Appendix A

Station Area Non-hazardous Waste Landfill

- A1 Site Condition/Visual Inspection Records
- A2 Geotechnical Inspection Photographic Records
- A3 Field Notes



A1. Station Area Non-hazardous Landfill

A1.1 Landfill Summary

The Station Area Non-Hazardous Waste Landfill is located on the Upper Site, approximately 500 m northeast of the main facilities area. The landfill contains non-hazardous wastes and debris generated and collected during clean up of the site. The landfill consists of perimeter berms and a cap of compacted granular fill. The location of the Station Area Non-Hazardous Waste Landfill is presented in Figure A-1.

For 2008, the monitoring requirements for the Station Area Non-Hazardous Waste Landfill included visual inspection only.

A1.2 Visual Monitoring

No significant erosion, settlement or indications of slope instability were observed at the Station Area Non-Hazardous Waste Landfill. Overall landfill performance is assessed as "acceptable". Appendix A1 presents a summary of the 2008 visual inspection results.

Minor erosion gullies were observed on the east slope that appear to be self-armouring (Photo SNH-8 in Appendix A2). An area of minor seepage and orange staining was observed on the lower half of the northeast slope (Photos SNH-7A and 7B in Appendix A2). Some minor drainage was observed along the road at the south toe (Photo SNH-10 in Appendix A2). No issues of concern that require immediate attention were identified.

A1.3 Soil Sampling

Soil sampling was not scheduled for the 2008 monitoring year.

A1.4 Groundwater Sampling

Groundwater sampling was not scheduled for the 2008 monitoring year.

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A1 – Site Condition/Visual Inspection Records

Visual Inspection Checklist Inspection Report – Page 1 of 2

SITE NAME:	CAM-4 - Pelly Bay
LANDFILL/AREA DESIGNATION:	Station Area Non-Hazardous Waste Landfill
DATE OF INSPECTION:	August 14, 2008
DATE OF PREVIOUS INSPECTION:	August 24 - 26, 2007
INSPECTED BY:	Darrin Johnson, P.Eng.
REPORT PREPARED BY:	Darrin Johnson, P.Eng.

The preparer represents to the best of the preparer's knowledge, the following statements and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or misstated.

Preliminary Stability Assessment

Feature	Severity Rating	Extent			
Settlement	Not observed	None			
Erosion	Acceptable	Isolated			
Frost Action	Not observed	None			
Animal Burrows	Not observed	None			
Vegetation	Not observed	None			
Staining	Acceptable	Isolated			
Vegetation Stress	Not observed	None			
Seepage Points	Acceptable	Isolated			
Debris Exposed	Not observed	None			
Tension Crack	Not observed	None			
Overall Landfill					
Performance	Acceptable				

Station Area Non-Hazardous Waste Landfill - Inspection Report - Page 2 of 2

Checklist Item	Present Yes/No	Location	Dimensions (L x W) (m)	Depth (m)	Extent (%)	Description	Photographic Records (Photos referenced in photolog and in figures)	Additional Comments/ Preliminary Stability Assessment
Settlement	No							
Erosion	Minor	East slope	10m x 10m	0.1m	1%	Isoloated area of minor erosion that appears to be self-armouring.	SNH-8	Acceptable
Frost Action	No							
Animal Burrows	No							
Vegetation	No							
Staining	Yes	Northeast corner slope	10m x 10m	N/A	1%	Isolated area of minor orange staining.	SNH-7A and SNH-7B	Acceptable
Vegetation Stress	No							
Seepage Points	Yes	Northeast corner slope	10m x 10m	N/A	1%	Isolated area of minor seepage.	SNH-7A and SNH-7B	Acceptable
Debris Exposed	No							
Presence/ Condition of Monitoring Instruments	Good							
Other Features of Note.	Yes	South toe along road	50m x 5m	N/A	3%	Drainage along road at toe. No staining.	SNH-10	Acceptable
Additional Photos						General	SNH-1A, 1B, 2A, 2B, 3A, 3B, 4A, 4B, 5, 6A, 6B, 9A, 9B	

Legend

TEMPORARY BENCHMARK

COORDINATE POINT

MONITORING WELL LOCATION

PHOTOGRAPH LOCATION

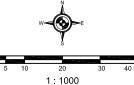
AREA OF MINOR SEEPAGE

AREA OF MINOR EROSION AREA OF WATER DRAINAGE

RECORD DRAWING

NOT FOR CONSTRUCTION

Map Sources / Notes:
-Source drawing from UMA: C4-RD02.dwg
-Photograph numbers refer to those found in Appendix A2 - Visual Inspection Photographs



UTM Zone 16W, NAD83

C4-RD02.dwg DCJ October, 2008

Defence Construction Canada

2008 CAM-4 DEW Line Monitoring Program CAM-4 Kugaaruk Nunavut Territory

Station Area Non-Hazardous Waste Landfill

> Figure A-1 Version 1



A2 – Geotechnical Inspection Photographic Records





Photograph SNH-1A. Southwest corner at the toe, facing northeast. ↑



Photograph SNH-1B. Southwest corner at the toe, facing north. •



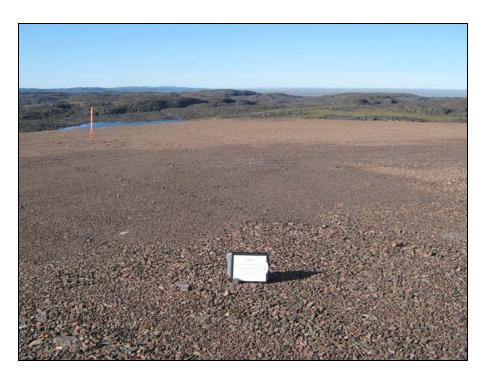


Photograph SNH-2A. Southwest corner at the crest facing northeast. Some tire tracks from a vehicle that tried to drive up onto the landfill near clipboard. **↑**



Photograph SNH-2B. Southwest corner at the crest, facing north. •





Photograph SNH-3A. Facing northeast over landfill surface. ↑



Photograph SNH-3B. Facing southeast over landfill top. ↑





Photograph SNH-4A. Northwest corner crest, facing south.



Photograph SNH-4B. Northwest corner crest, facing east. ↑





Photograph SNH-5. Panoramic of the north slope. ↑



Photograph SNH-6A. Northeast corner facing south. ↑





Photograph SNH-6B. Northeast corner facing west. ↑



Photograph SNH-7A. Facing slope. Some seepage and orange staining over 10m x 10m area on lower half of east slope, towards the northeast corner toe. ♠



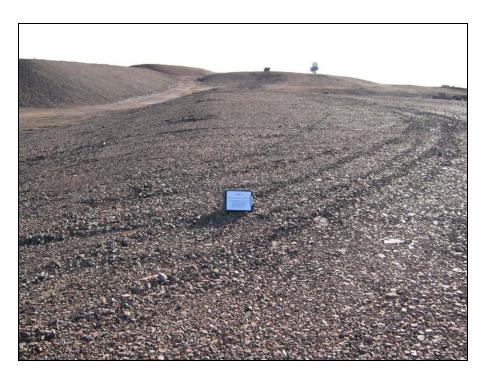


Photograph SNH-7B. Toe of slope near northeast corner. Orange staingin and seepage discharging onto rocks at toe of landfill. Down-slope of photo SNH-12. ↑



Photograph SNH-8. East slope. Area of possible minor erosion with gullies about 0.5m wide and less than 0.1m deep that appear to be self healing with larger rock in cover fill. ↑



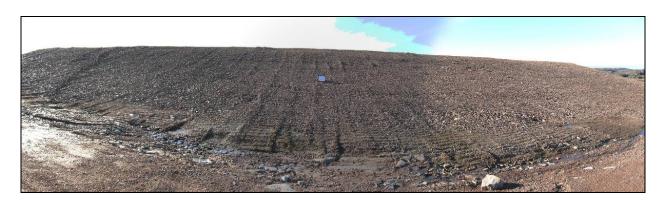


Photograph SNH-9A. Facing west along south crest. ↑



Photograph SNH-9B. Facing north along east crest. Some tire tracks but no damage. ↑





Photograph SNH-10. Panoramic of the south face. Some seepage and drainage along road at toe. No staining. ↑

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	STATION ARCA NON-HAZ/PAGEZ)
	The state of the s
	-PHOTO LOC, 4 (WAMPOINT 28)
	-NORTHWEST CHENER CREST
34.	- PHOTO 52 (FACING SOUTH)
-	- PHOTO 53 (FACING EAST)
	- PHOTO SY (OCEAN IN DISTANCE)
-	- PHOTO LUC. 5 (WAYPOINT 29)
	- NORTH SLOPE
	- PHOTOS 55, 56 AST (PANORAMIC)
	- NO EROSION DE CRACKS DESERVED
	- LARGE IM DIA, ROCKS AT
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	-NO SEEPAGE OBSORVED
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	- PHOTO 58 (FACING SOUTH)
	- PHOTOS9 (FACING WET)
and the T	
	PHOTO LOC; 7 (WAYPAINT 3T)
	-PHOTO GO (FACING SLOPE)
	- SOME SURPAGE AND GRANGE
	STAINING OVER IOM X10n ARM
	TOWARDS NE CORNER TOE.
	TOWNROS NE CORNER TOE.

STATION AFOR NOWHAZ UP (PAGE 3) - PHOTO GI (TOU OF SLOPE NEAR NE CORNUL - GRANGE STAINING AND SUPPAGE DISCHARGING ONTO ROCKS AT TOX OF LANDFILL - DOWNSCOPE OF PHOTO 60 -PHOTO 62 (EAST SWPE) -AREA OF POSSIBLE MINTOR GROSION WITH GULLOS ABOUT 0.5m WIDE AND CUSS THAN O. IM DUTP. THAT MARTERA TO GE SUF HEALING WITH LARGER PACK IN COVER -PHOTO LOC. 9 WAYPOINT -PHOTO 63 (FARING WITT AVOID JONTH CONT) - PHOTO GY (FACING NORTH ALONG LAST CANST) - SOME TIRE TRACKS -NO DAMAGE PHOTA LOC. IO (WAYPOINT 34- SONTH FALE) -PHOTOS 65 664 67 (PANJORAMIC) / -SOME SUPPAGE AND DRAINABE ALONG RUAD AT TOE, NO STAINING

Appendix B

DCC Tier II Soil Disposal Facility

- B1 Site Condition/Visual Inspection Records
- B2 Geotechnical Inspection Photographic Records
- B3 Monitoring Photographic Records
- B4 Monitoring Well Sampling Records
- B5 Thermistor Maintenance Records
- B6 Thermistor Graphs
- B7 Field Notes



B1. Tier II Soil Disposal Facility

B1.1 Landfill Summary

The Tier II Soil Disposal Facility is located approximately 550 m west of the main facilities area. The landfill was constructed for disposal of Tier II soil excavated during the clean up. The location and plan of the Tier II Disposal Facility is presented in Figure B-1.

The landfill has a double containment system consisting of a geomembrane liner and placement of sufficient surface fill to promote permafrost aggradation through the landfill contents. The liner was placed across the bottom of the landfill, along the berms and over top of the landfilled material.

For 2008, the monitoring requirements for the Tier II Soil Disposal Facility included visual inspection, soil sampling, groundwater sampling and thermal monitoring.

B1.2 Visual Monitoring

No significant erosion, settlement or indications of slope instability were observed at the Tier II Soil Disposal Facility. Overall landfill performance is assessed as "acceptable". Appendix B1 presents a summary of the 2008 visual inspection results.

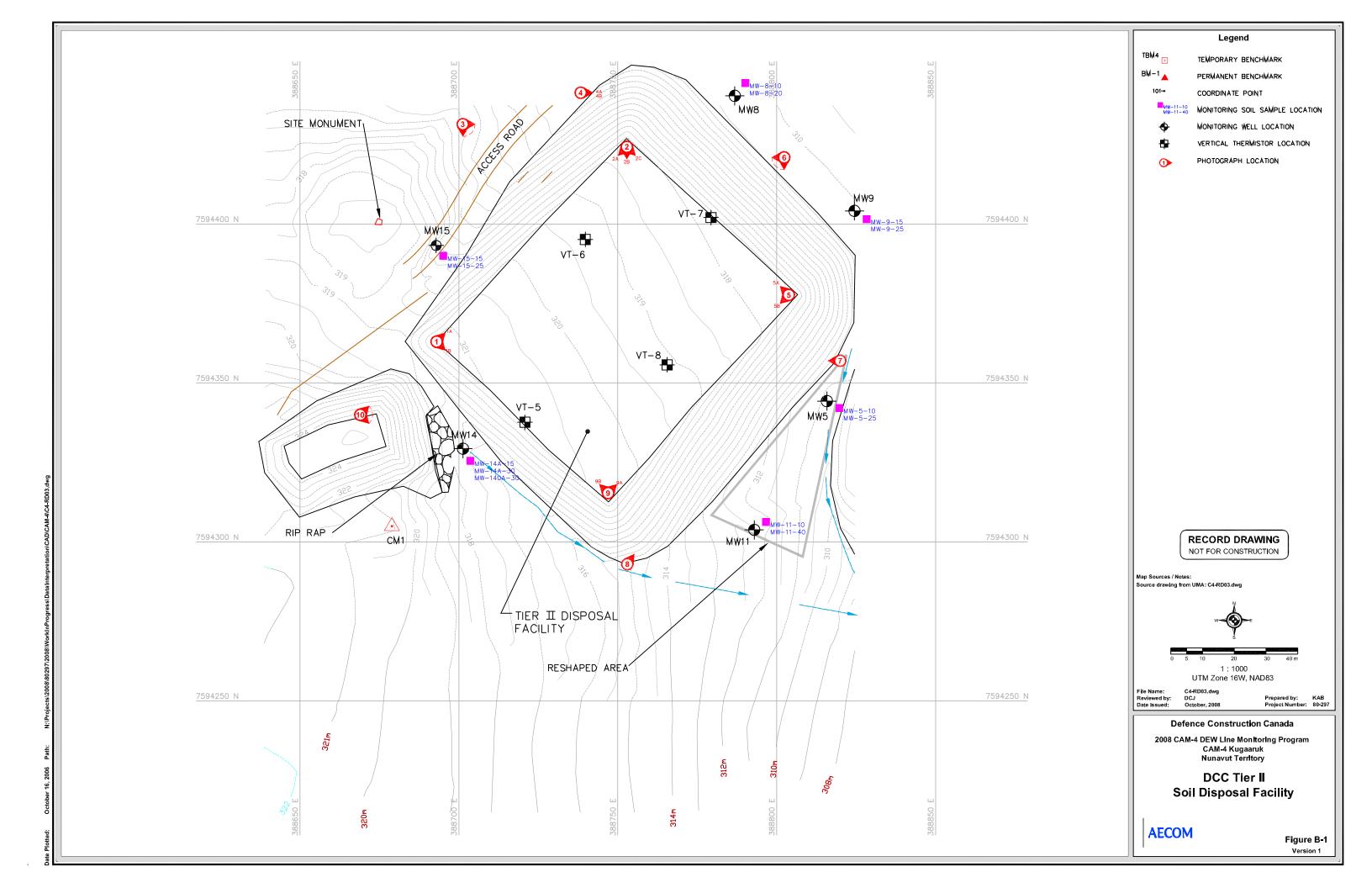
An area of minor orange staining was observed at the toe of the northeast slope (TII-4A in Appendix B2). Seepage was observed from the lower half of the northeast and southeast slopes (TII-6 and 7 in Appendix B2). No staining was observed on the slopes. Minor ponding of water and drainage was observed along the toes of the northwest, southeast and southwest slopes (TII-3, 9A and 10 in Appendix B2). No issues of concern that require immediate attention were identified.

B1.3 Soil Sampling

Soil samples were collected at the designated locations (BMW-3, MW-5, MW-8, MW-9, MW-14-A, MW-15 AND MW-16). Sampling locations are shown on Figure B-1. Two samples were collected at each station at depths of 0.10 - 0.15 m below ground surface and between 0.25 - 0.40 meters below ground surface. The photographs of each monitoring well and test pit location are included in Attachment B3.

No staining or free product was observed during the sampling event at the Tier II Soil Disposal Facility. There were no odours documented during the Tier II Disposal Facility sampling event, with the exception of one monitoring location, MW-16. An ambient hydrocarbon-like odour was detected during soil sampling at the MW-16 monitoring location.

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The laboratory analyses detected concentrations of TPH (C6-34) at monitoring locations MW-8, MW-9, MW-15 and MW-16. It is recommended that these results be evaluated in the context of the Landfill Monitoring Plan.

The analytical results and depths of samples are provided in Table B-1. The Laboratory Certificates of Analysis are provided in Appendix F.

B1.4 Groundwater Sampling

Groundwater measurements and monitoring system condition records were documented for observation wells BMW-3, MW-5, MW-8, MW-9, MW-14-A, MW-15 and MW-16. These records are provided in Attachment B4.

All groundwater monitoring wells slated for monitoring in 2008 at the Tier II Soil Disposal Facility contained sufficient volume for sampling. Samples were collected at a flow rate equal to the recharge rate of the monitoring well (and not exceeding 100mL/min). All monitors were sampled using a peristaltic pump and disposable LDPE tubing with the exception of BMW-3 and MW-16. The rechargeable battery provided with the peristaltic pump from the supplier proved to be faulty, thus monitors that were accessible by vehicle were sampled with the peristaltic pump runoff the vehicle battery. Monitors BMW-3 and MW-16 were not accessible by vehicle, therefore were purged and sampled using a disposable bailer.

Groundwater samples were not filtered and not preserved. Samples were analyzed for total concentration of inorganic metals, TPH (C6-C32) and PCB.

TPH (C6-C32) was detected in monitoring wells MW-5, MW-8, MW-9, MW-14-A, MW-15 and MW-16. The results should be evaluated in the context of the Landfill Monitoring Plan as well as compared with DCC internal standards.

The results are presented in Table B-2. The laboratory Certificates of Analysis are provided in Appendix F.

B1.5 Thermal Monitoring

All thermistors at the Tier II Soil Disposal Facility were in good condition. Thermistor data was downloaded on August 15, 2008, programming was checked and the data loggers were reset. The data logger clocks were adjusted to local (Standard Time). Battery charge was checked to ensure sufficient remaining charge and batteries were not changed in 2008.

Thermistor Maintenance Records were completed for all thermistors located at the Lower Landfill and are located in Appendix B5. Selected data has been plotted into graphs for each thermistor which are provided as Graphs B-1 through B-4 located in Appendix B6.

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Table B-1. CAM-4 Kugaaruk, Summary of 2008 Soil Analysis - Tier II Soil Disposal Facility

		Donth	Copper	Nickel	Cobalt	Cadmium	Lead	Zinc	Chromium	Arsenic	Mercury	PCB	F1	F2	F3	TPH
Sample Ident.	Sample Location	Depth	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	Hg	Total Aroclors	C6-C10	C10-C16	C16-C34	C6-34
		(m)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)						
Upgradient Sample																
BMW-3-15	BMW-3	0.15	13.9	15.7	8.5	< 0.50	9.3	44.0	31.8	<5.0	<0.0050	< 0.050	<10	<30	<50	0
BMW-3-40	BMW-3	0.40	16.8	17.5	9.0	< 0.50	10.9	53.7	35.0	<5.0	0.0086	< 0.050	<10	<31	<51	0
BMW-30-40*	BMW-3	0.40	12.0	13.9	7.1	< 0.50	8.0	38.3	28.4	<5.0	< 0.0050	< 0.050	<10	<30	<50	0
MW-14-A-15	MW-14-A	0.15	11.0	13.3	6.2	< 0.50	8.0	33.2	28.0	<5.0	< 0.0050	< 0.050	<10	<30	<50	0
MW-14-A-30	MW-14-A	0.30	12.1	14.2	6.7	< 0.50	8.3	35.8	28.1	<5.0	< 0.0050	< 0.050	<10	<30	<50	0
MW-140-A-30*	MW-14-A	0.30	11.8	13.9	6.1	< 0.50	8.0	33.8	27.4	<5.0	< 0.0050	< 0.050	<10	<30	<50	0
MW-15-15	MW-15	0.15	9.8	9.4	6.5	< 0.50	8.0	41.3	17.1	<5.0	< 0.0050	< 0.050	<10	118	235	353
MW-15-25	MW-15	0.25	11.2	9.3	7.0	< 0.50	7.4	43.9	17.9	<5.0	< 0.0050	< 0.050	<10	119	302	421
MW-16-15	MW-16	0.15	14.2	16.0	7.8	< 0.50	8.4	43.1	31.9	<5.0	< 0.0050	< 0.050	<10	286	133	419
MW-16-40	MW-16	0.40	12.3	15.2	7.8	< 0.50	8.0	39.3	29.5	<5.0	< 0.0050	< 0.050	<10	49	<50	49
Downgradient Sam	ples			•					•					•		
MW-5-10	MW-5	0.10	11.5	9.4	6.6	< 0.50	6.6	33.0	18.3	<5.0	< 0.0050	< 0.050	<10	<30	<50	0
MW-5-25	MW-5	0.25	11.6	9.0	6.3	< 0.50	6.8	33.5	19.0	<5.0	0.0051	< 0.050	<10	<30	<50	0
MW-8-10	MW-8	0.10	11.9	10.6	6.8	< 0.50	7.9	40.5	19.8	<5.0	< 0.0050	< 0.050	<10	<30	<50	0
MW-8-20	MW-8	0.20	11.9	10.6	6.4	<0.50	13.5	38.6	22.5	<5.0	0.0066	< 0.050	<10	296	121	417
MW-9-15	MW-9	0.15	10.3	8.9	6.4	< 0.50	11.6	35.6	18.1	<5.0	0.0070	< 0.050	<10	<30	69	69
MW-9-25	MW-9	0.25	10.4	7.9	6.2	<0.50	9.7	35.6	16.6	<5.0	0.0056	<0.050	<10	<30	<50	0

^{*} Denotes duplicate sample. (Further information located in Table 2 of main report,

Note: mg/kg = ug/g

TPH is represented as the total of F1, F2 and F3 as defined by CCME Tier I Method - Rev. 5 Analysis of Petroleum Hydrocarbons in Soil



Table B-2. CAM-4 Kugaaruk, Summary of 2008 Groundwater Analysis - Tier II Soil Disposal Facility

		Groundwater	Copper	Nickel	Cobalt	Cadmium	Lead	Zinc	Chromium	Arsenic	Mercury	PCB	F1	F2	F3	TPH
Sample Identification	Location	Elevation	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	Hg	Total Aroclors	C6-C10	C10-C16	C16-C34	C6-34
		(masl)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Upgradient Samples	3															
BMW-3	BMW-3	316.84	0.0155	0.0180	0.00817	0.000061	0.0091	0.0513	0.0437	0.00230	< 0.000020	<0.0010	<0.10	< 0.30	< 0.30	0
MW-14A	MW-14A	317.24	0.0146	0.0091	0.00135	0.000067	0.00112	2.41	0.0100	0.00067	< 0.000020	< 0.0010	<0.10	< 0.30	0.33	0.33
MW-15	MW-15	317.76	< 0.0020	0.0065	0.00216	< 0.000034	< 0.0010	0.250	0.0024	0.0020	< 0.000020	< 0.0010	0.35	5.98	1.65	7.98
MW-150*	MW-15	317.76	< 0.0020	0.0063	0.00208	< 0.000034	< 0.0010	0.239	< 0.0030	0.0020	< 0.000020	< 0.0010	0.33	5.15	1.40	6.88
MW-16	MW-16	312.96	0.0040	0.0120	0.00210	0.000082	0.00056	0.0149	0.0025	0.00076	< 0.000020	< 0.0010	2.23	76.7	8.01	86.94
Downgradient Samp	oles															
MW-5	MW-5	310.34	0.0043	0.0086	0.00030	0.000039	0.00142	0.0366	0.0051	< 0.00050	< 0.000020	<0.0010	<0.10	< 0.30	0.33	0.33
MW-8	8-WM	310.20	0.0228	0.0268	0.0031	0.000170	< 0.0025	0.0391	< 0.0050	< 0.0025	< 0.000020	<0.0010	2.89	8.17	1.84	12.9
MW-9	MW-9	310.14	0.0071	0.0079	< 0.0015	< 0.000085	< 0.0025	0.0382	0.0183	< 0.0025	< 0.000020	< 0.0010	<0.10	0.44	0.63	1.07

^{*} Denotes duplicate sample. (Further information located in Table 2 of main report,

Note: mg/L = 1000 ug/L

AECOM



B1 – Site Condition/Visual Inspection Records

Visual Inspection Checklist Inspection Report – Page 1 of 2

SITE NAME:	CAM-4 - Pelly Bay
LANDFILL/AREA DESIGNATION:	DCC Tier II Soil Disposal Facility
DATE OF INSPECTION:	August 14, 2008
DATE OF PREVIOUS INSPECTION:	August 24 - 26, 2007
INSPECTED BY:	Darrin Johnson, P.Eng.
REPORT PREPARED BY:	Darrin Johnson, P.Eng.

The preparer represents to the best of the preparer's knowledge, the following statements and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or misstated.

Preliminary Stability Assessment

Feature	Severity Rating	Extent			
Settlement	Not observed	None			
Erosion	Not observed	None			
Frost Action	Not observed	None			
Animal Burrows	Not observed	None			
Vegetation	Not observed	None			
Staining	Acceptable	Isolated			
Vegetation Stress	Not observed	None			
Seepage Points	Acceptable	Occasional			
Debris Exposed	Not observed	None			
Tension Crack	Not observed	None			
Overall Landfill					
Performance	Acceptable				

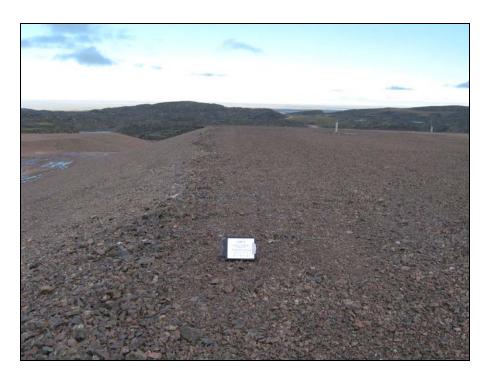
DCC Tier II Soil Disposal Facility - Inspection Report - Page 2 of 2

	Present		Dimensions	Depth	Extent		Photographic Records	
Checklist Item	Yes/No	Location	(L x W) (m)	(m)	(%)	Description	(Photos referenced in photolog and in figures)	Additional Comments/ Preliminary Stability Assessment
Settlement	No							
Erosion	No							
Frost Action	No							
Animal Burrows	No							
Vegetation	No							
Staining	Yes	Northeast toe	10 m x 10 m	N/A	1%	Orange staining at toe of slope.	TII-4A	Acceptable
Vegetation Stress	No							
Seepage Points	Yes	Lower half of northeast and southeast slopes.	60 m x 10 m	N/A	6%	Some seepage from lower half of slope. No staining on slopes observed.	TII-6 and TII-7	Acceptable
Debris Exposed	No							
Presence/ Condition of Monitoring Instruments	Good							
Other Features of Note.	Yes	Ponded water along toes of northwest, southeast and southwest slopes.	50m x 5m x3	N/A	8%	Minor ponding of water and drainage along toe.	TII-3, 9A, 10	Acceptable
Additional Photos							TII-1A, 1B, 2A, 2B, 2C, 4B, 5A, 5B, 8, 9B	



B2 – Geotechnical Inspection Photographic Records





Photograph TII-1A. Northwest corner of landfill facing east along crest. ↑



Photograph TII-1B. Northwest corner of landfill facing south along crest. ↑





Photograph TII-2A. Northeast corner of landfill facing west. ↑



Photograph TII-2B. Northeast corner of landfill facing southwest. ↑

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Photograph TII-2C. Northeast corner of landfill facing south. ↑



Photograph TII-3. Panoramic photo of the north slope. ↑



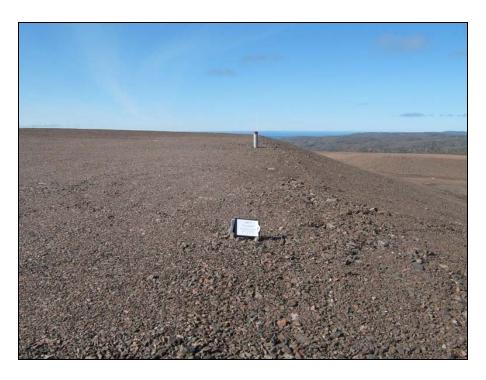


Photograph TII-4A. At the northeast toe. Some seepage with orange staining. Some water drainage along the road at the toe. ↑



Photograph TII-4B. Northeast corner and toe. ↑





Photograph TII-5A. Southeast crest facing north.



Photograph TII-5B. Southeast crest facing west. Some coarse rockfill along crest edge but there does not appear to be tension cracks. ↑

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Photograph TII-6. Panoramic photo of the southeast slope. Some water seeping out of slope face. No staining. ↑



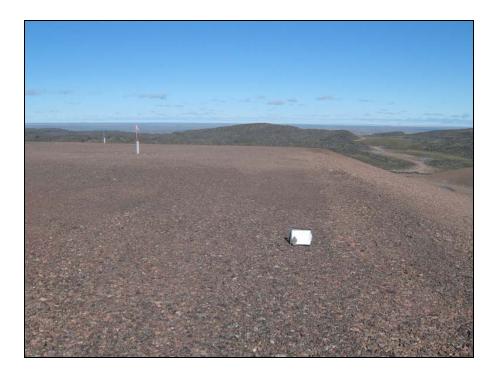
Photograph TII-7. South slope from southeast toe facing west. Some seepage from south slope and minor ponding at toe. No staining. ↑

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Photograph TII-8. South slope from southwest toe facing east. •



Photograph TII-9A. Facing east along crest from the southwest corner of the landfill. ↑





Photograph TII-9B. Facing north along crest from the southwest corner of the landfill. Some ponded water along toe. No staining. ↑



Photograph TII-10. Panoramic photo of Tier II landfill facing east from raised gravel pad. ↑

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B3 – Monitoring Photographic Records





Photograph 1. Monitoring Location BMW-3 (Upgradient) Facing South. ↑



Photograph 2. Monitoring Location MW-14-A (Upgradient). Facing North. •

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Photograph 3. Monitoring Location MW-15 (Upgradient). Facing East. ↑



Photograph 4. Monitoring Location MW-16 (Upgradient). Facing South. •

(cam4-appb3-mwphotos.doc) - 2 -





Photograph 5. Monitoring Location MW-5 (Downgradient). Facing Northwest. ↑



Photograph 6. Monitoring Location MW-8 (Downgradient). Facing Northwest. •

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Photograph 7. Monitoring Location MW-9 (Downgradient). Facing North. ↑

(cam4-appb3-mwphotos.doc) - 4 -



B4 – Monitoring Well Sampling Records

2008 Monitoring Well Sampling Log (BMW-3)

	Site name:	CAM-4						
	Date of sampling event:	14-17 Aug 2008						
	Names of samplers:	TFB						
	Monitoring well ID:	BMW-3						
	Facility:	Tier II Soil Disposa	I Facility					
	·	<u> </u>	•					
			Known I	Data				
	Depth of installation* (m):	3.45	Tanovin	Julu				
	of screened section (m):	2.03						
		0.46						
Det	oth to top of screen* (m):	0.46						
				D-1-				
			<i>l</i> leasured	Data				
	Condition of well:	1			Procedure/Equipment:			
	Procedure/Equipment:	Interface Meter		Dep	th to water surface (m):	0.92		
Well h	eight above ground (m):	0.76			Depth to bottom (m):	2.25		
	Diameter of well (m):	0.05		Free	product thickness (mm):	-		
	Calculations			Notes				
	Depth of water (m):	1.33			-			
V	Vell volume of water (L):	2.61		Evide	nce of freezing/siltation:	-		
	Static water level* (m):	0.16			<u>-</u>			
Length of scre	een collecting water (m):	1.03						
20119111 01 0011	Jon Jones III January II Janua		ent/Purai	ng Information				
	Equipment:	Disposable Bailer,		_				
	Equipment	Disposable Baller,	11011ba 0-22	<u>-</u>				
B	I 5	0			T 1112 ATTIN	D 1 11 111 1		
Date & Time	Volume Removed (L)	Temperature (°C)	pH	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water		
16-Aug-08	3	2.81	8.73	0.504	-	Silty, greyish brown, N/O		
	Water Samplin	g			Soil Sampling			
	Date & Time Collected:	16-Aug-0)8	D	ate and Time Collected:	14-Aug-08		
S	Sample Number - Water:	BMW-3			Sample Number - Soil:	BMW-3-15		
						BMW-3-40		
					Dup	BMW-30-40		
	Sample Containers:	3 x 0.5L Amber Gla	ass		Sample Containers:	8 x 250mL Glass		
	•	2 x VOC vials			·			
	Procedure/Equipment:	Disposable Bailer			Procedure/Equipment:	SS Trowel		
	i rocedure/Equipment.	Sp 222.2.0			i iocedule/Equipment.	TOWE!		
	Motor Deceription	Silty, greyish browr	n N/O		Cail Decariation	Craviah hrawa ailt till		
	Water Description:	only, groyion brown	., 14/0		Soil Description:	Greyish brown silt till,		
						some gravel.		
Sampling Equipment	Decontamination (Y/N):	Y		Sampling Equipment	Decontamination (Y/N):	Y		
	Number Washes:	1			Number Washes:	2		
	Number Rinses:	2			Number Rinses:	2		

^{*}From ground surface. Unless this is stated, all measurments are assumed to be from the top of the casing.
n/a=not applicable
LDPE=Low Density Polyethylene
SS=Stainless Steel

2008 Monitoring Well Sampling Log (MW-5)

	<u></u>	0.11.4				1
	Site name:					
	Date of sampling event:	_				
	Names of samplers:	TFB				
	Monitoring well ID:	MW-5				
	Facility:	Tier II Soil Disposa	l Facility			
			Known I	Data		
	Depth of installation* (m):	3.60				
Length	of screened section (m):	2.03				
Dep	oth to top of screen* (m):	0.60				
		N	Measured	Data		
	Condition of well:	Good			Procedure/Equipment:	Interface Meter
	Procedure/Equipment:	Interface Meter		Dep	oth to water surface (m):	1.17
Well h	neight above ground (m):	0.60	_		Depth to bottom (m):	3.25
	Diameter of well (m):	0.05		Free	product thickness (mm):	-
	· · ·					
	Calculations				Notes	
Depth of water (m): 2.08					Evidence of sludge:	-
\	Well volume of water (L):	4.08		Evide	nce of freezing/siltation:	-
	Static water level* (m):	0.57			<u> </u>	
Length of scr	een collecting water (m):	2.05				
	, , , , , , , , , , , , , , , , , , ,		ent/Purai	ng Information		
	Fauipment:			with flow through cell, LD)PF	
	<u> </u>	onotation amp, i	101104 0 22	mar now amough oon, ED		
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water
16-Aug-08	4.8	2.05	7.32	0.887	6.1	C&C.
10 / lug 00	4.0	2.00	7.02	0.007	0.1	Slight chemical odour
	Water Samplin	<u> </u>			Soil Sampling	Oligini olicimical ododi
	Date & Time Collected:	9 15-Aug-0	n8	<u></u>	ate and Time Collected:	14-Aug-08
	Sample Number - Water:		~		Sample Number - Soil:	
	sample Number - water:	U-VVIVI		Potugal @ 0 05	•	
				Refusal @ 0.25 m		MW-5-25
				1		
	0	0051			0	4 0501 .01
	Sample Containers:		488		Sample Containers:	4 x Zouml Glass
		2 x VOC vials				
	B	Poriotoltic Duma II	Joriba II 00		D	00 T
	Procedure/Equipment:	Peristaltic Pump, H	1011Da U-22		Procedure/Equipment:	SS I rowel
		CSC Slight share:	aal adaur		0.11-	
	Water Description:	C&C, Slight chemic	vai odour		Soil Description:	Greyish brown silt till,
						some gravel.
Sampling Equipment	Decontamination (Y/N):	Y		Sampling Equipment	Decontamination (Y/N):	Y
	Number Washes:	1			Number Washes:	2
	Number Rinses:	2			Number Rinses:	2

^{*}From ground surface. Unless this is stated, all measurments are assumed to be from the top of the casing.
n/a=not applicable
LDPE=Low Density Polyethylene
SS=Stainless Steel

2008 Monitoring Well Sampling Log (MW-8)

	I				
	e: CAM-4				
Date of sampling eve	-				
Names of sample	s: TFB				
Monitoring well	D: MW-8				
Facil	ty: Tier II Soil Disposa	l Facility			
	•				
		Known [Data		
Depth of installation* (i	n): 4.08				
Length of screened section (i	<u></u>				
Depth to top of screen* (i	·				
	.,,				
		Measured	Data		
Condition of w		vicasurca	Data	Procedure/Equipment:	Interface Meter
Procedure/Equipme			Dor	oth to water surface (m):	0.97
			Det		
Well height above ground (r	*		-	Depth to bottom (m):	2.45
Diameter of well (n): 0.05		Free	product thickness (mm):	-
Calculation	1			Notes Evidence of sludge:	
Depth of water (·			-	
Well volume of water (.): 2.91		Evide	nce of freezing/siltation:	-
Static water level* (n): 0.00				
Length of screen collecting water (n): 0.51				
	Developm	ent/Purgi	ng Information		
Equipme	nt: Peristaltic Pump, F	loriba U-22	with flow through cell, LD	PE	
Date & Time Volume Removed () Temperature (°C)	pН	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water
16-Aug-08 3	3.7	7.01	1150	10.7	C&C
					Chemical odour
Water Samp	ina			Soil Sampling	
Date & Time Collect		08	D	ate and Time Collected:	14-Aug-08
Sample Number - Wat				Sample Number - Soil:	•
Cample Number Wat				•	MW-8-20
					10100-0-20
0	2 2 0 51			Comple Contains	4 v 250ml Olass
Sample Containe	s: 3 x 0.5L Amber Gla	455		Sample Containers:	4 x 200ml Glass
	2 x VOC vials				
	Deviatelé - Dun -	lariba II 00			
Procedure/Equipme	nt: Peristaltic Pump, F	1011Da U-22		Procedure/Equipment:	SS Frowel
	000 01 110	I			
Water Description	n: C&C, Chemical Oc	lour		Soil Description:	Brown sandy silt till,
			some		some gravel.
Sampling Equipment Decontamination (Y/	I): Y		Sampling Equipment	Decontamination (Y/N):	Υ
Number Wash	s: 1	-		Number Washes:	2
Trainboi vvaoii					

^{*}From ground surface. Unless this is stated, all measurments are assumed to be from the top of the casing.
n/a=not applicable
LDPE=Low Density Polyethylene
SS=Stainless Steel

2008 Monitoring Well Sampling Log (MW-9)

		0.11.4				1	
	Site name:						
	Date of sampling event:	_					
	Names of samplers:	TFB					
	Monitoring well ID:	MW-9					
	Facility:	Tier II Soil Disposa	l Facility				
			Known I	Data			
	epth of installation* (m):	3.32					
Length	of screened section (m):	2.01					
Dep	oth to top of screen* (m):	0.40					
		N	Measured	Data			
	Condition of well:	Good			Procedure/Equipment:	Interface Meter	
	Procedure/Equipment:	Interface Meter		Dep	oth to water surface (m):	0.29	
Well h	eight above ground (m):	0.33	-		Depth to bottom (m):	1.98	
	Diameter of well (m):	0.05		Free	product thickness (mm):	-	
	· /				. 100 p.100001 u.uc.u.1000 ().		
	Calculations				Notes		
	Depth of water (m): 1.69				-		
V	Vell volume of water (L):	3.32		Evide	Evidence of sludge: nce of freezing/siltation:	-	
	Static water level* (m):	-0.04			<u> </u>		
Length of scre	een collecting water (m):	1.25					
	, ,		ent/Purai	ng Information			
	Fauipment:			with flow through cell, LD)PF		
	Equipment	onotation amp, i	101104 0 22	mar now amough oon, ED			
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water	
15-Aug-08	4	2.62	11.34	1060	41.3	C&C	
10 7 (ag 00	·	2.02	11.01	1000	11.0	Chemical odour	
	Water Samplin	~			Soil Sampling	Onemical oddul	
	Date & Time Collected:	9 16-Aug-0)8	<u></u>	ate and Time Collected:	14-Aug-08	
	Sample Number - Water:		~		Sample Number - Soil:		
	pampie mumber - water:	INIV P		Pofusal @ 0.25 ~	•		
				Refusal @ 0.25 m		MW-9-25	
				1			
	OI- O	0051			0	4 ·· 0501 C'	
	Sample Containers:		488		Sample Containers:	4 x 250ml Glass	
		2 x VOC vials					
	D 1 "= :	Poriotoltic Duma II	Joriba II 00		D	00 T :	
	Procedure/Equipment:	Peristaltic Pump, H	1011Da U-22		Procedure/Equipment:	SS Frowel	
		C&C Chemical odd	NIP.		0.11-		
	Water Description:	Cac Chemical odd	oul		Soil Description:	Brown sandy silt till,	
						some gravel.	
Sampling Equipment	Decontamination (Y/N):	Υ		Sampling Equipment	Decontamination (Y/N):	Y	
	Number Washes:	1			Number Washes:	2	
	Number Rinses:	2			Number Rinses:	3	

^{*}From ground surface. Unless this is stated, all measurments are assumed to be from the top of the casing.
n/a=not applicable
LDPE=Low Density Polyethylene
SS=Stainless Steel

2008 Monitoring Well Sampling Log (MW-14-A)

_		T .				
	Site name:					
	Date of sampling event:	14-17 Aug 2008				
	Names of samplers:	TFB				
	Monitoring well ID:	MW-14-A				
	Facility:	Tier II Soil Disposa	I Facility			
		-				
			Known I	Data		
	Depth of installation* (m):	4.66				
	of screened section (m):	2.03				
	oth to top of screen* (m):	1.67				
50,	our to top or soreen (iii).	1.07				
			/logourod	Data		
	On aliting of wells		Measured	Data	D d /F i	lataria a Matar
	Condition of well:			_	Procedure/Equipment:	
	Procedure/Equipment:			Dep	oth to water surface (m):	1.07
Well h	eight above ground (m):	0.51			Depth to bottom (m):	2.47
	Diameter of well (m):	0.05		Free	product thickness (mm):	-
	Calculations				Notes	
	Depth of water (m):	1.40			Evidence of sludge:	-
V	Vell volume of water (L):	2.75		Evidence of freezing/siltation:		-
	Static water level* (m):	0.56				
Length of scre	een collecting water (m):	0.29				
3, 1	, , , , , , , , , , , , , , , , , , ,		ent/Purai	ng Information		
	Fauinment:	_		with flow through cell, LD	DE	
	Equipment.	r enstattic r ump, ri	1011ba 0-22	with now throught cen, LD	T L	
D-4- 0 Ti	\/-\	T (00)	-11	0	Touch Salte of ATTLIN	December of Weter
Date & Time	Volume Removed (L)	Temperature (°C)	pH	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water
16-Aug-08	3	1.01	6.73	0.95	-	Grey, slightly cloudy
						N/O
	Water Samplin	ĭ .			Soil Sampling	
	Date & Time Collected:	16-Aug-0)8	D	ate and Time Collected:	14-Aug-08
5	Sample Number - Water:	MW-14-A			Sample Number - Soil:	MW-14-A-15
				Refusal @ 0.30 m		MW-14-A-30
					Dup	MW-140-A-30
	Sample Containers:	3 x 0.5L Amber Gla	ass		Sample Containers:	8 x 250mL Glass
	·	2 x VOC vials			·	
	Procedure/Equipment:	Peristaltic Pump, H	loriba U-22		Procedure/Equipment:	SS Trowel
	Frocedure/Equipment.	onotation amp, in	1011BQ 0 22		Frocedure/Equipment.	33 Howel
	W (D) (Grey, slightly cloud	ly N/O		0.35	D 1 26.03
Water Description: Grey, sligh		Grey, slightly cloud	iy, IN/O		Soil Description:	Brown sandy silt till.
Sampling Equipment	Decontamination (Y/N):	Υ		Sampling Equipment	Decontamination (Y/N):	Υ
	Number Washes:	2			Number Washes:	2
	2			2		

^{*}From ground surface. Unless this is stated, all measurments are assumed to be from the top of the casing.
n/a=not applicable
LDPE=Low Density Polyethylene
SS=Stainless Steel

2008 Monitoring Well Sampling Log (MW-15)

		0444				
	Site name:					
	Date of sampling event:					
	Names of samplers:	TFB				
	Monitoring well ID:	MW-15				
	Facility:	Tier II Soil Disposa	I Facility			
			Known [Data		
D	epth of installation* (m):	3.25				
Length of	of screened section (m):	1.97				
	th to top of screen* (m):	0.33				
			/leasured	Data		
	Condition of well:				Procedure/Equipment:	Interface Meter
	Procedure/Equipment:			Ner	oth to water surface (m):	0.45
Well by	eight above ground (m):	0.51		Det	Depth to bottom (m):	2.45
vven ne	Diameter of well (m):	0.05		Eroo	product thickness (mm):	-
	Diameter of well (III).	0.03		riee	product triickriess (min).	-
	O al a sala d'assa				Notes	
Calculations						
	Depth of water (m):	2.00			Evidence of sludge:	-
V	Vell volume of water (L):	3.93		Evide	nce of freezing/siltation:	-
	Static water level* (m):	-0.06				
Length of scre	en collecting water (m):	1.61				
		Developm	ent/Purgi	ng Information		
	Equipment:	Peristaltic Pump, H	loriba U-22	with flow through cell, LD	PE	
Date & Time	Volume Removed (L)	Temperature (°C)	рН	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water
16-Aug-08	4.5	2.08	6.31	0.846	13.5	Clear, slightly yellow
						Chemical odour
	Water Samplin	g			Soil Sampling	
	Date & Time Collected:	16-Aug-0)8	D	ate and Time Collected:	14-Aug-08
S	ample Number - Water:				Sample Number - Soil:	
		MW-150		Refusal @ 0.25 m	•	MW-15-25
	-1					
	Sample Containers:	6 x 0.5L Amber da	SS		Sample Containers:	4 x 250ml Glass
	Campio Contaniolo.	4 x VOC vials			Campio Contaniolo.	2002 0.000
	2 x 1L Amber glass	1 x 0.25L Plastic				
	Procedure/Equipment:	Peristaltic Pump, H	loriba U-22		Procedure/Equipment:	SS Trowel
	r rocedure/Equipment:	. chotailo i amp, ii			r rocedure/Equipment:	33 HOWEI
	Water Description	Clear, slightly yello	w		Poil Decement	Proug condition the
	Water Description:	chemical odour	vv,		Soil Description:	Brown sandy silt till,
				some		some gravel.
Sampling Equipment	Decontamination (Y/N):	Y		Sampling Equipment	Decontamination (Y/N):	Y
	Number Washes:	2			Number Washes:	2
	Number Rinses:	2			Number Rinses:	2

^{*}From ground surface. Unless this is stated, all measurments are assumed to be from the top of the casing.
n/a=not applicable
LDPE=Low Density Polyethylene
SS=Stainless Steel

2008 Monitoring Well Sampling Log (MW-16)

						1		
	Site name:							
	Date of sampling event:	14-17 Aug 2008						
	Names of samplers:	TFB						
	Monitoring well ID:	MW-16						
	Facility:	Tier II Soil Disposa	l Facility					
			Known I	Data				
	Depth of installation* (m):	Data not available						
	of screened section (m):							
	pth to top of screen* (m):							
	part to top or soreer (iii).							
			Measured	Data				
	Condition of well:	1	vicasureu	Data	Procedure/Equipment:	Interface Motor		
				D				
147 111	Procedure/Equipment:			Dep	oth to water surface (m):	1.34		
Well h	neight above ground (m):	0.60		_	Depth to bottom (m):	3.00		
	Diameter of well (m):	0.05		Free	product thickness (mm):	-		
Calculations				Notes				
	Depth of water (m):	1.66			Evidence of sludge:	-		
1	Well volume of water (L):	3.30		Evide	nce of freezing/siltation:	-		
	Static water level* (m):	0.74						
Length of scr	een collecting water (m):							
		Developm	ent/Purai	ng Information				
	Equipment:	Disposable Bailer,						
	-4-4-4			-				
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water		
16-Aug-08	4	1.7	6.9	0.544	54	C&C, sheen on surface		
10-Aug-00	4	1.7	0.9	0.344	34			
	\\\\-\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\				0 - 11 0 11	Hydrocarbon odour		
	Water Samplin				Soil Sampling	44.4		
	Date & Time Collected:	16-Aug-0)8	D	ate and Time Collected:	14-Aug-08		
	Sample Number - Water:	MW-16			Sample Number - Soil:			
				Refusal @ 0.40 m		MW-16-40		
	Sample Containers:	3 x 0.5L Amber Gla	ass		Sample Containers:	4 x 250mL Glass		
		2 x VOC vials						
				1				
	Procedure/Equipment:	Disposable Bailer			Procedure/Equipment:	SS Trowel		
	, ,							
	Water Description:	C&C, sheen on sur	rface,		Soil Description:	Brown, sandy silt till		
	Water Description: Odd, Sheer of Sundoe, Hydrocarbon odour				25 2 55011ptio11.	, Jile till		
Sampling Equipment	t Decontamination (Y/N):	Y		Sampling Equipment	Decontamination (Y/N):	Y		
Sampling Equipment	` '			Sampling Equipment	, ,			
	Number Washes:	2			Number Washes:	3		
Number Rinses: 3				Number Rinses:	3			

^{*}From ground surface. Unless this is stated, all measurments are assumed to be from the top of the casing.
n/a=not applicable
LDPE=Low Density Polyethylene
SS=Stainless Steel



B5 – Thermistor Maintenance Records

	Oround i	Emperata	ile Alliluai W					
Contarctor Name:	AECOM			Inspe	ection Date:	15-Aug-	08	
Prepared By:	Darrin Johnson							
Thermistor Information	nn .							
Site Name:	CAM-4		or Location		Tier II Disp	osal Faci	lity	
Thermistor Number:		Inclination			Vertical			
Install Date:	13-Aug-06	First Date	e Event		27-Aug-07	/ Last Date		15-Aug-08
Coordinates and Elev				E	· · · · · · · · · · · · · · · · · · ·		Elev	320.975
Length of Cable (m)	7.7 Ca 111092	able Lead Abo	ove Ground (m)		Nodal Point Cable Seria		13	1616
Datalogger Serial #	111032				Cable Selia	il Inullibei		1010
Code CAM-4VT05								
Thermistor Inspecti	on							
	_	Good	<u></u>	Need	ds Maintena	nce		
Casing		~	-					
_		14		-				
Cover		~						
Data Logg	er	~						
Cable		V						
Beads		~						
			· · · · · · · · · · · · · · · · · · ·	_				
•	stallation Date		s not replaced in	1 2008.	<u> </u>			
Battery Lev	vels	Main	11.34 V			Aux	13.14 V	
Manual Ground Ten			٦	ı				
Bead	ohms	Temp. (°C)	4	}	Bead	ohms	Ten	np. (ºC)
1		8.4	4	-	9			-5.5
2		10.9	1]	10			-6.4
3		3.4	_		11			-7.1
4		1.4	_		12			-7.9
5		-0.5	_		13			-8.0
6		-2.3	_		<u> </u>			
7		-3.4	_					
8		-4.4						
Observations and P	roposed Maintena	ance						
Lock lubri								

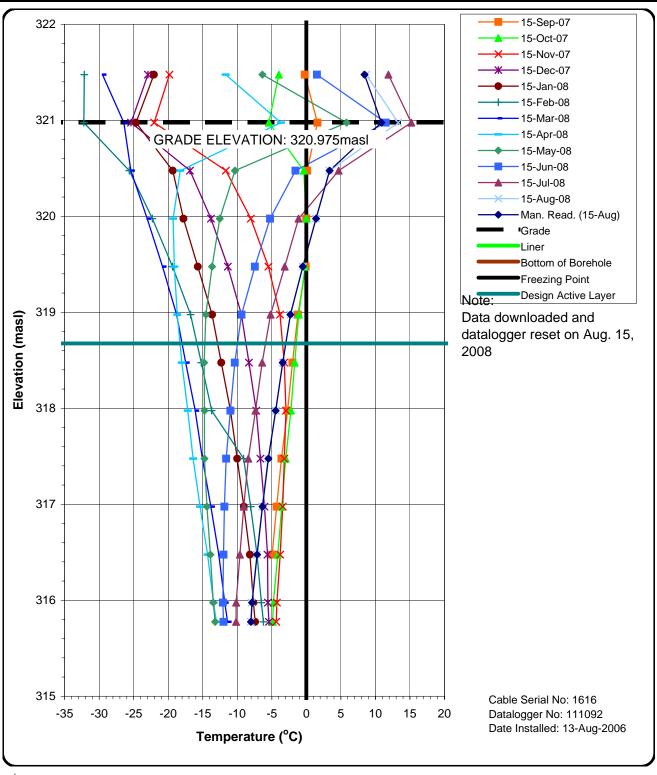
Contarctor Name:	AECOM			Insped	ction Date:	15-Aug-	08	
Prepared By:	Darrin Johnson							
Thermistor Informati Site Name:	CAM-4	Thermisto	or Location	Т	ier II Disn	osal Facil	litv	
Thermistor Number:		Inclination			ertical	osai i aon	iity	
Install Date:	13-Aug-06	First Date				7 Last Dat	e Event	15-Aug-08
Coordinates and Ele		N		Е			Elev	319.3
Length of Cable (m)		Cable Lead Abo	ove Ground (m)	1.2	Nodal Poin	ts	10	
Datalogger Serial #	111102				Cable Seria	al Number		1620
Code CAM-4VT06								
Thermistor Inspect	ion							
		Good		Needs	s Maintena	ince		
Casing		<u> </u>	_					
Casing		_		_				
Cover		~						
Data Logo	ner	<u>~</u>						
Cable	<i>.</i>							
		•		_				
Beads		V						
Battery In:	stallation Date	Batteries	not replaced in	2008.				
Battery Le	evels	Main	11.43 V			Aux	13.02 V	
Manual Ground Tel	mperature Readin	gs Temp. (°C)	1	Γ	Bead	ohms	Ton	np. (°C)
	Olillis		1			Olillis		
1		9.9	1	-	9			-5.4
2		9.4	-	-	10			-5.6
3		4.9	-	_				
4		3.1	-	-				
5		0.2	-	-				
6		-1.5	-	-				
7		-3.0	4					
8		-4.3	J					
Observations and I	Proposed Mainter	nance						
Lock lubr								

Contarctor Name:	AECOM			Inspe	ection Date:	15-Aug-0)8	
Prepared By:	Darrin Johnsor	n						
Thermistor Informat	tion							
Site Name:	CAM-4	Thermisto	or Location		Tier II Disp	osal Facil	ity	
Thermistor Number	: VT07	Inclination	n		Vertical			
Install Date:	13-Aug-06		Event		27-Aug-07	Last Date		15-Aug-08
Coordinates and Ele		N Cabla Laad Aba	O :=:::: d (:==)	E 4.51	ti i-i Daimt		Elev	317.825
Length of Cable (m) Datalogger Serial #		Cable Lead Abo	ove Grouna (m)	1.5	Nodal Point Cable Seria	S I Niumher	16	1624
Code CAM-4VT07					Cabic Cona	Humbon		10=1
Thermistor Inspec	tion							
Illerinistor mapee	<u>tion</u>	Good	_	Need	ds Maintenai	nce		
Casing		~			_		_	_
Cover		V						
Data Log	ıaer	~						
Cable		<u> </u>						
Beads		~						
	talletien Doto		· · t raplaced in	-				
•	nstallation Date		not replaced in	2000.				
Battery L	evels	Main	11.34 V			_Aux	13.14 V	
Manual Ground Te			1	ſ		_		
Bead	ohms	Temp. (°C)	4	ŀ	Bead	ohms	Ter	mp. (ºC)
1		4.6	_	ŀ	9			-7.4
2		2.4			10			-8.1
3		-0.4			11			-8.7
4		-2.0			12			-9.3
5		-3.3			13			-9.7
6		-4.5			14			-10.0
7		-5.5			15			-9.8
8		-6.5			16			-9.4
Observations and	Proposed Mainter	nance						
Lock lub		<u>Iui.oo</u>						
	110000							

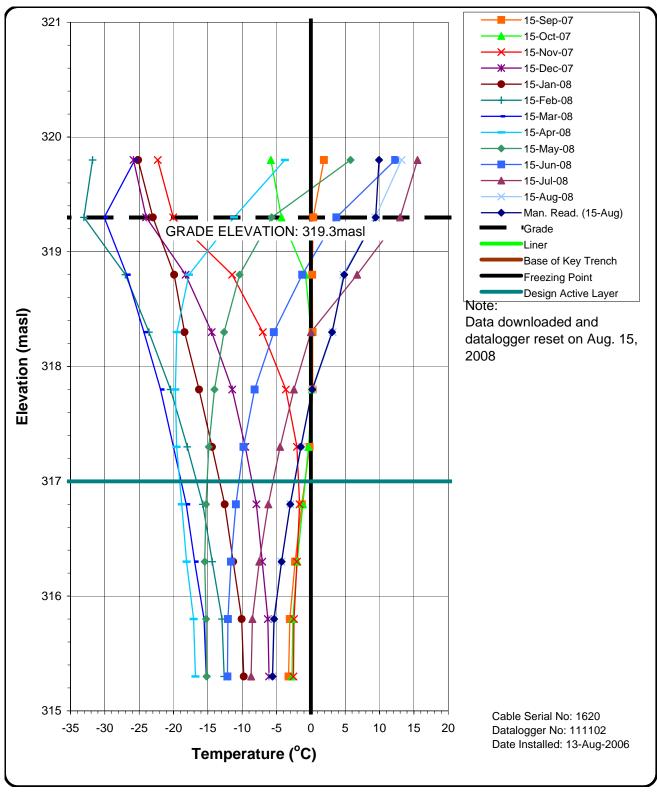
			io Ailiaai w					
Contarctor Name:	AECOM			Inspe	ction Date:	15-Aug-0	8	
Prepared By:	Darrin Johnson							
The maniete wheeler	_							
Thermistor Information Site Name:	CAM-4	Thermisto	or Location	-	Γier II Dien	osal Facilit	·V	
Thermistor Number:	VT08	Inclination			/ertical	osai i aciiii	. <u>y</u>	
Install Date:	13-Aug-06	First Date		•		7 Last Date	Event	15-Aug-08
Coordinates and Elev			270111	Е	<u> </u>	. Last Bate	Elev	319.18
Length of Cable (m)	6.2		ove Ground (m)		Nodal Poin	ts	10	0.0
Datalogger Serial #	108038		()	(Cable Seria	al Number		1622
Code CAM-4VT08								
Thermistor Inspection	<u>on</u>							
		Good	_		s Maintena	nce		
Casing		~						
Cover		~						
Data Logge	er	~						
Cable		~						
Beads		~						
Battery Ins	tallation Date	Batteries	not replaced in	– 1 2008.				
Battery Lev	/els	Main	11.34 V			Aux	13.02 V	
Manual Ground Tem	nperature Readin	<u>gs</u>	_	_				
Bead	ohms	Temp. (°C)			Bead	ohms	Tem	p. (ºC)
1		11.3			9		-	5.7
2		9.4	1		10		-	6.6
3		4.9	_					
4		3.2						
5		0.2	_	_				
6		-1.8						
7		-3.6	_	-				
8		-4.8						
Observations and P	roposed Mainten	ance						
Lock lubri	cated.							



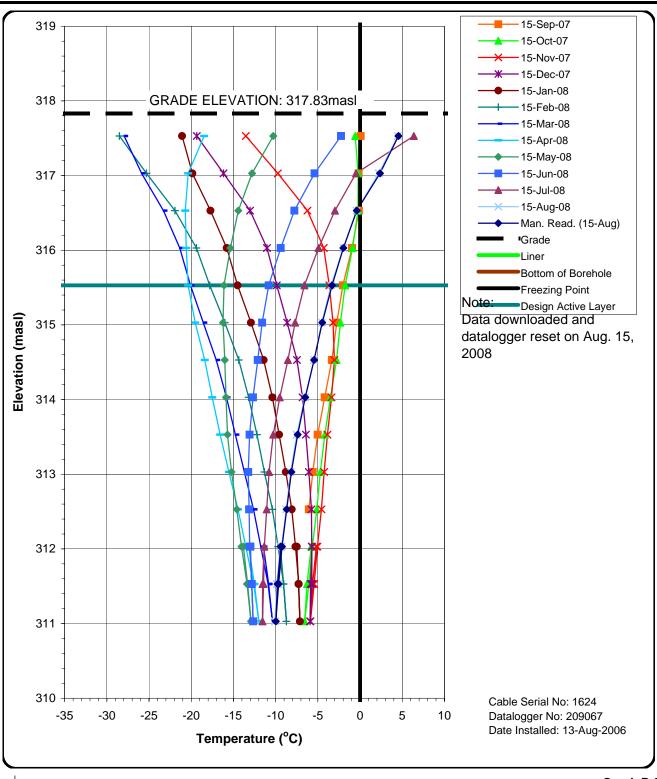
B6 – Thermistor Graphs



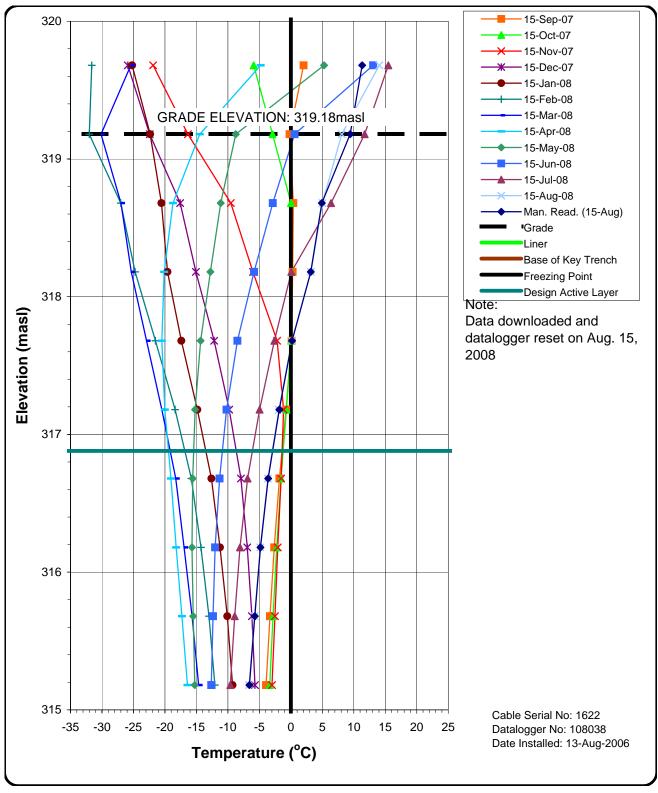
Graph B-1 Ground Temperature Profile Tier II Soil Disposal Facility Vertical GTC VT-5



Graph B-2 Ground Temperature Profile Tier II Soil Disposal Facility Vertical GTC VT-6



Graph B-3 Ground Temperature Profile Tier II Soil Disposal Facility Vertical GTC VT-7



Graph B-4 Ground Temperature Profile Tier II Soil Disposal Facility Vertical GTC VT-8 **B7 – Field Notes**

Ang. 14/08 I LANDFILL (TIT) INSPECTION @ 12:30PM CHINAL S. PANORAMIC PHOTO OF TUR I CF FACING SAST FROM GRAVER PAD (WP 3) CTEIR THE PHOTO LOC. 20) WAMPONT 4 (NW CORNOR OF LF) -PHOTO 7 (FAC)NG EAST ANNO - PHOTO 7 / FACING SONTH PHOTO LOC 1 NY CORNER OF LF) - PHATO 8 YFAUNG WEST) - PHOTO 9 (FACING SW) - PHOTO 10 (FACING SOUTH) { TEYPE II PHOTO LUC. 2) - WAYPAINT 6 (NORTH SURPE) CAR XXXXXX VIV (TIER I PHOTO LOC. 3)

- TIME II (PAGE 3) -WAYPOINT 8 (SONTH FACE FROM SE TOE) - PHOTO 19 (FACING WEST) - SUM G SURPAGE FRAM SONTH SLAPE AND MINDE PONDING AT TOO, NO STAINING CTIEN II PHOTA LOC 7 WAYPOINT 11 (SOWH FACE RAM ON TOU) - PHOTO 20 (FACING COST (Tiex II phons Luc. 8) - WAYPOINT LZ (SW CARNOR CROST) - PHOTO ZI (FACING HAST) - PHOTO IZ (FACING WORTH) (THER II PHOTY LOC. 9) - SAME PONDER WATER ALDER TOU - NO STAINING GASTRIFTO ONEAU CANOFILL PERFORMANCE - ACCEPTABLE, NO SETTLEMENT, EROS NOW THATION CRACKS POSTERNO - James SEUMAGE WITH STAINING AT NORTHEAST TOE

BMW-3

2008 Monitoring Well Sampling Log (\(\frac{\pm W #____}{2}\)

							-		
	Site name:	CAM-	4						
	Date of sampling event:	AUG - 1	7-16	12608					
	Names of samplers:	TFB							
		Z AM . *3							
	Monitoring well ID:	BMW-3							
	Facility:	UPPER ST	TE				-		
			16 F				-		
D	anth of installation* (m)	2 /15	Known E	Jata					
	epth of installation* (m): f screened section (m):	3,73							
	h to top of screen* (m):	0 40	, 						
Бері	Trio top or screen (III).	0,18	3				İ		
		,	Measured	Data					
	Condition of well:	GOOD			Procedure/Equipment:	INTERPAREME	EN		
	Procedure/Equipment:	INTERPACEN	NETEL		h to water surface (m):	042			
Well he	eight above ground (m):	0.76			Depth to bottom (m):	2.29			
λ	Diameter of well (m):	2 "		Free pi	roduct thickness (mm):				
							1		
	Calculations		1427	· · · · · · · · · · · · · · · · · · ·	Notes		-		
	Depth of water (m):				Evidence of sludge:				
W	/ell volume of water (L):	7.60		Eviden	ice of freezing/siltation:	£ and a second s	1		
	Static water level* (m):	0.16		LI MAGA 10	~ ~		'		
Length of scre	en collecting water (m):	7.3		T KALLEY 1.0.	<u> </u>		ł		
			ent/Purgi コン	ng Information			ļ		
	Equipment:	Daice					1		
Data 8 Time	\/-l	- 1 (90)	pН	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water	1		
Date & Time	Volume Removed (L)	Temperature (°C)			raiblaity (NTO)	SILLI (ROLL'A	1,		
16-1060	3.0L	[2.8]	8.73	0.404	But I'm and the standard of the	to and	LV0		
	Water Samplir	ď	1		Soil Sampling	V/COV/	7		
	Date & Time Collected:		0B	Da	ite and Time Collected:	19-AUG 08_	1		
	ample Number - Water:	BMW-	3		Sample Number - Soil:	PMW3-15	1		
	•	Zene		Mr =					
1				BMW-36	0-40	BMW-3-40			
				· &		1]		
	Sample Containers:	3 600	LAPTE		Sample Containers:	1/ TOM]		
*		2 0003				Clear			
						PER SAMKE			
Procedure/Equipment: BAILGL Water Description: SILM, GAM, BAILGL		,		Procedure/Equipment:	TROUBL				
	Water Description:	Sille	10 10/2		Soil Description:	GEA ULI	1		
		Brawn 1	K K	Soil Description:					
Sampling Equipment	Decontamination (Y/N):	N/	E	Sampling Equipment I	Decontamination (Y/N):	7	1		
zampinia zdaipinoni	Number Washes:	ì			Number Washes:	L.	1		
	Number Rinses:	1	;		Number Rinses:	- Lan-	1		

n/a=not applicable

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

2008 Monitoring Well Sampling Log (MW #1/5)

Site name:	CAM-4							
Date of sampling event:	AUG - 19-16	AUG-19-16/2008						
Names of samplers:	TEB							
Monitoring well ID:								
Facility:	UNER SITE							
		·						
	Known I	Data						
Depth of installation* (m):	3,75							
Length of screened section (m):	1,9,+							
Depth to top of screen* (m):	0.55							
		D-4-						
	Measured	Data	Due and walf avious ant	1	DR.			
Condition of well:	5000 1 5000	Don		INTERFACE METO	S. Source			
Procedure/Equipment:	INTERPACE METER	Debi	h to water surface (m):	7 6,5				
Well height above ground (m):	01.31		Depth to bottom (m):	Lu (7 4				
Diameter of well (m):		Free p	roduct thickness (mm):	ganggare di diplottituit ann distribuita				
Calculations			Notes					
Depth of water (m):	130 45		Evidence of sludge:	Company				
Well volume of water (L):	4,00	Evider	nce of freezing/siltation:	the second second				
Static water level* (m):	-0.06							
Length of screen collecting water (m):	1.6.1							
	Development/Purgi	ng Information		- V				
Equipment:	1 115 2 2 2 2 5	1UM						
Date & Time Volume Removed (L)	Temperature (°C) pH	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water				
16-AUG-03 9.5L	2.08 6.31	0.8%	13,5	Clear, Sligh	H/4			
Water Samplin	ng		Soil Sampling		<u>ن</u> ص			
Date & Time Collected	16 AVE -03	Da	ate and Time Collected:	14-AUG-08_				
Sample Number - Water			Sample Number - Soil:	MW 15-19				
	MU 19		•	MU 15-25				
DUP	MW-190	Refusal @ 2	C.A					
		revising at L	Jane .					
Sample Containers	1 gant Aniles]	Sample Containers:	4/200cmC				
/ a . h	40007			Cler				
41 CAMBERS	I'METALS (GOML)			MER SAMPLE				
Procedure/Equipment: 166157/46712 Procedure/Equipment: 17000000								
Water Description	CIPAT, Slight,		Soil Description:	Silly Gavel				
			•	7.11				
	Ye Nor Chronical values			" (1				
Sampling Equipment Decontamination (Y/N)		Sampling Equipment	Decontamination (Y/N):	4]			
Number Washes	2		Number Washes:	7				
Number Rinses	2		Number Rinses:	L				

n/a=not applicable

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

2008 Monitoring Well Sampling Log (MW #///A)

	Cita nama.	C 101 - 11				
5.	Site name:	CAM-4	200 D			
Da	ate of sampling event:	AUG-14-16/8	and the second second			
	Names of samplers:	TFB	9.78			
	NA	A4117 1 11 A				
	Monitoring well ID:	MW-14-A				
	Facility:	UPPERSITE				
		Known	Data			
	oth of installation* (m):	4.66				
Length of	screened section (m):	7.03				
Depth	to top of screen* (m):	1.6t				
		Measured	l Data			
	Condition of well:	600		Procedure/Equipment:	INTERFACE METER	
	Procedure/Equipment:	INTERPACE METER	Dep	th to water surface (m):	1107	
Well hei	ght above ground (m):	0.51		Depth to bottom (m):	2.47	
	Diameter of well (m):	Zu	Free p	product thickness (mm):	**Zerozenije**Promonizacionimonijenikova prijer-ilina	
	Calculations			Notes		
	Depth of water (m):	1.07		Evidence of sludge:	n diametria in management de la companya della companya della companya della companya de la companya de la companya della comp	
We	ell volume of water (L):	7.80	Evidence of freezing/siltation:			
	Static water level* (m):	0.56				
	n collecting water (m):	000	· ·			
Longin or sorec	concoming water (III).	Development/Purg	ing Information			
	Equipment:	OBALGIALTA	U JUJ			
	Equipment	hranilini,	- 1 ¹			
Data & Time	Volume Removed (L)	Temperature (°C) pH	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water	
Date & Time	volume Removed (L)			WELL PAGOD		
116. Alh. 22 1	3.0c	1.01 6.73	0.47	TO GOODLY & FLO	STADNY LA CAR	
118 / 11)/ 1	Water Carry Pro	*		Soil Sampling	10 prince 100 to the 1	
<u> </u>	Water Samplin		Date and Time Collected: 4-A6608			
	ate & Time Collected:	16-AUG-08	l Di			
Sa I	mple Number - Water:			Sample Number - Soil:	MW 17-4-11	
		MV-17-4	\perp_{a} , \perp		17017A-30	
			- Refusal @	Do on	04.1100.000	
		7 7 3 to 20			70 70 70	
	Sample Containers:	3 TOURLAMPE	+ Z/FOML Sample Containers: Z/WOML		2/Wonc	
		2006	2/2/01 De Test Dear			
		A district Al man	"/ LOUM	- C)6.	VEL SAMPLE	
	Procedure/Equipment:	MUMALTU		Procedure/Equipment:		
		Way.				
	Water Description:	Subtly clash		Soil Description:	SA 20954	
			*		of a Marine	
		16HU, 410			NV /W/OCR	
Sampling Equipment D	Decontamination (Y/N):	Y	Sampling Equipment	Decontamination (Y/N):	/	
	Number Washes:	T.		Number Washes:	7	
	Number Rinses:			Number Rinses:	7	

n/a≃not applicable

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

2008 Monitoring Well Sampling Log (MW #/6)

Sit	e name:	CAM-	- 4						
Date of samplin	g event:	AUG-14-16/2008							
Names of sa	mplers:	TFB							
Monitoring well ID: $M\omega$ – $I6$									
	Facility: UPER SITE								
	,				3				
			Known [Data - OATA N	SOT AVAILABLE				
Depth of installati									
Length of screened sec									
Depth to top of scre	en^ (m):								
			Measured	Data					
Condition	of well:	G000	vicasurcu		Procedure/Equipment:	INTECHEE METER			
Procedure/Equ		INTELFACE	METER		h to water surface (m):	1.5 2/			
Well height above gro		0.60	/··(-10/~		Depth to bottom (m):	2, 20			
Diameter of		7"		Free pi	roduct thickness (mm):	has common a contract of the c			
		600		· · · · · · · · · · · · · · · · · · ·					
Calculation	ıs		•		Notes				
Depth of w	ater (m):	1134),		Charles and the contract and the contrac				
Well volume of w	ater (L):	3,30		Eviden	ce of freezing/siltation:	*- Manuscriptor and American Column North Manuscriptor (Column North Manusc			
Static water le	/el* (m):	6.74							
Length of screen collecting w	ater (m):								
				ng Information					
· Eq	uipment:	BAILES				.,			
		r	·						
Date & Time Volume Remo	ved (L)	Temperature (°C)	pН	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water			
16-406-08 4,00	Marin .	1.70	6.90	0.594	54.0	Hydroxarbon ochour			
Water S	amplir	ıg			Soil Sampling				
Date & Time C	ollected:	16-AU6-C	9	Da	te and Time Collected:	14-AU6-08			
Sample Number	- Water:	MW-16			Sample Number - Soil:	Mw 16-15			
						MW 19- 40			
				Refusal@9	Dem				
			4 20	· Sugar		at the second se			
Sample Co	ntainers:	3 120ml	AMMEN)		Sample Containers:	2/190ac			
		20003				Clear			
		0 0				PEC SAMCE			
Procedure/Eq	uipment:	BAILER			Procedure/Equipment:	THOWEL			
Water Des	cription:	U10,5	eel on		Soil Description:	Sardy Silt			
		TOP OF WATE	rer			Till down			
		Hillocarban	alar			31/12/2			
Sampling Equipment Decontamination	on (Y/N):	y		Sampling Equipment I	Decontamination (Y/N):	1			
Number '	Washes:	2			Number Washes:	3			
Numbe	Rinses:	3			Number Rinses:	3			

n/a=not applicable



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

2008 Monitoring Well Sampling Log (MW # $\underline{\mathcal{S}}$)

	Site name:	CAM-	4				İ			
	Date of sampling event:	AUG- 14	AUG-14-16/2008							
	Names of samplers:	TEB	FB .							
							l.			
	Monitoring well ID:	MW-8								
	Facility:	UPPER SI	TE							
			Known [Data						
D	epth of installation* (m):	4,08								
Length of	of screened section (m):	2.01								
Dep	th to top of screen* (m):	0,47								
		N	V leasured	Data			ĺ			
	Condition of well:	6000			Procedure/Equipment:	INTELFACE METER	2			
	Procedure/Equipment:	NITERPACE	HETER	Dept	h to water surface (m):	0.17				
Well h	eight above ground (m):	0.47			Depth to bottom (m):	Z. 45				
	Diameter of well (m):	2"		Free pi	roduct thickness (mm):					
	Calculations				Notes					
	Depth of water (m):	: 0.47			Evidence of sludge:	de approprietation en la constitución de la constit				
V	Vell volume of water (L):			Eviden	ce of freezing/siltation:	-Massagerest (III-1)				
	Static water level* (m):	0,0	\mathcal{W}							
Length of scre	een collecting water (m):	0.5	1		gen.					
		Developm	ent/Purgi	ng Information						
	Equipment:	PENUTTAC	716 \$	70197		,				
		1 •								
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water				
ir arran	3 ni	210	711	115	111 -2	CIC				
16-AU6-U4	1,00	J. 70	7.01	1119 MILLA	10.7	HANG Che	800			
	Water Samplin	g			Soil Sampling		04			
	Date & Time Collected:	10-AU0-0	_ਪ	Da	ite and Time Collected:	14-AUG-08	l			
S	ample Number - Water:					ML28-10				
		MW-8		UEPH lake		My 8-20				
				ISI SAMPLE	,10cc					
				Redusal @	ZOCA					
	Sample Containers:	3 Kingl	Aunell	Sample Containers: 2/7572		2/2000				
	·	1 000				Clear				
		2 				PERSAMILE				
Procedure/Equipment: PER!TIALTIL			Procedure/Equipment:		TROUBL					
PVP'I'						2 Y 3 4.	1			
	Water Description:	CACI	da 'es		Soil Description:	Sandy sit				
		Strong 63	Mich			1 111 pro-	,			
		ONO.				OTPL. GRACEL	ľ			
Sampling Equipment	Decontamination (Y/N):	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		Sampling Equipment [Decontamination (Y/N):	7	l			
	Number Washes:	Const			Number Washes:	2	l			
1	Number Rinses:	-1		l	Number Rinses:	5	1			



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

2008 Monitoring Well Sampling Log (MW # _____)

					****		•		
	Site name:	CAM-	4						
Date of sampling event: AUG- 14-16/2008									
	Names of samplers: TFB								
	Monitoring well ID:	MW - 9							
	Facility:	UPPER SIT	E	,					
			Known [Data					
De	epth of installation* (m):	3,32							
Length o	of screened section (m):	Z.01					1		
Dept	th to top of screen* (m):	0,40							
			Measured			and the second to			
	Condition of well:	GOOD	· Andrill			INTELFACE METER			
	Procedure/Equipment:			Depti	n to water surface (m):	0.24			
Well he	eight above ground (m):	CONTRACTOR OF THE PARTY OF THE	0,33		Depth to bottom (m):	i. 39			
	Diameter of well (m):	2"		Free pr	oduct thickness (mm):	\$-theoretic/territorio-rations/			
							1		
	Calculations		1 7 30		Notes				
	Depth of water (m):	0.19 m	710	Evidence of sludge:					
V	/ell volume of water (L):	3.20		Eviden	ce of freezing/siltation:	Commission months and the second	ŀ		
	Static water level* (m):	-0.04		•					
Length of scre	en collecting water (m):						ł		
				ng Information			-		
	Equipment:	PELLSTAR	116	PUMY?			1		
A	Mucey Di	0/	1			Г <u>-</u>	-		
Date & Time	Volume Removed (L)	Temperature (°C)		Conductivity (µS/cm)	Turbidity (NTU)	Description of Water	ł		
15-AU6-U8	LAPL	2.62	11,34	1.06 ms/s	41.3	Charical or	Per		
	Water Samplin				Soil Sampling				
	Date & Time Collected:	160-AU6-0	F	Da	te and Time Collected:	19-AU6-08			
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1	ample Number - Water:	MW 9			Sample Number - Soil:	MW9-15	1		
10-10-14	06-08			à		MW9-25			
1.01	my 70!			Kefusa(a	25cm				
	Sample Containers:	3 500 ml	ANHERS	Sample Containers:		2/come	1		
	·		119L3			cleer	1		
			1-1-1			POR SAMPLE	Ì		
ACLISTALT Erocedure/Equipment:					Procedure/Equipment:	Movel			
Water Description:					Soil Description:	5 Y NN Y 2:14	1		
vvaler bescription.			Æ		,	TILL GRALEUY			
		Christal 1	dove			Morn, OTPL			
Sampling Equipment	Decontamination (Y/N):	and the second of	1	Sampling Equipment D	Decontamination (Y/N):	y	1		
, , , , , , , , , , , , , , , , , , , ,	Number Washes:	900			Number Washes:	7_	1		
	Number Rinses:	 			Number Rinses:	3	1		

n/a=not applicable



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

2008 Monitoring Well Sampling Log (MW #<u></u><u></u>)

	Site name:	CAM- L	F						
Date of sampling event: AUG-19-16/2008									
Names of samplers: THS .									
		A - Address							
	Monitoring well ID: Mw - 5								
	Facility:	UMEIL SI	E						
			17	\			į		
	and of installation* (m).	260	Known E	Jata					
	epth of installation* (m):	3.60 Z.03							
	of screened section (m): th to top of screen* (m):	0.60							
Бері	into top or screen (iii).	0.00							
		ľ	Measured	Data					
	Condition of well:	6000			Procedure/Equipment:	NTELFACE METE	R		
	Procedure/Equipment:	NTERFACE	METER		h to water surface (m):	117 MINE			
Well he	eight above ground (m):				Depth to bottom (m):	7,25 M STOP	l		
	Diameter of well (m):	0.60		Free pi	roduct thickness (mm):	Minustermones.	İ		
	Calculations				Notes				
	Depth of water (m):	1.17 ml	TOP.		Evidence of sludge:	of the second district and the second			
W	/ell volume of water (L):	4.20		Evidence of freezing/siltation:					
	Static water level* (m):	0.57			•		ĺ		
Length of scre	en collecting water (m):	てのち							
		Developm	ent/Purgi	ng Information					
	Equipment:	PERIN	HUIL	PUMP					
	1	1	1						
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water			
15-AU6-08	4.80	7.09	7.32	0.887	6.1	SHEHT Charles	ale.		
	Water Samplin			ų.	Soil Sampling	Dellist Cerenical	ov ev		
	Date & Time Collected:	15-AU6-0	, Q	Da	te and Time Collected:	14-A18-08	İ		
	ample Number - Water:	Mr0 - 1	ī		Sample Number - Soil:	144 5-10	İ		
	ample ramber - water.	3460.2	*		oumple Hamber Gom	MU5-25	İ		
				0.0	and a green.	000			
				Refusal @	Loca				
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		7, 7,50	AUNV,	An Flora na	. 11	1 0005			
		2100 01		1 2911 1. COM W	Eli	PER SAMPLE			
	Procedure/Equipment:	****	4 /	Procedure/Equipment: R		TROVEL			
	Water Description:	1 . 5			Soil Description:	SAUDY SILF	1		
	Trater Description.		1		22 2000	THE GRAVENT			
		Slight chem	ind silver			BOUND OTPL			
Sampling Equipment	Decontamination (Y/N):	¥ .	V	Sampling Equipment [Decontamination (Y/N):	y	1		
	Number Washes:		(Number Washes:	4	1		
Number Rinses: Number Rinses:						4			

n/a=not applicable



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

38					
	VT-8	AGINERO	oko At	4;55Pm	
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	BAT	AMX	13.02	V	
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	9	-5.=	73		
	10	-5.5	7		
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		10		5.78	
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	12		- 8 - 9 - 9	25		
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Appendix C

Upper Site Landfill

- C1 Site Condition/Visual Inspection Records
- C2 Geotechnical Inspection Photographic Records
- C3 Monitoring Photographic Records
- C4 Monitoring Well Sampling Records
- C5 Thermistor Maintenance Records
- C6 Thermistor Graphs
- C7 Field Notes



C1. Upper Site Landfill

C1.1 Landfill Summary

The Upper Site Landfill is located approximately 625 m east of the main facilities area. The original landfill consisted of three lobes (South, Central and North) that encompass an area of approximately 4,500 m². The location of the landfill is presented in Figure C-1.

A previous evaluation and geophysical survey determined landfilled material is continuous throughout the north and central lobes and more isolated in the south lobe. Tier I and Tier II contaminated soil was found downgradient of the central lobe, indicating contaminant migration from the landfill, thus, The Upper Site Landfill was classified as high potential environmental risk.

Remediation of the Upper Site Landfill involved complete excavation of the north lobe, partial excavation of the central lobe and installation of a leachate containment system in the central lobe and regrading of the south lobe.

Monitoring requirements for the 2008 monitoring year include visual inspection, soil sampling, groundwater sampling and thermal monitoring.

C1.2 Visual Monitoring

No significant erosion, settlement or indications of slope instability were observed at the Upper Site Landfill. Overall landfill performance is assessed as "acceptable". Appendix C1 presents a summary of the 2008 visual inspection results.

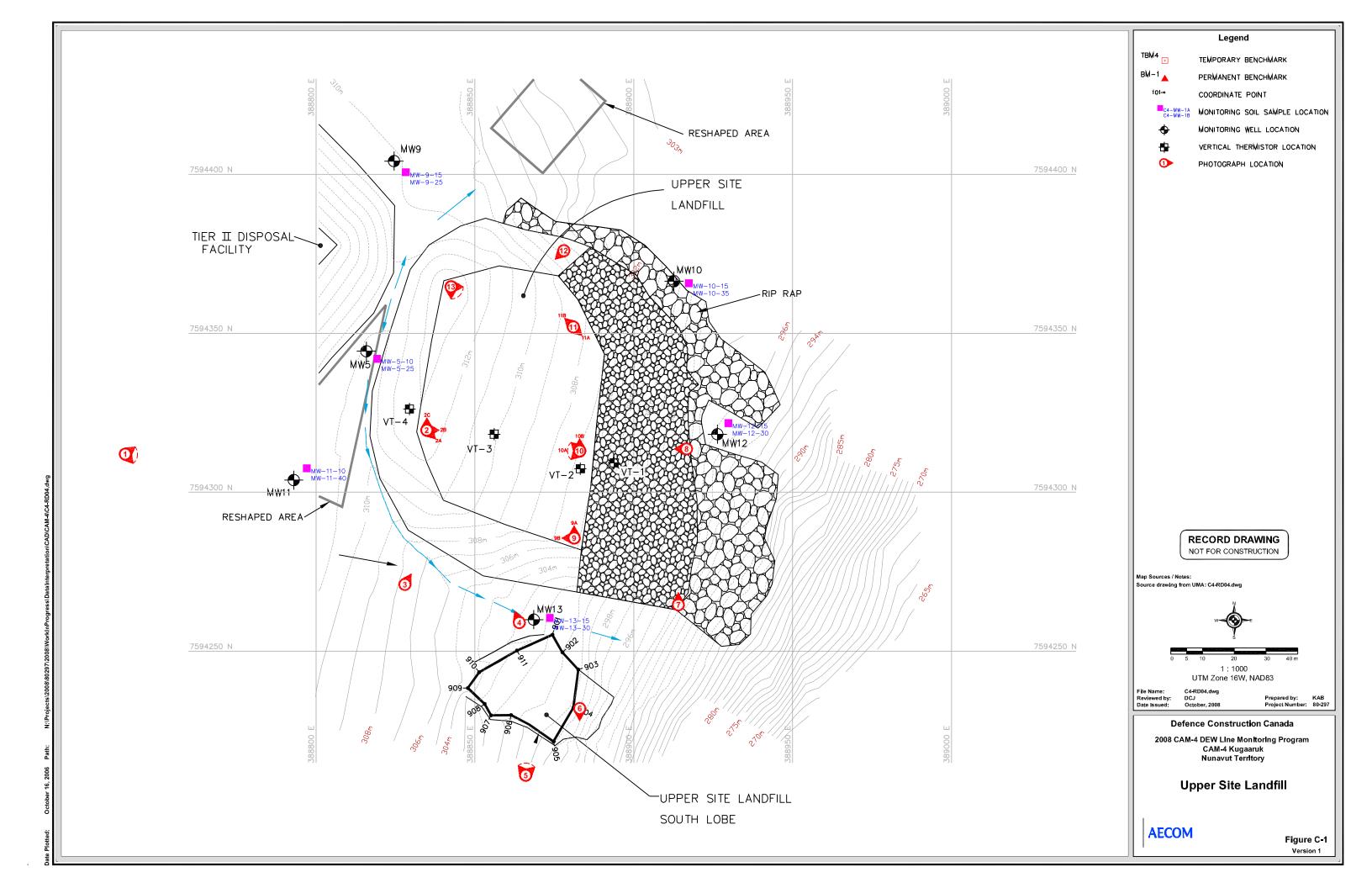
No issues of concern that require immediate attention were identified.

C1.3 Soil Sampling

Soil samples were collected at monitoring locations MW-10, MW-11, MW-12 and MW-13. The sampling locations are presented in Figure C-1. Two samples were collected at each monitoring location at depths of approximately 0.10 to 0.15 m and 0.30 to 0.40 m below ground surface. The photographs of each monitoring well and test pit location are included in Attachment C3.

No staining or free product was observed during the sampling event at the Upper Site Landfill. No odours were detected during the sampling event at the Upper Site Landfill.

(cam4-appc0-upperlfreport.doc)





Laboratory analysis detected concentrations of TPH (C6-34) at monitoring locations MW-11 and MW-13. It is recommended that these results be evaluated in the context of the Landfill Monitoring Plan. The soil sample at MW-10-35 (0.35 m depth) returned an arsenic concentration of 93.6 mg/kg. This value is presumed to be anomalously high, given the non-detection at the 0.15 m soil sample. At the time of issuing this draft report the results of the confirmatory analysis are awaited from ALS Laboratory Group.

The analytical results and depths of samples are provided in Table C-1. The Laboratory Certificates of Analysis are provided in Appendix F.

C1.4 Groundwater Sampling

Groundwater measurements and monitoring system condition records were documented for monitoring wells MW-10, MW-11, MW-12 and MW-13. These records are provided in attachment C4.

All groundwater monitoring wells slated for monitoring in 2008 at the Upper Site Landfill contained sufficient volume for sampling, with the exception of MW-10, which was completely dry. Samples were collected at a flow rate equal to the recharge rate of the monitoring well (and not exceeding 100mL/min). Monitor MW-11 was sampled using a peristaltic pump and disposable LDPE tubing. The rechargeable battery provided with the peristaltic pump from the supplier proved to be faulty, thus monitors that were accessible by vehicle were sampled with the peristaltic pump run off the vehicle battery. Monitors MW-12 and MW-13 were not accessible by vehicle, therefore were purged and sampled using a disposable bailer. It should be noted that monitoring well MW-12 was found to have a blockage in the well pipe at approximately 0.64 m below ground surface. Sand was discovered on the interface meter as well as the disposable bailer. The blockage in the well pipe may be attributed to a broken coupling, presumably allowing sand pack from the borehole annulus to enter the well.

Groundwater samples were not filtered and not preserved. Samples were analyzed for total concentration of inorganics, TPH (C6-C32) and PCB.

TPH (C6-C32) was detected in monitoring wells MW-11, MW-12 and MW-13. Elevated concentrations of Chromium and Lead were also reported for monitor MW-12. The results should be evaluated in the context of the Landfill Monitoring Plan as well as compared with DCC internal standards.

The results are presented in Table C-2. The laboratory Certificates of Analysis are provided in Appendix F.

C1.5 Thermal Monitoring

All thermistors at the Upper Site Landfill were in good condition. Thermistor data was downloaded on August 15, 2008, programming was checked and the data loggers were reset. The data logger clocks were adjusted to local (Standard Time). Battery charge was checked to ensure sufficient remaining charge and batteries were not changed in 2008.

Tabulated ground temperature data since the last download in August 2007 are included in Appendix C5. Graphs of ground temperature versus depth are presented in Appendix C6.

(cam4-appc0-upperlfreport.doc)

Table C-1. CAM-4 Kugaaruk, Summary of 2008 Soil Analysis - Upper Site Landfil

Sample Ident.	Sample Location	Depth	Copper Cu	Nickel Ni	Cobalt Co	Cadmium Cd	Lead Pb	Zinc Zn	Chromium Cr	Arsenic As	Mercury Hg	PCB Total Aroclors	F1 C6-C10	F2 C10-C16	F3 C16-C34	TPH C6-34
	·	(m)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Upgradient Sample	s								_							
MW-11-10	MW-11	0.10	11.2	11.9	7.0	<0.50	19.1	43.9	27.7	<5.0	<0.0050	<0.050	<10	<30	1230	1230
MW-11-40	MW-11	0.40	10.0	11.6	6.5	<0.50	8.1	33.3	22.6	<5.0	<0.0050	<0.050	<10	<30	1150	1150
Downgradient Sam	ples															
MW-10-15	MW-10	0.15	6.5	10.5	5.0	<0.50	5.6	22.9	22.3	<5.0	<0.0050	<0.050	<10	<30	<50	0
MW-10-35	MW-10	0.35	8.4	20.0	9.0	<0.50	6.2	27.0	24.8	93.6	<0.0050	< 0.050	<10	<30	<50	0
MW-12-15	MW-12	0.15	6.0	6.8	3.6	< 0.50	4.9	23.3	17.0	<5.0	< 0.0050	< 0.050	<10	<30	<50	0
MW-12-30	MW-12	0.30	5.4	6.9	3.8	< 0.50	4.9	21.0	15.4	<5.0	< 0.0050	< 0.050	<10	<30	<50	0
MW-13-15	MW-13	0.15	7.1	8.6	5.1	< 0.50	5.7	31.4	17.5	<5.0	0.0117	< 0.050	<10	<30	76	76
MW-13-30	MW-13	0.30	3.5	6.6	3.6	<0.50	3.7	17.2	14.9	<5.0	<0.0050	<0.050	<10	<30	<50	0

Note: mg/kg = ug/g

TPH is represented as the total of F1, F2 and F3 as defined by CCME Tier I Method - Rev. 5 Analysis of Petroleum Hydrocarbons in Soil



Table C-2. CAM-4 Kugaaruk, Summary of 2008 Groundwater Analysis - Upper Site Landfil

		Groundwater	Copper	Nickel	Cobalt	Cadmium	Lead	Zinc	Chromium	Arsenic	Mercury	РСВ	F1	F2	F3	TPH
Sample Identification	Location	Elevation	Cu	Ni	Со	Cd	Pb	Zn	Cr	As	Hg	Total Aroclors	C6-C10	C10-C16	C16-C34	C6-34
		(masl)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Upgradient Samples	3															
MW-11	MW-11	311.16	<0.0020	0.0026	0.00146	<0.000034	<0.0010	<0.0050	<0.0020	0.0011	<0.000020	<0.0010	<0.10	<0.30	0.47	0.47
Downgradient Samp	oles															
MW-10	MW-10	<299.13	-	-	1	-	-	•	-	-	-	-	-	-	-	-
MW-12	MW-12	294.18	0.0433	0.0418	0.0156	0.000135	0.0158	0.208	0.0540	0.0051	<0.000020	<0.0012	<0.10	1.26	2.02	3.28
MW-13	MW-13	301.12	0.0288	0.0257	0.00978	0.000176	0.00725	0.0809	0.0205	0.00216	<0.000020	<0.0011	<0.10	<0.30	1.11	1.11

⁻ Denotes dry well; no sample obtained Note: mg/L = 1000 ug/L





C1 – Site Condition/Visual Inspection Records

Visual Inspection Checklist Inspection Report – Page 1 of 2

SITE NAME:	CAM-4 - Pelly Bay
LANDFILL/AREA DESIGNATION:	Upper Site Landfill
DATE OF INSPECTION:	August 14, 2008
DATE OF PREVIOUS INSPECTION:	August 24 - 26, 2007
INSPECTED BY:	Darrin Johnson, P.Eng.
REPORT PREPARED BY:	Darrin Johnson, P.Eng.

The preparer represents to the best of the preparer's knowledge, the following statements and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or misstated.

Preliminary Stability Assessment

Feature	Severity Rating	Extent			
Settlement	Not observed	None			
Erosion	Not observed	None			
Frost Action	Not observed	None			
Animal Burrows	Not observed	None			
Vegetation	Not observed	None			
Staining	Not observed	None			
Vegetation Stress	Not observed	None			
Seepage Points	Not observed	None			
Debris Exposed	Not observed	None			
Tension Crack	Not observed	None			
Overall Landfill					
Performance	Acceptable				

Upper Site Landfill - Inspection Report - Page 2 of 2

	Present		Dimensions	Depth	Extent		Photographic Records	Additional Comments/ Bushiminan
Checklist Item	Yes/No	Location	(L x W) (m)	(m)	(%)	Description	(Photos referenced in photolog and in figures)	Additional Comments/ Preliminary Stability Assessment
Settlement								
	No							
Erosion								
	No							
Frost Action								
	No							
Animal Burrows								
	No							
Vegetation								
	No							
Staining								
	No							
Vegetation Stress								
	No							
Seepage Points								
	No							
Debris Exposed								
	No							
Presence/ Condition								
of Monitoring Instruments	Good							
Other Features of								
Note.	No							
Additional Photos							USL-1, 2A, 2B, 2C, 3, 4, 5, 6,	
						General	7, 8, 9A, 9B, 10A, 10B, 11A, 11B, 12, 13	



C2 – Geotechnical Inspection Photographic Records



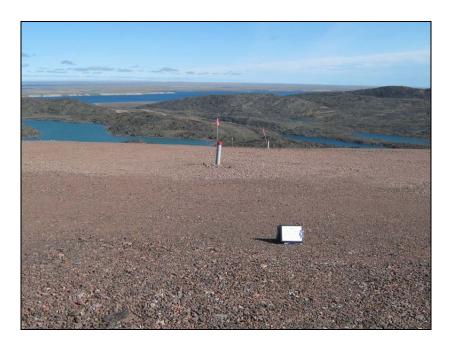


Photograph USL-1. Panoramic photo facing southeast towards west slope of Upper Site Landfill. ↑



Photograph USL-2A. Facing southeast along crest. ↑



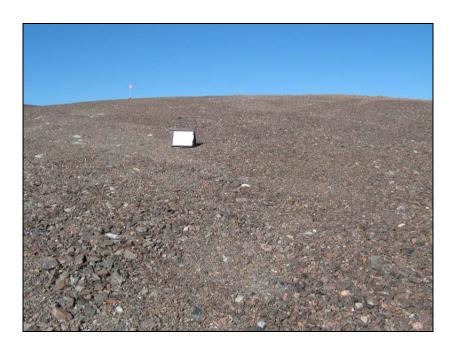


Photograph USL-2B. Facing east along line of thermistors. ↑



Photograph USL-2C. Facing north along west crest. ↑





Photograph USL-3. Facing south slope. ↑



Photograph USL-4. Facing west along south slope. ↑





Photograph USL-5. Panoramic photo from the southwest corner of south lobe. ↑



Photograph USL-6. Facing south along the south slope of the south lobe from the southeast corner. ↑



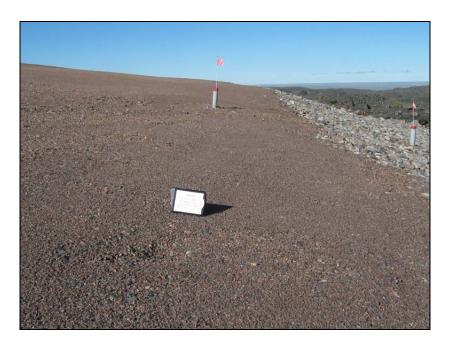


Photograph USL-7. Facing north from the southeast corner of the rip-rap. ↑



Photograph USL-8. Toe of rip-rap below thiermistors. ↑



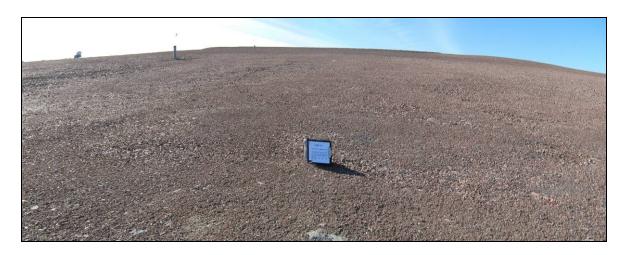


Photograph USL-9A. Facing north along crest from southeast corner. \uparrow



Photograph USL-9B. Facing west along south crest from the southeast corner. ↑





Photograph USL-10A. Panoramic photo of the top of the landfill facing west. ↑



Photograph USL-10B. Facing north along crest. ↑





Photograph USL-11A.

Facing southeast.



Photograph USL-11B.

Facing northwest.





Photograph USL-12. North gravel slope. ↑



Photograph USL-13. Panoramic photo of the landfill top from the northwest corner. ↑



C3 – Monitoring Photographic Records





Photograph 1. Monitoring Location MW-11 (Upgradient) Facing Southeast. ↑



Photograph 2. Monitoring Location MW-10 (Downgradient). Facing North. ↑

(cam4-appc3-mwphotos.doc) -1 -





Photograph 3. Monitoring Location MW-12 (Downgradient). Facing North. ↑



Photograph 4. Monitoring Location MW-13 (Downgradient). Facing Northeast. ↑

(cam4-appc3-mwphotos.doc) - 2 -



C4 – Monitoring Well Sampling Records

2008 Monitoring Well Sampling Log (MW-10)

	Site name:	CAM-4							
	Date of sampling event:								
	Names of samplers:	TFB							
	Monitoring well ID:	MW-10							
	Facility:	Upper Site Landfill							
	•								
			Known I	Data					
I	Depth of installation* (m):	3.37							
Length	of screened section (m):	2.03							
De	pth to top of screen* (m):	0.38							
	· · · · · · · · · · · · · · · · · · ·								
		N	Measured	Data					
	Condition of well:	1			Procedure/Equipment:	Interface Meter			
	Procedure/Equipment:	Interface Meter		Dep	oth to water surface (m):				
Well h	neight above ground (m):	0.68			Depth to bottom (m):	2.38			
	Diameter of well (m):	0.05		Free	product thickness (mm):	-			
	,				,				
	Calculations				Notes				
	Depth of water (m):	Dry @ 2.38			Evidence of sludge:	-			
,	Well volume of water (L):	0.00		Evide	nce of freezing/siltation:	-			
	Static water level* (m):				<u> </u>				
Length of scr	reen collecting water (m):								
Ů	<u> </u>	Developm	ent/Purai	ng Information					
	Equipment:		J						
		l							
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water			
16-Aug-08	()	()	'	, ,	, ,				
	Water Samplin	a			Soil Sampling				
	Date & Time Collected:	<u> </u>		D	ate and Time Collected:	14-Aug-08			
	Sample Number - Water:			_	Sample Number - Soil:				
						MW-10-35			
	Sample Containers:				Sample Containers:	4 x 250ml Glass			
	Campio Comanioro.			1	Campio Contamoro.	TX EGGINE GIGGS			
	Procedure/Equipment:				Procedure/Equipment:	SS Trowel			
	r rooddaro, Equipmont.				1 1000aa10/Equipmonii	00 1104101			
	Water Description:				Soil Description:	Brown sandy silt till,			
	Booonpaon.				Co. Docompation.	some gravel.			
						Joseph Gravon			
Sampling Equipmen	t Decontamination (Y/N):			Sampling Equipment	Decontamination (Y/N):	Y			
Camping Equipmen	Number Washes:			Camping Equipment	Number Washes:	2			
	Number Rinses:				Number Rinses:				
Ī	MUTIDEI MITSES.	1			indilibel Milises.				

^{*}From ground surface. Unless this is stated, all measurments are assumed to be from the top of the casing.
n/a=not applicable
LDPE=Low Density Polyethylene
SS=Stainless Steel

2008 Monitoring Well Sampling Log (MW-11)

		0.11.4				1
	Site name:					
	Date of sampling event:					
	Names of samplers:	TFB				
	Monitoring well ID:	MW-11				
	Facility:	Upper Site Landfill				
			Known [Data		
C	epth of installation* (m):	3.85				
Length	of screened section (m):	2.03				
Dep	oth to top of screen* (m):	0.86				
		N	/leasured	Data		
	Condition of well:				Procedure/Equipment:	Interface Meter
	Procedure/Equipment:			Der	oth to water surface (m):	1.97
Well h	eight above ground (m):	0.56			2.82	
***************************************	Diameter of well (m):	0.05		Free	Depth to bottom (m): product thickness (mm):	-
	Diameter of well (III).	0.00		1166		
	Calculations				Notes	
		0.05			Evidence of sludge:	
	Depth of water (m):	0.85		F. du		-
V	Well volume of water (L): 1.67 Evidence of freezing/siltation:				-	
Static water level* (m): 1.41						
Length of scre	een collecting water (m):	0.85				
				ng Information		
	Equipment:	Peristaltic Pump, H	loriba U-22	with flow through cell, LD	PE	
					T	
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water
15-Aug-08	2.5	2.71	6.62	0.97	2.3	C&C
						Chemical odour
	Water Sampling	g			Soil Sampling	
	Date & Time Collected:	15-Aug-0	8	D	ate and Time Collected:	14-Aug-08
S	Sample Number - Water:	MW-11			Sample Number - Soil:	MW-11-10
				Refusal @ 0.40 m		MW-11-40
	Sample Containers:	3 x 0.5L Amber Gla	ass		Sample Containers:	4 x 250mL Glass
		2 x VOC vials				
	Procedure/Equipment:	Peristaltic Pump, H	loriba U-22		Procedure/Equipment:	SS Trowel
	Procedure/Equipment.					
	Water Description:	C&C, Chemical od	our		Soil Description:	Brown sandy silt till,
	Trater Description.				Con Description.	some gravel.
						Somo giavon.
Sampling Equipment	Decontamination (Y/N):	Y		Sampling Equipment	Decontamination (Y/N):	Y
Sampling Equipment	Number Washes:	1		Sampling Equipment	Number Washes:	3
		2				
	Number Rinses:	2			Number Rinses:	3

^{*}From ground surface. Unless this is stated, all measurments are assumed to be from the top of the casing.
n/a=not applicable
LDPE=Low Density Polyethylene
SS=Stainless Steel

2008 Monitoring Well Sampling Log (MW-12)

	Site name:					
	Date of sampling event:	_				
	Names of samplers:	TFB				
	Monitoring well ID:	MW-12				
	Facility:	Upper Site Landfill				
		,				
			Known D)ata		
D	epth of installation* (m):	3.67				
Length	of screened section (m):	2.03				
	oth to top of screen* (m):	0.68				
			Measured	Data		
	Condition of well:	1			Procedure/Equipment:	Interface Meter
	Procedure/Equipment:			Der	oth to water surface (m):	1.53
الم الم	eight above ground (m):	0.66		Бер	Depth to bottom (m):	2.20
vveiri	Diameter of well (m):	0.05		Eroo :	product thickness (mm):	-
Note: Pleakage in walls	. ,		unling Con-		, ,	-
Note - Blockage in well a	approx. 1.30 mB1OP. Po	ssible damaged col	upiing. Sand	d pack allowed to enter w	eli at damaged area.	
	Onlandad's as				Neter	
	Calculations				Notes	
	Depth of water (n): 0.67				Evidence of sludge:	-
V	Well volume of water (L): 1.32			Evide	nce of freezing/siltation:	-
	Static water level* (m):	0.87				
Length of scre	een collecting water (m):	0.67				
		Developme	ent/Purgi	ng Information		
	Equipment:	Disposable Bailer, I	Horiba U-22	<u>-</u>		
Date & Time	Volume Removed (L)	Temperature (°C)	рН	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water
16-Aug-08	1.4		Insufficient	t volume for field paramet	ters	Grey, cloudy, silty
						Chemical odour
	Water Samplin	g			Soil Sampling	
	Date & Time Collected:	16-Aug-0)8	D;	ate and Time Collected:	14-Aug-08
S	Sample Number - Water:	MW-12			Sample Number - Soil:	MW-12-15
	•			Refusal @ 0.32 m		MW-12-30
	Sample Containers:	3 x 0.5L Amber Gla	ass		Sample Containers:	4 x 250ml Glass
	Campio Contaniolo.	2 x VOC vials			capio contaniois.	2002 0.000
		v 0 0 viaio				
	Procedure/Equipment	Disposable Bailer			Procedure/Equipment:	SS Trowol
Procedure/Equipment: Disposab		2.0p00able ballel			Frocedure/Equipment:	33 HOWEI
	Water Descript	Grey cloudy silty	chemical		Call December	Drawn and th
	Water Description: Grey, cloudy, silty, chemical odour		Gileitileai		Soil Description:	Brown sandy silt,
						some gravel.
Sampling Equipment	Decontamination (Y/N):	Y		Sampling Equipment Decontamination (Y/N		Y
I	Number Washes: 3			Number Washes Number Rinses		2
	Number Rinses:	5				2

^{*}From ground surface. Unless this is stated, all measurments are assumed to be from the top of the casing. n/a=not applicable
LDPE=Low Density Polyethylene
SS=Stainless Steel

2008 Monitoring Well Sampling Log (MW-13)

	Site name:	CAM-4					
	Date of sampling event:	14-17 Aug 2008					
	Names of samplers:	TFB/DAJ					
	Monitoring well ID:	MW-13					
		Upper Site Landfill					
	,	-11					
			Known I)ata			
F	Pepth of installation* (m):	3.18	TAILOWII E	Julu			
	of screened section (m):	1.90					
	• , ,						
Det	oth to top of screen* (m):	0.20					
			_				
			Measured	Data			
	Condition of well:	1	1		Procedure/Equipment:		
	Procedure/Equipment: Interface Meter Depth to water surface (m): Well height above ground (m): 0.64 Depth to bottom (m):					1.88	
Well h	eight above ground (m):	0.64			2.18		
	Diameter of well (m):	0.05		Free	product thickness (mm):	-	
	Calculations				Notes		
	Depth of water (m):	0.30			Evidence of sludge:	-	
Well volume of water (L): 0.59				Evide	nce of freezing/siltation:	-	
Static water level* (m): 1.24							
Length of scre	een collecting water (m):	0.30					
Longin or sort	ben conceaning water (iii).		ont/Durai	ng Information			
	Equipment	Disposable Bailer,		_			
	Equipment:	Disposable Baller,	HOIIDA U-22	<u>'</u>			
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water	
16-Aug-08	0.8	2.91	5.98	0.392	903	Grey, cloudy	
						Chemical odour	
	Water Samplin	g			Soil Sampling		
	Date & Time Collected:	16-Aug-0)8	D	ate and Time Collected:	14-Aug-08	
S	Sample Number - Water:	MW-13			Sample Number - Soil:	MW-13-15	
				Refusal @ 0.30 m		MW-13-30	
	Sample Containers:	2 x 0.5L Amber Gla	ass		Sample Containers:	4 x 250mL Glass	
		2 x VOC vials					
	Procedure/Equipment:	Disposable Bailer			Procedure/Equipment:	SS Trowol	
	r rocedure/Equipment:	2.5pecasio ballel			r rocedure/Equipment:	33 HOWEI	
	Water Descript	Cloudy arey chem	nical odour		Call December	Drawn agad: -18 400	
	Water Description: Cloudy, grey, chemical odo		noai ououl		Soil Description:	Brown sandy silt till,	
						some gravel.	
Sampling Equipment	Decontamination (Y/N):	Υ		Sampling Equipment	Decontamination (Y/N):	Y	
	Number Washes:	2		Number Washes: 2			
	Number Rinses:	3		Number Rinses: 3			

^{*}From ground surface. Unless this is stated, all measurments are assumed to be from the top of the casing.
n/a=not applicable
LDPE=Low Density Polyethylene
SS=Stainless Steel



C5 – Thermistor Maintenance Records

Contarctor Name:	AECOM			Inspect	ion Date:	15-Aug-0)8	
Prepared By:	Darrin Johnson	n						
Thermistor Informa	otion							
Site Name:	CAM-4	Thermisto	or Location	Ur	pper Site	Landfill		
Thermistor Number	er: VT01	Inclination	n	Ve	ertical			
Install Date:	28-Sep-06	First Date		2		Last Date		15-Aug-08
Coordinates and E		N		E			Elev	304.43
Length of Cable (n Datalogger Serial		Cable Lead Abo	ve Grouna (m)		odal Point able Seria		13	1615
Code CAM-4VT01					ADIO OCITA	HAUITIDGE		1010
Thermistor Inspe	<u>ction</u>	- ·						
		Good	_		Maintena	nce		
Casing		~						
Cover		~						
CUVEI		•						
Data Lo	gger	~						
Cable		~						
Beads		•						
	Installation Date		not replaced in	 2008				
			-	1 2000.				
Battery	Levels	Main	11.34 V			Aux	12.29 V	
Manual Ground T	Гетрегаture Readir	<u>ngs</u>	1	_				
Bead	d ohms	Temp. (°C)	_		Bead	ohms	Ten	np. (ºC)
1		10.1			9			-3.9
2		12.5			10			-5.2
3		5.6			11			-6.4
4		4.8			12			-5.9
5		4.5			13			-4.9
6		3.3						
7		-0.2						
8		-2.4						
Observations on	- Drawaged Mainta		4	F				
	d Proposed Mainter ubricated.	<u>nance</u>						
Look ia	Di icaica.							

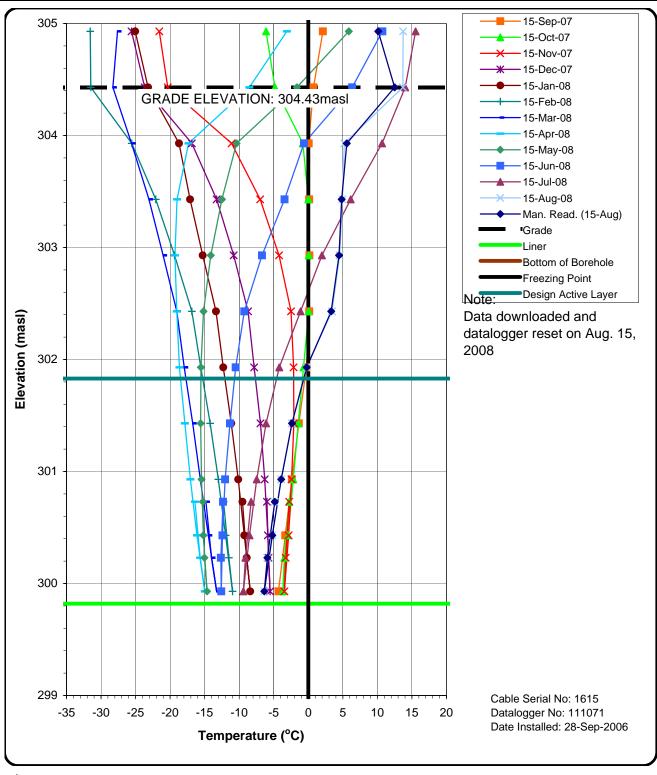
Contarctor Name:	AECOM			Inspecti	on Date:	15-Aug-(18	
Prepared By:	Darrin Johnson			Inspecti	on Date.	13-Aug-t	,	
Thermistor Information		The americate		Ha	nor Cito	l on df:II		1
Site Name: Thermistor Number:	CAM-4 VT02	Inclination	or Location		per Site rtical	Landfill		
Install Date:	28-Sep-06	First Date				7 Last Date	- Event	15-Aug-08
Coordinates and Ele			LVOIR		r rag o	Laot Batt	Elev	306.71
Length of Cable (m)			ove Ground (m)	1.2 No	dal Point	S	11	
Datalogger Serial #	2020175			Ca	ble Seria	l Number		1617
Code CAM-4VT02								
Thermister Inches	ion							
Thermistor Inspect	<u>ion</u>	Good		Needs N	//aintena	nce		
Cooing		<u> </u>	_					
Casing								
Cover		~						
Data Logg	er	~						
Cable		~						
Beads		~						
Battery Ins	stallation Date	Batteries	not replaced in	2008.				
Battery Le	vels	Main	11.34 V			Aux	12.77 V	
						_		
Manual Ground Ter	mperature Readin	<u>gs</u>	_					
Bead	ohms	Temp. (°C)			Bead	ohms	Ten	np. (ºC)
1		11.2	_		9			-4.8
2		8.9			10			-6.2
3		5.3			11			-7.6
4		4.0						
5		1.4						
6		-0.9	_					
7		-2.6	_					
8		-3.7						
Observations and F	Proposed Mainten	ance						
Lock lubr								

Contarctor Name:	AECOM			Insp	ection Date:	15-Aug-0	08	
Prepared By:	Darrin Johnso	n		•				
Thermistor Information	. n							
		Thermisto	or Location		Upper Site	Landfill		
Site Name: Thermistor Number:	VT03	Inclination			Vertical	Lanam		
Install Date:	28-Sep-06	First Date			27-Aug-06	Last Date	e Event	15-Aug-08
Coordinates and Elev		N		E			Elev	310.09
Length of Cable (m)	7.2	Cable Lead Abo	ove Ground (m)	1.2	Nodal Point	S	12	4040
Datalogger Serial #	111126				Cable Seria	l Number		1618
Code CAM-4VT03								
Thermistor Inspecti	on							
		Good	_	Nee	ds Maintena	nce		
Casing		~						
_								
Cover		~						
Data Logg	er	~						
Cable		V						
Beads		~						
Battery Ins	tallation Date	Batteries	not replaced in	2008	3.			
Battery Lev	vels	Main	11.34 V			Aux	13.5 V	
·						_		
Manual Ground Ten	nperature Readi	<u>ngs</u>	1	1				
Bead	ohms	Temp. (°C)			Bead	ohms	Ten	np. (ºC)
1		14.2	_		9			-5.3
2		9.2			10			-6.7
3		4.1			11			-7.6
4		2.3	1		12			-8.2
5		0.0	1					
6		-1.5]					
7		-2.8	1					
8		-4.2	1					
Observations and E			_	l.				
Observations and P		enance						
Look labit								

Contarctor Name:	AECOM				Inspection Date: 15-Aug-08				
	Darrin Johnson			IIISPE	ction Date	. IJ-Aug-			
Prepared By:	Darrin Johnson								
Thermistor Information									
Site Name:	CAM-4		or Location		Upper Site	Landfill			
Thermistor Number:		Inclination		Vertical					
Install Date:	: 26-Sep-06 Fi		First Date Event		27-Aug-07 Last Date Event			15-Aug-08	
Coordinates and Elev	vation N	اما ممما ۸۵	over Crown d (res)	E 4 0	Nadal Dain	4	Elev	312.8	
Length of Cable (m) Datalogger Serial #	atalogger Serial # 207046		le Lead Above Ground (m)		Nodal Poin Cable Seri		10	1619	
Code CAM-4VT04	207040			<u> </u>	Cable Sell	ai ivuilibei		1013	
Code CAMP4V104									
Thermistor Inspecti	on								
		Good		Need	s Maintena	ance			
Cooling		~	_						
Casing		•							
Cover		~							
Data Laure		_							
Data Logg	er	~							
Cable		~							
Beads		~							
Battery Installation Date		Batteries	not replaced in	- 1 2008.					
•							40.00.1/		
Battery Lev	vels	Main	11.34 V			Aux	13.63 V		
Manual Ground Ten	nperature Readings		=	!-					
Bead	ohms T	emp. (ºC)	_		Bead	ohms	Ten	np. (ºC)	
1		13.7			9			-5.2	
2		9.6			10			-5.3	
3		5.0							
4		3.4]						
5		1.2							
6		-1.1							
7		-2.5							
8		-4.0]						
Observations and P	Pronosed Maintenan								
Lock lubri		CE							
Lock lubii	caltu.								

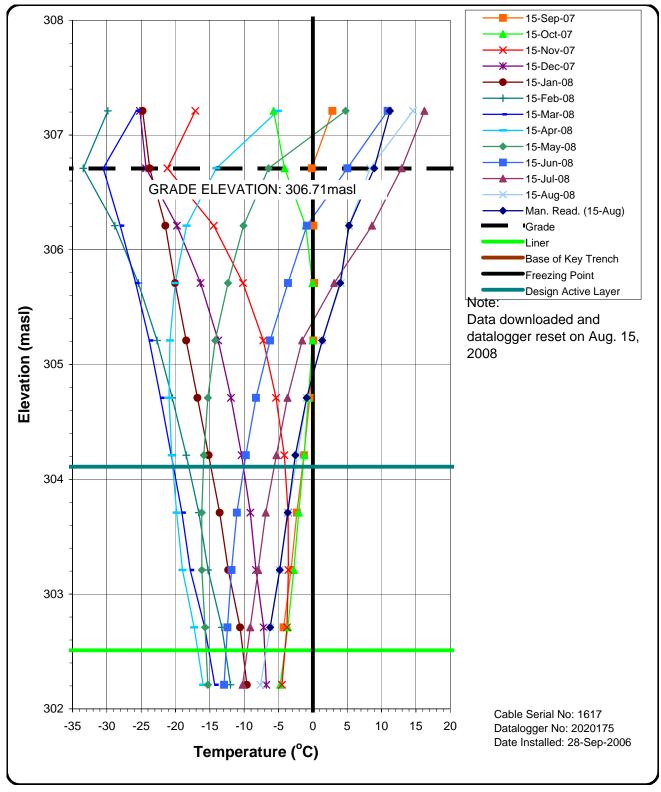


C6 – Thermistor Graphs



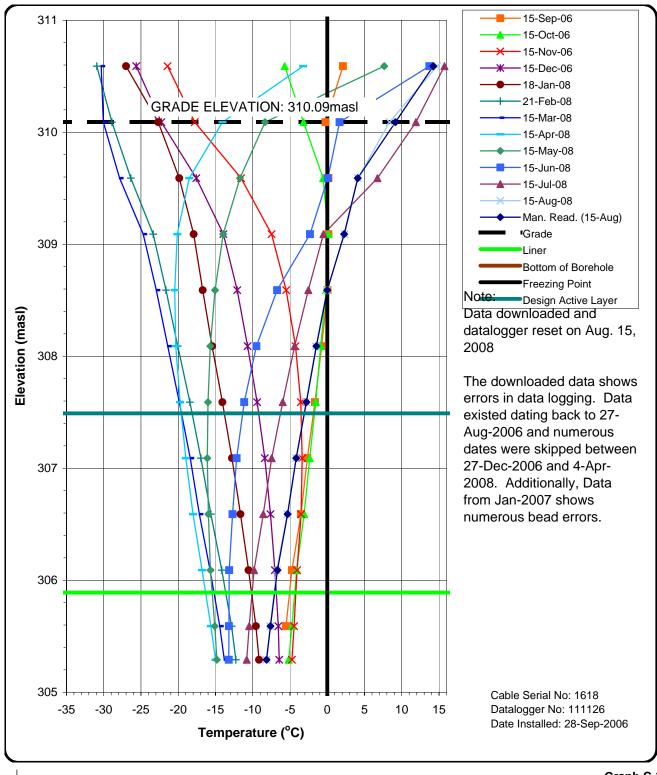
AECOM

Graph C-1 Ground Temperature Profile Upper Site Landfill Vertical GTC VT-1



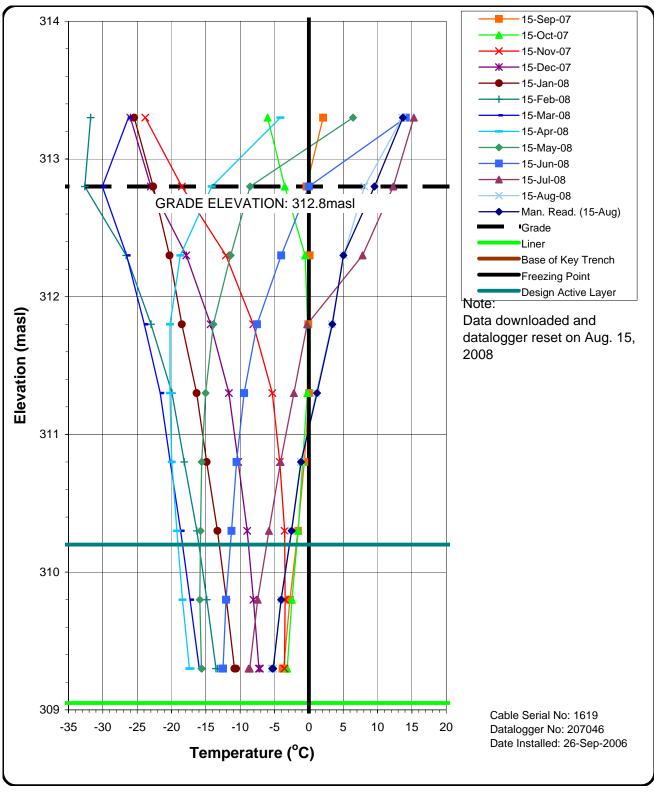
AECOM

Graph C-2 Ground Temperature Profile Upper Site Landfill Vertical GTC VT-2



AECOM

Graph C-3 Ground Temperature Profile Upper Site Landfill Vertical GTC VT-3



AECOM

Graph C-4
Ground Temperature Profile
Upper Site Landfill
Vertical GTC VT-4

C7 - Field Notes

			Au6. 15/113
	Q-1		- LOWER SITE NOW HAZ LF (SNH) - STARTED INSPERT ON AT JOAN
			- STARTOO INSPLAT ON AT LOAM
	The state of the s		- LSNH PHOTO COC I (LAYPOINT 34)
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Carlotte All Carlotte		- FRAM MW-20 (NORTH GOOD)
		Sales .	- PHOTOS 68,69270 (PANURAMIC)
			- CONTRE ROCKFILL ON SUPE
News Fla		100	WITH NO PROSION OR CRACKS
Production And State Tra	12 W 12 M 2 L 2 L 1		OBSTRVDD, NO SEUPAGE AT TO
		,	((2) (1) (2) (2) (2) (2)
		-	LSNH PHIFO LOC. 2 (WP 35)
		*	- CONTRO OF WORTH CRUIT
			ABOVE PHOTO LOW 1
Allegest .			- PHOTO 73 (COUST RACING PAST) - PHOTO 73 (TOP OF LF FACING SOM
			- PHOTO 72 (CANT FACING WEST)
A COMPANIE			-NO CRACKS OBSERVED PLANG
	1:111		CAST
	4 7		-NO SIGNIFICANT SETTLEMENT OF
The same is	02 Ja 502 a 11 a 2		CONLIDEN ON TOP OF CF
The state of the s	* The sweet		- Some TIRE TRACKS VISIBULT
	1970 1 1979		BUT NO DANVAGE OR RUTTING
		1	

Aw6. 15/08 21 LSNH LF (PAGE 3) LSNH PHOTO LOC. 7 (WP TO)
- WEST SLOPE OF LF
-PHOTO 82 (FACUE NE)
- PHOTO 83 (FACUE SE) - OVERALL LANOFIL APPEARS NO BROSIAN OR CRACKING -NO SUSPAGE FROM TOES. - NO ULBETATION.

2008 Monitoring Well Sampling Log (MW #__i_)

				······································		
	Site name:	CAM-	4			
	Date of sampling event:	AUG- 14-	16/20	න <u>හ</u>		
	Names of samplers:	TFB				
	Monitoring well ID:					
	Facility:	UNBL SIT	E			
			Known D	Data		
De	epth of installation* (m):	3.85 2.03				
Length o	f screened section (m):	2.03				
Dept	th to top of screen* (m):	0,86				
- · · · · · · · · · · · · · · · · · · ·						
		1	Measured	Data		
	Condition of well:	GOOD			Procedure/Equipment:	INTERFACE MUSTE
	Procedure/Equipment:	NICHACE	WETER		th to water surface (m):	1.17 1150
Well he	eight above ground (m):	0,56			Depth to bottom (m):	2.82. Mysol
	Diameter of well (m):	71		Free p	roduct thickness (mm):	- Secretarian management of the second second
				· · · · · · · · · · · · · · · · · · ·		
	Calculations				Notes	
	Depth of water (m):	1.47 m	410/2		Evidence of sludge:	Contraction and Contraction an
1/1	Vell volume of water (L):	4	7 20	Evider	nce of freezing/siltation:	Province and another SECON AND PROPERTY.
	Static water level* (m):		141			
Longth of sere	een collecting water (m):	1,40	1 • //			• .
Length of Scie	err collecting water (iii).	L	ont/Durai	ng Information		
		PEKLISTAC		Cid momation		
	Equipment:	1 COMME	116 /	N. 2		
Data 0 Time	Notice Demond (I)	T (80)	рН	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water
Date & Time	Volume Removed (L)	Temperature (°C)			ruibidity (NTO)	Description of Water
15-AU3-03	2.50	24	6,62	0.97	2.3	clanical color
	Water Samplin	ıg			Soil Sampling	
	Date & Time Collected:	17-AUGO	<i>1</i> 3	Da	ate and Time Collected:	19-AU6-08
S	ample Number - Water:	Mu)-11			Sample Number - Soil:	MW (1-10
						MW 11-40
				1 /a Cr. (a)	C1/1	
				lefusalo.	40 cm	
	Sample Containers:	3 500-16	Ambers		Sample Containers:	7/250mC
		1 VOL 1		- T- T- T- T- T- T- T- T- T- T- T- T- T-		Close
			3/14-7	ZM FREINE	W	PER SAMPLE
	Procedure/Equipment:	PENTIALI	TIC MG		Procedure/Equipment:	TROVEL
	Water Description:		' ']		Soil Description:	SA.104 S.14
	Trater Description.	clesical				DAY Alound
		Carucia nota	S			My Javan on
Compline Facion and	Decontamination (Y/N):	000		Sampling Equipment	Decontamination (Y/N):	
Sampling Equipment				Jamping Equipment	Number Washes:	
	Number Washes:				Number Rinses:	
I	Number Rinses:	1	نہ	1	Number Kinses:	·

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

2008 Monitoring Well Sampling Log (MW #<u>IS</u>)

	Site name:	CAM-	- land			
	Date of sampling event:	AUG- 19-	16/2	2008		
	Names of samplers:	TFB /1	クゴ (soil)		
	Monitoring well ID:					
	Facility:	UPPEL SI	75			
				-		
			Known D	Data		
De	epth of installation* (m):	3.18				
Length o	f screened section (m):	1.90				
Dept	h to top of screen* (m):	0.20				
			Measured			NTELFACE METER
	Condition of well:	600V	11 Acord			
		INTELPACE	WICIEIL	Dept	h to water surface (m):	1.33
Well he	eight above ground (m):	0.64		Essan	Depth to bottom (m):	*** 1 (C)
	Diameter of well (m):	<u> </u>		Free pi	roduct thickness (mm):	And the second s
	Calculations				Notes	
	Depth of water (m):	1.88			Evidence of sludge:	₩/ 20 for half flower or hand a large
M	Well volume of water (L):			Eviden	ce of freezing/siltation:	National Confession Co
Static water level* (m):					<u> </u>	
Length of scre	en collecting water (m):	1,34				
			ent/Purgi	ng Information		
	Equipment:	BAILER				
				97 SOUL S	TAGKANT	(WELL MAY)
Date & Time	Volume Removed (L)	Temperature (°C)	pН	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water
16-206-08	0.86	2,41	5,98	0.392	9070	Chamical exter
	Water Samplin	g			Soil Sampling	
	Date & Time Collected:	16-AUE-	U 4	Da	ite and Time Collected:	19-406-08
S	ample Number - Water:	MW-12,			Sample Number - Soil:	MW13-15
				relusace	300	My 13-30
						di i mag dana
	Sample Containers:	2000			Sample Containers:	4 12 Fac
		2 500 M	<u> </u>			clean.
		/3M/B	CK-			0 11
	Procedure/Equipment:	BAILER	e lee '		Procedure/Equipment:	TROUEL
	Water Description:	(lady 6	KEY		Soil Description:	SANTY SITT
		Clady, 6				THE BOOKE IS
		Le-nich!	au.			THE PSPORE
Sampling Equipment	Decontamination (Y/N):			Sampling Equipment	Decontamination (Y/N):	
	Number Washes:	Leen.			Number Washes:	has .
	Number Rinses:	3			Number Rinses:	3



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

2008 Monitoring Well Sampling Log (MW # <u>\(\brace \) \(\) \</u>

Site name:	CAM-	4			
Date of sampling event:	AUG- 14-16	5/200	ා රි		
Names of samplers:	TPB				
Monitoring well ID:	MW-10				
Facility:	UPPERSIT	E			
		Known D	ata		
Depth of installation* (m):	3.37				
Length of screened section (m):	2.03 0.38				
Depth to top of screen* (m):	0.38				
		Measured			-034.5
Condition of well:	6000				STEPPARE MUTER
Procedure/Equipment: Well height above ground (m):	INTEURE I	METELL	Dept	h to water surface (m):	(<i>MX@ Z 3</i>
	0,68			Depth to bottom (m):	
Diameter of well (m):			Free pr	oduct thickness (mm):	To the second se
				Nista	
Calculations				Notes	
Depth of water (m):	WY (W) 1	<u> 49 - </u>	Tuisla o	Evidence of sludge:	d
Well volume of water (L):		(/ '	Eviden	ce of freezing/siltation:	
Static water level* (m):	3 -9 -9				
Length of screen collecting water (m):	1.32	4/D	u a lafarmation		
	Developm	ent/Purgi	ng Information	************	
Equipment:	programme and the second secon	THE STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, ST	and the state of t	The state of the s	
D. O. T. Volum Demond (1)	T (90)	рН	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water
Date & Time Volume Removed (L)	Temperature (°C)	þΠ	Conductivity (porcin)	ruibidity (1410)	Bescription of Video
1/2-A1)608 1/0	LV -	Marin St. State Control of the said State Co	and profession of the series	t - Marija ta kananda kasan in Marija and ta katar ta kanan in mana ta Marija mana pandanga ito na anan a sista	and a graph and the state of th
Water Samplin	~	L		Soil Sampling	
Water Sampling Date & Tinge Collected	T	.,,	Da	ite and Time Collected:	K1411/5 08
Sample Nymber - Water				Sample Number - Soil:	MU10-15
Sample Matter		/			NW 10-74
	- June	<i>\$</i>			, , , , , , , , , , , , , , , , , , , ,
				,	
Sample Containers	 			Sample Containers:	2/20 ml
Sample Goritainers	H /		1		Clock
					PERSONNE
Procedure/Equipment	-			Procedure/Equipment:	MaseL
, 1000daro, Equipmone	1			• •	113
Water Description	. /			Soil Description:	50~27 SICT
, rate. Bessiption	**************************************			•	BROYNIMI
					Barry 1711 -
Sampling Equipment Decontamination (Y/N)	: 1		Sampling Equipment	Decontamination (Y/N):	y
			1		
Number Washes				Number Washes:	Live

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

2008 Monitoring Well Sampling Log (MW #1/2)

Site name:	CAM-4			
Date of sampling event:	AUG-19-16/	2008		
Names of samplers:	TFB			
Monitoring well ID:	MW-12			
Facility:	UMERSITE			
	Known I	Data		
Depth of installation* (m):	3.67			
Length of screened section (m):	1.03			
Depth to top of screen* (m):	0.68			
	Measured	Data		
Condition of well:	GEE MELOW			INTERPARE METER
Procedure/Equipment:	INTERFACE METER	Dep [.]	th to water surface (m):	1,53
Well height above ground (m):	0.66		Depth to bottom (m):	2.20
Diameter of well (m):	Z!'	Free p	roduct thickness (mm):	
Calculations			Notes	
	1 6	I	Evidence of sludge:	
Depth of water (h):	1 (1)	Evidor	nce of freezing/siltation:	
Well volume of water (L):	1001	Lvidei	ice of freezing/sittation.	
Static water level* (m):	0,86			
Length of screen collecting water (m):	Development/Purgi	ng Information		
Equipment:	MAILEIL	ng mormation		
Equipment	1)AICOIC			
Date & Time Volume Removed (L)	Temperature (°C) pH	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water
11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 5 6 1 1/LY			
16-AD6-08 July 1140L	1 So Field	2474 NETO	ME COLL	The second of th
Water Samplin	ng		Soil Sampling	
Date & Time Collected:	16-A66-08	. Da	ate and Time Collected:	14-A6-08
Sample Number - Water	1.00		Sample Number - Soil:	MW12-19
Makey in cellin	NW-12	4 0		M4/2-20
En non 170 Minut		Refusal a	+) +j .	-
SAND Pack ? @ cost lings		very mile	A 017-	
Sample Containers	3 520 X AMBY		Sample Containers:	2/250MC
				clear
	2000			NER SAMPLE
Procedure/Equipment	BAUSH		Procedure/Equipment:	TROWEL
	A Marian			
Water Description	closely GREY		Soil Description:	DANNY
	151/17/1			Some Charles
	chemich odlar			\$ 3 ft has \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
Sampling Equipment Decontamination (Y/N)		Sampling Equipment	Decontamination (Y/N):	<u> </u>
Number Washes			Number Washes:	Z
Number Rinses	5		Number Rinses:	7

n/a=not applicable

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

			13	ATT	en	4	M	Alr	l	11.	31	1 V			
		-	11.0		^		A	WX		100	12	V	11	out X	
		- 1	HK	MW	AL			KN	77	130	1	1	V		V
				1		4		4.4				110			
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Appendix D

Lower Site Non-hazardous Waste Landfill

- D1 Site Condition/Visual Inspection Records
- D2 Geotechnical Inspection Photographic Records
- D3 Field Notes



D1 – Site Condition/Visual Inspection Records



D2 – Geotechnical Inspection Photographic Records

D3 - Field Notes

Appendix E

Lower Site Landfill

- E1 Site Condition/Visual Inspection Records
- E2 Geotechnical Inspection Photographic Records
- E3 Monitoring Photographic Records
- E4 Monitoring Well Sampling Records
- E5 Thermistor Maintenance Records
- E6 Thermistor Graphs
- E7 Field Notes



E1 – Site Condition/Visual Inspection Records



E2 – Geotechnical Inspection Photographic Records



E3 – Monitoring Photographic Records



E4 – Monitoring Well Sampling Records



E5 – Thermistor Maintenance Records



E6 – Thermistor Graphs

E7 – Field Notes	E7 -	Fie	ble	No	tes
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Appendix F

Laboratory Reports

Appendix G

Quality Assurance/Quality Control

- Table G1 Soil Sampling QA/QC Results
- Table G2 Water Sampling QA/QC Results