and photo viewpoints can be found on Figure FOX-M.5.

5.1.1 Settlement

Indications of settlement were not observed.

5.1.2 Erosion

Indications of erosion were not observed.

5.1.3 Frost Action

Indications of frost action were not observed.

5.1.4 Evidence of Burrowing Animals

Indications of burrowing animals were not observed.

5.1.5 Re-establishment of Vegetation

Indications of vegetation were not observed.

5.1.6 Staining

Indications of staining were not observed.

5.1.7 Seepage Points

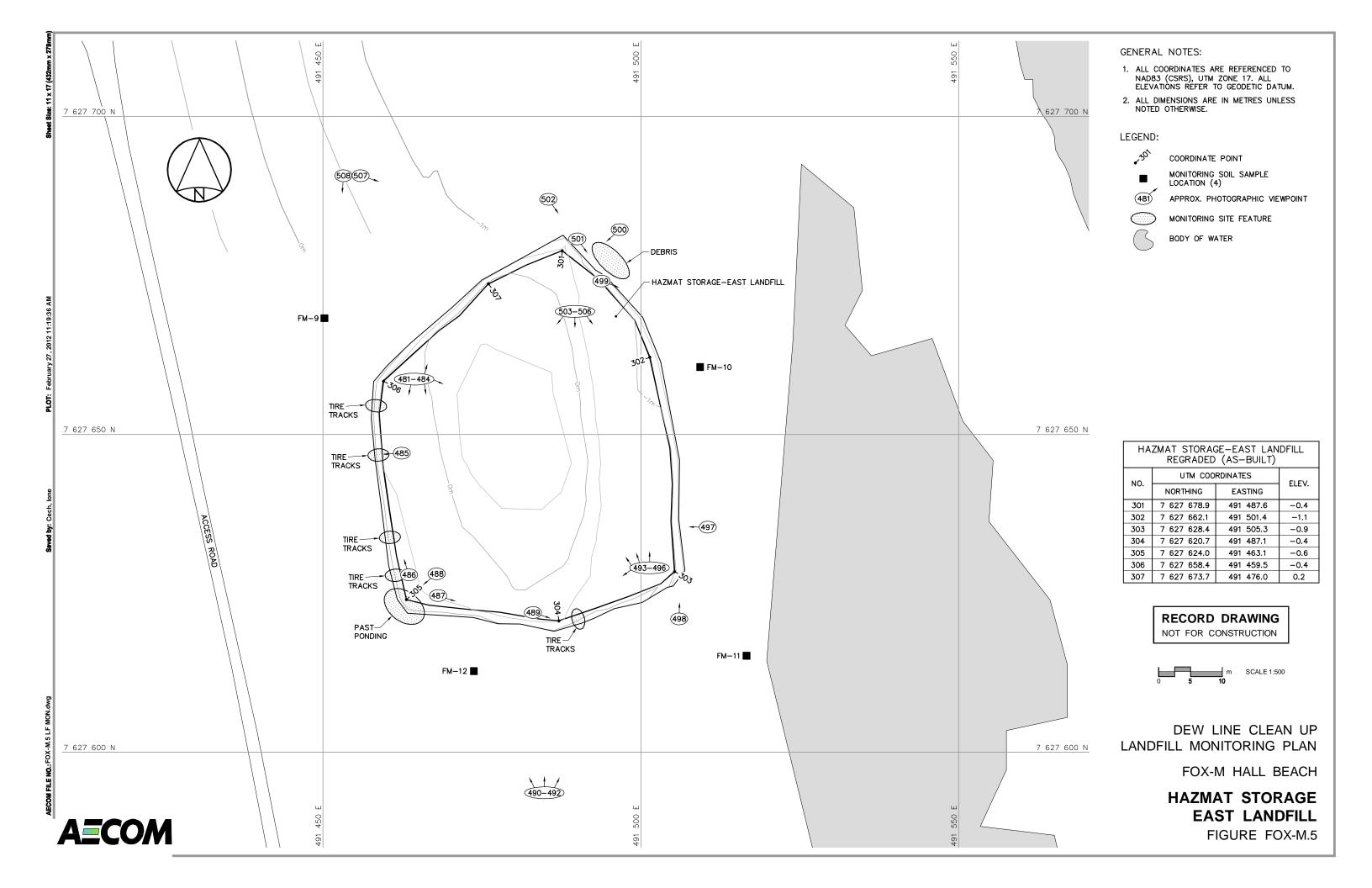
Indications of seepage were not observed.

5.1.8 Debris

Minimal amounts of wood and metal debris were observed along the eastern side of the landfill. This debris appears to have been dumped next to the landfill after construction.

5.1.9 Discussion

Tire tracks were observed on the east and west side slopes of the landfill; however the depth of the track marks was negligible. It was observed that ponding had occurred on the top cover in the southwest corner in the past. The landfill is considered stable.



5.2 Photographic Record



Photograph 13. Hazmat Storage Landfill: Looking S from NW Corner of Landfill (Photo 481)↑



Photograph 14. Hazmat Storage Landfill: Tire tracks on south slope of landfill (Photo 489)↑



Photograph 15. Hazmat Storage Landfill: Area of past ponding (Photo 488) ^



Photograph 16. Hazmat Storage Landfill: Looking SW from SE corner of landfill (Photo 493) ↑

5.3 Visual Inspection Checklist and Stability Assessment

DEW Line Cleanup: Post-Construction - Landfill Monitoring Visual Inspection Checklist and Preliminary Stability Assessment

Site Name:	FOX-M Hall Beach
Landfill Designation:	Hazmat Storage Landfill
Date of Inspection:	15-Aug-11
Inspected By:	David Elwood, M.Sc., P.Eng. (AB)
Report Prepared By:	Shaun Hughes, P.Eng (AB)
Report Reviewed By:	Cathy Corrigan, M.Sc., P.Eng.
The inspector/reporter repr	esents to the best of their knowledge, the following statement and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or
misstated.	

Signature:

Landfill Performance										Acceptable
Features of Note	Yes	Az. Top cover				(OCCASIONAI)	along west and southern side slopes	AZ. P110105 466	past	Acceptable
Factorian of Nata	Yes	A1: South and west side slopes A2: Top cover					A1: Track marks have been observed along west and southern side slopes	A1: Photos 489 A2: Photos 488	southwest corner of the top cover in the past	Acceptable
									A2: Ponding has occurred in the	
Monitoring Instruments	No								A2 Beedleed	
Presence/Condition -										
Debris Exposed	No					n/a	the landfill, it appears this was dumped after landfill construction was completed.	Photos: 499 and 501		
Scepage Forms	140						Some debris observed laying near			
Seepage Points	No									
Vegetation Stress	No									
Staining	No									
Vegetation	No									
Sloughing and Cracking Animal Burrows	No No									
Frost Action	No									
Erosion	No									
Settlement	No									
Checklist Item	Yes/No	surface, berms, toe)	Length	wiatii	Depth	Landfill (%)	Description	Scale	Comments	Severity Rating
Chad line to	Present	Location (Describe relative to existing monuments/features and relative to landfill design i.e.	Levelle	Width	Beeth	Extent relative to Area of	Post (Viv.)	Focal length, location, view point & direction (relative to magnetic north) Feature of note	Additional	Constitution Bullion
								Photographic Records		

6. Communications North Landfill

The landfill is located south of the Station Area, immediately north of the former communications area pad. Monitoring requirements for 2011 included a visual inspection of the landfill only.

6.1 Visual Inspection

The visual inspection of the Communications North Landfill was conducted on August 15-16, 2011. The Visual Inspection Checklist/Report has been completed as per the ToR and is included below.

Noted features and photo viewpoints can be found on Figure FOX-M.6.

6.1.1 Settlement

There are possible indications of settlement in two areas along the side slopes of the landfill. The first is occurring on the west side slope in the south west corner of the landfill roughly eight m in length by 0.5 m wide with a depth of 0.25 m. The second occurrence is a low lying area located along the west side just beyond the toe of the side slopes.

6.1.2 Erosion

Indications of erosion were not observed.

6.1.3 Frost Action

Indications of frost action were not observed.

6.1.4 Re-establishment of Vegetation

Indications of vegetation were not observed.

6.1.5 Evidence of Burrowing Animals

Indications of burrowing animals were not observed.

6.1.6 Staining

Indications of staining were not observed.

6.1.7 Seepage Points

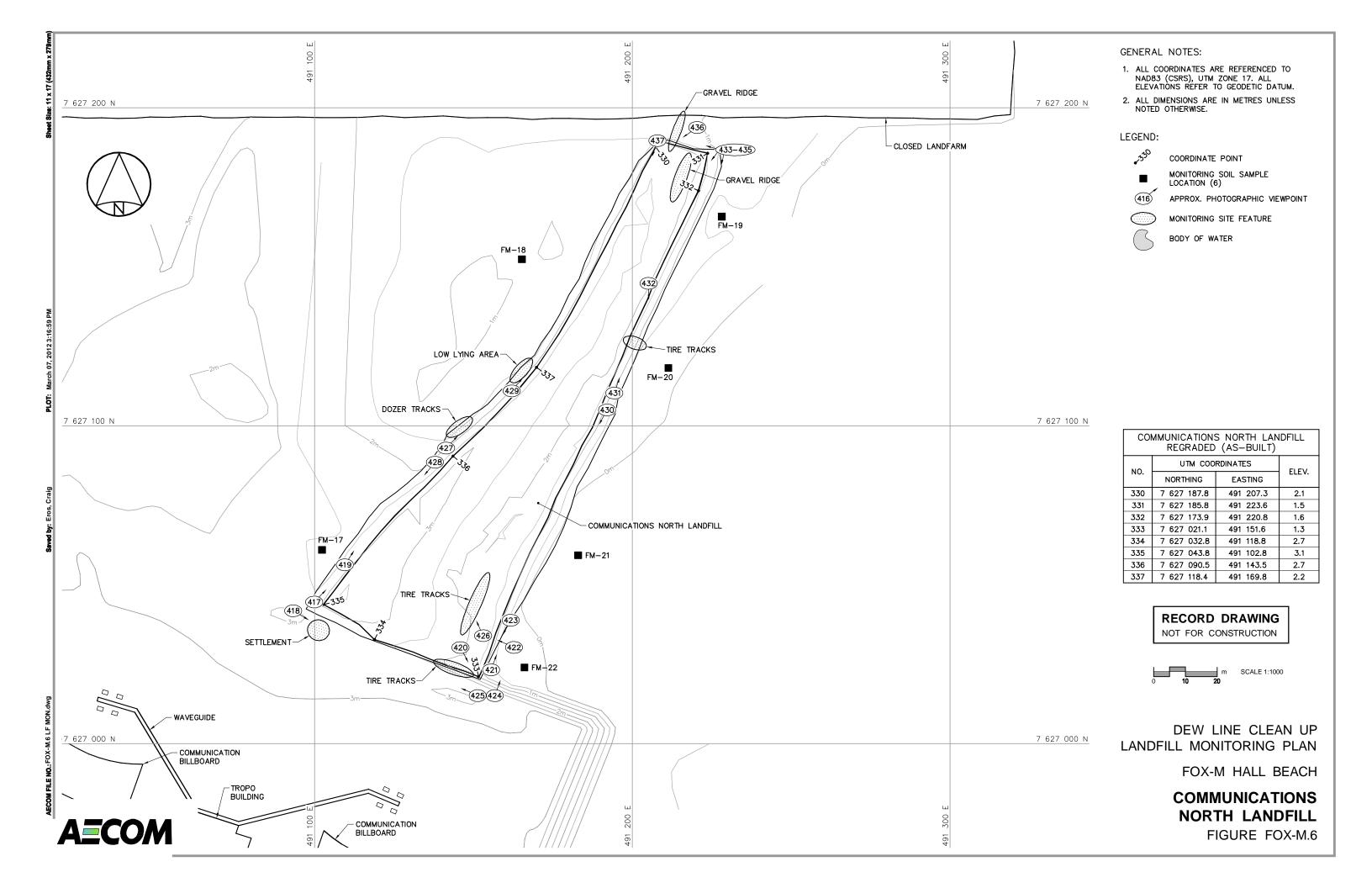
Indications of seepage were not observed.

6.1.8 Debris

Indications of debris were not observed.

6.1.9 Discussion

The two areas of settlement observed are isolated and should be of little consequence to the landfill performing as designed. Tire tracks were observed on the east and west side slopes of the landfill; however the depth of the track marks was negligible. A gravel ridge approximately 0.3 m in height spanning roughly 18 m in length was observed on the top cover in the northwest corner of the landfill. The landfill is considered stable.



6.2 Photographic Record



Photograph 17. Communications North Landfill: Looking NE From the SE Corner of the Landfill (Photo 424)↑



Photograph 18. Communications North Landfill: Settlement on south side slope (Photo 418)↑



Photograph 19. Communications North Landfill: Looking N at Tire Marks in the S Portion of the Landfill (Photo 426)↑



Photograph 20. Communications North Landfill: Gravel ridge on top of landfill (Photo 436). ↑

6.3 Visual Inspection Checklist and Stability Assessment

DEW Line Cleanup: Post-Construction - Landfill Monitoring Visual Inspection Checklist and Preliminary Stability Assessment

Site Name:	FOX-M Hall Beach
Landfill Designation:	Communications North Landfill
Date of Inspection:	15-Aug-11
Inspected By:	David Elwood, M.Sc., P.Eng. (AB)
Report Prepared By:	Shaun Hughes, P.Eng (AB)
Report Reviewed By:	Cathy Corrigan, M.Sc., P.Eng.
The inspector/reporter reporter	resents to the best of their knowledge, the following statement and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or
misstated.	
Signature:	Office of the Control
	ang

	20									
Checklist Item	Present Yes/No	Location (Describe relative to existing monuments/features and relative to landfill design i.e. surface, berms, toe)	Length	Width	Depth	Extent relative to Area of Landfill (%)	Description	Photographic Records Focal length, location, view point & direction (relative to magnetic north) Feature of note Scale	Additional Comments	Severity Rating
Settlement	Yes	A1: South, off toe of landfill A2: western side slope	A1: 6 m A2: 0.6m	A1: 1 m	A1: 500 mm A2: 152 mm	<1% (occasional)	A1: Minimal settlement A2: Minimal settlement	A1: Photo 418 A2: Photo 429	low lying area	Acceptable
Settlement	162	western side slobe	AZ: 0.0111	A2: 0.0 III	AZ: 15Z [[[[]]	(OCCASIONAI)	AZ: Millimai settiement	AZ: P11010 429	low lyllig area	Acceptable
Erosion	No									
ELOZIOTI	INU									
Frost Action	No									
Sloughing and Cracking	No									
Animal Burrows	No									
Vegetation	No									
Staining	No									
Vegetation Stress	No									
Seepage Points	No									
Debris Exposed	No									
Presence/Condition -										
Monitoring Instruments	No									4
							A1:Tracking visible on north, south	A1.Dhatas 420 422		
		A1: Side Slopes					and east side slopes A2: gravel ridge located on top	A1:Photos 420, 422, 426, 429 and 437		
Features of Note	Yes	A2:Top cover				(occasional)	(300mm high)	A2:Photo 436		Acceptable
		•	•	•		·				•
Landfill Performance										Acceptable

7. Communications Northwest Landfill

The landfill is located northwest of the Communications Area and west of the Communications North Landfill. Monitoring requirements for the 2011 monitoring event included a visual inspection of the landfill only.

7.1 Visual Inspection

The visual inspection of the Communications Northwest Landfill was conducted on August 15-16, 2011. The Visual Inspection Checklist/Report has been completed as per the ToR and is included below.

Noted features and photo viewpoints can be found on Figure FOX-M.7.

7.1.1 Settlement

Indications of settlement were not observed.

7.1.2 Erosion

Indications of erosion were not observed.

7.1.3 Frost Action

Indications of frost action were not observed.

7.1.4 Evidence of Burrowing Animals

Indications of burrowing animals were not observed.

7.1.5 Re-establishment of Vegetation

Indications of vegetation were not observed.

7.1.6 Staining

Indications of staining were not observed.

7.1.7 Seepage Points

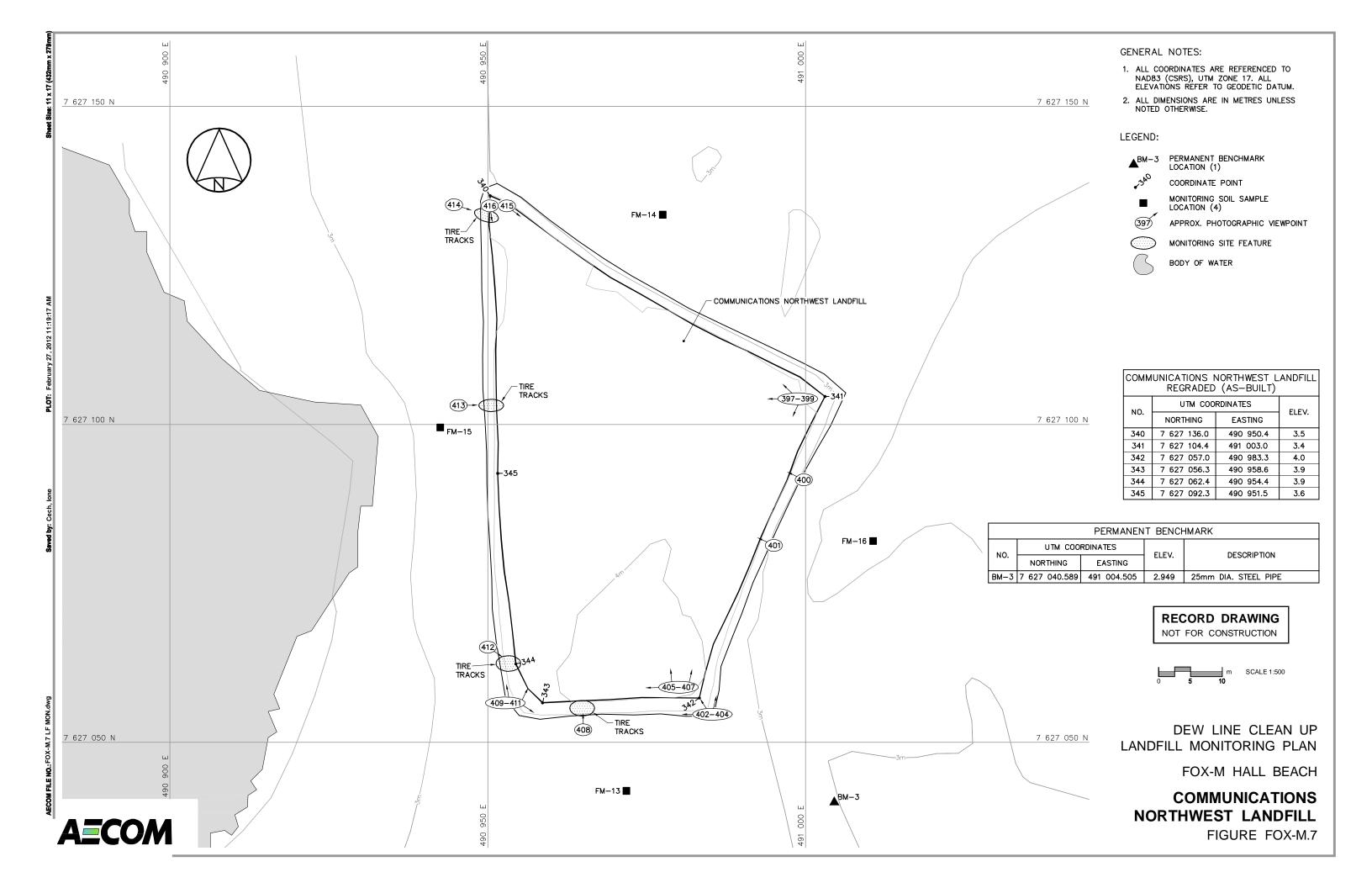
Indications of seeping were not observed.

7.1.8 Debris

Indications of debris were not observed.

7.1.9 Discussion

Tire tracks were observed on the north, south, and east side slopes of the landfill; however the depth of the track marks were negligible. The landfill is considered stable.



7.2 Photographic Record



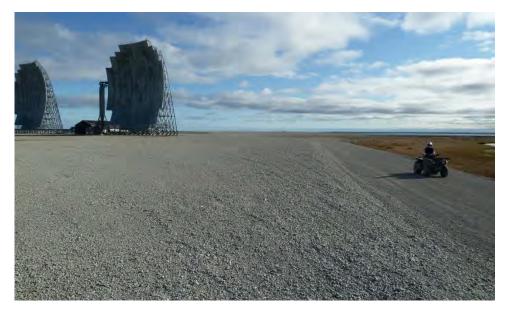
Photograph 21. Communications Northwest Landfill: Looking NW from NE Corner of Landfill (Photo 397)↑



Photograph 22. Communications Northwest Landfill: Looking W from NE Corner of Landfill (Photo 398)↑



Photograph 23. Communications Northwest Landfill: Looking N along W Toe of Landfill (Photo 409)↑



Photograph 24. Communications Northwest Landfill: Looking S from NW Corner of Landfill (Photo 416)↑

7.3 Visual Inspection Checklist and Stability Assessment

DEW Line Cleanup: Post-Construction - Landfill Monitoring Visual Inspection Checklist and Preliminary Stability Assessment

Site Name:	FOX-M Hall Beach
Landfill Designation:	Communications Northwest Landfill
Date of Inspection:	15-Aug-11
Inspected By:	David Elwood, M.Sc., P.Eng. (AB)
Report Prepared By:	Shaun Hughes, P.Eng (AB)
Report Reviewed By:	Cathy Corrigan, M.Sc., P.Eng.
The inspector/reporter rep	presents to the best of their knowledge, the following statement and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or
misstated.	
Signature:	
	ay s

Checklist Item	Present Yes/No	Location (Describe relative to existing monuments/features and relative to landfill design i.e. surface, berms, toe)	Length	Width	Depth	Extent relative to Area of Landfill (%)	Description	Photographic Records Focal length, location, view point & direction (relative to magnetic north) Feature of note Scale	Additional Comments	Severity Rating
Settlement	Yes	Area 1: southern side slope	A1: 8m	A1:0.5m	A1: 250mm	<1%	A1: minimal settlement	A1: Photo 408		Acceptable
Erosion	No									·
Frost Action	No									
Sloughing and Cracking	No									
Animal Burrows	No									
Vegetation	No									
Staining	No									
Vegetation Stress	No									
Seepage Points	No									
Debris Exposed	No									
Presence/Condition - Monitoring Instruments	No									
Features of Note	Yes	Side slopes				(occasional)	Tracking visible on west and east side slopes	A1: Photos 400, 401, 408, 412, 413 and 414 A2:Photos 400, 401, 408, 412, 413 and 414		Acceptable
Landfill Performance										Acceptable

8. Tier II Disposal Facility

The landfill is located south of the Communications Area. Monitoring requirements for 2011 included a visual inspection of the landfill, soil and groundwater sampling, and downloading of thermistor data. The Visual Inspection Checklist/Report has been completed as per the ToR and is included below. The results of soil sample analysis are provided in Tables 8.1 and 8.2 below, while groundwater sample results are provided in Tables 8.3 and 8.4. The thermistor data has been forwarded on separately from this report. Thermistor and monitoring wells inspection logs are provided in sections 8.6 and 8.7 below.

8.1 Visual Inspection

The visual inspection of the Tier II Disposal Facility was conducted on August 15-16, 2011. Noted features and photo viewpoints can be found on Figure FOX-M.8.

8.1.1 Settlement

Settlement was observed along the western side slope of the landfill and is approximately five m in length by 0.7m in width.

8.1.2 Erosion

Indications of erosion were not observed.

8.1.3 Frost Action

Indications of frost action were not observed.

8.1.4 Evidence of Burrowing Animals

Indications of burrowing animals were not observed.

8.1.5 Re-establishment of Vegetation

Indications of vegetation were not observed.

8.1.6 Staining

Indications of staining were not observed.

8.1.7 Seepage Points

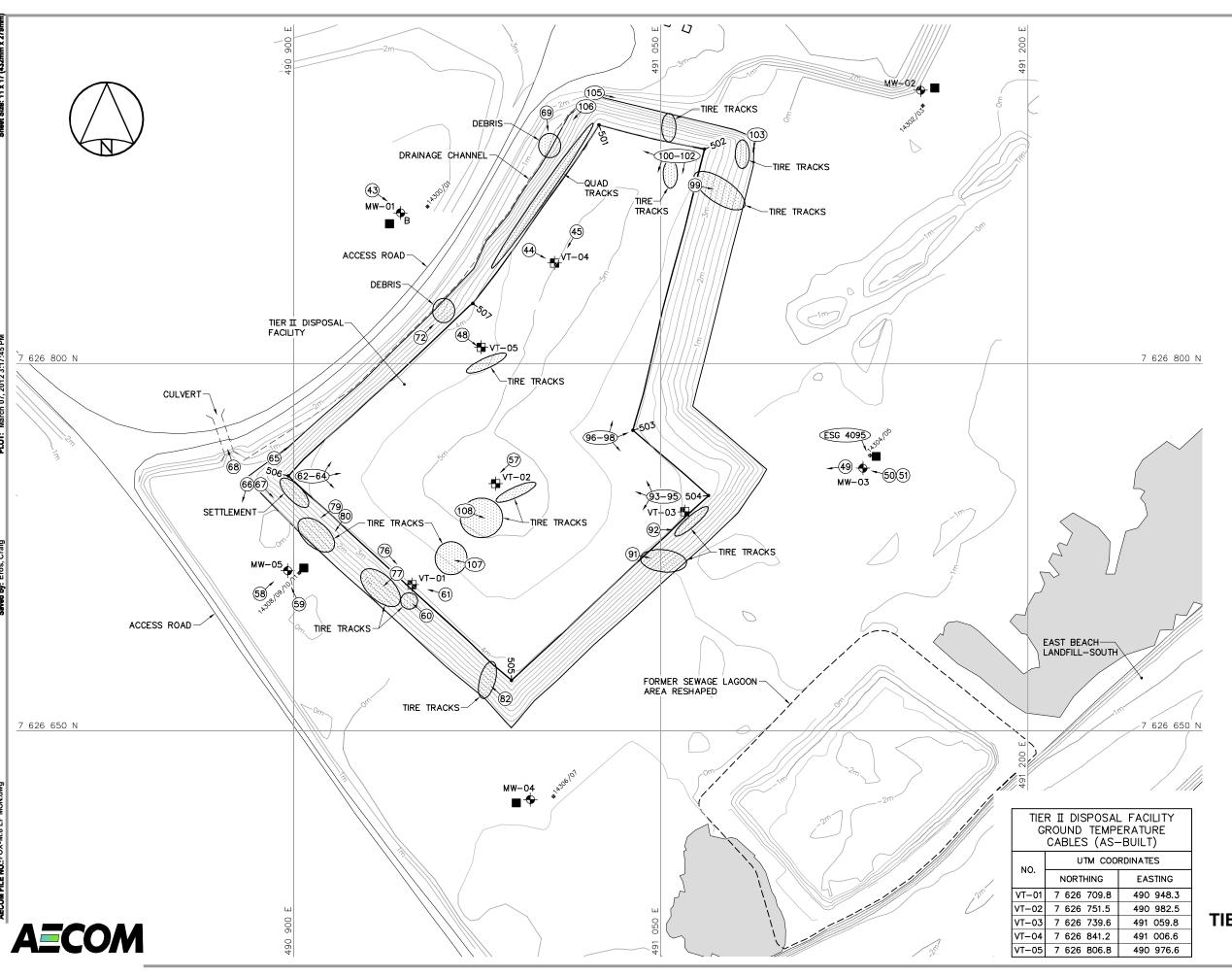
Indications of seepage were not observed.

8.1.8 Debris

A small amount of geotextile was noted near VT-05 and a piece of a metal sign was noted near the northeast corner. They are not thought to have originated from the landfill.

8.1.9 Discussion

The area of settlement should be of little consequence to the landfill performing as designed. Tire tracks were observed on both the side slopes and top cover of the landfill; however the depth of the track marks were negligible. The landfill is considered stable.



GENERAL NOTES:

- ALL COORDINATES ARE REFERENCED TO NAD83 (CSRS), UTM ZONE 17. ALL ELEVATIONS REFER TO GEODETIC DATUM.
- 2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.

LEGEND:

COORDINATE POINT

MONITORING SOIL SAMPLE LOCATION (5)

SOIL SAMPLE TAG LOCATION

 $igoplus^{
m MW-02}$ monitoring well location (4)

→ MW-01 BACKGROUND MONITORING WELL LOCATION (1)

₩VT-01 GROUND TEMPERATURE CABLE LOCATION (5)

APPROX. PHOTOGRAPHIC VIEWPOINT

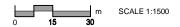
MONITORING SITE FEATURE

BODY OF WATER

TIER	I DISPOSAL	FACILITY (AS-	-BUILT)
NO.	итм соо	RDINATES	ELEV.
NO.	NORTHING	EASTING	LEEV.
501	7 626 897.6	491 024.7	4.5
502	7 626 887.7	491 067.9	4.4
503	7 626 772.9	491 038.6	4.0
504	7 626 746.2	491 069.5	4.0
505	7 626 670.7	490 989.0	4.0
506	7 626 754.2	490 897.8	3.9
507	7 626 824.7	490 973.1	4.0

М	TIER II DISPOSAL FACILITY MONITORING WELLS (AS-BUILT)						
NO.	UTM COO	RDINATES	ELEV.				
100.	NORTHING	EASTING	ELEV.				
MW-01	7 626 861.7	490 943.6	1.8				
MW-02	7 626 911.8	491 156.2	0.4				
MW-03	7 626 757.4	491 132.6	-0.5				
MW-04	7 626 622.0	490 996.7	0.2				
MW-05	7 626 715.5	490 897.5	0.6				





DEW LINE CLEAN UP LANDFILL MONITORING PLAN

FOX-M HALL BEACH

TIER II DISPOSAL FACILITY
FIGURE FOX-M.8

8.2 Photographic Record



Photograph 25. Looking SW from N portion of landfill. VT-4 and VT-5 visible (Photo 045). ↑



Photograph 26. Soil sample at MW-3 (ESG Photo 4095). ↑



Photograph 27. Debris at Tier II Facility (Photo 069).↑



Photograph 28. Looking down slope at tire tracks on NE slope (Photo 099). ↑



Photograph 29. Debris at Tier II Facility (Photo 072).↑

8.3 Visual Inspection Checklist and Stability Assessment

DEW Line Cleanup: Post-Construction - Landfill Monitoring Visual Inspection Checklist and Preliminary Stability Assessment

Site Name:	FOX-M Hall Beach
Landfill Designation:	Tier II Disposal Facility
Date of Inspection:	15-Aug-11
Inspected By:	David Elwood, M.Sc., P.Eng. (AB)
Report Prepared By:	Shaun Hughes, P.Eng (AB)
Report Reviewed By:	Cathy Corrigan, M.Sc., P.Eng.
The inspector/reporter rep misstated.	oresents to the best of their knowledge, the following statement and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or
Signature:	

Congey Photographic Records Focal length, location, Location (Describe relative to Extent view point & direction existing monuments/features and relative to (relative to magnetic relative to landfill design i.e. Area of north) Feature of note Additional Present Checklist Item Yes/No surface, berms, toe) Length Width Depth Landfill (%) Description Scale Comments Severity Rating Settlement No Western side slope 7m 0.7m Isolated Minor settlement Acceptable Erosion No Frost Action No Sloughing and Cracking no Animal Burrows No Vegetation No No Staining Vegetation Stress No Seepage Points No Debris did not Located on side slope near VT-05; Geotextile within cap near VT-05; Photos 72 and 69 originate within Debris Exposed near control point 501 abandoned sign and post (respectively) landfill Acceptable No Presence/Condition -Monitoring Instruments No Deepest track Track marks at various locations on the Photos 79, 80, 77, 82, mark estimated at 30mm. Features of Note Yes Side slopes and top cover landfill with varying depths. 99, 91 and 103 Acceptable Landfill Performance Acceptable

8.4 Soil Sample Analytical Data

Results and analysis for soil sample analytical results are included in Table 8.1 and 8.2 below. Lab Results can be found on the CD included with this report.

Table 8.1: Tier II Disposal Facility – Soil Sample Analytical Results

Sample #	Location	Depth (cm)	Cu [mg/kg]	Ni [mg/kg]	Co [mg/kg]	Cd [mg/kg]	Pb [mg/kg]	Zn [mg/kg]	Cr [mg/kg]	As [mg/kg]	Hg [mg/kg]	PCBs [mg/kg]	F1 C ₈ -C ₁₀ [mg/kg]	F2 C ₁₀ -C ₁₆ [mg/kg]	F3 C ₁₆ -C ₃₄ [mg/kg]	TPH C ₆ -C ₃₄ [mg/kg]
11-14300	MW-1	0-10	6.7	7.2	<5.0	<1.0	<10	<15	<20	2.2	<0.10	<0.050	<10	<4.0	11	11
11-14301	MW-1	30-40	3.4	6.8	<5.0	<1.0	<10	18	<20	6.5	<0.10	<0.050	<10	<4.0	<9.0	ND
11-14302	MW-2	0-10	4.7	7.4	<5.0	<1.0	<10	16	<20	2.4	<0.10	<0.050	<10	7.3	<9.0	7.3
11-14303	MW-2	30-40	5.5	7.5	<5.0	<1.0	<10	<15	<20	1.7	<0.10	<0.050	<10	11	12	23
11-14304	MW-3	0-10	5	10	<5.0	<1.0	<10	<15	<20	4.9	<0.10	<0.050	<10	<4.0	<9.0	ND
11-14305	MW-3	30-40	5.3	10	<5.0	<1.0	<10	16	<20	4.1	<0.10	<0.050	<10	<4.0	<9.0	ND
11-14306	MW-4	0-10	4	7.3	<5.0	<1.0	<10	<15	<20	2.5	<0.10	<0.050	<10	4.4	<9.0	4.4
11-14307	MW-4	30-40	3.7	6.7	<5.0	<1.0	<10	<15	<20	2.6	<0.10	<0.050	<10	<4.0	9	9
11-14308/9*	MW-5	0-10	4.5	11	<5.0	<1.0	<10	17	<20	2.5	<0.10	<0.050	<10	<4.0	<9.0	ND
11-14310/11*	MW-5	30-40	3.3	8.1	<5.0	<1.0	<10	16	<20	1.9	<0.10	<0.050	<10	<4.0	<9.0	ND
*Field duplica	tes. Averag	je of analy	tical resul	ts shown	in data ta	ble										
TPH: Sum of t	he concen	trations of	F1, F2, ar	nd F3. Cor	ncentratio	ns below	method o	detection	limits are	excluded	from the	total				
ND: Not Detec	ted															

Table 8.2: Tier II Disposal Facility – Soil Sample Analysis

Parameter	2011
Copper	Detectable concentrations ranged between 3.3 - 6.7 milligrams per kilogram (mg/kg) with detectable concentrations at all sample locations and a mean concentration of 4.6 mg/kg. The highest concentration was observed at surface at MW-1, whereas the lowest concentration was observed at depth at MW-5.
Nickel	Detectable concentrations ranged between 6.7 - 11 mg/kg with detectable concentrations at all sample locations and a mean concentration of 8.2 mg/kg. The highest concentration was observed at surface at MW-5, whereas the lowest concentration was observed at depth at MW-4.
Cobalt	All reported concentrations were less than the method detection limit. (5 mg/kg)
Cadmium	All reported concentrations were less than the method detection limit. (1 mg/kg)
Lead	All reported concentrations were less than the method detection limit. (10 mg/kg)
Zinc	Concentrations ranged between 16 – 18 mg/kg with detectable concentrations in 5 of 10 sample locations and a mean concentration of 17 mg/kg. The highest concentrations were observed at depth at MW-1, whereas the lowest concentrations were observed at surface at MW-2 and at depth at MW-5.
Chromium	All reported concentrations were less than the method detection limit (20 mg/kg)
Arsenic	Detectable concentrations ranged between 1.7 - 6.5 mg/kg with detectable concentrations at all sample locations and a mean concentration of 3.1 mg/kg. The highest concentration was observed at depth at MW-2, whereas the lowest concentration was observed at depth at MW-1.
Mercury	All reported concentrations were less than the method detection limit. (0.10 mg/kg)
PCBs	All reported concentrations were less than the method detection limit. (0.050 mg/kg)
TPH	Concentrations ranged between <4-23 mg/kg with detectable Fraction F2 concentrations noted at three sample locations including surface and depth samples at MW-2 and depth sample at MW-4, and detectable Fraction F3 concentrations noted at three sample locations including the surface sample at MW-1, and depth samples at MW-2 and MW-5.

8.5 Groundwater Sample Analytical Data

Table 8.3: Tier II Disposal Facility – Groundwater Analysis

Sample #	Location	Cu [mg/L]	Ni [mg/L]	Co [mg/L]	Cd [mg/L]	Pb [mg/L]	Zn [mg/L]	Cr [mg/L]	As [mg/L]	Hg [mg/L]	PCBs [mg/L]	F1 C ₈ -C ₁₀ [mg/L]	F2 C ₁₀ -C ₁₆ [mg/L]	F3 C ₁₆ -C ₃₄ [mg/L]	TPH C ₆ -C ₃₄ [mg/L]
11-14345/46	MW-1	<0.0050	0.015	<0.0030	<0.0010	<0.010	<0.010	0.058	<0.0030	<0.00040	<0.0030	<0.050	<0.50	<1.0	ND
11-14347	MW-2	<0.0050	0.018	<0.0030	<0.0010	<0.010	0.24	0.056	<0.0030	<0.00040	<0.0030	<0.050	<0.50	<1.0	ND
11-14348	MW-3	0.0072	0.10	<0.0030	<0.0010	<0.010	<0.010	0.26	<0.0030	<0.00040	<0.0030	<0.050	<0.50	<1.0	ND
11-14349	MW-4	0.0059	0.0073	<0.0030	<0.0010	<0.010	<0.010	0.058	<0.0030	<0.00040	<0.0030	<0.050	<0.50	<1.0	ND
11-14350	MW-5	0.0056	0.017	<0.0030	<0.0010	<0.010	<0.010	0.22	<0.0030	<0.00040	<0.0030	<0.050	<0.50	<1.0	ND
*Field duplica	tes. Averag	e of analyti	ical results	shown in	data table										
PCB detection	n limit incre	ased to 0.0	030 mg/L ir	n 20 11											
TPH: Sum of t	he concent	rations of I	F1, F2, and	F3. Conce	ntrations b	elow meth	od detecti	on limits	are exclud	ed from the	total				
ND: Not Detec	ted														

Table 8.4: Tier II Disposal Facility – Groundwater Evaluation

Parameter	2011
Copper	Detectable concentrations ranged between 0.0056 - 0.0072 milligrams per litre (mg/L) with the highest concentration noted at MW-3 (0.0072 mg/L) and lowest concentrations noted at MW-1 and MW-5 (0.0056 mg/L).
Nickel	Detectable concentrations ranged between 0.0073 - 0.10 mg/kg with detectable concentrations at all well locations with the highest concentration noted at MW-3 (0.10 mg/L) and lowest concentration noted at MW-4 (0.0073 mg/L).
Cobalt	All reported concentrations were less than the method detection limit (0.0030 mg/L)
Cadmium	All reported concentrations were less than the method detection limit (0.0010 mg/L)
Lead	All reported concentrations were less than the method detection limit (0.010 mg/L)
Zinc	Detectable concentrations were only noted in MW-2 (0.24 mg/L).
Chromium	Detectable concentrations ranged between 0.056 - 0.26 mg/L with detectable concentrations at all well locations with the highest concentration noted at MW-3 (0.26 mg/L) and lowest concentration noted at MW-2 (0.056 mg/L).
Arsenic	All reported concentrations were less than the method detection limit (0.0030 mg/L)
Mercury	All reported concentrations were less than the method detection limit (0.0040 mg/L)
PCBs	All reported concentrations were less than the method detection limit (0.0030 mg/L)
TPH	All reported concentrations were less than the method detection limit.

8.6 Monitoring Well Sampling/Inspection Logs

	Site Name:					<u> </u>	
I	Date of Sampling Event:	Saturday, August 13, 20	11				
		Tom Partridge, Alaina L	Leslie				
	Monitoring Well ID:	MW-1					
	Facility:	Tier II Disposal Facility					
		Wat	er Sample Me	easured Data			
	Condition of Well:						
	Procedure/Equipment:	Tape Measure		Pro	ocedure/Equipment:	waterra tubing / interface meter	
Well he	eight above ground (m)=			Depth to water surface (m)= 1.18			
	Diameter of well (m)=				ic water level* (m)=		
	oth of installation* (m)=			De	epth to bottom (m)=	2.00	
Length screened section (m)= 1.50				Free produ	ct thickness (mm)=	N/A	
Dept	h to top of screen* (m)=	0.50					
	Calculation	 1S			Notes		
Depth of water (m)= 0.82				Evi	dence of sludge etc:	N/A	
We	ell volume of water (L)=			Evidence of freezing/si	iltation: (compare to	freezing	
	` '			Č	installation record)	C .	
Length scree	en collecting water (m)=	0.82					
••		Develo	pment/Purgii	ng Information			
	Equipment:	waterra tubing / interfac					
		<u> </u>					
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (uS/cm)	Turbidity (NTU)	Description of water	
/13/2011 (10:00 AM)	1.0	10.0	8.3	1400	22		
3/13/2011 (10:10 AM)	1.0	<u> </u>		1400	22	cle	
13/2011 (10.10 AWI)	1.0	9.2	8.2	1200	51	· ·	
13/2011 (10.10 AIVI)	Water Samp		8.2	7.7		cl	
, , ,	Water Sampl	ling		1200	51 Soil Sampli	cling	
	Water Sampl	ling Saturday, August 13, 20		1200 Date	51 Soil Sampli	cling Saturday, August 13, 2011	
	Water Sample Date and time collected:	ling Saturday, August 13, 20		1200 Date	51 Soil Sampli	cling Saturday, August 13, 2011	
	Water Sample Date and time collected:	ling Saturday, August 13, 20 11-14345, 11-14346		1200 Date	51 Soil Sampli	cl. Saturday, August 13, 2011 11-14300 11-14301 (30 - 40 cm depth)	
	Water Sampl Date and time collected: Sample Number - Water:	ling Saturday, August 13, 20 11-14345, 11-14346		1200 Date	Soil Sampli and time collected: nple Number - Soil:	cl. Saturday, August 13, 2011 11-14300 11-14301 (30 - 40 cm depth)	
	Water Sampl Date and time collected: Sample Number - Water:	ling Saturday, August 13, 20 11-14345, 11-14346 1L HDPE		1200 Date	Soil Sampli and time collected: nple Number - Soil:	close Saturday, August 13, 2011 11-14300 11-14301 (30 - 40 cm depth) 125 mL jars	
	Water Sampl Date and time collected: Sample Number - Water:	ling Saturday, August 13, 20 11-14345, 11-14346 IL HDPE 1L Teflon 250 mL Amber glass		1200 Date Sar	Soil Sampli and time collected: nple Number - Soil: Sample containers:	close Saturday, August 13, 2011 11-14300 11-14301 (30 - 40 cm depth) 125 mL jars	
	Water Sampl Date and time collected: Sample Number - Water: Sample containers:	ling Saturday, August 13, 20 11-14345, 11-14346 IL HDPE 1L Teflon 250 mL Amber glass		1200 Date Sar	Soil Sampli and time collected: nple Number - Soil: Sample containers:	cl ing Saturday, August 13, 2011 11-14300 11-14301 (30 - 40 cm depth) 125 mL jars whirlpaks	
	Water Sampl Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment:	ling Saturday, August 13, 20 11-14345, 11-14346 IL HDPE IL Teflon 250 mL Amber glass Waterra tubing		1200 Date Sar	Soil Sampli and time collected: mple Number - Soil: Sample containers:	Saturday, August 13, 2011 11-14300 11-14301 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops	
	Water Sampl Date and time collected: Sample Number - Water: Sample containers:	ling Saturday, August 13, 20 11-14345, 11-14346 IL HDPE IL Teflon 250 mL Amber glass Waterra tubing		1200 Date Sar	Soil Sampli and time collected: mple Number - Soil: Sample containers:	cl ing Saturday, August 13, 2011 11-14300 11-14301 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops low lying vegetation, moderate	
	Water Sampl Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment:	ling Saturday, August 13, 20 11-14345, 11-14346 IL HDPE IL Teflon 250 mL Amber glass Waterra tubing		1200 Date Sar	Soil Sampli and time collected: mple Number - Soil: Sample containers:	Ing Saturday, August 13, 2011 11-14300 11-14301 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops low lying vegetation, moderate organics, dark brown soil / grave	
	Water Sampl Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description:	ling Saturday, August 13, 20 11-14345, 11-14346 IL HDPE IL Teflon 250 mL Amber glass Waterra tubing clear		1200 Date Sar	Soil Samplist and time collected: uple Number - Soil: Sample containers: occedure/Equipment: Soil description:	Saturday, August 13, 2011 11-14300 11-14301 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops low lying vegetation, moderate organics, dark brown soil / grave present	
	Water Sampl Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N)	ling Saturday, August 13, 20 11-14345, 11-14346 IL HDPE IL Teflon 250 mL Amber glass Waterra tubing clear		1200 Date Sar	Soil Samplist and time collected: uple Number - Soil: Sample containers: occedure/Equipment: Soil description:	Saturday, August 13, 2011 11-14300 11-14301 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops low lying vegetation, moderate organics, dark brown soil / grave present 490945	
	Water Sampl Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description:	ling Saturday, August 13, 20 11-14345, 11-14346 IL HDPE IL Teflon 250 mL Amber glass Waterra tubing clear		1200 Date Sar	Soil Samplist and time collected: uple Number - Soil: Sample containers: occedure/Equipment: Soil description:	Saturday, August 13, 2011 11-14300 11-14301 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops low lying vegetation, moderate organics, dark brown soil / grave present	
S	Water Sampl Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	ling Saturday, August 13, 20 11-14345, 11-14346 IL HDPE IL Teflon 250 mL Amber glass Waterra tubing clear N N Methanol / Distilled Wa	011	1200 Date Sar	Soil Sampli and time collected: nple Number - Soil: Sample containers: Occedure/Equipment: Soil description:	saturday, August 13, 2011 11-14300 11-14301 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops low lying vegetation, moderate organics, dark brown soil / grave present 490945 7626864	
S	Water Sampl Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N) Decontamination: (Y/N)	ling Saturday, August 13, 20 11-14345, 11-14346 1L HDPE 1L Teflon 250 mL Amber glass Waterra tubing clear N N Methanol / Distilled Wa Distilled Water	011	Date Sar	Soil Sampli and time collected: nple Number - Soil: Sample containers: Socil description: GPS at Decontamination: (Y/N)	Saturday, August 13, 2011 11-14300 11-14301 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops low lying vegetation, moderate organics, dark brown soil / grave present 490945 7626864 Y (shovel rinse)	
S	Water Sampl Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	ling Saturday, August 13, 20 11-14345, 11-14346 1L HDPE 1L Teflon 250 mL Amber glass Waterra tubing clear N N Methanol / Distilled Wa Distilled Water	011	Date Sar	Soil Sampli and time collected: nple Number - Soil: Sample containers: Occedure/Equipment: Soil description: GPS at Decontamination:	Ing Saturday, August 13, 2011 11-14300 11-14301 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops low lying vegetation, moderate organics, dark brown soil / grave present 490945 7626864 Y (shovel rinse)	

n/a=not applicable
*From ground surface. All other measurements are assumed to be from the top of the casing.

Table R-4: Monitoring Well Sampling Log. MW-2

THORE D. T. MIUIIIU	ring Well Sampling	g Llug- 1v1 vv -2					
	Site Name:	FOX-M					
Ι	Date of Sampling Event:	Saturday, August 13	3, 2011				
	Names of Samplers:	Tom Partridge, Alai	na Leslie				
	Monitoring Well ID:	MW-2					
	Facility:	Tier II Disposal Fac	ility				
	*						
		V	Vater Sample I	Measured Data			
	Condition of Well:	Good					
	Procedure/Equipment:	re/Equipment: Tape Measure Procedure/Equipment:				waterra tubing / interface met	er
Well he	ight above ground (m)=	0.48		Depth to	water surface (m)=	1.1	
	Diameter of well (m)=	0.040		Stati	c water level* (m)=	0.62	
Dep	oth of installation* (m)=	3.0		De	pth to bottom (m)=	2.1	
Lengt	h screened section (m)=	1.5		Free produ	ct thickness (mm)=	N/A	
Deptl	n to top of screen* (m)=	0.54					
	Calculations	S			Notes		
	Depth of water (m)=	1.0		Evic	dence of sludge etc:	N/A	
We	ll volume of water (L)=	1.3		Evidence of freezing/si	Itation: (compare to	freezing	
				_	installation record)		
Length scree	n collecting water (m)=	1.00					
Dengar serve	ir concerning water (iii)		elonment/Pur	ging Information			
	Equipment:	waterra tubing / inte	rface meter				
	• •		Trace meter				
			Trace meter				
Date & Time	Volume Removed (I.)		рН	Conductivity (uS/cm)	Turbidity (NTU)	Description of water	
Date & Time 8/13/2011 (10:50 AM)	Volume Removed (L)	Temperature (°C)	pН	Conductivity (uS/cm)	Turbidity (NTU)	Description of water	clea
Date & Time 8/13/2011 (10:50 AM) 8/13/2011 (11:00 AM)	1.0			Conductivity (uS/cm) 1200 1100	11		
8/13/2011 (10:50 AM)	1.0 1.0	Temperature (°C) 8.6 8.5	pH 8.2	1200	11 15		
8/13/2011 (10:50 AM) 8/13/2011 (11:00 AM)	1.0 1.0 Water Sampli	Temperature (°C) 8.6 8.5	pH 8.2 7.8	1200 1100	11 15 Soil Samp	ling	
8/13/2011 (10:50 AM) 8/13/2011 (11:00 AM)	1.0 1.0 Water Sampli Date and time collected:	Temperature (°C) 8.6 8.5 ng Saturday, August 13	pH 8.2 7.8	1200 1100 Date	11 15 Soil Samp and time collected:	ling Saturday, August 13, 2011	
8/13/2011 (10:50 AM) 8/13/2011 (11:00 AM)	1.0 1.0 Water Sampli	Temperature (°C) 8.6 8.5 ng Saturday, August 13	pH 8.2 7.8	1200 1100 Date	11 15 Soil Samp	ling Saturday, August 13, 2011 11-14302	
8/13/2011 (10:50 AM) 8/13/2011 (11:00 AM)	1.0 1.0 Water Sampli Date and time collected: ample Number - Water:	Temperature (°C)	pH 8.2 7.8	1200 1100 Date San	11 Soil Samp and time collected: pple Number - Soil:	ling Saturday, August 13, 2011 11-14302 11-14303 (30 - 40 cm depth)	
8/13/2011 (10:50 AM) 8/13/2011 (11:00 AM)	1.0 1.0 Water Sampli Date and time collected:	Temperature (°C) 8.6 8.5 ng Saturday, August 13 11-14347 1L HDPE	pH 8.2 7.8	1200 1100 Date San	11 15 Soil Samp and time collected:	ling Saturday, August 13, 2011 11-14302 11-14303 (30 - 40 cm depth) 125 mL jars	
8/13/2011 (10:50 AM) 8/13/2011 (11:00 AM)	1.0 1.0 Water Sampli Date and time collected: ample Number - Water:	Temperature (°C) 8.6 8.5 ng Saturday, August 13 11-14347 IL HDPE IL Teflon	pH 8.2 7.8 3, 2011	1200 1100 Date San	11 Soil Samp and time collected: pple Number - Soil:	ling Saturday, August 13, 2011 11-14302 11-14303 (30 - 40 cm depth)	
8/13/2011 (10:50 AM) 8/13/2011 (11:00 AM)	1.0 1.0 Water Sampli Date and time collected: ample Number - Water: Sample containers:	Temperature (°C) 8.6 8.5 ng Saturday, August 13 11-14347 IL HDPE IL Teflon 250mL Amber glass	pH 8.2 7.8 3, 2011	1200 1100 Date San	Soil Samp and time collected: apple Number - Soil: Sample containers:	ling Saturday, August 13, 2011 11-14302 11-14303 (30 - 40 cm depth) 125 mL jars whirlpaks	
8/13/2011 (10:50 AM) 8/13/2011 (11:00 AM)	1.0 1.0 Water Sampli Date and time collected: ample Number - Water:	Temperature (°C) 8.6 8.5 ng Saturday, August 13 11-14347 IL HDPE IL Teflon 250mL Amber glass	pH 8.2 7.8 3, 2011	1200 1100 Date San	Soil Samp and time collected: apple Number - Soil: Sample containers:	ling Saturday, August 13, 2011 11-14302 11-14303 (30 - 40 cm depth) 125 mL jars	
8/13/2011 (10:50 AM) 8/13/2011 (11:00 AM)	1.0 1.0 Water Sampli Date and time collected: ample Number - Water: Sample containers: Procedure/Equipment:	Temperature (°C) 8.6 8.5 ng Saturday, August 13 11-14347 IL HDPE IL Teflon 250mL Amber glass Waterra tubing	pH 8.2 7.8 3, 2011	1200 1100 Date San	Soil Samp and time collected: nple Number - Soil: Sample containers: occdure/Equipment:	ling Saturday, August 13, 2011 11-14302 11-14303 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops	
8/13/2011 (10:50 AM) 8/13/2011 (11:00 AM)	1.0 1.0 Water Sampli Date and time collected: ample Number - Water: Sample containers:	Temperature (°C) 8.6 8.5 ng Saturday, August 13 11-14347 IL HDPE IL Teflon 250mL Amber glass Waterra tubing	pH 8.2 7.8 3, 2011	1200 1100 Date San	Soil Samp and time collected: nple Number - Soil: Sample containers: occdure/Equipment:	ling Saturday, August 13, 2011 11-14302 11-14303 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops marsh area, high amount of	
8/13/2011 (10:50 AM) 8/13/2011 (11:00 AM)	1.0 Water Sampli Date and time collected: ample Number - Water: Sample containers: Procedure/Equipment: Water description:	Temperature (°C) 8.6 8.5 ng Saturday, August 13 11-14347 IL HDPE IL Teflon 250mL Amber glass Waterra tubing	pH 8.2 7.8 3, 2011	1200 1100 Date San	Soil Samp and time collected: nple Number - Soil: Sample containers: ocedure/Equipment:	ling Saturday, August 13, 2011 11-14302 11-14303 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops	
8/13/2011 (10:50 AM) 8/13/2011 (11:00 AM)	1.0 1.0 Water Sampli Date and time collected: ample Number - Water: Sample containers: Procedure/Equipment:	Temperature (°C) 8.6 8.5 ng Saturday, August 13 11-14347 1L HDPE 1L Teflon 250mL Amber glass Waterra tubing clear	pH 8.2 7.8 3, 2011	1200 1100 Date San	Soil Samp and time collected: nple Number - Soil: Sample containers: ocedure/Equipment:	ling Saturday, August 13, 2011 11-14302 11-14303 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops marsh area, high amount of organics, clay present	
8/13/2011 (10:50 AM) 8/13/2011 (11:00 AM)	1.0 Water Sampli Date and time collected: ample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	Temperature (°C) 8.6 8.5 ng Saturday, August 13 11-14347 IL HDPE 1L Teflon 250mL Amber glass Waterra tubing clear N N	pH 8.2 7.8 3, 2011	Date San	Soil Samp and time collected: nple Number - Soil: Sample containers: occdure/Equipment: Soil description: GPS	ling Saturday, August 13, 2011 11-14302 11-14303 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops marsh area, high amount of organics, clay present 491159 7626913	
8/13/2011 (10:50 AM) 8/13/2011 (11:00 AM)	1.0 Water Sampli Date and time collected: ample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N)	Temperature (°C) 8.6 8.5 ng Saturday, August 13 11-14347 IL HDPE 1L Teflon 250mL Amber glass Waterra tubing clear N N Methanol / Distilled	pH 8.2 7.8 3, 2011	1200 1100 Date San	Soil Samp and time collected: nple Number - Soil: Sample containers: occdure/Equipment: GPS at Decontamination:	ling Saturday, August 13, 2011 11-14302 11-14303 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops marsh area, high amount of organics, clay present 491159 7626913	
8/13/2011 (10:50 AM) 8/13/2011 (11:00 AM)	1.0 1.0 Water Sampli Date and time collected: ample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	Temperature (°C) 8.6 8.5 ng Saturday, August 13 11-14347 IL HDPE IL Teflon 250mL Amber glass Waterra tubing clear N Methanol / Distilled Distilled Water	pH 8.2 7.8 3, 2011	Date San	Soil Samp and time collected: nple Number - Soil: Sample containers: ocedure/Equipment: Soil description: GPS at Decontamination: (Y/N)	ling Saturday, August 13, 2011 11-14302 11-14303 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops marsh area, high amount of organics, clay present 491159 7626913 Y (shovel rinse)	clea
8/13/2011 (10:50 AM) 8/13/2011 (11:00 AM)	1.0 Water Sampli Date and time collected: ample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	Temperature (°C) 8.6 8.5 ng Saturday, August 13 11-14347 IL HDPE IL Teflon 250mL Amber glass Waterra tubing clear N Methanol / Distilled Distilled Water 3	pH 8.2 7.8 3, 2011	Date San	Soil Samp and time collected: nple Number - Soil: Sample containers: occdure/Equipment: GPS at Decontamination:	ling Saturday, August 13, 2011 11-14302 11-14303 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops marsh area, high amount of organics, clay present 491159 7626913 Y (shovel rinse)	

n/a=not applicable
*From ground surface. All other measurements are assumed to be from the top of the casing.

Table R-5: Monitoring Well Sampling Log- MW-3

Table B-5: Monitor	ing Well Sampling	Log- MW-3					
	Site Name:	FOX-M					
I	Date of Sampling Event:	Saturday, August 13,	2011				
	Names of Samplers:	Tom Partridge, Alain	a Leslie				
	Monitoring Well ID:	MW-3					
		Tier II Disposal Facil	ity				
		W	ater Sample N	Measured Data			
	Condition of Well:	Good					
	Procedure/Equipment:	Tape Measure		Pro	cedure/Equipment:	waterra tubing / interface meter	
Well he	ight above ground (m)=	0.52			water surface (m)=		
	Diameter of well (m)=	0.040		Stati	c water level* (m)=	0.53	
Der	oth of installation* (m)=	3.0			epth to bottom (m)=		
Lengt	h screened section (m)=	1.5		Free produ	ct thickness (mm)=	N/A	
	h to top of screen* (m)=			•	` `	1	
	* ` ` ` `						
	Calculations				Notes		
	Depth of water (m)=	1.11		Evi	dence of sludge etc:	N/A	
We	ell volume of water (L)=			Evidence of freezing/si			
	` '			Ü	installation record)	2	
Langth scree	en collecting water (m)=	1 11		Replaced lock.			
Length seree	on concerning water (iii)=			*			
				ging Information			
	Equipment:	waterra tubing / inter	face meter				
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (uS/cm)	Turbidity (NTU)	Description of water	
8/13/2011 (12:35 PM)	1.0	9.2	11.2	900.0	92	clear, sediment flakes at bottor	
8/13/2011 (12:45 PM)	1.0	11	11	996	60.0	clear, less sediment preser	
` '	Water Samplin	nor.			Soil Samp	ding	
1	Date and time collected:		2011	Date and time collected: Saturday, August 13, 2011			
	Sample Number - Water:		2011				
<u>b</u>	ampie ivambei - water.	11-14340		Sample Number - Soil:		11-14305 (30 - 40 cm depth)	
	Sample containers:	11 HDDE		Sample containers:			
	Sample contamers.				Sample containers.	whirlpaks	
		1L Teflon		-		wniripaks	
	D 1 /F ' .	250mL Amber glass		D/F		Cl 1 1' 11	
	Procedure/Equipment:	waterra tubing		Procedure/Equipment:		Shovel, disposable scoops	
	Water description:	clear			Soil description:	cobbles, rust coloured staining, low	
						amount of organics, dark brown soil	
						gravel present	
	Filtration: (Y/N)	N			GPS	491131	
	Acidification: (Y/N)				51.5	7626761	
		12.1				, , , , , , , , , , , , , , , , , , , ,	
Sampling Equipment 1	Decontamination: (Y/N)	Methanol / Distilled V	Water Mix	Sampling Equipmen	t Decontamination:	Y (shovel rinse)	
Samping Equipment	Commination. (1/N)	Distilled Water	,, att. 1411A	Sampling Equipmen	it Decontainmation. (Y/N)	1 (Shover imse)	
	Number washes:				Number washes:	0	
	Number rinses:				Number rinses:		
	rumber mises:	J			rumoer mises:	1	
/ , 1' 11							

n/a=not applicable
*From ground surface. All other measurements are assumed to be from the top of the casing.

Table R-6: Monitoring Well Sampling Log. MW-4

Table B-6: Monit	oring Well Samplii	ng Log- MW-4					
	Site Name:						
I	Date of Sampling Event:	Saturday, August 13	3, 2011				
	Names of Samplers:	Tom Partridge, Ala	ina Leslie				
	Monitoring Well ID:	MW-4					
	Facility:	Tier II Disposal Fac	ility				
	_						
		V	Vater Sample	Measured Data			
	Condition of Well:	Good	•				
	Procedure/Equipment:	Tape Measure		Pro	cedure/Equipment:	waterra tubing / interface met	ter
Well he	ight above ground (m)=	0.70		Depth to	water surface (m)=	1.1	
	Diameter of well (m)=			Statio	c water level* (m)=	0.42	
Der	oth of installation* (m)=	3.0		De	pth to bottom (m)=	2.2	
	h screened section (m)=				ct thickness (mm)=		
	h to top of screen* (m)=			•	` '	1	
•	• • • • • • • • • • • • • • • • • • • •						
	Calculation	s			Notes		
	Depth of water (m)=			Evic	dence of sludge etc:	N/A	
We	ell volume of water (L)=			Evidence of freezing/sil	Itation: (compare to	freezing	
	,				installation record)		
Longth serve	en collecting water (m)=	1.00			instantation record)		
Length serec	in concerning water (iii)=		olonmont/Dur	ging Information			
Equipment: waterra tubing / interface meter							
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (uS/cm)	Turbidity (NTU)	Description of water	
8/13/2011 (1:10 PM)	0.75	10.0	6.0	770	18	Description of water	clea
8/13/2011 (1:20 PM)	0.75		6.0	780	36		clea
	Water Sampl	ina			Soil Sampl	ling	
1	Date and time collected:		3 2011	Date and time collected: Saturday, August 13, 201			
<u> </u>	ample Number - Water:	11_1/3/10	5, 2011	San	ple Number - Soil:	11-1/306	
	ampie rumber - water.	11-14547		San	ipic ivaliloci - 30ii.	11-14307 (30 - 40 cm depth)	
	Sample containers:	11 HDPE			Sample containers:		
	Sample containers.	1L Teflon		- Sample containers.		whirlpaks	
		250mL Amber glas	n			WIIIIpaks	
	Procedure/Equipment:		5	Procedure/Equipment:		Chaval disposable secons	
	Procedure/Equipment.	waterra tubing				Shover, disposable scoops	
	Water description:	clear		Soil description: swampy area, low lying v		swampy area, low lying vege	tation
				clay present			
	Filtration: (Y/N) N				GPS	490997	
	Filtration: (Y/N)	Acidification: (Y/N) N				7626625	
						7626623	
Sampling Equip		N	l Water Mix	Sampling Equipmen	t Decontamination:		
Sampling Equip	Acidification: (Y/N) ment Decontamination:	N	l Water Mix	Sampling Equipmen	t Decontamination: (Y/N)		
Sampling Equip	Acidification: (Y/N) ment Decontamination:	Methanol / Distilled Distilled Water	l Water Mix	Sampling Equipmen		Y (shovel rinse)	
Sampling Equip	Acidification: (Y/N) ment Decontamination: (Y/N)	N Methanol / Distilled Distilled Water 3	l Water Mix	Sampling Equipmen	(Y/N)	Y (shovel rinse)	

n/a=not applicable
*From ground surface. All other measurements are assumed to be from the top of the casing.

Table B-7: Moni	toring Well Sampli	ng Log- MW-5				
	Site Name:					
I	Date of Sampling Event:					
	Names of Samplers:	Tom Partridge, Alain	a Leslie			
	Monitoring Well ID:	MW-5				
	Facility:	Tier II Disposal Facil	ity			
			XX-4 C	. M 1 D. 4		
	Condition of Well:	Good	water Samp	le Measured Data		
	Procedure/Equipment:			D _{m/}	aadura/Eavinmanti	waterra tubing / interface meter
Wall be	eight above ground (m)=					
Well lie	Diameter of well (m)=				c water level* (m)=	
Do	pth of installation* (m)=				epth to bottom (m)=	
	h screened section (m)=				ct thickness (mm)=	l
	h to top of screen* (m)=			riee piodu	et tillekiless (IIIII)=	IN/A
Бері	ii to top of screen. (iii)=	0.54				
	Calculation	ıs			Note	s
	Depth of water (m)=	1.2		Evi	dence of sludge etc:	N/A
We	ell volume of water (L)=	1.5		Evidence of freezing/si	ltation: (compare to	N/A
				_	installation record)	
Length scree	en collecting water (m)=	1.19				I.
		D	evelopment/P	urging Information		
Equipment: waterra tubing / interface meter						
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (uS/cm)	Turbidity (NTU)	Description of water
8/13/2011 (1:50 PM)	0.75	8.9	6.0	2000.0	5.0	clear
8/13/2011 (2:00 PM)	0.75	9.9	6.0	1000.0	5.6	clear
	Water Sampl	ing			Soil Sam	pling
	Date and time collected:	Saturday, August 13,	2011	Date and time collected: Saturday, August 13, 2011		
S	Sample Number - Water:	11-14350		Sar	nple Number - Soil:	11-14308, 11-14309
						11-14310, 11-14311 (30 - 40 cm depth)
	Sample containers:	1L HDPE			Sample containers:	125 mL jars
		1L Teflon				whirlpaks
		250 mL Amber glass				
	Procedure/Equipment:	Waterra tubing		Pro	ocedure/Equipment:	Shovel, disposable scoops
	Water description:	clear		Soil description: water at depth, medi		water at depth, medium amount of
	water description.	cicai			Bon description.	organics, cobbles, clay present
						and the second second second
	Filtration: (Y/N)	N			GPS	490898
	Acidification: (Y/N)				315	7626715
Sampling Fauir	oment Decontamination:	Methanol / Distilled	Water Mix	Sampling Equipmer	nt Decontamination:	Y (shovel rinse)
Samping Equip		Distilled Water	,, a.c. 11117	Sampling Equipmer	(Y/N)	(Shover thise)
	Number washes:				Number washes:	0
	Number rinses:				Number rinses:	l
	rumoer mises.	-			- rannour ringes.	[=

n/a=not applicable
*From ground surface. All other measurements are assumed to be from the top of the casing.

8.7 Thermistor Inspection Logs

Contractor Name:	AECOM	Inspection Date: 8/16/2011, 9/16/2011
Prepared By:	Dave Elwood	

Thermistor Information

Site Name:	FOX-M	Thermistor Location	Tier I	II Facility		
Thermistor Number:	VT-1	Inclination	Verti	cal		
Install Date:	23-Aug-07	First Date Event		26-Aug-10 Last Dat	e Event	27-Aug-10
Coordinates and Elev	ation	N 7	626709 E	4909	47 Elev	0
Length of Cable (m)	9.23	Cable Lead Above Ground	(m) 4.2	Nodal Points	11	
Datalogger Serial #	07050014			Cable Serial Number	TS070	50014 B-9.2

Thermistor Inspection

	Good		Needs Mainter	nance	
Casing	Yes		No		
Cover	Yes		No		
Data Logger	Yes		No		
Cable	Yes		No		
Beads	Yes		No		
Battery Installation Date	16-Sep-1	1			
Battery Levels	Main	11.34 V		Aux	11.56 V

Manual Ground Temperature Readings

Bead	ohms	Degrees C
1		
2		
3		
4		
5		
6		
7		
8		

Bead	ohms	Degrees C
9		
10		
11		

Observations and Proposed Maintenance

Memory at 39%	
Manual temperature readings were not taken	
Thermistor and casing in general good condition	

Contractor Name:	AECOM	Inspection Date: 8/15/2011, 9/16/2011
Prepared By:	Dave Elwood	

Thermistor Information

Site Name:	FOX-M	Thermistor Location	Tier II Facility	У	
Thermistor Number:	VT-2	Inclination	Vertical		
Install Date:	23-Aug-07	First Date Event	26-Au	g-10 Last Date Event	15-Aug-11
Coordinates and Elev	ation	N 7	626747 E	490982 Elev	0
Length of Cable (m)	7.32	Cable Lead Above Ground	I (m) 4.3 Nodal F	oints	7
Datalogger Serial #	07060009		Cable S	erial Number T	S07060009 B-7.2

Thermistor Inspection

	Good		Needs Mainten	ance	
Casing	Yes		No		
Cover	Yes		No		
Data Logger	Yes		No		
Cable	Yes		No		
Beads	Yes		No		
Battery Installation Date	16-Sep-11				
Battery Levels	Main	11.34 V		Aux	13.87 V

Manual Ground Temperature Readings

Bead	ohms	Degrees C
1	10.074	9.0874
2	13.297	4.1684
3	16.111	0.305
4	17.494	-1.2717
5	18.735	-2.6561
6	20.43	-4.3336
7	21.46	-5.3478

Bead	ohms	Degrees C

Observations and Proposed Maintenance

Memory 39% full
Thermistor and casing in general good condition

Contractor Name:	AECOM	Inspection Date: 8/15/2011, 9/16/2011
Prepared By:	Dave Elwood	

Thermistor Information

Site Name:	FOX-M	T	Thermistor Location	l	Tier II	l Facility			
Thermistor Number:	VT-3		nclination		Vertic	al			
Install Date:	23-Aug-07	F	First Date Event			26-Aug-11	Last Date Eve	nt	27-Aug-11
Coordinates and Elev	ation	N	7	7626738	Е		491057 EI	ev	0
Length of Cable (m)	9.21	Cable I	Lead Above Ground	d (m)	4.2	Nodal Points	3	11	
Datalogger Serial #	06030090				(Cable Serial	Number	TS0603	30090 B-9.2

Thermistor Inspection

	Good		Needs Main	tenance	
Casing	Yes		No		
Cover	Yes		No		
Data Logger	Yes		No		
Cable	Yes		No		
Beads	Yes		No		
Battery Installation Date	16-Sep-	11			
Battery Levels	Main	11.34 V		Aux	13.87 V

Manual Ground Temperature Readings

Bead	ohms	Degrees C
1	9.863	
2	13.209	
3	15.794	
4	17.128	
5	18.216	
6	19.146	
7	20.02	
8	20.71	

Bead	ohms	Degrees C
9	21.65	
10	22.4	
11	22.85	

Observations and Proposed Maintenance

Possibly requires re-programing
No temperature readings taken

Thermistor and casing in general good condition

Contractor Name:	AECOM	Inspection Date: 8/15/2011, 9/16/2011
Prepared By:	Dave Elwood	

Thermistor Information

Site Name:	FOX-M	Thermistor Locati	ion Tier	II Facility			
Thermistor Number:	VT-4	Inclination	Ver	ical			
Install Date:	23-Aug-07	First Date Event		26-Aug-11	Last Date Event		27-Aug-11
Coordinates and Elev	ation	N	7626841 E		491005 Elev		0
Length of Cable (m)	7.32	Cable Lead Above Grou	und (m) 4.3	Nodal Point	S	7	
Datalogger Serial #	7060020			Cable Seria	l Number		TS06060020

Thermistor Inspection

	Good		Needs I	Maintenance	
Casing	Yes		No		
Cover	Yes		No		
Data Logger	Yes		No		
Cable	Yes		No mi	nor cracking at cor	nnection
Beads	Yes		No		
Battery Installation Date	16-Sep-11				
Battery Levels	Main	11.34 V		Aux	13.63 V

Manual Ground Temperature Readings

Bead	ohms	Degrees C
1	-	
2	266.3	
3	260.7	
4	249.8	
5	262.3	
6	250.9	
7	269	

Bead	ohms	Degrees C

Observations and Proposed Maintenance

Datalogger requires reprogramming					
Thermistor and casing in general good condition					

Contractor Name:	AECOM	Inspection Date: 8/15/2011, 9/16/2011
Prepared By:	Dave Elwood	

Thermistor Information

Site Name:	FOX-M	Thermistor Location	n Tier	II Facility		
Thermistor Number:	VT-5	Inclination	Verti	cal		
Install Date:	23-Aug-07	First Date Event		26-Aug-10 Last Dat	e Event	15-Aug-11
Coordinates and Elev	ation	N	7626809 E	4909	79 Elev	0
Length of Cable (m)	7.33	Cable Lead Above Groun	d (m) 4.3	Nodal Points	7	
Datalogger Serial #	7060023			Cable Serial Number	TS0706	0023 B-7.2

Thermistor Inspection

	Good		Needs Maintena	ince	
Casing	Yes		No		
Cover	Yes		No		
Data Logger	Yes		No		
Cable	Yes		No		
Beads	Yes		No		
Battery Installation Date	16-Sep-11				
Battery Levels	Main	11.34 V		Aux	13.63 V

Manual Ground Temperature Readings

Bead	ohms	Degrees C
1	9.257	10.6367
2	12.891	4.7623
3	15.865	0.6841
4	17.191	-0.9039
5	18.708	-2.5836
6	19.691	-3.5877
7	20.47	-4.4234

Bead	ohms	Degrees C

Observations and Proposed Maintenance

Thermistor and casing in general good condition

9. East Beach Landfill

The East Beach Landfill is the main landfill at FOX-M and is located southeast of the Station Area. Monitoring requirements 2011 included a visual inspection of the landfill, soil and groundwater sampling, and downloading of thermistor data. The thermistor data has been forwarded on separately from this report. The results of soil sample analysis are provided in Tables 9.1 and 9.2 below, while groundwater sample results are provided in Tables 9.3 and 9.4. Thermistor and monitoring wells inspection logs are provided in sections 9.6 and 9.7 below.

9.1 Visual Inspection

The visual inspection of the East Beach Landfill was conducted on August 15-16, 2011. The Visual Inspection Checklist/Report has been completed as per the ToR and is included below.

Noted features and photo viewpoints can be found on Figures FOX-M.9 and FOX-M.10.

9.1.1 Settlement

Indications of settlement were not observed.

9.1.2 Erosion

Indications of erosion were not observed.

9.1.3 Frost Action

Indications of frost action were not observed.

9.1.4 Evidence of Burrowing Animals

Indications of burrowing animals were not observed.

9.1.5 Re-establishment of Vegetation

Indications of vegetation were not observed.

9.1.6 Staining

Indications of staining were not observed.

9.1.7 Seepage Points

Indications of seepage were not observed.

9.1.8 Debris

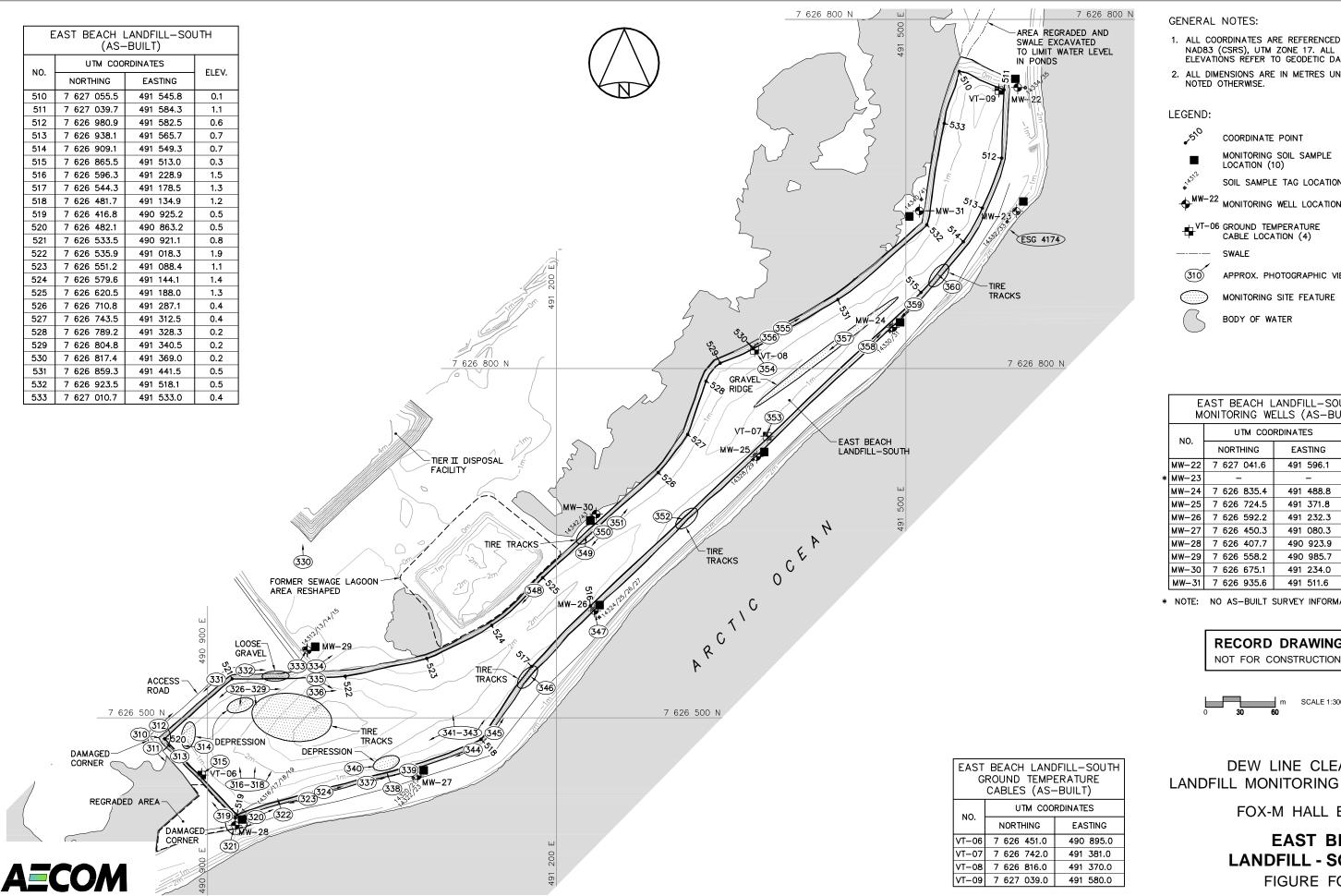
Indications of debris were not observed.

9.1.9 Discussion

Tire tracks were observed on the landfills side slopes and top cover; however the depth of the track marks were negligible. The damage to the corners of the landfill and the depressions noted are a result of quads driving over the area.

A gravel ridge approximately 125 m in length was observed on the top cover of the landfill.

Overall, the landfill is considered stable.



- 1. ALL COORDINATES ARE REFERENCED TO NAD83 (CSRS), UTM ZONE 17. ALL ELEVATIONS REFER TO GEODETIC DATUM.
- 2. ALL DIMENSIONS ARE IN METRES UNLESS

COORDINATE POINT

MONITORING SOIL SAMPLE LOCATION (10)

SOIL SAMPLE TAG LOCATION

 $lackbox{ }^{\mbox{\scriptsize MW}-22}$ monitoring well location (10)

VT-06 GROUND TEMPERATURE CABLE LOCATION (4)

APPROX. PHOTOGRAPHIC VIEWPOINT

MONITORING SITE FEATURE

BODY OF WATER

	MONITORING WELLS (AS-BUILT)					
	NO.	итм соо	EL E\/			
		NORTHING	EASTING	ELEV.		
	MW-22	7 627 041.6	491 596.1	-0.5		
*	MW-23	-	_	-		
	MW-24	7 626 835.4	491 488.8	0.0		
	MW-25	7 626 724.5	491 371.8	0.2		
	MW-26	7 626 592.2	491 232.3	0.6		
	MW-27	7 626 450.3	491 080.3	-0.1		
	MW-28	7 626 407.7	490 923.9	-0.4		
	MW-29	7 626 558.2	490 985.7	0.0		
	MW-30	7 626 675.1	491 234.0	-1.0		

* NOTE: NO AS-BUILT SURVEY INFORMATION.

RECORD DRAWING

-0.2

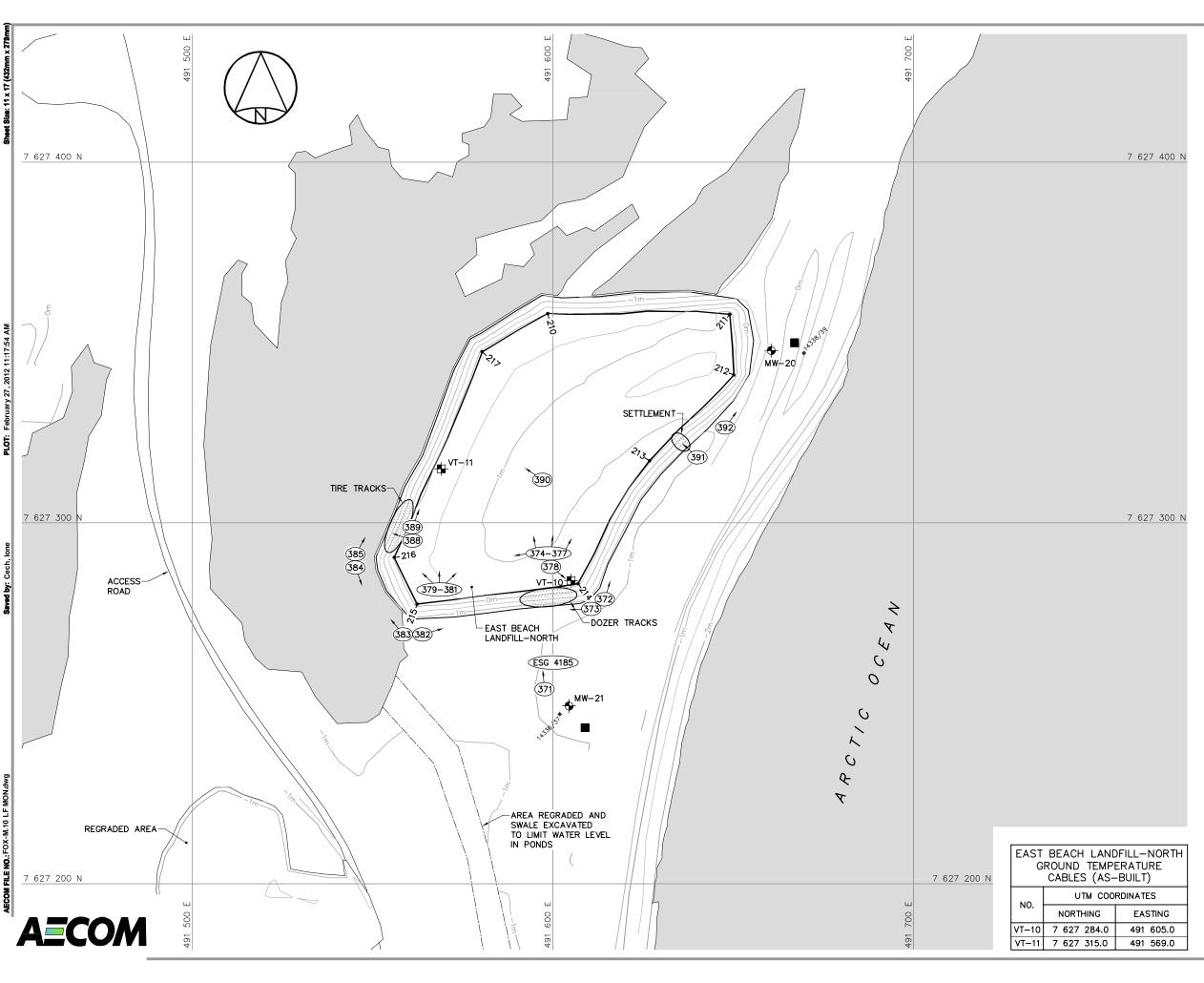
NOT FOR CONSTRUCTION



DEW LINE CLEAN UP LANDFILL MONITORING PLAN

FOX-M HALL BEACH

EAST BEACH LANDFILL - SOUTH FIGURE FOX-M.9



GENERAL NOTES:

- ALL COORDINATES ARE REFERENCED TO NAD83 (CSRS), UTM ZONE 17. ALL ELEVATIONS REFER TO GEODETIC DATUM.
- ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.

LEGEND:

COORDINATE POINT

MONITORING SOIL SAMPLE LOCATION (2)

SOIL SAMPLE TAG LOCATION

 $\bullet^{\rm MW-20}$ monitoring well location (2)

VT-10 GROUND TEMPERATURE CABLE LOCATION (2)

- SWALE

71 A

APPROX. PHOTOGRAPHIC VIEWPOINT

MONITORING SITE FEATURE

3

BODY OF WATER

EAST BEACH LANDFILL—NORTH REGRADED (AS—BUILT)				
NO.	итм соо	E1 E1/		
NO.	NORTHING	EASTING	ELEV.	
210	7 627 358.1	491 598.5	0.1	
211	7 627 357.8	491 649.0	1.2	
212	7 627 341.0	491 650.1	1.3	
213	7 627 317.3	491 626.7	0.7	
214	7 627 283.2	491 606.9	0.7	
215	7 627 277.6	491 562.3	0.2	
216	7 627 290.5	491 556.0	0.1	
217	7 627 347.5	491 580.3	0.2	

EAST BEACH LANDFILL—NORTH MONITORING WELLS (AS—BUILT)			
NO.	UTM COORDINATES		ELEV.
	NORTHING	EASTING	ELEV.
MW-20	7 627 347.8	491 660.5	0.0
MW-21	7 627 249.3	491 604.4	-0.1

RECORD DRAWING

NOT FOR CONSTRUCTION



DEW LINE CLEAN UP LANDFILL MONITORING PLAN

FOX-M HALL BEACH

EAST BEACH LANDFILL - NORTH FIGURE FOX-M.10

9.2 Photographic Record



Photograph 30. East Beach Landfill North: Looking at hole noted on east slope (Photo 391)↑



Photograph 31. East Beach Landfill North: Looking W from SE Corner of Landfill at dozer tracks (Photo 374)↑



Photograph 32. East Beach Landfill North: Tire tracks on west side of landfill (Photo 388)↑



Photograph 33. East Beach Landfill North: Soil sampling at MW-21 (ESG Photo 4185)↑

AECOM



Photograph 34. East Beach Landfill South: Looking N at MW-28. (Photo 321)↑



Photograph 35. East Beach Landfill South: Looking at damage to corner of landfill (Photo 310)↑



Photograph 36. East Beach Landfill South: Looking tire ruts at east side of landfill (Photo 328)↑



Photograph 37. East Beach Landfill South: Gravel ridge located at centre of landfill (Photo 357)↑



Photograph 38. East Beach Landfill South: Facing SE from MW-28 (ESG Photo 4162)↑



Photograph 39. East Beach Landfill South: Soil sample location at MW-23 (ESG Photo 4174)↑



Photograph 40. East Beach Landfill South: Looking S at thermistor VT-07 (Photo 353)↑

9.3 Visual Inspection Checklist and Stability Assessment

DEW Line Cleanup: Post-Construction - Landfill Monitoring Visual Inspection Checklist and Preliminary Stability Assessment

Site Name:	FOX-M Hall Beach
Landfill Designation:	East Beach Landfill
Date of Inspection:	15-Aug-11
Inspected By:	David Elwood, M.Sc., P.Eng. (AB)
Report Prepared By:	Shaun Hughes, P.Eng (AB)
Report Reviewed By:	Cathy Corrigan, M.Sc., P.Eng.
The inspector/reporter rep	resents to the best of their knowledge, the following statement and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or
misstated.	
Signature:	
	any grant and a second a second and a second a second and

			I			1				
Checklist Item	Present Yes/No	Location (Describe relative to existing monuments/features and relative to landfill design i.e. surface, berms, toe)	Length	Width	Depth	Extent relative to Area of Landfill (%)	Description	Photographic Records Focal length, location, view point & direction (relative to magnetic north) Feature of note Scale	Additional Comments	Severity Rating
Settlement	No									
Erosion	No									
Frost Action	No									
Sloughing and Cracking	No									
Animal Burrows	No									
Vegetation	No									
Staining	No									
Vegetation Stress	No									
Seepage Points	No									
Debris Exposed	No									
Presence/Condition - Monitoring Instruments	No									
				A1: 50mm						
		A1: top cover, north lobe	A1: 50mm	A2: 2m				A1: Photo 391		
		A2: west side slope, south lobe	A2: 3m	A3: 1.5m	A1: 200mm			A2: Photo 311		
		A3: west corner, south lobe	A3: 2m	A4: 3.5m	A2: 50mm			A3: Photo 314		
		A4: southwest corner, south lobe	A4: 3.5m	A5: 1.5m	A3: 50mm			A4: Photo 321	Damage to corners	
		A5: top cover, south lobe	A5: 5m	A6: 2.5m	A4: 25mm			A5: Photo 329	of landfill and	
		A6: top cover, south lobe	A6: 4m	A7: 2.5-	A5: 25mm		Track marks at various locations	A6: Photo 340	depression noted a	
Features of Note	Yes	A7: top cover, eastern side of south lobe	A7: 125m	5m	A6: 50mm		(A1 to A6). Gravel ridge (A7)	A7: Photo 357	result of quads.	Acceptable
Landfill Performance										Acceptable

9.4 Soil Sample Analytical Data

Results and analysis for soil sample analytical results are included in Table 9.1 and 9.2 below. Lab Results can be found on the CD included with this report.

Table 9.1: East Beach Landfill - Soil Sample Analytical Results

Sample #	Location	Depth (cm)	Cu [mg/kg]	Ni [mg/kg]	Co [mg/kg]	Cd [mg/kg]	Pb [mg/kg]	Zn [mg/kg]	Cr [mg/kg]	As [mg/kg]	Hg [mg/kg]	PCBs [mg/kg]	F1 C ₈ -C ₁₀ [mg/kg]	F2 C ₁₀ -C ₁₆ [mg/kg]	F3 C ₁₆ -C ₃₄ [mg/kg]	TPH C ₆ -C ₃₄ [mg/kg]
11-14338	MW-20	0-10	5.2	8.5	<5.0	<1.0	<10	17	<20	2.3	<0.10	<0.050	<10	<4.0	11	11
11-14339	MW-20	30-40	3.9	7.1	<5.0	<1.0	<10	17	<20	2.5	<0.10	<0.050	<10	<4.0	<9.0	ND
11-14336	MW-21	0-10	5.8	6.6	<5.0	<1.0	<10	26	<20	2.8	<0.10	<0.050	<10	<4.0	<9.0	ND
11-14337	MW-21	30-40	3.9	5.8	<5.0	<1.0	<10	<15	<20	2.7	<0.10	<0.050	<10	<4.0	<9.0	ND
11-14334	MW-22	0-10	4.7	9.3	<5.0	<1.0	<10	<15	<20	2.6	<0.10	<0.050	<10	<4.0	12	12
11-14335	MW-22	30-40	4.7	7.0	<5.0	<1.0	<10	<15	<20	2.7	<0.10	<0.050	<10	<4.0	13	13
11-14332	MW-23	0-10	11	9.5	<5.0	<1.0	23	27	<20	8.4	<0.10	0.13	<10	<4.0	57	57
11-14333	MW-23	30-40	13	9.1	<5.0	<1.0	15	21	<20	3.4	<0.10	0.070	<10	<4.0	21	21
11-14330	MW-24	0-10	7.7	59	<5.0	<1.0	12	23	120	2.7	<0.10	<0.050	<10	<4.0	9	9
11-14331	MW-24	30-40	5.6	7.2	<5.0	<1.0	<10	18	<20	2.4	<0.10	<0.050	<10	<4.0	15	15
11-14328	MW-25	0-10	8.7	9.7	<5.0	<1.0	480	18	<20	2.8	<0.10	<0.050	<10	<4.0	13	13
11-14329	MW-25	30-40	6.0	7.8	<5.0	<1.0	130	<15	<20	4.0	<0.10	<0.050	<10	<4.0	9.7	9.7
11-14324/25*	MW-26	0-10	<3.0	6.7	<5.0	<1.0	<10	<15	<20	2.4	<0.10	<0.050	<10	<4.0	<9.0	ND
11-14326/27*	MW-26	30-40	<3.0	<5.0	<5.0	<1.0	<10	<15	<20	2.0	<0.10	<0.050	<10	<4.0	<9.0	ND
11-14320/21*	MW-27	0-10	4.4	6.9	<5.0	<1.0	<10	<15	<20	3.4	<0.10	<0.050	<10	<4.0	<9.0	ND
11-14322/23*	MW-27	30-40	110	7.3	<5.0	<1.0	<10	<15	<20	3.7	<0.10	<0.050	<10	<4.0	<9.0	ND
11-14316/17*	MW-28	0-10	4.7	6.3	<5.0	<1.0	<10	<15	<20	4.4	<0.10	<0.050	<10	<4.0	<9.0	ND
11-14318/19*	MW-28	30-40	4.6	7.5	<5.0	<1.0	<10	<15	<20	2.6	<0.10	<0.050	<10	4.1	<9.0	4.1
11-14312/13*	MW-29	0-10	3.4	7.2	<5.0	<1.0	<10	<15	<20	2.5	<0.10	<0.050	<10	<4.0	<9.0	ND
11-14314/15*	MW-29	30-40	4.2	7.9	<5.0	<1.0	<10	<15	<20	3.0	<0.10	<0.050	<10	<4.0	<9.0	ND
11-14342	MW-30	0-10	3.3	7.2	<5.0	<1.0	<10	<15	<20	2.7	<0.10	<0.050	<10	<4.0	<9.0	ND
11-14343	MW-30	30-40	3.7	7.5	<5.0	<1.0	<10	<15	<20	1.4	<0.10	<0.050	<10	<4.0	<9.0	ND
11-14340	MW-31	0-10	4.6	7.8	<5.0	<1.0	10	16	<20	3.0	<0.10	0.28	<10	<4.0	<9.0	ND
11-14341	MW-31	30-40	3.2	6.5	<5.0	<1.0	<10	<15	<20	1.4	<0.10	0.10	<10	<4.0	<9.0	ND
*Field duplicate																
TPH: Sum of th		tions of I	F1, F2, and	F3. Conce	entrations	below met	hod detec	tion limits	are exclu	ded from t	he total					
ND: Not Detect	ed															

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Table 9.2: East Beach Landfill - Soil Sample Results Analysis

Parameter	2011
Copper	Detectable concentrations ranged between 3.2 – 110 mg/kg with detectable concentrations at 22 of 24 sample locations and a mean concentration of 5.5 mg/kg. The highest concentration was observed at depth at MW-27 (110 mg/kg), whereas the lowest concentration was observed at the depth at MW-31 (3.2 mg/kg).
	The concentration provided for MW-27 was the average of three samples (4.4, 4.3, and 335 mg/kg) taken, with an average of 110 mg/kg. The same location as sampled in 2007 which yielded a concentration of 430 mg/kg which suggests pre-existing contamination rather than contaminant transport from landfill.
Nickle	Detectable concentrations ranged between 5.8 - 59 mg/kg with detectable concentrations at 23 of 24 sample locations and a mean concentration of 9.8 mg/kg. The highest concentration was observed at surface at MW-24 (59 mg/kg), whereas the lowest concentration was observed at depth at MW-21 (5.8 mg/kg).
Cobalt	All reported concentrations were less than the method detection limit (5.0 mg/kg)
Cadmium	All reported concentrations were less than the method detection limit (1.0 mg/kg)
Lead	Detectable concentrations ranged between 10 - 480 mg/kg with detectable concentrations at 6 of 24 sample locations and a mean concentration of 110 mg/kg. The highest concentration was observed at the surface at MW-25 (480 mg/kg), whereas the lowest concentration was observed at the depth at MW-31 (10 mg/kg).
	Contaminant concentration in MW-25 was elevated in comparison to the baseline average and the surface sample exceeded the Tier I DLCC. Previous samples taken at MW-25 (2008 and 2011) have been over 100 mg/kg. The results from MW-25 are not believed to be an indication of contaminant leaching.
Zinc	Detectable concentrations ranged between 16 - 27 mg/kg with detectable concentrations at 9 of 24 sample locations and a mean concentration of 20 mg/kg. The highest concentration was observed at the surface at MW-23 (27 mg/kg), whereas the lowest concentration was observed at the depth at MW-31 (16 mg/kg).
Chromium	Only one instance of detectable concentration was noted in the 24 sample locations. The surface sample at MW-24 was found to have a concentration of 120 mg/kg.
Arsenic	Detectable concentrations ranged between 1.4 - 8.4 mg/kg with detectable concentrations at all sample locations and a mean concentration of 3.0 mg/kg. The highest concentration was observed at the surface at MW-23 (8.4 mg/kg), whereas the lowest concentration was observed at the depth at MW-30 and MW-31 (1.4 mg/kg).
Mercury	All reported concentrations were less than the method detection limit (0.10 mg/kg)
PCBs	Detectable concentrations ranged between 0.070 - 0.28 mg/kg with detectable concentrations at 4 of 24 sample locations and a mean concentration of 0.15 mg/kg. The highest concentration was observed at the surface at MW-31 (0.28 mg/kg), whereas the lowest concentration was observed at the depth at MW-23 (0.070 mg/kg).
ТРН	Concentrations ranged between <4-57 mg/kg with detectable Fraction F2 concentrations noted at one sample location at depth at MW-28 (4.1 mg/kg), and detectable Fraction F3 concentrations noted at nine sample locations with the highest concentration observed at surface depth at MW-23 (57 mg/kg), whereas the lowest concentration was observed at the surface at MW-24 (9.0 mg/kg).

9.5 Groundwater Sample Analytical Data

The groundwater analytical results and evaluation for the East Beach Landfill are included in Table 9.3 and 9.4 below. Groundwater samples were collected from MW-29 and MW-30. The remaining 10 monitoring wells had insufficient water to collect a sample.

Table 9.3: East Beach Landfill – Groundwater Analytical Results

Sample #	Location	Cu [mg/L]	Ni [mg/L]	Co [mg/L]	Cd [mg/L]	Pb [mg/L]	Zn [mg/L]	Cr [mg/L]	As [mg/L]	Hg [mg/L]	PCBs [mg/L]	F1 C ₈ -C ₁₀ [mg/L]	F2 C ₁₀ -C ₁₆ [mg/L]	F3 C ₁₆ -C ₃₄ [mg/L]	TPH C ₆ -C ₃₄ [mg/L]
11-14351	MW-29	0.0060	<0.0050	<0.0030	<0.0010	<0.010	0.065	0.031	<0.0030	<0.00040	<0.0030	<0.050	<0.50	<1.0	ND
11-14352	MW-30	0.016	0.079	0.0098	0.0010	0.013	0.19	0.22	0.014	<0.00040	<0.0030	< 0.050	<0.50	<1.0	ND
PCB detection in 2011	n limit increa	sed to 0.0	0030 mg/L												
TPH: Sum of from the tota	the concentr	ations of	F1, F2, and	F3. Conce	entrations b	elow metho	od detectio	n limits a	re excluded						
ND: Not Dete	ected														

Table 9.4: East Beach Landfill – Groundwater Analysis

Parameter	2011
Copper	Detectable concentrations ranged between 0.0060 - 0.016 mg/L with detectable concentrations at all sample locations and a mean concentration of 0.011 mg/L. The highest concentration was observed at MW-30 (0.016 mg/L), whereas the lowest concentration was observed at the depth at MW-29 (0.0060 mg/L).
Nickle	Only one instance of detectable concentration was noted in the two sample locations. The sample at MW-30 was found to have a concentration of 0.079 mg/L.
Cobalt	Only one instance of detectable concentration was noted in the two sample locations. The sample at MW-30 was found to have a concentration of 0.0098 mg/L.
Cadmium	Only one instance of detectable concentration was noted in the two sample locations. The sample at MW-30 was found to have a concentration of 0.0010 mg/L.
Lead	Only one instance of detectable concentration was noted in the two sample locations. The sample at MW-30 was found to have a concentration of 0.013 mg/L.
Zinc	Detectable concentrations ranged between 0.065 - 0.19 mg/L with detectable concentrations at all sample locations and a mean concentration of 0.128 mg/L. The highest concentration was observed at MW-30 (0.19 mg/L), whereas the lowest concentration was observed at the depth at MW-29 (0.065 mg/L).
Chromium	Detectable concentrations ranged between 0.031 - 0.22 mg/L with detectable concentrations at all sample locations and a mean concentration of 0.13 mg/L. The highest concentration was observed at MW-30 (0.22 mg/L), whereas the lowest concentration was observed at the depth at MW-29 (0.031 mg/L).
Arsenic	Only one instance of detectable concentration was noted in the two sample locations. The sample at MW-30 was found to have a concentration of 0.014 mg/L.
Mercury	All reported concentrations were less than the method detection limit. (0.00040 mg/kg)
PCBs	All reported concentrations were less than the method detection limit. (0.0030 mg/kg)
TPH	All reported concentrations were less than the method detection limit.

9.6 Monitoring Well Sampling/Inspection Logs

Table R-10: Monitoring Well Sampling Log. MW-20

Table B-10: Monitoring Well San	npling Log- MW-20			
Site Name:				
Date of Sampling Event:	Monday, August 15, 2011			
Names of Samplers:	Tom Partridge, Alaina Leslie			
Monitoring Well ID:				
	East Beach Landfill			
-				
		Sample Measured Data		
Condition of Well:	Good			
Procedure/Equipment:	Tape Measure	Procedu	re/Equipment:	waterra tubing / interface meter
Well height above ground (m)=	0.39	Depth to wate	er surface (m)=	N/A
Diameter of well (m)=	0.040	Static wat	ter level* (m)=	0
Depth of installation* (m)=	3.0	Depth to	to bottom (m)=	1.13
Length screened section (m)=	1.5	Free product thi	ickness (mm)=	N/A
Depth to top of screen* (m)=	0.46			
Calculation			No	
Depth of water (m)=			e of sludge etc:	
Well volume of water (L)=	0	Evidence of freezing/siltation	· •	freezing
			allation record)	
Length screen collecting water (m)=	N/A	Replaced lock.		
	Developn	nent/Purging Information		
Equipment:	N/A			
Date & Time Volume Removed (L)	Temperature (°C) pH	Conductivity (uS/cm) Tur	rbidity (NTU)	Description of water
		well frozen		
Water Sampl	ing		Soil Sai	mpling
	Monday, August 15, 2011	Date and		Monday, August 15, 2011
Sample Number - Water:	no sample collected		Number - Soil:	
•	•	1		11-14339 (30 - 40 cm depth)
Sample containers:	N/A	Sam	ple containers:	125 mL jars
				whirlpaks
Procedure/Equipment:	N/A	Procedu	re/Equipment:	Shovel, disposable scoops
Water description:	N/A	So	oil description:	gravel, light brown silt / sand
Filtration: (Y/N)			GPS	491659
Acidification: (Y/N)	N/A	1		7627348
	T			
Sampling Equipment Decontamination:		Sampling Equipment Dec		Y (shovel rinse)
(Y/N)			(Y/N)	
Number washes:	N/A	Ni	umber washes:	0
Number rinses:			Number rinses:	1
Trained Hises.	ı ··	·		

n/a=not applicable
*From ground surface. All other measurements are assumed to be from the top of the casing.

Table B-11: Monitoring Well Sampling Log- MW-21

Table B-11: Monitoring Well Sam				
Site Name:	=			
	Monday, August 15, 2011			
Names of Samplers:	Tom Partridge, Alaina Leslie			
Monitoring Well ID:	MW-21			
Facility:	East Beach Landfill			
		Sample Measured Data		
Condition of Well:	Good			
Procedure/Equipment:	Tape Measure	Pro	ocedure/Equipment:	waterra tubing / interface meter
Well height above ground (m)=	0.46	Depth to	water surface (m)=	N/A
Diameter of well (m)=			c water level* (m)=	
Depth of installation* (m)=			epth to bottom (m)=	
Length screened section (m)=		Free produ	ct thickness (mm)=	N/A
Depth to top of screen* (m)=	0.60			
Calculations			No	
Depth of water (m)=			dence of sludge etc:	
Well volume of water (L)=	0	Evidence of freezing/si		freezing
	1		installation record)	
Length screen collecting water (m)=	N/A	Well cover broken.		
	1			
	Develop	ment/Purging Information	1	
Equipment:	waterra tubing / interface met			
, , ,	_			
Date & Time Volume Removed (L)	Temperature (°C) pH	Conductivity (uS/cm)	Turbidity (NTU)	Description of water
		well frozen	1	
Water Sampli	ing		Soil Sa	mnling
Date and time collected:	Monday, August 15, 2011	Date		Monday, August 15, 2011
Sample Number - Water:			nple Number - Soil:	
•			1	11-14337 (30 - 40 cm depth)
Sample containers:	N/A			• /
Î		Sample containers:		125 mL jars
	l.		Sample containers:	125 mL jars whirlpaks
		_	Sample containers:	
Procedure/Equipment:	N/A			
Procedure/Equipment:	N/A			whirlpaks
Procedure/Equipment:	N/A			whirlpaks
Procedure/Equipment: Water description:			ocedure/Equipment:	whirlpaks
Water description:	N/A		ocedure/Equipment: Soil description:	whirlpaks Shovel, disposable scoops gravel, light brown silt / sand
Water description: Filtration: (Y/N)	N/A N/A		ocedure/Equipment: Soil description:	whirlpaks Shovel, disposable scoops gravel, light brown silt / sand 491602
Water description:	N/A N/A		ocedure/Equipment: Soil description:	whirlpaks Shovel, disposable scoops gravel, light brown silt / sand
Water description: Filtration: (Y/N) Acidification: (Y/N)	N/A N/A N/A	Pro	Soil description:	whirlpaks Shovel, disposable scoops gravel, light brown silt / sand 491602 7627250
Water description: Filtration: (Y/N) Acidification: (Y/N) Sampling Equipment Decontamination:	N/A N/A N/A		Soil description: GPS at Decontamination:	whirlpaks Shovel, disposable scoops gravel, light brown silt / sand 491602 7627250
Water description: Filtration: (Y/N) Acidification: (Y/N) Sampling Equipment Decontamination: (Y/N)	N/A N/A N/A N/A	Pro	Soil description: GPS at Decontamination: (Y/N)	whirlpaks Shovel, disposable scoops gravel, light brown silt / sand 491602 7627250 Y (shovel rinse)
Water description: Filtration: (Y/N) Acidification: (Y/N) Sampling Equipment Decontamination:	N/A N/A N/A N/A	Pro	Soil description: GPS at Decontamination:	whirlpaks Shovel, disposable scoops gravel, light brown silt / sand 491602 7627250 Y (shovel rinse)
Water description: Filtration: (Y/N) Acidification: (Y/N) Sampling Equipment Decontamination: (Y/N)	N/A N/A N/A N/A	Pro	Soil description: GPS at Decontamination: (Y/N)	whirlpaks Shovel, disposable scoops gravel, light brown silt / sand 491602 7627250 Y (shovel rinse)
Water description: Filtration: (Y/N) Acidification: (Y/N) Sampling Equipment Decontamination: (Y/N)	N/A N/A N/A N/A N/A N/A	Pro	Soil description: GPS at Decontamination: (Y/N)	whirlpaks Shovel, disposable scoops gravel, light brown silt / sand 491602 7627250 Y (shovel rinse) 0

n/a=not applicable

^{*}From ground surface. All other measurements are assumed to be from the top of the casing.

Table B-12:	Monitoring Well Sa		N-22			
	Site Name:	FOX-M				
]	Date of Sampling Event:	Monday, August 15	, 2011			
	Names of Samplers:	Tom Partridge, Alai	na Leslie			
	Monitoring Well ID:					
	Facility:	East Beach Landfill				
	•					
			Water S	ample Measured Data		
	Condition of Well:	Good				
	Procedure/Equipment:	Tape Measure		Pro	cedure/Equipment:	waterra tubing / interface meter
Well he	ight above ground (m)=	0.54		Denth to	water surface (m)=	N/A
,, 611 116	Diameter of well (m)=				c water level* (m)=	
De	oth of installation* (m)=				pth to bottom (m)=	
	h screened section (m)=				ct thickness (mm)=	
	h to top of screen* (m)=			Tice produ	et tillekness (IIIII)=	1771
Бері	n to top of sereen (m)=	0.00				
	Calculat	ions			No	tes
	Depth of water (m)=			Evid	dence of sludge etc:	
W	ell volume of water (L)=				_	
VV	en volume of water (L)=	U		Evidence of freezing/siltation: (compare to finstallation record)		neezing
					instanation record)	
Length scree	en collecting water (m)=	N/A		Well cover broken.		
				L		
			Developm	ent/Purging Information		
	Equipment:	N/A				
		0	T.T	C - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	T1:1:4-(NTTI)	
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (uS/cm)	Turbidity (NTU)	Description of water
				well frozen		
	Water San	npling			Soil Sai	mpling
	Date and time collected:	Monday, August 15	, 2011	Date	and time collected:	Monday, August 15, 2011
	ample Number - Water:				nple Number - Soil:	
	*	•			•	11-14335 (30 - 40 cm depth)
	Sample containers:	N/A			Sample containers:	
	1				1	whirlpaks
						•
	Procedure/Equipment:	N/A		Pro	cedure/Equipment:	Shovel, disposable scoops
	1 1				* *	, ,
	Water description:	N/A			Soil description:	cobbles present, moderate sand/loam
	water description	1 1/1 1			Boil description	cocces present, moderate sails found
	Filtration: (Y/N)	N/A			GPS	491595
	Acidification: (Y/N)			1	515	7627044
	(2/11)	*		1		
Sampling Equir	ment Decontamination:	N/A		Sampling Equipmen	t Decontamination:	Y (shovel rinse)
pgquij	(Y/N)	= w = =		Jamping Equipmen	(Y/N)	- ()
	Number washes:	N/A			Number washes:	0
	Number rinses:				Number rinses:	
						ı
n/o-not onnlice						

n/a=not applicable
*From ground surface. All other measurements are assumed to be from the top of the casing.

Table B-13: Monitoring Well Sampling Log- MW-23

Table B-13: Monitoring Well Sam	pling Log- MW-23		
Site Name:	FOX-M		
Date of Sampling Event:	Monday, August 15, 2011		
Names of Samplers:	Tom Partridge, Alaina Leslie		
Monitoring Well ID:	MW-23		
Facility:	East Beach Landfill		
		Sample Measured Data	
Condition of Well:	Good		
Procedure/Equipment:	~	Procedure/Equipment:	waterra tubing / interface meter
Well height above ground (m)=	0.40	Depth to water surface (m)=	N/A
Diameter of well (m)=		Static water level* (m)=	
Depth of installation* (m)=		Depth to bottom (m)=	
Length screened section (m)=		Free product thickness (mm)=	N/A
Depth to top of screen* (m)=	0.60		
G 1 1 t		NY.	,
Calculation Depth of water (m)=		No Evidence of sludge etc:	
Well volume of water (L)=	0	Evidence of freezing/siltation: (compare to	freezing
		installation record)	
Length screen collecting water (m)=			
P :	_	nent/Purging Information	
Equipment:	N/A		
Date & Time Volume Removed (L)	Temperature (°C) pH	Conductivity (uS/cm) Turbidity (NTU)	Description of water
Date & Time Volume Removed (L)	remperature (C)	well frozen	Description of water
w		1	
Water Sampl	Monday, August 15, 2011	Data and time collected	mpling Monday, August 15, 2011
Sample Number - Water:	no sample collected	Sample Number - Soil:	11_1/332
Sample Number - water.	no sample conected	Sample Number - Son.	11-14332 11-14333 (30 - 40 cm depth)
Sample containers:	N/A	Sample containers:	
			whirlpaks
Procedure/Equipment:	N/A	Procedure/Equipment:	Shovel, disposable scoops
Water description:	N/A	Soil description:	moderate light brown soil / fines, high
			amount of gravel, cobbles, area adjacent to
			beach
Filtration: (Y/N)	N/A	GPS	491572
Acidification: (Y/N)			7626940
Sampling Equipment Decontamination:	N/A	Sampling Equipment Decontamination:	Y (shovel rinse)
(Y/N)		(Y/N)	
Number washes:	N/A	Number washes:	0
Number rineac	N/Δ	Number rineac.	1
Number rinses:	N/A	Number rinses:	1

n/a=not applicable
*From ground surface. All other measurements are assumed to be from the top of the casing.

Table B-14: Monitoring Well Sampling Log- MW-24

	impling Log- MW-24		
Site Name:	_		
Date of Sampling Event:	Monday, August 15, 2011		
Names of Samplers:	Tom Partridge, Alaina Leslie		
Monitoring Well ID:			
Facility:	East Beach Landfill		
	Water Sa	mple Measured Data	
Condition of Well:	Good		
Procedure/Equipment:	Tape Measure	Procedure/Equipment:	waterra tubing / interface meter
Well height above ground (m)=	-	Depth to water surface (m)=	
Diameter of well (m)=		Static water level* (m)=	
Depth of installation* (m)=		Depth to bottom (m)=	
Length screened section (m)=		Free product thickness (mm)=	
Depth to top of screen* (m)=		Tree product unckness (mm)=	IV/A
Depth to top of screen (m)=	0.60		
Calculat	·	Notes	
		Notes	
Depth of water (m)=		Evidence of sludge etc:	
Well volume of water (L)=	0	Evidence of freezing/siltation: (compare to	
		installation record)	
Length screen collecting water (m)=	N/A	Well cover broken.	
		nt/Purging Information	
Equipment:	N/A		
Date & Time Volume Removed (L)	Temperature (°C) pH	Conductivity (uS/cm) Turbidity (NTU)	Description of water
Date & Time Volume Removed (L)	remperature (C)		Description of water
,	Temperature (C)	well frozen	•
Water San	apling	well frozen Soil Samp	oling
Water San Date and time collected:	apling Monday, August 15, 2011	well frozen Soil Samp Date and time collected:	oling Monday, August 15, 2011
Water San	apling Monday, August 15, 2011	well frozen Soil Samp	Dling Monday, August 15, 2011 11-14330
Water San Date and time collected: Sample Number - Water:	npling Monday, August 15, 2011 no sample collected	well frozen Soil Samp Date and time collected: Sample Number - Soil:	Monday, August 15, 2011 11-14330 11-14331 (30 - 40 cm depth)
Water San Date and time collected:	npling Monday, August 15, 2011 no sample collected	well frozen Soil Samp Date and time collected:	Monday, August 15, 2011 11-14330 11-14331 (30 - 40 cm depth) 125 mL jars
Water San Date and time collected: Sample Number - Water:	npling Monday, August 15, 2011 no sample collected	well frozen Soil Samp Date and time collected: Sample Number - Soil:	Monday, August 15, 2011 11-14330 11-14331 (30 - 40 cm depth)
Water San Date and time collected: Sample Number - Water: Sample containers:	npling Monday, August 15, 2011 no sample collected	well frozen Soil Samp Date and time collected: Sample Number - Soil: Sample containers:	Monday, August 15, 2011 11-14330 11-14331 (30 - 40 cm depth) 125 mL jars whirlpaks
Water San Date and time collected: Sample Number - Water:	npling Monday, August 15, 2011 no sample collected	well frozen Soil Samp Date and time collected: Sample Number - Soil: Sample containers:	Monday, August 15, 2011 11-14330 11-14331 (30 - 40 cm depth) 125 mL jars
Water San Date and time collected: Sample Number - Water: Sample containers:	npling Monday, August 15, 2011 no sample collected	well frozen Soil Samp Date and time collected: Sample Number - Soil: Sample containers:	Monday, August 15, 2011 11-14330 11-14331 (30 - 40 cm depth) 125 mL jars whirlpaks
Water San Date and time collected: Sample Number - Water: Sample containers:	npling Monday, August 15, 2011 no sample collected	well frozen Soil Samp Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment:	Monday, August 15, 2011 11-14330 11-14331 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops
Water San Date and time collected: Sample Number - Water: Sample containers:	npling Monday, August 15, 2011 no sample collected N/A N/A	well frozen Soil Samp Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment:	Monday, August 15, 2011 11-14330 11-14331 (30 - 40 cm depth) 125 mL jars whirlpaks
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment:	npling Monday, August 15, 2011 no sample collected N/A N/A	well frozen Soil Samp Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment:	Monday, August 15, 2011 11-14330 11-14331 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment:	npling Monday, August 15, 2011 no sample collected N/A N/A	well frozen Soil Samp Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment:	Monday, August 15, 2011 11-14330 11-14331 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops very little soil, fines / gravel present,
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description:	npling Monday, August 15, 2011 no sample collected N/A N/A N/A	well frozen Soil Samp Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment: Soil description:	Monday, August 15, 2011 11-14330 11-14331 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops very little soil, fines / gravel present, adjacent to beach
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N)	mpling Monday, August 15, 2011 no sample collected N/A N/A N/A	well frozen Soil Samp Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment: Soil description:	Monday, August 15, 2011 11-14330 11-14331 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops very little soil, fines / gravel present, adjacent to beach 491489
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description:	mpling Monday, August 15, 2011 no sample collected N/A N/A N/A	well frozen Soil Samp Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment: Soil description:	Monday, August 15, 2011 11-14330 11-14331 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops very little soil, fines / gravel present, adjacent to beach
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	npling Monday, August 15, 2011 no sample collected N/A N/A N/A N/A N/A N/A	well frozen Soil Samp Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment: Soil description: GPS	Monday, August 15, 2011 11-14330 11-14331 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops very little soil, fines / gravel present, adjacent to beach 491489 7626837
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N) Sampling Equipment Decontamination:	npling Monday, August 15, 2011 no sample collected N/A N/A N/A N/A N/A N/A	well frozen Soil Sampl Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment: Soil description: GPS Sampling Equipment Decontamination:	Monday, August 15, 2011 11-14330 11-14331 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops very little soil, fines / gravel present, adjacent to beach 491489 7626837 Y (shovel rinse)
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N) Sampling Equipment Decontamination: (Y/N)	npling Monday, August 15, 2011 no sample collected N/A N/A N/A N/A N/A N/A N/A	well frozen Soil Samp Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment: Soil description: GPS Sampling Equipment Decontamination: (Y/N)	Monday, August 15, 2011 11-14330 11-14331 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops very little soil, fines / gravel present, adjacent to beach 491489 7626837 Y (shovel rinse)
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N) Sampling Equipment Decontamination: (Y/N) Number washes:	npling Monday, August 15, 2011 no sample collected N/A N/A N/A N/A N/A N/A N/A	well frozen Soil Samp Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment: Soil description: GPS Sampling Equipment Decontamination: (Y/N) Number washes:	Monday, August 15, 2011 11-14330 11-14331 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops very little soil, fines / gravel present, adjacent to beach 491489 7626837 Y (shovel rinse)
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N) Sampling Equipment Decontamination: (Y/N)	npling Monday, August 15, 2011 no sample collected N/A N/A N/A N/A N/A N/A N/A	well frozen Soil Samp Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment: Soil description: GPS Sampling Equipment Decontamination: (Y/N)	Monday, August 15, 2011 11-14330 11-14331 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops very little soil, fines / gravel present, adjacent to beach 491489 7626837 Y (shovel rinse)

n/a=not applicable

^{*}From ground surface. All other measurements are assumed to be from the top of the casing.

Table B-15: Monitoring Well Sampling Log- MW-25

Table B-15: 1							
	Site Name:						
I	Date of Sampling Event:	Monday, August 15, 2011					
		Tom Partridge, Alaina Leslie					
	Monitoring Well ID:						
	Facility:	East Beach Landfill					
			ample Measured Data				
	Condition of Well:	Good					
	Procedure/Equipment:	Tape Measure	Procedure/Equipment: waterra tubing / interface meter				
Well he	ight above ground (m)=	0.42	Depth to v	water surface (m)=	N/A		
	Diameter of well (m)=			water level* (m)=			
Der	oth of installation* (m)=			oth to bottom (m)=			
	h screened section (m)=		Free product thickness (mm)= N/A				
	h to top of screen* (m)=						
	Calculat	ions		Not	es		
	Depth of water (m)=	0	Evide	ence of sludge etc:	N/A		
We	ell volume of water (L)=		Evidence of freezing/silt				
	on volume of water (E)=			installation record)	neezing		
T am atla a ana a		NI/A	1	mistanation record)			
Length scree	en collecting water (m)=		ent/Purging Information				
	Equipment:		ent/Purging information				
	Equipment.	N/A					
D . 0 FF:	V 1 D 1(I)	Temperature (°C) pH	Conductivity (uS/cm)	Turbidity (NTU)	TD 111 C 1		
Date & Time	Volume Removed (L)	Temperature (°C) pH	• • • • • • • • • • • • • • • • • • • •	Turbidity (NTO)	Description of water		
			well frozen				
	Water San	npling	Soil Sampling				
I	Daka amil 42mma anii ankadi.	Water Sampling			Monday, August 15, 2011		
C	Date and time conected:	Monday, August 15, 2011	Date a	and time collected:	Monday, August 15, 2011		
3	sample Number - Water:	Monday, August 15, 2011 no sample collected	Date a Samp	ple Number - Soil:	11-14328		
3	ample Number - Water:	Monday, August 15, 2011 no sample collected	Samj	ple Number - Soil:	11-14328 11-14339 (30 - 40 cm depth)		
	Sample containers:	no sample collected	Samj	ple Number - Soil:	11-14328 11-14339 (30 - 40 cm depth)		
3	ample Number - Water:	no sample collected	Samj	ple Number - Soil:	11-14328 11-14339 (30 - 40 cm depth)		
	ample Number - Water:	no sample collected	Samj	ple Number - Soil:	11-14328 11-14339 (30 - 40 cm depth) 125 mL jars		
3	ample Number - Water:	no sample collected N/A	Sam _j	ple Number - Soil: Sample containers:	11-14328 11-14339 (30 - 40 cm depth) 125 mL jars		
3	sample Number - Water: Sample containers:	no sample collected N/A	Sam _j	ple Number - Soil: Sample containers:	11-14328 11-14339 (30 - 40 cm depth) 125 mL jars whirlpaks		
5	sample Number - Water: Sample containers:	no sample collected N/A	Sam _j	ple Number - Soil: Sample containers:	11-14328 11-14339 (30 - 40 cm depth) 125 mL jars whirlpaks		
	Sample Number - Water: Sample containers: Procedure/Equipment:	no sample collected N/A N/A	Sam _j	ple Number - Soil: Sample containers: cedure/Equipment:	11-14328 11-14339 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops		
	sample Number - Water: Sample containers:	no sample collected N/A N/A	Sam _j	ple Number - Soil: Sample containers: cedure/Equipment: Soil description:	11-14328 11-14339 (30 - 40 cm depth) 125 mL jars whirlpaks		
	Sample Number - Water: Sample containers: Procedure/Equipment:	no sample collected N/A N/A	Sam _j	ple Number - Soil: Sample containers: cedure/Equipment: Soil description:	11-14328 11-14339 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops light brown sand / gravel present, adjacent		
	Sample Number - Water: Sample containers: Procedure/Equipment: Water description:	no sample collected N/A N/A N/A	Sam _j	ple Number - Soil: Sample containers: cedure/Equipment: Soil description:	11-14328 11-14339 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops light brown sand / gravel present, adjacent to beach		
	Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N)	no sample collected N/A N/A N/A N/A	Sam _j	ple Number - Soil: Sample containers: cedure/Equipment: Soil description:	11-14328 11-14339 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops light brown sand / gravel present, adjacent to beach 491370		
	Sample Number - Water: Sample containers: Procedure/Equipment: Water description:	no sample collected N/A N/A N/A N/A	Sam _j	ple Number - Soil: Sample containers: cedure/Equipment: Soil description:	11-14328 11-14339 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops light brown sand / gravel present, adjacent to beach		
	Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	no sample collected N/A N/A N/A N/A N/A N/A	Samp	ple Number - Soil: Sample containers: cedure/Equipment: Soil description: GPS	11-14328 11-14339 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops light brown sand / gravel present, adjacent to beach 491370 7626723		
	Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N) oment Decontamination:	no sample collected N/A N/A N/A N/A N/A N/A	Sam _j	ple Number - Soil: Sample containers: cedure/Equipment: Soil description: GPS Decontamination:	11-14328 11-14339 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops light brown sand / gravel present, adjacent to beach 491370 7626723		
	Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N) oment Decontamination: (Y/N)	no sample collected N/A N/A N/A N/A N/A N/A N/A N/	Samp	ple Number - Soil: Sample containers: cedure/Equipment: Soil description: GPS Decontamination: (Y/N)	11-14328 11-14339 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops light brown sand / gravel present, adjacent to beach 491370 7626723 Y (shovel rinse)		
	Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N) oment Decontamination:	no sample collected N/A N/A N/A N/A N/A N/A N/A N/	Samp	ple Number - Soil: Sample containers: cedure/Equipment: Soil description: GPS Decontamination: (Y/N) Number washes:	11-14328 11-14339 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops light brown sand / gravel present, adjacent to beach 491370 7626723 Y (shovel rinse)		
	Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N) oment Decontamination: (Y/N)	no sample collected N/A N/A N/A N/A N/A N/A N/A N/	Samp	ple Number - Soil: Sample containers: cedure/Equipment: Soil description: GPS Decontamination: (Y/N)	11-14328 11-14339 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops light brown sand / gravel present, adjacent to beach 491370 7626723 Y (shovel rinse)		

n/a=not applicable
*From ground surface. All other measurements are assumed to be from the top of the casing.

Table B-16: Monitoring Well Sa	ampling Log- MW-26		
Site Name:			
Date of Sampling Event:	Saturday, August 13, 2011		
Names of Samplers:	Tom Partridge, Alaina Leslie		
Monitoring Well ID:	MW-26		
Facility:	East Beach Landfill		
		mple Measured Data	
Condition of Well:	Good		
Procedure/Equipment:	Tape Measure	Procedure/Equipment:	waterra tubing / interface meter
Well height above ground (m)=	0.37	Depth to water surface (m)=	N/A
Diameter of well (m)=	0.040	Static water level* (m)=	0
Depth of installation* (m)=	3.0	Depth to bottom (m)=	
Length screened section (m)=	1.5	Free product thickness (mm)=	N/A
Depth to top of screen* (m)=	0.60	-	
Calculat		Not	
Depth of water (m)=	0	Evidence of sludge etc:	N/A
Well volume of water (L)=	0	Evidence of freezing/siltation: (compare to	freezing
		installation record)	
Length screen collecting water (m)=	N/A		
		nt/Purging Information	
Equipment:			
1			
Date & Time Volume Removed (L)	Temperature (°C) pH	Conductivity (uS/cm) Turbidity (NTU)	Description of water
Date & Time Volume Removed (L)	Temperature (°C) pH		Description of water
	Temperature (C)	well frozen	•
Water San	npling	well frozen Soil Sar	npling
Water San Date and time collected:	npling Saturday, August 13, 2011	well frozen Soil Sar Date and time collected:	npling Saturday, August 13, 2011
Water San	npling Saturday, August 13, 2011	well frozen Soil Sar	npling Saturday, August 13, 2011 11-14324, 11-14325
Water San Date and time collected: Sample Number - Water:	apling Saturday, August 13, 2011 no sample collected	well frozen Soil Sar Date and time collected: Sample Number - Soil:	Inpling Saturday, August 13, 2011 11-14324, 11-14325 11-14326, 11-14327 (30 - 40 cm depth)
Water San Date and time collected:	apling Saturday, August 13, 2011 no sample collected	well frozen Soil Sar Date and time collected:	npling Saturday, August 13, 2011 11-14324, 11-14325 11-14326, 11-14327 (30 - 40 cm depth) 125 mL jars
Water San Date and time collected: Sample Number - Water:	apling Saturday, August 13, 2011 no sample collected	well frozen Soil Sar Date and time collected: Sample Number - Soil:	Inpling Saturday, August 13, 2011 11-14324, 11-14325 11-14326, 11-14327 (30 - 40 cm depth)
Water San Date and time collected: Sample Number - Water: Sample containers:	npling Saturday, August 13, 2011 no sample collected	well frozen Soil Sar Date and time collected: Sample Number - Soil: Sample containers:	npling Saturday, August 13, 2011 11-14324, 11-14325 11-14326, 11-14327 (30 - 40 cm depth) 125 mL jars whirlpaks
Water San Date and time collected: Sample Number - Water:	npling Saturday, August 13, 2011 no sample collected	well frozen Soil Sar Date and time collected: Sample Number - Soil: Sample containers:	npling Saturday, August 13, 2011 11-14324, 11-14325 11-14326, 11-14327 (30 - 40 cm depth) 125 mL jars
Water San Date and time collected: Sample Number - Water: Sample containers:	npling Saturday, August 13, 2011 no sample collected	well frozen Soil Sar Date and time collected: Sample Number - Soil: Sample containers:	npling Saturday, August 13, 2011 11-14324, 11-14325 11-14326, 11-14327 (30 - 40 cm depth) 125 mL jars whirlpaks
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment:	npling Saturday, August 13, 2011 no sample collected N/A N/A	well frozen Soil Sar Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment:	npling Saturday, August 13, 2011 11-14324, 11-14325 11-14326, 11-14327 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops
Water San Date and time collected: Sample Number - Water: Sample containers:	npling Saturday, August 13, 2011 no sample collected N/A N/A	well frozen Soil Sar Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment:	npling Saturday, August 13, 2011 11-14324, 11-14325 11-14326, 11-14327 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops gravel, no organic matter, adjacent to
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment:	npling Saturday, August 13, 2011 no sample collected N/A N/A	well frozen Soil Sar Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment:	npling Saturday, August 13, 2011 11-14324, 11-14325 11-14326, 11-14327 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description:	npling Saturday, August 13, 2011 no sample collected N/A N/A N/A	well frozen Soil Sar Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment: Soil description:	npling Saturday, August 13, 2011 11-14324, 11-14325 11-14326, 11-14327 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops gravel, no organic matter, adjacent to beach
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N)	npling Saturday, August 13, 2011 no sample collected N/A N/A N/A	well frozen Soil Sar Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment: Soil description:	npling Saturday, August 13, 2011 11-14324, 11-14325 11-14326, 11-14327 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops gravel, no organic matter, adjacent to beach 491234
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description:	npling Saturday, August 13, 2011 no sample collected N/A N/A N/A	well frozen Soil Sar Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment: Soil description:	npling Saturday, August 13, 2011 11-14324, 11-14325 11-14326, 11-14327 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops gravel, no organic matter, adjacent to beach
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	npling Saturday, August 13, 2011 no sample collected N/A N/A N/A N/A N/A N/A	well frozen Soil Sar Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment: Soil description: GPS	mpling Saturday, August 13, 2011 11-14324, 11-14325 11-14326, 11-14327 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops gravel, no organic matter, adjacent to beach 491234 7626592
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N) Sampling Equipment Decontamination:	npling Saturday, August 13, 2011 no sample collected N/A N/A N/A N/A N/A N/A	well frozen Soil Sar Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment: Soil description: GPS Sampling Equipment Decontamination:	npling Saturday, August 13, 2011 11-14324, 11-14325 11-14326, 11-14327 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops gravel, no organic matter, adjacent to beach 491234 7626592 Y (shovel rinse)
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N) Sampling Equipment Decontamination: (Y/N)	npling Saturday, August 13, 2011 no sample collected N/A N/A N/A N/A N/A N/A N/A	well frozen Soil Sar Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment: Soil description: GPS Sampling Equipment Decontamination: (Y/N)	Inpling Saturday, August 13, 2011 11-14324, 11-14325 11-14326, 11-14327 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops gravel, no organic matter, adjacent to beach 491234 7626592 Y (shovel rinse)
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N) Sampling Equipment Decontamination: (Y/N) Number washes:	npling Saturday, August 13, 2011 no sample collected N/A N/A N/A N/A N/A N/A N/A N/	well frozen Soil Sar Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment: Soil description: GPS Sampling Equipment Decontamination: (Y/N) Number washes:	Inpling Saturday, August 13, 2011 11-14324, 11-14325 11-14326, 11-14327 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops gravel, no organic matter, adjacent to beach 491234 7626592 Y (shovel rinse)
Water San Date and time collected: Sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N) Sampling Equipment Decontamination: (Y/N)	npling Saturday, August 13, 2011 no sample collected N/A N/A N/A N/A N/A N/A N/A N/	well frozen Soil Sar Date and time collected: Sample Number - Soil: Sample containers: Procedure/Equipment: Soil description: GPS Sampling Equipment Decontamination: (Y/N)	Inpling Saturday, August 13, 2011 11-14324, 11-14325 11-14326, 11-14327 (30 - 40 cm depth) 125 mL jars whirlpaks Shovel, disposable scoops gravel, no organic matter, adjacent to beach 491234 7626592 Y (shovel rinse)

n/a=not applicable
*From ground surface. All other measurements are assumed to be from the top of the casing.

Table B-17: Monitoring Well S	ampling Log- MV	W-27			
Site Name	: FOX-M				
Date of Sampling Event					
Names of Samplers: Tom Partridge, Alaina Leslie					
Monitoring Well ID	: MW-27				
Facility	: East Beach Landfill				
		Water S	Sample Measured Data		
Condition of Well	: Good				
Procedure/Equipment	: Tape Measure		Pro	ocedure/Equipment:	waterra tubing / interface meter
Well height above ground (m)=	0.40		Depth to	water surface (m)=	N/A
Diameter of well (m)=			Stati	c water level* (m)=	0
Depth of installation* (m)=				epth to bottom (m)=	
Length screened section (m)=			Free produ	ct thickness (mm)=	N/A
Depth to top of screen* (m)=	0.60		•	, ,	
Calcula	tions			No	tes
Depth of water (m)=	0		Evi	dence of sludge etc:	N/A
Well volume of water (L)=	0		Evidence of freezing/si	Itation: (compare to	freezing
,			<i>g</i>	installation record)	
Length screen collecting water (m)=	- Ν/Δ			,	
Length screen concerning water (in)-	11/21	Develonm	ent/Purging Information	1	
Equipment	· N/A	Developin	ient/1 urging imormation	-	
Equipment					
Date & Time Volume Removed (L)	Temperature (°C)	pН	Conductivity (uS/cm)	Turbidity (NTU)	Description of water
Date & Time Volume Removed (E)	remperature (C)	<u> </u>	well frozen		Description of water
			WCII IIOZCII		
Water Sa			_	Soil Sa	
Date and time collected					Saturday, August 13, 2011
Sample Number - Water	no sample collected		Sar	nple Number - Soil:	11-14320, 11-14321
				~	11-14322, 11-14323 (30 - 40 cm depth)
Sample containers	: N/A			Sample containers:	*
					whirlpaks
D 1 77 1	27/4			1 77	
Procedure/Equipment	: N/A		Pro	ocedure/Equipment:	Shovel, disposable scoops
WY	27/4			0.11.1	
Water description	: N/A			Soil description:	gravel, no organic matter, adjacent to beach
Filtration: (Y/N	N/A			GPS	491081
Acidification: (Y/N	N/A				7626448
Sampling Equipment Decontamination	: N/A		Sampling Equipmer	nt Decontamination:	Y (shovel rinse)
(Y/N	/			(Y/N)	
Number washes				Number washes:	
Number rinses	: N/A			Number rinses:	1

n/a=not applicable
*From ground surface. All other measurements are assumed to be from the top of the casing.

Table B-18: Monitoring Well Sampling Log- MW-28

n/a=not applicable
*From ground surface. All other measurements are assumed to be from the top of the casing.

Table B-19: Monitoring Well Sampling Log- MW-29

Table B-19: N	Monitoring Well Sam	pling Log- MW-	29				
	Site Name:	FOX-M					
	Date of Sampling Event:	Saturday, August 13	3, 2011				
	Names of Samplers:	Tom Partridge, Alai	om Partridge, Alaina Leslie				
	Monitoring Well ID:						
		East Beach Landfill					
		1					
			Water S	ample Measured Data			
	Condition of Well:	Good					
	Procedure/Equipment:	Tape Measure		Pro	cedure/Equipment:	waterra tubing / interface meter	
Well h	neight above ground (m)=	0.40		Depth to	water surface (m)=	0.75	
	Diameter of well (m)=			Stati	c water level* (m)=	0.35	
D	epth of installation* (m)=	3.0			pth to bottom (m)=		
Leng	gth screened section (m)=	1.5		Free produ	ct thickness (mm)=	N/A	
Dep	oth to top of screen* (m)=	0.60					
	Calculation				No		
	Depth of water (m)=				dence of sludge etc:		
V	Vell volume of water (L)=	0.44		Evidence of freezing/si		freezing	
					installation record)		
Length scr	een collecting water (m)=	0.10					
				ent/Purging Information	1		
	Equipment:	waterra tubing / inte	rface				
		meter					
		- 00	11	Can du ativita (aC/am)	T		
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (uS/cm)	Turbidity (NTU)	Description of water	
13-Aug	0.40	11	6.0	1600	41	clear	
13-Aug	0.40	11	6.0	1700	31	clear	
	Water Sampl	ing			Soil Sa	mpling	
	Date and time collected:	Saturday, August 13	3, 2011	Date	and time collected:	Saturday, August 13, 2011	
	Sample Number - Water:	11-14351		San	nple Number - Soil:	11-14312, 11-14313	
						11-14314, 11-14315 (30 - 40 cm depth)	
	Sample containers:				Sample containers:		
		1L Teflon				whirlpaks	
		250mL Amber glass	1				
	Due a a dessa /Cassimus auto	Watamatuhina		Duo	d /F	Shovel, disposable scoops	
	Procedure/Equipment:	waterra tubing		PIC	cedure/Equipment:	Shover, disposable scoops	
	Water description:	clear			Soil description:	cobbles, adjacent to marsh, water in depth,	
	water description.	Clear			Son description.	minor amount of organic matter present	
						innor amount of organic matter present	
	THE STATE OF THE S				ana	100005	
	Filtration: (Y/N) Acidification: (Y/N)				GPS	490986	
	Acidification: (Y/N)	IN				7626558	
Sampling Equ	ipment Decontamination:	Methanol / Distilled	Water	Sampling Equipmen	t Decontamination:	Y (shovel rinse)	
	(Y/N)	Mix			(Y/N)		
	Number washes:	3			Number washes:	0	
	Number rinses:	3			Number rinses:	1	

n/a=not applicable
*From ground surface. All other measurements are assumed to be from the top of the casing.

Table B-20: 1	Monitoring Well Sa	ampling Log- MV	V-30				
	Site Name:						
Ι	Date of Sampling Event:	Monday, August 15,	2011				
	Names of Samplers:	Tom Partridge, Alair	om Partridge, Alaina Leslie				
	Monitoring Well ID:						
		East Beach Landfill					
	Ť						
			Water Sai	nple Measured Data			
	Condition of Well:	Good					
	Procedure/Equipment:	Tape Measure		Pro	ocedure/Equipment:	waterra tubing / interface meter	
Well he	ight above ground (m)=	•			water surface (m)=	-	
Well lie	Diameter of well (m)=				c water level* (m)=		
Der	oth of installation* (m)=				epth to bottom (m)=		
	n screened section (m)=				ct thickness (mm)=		
	to top of screen* (m)=			Tice produ	et tillekiless (IIIII)=	IVA	
Бери	i to top of screen (iii)=	0.00					
	Calculat	ione			Note	A.C.	
	Depth of water (m)=			Evi	dence of sludge etc:		

We	ell volume of water (L)=	0.75		Evidence of freezing/si			
					installation record)		
Length scree	n collecting water (m)=	0.32					
				t/Purging Information			
	Equipment:	waterra tubing / inter	face meter				
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (uS/cm)	Turbidity (NTU)	Description of water	
15-Aug	0.75	8.2	5.5	1100	270		brown
15-Aug	0.75	9.2	6.0	1600	400.0		brown
,	Water San		2011	Doto	Soil Sam		
	Date and time collected:		2011			Monday, August 15, 2011	
3	ample Number - Water:	11-14352		Sar	nple Number - Soil:		
	0 1	11 LIDDE			0 1	11-14343 (30 - 40 cm depth)	
	Sample containers:				Sample containers:		
		1L Teflon				whirlpaks	
		250mL Amber glass					
	D 1 /F : .	*** 1 *		D.	1 /5 :	GI 1 I' 11	
	Procedure/Equipment:	Waterra tubing		Pro	ocedure/Equipment:	Shovel, disposable scoops	
	Water description:	brown			Soil description:	gravel, minor vegetation / weeds	,
						adjacent to pond	
	Filtration: (Y/N)	N			GPS	491234	
	Acidification: (Y/N)				GIB	7626675	
	Actumenton. (1/N)	1 . 1				7.020073	
Sampling Favin	ment Decontamination:	Methanol / Distilled	Water Miv	Sampling Equipmer	nt Decontamination:	V (shovel rinse)	
Samping Equip		Distilled Water	vv atel iviix	Sampling Equipmen	it Decontainmation. (Y/N)	1 (SHOVELTHISE)	
	Number washes:				Number washes:	0	
-					Number wasnes: Number rinses:		
-	Number rinses:	J			number rinses:	1	
1				1			

n/a=not applicable
*From ground surface. All other measurements are assumed to be from the top of the casing.

Table B-21: Monitoring Well Sa	ampling Log- MW-31					
Site Name:						
	Monday, August 15, 2011					
	Tom Partridge, Alaina Leslie					
Monitoring Well ID:						
Facility:	East Beach Landfill					
	Water S	ample Measured Data				
Condition of Well:		ampie wicasureu Data				
Procedure/Equipment:		Prov	cedure/Equipment:	waterra tubing / interface meter		
Well height above ground (m)=	1		water surface (m)=	N/A		
Diameter of well (m)=			water surface (III)=	0		
Depth of installation* (m)=				~		
Length screened section (m)=						
Depth to top of screen* (m)=		Tiee produc	et tillekiless (IIIII)=	17/1		
Departs to top of sereen (m)	0.00					
Calculat	ions		Note	s		
Depth of water (m)=	0	Evid	lence of sludge etc:	N/A		
Well volume of water (L)=	0	Evidence of freezing/sile	tation: (compare to	freezing		
` ′			installation record)			
Length screen collecting water (m)=	N/A					
		ent/Purging Information				
Equipment:						
• •						
Date & Time Volume Removed (L)	Temperature (°C) pH	Conductivity (uS/cm)	Turbidity (NTU)	Description of water		
		well frozen		•		
Water San	npling		Soil Sam	pling		
Date and time collected:	Monday, August 15, 2011	Date :	and time collected:	Monday, August 15, 2011		
Sample Number - Water:	no sample collected	Sam	ple Number - Soil:	11-14340		
				11-14341 (30 - 40 cm depth)		
Sample containers:	N/A	:	Sample containers:	125 mL jars		
				whirlpaks		
Procedure/Equipment:	N/A	Proc	cedure/Equipment:	Shovel, disposable scoops		
Water description:	N/A		Soil description:	gravel, minor vegetation, adjacent to		
				pond		
Filtration: (Y/N)	N/A		GPS	491511		
Acidification: (Y/N)	N/A			7626938		
Sampling Equipment Decontamination:	N/A	Sampling Equipment	t Decontamination:	Y (shovel rinse)		
		(Y/N)				
(Y/N)						
Number washes:			Number washes:			
(' ' ' '						

n/a=not applicable
*From ground surface. All other measurements are assumed to be from the top of the casing.

9.7 Thermistor Inspection Logs

Contractor Name:	AECOM	Inspection Date: 8/15/2011, 9/16/2011
Prepared By:	Dave Elwood	

Thermistor Information

Site Name:	FOX-M	Thermistor Location	n East	Beach Landfill South	Lobe	
Thermistor Number:	VT-6	Inclination	Verti	cal		
Install Date:	23-Aug-07	First Date Event		27-Aug-10 Last Date	e Event	15-Aug-11
Coordinates and Elev	ation	N	7626809 E	4909	79 Elev	0
Length of Cable (m)	8.23	Cable Lead Above Groun	id (m) 4.2	Nodal Points	9	
Datalogger Serial #	7060018			Cable Serial Number		TS07060018

Thermistor Inspection

	Good		Needs Maintena	ance	
Casing	Yes		No		
Cover	Yes		No		
Data Logger	Yes		No		
Cable	Yes		No		
Beads	Yes		No		
Battery Installation Date	16-Sep-11				
Battery Levels	Main	11.34 V		Aux	13.38 V

Manual Ground Temperature Readings

Bead	ohms	Degrees C
1	8.656	13.1434
2	11.224	8.0263
3	14.241	3.5292
4	16.456	-0.0597
5	17.171	-0.8835
6	18.047	-1.8460
7	18.935	-2.8324
8	19.857	-3.8

Bead	ohms	Degrees C
9	20.74	-4.5502

Thermistor and casing in general good condition

Contractor Name:	AECOM	Inspection Date: 8/15/2011, 9/16/2011
Prepared By:	Dave Elwood	

Thermistor Information

Site Name:	FOX-M	Thermistor Location	n Eas	t Beach Landfill	South Lobe	
Thermistor Number:	VT-7	Inclination	Vert	ical		
Install Date:	24-Aug-07	First Date Event		27-Aug-10 La	ast Date Event	15-Aug-11
Coordinates and Elev	ation	N	7626740 E		491378 Elev	0
Length of Cable (m)	8.22	Cable Lead Above Groun	d (m) 4.2	Nodal Points		9
Datalogger Serial #	7019996			Cable Serial N	umber	TS07010006B8.2

Thermistor Inspection

	Good		Nee	ds Maintenance
Casing	Yes		No	
Cover	Yes		No	New lock required
Data Logger	Yes		No	
Cable	Yes		No	
Beads	Yes		No	
Battery Installation Date	16-Sep-11			
Battery Levels	Main	11.34 V		Aux <u>11.68 V</u>

Manual Ground Temperature Readings

Bead	ohms	Degrees C
1	8.419	13.2265
2	9.904	9.3548
3	13.006	4.5876
4	15.655	0.9464
5	16.85	-0.4557
6	17.769	-1.4714
7	18.838	-2.6043
8	19.817	-3.5877

Bead	ohms	Degrees C
9	20.86	-4.5714

Thermistor and casing in general good condition

Contractor Name:	AECOM	Inspection Date: 8/15/2011, 9/16/2011
Prepared By:	Dave Elwood	

Thermistor Information

Site Name:	FOX-M	Thermistor Location	n East	t Beach Landfill South	Lobe	
Thermistor Number:	VT-8	Inclination	Vert	ical		
Install Date:	24-Aug-07	First Date Event		27-Aug-10 Last Da	te Event	15-Aug-11
Coordinates and Elev	ation	N	7626818 E	4913	372 Elev	0
Length of Cable (m)	8.32	Cable Lead Above Groun	nd (m) 4.3	Nodal Points	9	
Datalogger Serial #	7040022			Cable Serial Number	TS0704	400022B8.2

Thermistor Inspection

	Good		Nee	eds Maintenance
Casing	Yes		No	
Cover	Yes		No	New lock required
Data Logger	Yes		No	
Cable	Yes		No	Minor cracking at connection
Beads	Yes		No	
Battery Installation Date	16-Sep-1	1		
Battery Levels	Main	11.34 V		Aux <u>13.26 V</u>

Manual Ground Temperature Readings

Bead	ohms	Degrees C
1	8.986	13.3097
2	11.055	8.7751
3	13.876	4.1684
4	16.04	0.5629
5	17.113	-0.7815
6	18.108	-1.8871
7	19.096	-2.8998
8	19.985	-3.8759

Bead	ohms	Degrees C
9	20.79	-4.6349

memory at 38%	
Thermistor and casing in general good condition	

Contractor Name:	AECOM	Inspection Date:	8/15/2011, 9/16/2011
Prepared By:	Dave Elwood		

Thermistor Information

Site Name:	FOX-M	Thermistor Location	East	Beach Landfill South	Lobe	
Thermistor Number:	VT-9	Inclination	Vertio	cal		
Install Date:	22-Aug-07	First Date Event		27-Aug-10 Last Da	te Event	15-Aug-11
Coordinates and Elev	ation	N	762038 E	491	574 Elev	0
Length of Cable (m)	8.22	Cable Lead Above Ground	I (m) 4.22	Nodal Points	9	
Datalogger Serial #	RDHM 070609			Cable Serial Numbe	r	TS07060017

Thermistor Inspection

	Good		Needs Mainten	ance	
Casing	Yes		No		
Cover	Yes		No		
Data Logger	Yes		No		
Cable	Yes		No		
Beads	Yes		No		
Battery Installation Date	16-Sep-11				
Battery Levels	Main	11.34 V		Aux	13.63 V

Manual Ground Temperature Readings

Bead	ohms	Degrees C
1	9.239	14.6661
2	9.574	11.9658
3	12.045	6.8893
4	14.484	2.9293
5	16.431	-0.0445
6	17.306	-1.0264
7	18.446	-2.2735
8	19.303	-3.2119

Bead	ohms	Degrees C
9	20.31	-4.1650

Thermistor and casing in general good condition

Contractor Name:	AECOM	Inspection Date:	8/15/2011, 9/16/2011
Prepared By:	Dave Elwood	_	

Thermistor Information

Site Name:	FOX-M	Thermistor Locatio	n East	Beach Landfill South L	₋obe	
Thermistor Number:	VT-10	Inclination	Verti	cal		
Install Date:	24-Aug-07	First Date Event		27-Aug-10 Last Date	e Event	15-Aug-11
Coordinates and Elev	ation	N	7627282 E	4916	05 Elev	0
Length of Cable (m)	8.22	Cable Lead Above Groun	nd (m) 4.22	Nodal Points	9	
Datalogger Serial #	7060003			Cable Serial Number	TS070	60003B-8.2

Thermistor Inspection

	Good		Nee	ds Maintenance
Casing	Yes		No	
Cover	Yes		No	
Data Logger	Yes		No	
Cable	Yes		No	slight cracking at connection
Beads	Yes		No	
Battery Installation Date	16-Sep-11	<u> </u>		
Battery Levels	Main	11.34 V		Aux <u>13.26 V</u>

Manual Ground Temperature Readings

Bead	ohms	Degrees C
1	8.731	13.1641
2	10.482	8.8909
3	13.713	4.6026
4	15.7	1.0018
5	16.866	-0.5574
6	17.787	-1.6406
7	18.854	-2.7494
8	19.695	-3.6453

ohms	Degrees C
20.55	-4.4234

Thermistor and casing in general good condition

Contractor Name:	AECOM	Inspection Date:	8/15/2011, 9/16/2011
Prepared By:	Dave Elwood		

Thermistor Information

Site Name:	FOX-M	Thermistor Location	n East	Beach Landfill Sou	uth Lobe	
Thermistor Number:	VT-11	Inclination	Verti	cal		
Install Date:	24-Aug-07	First Date Event		27-Aug-10 Last	Date Event	15-Aug-11
Coordinates and Elev	ation	N	7627318 E	4	91566 Elev	0
Length of Cable (m)	8.22	Cable Lead Above Groun	id (m) 4.22	Nodal Points	9	
Datalogger Serial #	7060002			Cable Serial Num	ber	TS07060002

Thermistor Inspection

	Good		Needs Mainter	nance	
Casing	Yes		No		
Cover	Yes		No		
Data Logger	Yes		No		
Cable	Yes		No		
Beads	Yes		No		
Battery Installation Date	16-Sep-11				
Battery Levels	Main	11.34 V		Aux	12.29 V

Manual Ground Temperature Readings

Bead	ohms	Degrees C
1	8.204	12.7339
2	9.817	9.7338
3	13.56	4.7473
4	15.55	1.1933
5	16.925	-0.5778
6	17.927	-1.6818
7	19.008	-2.8324
8	19.947	-3.8391

20.85	4 0007
	-4.6667
	20.85

Thermistor and casing in general good condition

Annex 1

Laboratory Data

ASU#	13847		Report ID:	FOX-M W1					
Client:	ESG		Date Submitted:	25-Aug-11					
			Date tested:	25-Aug-11					
Site:	FOX-M		Date:	26-Aug-11					
	11-219		Matrix:	water					
Report of Analysis									
Results relate only to the	e items tested								
Total Metals	Results in mg/L								
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
11-14345	< 0.005	0.018	< 0.003	< 0.001	< 0.010	< 0.010	0.058	< 0.003	
11-14346	< 0.005	0.011	< 0.003	< 0.001	< 0.010	< 0.010	0.056	< 0.003	
11-14347	< 0.005	0.018	< 0.003	< 0.001	< 0.010	0.244	0.056	< 0.003	
11-14348	0.007	0.104	< 0.003	< 0.001	< 0.010	< 0.010	0.260	< 0.003	
11-14349	0.006	0.007	< 0.003	< 0.001	< 0.010	< 0.010	0.058	< 0.003	
11-14350	0.006	0.017	< 0.003	< 0.001	< 0.010	< 0.010	0.220	< 0.003	
11-14351	0.006	< 0.005	< 0.003	< 0.001	< 0.010	0.065	0.031	< 0.003	*
11-14052	0.016	0.079	0.010	0.001	0.013	0.188	0.220	0.014	
11-14053	< 0.005	< 0.005	< 0.003	< 0.001	< 0.010	< 0.010	< 0.005	< 0.003	
11-14054	< 0.005	< 0.005	< 0.003	< 0.001	< 0.010	< 0.010	< 0.005	< 0.003	
Blank	< 0.005	< 0.005	< 0.003	< 0.001	< 0.010	< 0.010	< 0.005	< 0.003	
Control	1.57	1.62	1.60	0.79	8.08	3.02	0.82	0.75	
Control Target	1.60	1.60	1.60	0.80	8.00	3.00	0.80	0.80	
-									
11-14351	0.006	< 0.005	< 0.003	< 0.001	< 0.010	0.066	0.015	< 0.003	
11-14351	0.006	0.007	< 0.003	< 0.001	< 0.010	0.065	0.047	< 0.003	

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: 22023
Site: Fox-M
Client No: 11-219
Samples Received: 25-Aug-11
Date of analysis: 25-Aug-11
Method No: ASG 015
Date Reported: 31-Aug-11
Sheet No: 1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	14345	mg/L	< 0.003	< 0.003
W	14346	mg/L	< 0.003	< 0.003
W	14347	mg/L	< 0.003	< 0.003
W	14348	mg/L	< 0.003	< 0.003
W	14349	mg/L	< 0.003	< 0.003
W	14350	mg/L	< 0.003	< 0.003
W	14351	mg/L	< 0.003	< 0.003
W	14352	mg/L	< 0.003	< 0.003
W	14353	mg/L	< 0.003	< 0.003
W	14354	mg/L	< 0.003	< 0.003

^{**}Report Values in PPM**

LABORATORY QA/QC

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

 $^{^{\}star\star}$ 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

The results reported here relate only to the items tested.	
·	Authorization:
Prepared By:	Julie McDonald, Laboratory Manager
Chad Hind, Analyst	PCBregw22023r1.xls

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: 22023

 12 Verite Ave
 Site: Fox-M

 Dept. of Chem. / Chem. Eng., RMC
 Client No: 11-219

 P.O. Box 17000, Stn. Forces
 Samples Received: 25-Aug-11

 Kingston, Ontario K7K 7B4
 Date of analysis: 26-Aug-11

 (613) 541-6000 ext 6567
 Method No: ASG 021

 Fax: (613) 541-6596
 Date Reported: 26-Aug-11

Sheet: 1 of 1

Test Report I.D: Hgw22023r1.xls

RESULTS OF MERCURY ANALYSIS

Sample	Mercury [^]
ID	mg/L
14345	< 0.0004
14346	< 0.0004
14347	< 0.0004
14348	< 0.0004
14349	< 0.0004
14350	< 0.0004
14351	< 0.0004
14352	< 0.0004
14353	< 0.0004
14354	< 0.0004

[^] Acid digestion performed.

LABORATORY QA/QC

Sample	Mercury^
ID	mg/L
Blank	< 0.0004
Control Target	0.0040
Control Sample	0.0042

The results reported here relate only to the items tested.	
Prepared By:	Authorization:
Yi Wang;	Julie McDonald;
Analyst	Laboratory Manager

[#] Reported at 0.0004 mg/L detection limit.

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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: 22023

Site: Fox-M Client Login No: 11-219 Date Sampled: 13-15-Aug-11 Samples Received: 25-Aug-11 Date of analysis: 30-Aug-11

Method No: ASG 055 ~ Date Reported: 06-Sep-11 Sheet: 1 of 1

RESULTS OF PHC IN WATER ANALYSIS - F1 FRACTION^

Unit	F1 Fraction (ppm)
mg/L	< 0.05
	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L

LABORATORY QA/QC SECTION

Blank	mg/L	< 0.05
Gasoline Control Sample	mg/L	0.15
Gasoline Control Target	mg/L	0.16

^ BTEX contribution to F1 fraction not subtracted from reported values Average response factors for hexane and decane were within 30% of the toluene response factor. Linearity of calibration standards is within 15%.

The results reported here relate only to the items tested	
Prepared by:	Authorization:
Chad Hind ; Analyst	Julie McDonald, Laboratory Mana

Julie McDonald, Laboratory Manager

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: 22023

 12 Verite Ave
 Site: Fox-M

 Dept. of Chem. / Chem. Eng., RMC
 Client Login No: 11-219

 P.O. Box 17000, Stn. Forces
 Samples Received: 25-Aug-11

 Kingston, Ontario K7K 7B4
 Date of analysis: 8-Sep-11

 (613) 541-6000 ext 6567
 Date Sampled: 13-15 Aug 11

 Fax: (613) 541-6596
 Method No: ASG 053~

Method No: ASG 053~
Date Reported: 13-Sep-11
Sheet: 1 of 1

RESULTS OF PHC IN WATER ANALYSIS^

Sample I.D.	Unit	F2 Fraction (ppm)	F3 Fraction (ppm)	F4 Fraction (ppm)	F4G (ppm)
14345	mg/L	< 0.5	< 1.0	< 1.0	N/A
14346	mg/L	< 0.5	< 1.0	< 1.0	N/A
14347	mg/L	< 0.5	< 1.0	< 1.0	N/A
14348	mg/L	< 0.5	< 1.0	< 1.0	N/A
14349	mg/L	< 0.5	< 1.0	< 1.0	N/A
14350	mg/L	< 0.5	< 1.0	< 1.0	N/A
14351	mg/L	< 0.5	< 1.0	< 1.0	N/A
14352	mg/L	< 0.5	< 1.0	< 1.0	N/A
14353	mg/L	< 0.5	< 1.0	< 1.0	N/A
14354	mg/L	< 0.5	< 1.0	< 1.0	N/A

LABORATORY QA/QC FOR F2-F4 FRACTIONS

Sample I.D.	Unit	F2 Fraction (ppm)	F3 Fraction (ppm)	F4 Fraction (ppm)	F4G (ppm)	
Blank	mg/L	< 0.5	< 1.0	< 1.0	N/A	

Diesel Spike	mg/L	8.5
Diesel Spike Target	mg/L	10
Control Standard	mg/L	2400
Control Standard Target	mg/L	2500

[^]PAH contributions to F2-F4 not subtracted from reported values.

Gravimetric heavy hydrocarbons cannot be added to the C6-C50 hydrocarbons. The chromatogram descended to baseline by the C50 retention time. Average response factors for C10, C16, C34 were within 10% of each other. C50 response factor was within 70% of the C10, C16, C34 average response factor. Linearity of calibration standards was within 15%. Extraction and analysis holding times for samples were met.

The results reported here relate only to the items tested.	
Prepared By:	Authorization:
Kate Campbell, Analyst	Julie McDonald, Laboratory Manager
	Test Report I.D: PHCw22023r1(F2-F4).xls

[~]The method used complies with the Reference Method for the CWS PHC.

^{*}Averaged result of duplicate

ASU#	13850		Report ID:	FOX-M S1					
Client:	ESG		Date Submitted:	25-Aug-11					
			Date Tested:	30-Aug-11					
Site:	FOX-M		Date Reported:	01-Sep-11					
ESG#	11-218		Matrix:	Soil					
Report of Analysis				All results in ug/g	3				
Results relate only to the	ne items tested								
Sample	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
44.44000					4.0		• • •		Ш
11-14300	9.1	6.9	<5.0	<1.0	<10	<15	<20	2.7	*
11-14301	3.4 4.7	6.8	<5.0 <5.0	<1.0	<10	18 16	<20 <20	6.5 2.4	
11-14302 11-14303	5.1	7.4 6.9	<5.0 <5.0	<1.0 <1.0	<10 <10	<15	<20	2.4	
11-14303	5.0	10.1	<5.0	<1.0	<10	<15	<20	4.9	
11-14304	5.3	10.1	<5.0	<1.0	<10	16	<20	4.9	
11-14305	4.0	7.3	<5.0	<1.0	<10	<15	<20	2.5	
11-14307	3.7	6.7	<5.0	<1.0	<10	<15	<20	2.6	
11-14307	3.5	9.2	<5.0	<1.0	<10	<15	<20	2.6	
11-14309	4.0	9.9	<5.0	<1.0	<10	16	<20	2.8	
11-14310	3.1	8.1	<5.0	<1.0	<10	<15	<20	2.0	*
11-14311	3.5	8.1	<5.0	<1.0	<10	<15	<20	1.8	
11-14313	3.4	7.2	<5.0	<1.0	<10	<15	<20	2.5	
11-14315	4.2	8.7	<5.0	<1.0	<10	<15	<20	2.7	
11-14317	5.0	6.8	<5.0	<1.0	<10	<15	<20	6.5	
11-14319	4.6	7.5	<5.0	<1.0	<10	<15	<20	2.6	
11-14321	4.4	7.2	<5.0	<1.0	<10	<15	<20	2.4	
11-14323	169.9	7.8	<5.0	<1.0	<10	<15	<20	3.8	*
11-14325	<3.0	6.7	<5.0	<1.0	<10	<15	<20	2.4	
11-14327	<3.0	5.2	<5.0	<1.0	<10	<15	<20	2.1	
11-14328	8.7	9.7	< 5.0	<1.0	478	18	<20	2.8	
11-14329	6.0	8.4	<5.0	<1.0	124	<15	<20	2.7	
11-14330	7.7	59.0	<5.0	<1.0	12	23	120	2.7	
11-14331	5.6	7.2	<5.0	<1.0	<10	18	<20	2.4	
11-14332	10.5	9.1	<5.0	<1.0	19	23	<20	4.0	*
11-14333	12.9	9.1	<5.0	<1.0	15	21	<20	3.4	
11-14334	4.7	9.3	<5.0	<1.0	10	<15	<20	2.6	
11-14335	4.7	7.0	<5.0	<1.0	<10	<15	<20	2.7	
Blank	<3.0	<5.0	<5.0	<1.0	<10	<15	<20	<1.0	Н
Blank	<3.0	<5.0	<5.0	<1.0	<10	<15	<20	<1.0	
Diank	\\ 5.0	₹3.0	\(\)	<1.0	\10	\13	<20	<1.0	Н
MESS-3	27.2	33.4	11.1	<1.0	18	118	33	16.3	
SS-2	196.8	59.9	15.6	1.9	122	490	45	88.9	
						., ,		0017	
11-14300	13.8	6.6	<5.0	<1.0	<10	<15	<20	2.5	
11-14300	4.3	7.2	<5.0	<1.0	<10	<15	<20	2.8	
11-14310	3.0	7.4	<5.0	<1.0	<10	<15	<20	2.0	
11-14310	3.2	8.8	< 5.0	<1.0	<10	<15	<20	2.1	
11-14323	4.4	7.2	< 5.0	<1.0	<10	<15	<20	3.5	Ш
11-14323	335.4	8.3	<5.0	<1.0	<10	<15	<20	4.1	Ш
11.6.1222	12.0	6			2:	<i>a :</i>	•		Ш
11-14332	12.0	9.7	<5.0	<1.0	21	24	<20	4.4	Ш
11-14332	9.0	8.4	< 5.0	<1.0	18	22	<20	3.6	

ASU#	13850		Report ID:	FOX-M S2					
Client:	ESG		Date Submitted:	25-Aug-11					
			Date Tested:	30-Aug-11					
Site:	FOX-M		Date Reported:	01-Sep-11					
ESG#	11-218		Matrix:	Soil					
Report of Analysis				All results in ug/g	3				
Results relate only to the	items tested								
Sample	Cu	Ni	Со	Cd	Pb	Zn	Cr	As	
11-14336	5.8	6.6	<5.0	<1.0	<10	26	<20	2.8	
11-14337	3.9	5.8	<5.0	<1.0	<10	<15	<20	2.7	
11-14338	5.2	8.5	<5.0	<1.0	<10	17	<20	2.3	
11-14339	3.9	7.1	<5.0	<1.0	<10	17	< 20	2.5	*
11-14340	4.6	7.8	<5.0	<1.0	10	16	<20	3.0	
11-14341	3.2	6.5	<5.0	<1.0	<10	<15	<20	1.4	
11-14342	3.3	7.3	<5.0	<1.0	<10	<15	<20	1.8	
11-14343	3.7	7.5	<5.0	<1.0	<10	<15	<20	1.4	
Blank	<3.0	< 5.0	<5.0	<1.0	<10	<15	<20	<1.0	
Blank	<3.0	< 5.0	< 5.0	<1.0	<10	<15	<20	<1.0	
MESS-3	29.6	39.4	12.6	<1.0	19	140	52	18.1	
SS-2	185.0	56.6	14.9	1.9	116	461	47	78.2	
11-14339	3.7	6.9	<5.0	<1.0	<10	16	<20	2.5	
11-14339	4.1	7.3	<5.0	<1.0	<10	18	<20	2.5	
						l		1	Ш

ASU#	13993		Report ID:	FOX-M S3					
Client:	ESG		Date Submitted:	09-Dec-11					
			Date Tested:	12-Dec-11					
Site:	FOX-M		Date Reported:	13-Dec-11					
ESG#	11-351		Matrix:	Soil					
Report of Analysis			All results in ug/g						
Results relate only to the	e items tested								
Sample	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
11-14316	4.3	5.8	< 5.0	<1.0	<10	<15	<20	2.3	*
11-14322	4.3	6.5	< 5.0	<1.0	<10	<15	<20	3.4	
11-14326	<3.0	< 5.0	< 5.0	<1.0	<10	<15	<20	1.8	
Blank	<3.0	< 5.0	< 5.0	<1.0	<10	<15	<20	<1.0	
Blank	<3.0	< 5.0	<5.0	<1.0	<10	<15	<20	<1.0	
MESS-3	30.1	36.8	11.6	<1.0	21	126	38	16.8	
SS-2	214.3	51.7	13.6	1.8	118	454	44	67.7	
11-14316	4.3	5.9	<5.0	<1.0	<10	<15	<20	2.0	
11-14316	4.2	5.7	<5.0	<1.0	<10	<15	<20	2.5	

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Client: ESG ASG Login No: 22015

12 Verite Ave Site: Fox-M
Dept. of Chem. / Chem. Eng., RMC
P.O. Box 17000, Stn. Forces Samples Received: 25-Aug-11

Kingston, Ontario K7K 7B4 Date of analysis: 8-Sep-11 (613) 541-6000 ext 6567 Method No: ASG 005C Fax: (613) 541-6596 Date Reported: 15-Sep-11

Sheet No: 1 of 1

RESULTS OF PCB ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
S	14300	μg/g	< 0.05	< 0.05
S	14301	μg/g	< 0.05	< 0.05
S	14302	μg/g	< 0.05	< 0.05
S	14303	μg/g	< 0.05	< 0.05
S	14304	μg/g	< 0.05	< 0.05
S	14305	μg/g	< 0.05	< 0.05
S	14306	μg/g	< 0.05	< 0.05
S	14307	μg/g	< 0.05	< 0.05
S	14308	μg/g	< 0.05	< 0.05
S	14309	μg/g	< 0.05	< 0.05
S	14310	μg/g	< 0.05	< 0.05
S	14311	μg/g	< 0.05	< 0.05
S	14313	μg/g	< 0.05	< 0.05
S	14315	μg/g	< 0.05	< 0.05
S	14317	μg/g	< 0.05	< 0.05
S	14319	μg/g	< 0.05	< 0.05
S	14321	μg/g	< 0.05	< 0.05
S	14323	μg/g	< 0.05	< 0.05

^{*} Averaged result of duplicate

The results reported here relate only to the items tested.

LABORATORY QA/QC

S	38338 ; Duplicate	μg/g	< 0.05 ; < 0.05	< 0.05 ; < 0.05
	Blank	μg/g	< 0.1	< 0.05
	Control Sample	μg/g	5.3	< 0.05
	Control Sample Target	μg/g	5.0	< 0.05

·	
Prepared By:	Authorization:
Stephanie Trickey, Analyst	Julie McDonald, Lab Manager
	PCBs22015r1.xls

^{**} O = Oil, S = Soil, C = Concrete, PC = Paint Chips, SW = Swabs, W = Water, P = Plants

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Client: ESG ASG Login No: 22015

12 Verite Ave Site: Fox-M
Dept. of Chem. / Chem. Eng., RMC
P.O. Box 17000, Stn. Forces Samples Received: 25-Aug-11

 Kingston, Ontario K7K 7B4
 Date of analysis: 8-Sep-11

 (613) 541-6000 ext 6567
 Method No: ASG 005C

 Fax: (613) 541-6596
 Date Reported: 15-Sep-11

Sheet No: 1 of 1

PCBs22015r2.xls

RESULTS OF PCB ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
S	14325*	μg/g	< 0.05	< 0.05
S	14327	μg/g	< 0.05	< 0.05
S	14328	μg/g	< 0.05	< 0.05
S	14329	μg/g	< 0.05	< 0.05
S	14330	μg/g	< 0.05	< 0.05
S	14331	μg/g	< 0.05	< 0.05
S	14332	μg/g	0.10	< 0.05
S	14333	μg/g	0.07	< 0.05
S	14334	μg/g	< 0.05	< 0.05
S	14335	μg/g	< 0.05	< 0.05
S	14336	μg/g	< 0.05	< 0.05
S	14337	μg/g	< 0.05	< 0.05
S	14338	μg/g	< 0.05	< 0.05
S	14339	μg/g	< 0.05	< 0.05
S	14340	μg/g	0.28	< 0.05
S	14341	μg/g	0.10	< 0.05
S	14342	μg/g	< 0.05	< 0.05
			·	

^{*} Averaged result of duplicate

LABORATORY QA/QC

S	14325 ; Duplicate	μg/g	< 0.05 ; < 0.05	< 0.05 ; < 0.05
	Blank	μg/g	< 0.05	< 0.05
	Control Sample	μg/g	6.5	< 0.05
	Control Sample Target	μg/g	5.0	< 0.05

The results reported here relate only to the items tested.		
Prepared By:	Authorization:	
Stephanie Trickey, Analyst		Julie McDonald, Lab Manager

^{**} O = Oil, S = Soil, C = Concrete, PC = Paint Chips, SW = Swabs, W = Water, P = Plants

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Client: ESG ASG Login No: 22015

12 Verite Ave Site: Fox-M
Dept. of Chem. / Chem. Eng., RMC Client No: 11-218
P.O. Box 17000, Stn. Forces Samples Received: 25-Aug-11

 Kingston, Ontario K7K 7B4
 Date of analysis: 15-Sep-11

 (613) 541-6000 ext 6567
 Method No: ASG 005C

 Fax: (613) 541-6596
 Date Reported: 16-Sep-11

Sheet No: 1 of 1

PCBs22015r3.xls

RESULTS OF PCB ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
S	14343	μg/g	< 0.05	< 0.05

^{*} Averaged result of duplicate

LABORATORY QA/QC

Blank	μg/g	< 0.05	< 0.05
Control Sample	μg/g	6.4	< 0.05
Control Sample Target	μg/g	5.0	< 0.05

The results reported here relate only to the items tested.		
Prepared By:	Authorization:	
Stephanie Trickey, Analyst	Julie McDonald, Lab N	∕lanager

^{**} O = Oil, S = Soil, C = Concrete, PC = Paint Chips, SW = Swabs, W = Water, P = Plants

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Client: ESG ASG Login No: 22282

12 Verite Ave Site: Fox-M
Dept. of Chem. / Chem. Eng., RMC Client No: 11-351
P.O. Box 17000, Stn. Forces Samples Received: 9-Dec-11
Kingston, Ontario K7K 7B4 Date of analysis: 19-Dec-11

(613) 541-6000 ext 6567 Method No: ASG 005C Fax: (613) 541-6596 Date Reported: 20-Dec-11

Sheet No: 1 of 1

PCB extra.xls

RESULTS OF PCB ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
S	14316	μg/g	< 0.05	< 0.05
S	14322	μg/g	< 0.05	< 0.05
S	14326*	μg/g	< 0.05	< 0.05

^{*} Averaged result of duplicate

LABORATORY QA/QC

S	14326 ; Duplicate	μg/g	< 0.05 ; < 0.05	< 0.05 ; < 0.05
	Blank	μg/g	< 0.05	< 0.05
	Control Sample	μg/g	5.1	< 0.05
	Control Sample Target	μg/g	5.0	< 0.05

The results reported here relate only to the items tested.		
Prepared By:	Authorization:	
Stephanie Trickey, Analyst		Julie McDonald, Lab Manager

^{**} O = Oil, S = Soil, C = Concrete, PC = Paint Chips, SW = Swabs, W = Water, P = Plants

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Client: ESG ASG Login No: 22015

12 Verite Ave

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Sheet: 1 of 1

RESULTS OF MERCURY ANALYSIS

Sample	Mercury [^]	
ID	μg/g	
14341	< 0.1	
14342	< 0.1	
14343	< 0.1	

[^] Acid digestion performed.

LABORATORY QA/QC

Sample	Mercury [^]	
ID	μg/g	
Blank	< 0.1	
Control Target	0.44	
Control Sample	0.48	

The results reported here relate only to the items tested.		
Prepared By:	Authorization:	
Yi Wang;	Julie	e McDonald;
Analyst	Laborato	ory Manager

Test Report I.D: Hgs-22015r1.xls

[#] Reported at 0.1µg/g detection limit.

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Client: ESG ASG Login No: 22015
12 Verite Ave Site: Fox-M

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The results reported here relate only to the items tested.

(613) 541-6000 ext 6567

Site: Fox-M Client No: 11-218 Samples Received: 25-Aug-11 Date of analysis: 15-Sep-11 Method No: ASG 014

Fax: (613) 541-6596 Date Reported: 15-Sep-11 Sheet: 1 of 1

RESULTS OF MERCURY IN SOIL ANALYSIS

LIS OF MILICOL	THE COLL AND
Sample	Mercury
ID	μg/g
14300*	< 0.1
14301	< 0.1
14302	< 0.1
14303	< 0.1
14304	< 0.1
14305	< 0.1
14306	< 0.1
14307	< 0.1
14308	< 0.1
14309	< 0.1
14310	< 0.1
14311	< 0.1
14313	< 0.1
14315	< 0.1
14317	< 0.1
14319	< 0.1
14321	< 0.1
14323	< 0.1
14325	< 0.1
14327	< 0.1
14328	< 0.1
14329	< 0.1
14330	< 0.1
14331	< 0.1
14332	< 0.1
14333	< 0.1
14334	< 0.1
14335	< 0.1
14336	< 0.1
14337	< 0.1
14338	< 0.1
14339	< 0.1
14340	< 0.1

LABORATORY QA/QC

Sample	Mercury
ID	μg/g
Duplicate ; 14300*	< 0.1 ; < 0.1
Blank	< 0.1
Control Target	0.44
Control Sample	0.31

^{*} Averaged result of duplicates

, , , , , , , , , , , , , , , , , , , ,	
Prepared By:	Authorization:
Curtis McDonald;	Julie McDonald;
Analyst	Laboratory Manager
·	Test Report I.D: Hgs-22015r2.xls

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Client: ESG ASG Login No: 22282

 12 Verite Ave
 Site: Fox-M

 Dept. of Chem. / Chem. Eng., RMC
 Client No: 11-351

 P.O. Box 17000, Stn. Forces
 Samples Received: 09-Dec-11

 Kingston, Ontario K7K 7B4
 Date of analysis: 14-Dec-11

 (613) 541-6000 ext 6567
 Method No: ASG 014

 Fax: (613) 541-6596
 Date Reported: 14-Dec-11

Sheet: 1 of 1

RESULTS OF MERCURY IN SOIL ANALYSIS

Sample	Mercury	
ID	μg/g	
14316	< 0.1	
14322*	< 0.1	
14326	< 0.1	

LABORATORY QA/QC

Sample	Mercury
ID	μg/g
Duplicate ; 14322*	< 0.1 ; < 0.1
Blank	< 0.1
Control Target	0.44
Control Sample	0.33

^{*} Averaged result of duplicates

The results reported here relate only to the items tested	
Prepared By:	Authorization:
Curtis McDonald;	Julie McDonald;
Analyst	Laboratory Manager
	Test Report I.D: mercury fox-m extra.xls

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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: 22015 Site: Fox-M Client Login No: 11-218 Date Sampled: 13-15-Aug-11 Samples Received: 25-Aug-11 Date of analysis: 26-Aug-11 Method No: ASG 053 ~

> Date Reported: 14-Sep-11 Sheet: 1 of 1

RESULTS OF PHC IN SOIL ANALYSIS - F1 FRACTION^

Sample I.D.	Unit	F1 Fraction (ppm)
14335*	mg/kg	< 10
14336	mg/kg	< 10
14337	mg/kg	< 10
14338	mg/kg	< 10
14339	mg/kg	< 10
14340	mg/kg	< 10
14341	mg/kg	< 10
14342	mg/kg	< 10
14343	mg/kg	< 10

LABORATORY QA/QC SECTION

Blank	mg/kg	< 10
Duplicate; 14335*	mg/kg	< 10 ; < 10
Gasoline Control Sample	mg/kg	32
Gasoline Control Target	mg/kg	29

[^] BTEX contribution to F1 fraction not subtracted from reported values

The results reported here relate only to the items tested

Prepared by:	
Chad Hind, Analyst	

^{*} Averaged result of duplicates

[~] This method complies with the reference method for the CWS PHC and is validated for use in the laboratory. Linearity of calibration standards is within 15%. Extraction and analysis holding times for samples were met.

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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: 22015 Site: Fox-M Client Login No: 11-218 Date Sampled: 13-15-Aug-11 Samples Received: 25-Aug-11 Date of analysis: 26-Aug-11 Method No: ASG 053 ~

Date Reported: 09-Sep-11 Sheet: 1 of 1

RESULTS OF PHC IN SOIL ANALYSIS - F1 FRACTION^

Sample I.D.	Unit	F1 Fraction
		(ppm)
14300*	mg/kg	< 10
14301	mg/kg	< 10
14302	mg/kg	< 10
14303	mg/kg	< 10
14304	mg/kg	< 10
14305	mg/kg	< 10
14306	mg/kg	< 10
14307	mg/kg	< 10
14308	mg/kg	< 10
14309	mg/kg	< 10
14310	mg/kg	< 10
14311	mg/kg	< 10
14313	mg/kg	< 10
14315	mg/kg	< 10
14317	mg/kg	< 10
14319	mg/kg	< 10
14321	mg/kg	< 10
14323	mg/kg	< 10
14325	mg/kg	< 10
14327	mg/kg	< 10
14328	mg/kg	< 10
14329	mg/kg	< 10
14330	mg/kg	< 10
14331	mg/kg	< 10
14332	mg/kg	< 10
14333	mg/kg	< 10
14334	mg/kg	< 10

LABORATORY QA/QC SECTION

Blank	mg/kg	< 10
Duplicate; 14300*	mg/kg	< 10 ; < 10
Gasoline Control Sample	mg/kg	29
Gasoline Control Target	mg/kg	29

[^] BTEX contribution to F1 fraction not subtracted from reported values

The results reported here relate only to the items tested

Prepared by:______Chad Hind, Analyst

Authorization:______
Julie McDonald, Laboratory Manager

^{*} Averaged result of duplicates

[~] This method complies with the reference method for the CWS PHC and is validated for use in the laboratory. Linearity of calibration standards is within 15%. Extraction and analysis holding times for samples were met.

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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

The results reported here relate only to the items tested

ASG Login No: 22282 Site: Fox-M Client Login No: 11-351

Client Login No: 11-351
Date Sampled: 13-Aug-11
Samples Received: 09-Dec-11
Date of analysis: 09-Dec-11
Method No: ASG 053 ~
Date Reported: 13-Dec-11

Sheet: 1 of 1

RESULTS OF PHC IN SOIL ANALYSIS - F1 FRACTION^

Unit	F1 Fraction
	(ppm)
mg/kg	< 10
mg/kg	< 10
mg/kg	< 10
	mg/kg mg/kg

LABORATORY QA/QC SECTION

Blank	mg/kg	< 10
Duplicate; 14316*	mg/kg	< 10 ; < 10
Gasoline Control Sample	mg/kg	28
Gasoline Control Target	mg/kg	29

[^] BTEX contribution to F1 fraction not subtracted from reported values

Extraction and analysis holding times for samples were met.

Prepared by:	Authorization:
Chad Hind, Analyst	Julie McDonald, Laboratory Manager

^{*} Averaged result of duplicates

[~] This method complies with the reference method for the CWS PHC and is validated for use in the laboratory. Linearity of calibration standards is within 15%.

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Client : ESG

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(613) 541-6000 ext 6567 Fax: (613) 541-6596 ASG Login No: 22015

Site: Fox-M Client Login No: 11-218 Samples Received: 25-Aug-11 Date of analysis: 7-Sep-11 Date Sampled: 13-15 Aug 11

Method No: ASG 053~
Date Reported: 15-Sep-11
Sheet: 1 of 1

RESULTS OF PHC IN SOIL ANALYSIS^

Sample I.D.	Unit	F2 Fraction	F3 Fraction	F4 Fraction	F4G
-		(ppm)	(ppm)	(ppm)	(ppm)
14300	mg/kg	< 4.0	11	< 8.0	N/A
14301	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14302	mg/kg	7.3	< 9.0	< 8.0	N/A
14303	mg/kg	6.8	12	< 8.0	N/A
14304	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14305	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14306	mg/kg	4.4	< 9.0	< 8.0	N/A
14307	mg/kg	< 4.0	9.0	< 8.0	N/A
14308	mg/kg	4.7	< 9.0	< 8.0	N/A
14309	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14310	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14311	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14313	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14315	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14317	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14319	mg/kg	4.1	< 9.0	< 8.0	N/A
14321	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14323	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14325	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14327	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14328	mg/kg	< 4.0	13	11	N/A
14329	mg/kg	< 4.0	10	< 8.0	N/A
14330	mg/kg	< 4.0	9.2	< 8.0	N/A
14331	mg/kg	< 4.0	15	< 8.0	N/A
14332	mg/kg	< 4.0	57	13	N/A
14333*	mg/kg	< 4.1	21	8.7	N/A
14334	mg/kg	< 4.0	12	< 8.0	N/A

LABORATORY QA/QC FOR F2-F4 FRACTIONS

Sample I.D.	Unit	F2 Fraction (ppm)	F3 Fraction (ppm)	F4 Fraction (ppm)	F4G (ppm)
Duplicate; 14333*	mg/kg	< 4.0 ; < 4.0	20 ; 21	8.2 ; 9.1	N/A
Blank	mg/kg	< 4.0	< 9.0	< 8.0	N/A

Diesel Spike	mg/kg	40
Diesel Spike Target	mg/kg	50
Control Standard	mg/kg	2600
Control Standard Target	mg/kg	2500

[^]PAH contributions to F2-F4 not subtracted from reported values.

Gravimetric heavy hydrocarbons cannot be added to the C6-C50 hydrocarbons. The chromatogram descended to baseline by the C50 retention time. Average response factors for C10, C16, C34 were within 10% of each other. C50 response factor was within 70% of the C10, C16, C34 average response factor. Linearity of calibration standards was within 15%. Extraction and analysis holding times for samples were met.

The results reported here relate only to the items tested.

Prepared By:	Authorization:
Kate Campbell, Analyst	Julie McDonald, Laboratoy Manage
	Test Report I.D: PHCs22015r1(F2-F4).xl

[~]The method used complies with the Reference Method for the CWS PHC.

^{*}Averaged result of duplicate

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Client : ESG ASG Login No: 22015

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 Site: Fox-M
Client Login No: 11-218
Samples Received: 25-Aug-11
Date of analysis: 7-Sep-11
Date Sampled: 13-15 Aug 11
Method No: ASG 053~
Date Reported: 15-Sep-11
Sheet: 1 of 1

RESULTS OF PHC IN SOIL ANALYSIS^

Sample I.D.	Unit	F2 Fraction (ppm)	F3 Fraction (ppm)	F4 Fraction (ppm)	F4G (ppm)
14335	mg/kg	< 4.0	13	< 8.0	N/A
14336	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14337	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14338	mg/kg	< 4.0	11	< 8.0	N/A
14339	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14340	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14341	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14342	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14343*	mg/kg	< 4.0	< 9.0	< 8.0	N/A

LABORATORY QA/QC FOR F2-F4 FRACTIONS

Sample I.D.	Unit	F2 Fraction (ppm)	F3 Fraction (ppm)	F4 Fraction (ppm)	F4G (ppm)
Duplicate; 14343*	mg/kg	< 4.0 ; < 4.0	< 9.0 ; < 9.0	< 8.0 ; < 8.0	N/A
Blank	mg/kg	< 4.0	< 9.0	< 8.0	N/A

Diesel Spike	mg/kg	41
Diesel Spike Target	mg/kg	50
Control Standard	mg/kg	2600
Control Standard Target	mg/kg	2500

[^]PAH contributions to F2-F4 not subtracted from reported values.

Gravimetric heavy hydrocarbons cannot be added to the C6-C50 hydrocarbons. The chromatogram descended to baseline by the C50 retention time. Average response factors for C10, C16, C34 were within 10% of each other. C50 response factor was within 70% of the C10, C16, C34 average response factor. Linearity of calibration standards was within 15%. Extraction and analysis holding times for samples were met.

The results reported here relate only to the items tested.	
Prepared By:	Authorization:
Kate Campbell, Analyst	Julie McDonald, Laboratory Manager
	Test Report I.D: PHCs22015r2(F2-F4).xls

[~]The method used complies with the Reference Method for the CWS PHC.

^{*}Averaged result of duplicate

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The results reported here relate only to the items tested

ASG Login No: 22282

Site: Fox-M Client Login No: 11-351 Samples Received: 9-Dec-11 Date of analysis: 9-Dec-11 Date Sampled: 13-Aug-11

Method No: ASG 053~ Date Reported: 16-Dec-11

Sheet: 1 of 1

RESULTS OF PHC IN SOIL ANALYSIS^

Sample I.D.	Unit	F2 Fraction (ppm)	F3 Fraction (ppm)	F4 Fraction (ppm)	F4G (ppm)
14316	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14322	mg/kg	< 4.0	< 9.0	< 8.0	N/A
14326*	mg/kg	< 4.0	< 9.0	< 8.0	N/A

LABORATORY QA/QC FOR F2-F4 FRACTIONS

Sample I.D.	Unit	F2 Fraction (ppm)	F3 Fraction (ppm)	F4 Fraction (ppm)	F4G (ppm)
Duplicate; 14326*	mg/kg	< 4.0 ; < 4.0	< 9.0 ; < 9.0	< 8.0 ; < 8.0	N/A
Blank	mg/kg	< 4.0	< 9.0	< 8.0	N/A

Diesel Spike	mg/kg	38
Diesel Spike Target	mg/kg	50
Control Standard	mg/kg	2300
Control Standard Target	mg/kg	2500

[^]PAH contributions to F2-F4 not subtracted from reported values.

Gravimetric heavy hydrocarbons cannot be added to the C6-C50 hydrocarbons. The chromatogram descended to baseline by the C50 retention time. Average response factors for C10, C16, C34 were within 10% of each other. C50 response factor was within 70% of the C10, C16, C34 average response factor. Linearity of calibration standards was within 15%. Extraction and analysis holding times for samples were met.

The results reported field feliate erry to the feliate total.	
Prepared By:	Authorization:
Cate Campbell, Analyst	Julie McDonald, Laboratory Manage

[~]The method used complies with the Reference Method for the CWS PHC.

^{*}Averaged result of duplicate

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Client: ESG ASG Login No: 22282

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 Site: Fox-M

 Dept. of Chem. / Chem. Eng., RMC
 Client Login No: 11-351

 P.O. Box 17000, Stn. Forces
 Samples Received: 09-Dec-11

 Kingston, Ontario K7K 7B4
 Date of analysis: 09-Dec-11

 (613) 541-6000 ext 6567
 Method No: ASG 053~

 Fax: (613) 541-6596
 Date Reported: 16-Dec-11

Sheet: 1 of 1

RESULTS OF % MOISTURE ANALYSIS

Sample I.D.	Moisture (%)
14316	2.3
14322	2.2
14326*	2.7

The results reported here relate only to the items tested.	
Prepared By:	Authorization:
Kate Campbell, Analyst	Julie McDonald, Laboratory Manager
	Test Report I.D: F-M PHC 2nd moisture.xls

FOX-M-MON-DLCU.RQ.11-309 Candice Casucci, Department of National Defense - Astra L1071571 13-Oct-11 09:15 27-Oct-11

Project Report To ALS File No. Date Received Date

RESULTS OF ANALYSIS

RESULTS OF ANALYSIS								
Sample ID				14315				14342
								15-AUG-11
	00:00		00:00		00:00	00:00		00:00
•								L1071571-8
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Physical Tests								
% Moisture	6.46	12.1	12.8	9.76	4.29	4.53	4.21	3.61
Metals								
								2.23
								< 0.50
. ,								9.6
								1.7
								3.3
								4.3
3 (3)								< 0.050
								7.1
Zinc (Zn)	10.2	18.6	22.7	11.6	10.5	16.6	29.3	14.1
Hydrocarbons								
								<5.0
,								<6
								<50
								<17
, ,								<50
								YES
3								80.0
Surrogate: Octacosane	94.7	90.8	102.1	100.5	101.1	112.2	100.8	90.4
Polychlorinated Biphenyls	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
								<0.010
								<0.010
								<0.010
								<0.010
								<0.010
								0.012
								<0.010
								<0.010
								<0.010 <0.030
								<0.030 101.7
Surrogate: 014-1erpnenyl	99.4	101.1	98.5	96.4	103.6	98.6	100.7	101.7
	Sample ID Date Sampled Time Sampled ALS Sample ID Matrix Physical Tests % Moisture Metals Arsenic (As) Cadmium (Cd) Chromium (Cr) Cobalt (Co) Copper (Cu) Lead (Pb) Mercury (Hg) Nickel (Ni) Zinc (Zn) Hydrocarbons F1 (C6-C10) F2 (C10-C16) F3 (C16-C34) F4 (C34-C50) Total Hydrocarbons (C6-C50) Chrom. to baseline at nC50 Surrogate: 2-Bromobenzotrifluoride Surrogate: Octacosane	Sample ID 14300 Date Sampled 15-AUG-11 Time Sampled 00:00 ALS Sample ID L1071571-1 Matrix Soil Physical Tests % Moisture 6.46 Metals Arsenic (As) 1.72 Cadmium (Cd) <0.50 Chromium (Cr) 8.6 Cobalt (Co) 1.9 Copper (Cu) 4.3 Lead (Pb) 2.9 Mercury (Hg) <0.050 Nickel (Ni) 7.4 Zlnc (Zn) 10.2 Phydrocarbons F1 (C6-C10) <5.0 F2 (C10-C16) <6 F3 (C16-C34) <50 F4 (C34-C50) <50 Total Hydrocarbons (C6-C50) <50 Chrom. to baseline at nC50 YES Surrogate: 2-Bromobenzotrifluoride 90.3 Surrogate: 2-Bromobenzotrifluoride 90.3 Surrogate: 2-Bromobenzotrifluoride 90.3 Surrogate: 2-Bromobenzotrifluoride 90.0 </th <th>Sample ID 14300 14303 Date Sampled 15-AUG-11 13-AUG-11 Time Sampled 00:00 00:00 ALS Sample ID L1071571-1 L1071571-2 Matrix Soil Soil Physical Tests % Moisture 6.46 12.1 Metals Arsenic (As) 1.72 1.27 Cadmium (Cd) <0.50 <0.50 Chromium (Cr) 8.6 12.3 Cobalt (Co) 1.9 1.9 Copper (Cu) 4.3 5.9 Lead (Pb) 2.9 5.2 Mercury (Hg) <0.050 <0.050 Mickel (Ni) 7.4 8.0 Zinc (2n) 10.2 18.6 Hydrocarbons F1 (C6-C10) <5.0 <5.0 F2 (C10-C16) <6 14 F3 (C16-C34) <50 <50 F4 (C34-C50) <50 <50 Total Hydrocarbons (C6-C50) <50 <50 <!--</th--><th>Sample ID 14300 14303 14308-11 Date Sampled 15-AUG-11 13-AUG-11 13-AUG-11 Time Sampled 00:00 00:00 00:00 ALS Sample ID L1071571-1 L1071571-2 L1071571-3 Matrix Soil Soil Soil Physical Tests % Moisture 6.46 12.1 12.8 Metals Arsenic (As) 1.72 1.27 2.18 Cadmium (Cd) <0.50 <0.50 <0.50 Chromium (Cr) 8.6 12.3 18.8 Cobalt (Co) 1.9 1.9 3.0 Copper (Cu) 4.3 5.9 5.1 Lead (Pb) 2.9 5.2 3.5 Mercury (Hg) <0.050 <0.050 <0.050 Nickel (Ni) 7.4 8.0 11.7 Ziric (Zn) 10.2 18.6 22.7 Phydrocarbons F1 (C6-C10) <5.0 <5.0 <5.0</th><th>Sample ID 14300 14303 14308 14315 Date Sampled 15-AUG-11 13-AUG-11 123-AUG-11 123-AUG-11 123-AUG-11 123-AUG-11 123-AUG-11 123-AUG-11 124-AUG-11 124-AUG-11-AUG-11 124-AUG-11-AUG-11 124-AUG-11-AUG-11 124-AUG-11-AUG-11 124-AUG-11-A</th><th>Sample ID 14300 14303 14308 14301 14301-11 13-AUG-11 14301 <</th><th> Sample D</th><th> Sample D</th></th>	Sample ID 14300 14303 Date Sampled 15-AUG-11 13-AUG-11 Time Sampled 00:00 00:00 ALS Sample ID L1071571-1 L1071571-2 Matrix Soil Soil Physical Tests % Moisture 6.46 12.1 Metals Arsenic (As) 1.72 1.27 Cadmium (Cd) <0.50 <0.50 Chromium (Cr) 8.6 12.3 Cobalt (Co) 1.9 1.9 Copper (Cu) 4.3 5.9 Lead (Pb) 2.9 5.2 Mercury (Hg) <0.050 <0.050 Mickel (Ni) 7.4 8.0 Zinc (2n) 10.2 18.6 Hydrocarbons F1 (C6-C10) <5.0 <5.0 F2 (C10-C16) <6 14 F3 (C16-C34) <50 <50 F4 (C34-C50) <50 <50 Total Hydrocarbons (C6-C50) <50 <50 </th <th>Sample ID 14300 14303 14308-11 Date Sampled 15-AUG-11 13-AUG-11 13-AUG-11 Time Sampled 00:00 00:00 00:00 ALS Sample ID L1071571-1 L1071571-2 L1071571-3 Matrix Soil Soil Soil Physical Tests % Moisture 6.46 12.1 12.8 Metals Arsenic (As) 1.72 1.27 2.18 Cadmium (Cd) <0.50 <0.50 <0.50 Chromium (Cr) 8.6 12.3 18.8 Cobalt (Co) 1.9 1.9 3.0 Copper (Cu) 4.3 5.9 5.1 Lead (Pb) 2.9 5.2 3.5 Mercury (Hg) <0.050 <0.050 <0.050 Nickel (Ni) 7.4 8.0 11.7 Ziric (Zn) 10.2 18.6 22.7 Phydrocarbons F1 (C6-C10) <5.0 <5.0 <5.0</th> <th>Sample ID 14300 14303 14308 14315 Date Sampled 15-AUG-11 13-AUG-11 123-AUG-11 123-AUG-11 123-AUG-11 123-AUG-11 123-AUG-11 123-AUG-11 124-AUG-11 124-AUG-11-AUG-11 124-AUG-11-AUG-11 124-AUG-11-AUG-11 124-AUG-11-AUG-11 124-AUG-11-A</th> <th>Sample ID 14300 14303 14308 14301 14301-11 13-AUG-11 14301 <</th> <th> Sample D</th> <th> Sample D</th>	Sample ID 14300 14303 14308-11 Date Sampled 15-AUG-11 13-AUG-11 13-AUG-11 Time Sampled 00:00 00:00 00:00 ALS Sample ID L1071571-1 L1071571-2 L1071571-3 Matrix Soil Soil Soil Physical Tests % Moisture 6.46 12.1 12.8 Metals Arsenic (As) 1.72 1.27 2.18 Cadmium (Cd) <0.50 <0.50 <0.50 Chromium (Cr) 8.6 12.3 18.8 Cobalt (Co) 1.9 1.9 3.0 Copper (Cu) 4.3 5.9 5.1 Lead (Pb) 2.9 5.2 3.5 Mercury (Hg) <0.050 <0.050 <0.050 Nickel (Ni) 7.4 8.0 11.7 Ziric (Zn) 10.2 18.6 22.7 Phydrocarbons F1 (C6-C10) <5.0 <5.0 <5.0	Sample ID 14300 14303 14308 14315 Date Sampled 15-AUG-11 13-AUG-11 123-AUG-11 123-AUG-11 123-AUG-11 123-AUG-11 123-AUG-11 123-AUG-11 124-AUG-11 124-AUG-11-AUG-11 124-AUG-11-AUG-11 124-AUG-11-AUG-11 124-AUG-11-AUG-11 124-AUG-11-A	Sample ID 14300 14303 14308 14301 14301-11 13-AUG-11 14301 <	Sample D	Sample D

FOX-M-MON-DLCU.RQ.11-309 Candice Casucci, Department of National Defense - Astra L1071571 13-Oct-11 09:15 27-Oct-11

Project Report To ALS File No. Date Received Date

DETECTION LIMITS

DETECTION LIMITS								
Sample ID	14300	14303	14308	14315	14321	14329	14332	14342
Date Sampled	15-AUG-11	13-AUG-11	13-AUG-11	13-AUG-11	13-AUG-11	15-AUG-11	15-AUG-11	15-AUG-11
Time Sampled	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
ALS Sample ID	L1071571-1	L1071571-2	L1071571-3	L1071571-4	L1071571-5	L1071571-6	L1071571-7	L1071571-8
Matrix	Soil							
Physical Tests								
% Moisture	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Metals								
Arsenic (As)	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Cadmium (Cd)	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Chromium (Cr)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Cobalt (Co)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Copper (Cu)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead (Pb)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Mercury (Hg)	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050
Nickel (Ni)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Zinc (Zn)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Hydrocarbons								
F1 (C6-C10)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
F2 (C10-C16)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
F3 (C16-C34)	50	50	18	18	18	18	50	50
F4 (C34-C50)	50	17	17	17	17	17	50	17
Total Hydrocarbons (C6-C50)	50	50	50	50	50	50	50	50
Chrom. to baseline at nC50		-	-	-	-	-	-	-
Surrogate: 2-Bromobenzotrifluoride		-	-	-	-	-	-	-
Surrogate: Octacosane	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls								
Aroclor 1016	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Aroclor 1221	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Aroclor 1232	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Aroclor 1242	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Aroclor 1248	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Aroclor 1254	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Aroclor 1260	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Aroclor 1262	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Aroclor 1268	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Total PCBs	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
Surrogate: d14-Terphenyl	-	-	-	-	-	-	-	-

FOX-M-MON-DLCU.RQ.11-309 Candice Casucci, Department of National Defense - Astra L1071571 13-Oct-11 09:15 27-Oct-11

Project Report To ALS File No. Date Received Date

UNITS								
Sample ID	14300	14303	14308	14315	14321	14329	14332	14342
Date Sampled	15-AUG-11	13-AUG-11	13-AUG-11	13-AUG-11	13-AUG-11	15-AUG-11	15-AUG-11	15-AUG-11
Time Sampled	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
ALS Sample ID	L1071571-1	L1071571-2	L1071571-3	L1071571-4	L1071571-5	L1071571-6	L1071571-7	L1071571-8
Matrix	Soil							
Physical Tests								
% Moisture	%	%	%	%	%	%	%	%
Metals								
Arsenic (As)	ug/g							
Cadmium (Cd)	ug/g							
Chromium (Cr)	ug/g							
Cobalt (Co)	ug/g							
Copper (Cu)	ug/g							
Lead (Pb)	ug/g							
Mercury (Hg)	mg/kg							
Nickel (Ni)	ug/g							
Zinc (Zn)	ug/g							
Hydrocarbons								
F1 (C6-C10)	ug/g							
F2 (C10-C16)	ug/g							
F3 (C16-C34)	ug/g							
F4 (C34-C50)	ug/g							
Total Hydrocarbons (C6-C50)	ug/g							
Chrom. to baseline at nC50	-	-	-	-	-	-	-	-
Surrogate: 2-Bromobenzotrifluoride	%	%	%	%	%	%	%	%
Surrogate: Octacosane	%	%	%	%	%	%	%	%
Polychlorinated Biphenyls								
Aroclor 1016	mg/kg							
Aroclor 1221	mg/kg							
Aroclor 1232	mg/kg							
Aroclor 1242	mg/kg							
Aroclor 1248	mg/kg							
Aroclor 1254	mg/kg							
Aroclor 1260	mg/kg							
Aroclor 1262	mg/kg							
Aroclor 1268	mg/kg							
Total PCBs	mg/kg							
Surrogate: d14-Terphenyl	%	%	%	%	%	%	%	%

Project FOX-M-MON-DLCU.RQ.11-309

Report To Candice Casucci, Department of National Defense - Astra

 ALS File No.
 L1071571

 Date Received
 13-Oct-11 09:15

 Date
 27-Oct-11

REPLICATE RESULTS

Sample ID	Matrix	ALS ID	Analyte	Replicate 1	Replicate 2	Units	RPD	RPD Limit	Diff	Diff Limit	Qualifier
Physical Tests											
L1071571-6	Soil	WG1368153-3	% Moisture	4.53	4.58	%	1.3	30	-	-	=
Hydrocarbons											
WG1370324-2	Soil	WG1370324-3	F2 (C10-C16)	86.0	84.5	%	1.8	50	-	-	-
WG1371986-2	Soil	WG1371986-3	F2 (C10-C16)	85.7	89.3	%	4.0	50	-	-	-
WG1372060-2	Soil	WG1372060-3	F2 (C10-C16)	84.0	89.3	%	6.1	50	-	-	-
WG1370324-2	Soil	WG1370324-3	F3 (C16-C34)	95.2	99.9	%	4.8	50	-	-	-
WG1371986-2	Soil	WG1371986-3	F3 (C16-C34)	94.7	97.6	%	3.0	50	-	-	-
WG1372060-2	Soil	WG1372060-3	F3 (C16-C34)	86.9	92.5	%	6.3	50	-	-	-
WG1370324-2	Soil	WG1370324-3	F4 (C34-C50)	101.6	105.1	%	3.4	50	-	-	-
WG1371986-2	Soil	WG1371986-3	F4 (C34-C50)	99.5	101.2	%	1.6	50	-	-	-
WG1372060-2	Soil	WG1372060-3	F4 (C34-C50)	90.8	98.0	%	7.6	50	-	-	-
Polychlorinated Bip	ohenyls										
WG1371979-2	Soil	WG1371979-3	Aroclor 1242	89.6	87.7	%	2.2	50	-	-	-
WG1371979-2	Soil	WG1371979-3	Aroclor 1248	86.7	86.7	%	0.0	50	-	-	-
WG1371979-2	Soil	WG1371979-3	Aroclor 1254	87.0	85.6	%	1.6	50	-	-	-
WG1371979-2	Soil	WG1371979-3	Aroclor 1260	99.7	99.3	%	0.43	50	-	-	-

Project FOX-M-MON-DLCU.RQ.11-309

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QUALITY CONTROL RESULTS

Matrix	QC Type	Analyte	QC Spl. No.	Reference	Result	Target	Units	%	Limits	Qualifier
Physical Tests										
Soil	LCS	% Moisture	WG1368153-2		3129470348	10.0	%	94.6	70-130	
Soil	LCS	% Moisture	WG1368209-2		8346972176	10.0	%	90.8	70-130	
Soil	MB	% Moisture	WG1368153-1		<0.10	<0.1	%	-	0.1	
Soil	MB	% Moisture	WG1368209-1		<0.10	<0.1	%	-	0.1	
Metals										
Soil	CRM	Mercury (Hg)	WG1370025-2	WT-SS-1	0.401	0.410	mg/kg	97.8	70-130	
Soil	LCS	Arsenic (As)	WG1370025-6	A+B	1.028576	1.00	ug/g	102.9	80-120	
Soil	LCS	Cadmium (Cd)	WG1370025-6	A+B	.992982	1.00	ug/g	99.3	80-120	
Soil	LCS	Chromium (Cr)	WG1370025-6	A+B	1.020686	1.0	ug/g	102.1	80-120	
Soil	LCS	Cobalt (Co)	WG1370025-6	A+B	.98499	1.0	ug/g	98.5	80-120	
Soil	LCS	Copper (Cu)	WG1370025-6	A+B	.96367	1.0	ug/g	96.4	80-120	
Soil	LCS	Lead (Pb)	WG1370025-6	A+B	1.010608	1.0	ug/g	101.1	80-120	
Soil	LCS	Nickel (Ni)	WG1370025-6	A+B	.97552	1.0	ug/g	97.6	80-120	
Soil	LCS	Zinc (Zn)	WG1370025-6	A+B	1.153814	1.0	ug/g	115.4	80-120	
Soil	LCS	Mercury (Hg)	WG1370025-7	QCSTD	.05325	0.050	mg/kg	106.5	70-130	
Soil	MB	Arsenic (As)	WG1370025-1		<0.20	<0.2	ug/g	-	0.2	
Soil	MB	Cadmium (Cd)	WG1370025-1		< 0.50	< 0.5	ug/g	-	0.5	
Soil	MB	Chromium (Cr)	WG1370025-1		<1.0	<1	ug/g	-	1	
Soil	MB	Cobalt (Co)	WG1370025-1		<1.0	<1	ug/g	-	1	
Soil	MB	Copper (Cu)	WG1370025-1		<1.0	<1	ug/g	-	1	
Soil	MB	Lead (Pb)	WG1370025-1		<1.0	<1	ug/g	-	1	
Soil	MB	Mercury (Hg)	WG1370025-1		< 0.050	< 0.05	mg/kg	-	0.05	
Soil	MB	Nickel (Ni)	WG1370025-1		<1.0	<1	ug/g	-	1	
Soil	MB	Zinc (Zn)	WG1370025-1		<5.0	<5	ug/g	-	5	
Soil	MS	Arsenic (As)	WG1370025-5	Anonymous	2809324566	5.62	ug/g	N/A	-	MS-B
Soil	MS	Cadmium (Cd)	WG1370025-5	Anonymous	3705917513	2.49	ug/g	101.9	70-130	
Soil	MS	Chromium (Cr)	WG1370025-5	Anonymous	2117951783	12.7	ug/g	N/A	-	MS-B
Soil	MS	Cobalt (Co)	WG1370025-5	Anonymous	1793783622	6.3	ug/g	N/A	-	MS-B
Soil	MS	Copper (Cu)	WG1370025-5	Anonymous	5819884439	10.7	ug/g	N/A	-	MS-B

Hydrocarbons	Soil Soil Soil	MS MS MS	Lead (Pb) Mercury (Hg) Nickel (Ni)	WG1370025-5 WG1370025-5 WG1370025-5	Anonymous Anonymous	3314405260	8.5 0.09960 11.2	ug/g mg/kg ug/g	N/A 104.0 N/A	- 70-130 -	MS-B
Soil			Zinc (Zn)	WG1370025-5	Anonymous	412432755	9.7	ug/g	IN/A	-	IVIO-D
Soil LCS	•										
Soil LCS F2 (C10-C16) WG1370324-2 289.13 336 ug/g 86.0 80-120											
Soil LCS F3 (C16-C34)			, ,								
Soil LCS			,								
Soil LCS F2 (C10-C16) WG1371986-2 288.14 336 ug/g 85.7 80-120			,								
Soil LCS F3 (C16-C34) WG1371986-2 607.22 641 ug/g 94.7 80-120			,								
Soil LCS			,								
Soil LCS F2 (C10-C16) WG1372060-2 282.44 336 ug'g 84.0 80-120											
Soil LCS			,								
Soil LCS F4 (C34-C50) WG1372060-2 68.81 76 ug/g 90.8 80-120			,								
Soil MB			,								
Soil MB	Soil	LCS	F4 (C34-C50)	WG1372060-2		68.81	76	ug/g	90.8	80-120	
Soil MB F2 (C10-C16) WG1370324-1 <10	Soil	MB	F1 (C6-C10)	WG1368188-1		<5.0	<5	ug/g	-		
Soil MB F3 (C16-C34) WG1370324-1 <50	Soil	MB	F1 (C6-C10)	WG1368312-1		< 5.0	<5	ug/g	-	5	
Soil MB	Soil	MB	F2 (C10-C16)	WG1370324-1		<10	<10	ug/g	-	10	
Soil MB F2 (C10-C16) WG1371986-1 <10 <10 ug/g - 10 10 Ug/g - 50 Soil MB F3 (C16-C34) WG1371986-1 <50 <50 ug/g - 50 Soil MB F4 (C34-C50) WG1371986-1 <50 <50 ug/g - 50 Soil MB F2 (C10-C16) WG1372060-1 <10 <10 ug/g - 10 Soil MB F2 (C10-C16) WG1372060-1 <10 <10 ug/g - 10 Soil MB F3 (C16-C34) WG1372060-1 <50 <50 ug/g - 50 Soil MB F3 (C16-C34) WG1372060-1 <50 <50 ug/g - 50 Soil MB F4 (C34-C50) WG1372060-1 <50 <50 ug/g - 50 Soil MS F1 (C6-C10) WG1372060-1 <50 <50 ug/g - 50 Soil MS F1 (C6-C10) WG1372060-1 <50 Soil MS F2 (C10-C16) WG1370324-5 Anonymous 3634960657 9.5 ug/g 93 50-140 Soil MS F2 (C10-C16) WG1370324-5 Anonymous 3634960657 9.5 ug/g 93 50-140 Soil MS F3 (C16-C34) WG1370324-5 Anonymous 3634960657 9.5 ug/g 93 50-140 Soil MS F3 (C16-C34) WG1370324-5 Anonymous 3634960657 9.5 ug/g 90.0 60-140 Soil MS F3 (C16-C34) WG1370324-5 Anonymous 3634960657 9.5 ug/g 90.0 60-140 Soil MS F4 (C34-C50) WG1370324-5 Anonymous 3634960657 9.5 ug/g 90.7 60-140 Soil MS F2 (C10-C16) WG1370324-5 Anonymous 3634960657 9.5 ug/g 96.7 60-140 Soil MS F2 (C10-C16) WG1370324-5 Anonymous 3634960657 9.5 ug/g 96.7 60-140 Soil MS F2 (C10-C16) WG1371986-5 Anonymous 3634960667 370 ug/g 38.7 60-140 Soil MS F2 (C10-C16) WG1371986-5 Anonymous 3634960657 370 ug/g 36.6 60-140 Soil MS F3 (C16-C34) WG1371986-5 Anonymous 3634960657 360-140 370 ug/g 36.6 60-140 370	Soil	MB	F3 (C16-C34)	WG1370324-1		<50	<50	ug/g	=	50	
Soil MB	Soil	MB	F4 (C34-C50)	WG1370324-1		<50	<50	ug/g	=	50	
Soil MB F4 (C34-C50) WG1371986-1 <50 <50 ug/g - 50 Soil MB F2 (C10-C16) WG1372060-1 <10	Soil	MB	F2 (C10-C16)	WG1371986-1		<10	<10	ug/g	=	10	
Soil MB F2 (C10-C16) WG1372060-1 <10 <10 ug/g - 10 Soil MB F3 (C16-C34) WG1372060-1 <50 <50 ug/g - 50 Soil MB F4 (C34-C50) WG1372060-1 <50 <50 ug/g - 50 Soil MS F1 (C6-C10) WG1368188-6 Anonymous 3634960657 9.5 ug/g 93 50-140 Soil MS F1 (C6-C10) WG1368312-7 Anonymous 3634960657 9.5 ug/g 93 50-140 Soil MS F1 (C6-C10) WG1370324-5 Anonymous 3811325223 6.6 ug/g 134.0 50-140 Soil MS F2 (C10-C16) WG1370324-5 Anonymous .635419719 360 ug/g 80.0 60-140 Soil MS F3 (C16-C34) WG1371986-5 Anonymous 29837110 686 ug/g 96.7 60-140 Soil MS	Soil	MB	F3 (C16-C34)	WG1371986-1		<50	<50	ug/g	=	50	
Soil MB F3 (C16-C34) WG1372060-1 <50 <50 ug/g - 50 Soil MB F4 (C34-C50) WG1372060-1 <50 <50 ug/g - 50 Soil MS F1 (C6-C10) WG1368188-6 Anonymous 3634960657 9.5 ug/g 93 50-140 Soil MS F1 (C6-C10) WG1368312-7 Anonymous 3811325223 6.6 ug/g 134.0 50-140 Soil MS F2 (C10-C16) WG1370324-5 Anonymous .635419719 360 ug/g 80.0 60-140 Soil MS F3 (C16-C34) WG1370324-5 Anonymous .699837110 686 ug/g 96.7 60-140 Soil MS F4 (C34-C50) WG1371986-5 Anonymous .99837110 686 ug/g 96.7 60-140 Soil MS F2 (C10-C16) WG1371986-5 Anonymous .998048148 370 ug/g 88.7 60-140 <	Soil	MB	F4 (C34-C50)	WG1371986-1		<50	<50	ug/g	-	50	
Soil MB F4 (C34-C50) WG1372060-1 <50 <50 ug/g - 50 Soil MS F1 (C6-C10) WG1368188-6 Anonymous 3634960657 9.5 ug/g 93 50-140 Soil MS F1 (C6-C10) WG1368312-7 Anonymous 3811325223 6.6 ug/g 134.0 50-140 Soil MS F2 (C10-C16) WG1370324-5 Anonymous .635419719 360 ug/g 80.0 60-140 Soil MS F3 (C16-C34) WG1370324-5 Anonymous .909837110 686 ug/g 96.7 60-140 Soil MS F4 (C34-C50) WG1370324-5 Anonymous .909837110 686 ug/g 96.7 60-140 Soil MS F2 (C10-C16) WG1371986-5 Anonymous .998048148 370 ug/g 88.7 60-140 Soil MS F3 (C16-C34) WG1371986-5 Anonymous .997657266 706 ug/g 98.6 <t< td=""><td>Soil</td><td>MB</td><td>F2 (C10-C16)</td><td>WG1372060-1</td><td></td><td><10</td><td><10</td><td>ug/g</td><td>-</td><td>10</td><td></td></t<>	Soil	MB	F2 (C10-C16)	WG1372060-1		<10	<10	ug/g	-	10	
Soil MB F4 (C34-C50) WG1372060-1 <50 <50 ug/g - 50 Soil MS F1 (C6-C10) WG1368188-6 Anonymous 3634960657 9.5 ug/g 93 50-140 Soil MS F1 (C6-C10) WG1368312-7 Anonymous 3811325223 6.6 ug/g 134.0 50-140 Soil MS F2 (C10-C16) WG1370324-5 Anonymous .635419719 360 ug/g 80.0 60-140 Soil MS F3 (C16-C34) WG1370324-5 Anonymous .909837110 686 ug/g 96.7 60-140 Soil MS F4 (C34-C50) WG1370324-5 Anonymous .909837110 686 ug/g 96.7 60-140 Soil MS F2 (C10-C16) WG1371986-5 Anonymous .998048148 370 ug/g 88.7 60-140 Soil MS F3 (C16-C34) WG1371986-5 Anonymous .997657266 706 ug/g 98.6 <t< td=""><td>Soil</td><td>MB</td><td>F3 (C16-C34)</td><td>WG1372060-1</td><td></td><td><50</td><td><50</td><td>ug/g</td><td>-</td><td>50</td><td></td></t<>	Soil	MB	F3 (C16-C34)	WG1372060-1		<50	<50	ug/g	-	50	
Soil MS F1 (C6-C10) WG1368312-7 Anonymous 3811325223 6.6 ug/g 134.0 50-140 Soil MS F2 (C10-C16) WG1370324-5 Anonymous .635419719 360 ug/g 80.0 60-140 Soil MS F3 (C16-C34) WG1370324-5 Anonymous .909837110 686 ug/g 96.7 60-140 Soil MS F4 (C34-C50) WG1370324-5 Anonymous .909837110 686 ug/g 96.7 60-140 Soil MS F2 (C10-C16) WG1371986-5 Anonymous .958048148 370 ug/g 88.7 60-140 Soil MS F3 (C16-C34) WG1371986-5 Anonymous .997657266 706 ug/g 98.6 60-140 Soil MS F4 (C34-C50) WG1371986-5 Anonymous .9297657266 706 ug/g 98.6 60-140 Soil MS F2 (C10-C16) WG1372060-5 Anonymous .9297657266 70 <	Soil	MB	F4 (C34-C50)	WG1372060-1		<50	<50	ug/g	=	50	
Soil MS F1 (C6-C10) WG1368312-7 Anonymous 3811325223 6.6 ug/g 134.0 50-140 Soil MS F2 (C10-C16) WG1370324-5 Anonymous .635419719 360 ug/g 80.0 60-140 Soil MS F3 (C16-C34) WG1370324-5 Anonymous .909837110 686 ug/g 96.7 60-140 Soil MS F4 (C34-C50) WG1370324-5 Anonymous .909837110 686 ug/g 96.7 60-140 Soil MS F2 (C10-C16) WG1371986-5 Anonymous .958048148 370 ug/g 88.7 60-140 Soil MS F3 (C16-C34) WG1371986-5 Anonymous .997657266 706 ug/g 98.6 60-140 Soil MS F4 (C34-C50) WG1371986-5 Anonymous .9297657266 706 ug/g 98.6 60-140 Soil MS F2 (C10-C16) WG1372060-5 Anonymous .9297657266 70 <	Soil	MS	F1 (C6-C10)	WG1368188-6	Anonymous	3634960657	9.5	ug/g	93	50-140	
Soil MS F2 (C10-C16) WG1370324-5 Anonymous .635419719 360 ug/g 80.0 60-140 Soil MS F3 (C16-C34) WG1370324-5 Anonymous .909837110 686 ug/g 96.7 60-140 Soil MS F4 (C34-C50) WG1370324-5 Anonymous .2418186674 81 ug/g 103.9 60-140 Soil MS F2 (C10-C16) WG1371986-5 Anonymous .958048148 370 ug/g 88.7 60-140 Soil MS F3 (C16-C34) WG1371986-5 Anonymous .997657266 706 ug/g 98.6 60-140 Soil MS F4 (C34-C50) WG1371986-5 Anonymous .997657266 706 ug/g 98.6 60-140 Soil MS F2 (C10-C16) WG1371986-5 Anonymous .7229502236 83 ug/g 106.4 60-140 Soil MS F3 (C16-C34) WG137197060-5 Anonymous .964053963 652	Soil		F1 (C6-C10)	WG1368312-7	Anonymous	3811325223	6.6		134.0	50-140	
Soil MS F3 (C16-C34) WG1370324-5 Anonymous .909837110 686 ug/g 96.7 60-140 Soil MS F4 (C34-C50) WG1370324-5 Anonymous 2418186674 81 ug/g 103.9 60-140 Soil MS F2 (C10-C16) WG1371986-5 Anonymous .958048148 370 ug/g 88.7 60-140 Soil MS F3 (C16-C34) WG1371986-5 Anonymous .997657266 706 ug/g 98.6 60-140 Soil MS F4 (C34-C50) WG1371986-5 Anonymous .997657266 706 ug/g 98.6 60-140 Soil MS F2 (C10-C16) WG1371986-5 Anonymous .7229502236 83 ug/g 106.4 60-140 Soil MS F3 (C16-C34) WG1372060-5 Anonymous .964053963 652 ug/g 96.1 60-140 Soil MS F4 (C34-C50) WG1371979-2 .17928 0.200 mg/kg 89.			, ,		•				80.0		
Soil MS F4 (C34-C50) WG1370324-5 Anonymous 2418186674 81 ug/g 103.9 60-140 Soil MS F2 (C10-C16) WG1371986-5 Anonymous .958048148 370 ug/g 88.7 60-140 Soil MS F3 (C16-C34) WG1371986-5 Anonymous .997657266 706 ug/g 98.6 60-140 Soil MS F4 (C34-C50) WG1371986-5 Anonymous .997657266 706 ug/g 98.6 60-140 Soil MS F2 (C10-C16) WG1371986-5 Anonymous .7229502236 83 ug/g 106.4 60-140 Soil MS F3 (C16-C34) WG1372060-5 Anonymous .964053963 652 ug/g 96.1 60-140 Soil MS F4 (C34-C50) WG1372060-5 Anonymous .999727487 77 ug/g 107.8 60-140 Polychlorinated Biphenyls Soil LCS Aroclor 1242 WG1371979-2 <t< td=""><td>Soil</td><td>MS</td><td>F3 (C16-C34)</td><td>WG1370324-5</td><td>Anonymous</td><td>.909837110</td><td>686</td><td></td><td>96.7</td><td>60-140</td><td></td></t<>	Soil	MS	F3 (C16-C34)	WG1370324-5	Anonymous	.909837110	686		96.7	60-140	
Soil MS F2 (C10-C16) WG1371986-5 Anonymous .958048148 370 ug/g 88.7 60-140 Soil MS F3 (C16-C34) WG1371986-5 Anonymous .997657266 706 ug/g 98.6 60-140 Soil MS F4 (C34-C50) WG1371986-5 Anonymous 7229502236 83 ug/g 106.4 60-140 Soil MS F2 (C10-C16) WG1372060-5 Anonymous 0.04604263' 341 ug/g 90.8 60-140 Soil MS F3 (C16-C34) WG1372060-5 Anonymous .964053963 652 ug/g 96.1 60-140 Soil MS F4 (C34-C50) WG1372060-5 Anonymous .9999727487 77 ug/g 107.8 60-140 Polychlorinated Biphenyls Soil LCS Aroclor 1242 WG1371979-2 .17928 0.200 mg/kg 89.6 60-140 Soil LCS Aroclor 1248 WG1371979-2 .17336			,		•				103.9		
Soil MS F3 (C16-C34) WG1371986-5 Anonymous .997657266 706 ug/g 98.6 60-140 Soil MS F4 (C34-C50) WG1371986-5 Anonymous 7229502236 83 ug/g 106.4 60-140 Soil MS F2 (C10-C16) WG1372060-5 Anonymous 1.04604263' 341 ug/g 90.8 60-140 Soil MS F3 (C16-C34) WG1372060-5 Anonymous .964053963 652 ug/g 96.1 60-140 Soil MS F4 (C34-C50) WG1372060-5 Anonymous 3999727487 77 ug/g 107.8 60-140 Polychlorinated Biphenyls Soil LCS Aroclor 1242 WG1371979-2 .17928 0.200 mg/kg 89.6 60-140 Soil LCS Aroclor 1248 WG1371979-2 .17336 0.200 mg/kg 86.7 60-140			,		•						
Soil MS F4 (C34-C50) WG1371986-5 Anonymous 7229502236 83 ug/g 106.4 60-140 Soil MS F2 (C10-C16) WG1372060-5 Anonymous).04604263; 341 ug/g 90.8 60-140 Soil MS F3 (C16-C34) WG1372060-5 Anonymous .964053963 652 ug/g 96.1 60-140 Soil MS F4 (C34-C50) WG1372060-5 Anonymous 3999727487 77 ug/g 107.8 60-140 Polychlorinated Biphenyls Soil LCS Aroclor 1242 WG1371979-2 .17928 0.200 mg/kg 89.6 60-140 Soil LCS Aroclor 1248 WG1371979-2 .17336 0.200 mg/kg 86.7 60-140	Soil		,	WG1371986-5	•		706		98.6	60-140	
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Soil LCS Aroclor 1248 WG1371979-2 .17336 0.200 mg/kg 86.7 60-140	-		Aroclor 1242	WG1371979-2		.17928	0.200	ma/ka	89.6	60-140	

Soil	LCS	Aroclor 1260	WG1371979-2	.1994	0.200	mg/kg	99.7	60-140
Soil	MB	Aroclor 1016	WG1371979-1	<0.010	<0.01	mg/kg	-	0.01
Soil	MB	Aroclor 1221	WG1371979-1	< 0.010	< 0.01	mg/kg	-	0.01
Soil	MB	Aroclor 1232	WG1371979-1	< 0.010	< 0.01	mg/kg	-	0.01
Soil	MB	Aroclor 1242	WG1371979-1	< 0.010	< 0.01	mg/kg	-	0.01
Soil	MB	Aroclor 1248	WG1371979-1	< 0.010	< 0.01	mg/kg	-	0.01
Soil	MB	Aroclor 1254	WG1371979-1	< 0.010	< 0.01	mg/kg	-	0.01
Soil	MB	Aroclor 1260	WG1371979-1	< 0.010	< 0.01	mg/kg	-	0.01
Soil	MB	Aroclor 1262	WG1371979-1	< 0.010	< 0.01	mg/kg	-	0.01
Soil	MB	Aroclor 1268	WG1371979-1	< 0.010	< 0.01	mg/kg	-	0.01

FOX-M-MON-DLCU.RQ.11-309

Project Report To ALS File No. Candice Casucci, Department of National Defense - Astra

L1071571 Date Received 13-Oct-11 09:15 Date 27-Oct-11

Hold Time Exceedances

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
% Moisture	1	15-AUG-11	14-OCT-11 11:48	14	60	days	EHTR
	2	13-AUG-11	14-OCT-11 11:49	14	62	days	EHTR
	3	13-AUG-11	14-OCT-11 11:50	14	62	days	EHTR
	4	13-AUG-11	14-OCT-11 11:51	14	62	days	EHTR
	5	13-AUG-11	14-OCT-11 11:52	14	62	days	EHTR
	6	15-AUG-11	14-OCT-11 11:53	14	60	days	EHTR
	7	15-AUG-11	14-OCT-11 12:24	14	60	days	EHTR
	8	15-AUG-11	14-OCT-11 12:25	14	60	days	EHTR
Metals							
Metal Scan Collision Cell ICPMS	1	15-AUG-11	17-OCT-11 23:37	60	63	days	EHT
	2	13-AUG-11	17-OCT-11 23:38	60	65	days	EHTR
	3	13-AUG-11	17-OCT-11 23:39	60	65	days	EHTR
	4	13-AUG-11	17-OCT-11 23:40	60	65	days	EHTR
	5	13-AUG-11	17-OCT-11 23:41	60	65	days	EHTR
	6	15-AUG-11	17-OCT-11 23:42	60	63	days	EHT
	7	15-AUG-11	17-OCT-11 23:43	60	63	days	EHT
	8	15-AUG-11	17-OCT-11 23:44	60	63	days	EHT
Hydrocarbons							
F1 R153/04 as amended R511 by headspace	1	15-AUG-11	14-OCT-11 12:28	14	60	days	EHTR
	2	13-AUG-11	14-OCT-11 12:29	14	62	days	EHTR
	3	13-AUG-11	14-OCT-11 12:30	14	62	days	EHTR
	4	13-AUG-11	14-OCT-11 12:31	14	62	days	EHTR
	5	13-AUG-11	14-OCT-11 12:32	14	62	days	EHTR
	6	15-AUG-11	14-OCT-11 15:09	14	60	days	EHTR
	7	15-AUG-11	14-OCT-11 15:10	14	60	days	EHTR
	8	15-AUG-11	14-OCT-11 15:11	14	60	days	EHTR
F2-F4 (O.Reg 153/04, 511 Amendments)	1	15-AUG-11	18-OCT-11 08:58	14	64	days	EHTR
	2	13-AUG-11	18-OCT-11 08:59	14	66	days	EHTR
	3	13-AUG-11	20-OCT-11 23:37	14	68	days	EHTR
	4	13-AUG-11	20-OCT-11 23:38	14	68	days	EHTR
	5	13-AUG-11	20-OCT-11 23:39	14	68	days	EHTR
	6	15-AUG-11	20-OCT-11 23:40	14	66	days	EHTR
	7	15-AUG-11	20-OCT-11 23:41	14	66	days	EHTR
	8	15-AUG-11	20-OCT-11 23:19	14	66	days	EHTR
Polychlorinated Biphenyls							
PCBs	1	15-AUG-11	20-OCT-11 13:44	14	66	days	EHTR
	2	13-AUG-11	20-OCT-11 13:45	14	68	days	EHTR
	3	13-AUG-11	20-OCT-11 13:46	14	68	days	EHTR
	4	13-AUG-11	20-OCT-11 13:47	14	68	days	EHTR
	5	13-AUG-11	20-OCT-11 13:48	14	68	days	EHTR
	6	15-AUG-11	20-OCT-11 13:49	14	66	days	EHTR
	7	15-AUG-11	20-OCT-11 13:50	14	66	days	EHTR
	8	15-AUG-11	20-OCT-11 13:51	14	66	days	EHTR

Legend & Qualifier Definitions

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.

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

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

EHT: Exceeded ALS recommended hold time prior to analysis.

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

Notes*:

Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes. Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

SAMPLENUM RPTREMARKS

WG1368188-4 ; Analysis compromised due to type of sample jar received. Loses may have occurred according to 511 Regulation.

QUALIFIER DESCRIPTION

ABL Approximate Result: May Be Biased Low

RPD-NA Relative Percent Difference Not Available due to result(s) being less than detection limit.

MS-B Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Qualifier Key for Sample Parameters Listed Below:

Qualifier Description

ABL Approximate Result: May Be Biased Low

VC:RHS Volatile Analysis Compromised; Samples Received With Headspace DLMDL Detection Limit calculated from MDL to meet client specification

Samples with Parameter Qualifiers as Listed Above:

Samples with Parar	neter Qualifiers as Listed Above) :	
Sample Number	Client Sample ID	Parameters	Qualifier
L1071571-1	14300	F2 (C10-C16)	DLMDL
L1071571-1	14300	F1 (C6-C10)	ABL
L1071571-2	14303	F4 (C34-C50)	DLMDL
L1071571-2	14303	F2 (C10-C16)	DLMDL
L1071571-2	14303	F1 (C6-C10)	ABL
L1071571-3	14308	F3 (C16-C34)	DLMDL
L1071571-3	14308	F1 (C6-C10)	ABL
L1071571-3	14308	F4 (C34-C50)	DLMDL
L1071571-3	14308	F2 (C10-C16)	DLMDL
L1071571-4	14315	F1 (C6-C10)	ABL
L1071571-4	14315	F2 (C10-C16)	DLMDL
L1071571-4	14315	F4 (C34-C50)	DLMDL
L1071571-4	14315	F3 (C16-C34)	DLMDL
L1071571-5	14321	F2 (C10-C16)	DLMDL
L1071571-5	14321	F4 (C34-C50)	DLMDL
L1071571-5	14321	F3 (C16-C34)	DLMDL
L1071571-5	14321	F1 (C6-C10)	ABL
L1071571-6	14329	F2 (C10-C16)	DLMDL
L1071571-6	14329	F3 (C16-C34)	DLMDL
L1071571-6	14329	F1 (C6-C10)	VC:RHS
L1071571-6	14329	F4 (C34-C50)	DLMDL
L1071571-7	14332	F2 (C10-C16)	DLMDL
L1071571-7	14332	F1 (C6-C10)	VC:RHS
L1071571-8	14342	F1 (C6-C10)	VC:RHS
L1071571-8	14342	F4 (C34-C50)	DLMDL
L1071571-8	14342	F2 (C10-C16)	DLMDL

Annex 2

QA/QC Discussion and Result

APPENDIX C: QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

ESG follows an internal quality assurance/quality control program that was implemented to allow data quality to be monitored on an ongoing basis. This program is described in the Quality Assurance Project Plan (QAPP) (ESG, 2011). The points relevant to the discussion of QA/QC sample collection and analysis of monitoring samples at FOX-M, Hall Beach in 2011 are summarized here for completeness.

All samples are given sequential, numerical codes before submission to the analytical firms; these codes mask any information concerning site location, sample type or possible concentration of the sample.

Accuracy is measured and controlled by instrument calibration, the use of control standards, control spikes and the collection and analysis of blanks. Control standards and control spikes are reference materials with known concentrations. After analysis of a control standard or spike, the instrument calibration is evaluated based on comparison of the results with the target concentration.

Analytical blanks are processed through extraction/digestion and analysis procedures. These blanks give a measure of the quantity of any contaminant (analyte) that may be added to the overall result during the analysis.

Precision is measured and controlled by the analysis of field and analytical duplicates. Samples of the same material that are collected in the field and submitted blind as separate samples for analysis are field duplicates. Analytical duplicates are replicate preparations and analyses of the same sample. Comparison of the average relative standard deviations (RSD%) – also known as coefficients of variation, which are calculated as the standard deviation divided by the mean – are used to evaluate laboratory precision. Acceptable limits are generally considered to be less than 40 percent RSD for inorganics, 30 percent for other analyses, with 20 percent or less considered good agreement.

The results of the QA/QC program for the 2011 monitoring sampling program at FOX-Main, Hall Beach are discussed below. The laboratory associated with each analysis is also listed.

A. Inorganic Elements in Soil and Water Samples – Analytical Services Unit (ASU), Queen's University

1. Accuracy

Accuracy was monitored internally by ASU with the analysis of Standard Reference materials, specifically NRC Canada Marine Reference Sediment MESS-3 and contaminated soil reference material SS-2 (Table C-1). The reported results for several elements were consistently lower than the certified value for MESS-3. This discrepancy is attributed to differences between the digestion methods used at ASU and those used to obtain the certified values. The reference values are established by a variety of techniques that analyze the total metal content of the standard substrate. By contrast, the method used in most laboratories, including the ASU lab, (aqua regia digestion) extracts only the available metals in the sample substrate. This is because metals present within minerals forming part of the soil matrix are not released in the extraction process. As these metals form part of the soil matrix, they are also biologically unavailable. Because these elements are not extracted under the strongly oxidizing acid digestion procedure then generally they will not become mobilized by normal weathering and are therefore not environmentally significant. The fact that numerical environmental criteria for metals are designed to be compared with potentially biologically available metal concentrations means that the level of accuracy reported above is acceptable. ASU has developed a set of warning and control limits for MESS-3 sediment analyzed using aqua regia digestion, and results must be within these limits. The limits were created by compiling data from each MESS-3 sample over the last several years and checking for trends such as moving averages. The data compiled takes into account day to day variations in such factors as the weighing, acid digestion procedures and instrumentation. For the current MESS-3 control limits, there were over 600 data points for the arctic suite elements (Cu, Ni, Co, Cd, Pb, Zn, Cr, As) used in the development of the limits.

Average determined results for inorganic elements in MESS-3 in this study were all within control limits (Table C-1).

Soil reference material SS-2 was also used to monitor accuracy and determined results were within control limits. Certified values provided in Table C-1 reflect results obtained by the supplier for total digest analysis, similar to MESS-3 certified values. While the supplier also lists EPA-3050 Acid digestion values, the procedure is different from that used at ASU and digestion times are not provided by the supplier. Typically, digestion efficiencies for partial digestion methods have to be established on a lab per lab basis. As stated for MESS-3, the control limits established for SS-2 analysis at ASU are based on

hundreds of digestions performed over several years and the tolerance intervals are much smaller than those listed by the SS-2 supplier for acid digestion.

Water sample batches included spiked control samples to monitor accuracy. The control results and percent recoveries of the spikes are presented in Table C-2. Recoveries ranged from 94 to 103 percent for elements analyzed as total metals in water samples indicating good accuracy for the method. Laboratory control limits allow for a 30 percent variation in spike recovery.

Analytical blank samples were run with the soil and water batches and all results were below detection for inorganic elements (Tables C-2 & C-3). One field blank was also analyzed with the water samples and results were again below detection (Table C-2).

2. Precision/Repeatability

Precision was monitored externally by ESG using 2 pairs of soil sample field duplicates and one water sample field duplicate (Tables C-4 & C-2). The average relative standard deviations for detectable inorganic elements in the FOX-M monitoring soil samples were below 10 percent, indicating very good agreement between replicates (Table C-4). Just chromium and nickel showed detectable concentrations in the water field duplicate and RSDs were 2.0 and 34 percent respectively (Table C-2).

In some cases, one duplicate result was above the detection limit while the other was below. For these duplicates, we have not calculated RSDs. Previously in such cases, ESG calculated the relative standard deviation by a conventional method that takes the lower of the duplicate results as half of the detection limit. This method invariably leads to artificially inflated RSDs, even when the concentration in the higher result is close to the detection limit. In our experience, in such cases the two results generally are, in fact, very close and do represent good precision. For these reasons, these duplicate calculations are no longer included in the QA/QC analysis.

Internal precision was also monitored by ASU through the use of analytical duplicates. Five soil samples and one water sample were analyzed in duplicate for inorganic elements (Tables C-5 & C-2). The average RSDs for most elements in the soil replicates were below 10 percent, indicating good precision for analysis. The average RSD for copper was higher at 49 percent but most duplicate results were well below the DLCU criteria of 100ppm for copper in soil so results were accepted (Table C-5). One pair (14323) reported copper results straddling the criteria, with an elevated RSD. Variation in results for this pair were considered to be due to heterogeneity of the soil and since all other QA/QC parameters passed, no further action was taken.

One water sample was analyzed in duplicate and just three elements showed detectable levels in the pairs (Table C-2). RSDs for copper and zinc were quite low at 6.4 per cent and 1.8 percent, indicating good reproducibility. Chromium results in the water replicate resulted in a higher RSD at 74 percent.

B. Mercury in Soil and Water Samples – Analytical Services Group (ASG), Royal Military College (RMC)

1. Accuracy

Soil and water samples were analyzed for mercury along with control spiked samples. The results for these are presented in Tables C-6 and C-7; the control recoveries averaged 90 percent for soil control spikes and 105 percent for mercury in the water spikes. Blank samples were analyzed for mercury and results for soil and water analytical blanks and for the water field blank were below detection (Tables C-6 and C-7).

2. Precision

Two soil and one water sample field duplicate were submitted for analysis and all results were below detection for mercury (Tables C-6 and C-7).

One soil analytical duplicate was analyzed for mercury and results were again below detection (Table C-6).

C. Polychlorinated Biphenyls (PCBs) in Soil Samples – ASG, RMC

The QA/QC protocol for PCBs calls for analyses to be carried out in batches of no more than 30 samples. Each batch must include one analytical duplicate, a procedural blank and a spiked control sample. Each batch is treated as a separate unit: samples within the same batch must be worked up and analyzed continuously, and the QA/QC data considered with respect to each batch.

1. Accuracy

Internally, all samples were spiked with an aliquot of the surrogate standard decachlorobiphenyl (DCBP) prior to analysis by gas chromatography (GC) with electron capture detection (ECD), in order to measure recovery of PCBs. Sample results were corrected for this recovery. The method was calibrated using known standards of Aroclor 1254 and 1260. A calibration check standard was run with each batch to verify the

calibration. Duplicates, blanks, the spiked control sample, DCBP recovery and the calibration check were all required to be within predetermined control limits.

Aroclor 1254 (soil) and Aroclor 1260 (water) spiked control samples were run with the soil and water PCB analyses; the average recoveries were 121 percent in soil samples and 100 percent in the water spike (Table C-8).

Each batch was monitored internally by analyzing blank samples for PCBs with the soil and water samples. All results were below detection limits for analytical blanks and for the water sample field blank (Table C-9).

2. Precision/Repeatability

Precision was monitored internally by ASG using soil and water field duplicates and one soil sample analytical replicate (Table C-10). All results in the soil and water duplicates were below detection for Aroclor PCBs.

D. CCME Method of Petroleum Hydrocarbons in Soil and Water – ASG, RMC

Soil and water analysis was performed as prescribed in the CCME Reference Method for Canada-Wide Standard for Petroleum Hydrocarbons in Soil, 2001-2002. Results were reported for F1 fraction, F2 to F4 fractions and, if extra cleanup was required, Gravimetric F4G.

1. Accuracy

Two gasoline control spikes were analyzed for F1 fraction hydrocarbons in soil samples and the average recovery was 105 percent (Table C-11). Two control diesel spikes and control standards were analyzed for total hydrocarbons in soil samples resulting in average recoveries of 81 percent and 104 percent, respectively (Table C-11). Water sample control spikes were analyzed for F1 fraction hydrocarbons and total hydrocarbons and the resulting recoveries were 94 percent for F1, 85 percent for total hydrocarbon diesel spikes and 96 percent for total hydrocarbon control standards (Table C-14).

Analytical soil blank results are listed in Table C-12 and the water blanks are listed in Table C-15. All results were below detection for hydrocarbons in the analytical blanks and field blank.

2. Precision

Precision was monitored by running field and analytical replicates. Two soil sample field duplicates were analyzed and results were below detection with the exception of one sample which showed F2 fraction hydrocarbons just over the detection limit (Table C-13). The water sample field duplicate showed no detectable hydrocarbons (Table C-15).

Four soil samples were analyzed in duplicate for hydrocarbons and the results are listed in Table C-13. RSDs for the were less than 10 percent in the one sample that showed detectable hydrocarbons (Table C-13).

E. Inorganic Analysis of Soil Samples at ALS Environmental, Waterloo, ON

Soil samples were analysed for the Arctic suite of inorganic elements and mercury and QA/QC results are listed in Table C-16.

1. Accuracy and Precision

ALS Environmental laboratory used a control reference material to help quantify the mercury results and the recovery was reported as 98 percent (Table C-16). One laboratory control spike was analysed for inorganic elements and recoveries ranged from 96 percent to 115 percent, within the laboratory control limits of 80 to 120 percent. One matrix control spike was also run and just cadmium and mercury reported quantifiable results at 102 percent and 104 percent recovery. Control limits for these spikes were 70 to 130 percent. According to notes from the lab, other inorganic element spike recoveries could not be accurately calculated due to high analyte background in the samples (Table C-16).

Results were below detection in the method blank (Table C-16).

F. Hydrocarbon Analysis of Soil Samples at ALS, Waterloo, ON

1. Accuracy and Precision

Three laboratory control spikes were analysed for F1, F2, F3 and F4 fraction hydrocarbons. Average recoveries ranged from 85 percent to 115 percent, within the laboratory acceptable limits of 80 to 120 percent (Table C-17). The laboratory control spikes were analysed in duplicate and recoveries were within the control limits. Three

matrix control spikes were also run and the resulting average recoveries were again within control limits (Table C-17).

Results were below detection for hydrocarbons in the method blanks (Table C-17).

G. Aroclor PCB Analysis of Soil Samples at ALS, Waterloo, ON

1. Accuracy and Precision

One laboratory control spike of Aroclor 1242, 1248, 1254 and 1260 reported recoveries ranging from 87 percent to 100 percent (Table C-18). The spike was analysed in duplicate and recoveries of the replicate were also well within control limits.

Results were below detection for Aroclor PCBs in the method blank (Table C-18).

H. Comparison of Inorganic, Hydrocarbon and PCB Analysis at ASU/ASG and ALS

Table C-19 lists samples that were analysed at more than one laboratory. Results were compared on the basis of agreement with the DewLine Cleanup Criteria (DLCU) and samples that were not in agreement were flagged. All results were in agreement (Table C-19).

I. References

Environmental Sciences Group (ESG 2011). Quality Assurance Project Plan. Royal Military College, Kingston, ON.

Table C-1: Summary of Inorganic Element Results for Soil Internal Standards (MESS-3 and SS-2)

Element	MESS-3 Certified Value	Mean (n=2)	ASU Control Limits
	[ppm]	[ppm]	[ppm]
Cu	33.9 ± 1.6	28 ± 1.7	25.7-38.7
Ni	46.9 ± 2.2	36 ± 4.3	32.4-43.2
Co	14.4 ± 2.0	12 ± 1.1	10.4-13.9
Cd	0.24 ± 0.01	<1.0	-
Pb	21.1 ± 0.7	19 ± 1.0	14.2-19.8
Zn	159 ± 8	129 ± 15	115-152
Cr	105 ± 4	42 ± 13	25.8-55
As	21.2 ± 1.1	17 ± 1.3	14.1-19.2

Element	SS-2 Certified Value	Mean (n=2)	ASU Control Limits
	[ppm]	[ppm]	[ppm]
Cu	191 ± 9.0	191 ± 8.4	160-232
Ni	54 ± 4.0	58 ± 2.3	48-62.8
Co	12 ± 1.0	15 ± 0.4	11.8-16.9
Cd	2.0**	1.9 ± 0	1.3-2.8
Pb	126 ± 10	119 ± 3.7	97.6-137
Zn	467 ± 23	476 ± 20	389-563
Cr	34 ± 4.0	46 ± 1.5	34.7-52.7
As	75 ± 10	84 ± 7.6	53-99.7

^{**} cadmium SS-2 information only, not certified

Table C-2: Inorganic Element Analysis of Water QA/QC Samples

Sample	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
Bampic	[mg/L]							
Total Metals								
Control Spike								
Control	1.57	1.62	1.6	0.79	8.08	3.02	0.82	0.75
Control Target	1.6	1.6	1.6	0.8	8.0	3.0	0.8	0.8
Recovery (%)	98	101	100	99	101	101	103	94
Analytical and Field Blo	ınks							
Blank	< 0.005	< 0.005	< 0.003	< 0.001	< 0.010	< 0.010	< 0.005	< 0.003
11-14354 Field Blank	< 0.005	< 0.005	< 0.003	< 0.001	< 0.010	< 0.010	< 0.005	< 0.003
Field Duplicate								
11-14345	< 0.005	0.018	< 0.003	< 0.001	< 0.010	< 0.010	0.058	< 0.003
11-14346	< 0.005	0.011	< 0.003	< 0.001	< 0.010	< 0.010	0.056	< 0.003
Average		0.015					0.057	
Std Dev		0.005					0.001	
RSD (%)		34					2.0	
Analytical Duplicate			1					
11-29114	0.0057	< 0.005	< 0.003	< 0.001	< 0.010	0.066	0.015	< 0.003
Duplicate	0.0063	0.006	< 0.003	< 0.001	< 0.010	0.065	0.047	< 0.003
Average	0.006					0.065	0.031	
Std Dev	0.0004					0.001	0.02	
RSD (%)	6.4					1.8	74	

Table C-3: Inorganic Element Results for Soil Sample Analytical Blanks

Sample	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
	[ppm]							
Soil Samples								
Blank	<3.0	< 5.0	< 5.0	<1.0	<10	<15	<20	<1.0
Blank	<3.0	< 5.0	< 5.0	<1.0	<10	<15	<20	<1.0
Blank	<3.0	< 5.0	< 5.0	<1.0	<10	<15	<20	<1.0
Blank	<3.0	< 5.0	< 5.0	<1.0	<10	<15	<20	<1.0

Table C-4: Inorganic Element Results for Soil Sample Field Duplicates

Sample	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
	[ppm]							
Field Duplicates								
11-14308	3.5	9.2	< 5.0	<1.0	<10	<15	<20	2.6
11-14309	4.0	9.9	< 5.0	<1.0	<10	16	<20	2.8
Average	3.8	9.6						2.7
Std Dev	0.4	0.5						0.1
RSD (%)	9.4	4.9						5.6
11-14310	3.1	8.11	< 5.0	<1.0	<10	<15	<20	2.0
11-14311	3.5	8.1	< 5.0	<1.0	<10	<15	<20	1.8
Average	3.3	8.1						1.9
Std Dev	0.3	0.01						0.2
RSD (%)	8.6	0.1						9.9
Average RSD (%)	9.0	2.5						7.8
Std Dev	± 0.6	± 3.4						± 3.0

Table C-5: Inorganic Element Results for Soil Sample Analytical Duplicates

Sample	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
Sample	[ppm]	[ppm]	[ppm]	[ppm]	[ppm]	[ppm]	[ppm]	[ppm]
Soil Samples - Analyti	ical Duplicates							
11-14300	14	6.6	< 5.0	<1.0	<10	<15	<20	2.5
Duplicate	4.3	7.2	< 5.0	<1.0	<10	<15	<20	2.8
Average	9.1	6.9						2.7
Std Dev	6.7	0.4						0.2
RSD (%)	74	6.4						7.8
11-14310	3.0	7.4	<5.0	<1.0	<10	<15	<20	2.0
Duplicate	3.2	8.8	< 5.0	<1.0	<10	<15	<20	2.1
Average	3.1	8.1						2.0
Std Dev	0.1	1.0						0.01
RSD (%)	4.6	12						0.5
11-14323	4.4	7.2	<5.0	<1.0	<10	<15	<20	3.5
Duplicate	335	8.3	< 5.0	<1.0	<10	<15	<20	4.1
Average	170	7.8						3.8
Std Dev	234	0.8						0.5
RSD (%)	138	10						12
11-14332	12	9.7	<5.0	<1.0	21	24	<20	4.4
Duplicate	9.0	8.4	< 5.0	<1.0	18	22	<20	3.6
Average	11	9.1			19	23		4.0
Std Dev	2.1	0.9			2.1	1.6		0.6
RSD (%)	20	10			11	7.0		14
11-14339	3.7	6.9	<5.0	<1.0	<10	16	<20	2.5
Duplicate	4.1	7.3	< 5.0	<1.0	<10	18	<20	2.5
Average	3.9	7.1				17		2.5
Std Dev	0.3	0.3				1.1		0.02
RSD (%)	7.3	4.4				6.2		0.7
Average RSD (%)	49	8.6			11	6.6		7.0
Std Dev	± 57	± 3.1			-	± 0.6		± 6.2

Table C-6: Mercury Analysis in Soil QA/QC Samples

G 1	Hg
Sample	[ppm]
Control Spikes	
Control	0.31
Control Target	0.44
Recovery (%)	70
Control	0.48
Control Target	0.44
Recovery (%)	109
Average Recovery (%)	90
Std Dev	± 27
Analytical Blanks	
Blank	< 0.1
Blank	< 0.1
Field Duplicates	
11-14308	< 0.1
11-14309	< 0.1
11-14310	< 0.1
11-14311	< 0.1
Analytical Duplicate	
11-14300	< 0.1
Duplicate	< 0.1

Table C-7: Mercury Analysis in Water QA/QC Samples

Comple	Hg			
Sample	[mg/L]			
Control Spike				
Control Sample	0.0042			
Control Target	0.004			
Recovery (%)	105			
Analytical and Field Blank Samples				
Blank	< 0.0004			
11-14354 Field Blank	< 0.0004			
Field Duplicate				
11-14345	< 0.0004			
11-14346	< 0.0004			

Table C-8: Aroclor Polychlorinated Biphenyl (PCB) Control Spikes for Soil and Water Samples

Sample	Aroclor 1254	Aroclor 1260
	[ppm]	[ppm]
Soil Samples - Control Sp	oikes	
Control Sample	6.5	< 0.05
Control Target	5.0	< 0.05
Recovery (%)	130	
Control Sample	5.3	< 0.05
Control Target	5.0	< 0.05
Recovery (%)	106	
Control Sample	6.4	< 0.05
Control Target	5.0	< 0.05
Recovery (%)	128	
Average Recovery (%)	121	
Std Dev	± 13	

Sample	Aroclor 1254	Aroclor 1260				
	[mg/L]	[mg/L]				
Water Samples - Control Spike						
Control Sample	< 0.003	0.015				
Control Target	< 0.003	0.015				
Recovery (%)		100				

Table C-9: Aroclor PCB Results for Soil and Water Analytical and Field Blanks

Sample	Aroclor 1254	Aroclor 1260	
Sumpre	[ppm]	[ppm]	
Soil Samples - Analy			
Blank	< 0.05	< 0.05	
Blank	< 0.05	< 0.05	
Blank	< 0.05	< 0.05	

Sample	Aroclor 1254	Aroclor 1260			
Sumpre	[mg/L]	[mg/L]			
Water Samples - Analytical Blank and Field Blank					
Blank	< 0.003	< 0.003			
11-14354 Field Blanl	< 0.003	< 0.003			

Table C-10: Aroclor PCB Results for Soil and Water Sample Field and Analytical Duplicates

Sample	Aroclor 1254	Aroclor 1260		
Sample	[ppm]	[ppm]		
Soil Samples - Field D	uplicates			
11-14308	< 0.05	< 0.05		
11-14309	< 0.05	< 0.05		
11-14310	< 0.05	< 0.05		
11-14311	< 0.05	< 0.05		
Soil Samples - Analytical Duplicate				
11-14325	< 0.05	< 0.05		
Duplicate	< 0.05	< 0.05		

C1-	Aroclor 1254	Aroclor 1260	
Sample	[mg/L]	[mg/L]	
Water Samples - Field Duplicate			
11-14345	< 0.003	< 0.003	
11-14346	< 0.003	< 0.003	

Table C-11: Canadian Council of Ministers of the Environment (CCME) Hydrocarbon Control Spikes in Soil Samples

Try drocar bon Control Spines in Bon S		
	F1	
Sample	(C6-C10)	
	[ppm]	
Control Sample F1		
Control F1	32	
Control Target	29	
Recovery (%)	110	
Control F1	29	
Control Target	29	
Recovery (%)	100	
Average Recovery (%)	105	
Std Dev	± 7.3	

Sample	Total Hydrocarbons	
	[ppm]	
Control Samples F2-F4		
Diesel Spike	40	
Diesel Spike Target	50	
Recovery (%)	80	
Diesel Spike	41	
Diesel Spike Target	50	
Recovery (%)	82	
Average Recovery (%)	81	
Std Dev	± 1.4	

Sample	Total Hydrocarbons	
	[ppm]	
Control Samples F2-F4		
Control Standard	2,600	
Control Standard Target	2,500	
Recovery (%)	104	
Control Standard	2,600	
Control Standard Target	2,500	
Recovery (%)	104	
Average Recovery (%)	104	
Std Dev	± 0	

Table C-12: CCME Hydrocarbons in Soil Sample Analytical Blanks

	F1	F2	F3	F4
Sample	(C6-C10)	(C10-C16)	(C16-C34)	(C34-C50)
	[ppm]	[ppm]	[ppm]	[ppm]
Analytical Blanks		•	-	
Blank	< 10	< 4.0	< 9.0	< 8.0
Blank	< 10	< 4.0	< 9.0	< 8.0

Table C-13: CCME Hydrocarbon in Soil Field and Analytical Duplicates

	F1	F2	F3	F4
G 1			-	
Sample	(C6-C10)	(C10-C16)	(C16-C34)	(C34-C50)
	[ppm]	[ppm]	[ppm]	[ppm]
Field Duplicates				
11-14308	<10	4.7	< 9.0	< 8.0
11-14309	<10	< 4.0	< 9.0	< 8.0
11-14310	<10	< 4.0	< 9.0	< 8.0
11-14311	<10	< 4.0	< 9.0	< 8.0
Analytical Duplicat	tes			
11-14300	<10			
Duplicate	<10			
11-14333		<4.0	20	8.2
Duplicate		<4.0	21	9.1
Average			21	8.7
Std Dev			0.7	0.6
RSD (%)			3.4	7.4
11-14343	<10			
Duplicate	<10			
11-14343		<4.0	<9.0	<8.0
Duplicate		<4.0	<9.0	<8.0

Table C-14: CCME Hydrocarbon Control Spikes in Water Samples

	F1
Sample	(C6-C10)
	[mg/L]
Control Sample F1	
Control F1	0.15
Control Target	0.16
Recovery (%)	94

	Total Hydrocarbons	
Sample	(C34-C50)	
	[mg/L]	
Control Samples F2-F4		
Diesel Spike	8.5	
Diesel Spike Target	10	
Recovery (%)	85	

Sample	Total (C34-C50)	
	[mg/L]	
Control Samples F2-F4		
Control Standard	2,400	
Control Standard Target	2,500	
Recovery (%)	96	

Table C-15: CCME Hydrocarbon Analysis of Water Sample Blanks and Duplicates

	F1	F2	F3	F4
Sample	(C6-C10)	(C10-C16)	(C16-C34)	(C34-C50)
	[mg/L]	[mg/L]	[mg/L]	[mg/L]
Analytical Blanks	•	•	•	•
Blank	< 0.05	< 0.5	< 1.0	< 1.0
11-14354 Field Blank	< 0.05	< 0.5	< 1.0	< 1.0
Field Duplicate				
11-14345	< 0.05	< 0.5	< 1.0	< 1.0
11-14346	< 0.05	< 0.5	< 1.0	< 1.0

Table C-16: Inorganic Element Analysis of Soil QA/QC Samples Analyzed at ALS Environmental

Sample	Hg
Sample	[ppm]
Certified Reference material	0.401
Reference Target	0.41
Recovery (%)	98
Limits	70-130

Comple	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	Hg
Sample	[ppm]	[ppm]	[ppm]	[ppm]	[ppm]	[ppm]	[ppm]	[ppm]	[ppm]
Laboratory Control Spike									
Laboratory Control Spike	0.96	0.98	0.98	0.99	1.01	1.15	1.02	1.03	0.053
Control Target	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.05
Recovery (%)	96	98	98	99	101	115	102	103	106
Limits	80-120	80-120	80-120	80-120	80-120	80-120	80-120	80-120	70-130
Matrix Control Spike									
Matrix Control Spike	11.6	11.8	6.6	2.5	8.4	11	15	6.02	0.104
Control Target	10.7	11.2	6.3	2.5	8.5	9.7	12.7	5.6	0.1
Recovery (%)	N/A*	N/A*	N/A*	102	N/A*	N/A*	N/A*	N/A*	104
Limits	-	-	-	70-130	-	-	-	-	70-130
	*N/A Matrix S	pike recovery	could not be ac	curately calcul	ated due to hig	gh analyte bacl	kground in san	nple.	
Method Blank									
Method Blank	<1.0	<1.0	<1.0	< 0.50	<1.0	<5.0	<1.0	< 0.20	< 0.05

Table C-17: Hydrocarbon Analysis of Soil Sample Control Spikes and Blanks, Analyzed at ALS

Commit	F1 (C6-C10)	F2 (C10-C16)	F3 (C16-C34)	F4 (C34-C50)
Sample	[ppm]	[ppm]	[ppm]	[ppm]
Laboratory Control Spike				
Laboratory Control Spike	8.5	289	611	77
Control Target	7.5	336	641	76
Recovery (%)	113	86	95	102
Laboratory Control Spike	8.7	288	607	75
Control Target	7.5	336	641	76
Recovery (%)	117	86	95	100
-				
Laboratory Control Spike		282	557	69
Control Target		336	641	76
Recovery (%)		84	87	91
Average Recovery (%)	115	85	92	98
Std Dev	± 2.8	± 1.2	± 4.6	± 5.9
Limits	80-120	80-120	80-120	80-120
Matrix Control Spike				
Matrix Control Spike	0.8	288	664	84
Control Target	9.5	360	686	81
Recovery (%)	93	80	97	104
Matrix Control Spike	8.9	328	696	89
Control Target	6.6	370	706	83
Recovery (%)	134	89	99	106
Matrix Control Spike		310	626	83
Control Target		341	652	77
Recovery (%)		91	96	108
Average Recovery (%)	114	87	97	106
Std Dev	± 29	± 5.9	± 1.5	± 2.0
Limits	50-140	50-140	60-140	60-140
Method Blanks				
Method Blank	< 5.0	<10	< 50	< 50
Method Blank	<5.0	<10	< 50	< 50
Method Blank		<10	< 50	< 50

Table C-18: PCB Analysis of Control Spike and Blank, Analyzed at ALS

Sample	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
	[ppm]	[ppm]	[ppm]	[ppm]
Laboratory Control Spike				
Laboratory Control Spike	0.18	0.17	0.17	0.2
Control Target	0.2	0.2	0.2	0.2
Recovery (%)	90	87	87	100
Limits	60-140	60-140	60-140	60-140

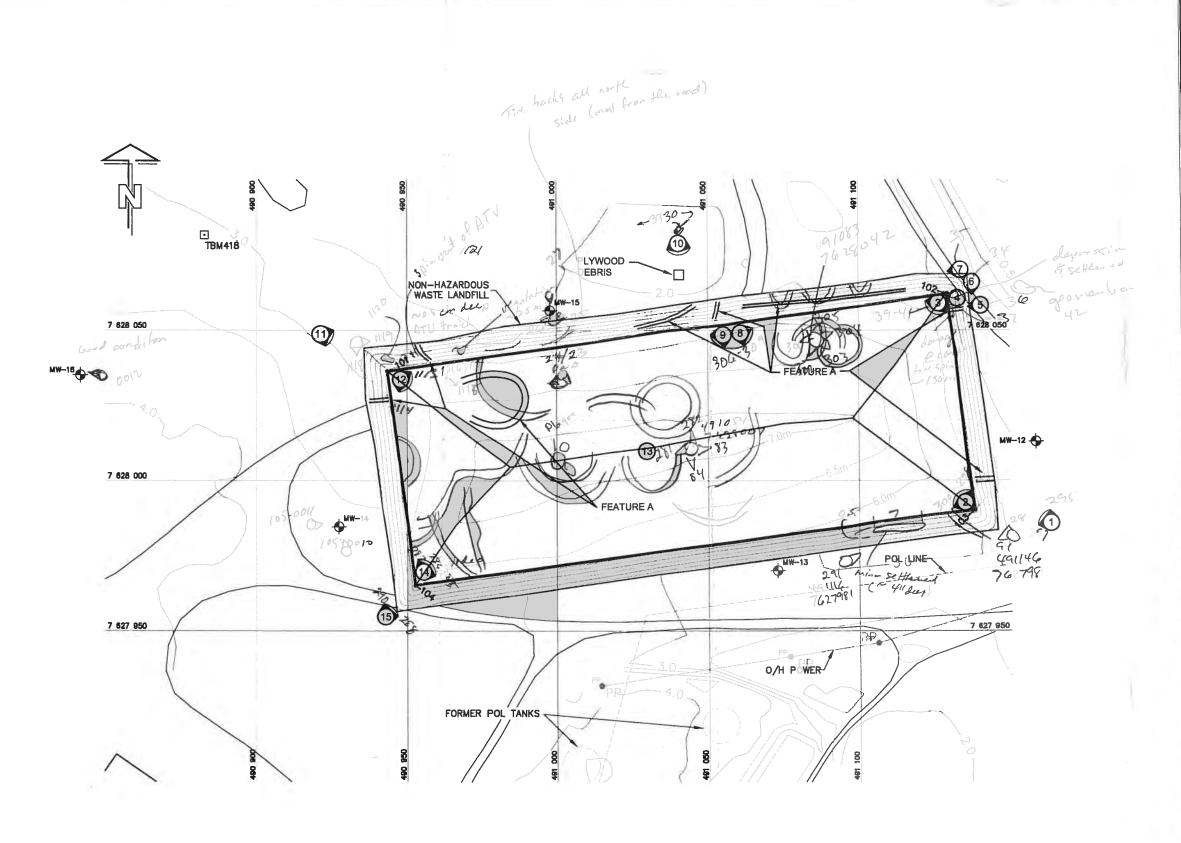
Sample	Aroclor 1016 [ppm]	Aroclor 1221 [ppm]	Aroclor 1232 [ppm]	Aroclor 1242 [ppm]	Aroclor 1248 [ppm]	Aroclor 1254 [ppm]	Aroclor 1260 [ppm]	Aroclor 1262 [ppm]	Aroclor 1268 [ppm]
Method Blank	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010

Table C-19: Comparison of Inorganic, Hydrocarbon and PCB results analyzed at ASU/ASG and at ALS Laboratories

1 able C-17. (able C-19: Comparison of inorganic, Hydrocarbon and PCB results analyzed at ASU/ASG and at ALS Laboratories														
		Cu	Ni	Co	Cd	Pb	Zn	Cr	As	Hg	F1	F2	F3	F4	Total
Laboratory	Sample ID	Cu	111	CO	Cu	10	211	Cı	As	11g	(C6-C10)	(C10-C16)	(C16-C34)	(C34-C50)	PCBs
		[ppm]	[ppm]	[ppm]	[ppm]	[ppm]	[ppm]	[ppm]	[ppm]	[ppm]	[ppm]	[ppm]	[ppm]	[ppm]	[ppm]
DLCU Criteria	Tier I					200									1
DECC CITICITA	Tier II	100	100	50	5	500	500	250	30	2					5
ASG/ASU	11-14300	9.1	6.9	< 5.0	<1.0	<10	<15	<20	2.7	< 0.1	<10	<4.0	11	<8.0	< 0.05
ALS		4.3	7.4	1.9	< 0.5	2.9	10.2	8.6	1.72	< 0.5	< 5.0	< 6.0	<50	<50	< 0.03
A GG/A GIT	11 14202	<i>5</i> 1	6.0	.5.0	.1.0	.10	.15	<20	2.1	.0.1	<10	6.0	10	.0.0	.0.05
ASG/ASU	11-14303	5.1	6.9	< 5.0	<1.0	<10	<15		2.1	<0.1		6.8	12	<8.0	< 0.05
ALS		5.9	8.0	1.9	< 0.5	5.2	18.6	12.3	1.27	< 0.5	< 5.0	14	<50	<17	< 0.03
ASG/ASU	11-14308	3.5	9.2	< 5.0	<1.0	<10	<15	<20	2.6	< 0.1	<10	4.7	<9.0	<8.0	< 0.05
ALS	11-14300	5.1	11.7	3.0	<0.5	3.5	22.7	18.8	2.18	<0.1	<5.0	<6	<18	<17	< 0.03
ALS		3.1	11.7	3.0	\0.5	3.3	22.1	10.0	2.10	₹0.5	₹3.0	<0	<10	<17	₹0.03
ASG/ASU	11-14315	4.2	8.7	< 5.0	<1.0	<10	<15	<20	2.7	< 0.1	<10	<4.0	<9.0	<8.0	< 0.05
ALS		3.4	7.0	1.8	<0.5	3.3	11.6	10.3	2.23	<0.5	< 5.0	<6.0	<18	<17	< 0.03
ASG/ASU	11-14321	4.4	7.2	< 5.0	<1.0	<10	<15	< 20	2.4	< 0.1	<10	<4.0	<9.0	< 8.0	< 0.05
ALS		4.0	6.5	1.7	< 0.5	4.4	10.5	7.9	3.07	< 0.5	< 5.0	< 6.0	<18	<17	< 0.03
ASG/ASU	11-14329	6.0	8.4	< 5.0	<1.0	120	<15	<20	2.7	< 0.1	<10	<4.0	9.7	<8.0	< 0.05
ALS		5.9	7.2	1.7	< 0.5	140	16.6	9.1	2.45	< 0.5	< 5.0	< 6.0	<18	<17	< 0.03
ASG/ASU	11-14332	11	9.1	< 5.0	<1.0	19	23	<20	4.0	< 0.1	<10	<4.0	57	13	0.1
ALS		12.5	9.9	2.5	< 0.5	26	29.3	12.8	4.26	< 0.5	< 5.0	< 6.0	<50	<50	0.153
A CC / A CIT	11 14242	22	7.2	-5 O	-1.0	-10	-15	-20	1.0	-0.1	-10	:10	-0.0	-0	-0.05
ASG/ASU	11-14342	3.3	7.3	< 5.0	<1.0	<10	<15	<20	1.8	<0.1	<10	<4.0	<9.0	<8	< 0.05
ALS		3.3	7.1	1.7	< 0.5	4.3	14.1	9.6	2.23	< 0.5	< 5.0	<6.0	<50	<17	< 0.03

Annex 3

Field Notes



• TEMPORARY BENCHMARK

●─101 COORDINATE POINT

1

MONITORING WELL LOCATION

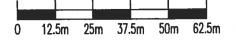
PHOTOGRAPH VIEWPOINT LOCATION

PANORAMIC VIEW

VEHICLE TRACKS/RUTS (NTS)

TEMPORARY BENCHMARKS							
UTM COORDINATES ELEV							
NO.	NORTHING	EASTING	ELEV.				
TBM418	7 628 081.738	490 882.902	3.277				

C	COORDINATE POINTS (AS BUILT) MONITORING WELLS										
NO.	NORTHING	EASTING	ELEV.								
MW-12	7 628 012.9	491 158.5	2.41								
MW-13	7 627 970.1	491 073.0	3.12								
MW-14	7 627 984.7	790 927.2	4.39								
MW-15	7 628 056.6	490 997.8	2.72								
MW-16	7 628 035.1	490 841.6	4.65								



A	FINAL VERSION	10-03-08	P.L.	A.P.	J.P.P.
NO.	VERSION	DATE	BY	VERIF.	APPR.

FINAL REPORT
COLLECTION OF LANDFILL MONITORING DATA

FOX-M, HALL BEACH, NUNAVUT

NON-HAZARDOUS WASTE LANDFILL

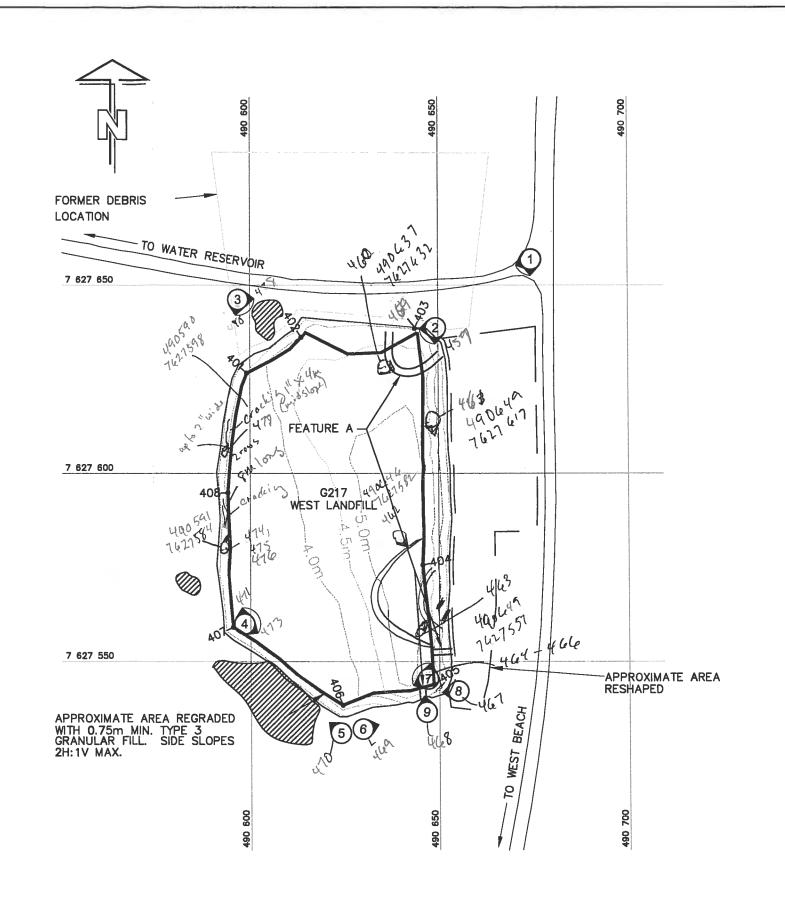
SITE REMEDIATION SOLUTIONS

Biogenie, a division of EnGlobe Corp. 4495 Wiffrid-Hamel Blvd., Suite 200 Quebec (Quebec) CANADA G1P 2J7 Phone: (418) 653-4422 Fax.: (418) 653-3583

1	DAYE (month-year): MARCH 2010
ĺ	APPROVED BY:

Biogénie

Metre	1 : 1,250	MARCH 2010
DRAWN BY: P. LÉGARÉ	VERGRIED BY: A. PASSALIS	JP. PELLETIER
PROJECT NO: CD8177_005_101	ORAWING NO: CD8177_005_101-FOX-M	_B PL



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SURVEY CONTROL MONUMENT



TEMPORARY BENCHMARK
COORDINATE POINT



PHOTOGRAPH VIEWPOINT LOCATION



PANORAMIC VIEW



PONDED WATER



VEHICLE TRACKS/RUTS (NTS)

٦	EMPORARY E	BENCHMARKS		
NO	UTM COOR	DINATES	ELEV.	
NO.	NORTHING	EASTING	ELCV.	
TBM202	7 627 536.239	490 688.266	4.032	
TBM420	7 627 562.060	490 830.450	6.578	



٨	FINAL VERSION	10-03-08	P.L.	A.P.	J.P.P.
NO.	VERSION	DATE	BY	VERIF.	APPR.

FINAL REPORT COLLECTION OF LANDFILL MONITORING DATA

FOX-M, HALL BEACH, NUNAVUT

G217 WEST LANDFILL

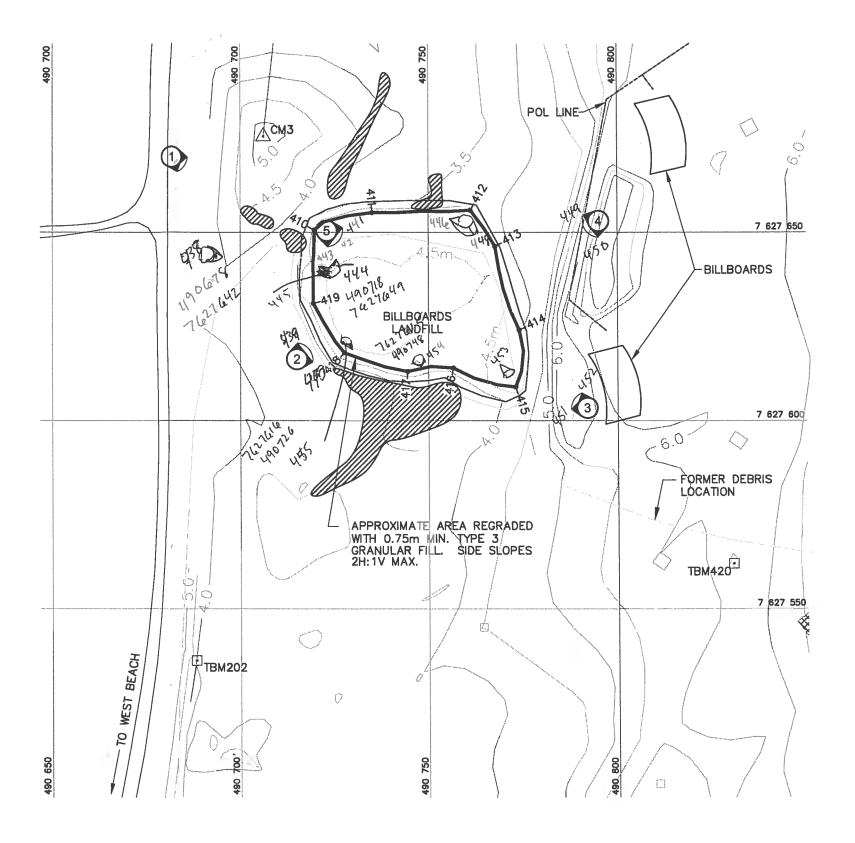
SITE REMEDIATION SOLUTIONS

Biogenie, a division of EnGlobe Corp. 4495 Wilfrid-Hamel Blvd., Suite 200 Quebec (Quebec) CANADA G1P 2J7 Phone: (418) 653-4422 Fax.: (418) 653-3583



MEASUREMENT UNIT	SCALE;	DATE (month-year):
Metre	1 : 1,000	MARCH 2010
DRAWN BY: P. LÉGARÉ	VERIFIED BY: A. PASSALIS	JP. PELLETIER
PROJECT NO: CD8177_005_101	ORAMING NO: CD8177_005_101-FOX-	PAGE PL





SURVEY CONTROL MONUMENTS				
NO.	UTM COOF	RDINATES	ELEV.	DESCRIPTION
NO.	NORTHING	EASTING	ELEV.	DESCRIP HON
СМЗ	7 627 675.453	490 706.281	5.291	FOX-M BASELINE STA. 47+00

SURVEY CONTROL MONUMENT

TEMPORARY BENCHMARK

COORDINATE POINT
 PHOTOGRAPH VIEWPOINT LOCATION

10 PANORAMIC VIEW

PONDED WATER

TEMPORARY BENCHMARKS					
NO.	UTM COOR	ELEV.			
	NORTHING	EASTING	ELEV.		
TBM202	7 627 536.239	490 688.266	4.032		
TBM420	7 627 562.060	490 830.450	6.578		



1	A	FINAL VERSION	10-03-08	P.L.	AP.	J.P.P.
	NO.	VERSION	DATE	BY	VERIF.	APPR.

FINAL REPORT COLLECTION OF LANDFILL MONITORING DATA

FOX-M, HALL BEACH, NUNAVUT

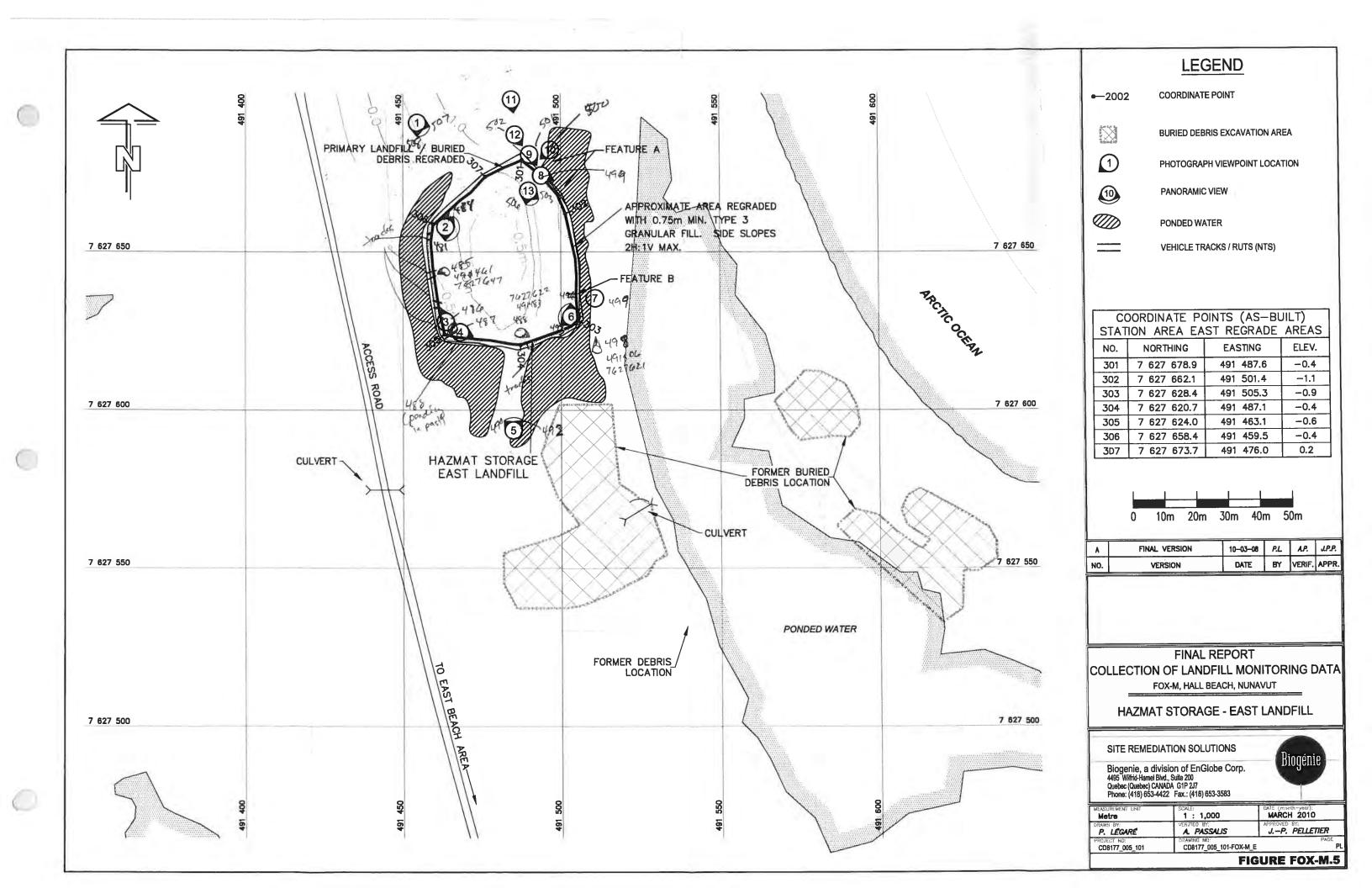
BILLBOARDS LANDFILL

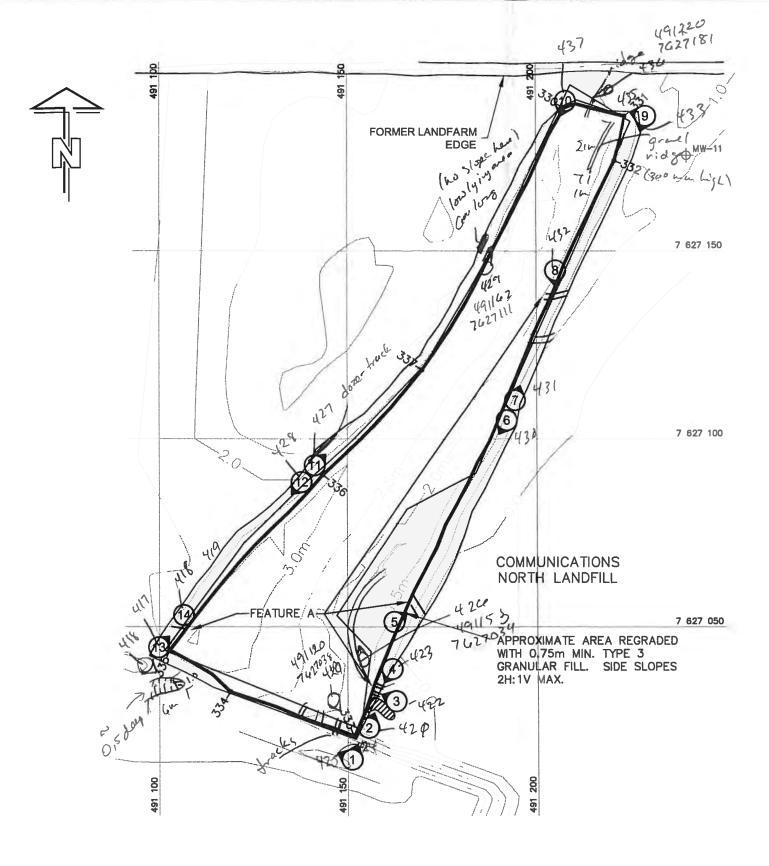
SITE REMEDIATION SOLUTIONS

Biogenie, a division of EnGlobe Corp. 4495 Wilfrid-Hamel Blvd., Suite 200 Quebec (Quebec) CANADA G1P 2J7 Phone: (418) 653-4422 Fax.: (418) 653-3583



MEASUREMENT UNIT	1: 1,000	DATE (month-ymar): MARCH 2010
DRAWN BY: P. LEGARE	VERIFIED BY: A. PASSALIS	JP. PELLETIER
PROJECT NO: CD8177_005_101	ORAMING NO: CD8177_005_101-FOX-M_D	PAGE PL





PERMANENT BENCHMARK						
NO	UTM COORDINATES		51.514	DESCRIPTION		
NO.	NORTHING	EASTING	ELEV.	DESCRIPTION		
BM-3	7 627 040.589	491 004.505	2.949	25mm DIA. STEEL PIPE		

PERMANENT BENCHMARK



COORDINATE POINT



PHOTOGRAPH VIEWPOINT LOCATION



PANORAMIC VIEW



PONDED WATER



VEHICLE TRACKS/RUTS (NTS)



A	FINAL VERSION	10-03-08	P.L.	A.P.	J.P.P.
NO.	VERSION	DATE	BY	VERIF.	APPR.

FINAL REPORT COLLECTION OF LANDFILL MONITORING DATA

FOX-M, HALL BEACH, NUNAVUT

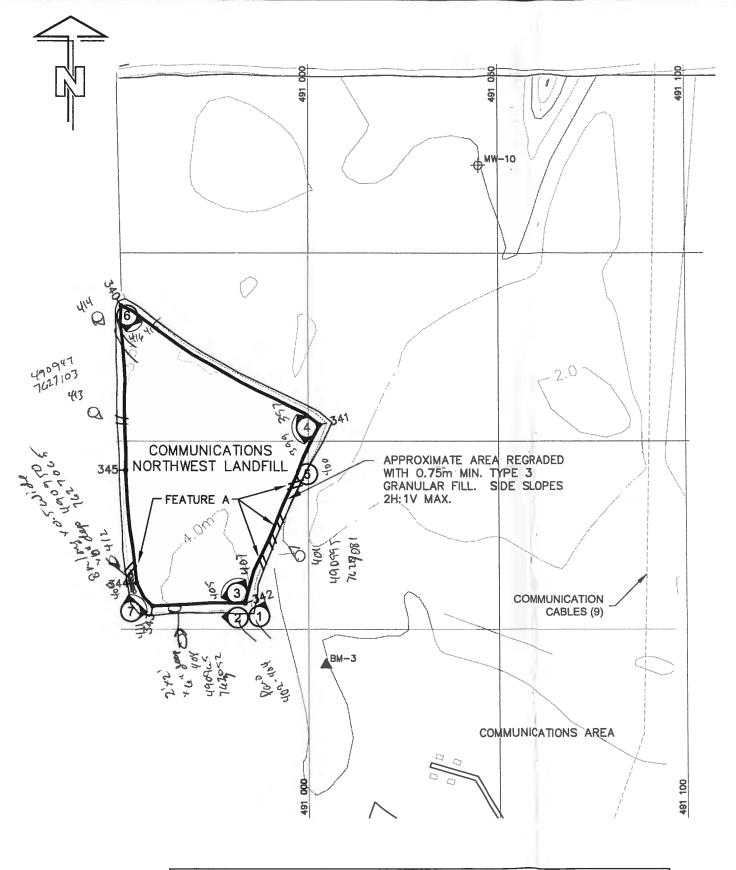
COMMUNICATIONS NORTH LANDFILL

SITE REMEDIATION SOLUTIONS

Biogenie, a division of EnGlobe Corp. 4495 Wilfrid-Hamel Blvd., Suite 200 Quebec (Quebec) CANADA G1P 2J7 Phone: (418) 653-4422 Fax.: (418) 653-3583

Biogénie
DATE (month-year):

MEASUREMENT UNIT	1 : 1,000	CATE (Pronth-year): MARCH 2010
DEAWN BY: P. LÉGARÉ	VÉRIFIÉO BY: A. PASSALIS	JP. PELLETIER
PROJECT NO: CD8177_005_101	ORAMING NO- CD8177_005_101-FOX-M_F	PAGE P



PERMANENT BENCHMARK					
NO.	UTM COO	UTM COORDINATES	C) C)	DESCRIPTION	
NU.	NORTHING	EASTING	ELEV.	DESCRIPTION	
BM-3	7 627 040.589	491 004.505	2.949	25mm DIA. STEEL PIPE	

PERMANENT BENCHMARK



PHOTOGRAPH VIEWPOINT LOCATION



PANORAMIC VIEW

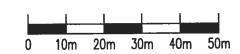
COORDINATE POINT



PONDED WATER



VEHICLE TRACKS/RUTS (NTS)



A	FINAL VERSION	10-03-08	P.L.	A.P.	J.P.P.
NO.	VERSION	DATE	BY	VERIF.	APPR.

FINAL REPORT

COLLECTION OF LANDFILL MONITORING DATA FOX-M, HALL BEACH, NUNAVUT

COMMUNICATIONS NORTHWEST LANDFILL

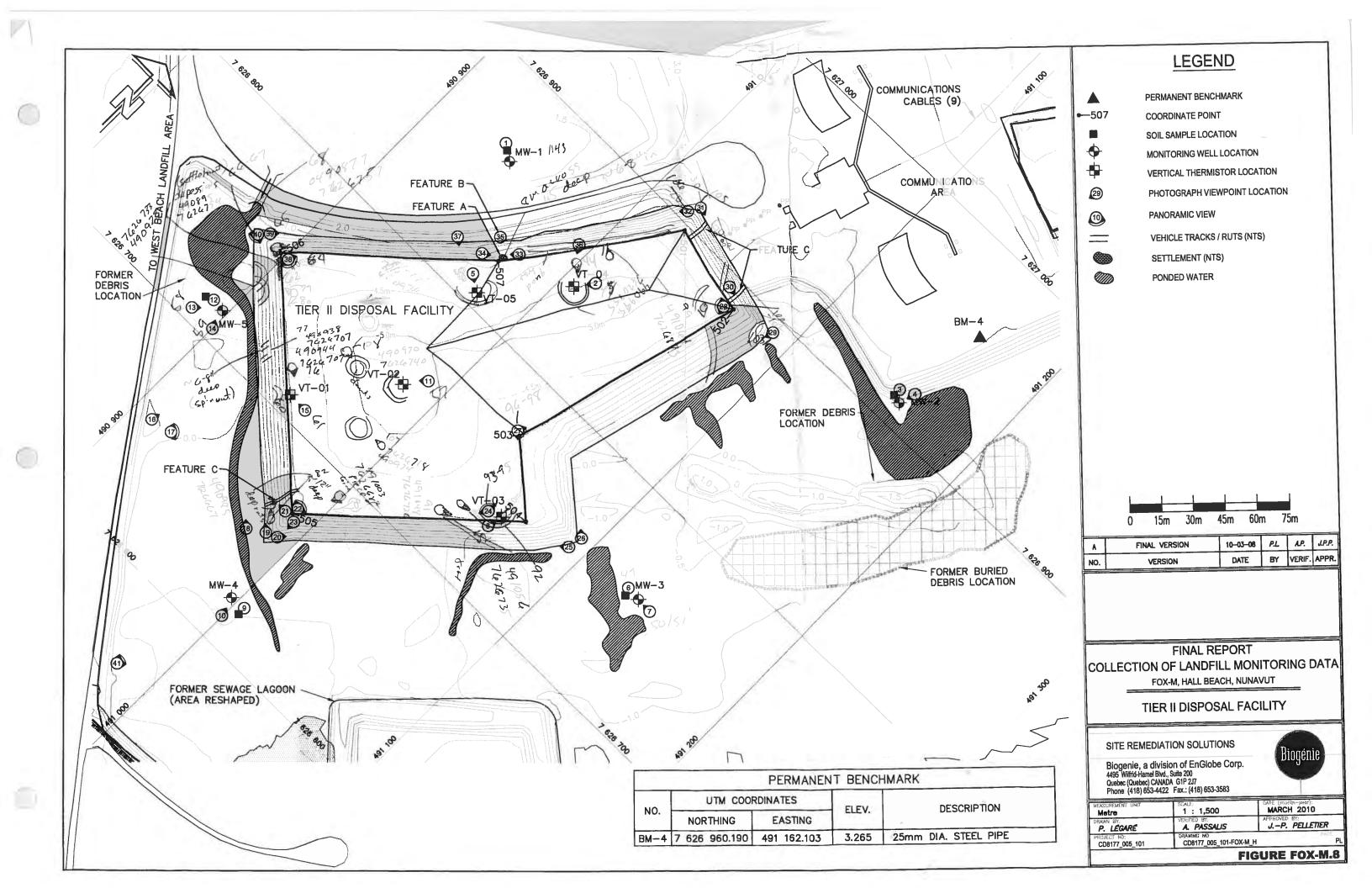
SITE REMEDIATION SOLUTIONS

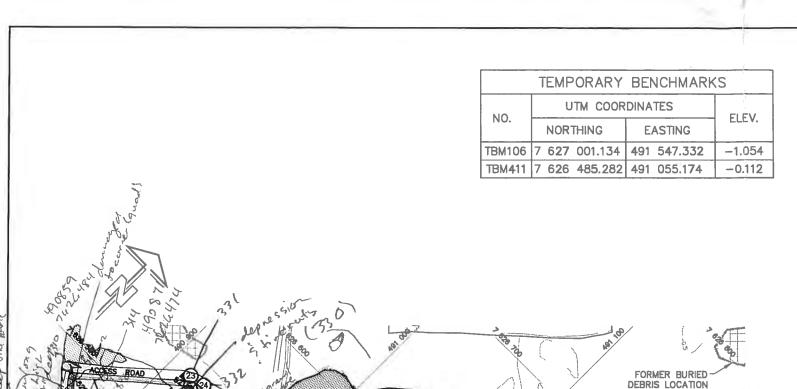
Biogenie, a division of EnGlobe Corp. 4495 Wilfrid-Hamel Blvd., Suite 200 Quebec (Quebec) CANADA G1P 2J7 Phone: (418) 653-4422 Fax.: (418) 653-3583

e Corp.		
3583		
)	DATE (month-year): MARCH 2010	
	APPROVED BY:	

Biogénie

MEASUREMENT UNIT	SCALE: 1: 1,000	DATÉ (month-yeldi): MARCH 2010
P. LEGARE	VERIFIED BY: A. PASSALIS	APPROVED BY: JP. PELLETIER
PROJECT NO: CD8177_005_101	DRAWING NO: CD8177_005_101-FOX-M_G	PAGE PI





FORMER SEWAGE LAGOON. AREA RESMAPED. KEY TRENCH FORMER DEBRIS FEATURE A EAST BEACH LANDFILL - SOUTH ™TBM105 MW-25 7624 657 FORMER BURIED -7626621 DEBRIS LOCATION ARCTIC OCEAN

С	OORDINATE PO	DINTS (AS BU ING WELLS	ILT)
	MONITOR	ING WLLLS	
NO.	NORTHING	EASTING	ELEV.
MW24	7 626 835.4	491 488.8	0.01
MW25	7 626 724.5	491 371.8	0.24
MW26	7 626 592.2	491 232.3	0.57
MW27	7 626 450.3	491 080.3	-0.10
MW28	7 626 407.7	490 923.9	-0.42
MW29	7 626 558.2	490 985.7	-0.03
MW30	7 626 675.1	491 234.0	-1.03

COORDINATE POINTS (AS-BUILT) **VERTICAL THERMISTORS** NORTHING **EASTING** 490 895.0 VT-06 7 626 451.0 VT-07 7 626 742.0 491 381.0 VT-08 7 626 816.0 491 370.0

LEGEND

• TEMPORARY BENCHMARK

-525 COORDINATE POINT

10

EAST BEACH

MONITORING SOIL SAMPLE LOCATION

MONITORING WELL LOCATION

VERTICAL THERMISTOR LOCATION 1

PHOTOGRAPH VIEWPOINT LOCATION

PANORAMIC VIEW

VEHICLE TRACKS / RUTS (NTS)



	A	FINAL VERSION	10-03-08	P.L.	A.P.	J.P.P.
1	NO.	VERSION	DATE	BY	VERIF.	APPR.

FINAL REPORT COLLECTION OF LANDFILL MONITORING DATA

FOX-5, HALL BEACH, NUNAVUT

EAST BEACH LANDFILL SOUTH

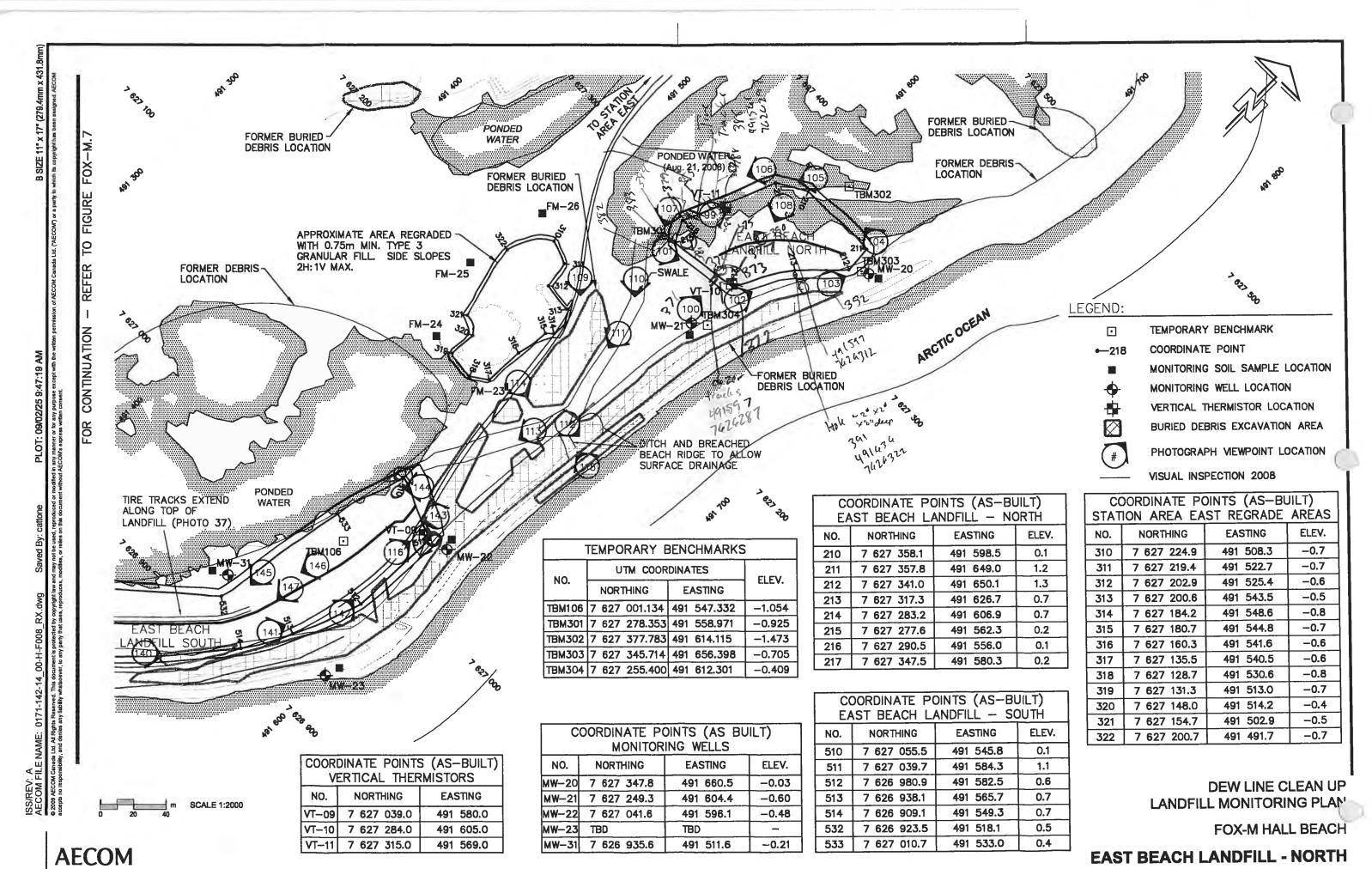
SITE REMEDIATION SOLUTIONS

7626880

Biogenie, a division of EnGlobe Corp. 4495 Wilfrid-Hamel Blvd., Suite 200 Quebec (Quebec) CANADA G1P 2J7 Phone: (418) 653-4422 Fax.: (418) 653-3583



MEASUREMENT DIRT	1 : 2,500	DATE (month-year): MARCH 2010
DRAWN BY: P. LEGARE	VERIFIED BY: A. PASSALIS	APPROVED BY: JP. PELLETIER
PROJECT NO: CD8177_005_101	GRAVING NO: CD8177_005_101-FOX-M_I	PAGE PL



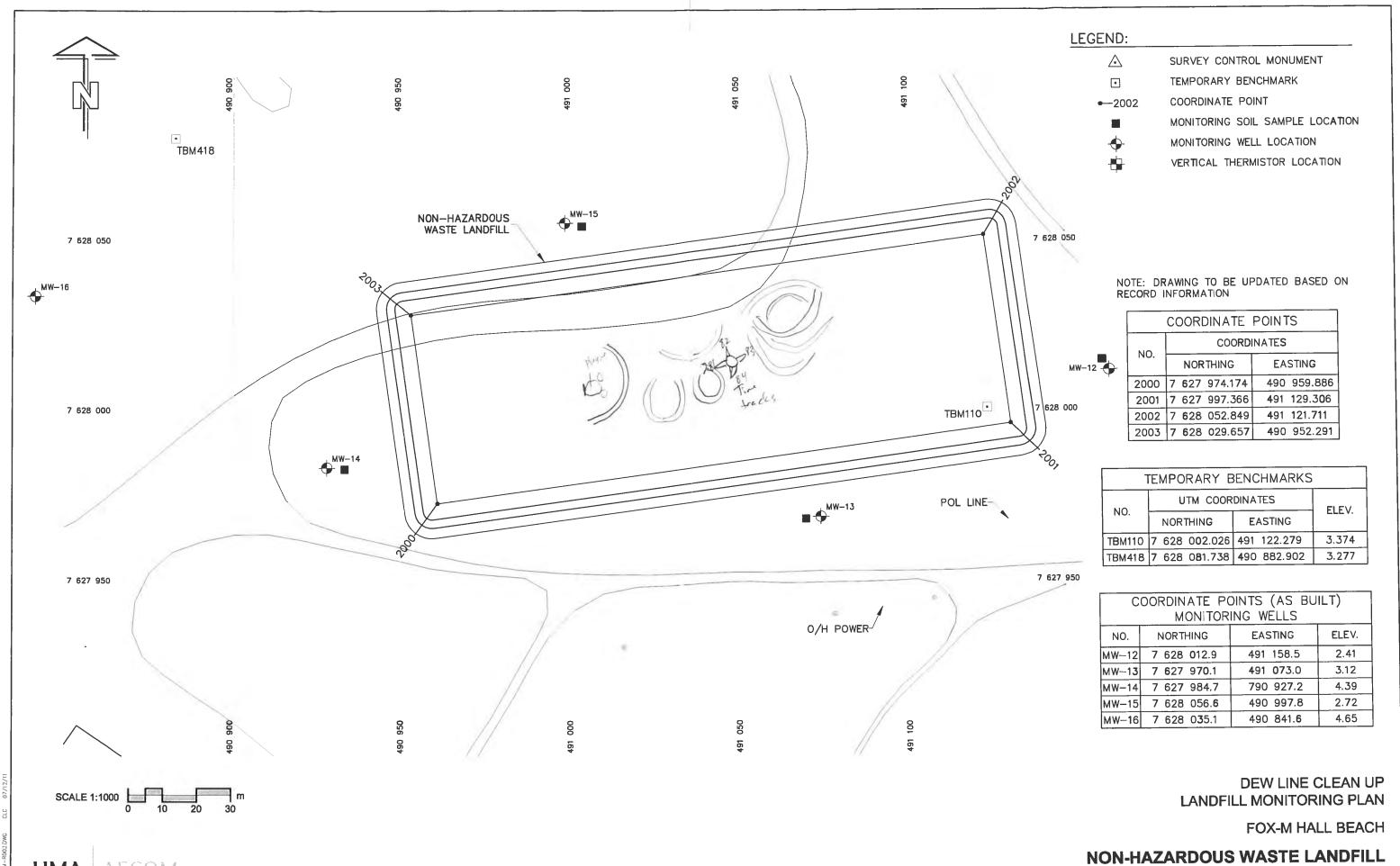


FIGURE FOX-M.2

UMA

	Site Name:	FOX-M				
	Date of Sampling Event:	Aug 17 Tom, Almina				
	Names of Samplers:	lom, Almina				
	Monitoring Well ID:	M11-7				
	Facility:	MW-I				
	racinty.	110 4				
		"	ater Sample M	Measured Data		
	Condition of Well:	Good				
	Procedure/Equipment:	vatora/int	- free		ocedure/Equipment:	
Well he	eight above ground (m)=	0,45		Depth to	water surface (m)=	1.18
	Diameter of well (m)=	0.04		Static water level* (m)= + 00 0.8		
De	pth of installation* (m)=	3		Depth to bottom (m)= 2,00		
Leng	th screened section (m)=	1.5		Free produ	act thickness (mm)=	
	h to top of screen* (m)=					
	Calculat Depth of water (m)=	O. 87		Too!	Notes idence of sludge etc:	
337	ell volume of water (L)=	0.14.6		Evidence of freezing/si		
W	en volume of water (L)=	1.10		Evidence of freezing/s	installation record)	
Length scree	en collecting water (m)=	0.82 1.5			31.031.11.03.031.2.4.2.5.0.7	
-			elopment/Purs	ging Information		
	Equipment:					
Data P. Tima	Values Demond (L)	Tammaratura (°C)	рН	Conductivity (uS/cm)	Turbidity (NTU)	Description of control
Date & Time	Volume Removed (L)	Temperature (°C)	8-25			Description of water
	1	7.0	0-4	1360	21.9	cler
10:30	1	18.9 9.1	8.16	1200	50,9	clay
	Water San			19/4	Soil Sampling	10:10
	Date and time collected:	10:40 00			and time collected:	10:20
		14348			- Committee of the comm	19:20
	Date and time collected: ample Number - Water:	14348			and time collected: mple Number - Soil:	19300/01
	Date and time collected:	14345 14345 17346			and time collected:	10:20 19300/01 J-s/WPS
	Date and time collected: ample Number - Water:	14348 14348 17346 16 HOTE	u		and time collected: mple Number - Soil:	19300/01
	Date and time collected; ample Number - Water; Sample containers:	14345 14345 17346	iş.	Sar	and time collected: nple Number - Soil: Sample containers:	J-5/WPS
	Date and time collected: ample Number - Water:	14348 14348 17346 16 HOTE	iş.	Sar	and time collected: mple Number - Soil:	19300/01
	Date and time collected; ample Number - Water; Sample containers:	14348 14348 17346 16 HOTE	is.	Sar	and time collected: nple Number - Soil: Sample containers:	7-5/WPS
	Date and time collected; ample Number - Water; Sample containers: Procedure/Equipment;	10:40 10 14345 17346 1 6 HORE 1 6 Teller 150 - 6 glas	is.	Sar	and time collected: nple Number - Soil: Sample containers: ocedure/Equipment:	J-5/WPS
	Date and time collected; ample Number - Water; Sample containers:	14348 14348 17346 16 HOTE	is	Sar	and time collected: nple Number - Soil: Sample containers:	7-5/WPS
	Date and time collected: ample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N)	10:40 10 14345 17346 1 6 HORE 1 6 Teller 150 - 6 glas	55	Sar	and time collected: nple Number - Soil: Sample containers: ocedure/Equipment:	J-5/WPS
	Date and time collected; sample Number - Water; Sample containers: Procedure/Equipment: Water description;	10:40 10 14345 17346 1 6 HORE 1 6 Teller 150 - 6 glas	55	Sar	and time collected: nple Number - Soil: Sample containers: occdure/Equipment: Soil description:	19300/01 J-5/WPS Plastic Scoops 100 17074-51 490945
\$	Date and time collected: cample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	10:40 10 14345 17346 1 6 HORE 1 6 Teller 150 - 6 glas	5	Sar Pro	and time collected: hiple Number - Soil: Sample containers: ceedure/Equipment: Soil description: GPS	7-5/WPS
\$	Date and time collected; sample Number - Water; Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N) oment Decontamination:	10:40 10 14345 17346 1 6 HORE 1 6 Teller 150 - 6 glas	55	Sar	and time collected: inple Number - Soil: Sample containers: ocedure/Equipment: Soil description: GPS int Decontamination:	19300/01 J-5/WPS Plastic Scoops 100 1717/1-57 490945 7626864
\$	Date and time collected: cample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N) oment Decontamination: (Y/N)	10:40 : 14345 17346 16 HOSS 16 Tollor 250-6 glas	13	Sar Pro	and time collected: inple Number - Soil: Sample containers: ocedure/Equipment: Soil description: GPS int Decontamination: (Y/N)	19300/01 J-5/WPS Plastic Scoops low 17028-5' 490945 7626864
\$	Date and time collected; sample Number - Water; Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N) oment Decontamination:	10:40 10 14345 17346 1 6 HORE 1 6 Teller 150 - 6 glas	13	Sar Pro	and time collected: inple Number - Soil: Sample containers: ocedure/Equipment: Soil description: GPS int Decontamination:	19300/01 J-5/WPS Plastic Scoops 100 17071-59 490945 7626864

n/a=not applicable

^{*}From ground surface. Unless this is stated, all measurements are assumed to be from the top of the casing. Grey shaded cells indicates information obtained from original installation record.

Table XX: Monitoring Well Sampling Log Site Name: Date of Sampling Event: Names of Samplers: MW-1 Tiv # Monitoring Well ID: Facility: Water Sample Measured Data Condition of Well: Good water Procedure/Equipment: Procedure/Equipment: 1.10 0.48 Depth to water surface (m)= Well height above ground (m)= Diameter of well (m)= 0.04 Static water level* (m)= Depth of installation* (m)= Depth to bottom (m)= 1.5 Length screened section (m)= Free product thickness (mm)= 0.54 Depth to top of screen* (m)= Calculations Notes 10 Evidence of sludge etc: Depth of water (m)= Well volume of water (L)= Evidence of freezing/siltation: (compare to 2.0 installation record) 1.6 Length screen collecting water (m)= Development/Purging Information Equipment: pH Turbidity (NTU) Conductivity (uS/cm) Temperature (°C) Description of water Date & Time Volume Removed (L) 8.15 11:20 10.69 clear. 1167 11:30 7.82 1148 14.53 clear Soil Sampling Water Sampling 11-90 Date and time collected: Date and time collected: 4302 Sample Number - Water: 12347 Sample Number - Soil: 1 4 11015 Sample containers: Sample containers: 750 at glass Procedure/Equipment: Procedure/Equipment: Water description: Soil description: Filtration: (Y/N) Acidification: (Y/N)

n/a=not applicable

Sampling Equipment Decontamination:

Grey shaded cells indicates information obtained from original installation record.

(Y/N)

Number washes: Number rinses: Sampling Equipment Decontamination:

(Y/N)

Number washes:

Number rinses:

^{*}From ground surface. Unless this is stated, all measurements are assumed to be from the top of the casing.

	Site Name:	FOXIN				
Da	ate of Sampling Event:	Aug 13				
	Names of Samplers:	Tom	/ Alaina			
	Monitoring Well ID:	MW-3				
	Facility:	Tier I				
		w	ater Sample I	Measured Data		
	Condition of Well:	Good	ater Sample is	Vicasured Data		
	Procedure/Equipment:	unterruli.	terfore	Pr	ocedure/Equipment:	
	ght above ground (m)=	unterruli-			o water surface (m)=	1.08
	Diameter of well (m)=				tic water level* (m)=	1.05
	h of installation* (m)=	3			epth to bottom (m)=	2.16
	screened section (m)=				uct thickness (mm)=	
- Minnie	to top of screen* (m)=				,	
	Calculat	ione			Notes	
	Depth of water (m)=	1,11		Fu	idence of sludge etc:	
Well	volume of water (L)=	1,11		Evidence of freezing/s		
77011		7.2		armine of freezing/s	installation record)	
Length screen	collecting water (m)=	1.66				
		Deve	lopment/Purg	ging Information		
	Equipment:					
Date & Time	Volume Removed (L)	Temperature (°C)	рН	Conductivity (uS/cm)	Turbidity (NTU)	Description of water
1 00	IL	9.2"	11-17	902	92.3	selimit, flow
1:10	16	110	11	796	575	Less schihat
	30d-10014	- at made	elve	110		
	1. 1. 1	77				
		- 61"			W 10 W 11 W	
D	Water San			Date	Soil Sampling	1 10
	ate and time collected:	1:20	2.	1	e and time collected:	1 10
			>	1		14304/ = S
	ate and time collected:	14348 14348	>	1	e and time collected:	richy
	ate and time collected: mple Number - Water:	14348 14348 16 489É 16 Tolon	>	1	e and time collected: mple Number - Soil:	1 An 14304/ = S hy Tas / wps
	ate and time collected: mple Number - Water:	14348 14348 16 489É 16 Tolon	>	1	e and time collected: mple Number - Soil:	richy
Sar	ate and time collected: mple Number - Water:	14348 14348	>	Sa	e and time collected: mple Number - Soil:	Jas / wps
Sar	ate and time collected: mple Number - Water: Sample containers:	14348 14348 16 489É 16 Tolon	>	Sa	e and time collected: mple Number - Soil: Sample containers:	richy
Sar	ate and time collected: mple Number - Water: Sample containers: Procedure/Equipment:	14348 14348 16 489É 16 Tolon	>	Sa	e and time collected: mple Number - Soil: Sample containers: ocedure/Equipment:	Tas / Wps Plastic Scoops
Sar	ate and time collected: mple Number - Water: Sample containers:	14348 14348 16 489É 16 Tolon	>	Sa	e and time collected: mple Number - Soil: Sample containers:	Plastic Scoops
Sar	ate and time collected: mple Number - Water: Sample containers: Procedure/Equipment:	14348 14348 16 489É 16 Tolon)	Sa	e and time collected: mple Number - Soil: Sample containers: ocedure/Equipment:	Plastic Scoops = oust shi airs rocky, In og
Sar	ate and time collected: mple Number - Water: Sample containers: Procedure/Equipment: Water description:	14348 14348 16 489É 16 Tolon	>	Sa	e and time collected: mple Number - Soil: Sample containers: ocedure/Equipment: Soil description:	Plastic Scoops Plastic Scoops - rocky, 1-v og
Sar	ate and time collected: mple Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	14348 14348 16 489É 16 Tolon	>	Sa.	e and time collected: mple Number - Soil: Sample containers: ocedure/Equipment: Soil description: GPS	Plastic Scoops = oust shi airs rocky, In og
Sar	ate and time collected: mple Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	14348 14348 16 489É 16 Tolon	>	Sa.	e and time collected: mple Number - Soil: Sample containers: ocedure/Equipment: Soil description: GPS nt Decontamination:	Plastic Scoops Plastic Scoops - rocky, 1-v og
Sar	ate and time collected: mple Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	14348 14348 16 489É 16 Tolon		Sa.	e and time collected: mple Number - Soil: Sample containers: ocedure/Equipment: Soil description: GPS	Plastic Scoops Plastic Scoops Flastic Scoops Focky, In agree 991131 7626761

^{*}From ground surface. Unless this is stated, all measurements are assumed to be from the top of the casing. Grey shaded cells indicates information obtained from original installation record.

	onitoring Well Sam Site Name:	FOX-M						
D	ate of Sampling Event:	Au, 13	Au, 13					
	Names of Samplers:	Tom, Alaina						
	Monitoring Well ID:	MW-4						
	Facility:	Tiv I						
		W	ater Sample	Measured Data				
	Condition of Well:	Good						
	Procedure/Equipment:	veterali-	fre	Pr	ocedure/Equipment:			
Well hei	ght above ground (m)=	0,70			water surface (m)=	1.17		
	Diameter of well (m)=	0.04			ic water level* (m)=	1.05		
Dep	th of installation* (m)=	3		D	epth to bottom (m)=	2,17		
Length	screened section (m)=	1,5			uct thickness (mm)=			
	to top of screen* (m)=	0,47						
	Calculati				Notes			
	Depth of water (m)=	1.05		Ev	idence of sludge etc:			
Wel	Il volume of water (L)=			Evidence of freezing/siltation: (compare to installation record)				
		7.1						
Length screen	n collecting water (m)=	1.67						
13419511 34144	in some time.		lopment/Pu	rging Information				
	Equipment:			Burg morning				
Date & Time	Volume Removed (L)	Temperature (°C)	pH	Conductivity (uS/cm)	Turbidity (NTU)	Description of water		
		10.4	-		18.21	cho		
U V//	0.75	1.0	6	110	10,61			
5.10 64	0,73	9	6	783	36.0	chu		
	Water Sam	pling			Soil Sampling			
	Date and time collected:	2:20 10			and time collected:	zienem		
		pling 2: 70 1 m				7:50 PM 19806/67		
	Date and time collected: ample Number - Water:	14349			and time collected: mple Number - Soil:			
	Date and time collected:	14349			and time collected:	7:50 PM 19806/67 Jus / Wps		
	Date and time collected: ample Number - Water:	14349			and time collected: mple Number - Soil:			
Sa	Date and time collected: ample Number - Water: Sample containers:	14349		Sar	and time collected: inple Number - Soil: Sample containers:			
Sa	Date and time collected: ample Number - Water:	14349		Sar	and time collected: mple Number - Soil:	Jus / Wys		
Sa	Date and time collected: ample Number - Water: Sample containers:	14349		Sar	and time collected: inple Number - Soil: Sample containers:			
Sa	Date and time collected: ample Number - Water: Sample containers:	14349		Sar	and time collected: imple Number - Soil: Sample containers: ocedure/Equipment:	Jus / Wys		
Sa	Date and time collected: ample Number - Water: Sample containers:	14349		Sar	and time collected: inple Number - Soil: Sample containers:	Jus / Wys		
Sa	Date and time collected: Imple Number - Water: Sample containers: Procedure/Equipment:	14349		Sar	and time collected: imple Number - Soil: Sample containers: ocedure/Equipment: Soil description:	Jus / Wys		
Sa	Date and time collected: Imple Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N)	14349		Sar	and time collected: imple Number - Soil: Sample containers: ocedure/Equipment:	Jus / Wys		
Sa	Date and time collected: Imple Number - Water: Sample containers: Procedure/Equipment: Water description:	14349		Sar	and time collected: imple Number - Soil: Sample containers: ocedure/Equipment: Soil description:	Jus / Wys		
Sa	Date and time collected: Imple Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N)	14349		Sar	and time collected: imple Number - Soil: Sample containers: ocedure/Equipment: Soil description:	Jus / Wys		
Sa	Date and time collected: Imple Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N)	12:70 PM 14349 16 HOPE 16 TJUN 150 NC 36		Sar	and time collected: imple Number - Soil: Sample containers: occdure/Equipment: Soil description: GPS	Jus / Wys		
Sa	Date and time collected: Imple Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	14349		Pro	and time collected: imple Number - Soil: Sample containers: occdure/Equipment: Soil description: GPS	Jus / Wys		
Sa	Date and time collected: Imple Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N) ment Decontamination:	12:70 PM 14349 16 HOPE 16 TJUN 150 NC 36		Pro	and time collected: imple Number - Soil: Sample containers: ocedure/Equipment: Soil description: GPS int Decontamination:	Jus / Wys		

n/a=not applicable
*From ground surface. Unless this is stated, all measurements are assumed to be from the top of the casing.
Grey shaded cells indicates information obtained from original installation record.

	Site Name:	FOX-M				
	Date of Sampling Event:	Ay 13				
	Names of Samplers:	Tun, Alsina				
	222 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	419 W				
	Monitoring Well ID:		4.	6 111		
	Facility:	Tiv I	Disposal	Facility		
		W	ater Sample	Measured Data		
	Condition of Well;	Good				
	Procedure/Equipment:			Pro	ocedure/Equipment:	
Well h	eight above ground (m)=	0.56			water surface (m)=	1.25
	Diameter of well (m)=				ic water level* (m)=	1.17
	epth of installation* (m)=	3			epth to bottom (m)=	2.44
	th screened section (m)=	1.5		Free produ	uct thickness (mm)=	
Dep	th to top of screen* (m)=	0.54				
	Calculat	ions			Notes	
	Depth of water (m)=	1,17		Evi	idence of sludge etc:	
W	/ell volume of water (L)=	7 7		Evidence of freezing/s		
		2.3			installation record)	
Length scre	een collecting water (m)=	1,74				
		Deve	lopment/Pu	rging Information		
	Equipment:					
Date & Time	Volume Removed (L)	Temperature (°C)	рН	Conductivity (uS/cm)	Turbidity (NTU)	Description of water
3 10			1			
	0.75	8.9°	6	1960	4.95	clear
3:10	0.75	901	6	1026	5.57	CHEO
	Water San				Soil Sampling	2 4 4
	Date and time collected:	3:10		Date	and time collected:	3/1
	Sample Number - Water:	14350		Sample Number - Soils		14710/11
	Sample containers:	LL HOPE			J-1/Vps	
	Sample containers.	1 L Tofler			Sample containers:	0 110 15
		150 ml 5/4	35			
	Procedure/Equipment:			Pro	ocedure/Equipment:	Plastic Scoops
	Water description:				Soil description:	work a dight
	Filtration: (Y/N)				GPS	490892
	Acidification: (Y/N)					
	, , , , , , , , , , , , , , , , , , ,					7626715
				Sampling Equipmen	nt Decontamination:	
Sampling Equi	pment Decontamination:	. 1			CVAN	1
Sampling Equi	(Y/N)	<			(Y/N) Number washes:	
Sampling Equi		3			Number washes: Number rinses:	1

^{*}From ground surface. Unless this is stated, all measurements are assumed to be from the top of the casing. Grey shaded cells indicates information obtained from original installation record.

Table XX: Monitoring Well Sampling Log

	Site Name:	FOX-M					
	Date of Sampling Event:	Any 15					
	Names of Samplers:	FOX-M Any 15 Ton, Alvina					
	Monitoring Well ID:	MW-10 East Beach					
	Facility:	East Beach	Londfill				
		W	ater Sample	Measured Data			
	Condition of Well:	Good		The asure of south			
	Procedure/Equipment:	wateralin	whe	Procedure/Equipment:			
Well he	eight above ground (m)=	0.39			water surface (m)=		
	Diameter of well (m)=	0.04			ic water level* (m)=		
De	pth of installation* (m)=	3.5			epth to bottom (m)=	1,13	
Length screened section (m)= 1.5			ict thickness (mm)=				
Dept	th to top of screen* (m)=						
	Calculati	ions			Notes		
	Depth of water (m)=	dry		Evi	dence of sludge etc:		
W	ell volume of water (L)=	417		Evidence of freezing/s			
	211 1 211111 22 21 21 21 21 21				installation record)		
Length scree	en collecting water (m)=						
Lieugh Dere	on concerning mater (m)	Deve	lopment/Pu	rging Information			
	Equipment:						
Date & Time	Volume Removed (L)	Temperature (°C)	pH	Conductivity (uS/cm)	Turbidity (NTU)	Description of water	
				1			
	Water Sam	pling			Soil Sampling		
	Date and time collected:			Date	and time collected:	n.k.zve	
5	Sample Number - Water:			Sar	nple Number - Soil:	14338 339 Wps/Jos	
						337	
	Sample containers:				Sample containers:	Wps/Jas	
	Procedure/Equipment:			Pro	ocedure/Equipment:	01 1- 6- 25	
	i roccamera quipinent.			***	occure Equipment.	Plastic Scoops	
	Water description:				Soil description:	gravel, some	
	water description.				CDC	S, Ity Sour	
			Filtration: (Y/N)		GPS 491659		
	Filtration: (Y/N)				0.0	79.601	
						7627348	
sampling Equip	Filtration: (Y/N)			Sampling Equipmer	nt Decontamination:	5.17 504 491659 7627348	
ampling Equip	Filtration: (Y/N) Acidification: (Y/N) pment Decontamination: (Y/N)			Sampling Equipmen	nt Decontamination:	7627348	
ampling Equip	Filtration: (Y/N) Acidification: (Y/N) pment Decontamination:			Sampling Equipmen	nt Decontamination:	7627.348	

^{*}From ground surface. Unless this is stated, all measurements are assumed to be from the top of the casing. Grey shaded cells indicates information obtained from original installation record.

	Site Name:	FOX-M						
	Date of Sampling Event:	AL 15	AL 18					
	Names of Samplers:	Tor, Alnin						
	Manifest - W. II W							
	Monitoring Well ID:		10.0					
	Facility:	East Deach	Lordfill					
		Wa	ter Sample	Measured Data				
	Condition of Well;							
	Procedure/Equipment:			Pr	ocedure/Equipment			
Well he	eight above ground (m)=	0,46		Depth to	water surface (m)=			
	Diameter of well (m)=				ic water level* (m)=			
	pth of installation* (m)=				epth to bottom (m)=			
	th screened section (m)=			Free produ	uct thickness (mm)=			
Dept	h to top of screen* (m)=	0,6						
	Calculati	ions			Notes			
	Depth of water (m)=	Dry.		Evi	idence of sludge etc:			
W	ell volume of water (L)=	J.		Evidence of freezing/s				
				installation record)				
Length scre	en collecting water (m)=							
200	The state of the s	Devel	opment/Pur	rging Information				
	Equipment:							
Sate W. Times	Walana Bassas I/II	Tananastina (OCV	pH	Conductivity (uS/cm)	Turbidity (NTU)			
Date & Time	Volume Removed (L)	Temperature (°C)	bitt	Conductivity (u.5/cm)	Turbidity (NTO)	Description of water		
	Water Sam	nling			Soil Sampling			
	Water Sam	pling		Date	Soil Sampling			
	Date and time collected:	pling		Date Sar	and time as Heated	14337		
		pling		Date Sar	and time as Heated	14337		
	Date and time collected:	pling		Date Sar	and time as Heated	14337 14336 Jos/Vas		
	Date and time collected: ample Number - Water:	pling		Date Sar		14337 14336 J-5/Ups		
	Date and time collected: sample Number - Water; Sample containers:	pling		Sar	and time collected: nple Number - Soil: Sample containers:			
	Date and time collected: ample Number - Water:	pling		Sar	and time as Heated			
	Date and time collected: sample Number - Water; Sample containers:	pling		Sar	and time collected: nple Number - Soil: Sample containers:			
	Date and time collected: cample Number - Water; Sample containers: Procedure/Equipment:	pling		Sar	and time collected: nple Number - Soil: Sample containers; ocedure/Equipment:	Plastic Scoops		
	Date and time collected: sample Number - Water; Sample containers:	pling		Sar	and time collected: nple Number - Soil: Sample containers; ocedure/Equipment:	Plastic Scorps		
	Date and time collected: Sample Number - Water; Sample containers: Procedure/Equipment: Water description:	ipling		Sar	and time collected: nple Number - Soil: Sample containers: ocedure/Equipment: Soil description:	Plastic Scorps gravel, some Sa		
	Date and time collected: Sample Number - Water; Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N)	ipling		Sar	and time collected: nple Number - Soil: Sample containers; ocedure/Equipment:	Plastic Scorps gravel, some sh		
	Date and time collected: Sample Number - Water; Sample containers: Procedure/Equipment: Water description:	ipling		Sar	and time collected: nple Number - Soil: Sample containers: ocedure/Equipment: Soil description:	Plastic Scorps gravel, some Sa		
S	Date and time collected: Sample Number - Water; Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	ipling		Pro	and time collected: nple Number - Soil: Sample containers: ocedure/Equipment: Soil description: GPS	Plastic Scorps gravel, some shi 491607 7627		
S	Date and time collected: Sample Number - Water; Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	pling		Sar	and time collected: nple Number - Soil: Sample containers: ocedure/Equipment: Soil description: GPS at Decontamination:	Plastic Scorps gravel, some su i sitt 491607 7677		
S	Date and time collected: Sample Number - Water; Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	ipling		Pro	and time collected: nple Number - Soil: Sample containers: ocedure/Equipment: Soil description: GPS	Plastic Scorps gravel, some su i sitt 491607 7677		

n/a=not applicable
*From ground surface. Unless this is stated, all measurements are assumed to be from the top of the casing.
Grey shaded cells indicates information obtained from original installation record.

	Ionitoring Well Sam Site Name:	FOX-M							
	Date of Sampling Event:	Ave 15	Ave 15						
	Names of Samplers:	Tom, Alaina							
	Monitoring Well ID:	MW-72							
	Facility:	East Beach	4						
		Wa	ter Sample	Measured Data					
	Condition of Well:	Good							
	Procedure/Equipment:			Pr	ocedure/Equipment:				
Well he	eight above ground (m)=	0.54		Depth to	water surface (m)=				
	Diameter of well (m)=	0,04		Stat	ic water level* (m)=	1.			
De	oth of installation* (m)=	3		D	epth to bottom (m)=	0.67 (44)			
	th screened section (m)=	1.5			ict thickness (mm)=				
	h to top of screen* (m)=	0.6							
	Calculati	ons			Notes				
	Depth of water (m)=	0.110		Evi	dence of sludge etc:				
W	ell volume of water (L)=			Evidence of freezing/si					
				installation record)					
Length scree	en collecting water (m)=								
Length Sele	and a state of the	Devel	opment/Pu	rging Information					
	Equipment:								
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (uS/cm)	Turbidity (NTU)	Description of water			
	Water Sam	nling			Soil Sampling				
	Date and time collected:	pring		Date	and time collected:				
	Sample Number - Water:				mple Number - Soil:	335			
	Sample containers:				Sample containers:	Ins / Wps			
	Procedure/Equipment:			Pro	ocedure/Equipment:	Plastic Scoops			
	Water description:				Soil description:	rocky, some san			
	Filtration: (Y/N)				GPS	491595			
	Acidification: (Y/N)					491595			
Consulting Day	ment Decontamination:			Sampling Equipmer	nt Decontamination:				

(Y/N)

Number washes:

Number rinses:

(Y/N)

Number washes:

Number rinses:

^{*}From ground surface. Unless this is stated, all measurements are assumed to be from the top of the easing. Grey shaded cells indicates information obtained from original installation record.

	Site Name:	FOX-M Ay 15 Ton, Alaina				
1	Date of Sampling Event:	Au 15				
	Names of Samplers:	Jem Alaina				
		,,,,,				
	Monitoring Well ID:	MW-23				
	Facility:	East Beach	LF			
		111		W. Inc.		
	Condition of Well:	Good	ter Sample	Measured Data		
	Procedure/Equipment:	Good		De	ocedure/Equipment:	
Well he	eight above ground (m)=	0.40			water surface (m)=	
Trenine	Diameter of well (m)=	0-04			ic water level* (m)=	
Der	pth of installation* (m)=		3		epth to hottom (m)=	1.25 /10
	th screened section (m)=	1.5			ict thickness (mm)=	204
	h to top of screen* (m)=	0.60		Tree prode	ict tillekiless (lilli)	
Dept	in to top or sereen (m)	0.20				
	Calculati	ons			Notes	
	Depth of water (m)=			Evi	dence of sludge etc:	
We	ell volume of water (L)=			Evidence of freezing/si		
				100000000000000000000000000000000000000	installation record)	
Length scree	en collecting water (m)=					
		Devel	opment/Pu	rging Information		
	Equipment					
	5522 Sa 13 W		-11	Participant Vigitary	er 1915 Arren	
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (uS/cm)	Turbidity (NTU)	Description of water
	Water Sam	nling		1	Soil Sampling	
1	Date and time collected:			Date	and time collected:	
	ample Number - Water:				nple Number - Soil:	14332 33
	•					
	Sample containers:				Sample containers:	Jar/Wps
	Drogadura/Equipment			Day	ocedure/Equipment:	7.55
	Procedure/Equipment:			Fit	scedure/Equipment.	Plastic Scoops
	Water description:				Cail description	Plastic Scoops
	Water description: Soil description		wan rollifered			
	water description.		Eiltestion: /V/ND		CDC	491572
	1,,,			GPS		
	Filtration: (Y/N) Acidification: (Y/N)				Ora	
	Filtration: (Y/N) Acidification: (Y/N)					7626940
Sampling Equip	Filtration: (Y/N) Acidification: (Y/N) ment Decontamination:			Sampling Equipmen	nt Decontamination:	
Sampling Equip	Filtration: (Y/N) Acidification: (Y/N) ment Decontamination: (Y/N)			Sampling Equipmen	at Decontamination: (Y/N)	
Sampling Equip	Filtration: (Y/N) Acidification: (Y/N) ment Decontamination:			Sampling Equipmen	nt Decontamination:	

n/a=not applicable
*From ground surface. Unless this is stated, all measurements are assumed to be from the top of the casing.
Grey shaded cells indicates information obtained from original installation record.

Table XX:	Monitoring	Well	Sampling	Log
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Site Name:	FOX-M				
Date of Sampling Event:	Ton, Alrin				
Names of Samplers:	Tom, Alrina				
Monitoring Well ID:	MW-24				
Facility:	East Beach	n 15			
	Wa	ter Sample	Measured Data		
Condition of Well:	Good				
Procedure/Equipment:				ocedure/Equipment:	
Well height above ground (m)=	0.50			o water surface (m)=	
Diameter of well (m)=	0,04			tic water level* (m)=	(1)
Depth of installation* (m)=	3			epth to bottom (m)=	
Length screened section (m)=	1.5		Free produ	uct thickness (mm)=	
Depth to top of screen* (m)=	0.10				
Calculatio	40			Miller	
Calculation Depth of water (m)=	ous		P	Notes idence of sludge etc:	
Well volume of water (L)=					
well volume of water (L)			Evidence of freezing/siltation: (compare to installation record)		
Length screen collecting water (m)=				mstanation record)	
bengar sereen concernig water (III)	Devel	opment/Pu	rging Information		
Equipment:	Descr	opmenera	ging mioritanton		
3,4000					
Date & Time Volume Removed (L)	Temperature (°C)	pH	Conductivity (uS/cm)	Turbidity (NTU)	Description of water
ate to Time Tolume Removed (E)	remperature (c)	AV	-2007-2010-0010-0010	31 to 50 50 4 (10 5 6 7)	Description of water
Water Samp	oling			Soil Sampling	
Date and time collected:			Date	and time collected:	
Sample Number - Water:			Sar	mple Number - Soil:	14730/31
Sample containers:				Sample containers:	Jas /w/s
Dranadura/Equipment			D.	and an office the same	A
Procedure/Equipment:			Pro	ocedure/Equipment:	flastic Scoops
Water description:				Soil description	1. 1. 1. 1.
water description:				Son description:	wy little sail,
Filtration: (Y/N)				GPS	1.72
Acidification: (Y/N)				urs	762683
a relative (1714)					762683
			Sampling Equipmen	nt Decontamination:	
impling Equipment Decontamination:					
impling Equipment Decontamination: (Y/N)				(Y/N)	
				(Y/N) Number washes:	

Grey shaded cells indicates information obtained from original installation record.

^{*}From ground surface. Unless this is stated, all measurements are assumed to be from the top of the easing.

Table XX: Monitoring We	Il Sampling Log
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	Site Name:	FOX-1						
	Date of Sampling Event:	Aug 15	Ter, Al-ina					
	Names of Samplers:	Ton, Alrina						
	Manifestor Wall III	MW-75						
	Monitoring Well ID:		15					
	Facility:	East Beach	LF					
		Wa	ter Sample	Measured Data				
	Condition of Well:	Good						
	Procedure/Equipment:	2.112			rocedure/Equipment:			
Wellh	neight above ground (m)=	0,47			o water surface (m)=			
75	Diameter of well (m)=	0.04			tic water level* (m)=	1 (1 7		
	epth of installation* (m)=	3			epth to bottom (m)=	1.75 (dy)		
				Free prod	uct thickness (mm)=	1 1/2 1 2 2 L		
Dep	oth to top of screen* (m)=	0.60	- 3					
	Calculati	ons		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Notes			
	Depth of water (m)=				idence of sludge etc:			
W	Vell volume of water (L)=			Evidence of freezing/s				
					installation record)			
Length scre	een collecting water (m)=							
	Parture	Devel	opment/Pu	rging Information				
Equipment:								
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (uS/cm)	Turbidity (NTU)	Description of water		
	· crome stemored (c)	remperature (c)				Description of water		
	Water Sam	nling			Sail Samelina			
	Date and time collected:	pring		Date	Soil Sampling and time collected:			
	Sample Number - Water:				mple Number - Soil:	14700/10		
				Cons	inpre reuniter - Bon,	19300/67		
	Sample containers:				Sample containers:	Jus/wps		
	Procedure/Equipment:			Pro	ocedure/Equipment:	0/15		
						Plastic Scops		
	Water description:				Soil description:	201370 7		
	Filtration: (Y/N)				CDC	adjacent to		
	Acidification: (Y/N)				UPS	10		
						491370 7		
amalina Danie	pment Decontamination:			Sampling Equipmer	nt Decontamination:			
ampling Equip	(Y/N)				(Y/N)			
sampring Equip								
sampning equip	Number washes: Number rinses:				Number washes: Number rinses:			

^{*}From ground surface. Unless this is stated, all measurements are assumed to be from the top of the casing. Grey shaded cells indicates information obtained from original installation record.

	Site Name:	FOX-M						
	Date of Sampling Event:	Aug 17						
	Names of Samplers:	Ton Alnine						
	Monitoring Well ID:	MW-26						
	Facility:		LF					
	- worthey to	6-17 proc.	, ,					
			ter Sample	Measured Data				
	Condition of Well:	Good						
141 97 2	Procedure/Equipment:				ocedure/Equipment:			
Well h	eight above ground (m)=	0.37		Depth to	water surface (m)=			
	Diameter of well (m)=				ic water level* (m)=	1 m 1 1		
	pth of installation* (m)=	3			epth to bottom (m)=	1.19 (My)		
	th screened section (m)=			Free produ	uct thickness (mm)=			
Dept	th to top of screen* (m)=	0,60						
	Calculati	ions			Notes			
	Depth of water (m)=	4.5		Evi	idence of sludge etc:			
W	ell volume of water (L)=			Evidence of freezing/s				
	en romme or mater (L)			is ridelice of freezings	installation record)			
Lenoth scre	en collecting water (m)=				mstanation record)			
Deligni Sere	on concernig water (m)	Devel	opment/Pu	rging Information				
	Equipment:							
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (uS/cm)	Turbidity (NTU)	Description of water		
zate ec 1 tine	Totalie Remoted (L)	remperature (c)		Princer and S. Contractor		Description of water		
	Water Sam	pling			Soil Sampling			
	Date and time collected:	pring		Date	and time collected:	UNUS		
	Sample Number - Water:				nple Number - Soil:	14324/85		
						26/27		
	Sample containers:				Sample containers:	Jos / Wps		
	Procedure/Equipment:			Pro	ocedure/Equipment:	Plastic Scoops		
					1.7	Mastic scoops		
	Water description:				Soil description:	9-avel/-00		
	Filtration: (Y/N)				GPS	0-19/234		
	Acidification: (Y/N)					7626592		
	oment Decontamination:			Compline Engles	t Danastantination	There's a		
ampling Farris				Sampling Equipmer				
ampling Equip	(Y/N)		(Y/N)					
ampling Equip		Number washes:			Number washes:			
ampling Equip					Number washes: Number rinses:			

n/a=not applicable
*From ground surface. Unless this is stated, all measurements are assumed to be from the top of the casing.
Grey shaded cells indicates information obtained from original installation record.

	Site Name:	FOX-M				
	Date of Sampling Event:	Aug 13				
	Names of Samplers:	FOX-M Aug 13 Tom, Alaina				
	Monitoring Well ID:	MW-27	_			
	Facility:	East Beach	LF			
		Wa	ter Sample	Measured Data		
	Condition of Well:	Good				
	Procedure/Equipment:			Pr	ocedure/Equipment:	1
Well h	eight above ground (m)=	0,40			water surface (m)=	Ny
	Diameter of well (m)=	0,04			ic water level* (m)=	
	epth of installation* (m)=	3			epth to bottom (m)=	1,50
	th screened section (m)=	1.5		Free produ	ict thickness (mm)=	
Dep	th to top of screen* (m)=	0,60				
	Calculati	ions			Notes	
	Depth of water (m)=			Evi	idence of sludge etc:	
W	ell volume of water (L)=			Evidence of freezing/s		
					installation record)	
Length scre	een collecting water (m)=					
		Devel	opment/Pu	rging Information		
	Equipment:					
Date & Time	Volume Removed (L)	Temperature (°C)	pH	Conductivity (uS/cm)	Turbidity (NTU)	Description of water
	Water Sam	pling			Soil Sampling	
	Date and time collected:				and time collected:	
	Sample Number - Water:			Sar	nple Number - Soil:	14320121
	w					22/23
	Sample containers:				Sample containers:	Jas/Wps
	Procedure/Equipment:			Pro	ocedure/Equipment:	01 11
	r rocedure/ Equipment.			110	occome/1,quipment.	Plastic Scoops
	Water description:				Soil description:	travel, no or
	3103110322340				Don description.	CI, To Ci.
	Filtration: (Y/N)				GPS	dalvie.
	Acidification: (Y/N)					491081
						7026448
Sampling Equip	pment Decontamination:			Sampling Equipmen	nt Decontamination:	
(Y/N)					(Y/N)	
			Number washes:			
	Number washes: Number rinses:				Number washes: Number rinses:	

^{*}From ground surface. Unless this is stated, all measurements are assumed to be from the top of the casing. Grey shaded cells indicates information obtained from original installation record.

	Ionitoring Well San Site Name:						
	Date of Sampling Event:	Aus 13					
	Names of Samplers;	Tar, Almina					
	Monitoring Well ID:	MW-18 East Beach					
	Facility:	East Beach	LF				
		Wa	tar Sample	Measured Data			-
	Condition of Well:		ter Sample	Measured Data			
	Procedure/Equipment:	0.00		Pr	ocedure/Equipment:		-100
Well he	eight above ground (m)=	0.52			water surface (m)=	4	51.5
	Diameter of well (m)=	0.04			ic water level* (m)=		
De	pth of installation* (m)=	3			epth to bottom (m)=	1,32 184	
	th screened section (m)=				ict thickness (mm)=		
	h to top of screen* (m)=						
	Calculat	ions		E.3	Notes idence of sludge etc:		
117	Depth of water (m)=			Evidence of freezing/s			
W	ell volume of water (L)=			Evidence of freezing/s	installation record)		
					installation (ccord)		-
Length scre	en collecting water (m)=	David		and any Transport and any			-
	Equipment:	Devel	opment/Pu	rging Information			-
	Equipment.						
Date & Time	Volume Removed (L)	Temperature (°C)	рН	Conductivity (uS/cm)	Turbidity (NTU)	Description of water	
Date de Time	volume removed (E)	remperature (c)				Description of mater	
	Water San	ipling			Soil Sampling		
	Date and time collected:			Date	and time collected:	y pm	
5	Sample Number - Water:			Sar	nple Number - Soil:	14314/17	
	Sample containers:				Sample containers:	Jas/wps	
	Procedure/Equipment:			Pro	ocedure/Equipment:	Plastic Scrops	
	Water description:				Soil description:	cobher 1, -mal	1 20 000
	Filtration: (Y/N)				GPS	490976	acr.
	Acidification: (Y/N)					7676404	
	312141114111111111111111111111111111111					1210101	
Sampling Equip	oment Decontamination:			Sampling Equipmen		1060101	
Sampling Equip	oment Decontamination: (Y/N)			Sampling Equipmen	(Y/N)	10,000	
Sampling Equip	oment Decontamination:			Sampling Equipmen		10[0 101	

Number rinses:

Number rinses:

^{*}From ground surface. Unless this is stated, all measurements are assumed to be from the top of the casing. Grey shaded cells indicates information obtained from original installation record.

Table XX: Monitoring Well Sampling Log Site Name: Date of Sampling Event: Names of Samplers: Monitoring Well ID: Facility: Water Sample Measured Data Condition of Well: Good Procedure/Equipment: Procedure/Equipment: Well height above ground (m)= 0,40 0.75 Depth to water surface (m)= 0.04 Diameter of well (m)= Static water level* (m)= Depth of installation* (m)= 3 Depth to bottom (m)= 1.10 Length screened section (m)= Free product thickness (mm)= 0.80 Depth to top of screen* (m)= Calculations Notes Evidence of sludge etc: Depth of water (m)= Well volume of water (L)= Evidence of freezing/siltation: (compare to installation record) Length screen collecting water (m)= Development/Purging Information Equipment: Volume Removed (L) Temperature (°C) Conductivity (uS/cm) Turbidity (NTU) Date & Time Description of water 11/1 1608 40.5 1680 Water Sampling Soil Sampling Date and time collected: Date and time collected: Sample Number - Water: Sample Number - Soil: Sample containers: Sample containers: Plastic Scoops Procedure/Equipment: Procedure/Equipment: Soil description: Water description: Filtration: (Y/N) Acidification: (Y/N)

Sampling Equipment Decontamination:

(Y/N)

Number washes:

Number rinses:

n/a=not applicable

Sampling Equipment Decontamination:

(Y/N)

Number washes:

Number rinses:

^{*}From ground surface. Unless this is stated, all measurements are assumed to be from the top of the casing. Grey shaded cells indicates information obtained from original installation record.

	Site Name:	FOX-M				
1	Date of Sampling Event:	Ans 15				
	Names of Samplers:	Ton, Alnina				
	Monitoring Well ID:	W11 36				
	Facility:	MW-36 East Be	ach IF			
	r dentry.	C-OT DC	- LI			
		W	ater Sample	Measured Data		
	Condition of Well:	Good				
61.01	Procedure/Equipment:	0.28			ocedure/Equipment:	0 00
Well he	ight above ground (m)=	0,28			water surface (m)=	0,60
15	Diameter of well (m)=				ic water level* (m)=	. 29 -5
	oth of installation* (m)=	1,5			epth to bottom (m)=	
	h screened section (m)= h to top of screen* (m)=	0.60		Free produ	act thickness (mm)=	
глери	to top of server (III)	0.100				
	Calculati	ons			Notes	
	Depth of water (m)=			Evi	idence of sludge etc:	
We	ell volume of water (L)=			Evidence of freezing/s		
					installation record)	
Length scree	n collecting water (m)=					
		Dev	elopment/Pu	rging Information		
	Equipment:					
ate & Time	Volume Removed (L)	Temperature (°C)	pH	Conductivity (uS/cm)	Turbidity (NTU)	Description of water
ate & Time	Volume Removed (L)	Temperature (°C)	- A			Description of water
ate & Time	0,75	8.2	5.5	Conductivity (uS/cm)		Description of water
ate & Time		Temperature (°C)	- A		Turbidity (NTU) 265 396	
te & Time	0,75	8.2	5.5			
te & Time	0,75	8.2	5.5			
ite & Time	0,75	8.2	5.5		265 396	
	0,75 0.75.	8.2	5.5	1058	265 396 Soil Sampling	
	0,75 0.75. Water Sam	8.2 9.2 pling	5.5	1058 1610	265 396 Soil Sampling	brown
	0,75 0.75.	8.2	5.5	1058 1610	265 396 Soil Sampling	
	Water Sam Date and time collected; ample Number - Water;	8.2 9.2 pling	5.5	1058 1610	Soil Sampling and time collected:	brown 14342/43
	0,75 0.75. Water Sam	8.2 9.2 pling	5.5	1058 1610	265 396 Soil Sampling	brown
	Water Sam Date and time collected; ample Number - Water;	8.2 9.2 pling	5.5	1058 1610	Soil Sampling and time collected: mple Number - Soil:	14342/43 Jas/43
	Water Sam Date and time collected; ample Number - Water;	8.2 9.2 pling	5.5	1058 1610	Soil Sampling and time collected:	14342/43 Jas/45
	Water Sam Date and time collected; ample Number - Water; Sample containers;	8.2 9.2 pling	5.5	1058 1610	Soil Sampling and time collected: mple Number - Soil:	14342/43 Jas/43
	Water Sam Date and time collected; ample Number - Water; Sample containers; Procedure/Equipment;	8.2 9.2 pling	5.5	1058 1610	Soil Sampling and time collected: mple Number - Soil: Sample containers:	brown 14342/43 Jrs/Us Plastic Sceops
	Water Sam Date and time collected; ample Number - Water; Sample containers;	8.2 9.2 pling	5.5	1058 1610	Soil Sampling and time collected: mple Number - Soil:	brown 14342/43 Jrs/Us Plastic Sceops
	Water Sam Date and time collected; ample Number - Water: Sample containers: Procedure/Equipment: Water description:	8.2 9.2 pling 14052	5.5	1058 1610	Soil Sampling and time collected: mple Number - Soil: Sample containers: ocedure/Equipment: Soil description:	brown 14342/43 Jrs/Us Plastic Sceops
	Water Sam Date and time collected; ample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N)	8.2 9.2 pling 14052	5.5	1058 1610	Soil Sampling and time collected: mple Number - Soil: Sample containers:	brown 14342/43 Jrs/Us Plastic Sceops
	Water Sam Date and time collected; ample Number - Water: Sample containers: Procedure/Equipment: Water description:	8.2 9.2 pling 14052	5.5	1058 1610	Soil Sampling and time collected: mple Number - Soil: Sample containers: ocedure/Equipment: Soil description:	brown 14342/43 Jos /U/s Plastic Scoops
I S	Water Sam Date and time collected; ample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	8.2 9.2 pling 14052	5.5	058 660	Soil Sampling and time collected; mple Number - Soil; Sample containers; ocedure/Equipment; Soil description; GPS	brown 14342/43 Jos /U/s Plastic Scoops
I S	Water Sam Date and time collected; ample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N)	8.2 9.2 pling 14052	5.5	1058 1610	Soil Sampling and time collected; mple Number - Soil; Sample containers; ocedure/Equipment; Soil description; GPS	brown 14342/43 Jos 1015 Plastic Sceops
I S	Water Sam Date and time collected; ample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	8.2 9.2 pling 14052	5.5	058 660	Soil Sampling and time collected: mple Number - Soil: Sample containers: ocedure/Equipment: Soil description: GPS and Decontamination:	brown 14342/43 Jrs/Us Plastic Sceops

n/a=not applicable
*From ground surface. Unless this is stated, all measurements are assumed to be from the top of the casing. Grey shaded cells indicates information obtained from original installation record.

	Site Name:	FOX-M							
	Date of Sampling Event:	Ans 15							
	Names of Samplers:	Tem, Almina	Ten, Almina						
		M. 1.27							
	Monitoring Well ID:	1-W-31	MW-31 East Beach LF						
	Facility:	East Bu	ich LF						
		Wa	ter Sample	Measured Data					
	Condition of Well;	Good	ter outilize						
	Procedure/Equipment:			Pro	ocedure/Equipment:				
Well he	eight above ground (m)=	0.41			water surface (m)=				
	Diameter of well (m)=	0,04		Stati	ic water level* (m)=	2-3-2			
De	oth of installation* (m)=	3		De	epth to bottom (m)=	1.23			
	h screened section (m)=	1.5		Free produ	ict thickness (mm)=				
	h to top of screen* (m)=								
	VI. 111.	Control of the Contro			Mann				
	Donth of water (m)	drs.		Poi	Notes dence of sludge etc:				
117	Depth of water (m)= ell volume of water (L)=	aid.		Evidence of freezing/si					
W	ell volume of water (L)=			Evidence of freezing/si	installation record)				
Length scree	en collecting water (m)=				mistanation recordy				
Longin Sere	in concernig water (m)	Devel	opment/Pu	rging Information					
	Equipment:								
				I no distribution in	THE PARTY OF THE PARTY	- A1			
Date & Time	Volume Removed (L)	Temperature (°C)	pH	Conductivity (uS/cm)	Turbidity (NTU)	Description of water			
	W. S				Call Carrain				
	Water San	npling		Date	Soil Sampling				
	Date and time collected:	npling			and time collected:	14 3U1			
		pling			Soil Sampling and time collected: nple Number - Soil:	14341			
	Date and time collected: ample Number - Water:	pling			and time collected: nple Number - Soil:	14341 340			
	Date and time collected:	pling			and time collected:	14341 340 5-1/Wps			
	Date and time collected: ample Number - Water:	npling			and time collected: nple Number - Soil:	14341 340 5-1/Wps			
	Date and time collected: ample Number - Water:	npling		Sar	and time collected: nple Number - Soil:	340 J-1/W/5			
	Date and time collected: sample Number - Water: Sample containers:	npling		Sar	and time collected: nple Number - Soil: Sample containers:	14341 340 5-5/Wps Plastic Scoops			
	Date and time collected: sample Number - Water: Sample containers:	npling		Sar	and time collected: nple Number - Soil: Sample containers: ocedure/Equipment:	S-1/Wps flustic Scoops			
	Date and time collected: sample Number - Water: Sample containers:	npling		Sar	and time collected: nple Number - Soil: Sample containers: ocedure/Equipment:	S-1/Wps Plastic Scoops			
	Date and time collected: sample Number - Water: Sample containers: Procedure/Equipment: Water description:	ppling		Sar	and time collected: nple Number - Soil: Sample containers: ocedure/Equipment: Soil description:	Sustic scoops gravel, mino			
	Date and time collected: sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N)	apling		Sar	and time collected: nple Number - Soil: Sample containers: ocedure/Equipment: Soil description:	Stastic Scoops gravel, mino			
	Date and time collected: sample Number - Water: Sample containers: Procedure/Equipment: Water description:	ipling		Sar	and time collected: nple Number - Soil: Sample containers: ocedure/Equipment: Soil description: GPS	Stastic Scoops gravel, mino			
Š	Date and time collected: sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	pling		Pro	and time collected: nple Number - Soil: Sample containers: ocedure/Equipment: Soil description: GPS	Sustic scoops gravel, mino			
Š	Date and time collected: sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	pling		Sar	and time collected: nple Number - Soil: Sample containers: ocedure/Equipment: Soil description: GPS at Decontamination:	Stastic Scoops gravel, mino			
Š	Date and time collected: sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N) oment Decontamination: (Y/N)	pling		Pro	and time collected: nple Number - Soil: Sample containers: ocedure/Equipment: Soil description: GPS at Decontamination: (Y/N)	Stastic Scoops gravel, mino			
Š	Date and time collected: sample Number - Water: Sample containers: Procedure/Equipment: Water description: Filtration: (Y/N) Acidification: (Y/N)	pling		Pro	and time collected: nple Number - Soil: Sample containers: ocedure/Equipment: Soil description: GPS at Decontamination:	Stastic Scoops gravel, mino			

Grey shaded cells indicates information obtained from original installation record,

n/a=not applicable
*From ground surface. Unless this is stated, all measurements are assumed to be from the top of the casing.

Cooler Identification: 2011.FOX-M-mon-DLCU.1 Environmental Sciences Group
Site Name: HALL BEACH The Royal Military College of Canada

 Date - Packed: 20110816
 PO Box 17000, Stn. Forces

 Date - Sent: 20110816
 12 Verite Avenue, Bldg #62

 Date - Received:
 Kingston, ON K7K 7B4

Report Results To: **Partridge, Tom** Tel: (613) 541-6000, Ext: 6818/6819

Project Code: **FOX-M-mon-DLCU** Fax: (613) 541-6820

Comments: soil samples

Prepared By:	Partridge, Tom	
Signature/Date:	1. fly	2011/08/16 (yyyymmdd)
Relinquished By:	Partridge, Tom	
Signature/Date:	1. P.Y	2011/08/16 (yyyymmdd)
Received By (Print Name):		
Signature/Date:		2011// (yyyymmdd)

Check	TN	Quantity	Storage Medium	Sample Matrix	Date Collected	Storage Instruction
	14300	1	Whirlpaks	Soil	20110815	Refrigerate
	14301	1	Whirlpaks	Soil	20110813	Refrigerate
	14302	1	Whirlpaks	Soil	20110813	Refrigerate
	14303	1	Whirlpaks	Soil	20110813	Refrigerate
	14304	1	Whirlpaks	Soil	20110813	Refrigerate
	14305	1	Whirlpaks	Soil	20110813	Refrigerate
	14306	1	Whirlpaks	Soil	20110813	Refrigerate
	14307	1	Whirlpaks	Soil	20110813	Refrigerate
	14308	1	Whirlpaks	Soil	20110813	Refrigerate
	14309	1	Whirlpaks	Soil	20110813	Refrigerate
	14310	1	Whirlpaks	Soil	20110813	Refrigerate
	14311	1	Whirlpaks	Soil	20110813	Refrigerate
	14312	1	Whirlpaks	Soil	20110813	Refrigerate
	14313	1	Whirlpaks	Soil	20110813	Refrigerate
	14314	1	Whirlpaks	Soil	20110813	Refrigerate
	14315	1	Whirlpaks	Soil	20110813	Refrigerate
	14316	1	Whirlpaks	Soil	20110813	Refrigerate
	14317	1	Whirlpaks	Soil	20110813	Refrigerate

Check	TN	Quantity	Storage Medium	Sample Matrix	Date Collected	Storage Instruction
	14318	1	Whirlpaks	Soil	20110813	Refrigerate
	14319	1	Whirlpaks	Soil	20110813	Refrigerate
	14320	1	Whirlpaks	Soil	20110813	Refrigerate
	14321	1	Whirlpaks	Soil	20110813	Refrigerate
	14322	1	Whirlpaks	Soil	20110813	Refrigerate
	14323	1	Whirlpaks	Soil	20110813	Refrigerate
	14324	1	Whirlpaks	Soil	20110813	Refrigerate
	14325	1	Whirlpaks	Soil	20110813	Refrigerate
	14326	1	Whirlpaks	Soil	20110813	Refrigerate
	14327	1	Whirlpaks	Soil	20110813	Refrigerate
	14328	1	Whirlpaks	Soil	20110815	Refrigerate
	14329	1	Whirlpaks	Soil	20110815	Refrigerate
	14330	1	Whirlpaks	Soil	20110815	Refrigerate
	14331	1	Whirlpaks	Soil	20110815	Refrigerate
	14332	1	Whirlpaks	Soil	20110815	Refrigerate
	14333	1	Whirlpaks	Soil	20110815	Refrigerate
	14334	1	Whirlpaks	Soil	20110815	Refrigerate
	14335	1	Whirlpaks	Soil	20110815	Refrigerate
	14336	1	Whirlpaks	Soil	20110815	Refrigerate
	14337	1	Whirlpaks	Soil	20110815	Refrigerate
	14338	1	Whirlpaks	Soil	20110815	Refrigerate
	14339	1	Whirlpaks	Soil	20110815	Refrigerate
	14340	1	Whirlpaks	Soil	20110815	Refrigerate
	14341	1	Whirlpaks	Soil	20110815	Refrigerate
	14342	1	Whirlpaks	Soil	20110815	Refrigerate
	14343	1	Whirlpaks	Soil	20110815	Refrigerate

Cooler Identification: 2011.FOX-M-mon-DLCU.2 Environmental Sciences Group
Site Name: HALL BEACH The Royal Military College of Canada

 Date - Packed: 20110816
 PO Box 17000, Stn. Forces

 Date - Sent: 20110816
 12 Verite Avenue, Bldg #62

 Date - Received:
 Kingston, ON K7K 7B4

Report Results To: **Partridge, Tom** Tel: (613) 541-6000, Ext: 6818/6819

Project Code: **FOX-M-mon-DLCU** Fax: (613) 541-6820

Comments: soil samples

Prepared By:	Partridge, Tom	
Signature/Date:	1- RY	2011/08/16 (yyyymmdd)
Relinquished By:	Partridge, Tom	
Signature/Date:	1- RY	2011/08/16 (yyyymmdd)
Received By (Print Name)	:	
Signature/Date:		2011// (yyyymmdd)

Check	TN	Quantity	Storage Medium	Sample Matrix	Date Collected	Storage Instruction
	14300	1	Jar 125ml Glass #1	Soil	20110815	Freeze
	14301	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14302	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14303	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14304	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14305	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14306	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14307	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14308	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14309	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14310	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14311	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14312	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14313	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14314	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14315	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14316	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14317	1	Jar 125ml Glass #1	Soil	20110813	Freeze

Check	TN	Quantity	Storage Medium	Sample Matrix	Date Collected	Storage Instruction
	14318	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14319	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14320	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14321	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14322	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14323	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14324	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14325	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14326	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14327	1	Jar 125ml Glass #1	Soil	20110813	Freeze
	14328	1	Jar 125ml Glass #1	Soil	20110815	Freeze
	14329	1	Jar 125ml Glass #1	Soil	20110815	Freeze
	14330	1	Jar 125ml Glass #1	Soil	20110815	Freeze
	14331	1	Jar 125ml Glass #1	Soil	20110815	Freeze
	14332	1	Jar 125ml Glass #1	Soil	20110815	Freeze
	14333	1	Jar 125ml Glass #1	Soil	20110815	Freeze
	14334	1	Jar 125ml Glass #1	Soil	20110815	Freeze
	14335	1	Jar 125ml Glass #1	Soil	20110815	Freeze
	14336	1	Jar 125ml Glass #1	Soil	20110815	Freeze
	14337	1	Jar 125ml Glass #1	Soil	20110815	Freeze
	14338	1	Jar 125ml Glass #1	Soil	20110815	Freeze
	14339	1	Jar 125ml Glass #1	Soil	20110815	Freeze
	14340	1	Jar 125ml Glass #1	Soil	20110815	Freeze
	14341	1	Jar 125ml Glass #1	Soil	20110815	Freeze
	14342	1	Jar 125ml Glass #1	Soil	20110815	Freeze
	14343	1	Jar 125ml Glass #1	Soil	20110815	Freeze

Cooler Identification: 2011.FOX-M-mon-DLCU.3 Environmental Sciences Group
Site Name: HALL BEACH The Royal Military College of Canada

 Date - Packed: 20110816
 PO Box 17000, Stn. Forces

 Date - Sent: 20110816
 12 Verite Avenue, Bldg #62

 Date - Received:
 Kingston, ON K7K 7B4

Report Results To: **Partridge, Tom** Tel: (613) 541-6000, Ext: 6818/6819

Project Code: **FOX-M-mon-DLCU** Fax: (613) 541-6820

Comments: water samples

Prepared By:	Partridge, Tom	
Signature/Date:	X LY	2011/08/16 (yyyymmdd)
Relinquished By:	Partridge, Tom	
Signature/Date:	X 84	2011/08/16 (yyyymmdd)
Received By (Print Name):		
Signature/Date:		2011// (yyyymmdd)

Check	TN	Quantity	Storage Medium	Sample Matrix	Date Collected	Storage Instruction
	14345	1	Bottle 1L Plastic	Groundwater	20110813	Refrigerate
	14345	1	Bottle 1L Teflon	Groundwater	20110813	Refrigerate
	14345	1	Bottle 250ml Glass	Groundwater	20110813	Refrigerate
	14346	1	Bottle 1L Plastic	Groundwater	20110813	Refrigerate
	14346	1	Bottle 1L Teflon	Groundwater	20110813	Refrigerate
	14346	1	Bottle 250ml Glass	Groundwater	20110813	Refrigerate
	14347	1	Bottle 1L Plastic	Groundwater	20110813	Refrigerate
	14347	1	Bottle 1L Teflon	Groundwater	20110813	Refrigerate
	14347	1	Bottle 250ml Glass	Groundwater	20110813	Refrigerate
	14348	1	Bottle 1L Plastic	Groundwater	20110813	Refrigerate
	14348	1	Bottle 1L Teflon	Groundwater	20110813	Refrigerate
	14348	1	Bottle 250ml Glass	Groundwater	20110813	Refrigerate
	14349	1	Bottle 1L Plastic	Groundwater	20110813	Refrigerate
	14349	1	Bottle 1L Teflon	Groundwater	20110813	Refrigerate
	14349	1	Bottle 250ml Glass	Groundwater	20110813	Refrigerate

Cooler Identification: 2011.FOX-M-mon-DLCU.4 Environmental Sciences Group
Site Name: HALL BEACH The Royal Military College of Canada

 Date - Packed: 20110816
 PO Box 17000, Stn. Forces

 Date - Sent: 20110816
 12 Verite Avenue, Bldg #62

 Date - Received:
 Kingston, ON K7K 7B4

Report Results To: **Partridge, Tom** Tel: (613) 541-6000, Ext: 6818/6819

Project Code: **FOX-M-mon-DLCU** Fax: (613) 541-6820

Comments: water samples

Prepared By:	Partridge, Tom	
Signature/Date:	1- RY	2011/08/16 (yyyymmdd)
Relinquished By:	Partridge, Tom	
Signature/Date:	X R4	2011/08/16 (yyyymmdd)
Received By (Print Name):		
Signature/Date:		2011// (yyyymmdd)

Check	TN	Quantity	Storage Medium	Sample Matrix	Date Collected	Storage Instruction
	14350	1	Bottle 1L Plastic	Groundwater	20110813	Refrigerate
	14350	1	Bottle 1L Teflon	Groundwater	20110813	Refrigerate
	14350	1	Bottle 250ml Glass	Groundwater	20110813	Refrigerate
	14351	1	Bottle 1L Plastic	Groundwater	20110815	Refrigerate
	14351	1	Bottle 1L Teflon	Groundwater	20110815	Refrigerate
	14351	1	Bottle 250ml Glass	Groundwater	20110815	Refrigerate
	14352	1	Bottle 1L Plastic	Groundwater	20110815	Refrigerate
	14352	1	Bottle 1L Teflon	Groundwater	20110815	Refrigerate
	14352	1	Bottle 250ml Glass	Groundwater	20110815	Refrigerate
	14353	1	Bottle 1L Plastic	Groundwater	20110815	Refrigerate
	14353	1	Bottle 1L Teflon	Groundwater	20110815	Refrigerate
	14353	1	Bottle 250ml Glass	Groundwater	20110815	Refrigerate
	14354	1	Bottle 1L Plastic	Groundwater	20110815	Refrigerate
	14354	1	Bottle 1L Teflon	Groundwater	20110815	Refrigerate
	14354	1	Bottle 250ml Glass	Groundwater	20110815	Refrigerate

Inspection Date: Aug 15,204

Contractor Name: AECom

Prepared By: D.Elw	003					
Thermistor Information						
	Fox -M	Thermistor Loc	cation east	1 m-1	7 1/10 - 1/1	nicou.
	HB2	Inclination Ne	-the d	2 3 11GW - W	A SE L ID A Z V	3
Install Date:		First Date Ever			Last Date Eve	nt
Coordinates and Eleva	tion	N	Е		Elev	/
Length of Cable (m)	0	Cable Lead Above G	round (m) 115	Nodal Point		
Datalogger Serial #			**	Cable Seria	l Number	
Thermistor Inspection	<u>1</u>					
		Good	Nee	eds Maintena	nce	
Casing		?	?	No craces	200	
Cover		?	?	NO COUR		
Data Logger		?	?	no data	losser	
Cable		?/	?	good	10	
Beads		? ~	?	0		
Battery Insta	llation Date			no battors		
Battery Leve	ls	Main			Aux	
•						
Manual Ground Temp	erature Readir	<u>ıgs</u>				
Bead	ohms	Degrees C		Bead	ohms	Degrees C
1	8.541			9	19.173	
2	165.97			15	20.79	
3	12.114			11	19.60	
4	2.617					
5	11,451					
· le	9.208					
7	15.163					
8	15.448					
Observations and Pro						
beats	25 4 ms	+ functioning			_	
Ne vos	<i>5</i>	0				
T .						

Contractor Name: AECom		Inspec	ction Date: VT-/	
Prepared By: D. Elwoon	6	Типорел	onon bato.	
Thermistor Information	(m) (m) (m) (m)			
Site Name: Fox-M	Thermistor Location	on scentra	L Tier I	
Thermistor Number:	Inclination First Date Event		Last Date Ev	ent
Install Date: Coordinates and Elevation	N First Date Event	E	Ele	
Length of Cable (m)	Cable Lead Above Grou		Nodal Points	
Datalogger Serial #	Cable Load / Loave C. Co		Cable Serial Number	
Thermistor Inspection		A 1 1		
	Good		s Maintenance	
Casing	? ~	? _	<u> </u>	<u></u>
Cover	? ~	? _		
Data Logger	? /	? _		
Cable	? ~	? _		
Beads	?	?		
Battery Installation Date		_	neplace bal	tery.
Battery Levels	Main //-	34 lgo-d	Aux	12.04 (good)
Manual Ground Temperature Read Bead ohms	dings Degrees C	[Bead ohms	Degrees C
		-		
		-		
Observations and Proposed Main	tenance	-		

0ttN		Impropries Date: A 24 Annual		
Contractor Name: AビCのM		Inspection Date: Aug /3/2011		
Prepared By: D. Elwoop				
Thermistor Information				
Site Name: Fox see		1-2 (SW comer Tier II)		
Thermistor Number: リケース	Inclination			
Install Date:	First Date Event	Last Date Event		
Coordinates and Elevation	N	E Elev		
Length of Cable (m)	Cable Lead Above Ground (m)	Nodal Points Cable Serial Number		
Datalogger Serial #		Cable Serial Nulliber		
Thermistor Inspection				
	Good	Needs Maintenance		
Casing	? ~	?		
Cover	2 V	?		
Data Logger	2 /	?		
	? V	?		
Cable	: -	?		
Beads	?	!		
Battery Installation Date				
Battery Levels	Main	(400d) Aux 12.77 (900d)		
		7		
Manual Consumal Tamanageture Bas				
Manual Ground Temperature Rea				
Bead ohms	Degrees C	Bead ohms Degrees C		
Observations and Proposed Mai	-tenance			
men 39%	full good			
	V			
1				
I				

Contractor Name: Allom		Inspection Date: Auc 15,2011
Prepared By: D. Ehwoon		
Thermistor Information		
Site Name:	Thermistor Loc	ation Tier 11 South
Thermistor Number: V1-2	Inclination	The It Conclusion
Install Date:	First Date Ever	t Last Date Event
Coordinates and Elevation	N	E Elev
Length of Cable (m)	Cable Lead Above G	
Datalogger Serial #		Cable Serial Number
Thermistor Inspection	Good	Needs Maintenance
Casing	? ~	?
Cover	2 V	?
	? ′	?
Data Logger	? ~	?
Cable	? V	
Beads	?	?
Battery Installation Date		replace battery
Battery Levels	Main	Aux
Manual Ground Temperature Read Bead ohms	lings Degrees C	Bead ohms Degrees C
1 10.074		
2 13.297		
3 14.111		
4 17.494		
\$ 18,735		<u> </u>
4 20.43		
7 21.44		
Observations and Proposed Maint	tenance	
Observations and Proposed Maint	tenance	
Observations and Proposed Maint	tenance	
Observations and Proposed Maint	tenance	
Observations and Proposed Maint	<u>tenance</u>	
Observations and Proposed Maint	tenance	
Observations and Proposed Maint	tenance	
Observations and Proposed Maint	tenance	
Observations and Proposed Maint	tenance	

				, 		
Contractor Name: AELOW			Inspection Date: Aug 13/2011			
Prepared By: D. Ehwood						
Thermistor Information						
Site Name: Fox-M	Thermisto	r Location 💋 🖺 🕜	Culr			
Thermistor Number: V1-3	Inclination		, loci			
Install Date:	First Date		Last Date	Event		
Coordinates and Elevation	N	E		Elev		
Length of Cable (m)	Cable Lead Abo	ve Ground (m)	Nodal Points			
Datalogger Serial #			Cable Serial Number			
Thermistor Inspection						
	Good	Nee	eds Maintenance			
Casing	?V	?				
Cover	2 ~	?				
Data Logger	21	?				
Cable	· フレ	?				
Beads	7V	?				
Battery Installation Date	• •	•		···		
		/	needs replac	The Control		
Battery Levels	Main	11.34 Good)	Aux	11.68 (fair/po-		
		•				
Manual Ground Temperature Rea	dings					
Bead ohms	Degrees C		Bead ohms	Degrees C		
Boud Offinio	Degrees 0		Dead Offins	Degrees C		
Observations and Proposed Mair	itenance					
				ŀ		
				_		
				-		
				-		

Contractor Name:			Inspe	ection Date:			
Prepared By:						_	<u></u>
Thermistor In	nformation		Thermistor Location			<u> </u>	
Site Name: Thermistor N	lumber	VT-3	Inclination				
Install Date:	dumber.	VYZ	First Date Event			Last Date Eve	ent
Coordinates	and Elevation	on	N N	E		Ele	
Length of Ca			Cable Lead Above Ground		Nodal Point		
Datalogger S	Serial #				Cable Seria	l Number	
	324		971012	11/4/5/21/7			
Thomaiator	Inonostion						
Thermistor I	inspection		Good	Need	ds Maintena	nce	
_	_			?	- Trialitions		
Са	asing		?				
Co	over		?	?			
Da	ata Logger		?	?			
	able		?	?			
	eads		?	?			
	attery Install	ation Date	-	-			
	-				-		
Ва	attery Levels	3	Main			_Aux	
Manual Grou	und Tempe	rature Read	lings	_	_		
	Bead	ohms	Degrees C		Bead	ohms	Degrees C
	1	9.843			9	21,45	
	2	13.209			10	22.40	
	3	15,794			11	22.85	· · · · · · · · · · · · · · · · · · ·
	4		i				
		17,128	i				
	5	17,128	i				
	5	17,128 18,216 19,144	i				
-	5 4	17.128 18.216 19.144 20.61	i				
	5	17,128 18,216 19,144	i				
Observation	5 4 7 8	17.128 18.216 19.144 20.61 20.01					
Observation	5 4 7 8	17.128 18.216 19.144 20.61 20.01					
Observation	5 4 7 8	17.128 18.216 19.144 20.61 20.01					
Observation	5 4 7 8	17.128 18.216 19.144 20.61 20.01					
Observation	5 4 7 8	17.128 18.216 19.144 20.61 20.01					
Observation	5 4 7 8	17.128 18.216 19.144 20.61 20.01					
Observation	5 4 7 8	17.128 18.216 19.144 20.61 20.01					
Observation	5 4 7 8	17.128 18.216 19.144 20.61 20.01					
Observation	5 4 7 8	17.128 18.216 19.144 20.61 20.01					
Observation	5 4 7 8	17.128 18.216 19.144 20.61 20.01					
Observation	5 4 7 8	17.128 18.216 19.144 20.61 20.01					

0.001.001		E (FIX		1	otion Data:	Aug 15,2	0.11
	r Name: A			jinspe	cuon Date:	1740 DIZ	0 (
Prepared	ву: 1), Е	lwood					
Thermisto	or Information	Foxen	Thermistor	Location Tier 11	1, 10:11	(North	
	or Number:	V7-4	Inclination		h/AAA	1 1000	
Install Da	te:		First Date E			ast Date Eve	nt
	tes and Eleva	ation	N 7626838		91007	Elev	
	Cable (m)		Cable Lead Abov		Nodal Points		
Datalogge	er Serial#				Cable Serial N	Number	
<u>Thermist</u>	or Inspection	<u>on</u>					
			Good	Need	s Maintenand	:е	
	Casing		?~	? _			
	Cover		? 🗸	? _			
	Data Logge	er	? ✓	? _	· · · ·		
	Cable		? ~	? _	vinor cro	whim Pc	onneellor
	Beads		?	? _			
	Battery Inst	allation Date					
	Battery Lev	rels	Main	11.34 U (good)	A	Aux _ <i>\\.</i>	07V (verbace)
<u>Manual (</u>	Ground Tem Bead	perature Rea	dings Degrees C	ſ	Bead	ohms	Degrees C
	1						
	2	2663					
	3	260.7					
	Ч	248.8					
	5	269.3					
	6	250.9					
	7	269.0					
				l			
Observa	tions and P	roposed Mair	tenance				
	1						
	1						
	1						
	=						
	1						

		,			
Contractor Name: AEcom		Insp	ection Date:	Aug 15, 20	11
Prepared By: D. Elwoop					
Thermistor Information					
Site Name: Fox M	Thermistor Location				
Thermistor Number: VT-5	Inclination				
Install Date:	First Date Event	P=-		Last Date Ev	
Coordinates and Elevation	N Cable Lead Above Ground (m)	E	Nodal Point	Ele c	∋v
Length of Cable (m) Datalogger Serial #	Sable Lead Above Ground (III)		Cable Seria		
Data oggor Conari					
Thermistor Inspection					
	Good		ds Maintena	nce	
Casing	? ~	?			*****
Cover	? ~	?			
Data Logger	? ~	?			
Cable	? ~	?		***************************************	
Beads	? ~	?			
Battery Installation Date	•	•			
·					
Battery Levels	Main			_Aux	
Manual Ground Temperature Readin	<u>igs</u>				
Bead ohms	Degrees C		Bead	ohms	Degrees C
1 9.257	:				
2 12.891					
3 15.865					
4 17.191					
5 18.708					
4 19.691					
7 70.47					
* 28,47					
Observations and Proposed Mainter	<u>nance</u>				

Contractor Name: AELOW			Inspection Date: Aug 13, 2011					
Prepared By: D.Elwoc	•					3		
Thermistor Information								
***************************************	1x - 111	Thermisto	Location beca	. (-	landfill			
Thermistor Number: V1	T-6	Inclination		LZV	(marily			
Install Date:		First Date	Event			Last Date E	vent	
Coordinates and Elevation		N7626952			190897		lev	
Length of Cable (m)		Cable Lead Abo	ve Ground (m)		Nodal Point			
Datalogger Serial #					Cable Seria	l Number		
Thermistor Inspection		Good			ds Maintena	nce		
Casing		?		?				
Cover		? V		?				
Data Logger		? ~		?				
Cable		?		?				
Beads		?		?				
Battery Installa	tion Date				replace	battery		
Battery Levels		Main	11.34 (900	4)		Aux	17.04 No	(b.
Dattery Levele		· · · · · · · · · · · · · · · · · · ·	11.0					
Manual Ground Temper	ature Read	ings	_					
Bead	ohms	Degrees C	2.		Bead	ohms	Degrees	s C
/	8,656				9 40	20.74		
2	11, 224				K			
	14,241		1		PZ			
	Ce. 454				B			
	17, 171				И			
6	18,047		2		15			
	18,935		1		ile			
0			1			·· <u>···</u>		
	19.857		J		M			
Observations and Prop	osed Mainte	<u>enance</u>						
nevory (9990							
, ,								
l								

Contractor Name: A	stom			Insp	pection Date: Nuc 15,2011
Prepared By: D. 2	Twoon				
Thermistor Information	•				
Site Name:	FOY-M	Thermistor	Location Eus	t /3	each
	UT-7		vertical		
Install Date:		First Date B			Last Date Event
Coordinates and Eleva		2424743		Ε '	491383 Elev
Length of Cable (m)		ie Lead Abov	re Ground (m)		Nodal Points 9
Datalogger Serial #	27010006				Cable Serial Number 150701000(UT-7)
Thermistor Inspection	<u>on</u>	Good		Nee	eds Maintenance
Casing		?✓		?	
Cover		?/		?	new lock required
Data Logge	ır	?1/		?	
Cable		? 🗸		?	
Beads		?		?	
Battery Inst	allation Date				
Battery Lev	els	Main _	11-340	موراه	d) Aux 11.80 (replace)
Manual Ground Tem	perature Readings				
Bead	ohms	Degrees C			Bead ohms Degrees C
ı	8.419				9 20.86
2	9.904				
3					
ч	13.006				
5	15, 455				
	16. 850				
7	17.749				
	16.834				
8	19.817				
Observations and D	reneed Maintone				
Observations and P		ICE	 	-	
Mossour	3 6 3710				1
VV	3 6 3710				
Vicesore	2 6 3710				
Mesceria	2 6 3710				
Mesceria	5 6 3410				
Mescore	5 6 3710				
Mescerio	5 6 3410				
Mescore	5 6 57 10				
Mesceria	5 6 57 10				
Mesceria	5 6 57 10				

								7	
Contractor Name: AECON				Inspe	Inspection Date: Aug 13, 2011				
Prepared By: り、どり	woo9								
				-					
Thermistor Information Site Name:	Fox-m	Thermistor	Location					7	
Thermistor Number:		Inclination					···-	7	
Install Date:		First Date				Last Date	Event	7	
Coordinates and Eleva	ation N	742481		E 4	9/371		Elev		
Length of Cable (m)	С	able Lead Abov	ve Ground	(m)	Nodal Poin	ts 🤗			
Datalogger Serial #	07040022				Cable Seri	al Number	TS 070400022	(VT-8,	
Thermistor Inspection	<u>on</u>	Good			is Mainten	ance		_	
Casing		? ~		?				_	
Cover		? ~		?	new lo	de			
Data Logge	er	? ~		?				_	
Cable		?~		? 4	minor,	eraching	@ connection (o	k)	
Beads		?		? .				_	
Battery Inst	allation Date				<u></u>		<u>-</u>	_	
Battery Lev	rels	Main	11-34	good		Aux	13.02 good		
·		•		7		_	3		
Manual Ground Tem	perature Readin		ı	1					
Bead	ohms	Degrees C			Bead	ohms	Degrees C	_	
1	8.984				9	20.79		4	
2	11,155				[2]			_	
3	13,87%							_	
4	16.040							_	
5	(7, \(3]					_	
Le	18,108							_	
7	19.096	_						_	
4	19.985]		l				
Observations and P	roposed Mainter	ance							
	y 38°6			·					
memo	9 30 00								
								ļ	
								İ	
								1	
1									

				_				
Contractor Name: AECON				Inspection Date: Aug 13, Zoli				
Prepared By: D. Elwoon								
Troparda By. 3.0210								
Thermistor Information								
	X-M	Thermisto	r Location					
	-9	Inclination						
Install Date:		First Date	Event			Last Date	Event	
Coordinates and Elevation		627041		E,	0491580		Elev	
Length of Cable (m)	Cabl	e Lead Abo	ve Ground (m)		Nodal Poin			
Datalogger Serial # 670	40017				Cable Seria	I Number	TS07060017 (UT	
Thermistor Inspection								
memistor inspection		Good		Needs Maintenance				
		-			eus Maintena	ince		
Casing		?		?				
Cover		?		?				
Data Logger		?		?				
Cable		?		?				
		?						
Beads		•		?		_		
Battery Installation	on Date			re	place b	attery		
Battery Levels		Main	11.34	190	od)	Aux	12.53 (Fair)	
•		•		-0				
Manual Carried Trees	D !							
Manual Ground Tempera	ture Readings							
Bead	ohms	Degrees C			Bead	ohms	Degrees C	
1 9	,239				9	20.31		
	574				10			
	1045							
. 1	484							
	1431							
190	1306							
					-			
A	, 446							
0 (0	1 : 363							
		_						
Observations and Propos	sed Maintenand	<u>:e</u>				_		
ļ								
ļ								

Contractor	Name: A	<i>E</i> 0			laa	pection Date:	A.A. 13/201	11
Prepared By: DELWOOD				Jins	pection Date.	Buy 19/20		
Prepared B	Sy. DE	(WOOL)						
Thermistor	Informatio							
Site Name:		Foy-m	Thermistor	Location				
Thermistor		VT-10	Inclination					
Install Date			First Date				ast Date Even	t
Coordinate		ation	N 7627284		E	491604	Elev	
Length of C		4741	Cable Lead Abo	ve Ground (m)		Nodal Points		1 - 502 (18 1
Datalogger	Seriai #	0706000°	3			Cable Serial	Number 15/6	40003 (US-1
Thermisto	r Inspectio	nn.						
	111000011	211	Good		Ne	eds Maintenan	ce	
			2 ~		?			
(Casing		•					
(Cover		?~		?			
	Data Lagge		2		?	1 . S. A.	(, 0	· ·
L	Data Logge	#1	:			clight are	aching e con	amection
(Cable		?		?			
E	Beads		?		?			
F	Battery Inst	tallation Date				ren(c	ace balle	wies
	Battery Lev			11.34	6-0	,		56 (fa-)
	Dallery Lev	reis	IVIAII	11.5	900		Aux	J& C100 /
Manual Gr	round Tem	perature Read	<u>lings</u>					
	Bead	ohms	Degrees C			Bead	ohms	Degrees C
	}	8.731	3			9	20.55	
	2	10.482					70,73	
-	2	•						
	3	13, 713						
-	4	15,700						
	8	16,866						
	10	17,787						
	7	18.854						
	8	19.695						
Observation	one and D	roposed Maint	tonanco					
Observation	ons and P	roposed Mairi	enance					
- 1								

Contractor Name:	tEcon		Ins	pection Date	Aug 13,2	-0(1
Prepared By: D.4		, , , , ,		3		
ricpared by. U.L	=10000					
Thermistor Informatio						
Site Name:	Fox-M	Thermistor	Location			
Thermistor Number:	VT-II	Inclination				
Install Date:		First Date 6		11.01.51.5	Last Date Eve	
Coordinates and Elev	ation	N 7627310		491568	Ele	<u> </u>
Length of Cable (m) Datalogger Serial #	706000	Cable Lead Abov	e Ground (m)	Nodal Poin		7060002 (UT-1
Thermistor Inspection		Good	Ne	eds Maintena		
-						
Cover		? -	?			
Data Logge	er	?~	?			
Cable		? 🗸	?			
Beads		? V	?			
Battery Ins	tallation Date			replace	e ballon	
Battery Lev	/els	Main	11.34 (good)	•)	45 (Rai-)
Manual Ground Ten	nperature Reac	dings Degrees C		Bead	ohms	Degrees C
1	8,204			9	20-85	-
2	9,817			759.3	×0.40	
3	13,560					
4	15, 550					
5	16,925					
4	17,927					
7	19008					
8	19.947					:
Observations and P	roposed Main	tenance				
premor	y 39%					