

Aug. 14/08

- TIER II LANDFILL (TII)
- STARTED INSPECTION @ 12:30PM
- PANORAMIC PHOTO OF TIER II
LF FACING EAST FROM
RAISED GRAVEL PAD (WP 3)
↳ PHOTO 4, 5 & 6 (PANORAMIC)
(TIER II PHOTO LOC. 10)
- WAYPOINT 4 (NW CORNER OF LF)
 - PHOTO 7 (FACING EAST ALONG
CROSS)
 - PHOTO 7 (FACING SOUTH
ALONG CROSS)
(TIER II PHOTO LOC. 1)
- WAYPOINT 5 (NE CORNER OF LF)
 - PHOTO 8 (FACING WEST)
 - PHOTO 9 (FACING SW)
 - PHOTO 10 (FACING SOUTH)
(TIER II PHOTO LOC. 2)
- WAYPOINT 6 (NORTH SIDE)
 - PHOTO 11 & 12 (PANORAMIC)
(TIER II PHOTO LOC. 3)

- TIER II (PAGE 2)

- WAYPOINT 7 (NE TOE)

- SOME SEEPAGE AT TOE
WITH SOME ORANGE STAINING

- SOME WATER DRAINAGE
ALONG ROAD AT TOE

- PHOTO 13 (SEEPAGE FROM TOE)

- PHOTO 14 (NUT SLOPE/CORNER)
(TIER II PHOTO LOC. 4)

- WAYPOINT 10 (SE CRUST CORNER)

- PHOTO 15 (FACING NORTH)

- PHOTO 16 (FACING WEST)

- SOME COARSE ROCKFILL
ALONG CRUST EDGE BUT
DO NOT APPEAR TO BE TENSION
CRACKS

(TIER II PHOTO LOC. 5)

- WAYPOINT 9 (SE TOE)

- PHOTOS 17 & 18 (PANORAMIC)

- SOME WATER SEEPING OUT
OF SLOPE FACE, NO STAINING
(TIER II PHOTO LOC. 6)

- TIER II (PAGE 3)

- WAYPOINT 8 (SOUTH FACE FROM SE TOE)

- PHOTO 19 (FACING WEST)

- SOME SEEPAGE FROM SOUTH
SLOPE AND MINOR PONDING
AT TOE, NO STAINING
(TIER II PHOTO LOC. 7)

- WAYPOINT 11 (SOUTH FACE FROM SW TOE)

- PHOTO 20 (FACING EAST)
(TIER II PHOTO LOC. 8)

- WAYPOINT 12 (SW CORNER CRUST)

- PHOTO 21 (FACING EAST)

- PHOTO 22 (FACING NORTH)
(TIER II PHOTO LOC. 9)

- SOME PONDING WATER ALONG TOE

- NO STAINING OBSERVED

OVERALL LANDFILL PERFORMANCE

- ACCEPTABLE, NO SETTLEMENT,
EROSION, TENSION CRACKS OBSERVED

- SOME SEEPAGE WITH STAINING AT
NORTHEAST TOE

BMW-3

2008 Monitoring Well Sampling Log (MW# ~~5~~)

Site name:		CAM-4				
Date of sampling event:		AUG-19-16/2008				
Names of samplers:		TFB				
Monitoring well ID:		BMW-3				
Facility:		UPPER SITE				
Known Data						
Depth of installation* (m):		3.45				
Length of screened section (m):		2.03				
Depth to top of screen* (m):		0.46				
Measured Data						
Condition of well:		GOOD		Procedure/Equipment:		INTERFACE METER
Procedure/Equipment:		INTERFACE METER		Depth to water surface (m):		0.42
Well height above ground (m):		0.76		Depth to bottom (m):		2.29
Diameter of well (m):		2"		Free product thickness (mm):		—
Calculations						
Depth of water (m):		0.42 + 0.46 = 0.88		Evidence of sludge:		—
Well volume of water (L):		7.60		Evidence of freezing/siltation:		—
Static water level* (m):		0.16				
Length of screen collecting water (m):		2.03 + 0.46 = 1.03				
Development/Purging Information						
Equipment:		BAILER				
Date & Time	Volume Removed (L)	Temperature (°C)	pH	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water
16-AUG-08	3.0L	2.81	8.73	0.404	—	Silty, Grayish brown, N/O
Water Sampling				Soil Sampling		
Date & Time Collected:		16-AUG-08		Date and Time Collected:		14-AUG-08
Sample Number - Water:		BMW-3		Sample Number - Soil:		BMW-3-15
						BMW-3-16
						BMW-3-40
Sample Containers:		3 200 mL		Sample Containers:		2/200 mL
		2 WGS				Clear
						PER SAMPLE
Procedure/Equipment:		BAILER		Procedure/Equipment:		TROWEL
Water Description:		Silty, Grayish Brown, N/O		Soil Description:		Gravelly silty Gravelly, silty grayish Brown
Sampling Equipment Decontamination (Y/N):		Y		Sampling Equipment Decontamination (Y/N):		Y
Number Washes:		1		Number Washes:		2
Number Rinses:		2		Number Rinses:		2

n/a=not applicable

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



Gartner Lee

2008 Monitoring Well Sampling Log (MW #15)

Site name:	CAM-4					
Date of sampling event:	AUG - 19 - 16/2008					
Names of samplers:	TFB					
Monitoring well ID:	MW-15					
Facility:	UPPER SITE					
Known Data						
Depth of installation* (m):	3.25					
Length of screened section (m):	1.97					
Depth to top of screen* (m):	0.33					
Measured Data						
Condition of well:	GOOD	Procedure/Equipment:	INTERFACE METER			
Procedure/Equipment:	INTERFACE METER	Depth to water surface (m):	0.95			
Well height above ground (m):	0.51	Depth to bottom (m):	2.45			
Diameter of well (m):	2"	Free product thickness (mm):				
Calculations						
Depth of water (m):	-0.45	Evidence of sludge:				
Well volume of water (L):	4.00	Evidence of freezing/siltation:				
Static water level* (m):	-0.06					
Length of screen collecting water (m):	1.61					
Development/Purging Information						
Equipment:	PERISTALTIC PUMP					
Date & Time	Volume Removed (L)	Temperature (°C)	pH	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water
16-AUG-08	4.5 L	2.08	6.31	0.846	13.5	Clear, slightly yellow, chemical odor
Water Sampling			Soil Sampling			
Date & Time Collected:	16 AUG-08		Date and Time Collected:	14 AUG-08		
Sample Number - Water:	DOP → MW-15 MW-150		Sample Number - Soil:	MW 15-15 MW 15-25		
Sample Containers:	6 500mL Amber 4 JUC'S 1 METALS (60mL)		Sample Containers:	2/200mL Clear METAL SAMPLE		
Procedure/Equipment:	PERISTALTIC PUMP		Procedure/Equipment:	TROWEL		
Water Description:	Clear, slightly yellow, chemical odor		Soil Description:	Silty Gravel Till		
Sampling Equipment Decontamination (Y/N):	Y		Sampling Equipment Decontamination (Y/N):	Y		
Number Washes:	2		Number Washes:	2		
Number Rinses:	2		Number Rinses:	2		

n/a=not applicable

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2008 Monitoring Well Sampling Log (MW #11-A)

1.74

Site name:	CAM-4				
Date of sampling event:	AUG-14-16/2008				
Names of samplers:	TFB				
Monitoring well ID:	MW-14-A				
Facility:	UPPER SITE				
Known Data					
Depth of installation* (m):	4.66				
Length of screened section (m):	2.03				
Depth to top of screen* (m):	1.67				
Measured Data					
Condition of well:	GOOD	Procedure/Equipment:	INTERFARE METER		
Procedure/Equipment:	INTERFARE METER	Depth to water surface (m):	1.07		
Well height above ground (m):	0.51	Depth to bottom (m):	2.47		
Diameter of well (m):	2"	Free product thickness (mm):			
Calculations					
Depth of water (m):	1.07	Evidence of sludge:			
Well volume of water (L):	2.80	Evidence of freezing/siltation:			
Static water level* (m):	0.56				
Length of screen collecting water (m):	0.79				
Development/Purging Information					
Equipment:	PERISTALTIC PUMP				
Date & Time	Volume Removed (L)	Temperature (°C)	pH	Conductivity (µS/cm)	Turbidity (NTU)
16-AUG-08	3.0L	1.01	6.73	0.45	WELL BEGAN TO COOL TO 60°F → PRESSURE IN FLOW THROUGH CELL
Water Sampling			Soil Sampling		
Date & Time Collected:	16-AUG-08		Date and Time Collected:	16-AUG-08	
Sample Number - Water:	MW-17-A		Sample Number - Soil:	MW 14-A-15 MW 14-A-30 MW 14-A-30 MW 14-A-30	
Sample Containers:	3 500mL AMPHET 2 VOLS		Sample Containers:	2/250mL Clear-CANES 2/250mL Clear-ESG PER SAMPLE	
Procedure/Equipment:	PERISTALTIC PUMP		Procedure/Equipment:		
Water Description:	Slightly cloudy clear, V/O		Soil Description:	SANDY SILT Till, Brown O/R	
Sampling Equipment Decontamination (Y/N):	Y		Sampling Equipment Decontamination (Y/N):	Y	
Number Washes:	2		Number Washes:	2	
Number Rinses:	2		Number Rinses:	2	

n/a=not applicable

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

2008 Monitoring Well Sampling Log (MW #16)

Site name:		CAM-4					
Date of sampling event:		AUG-19-16 / 2008					
Names of samplers:		TFB					
Monitoring well ID:		MW-16					
Facility:		UPPER SITE					
Known Data - DATA NOT AVAILABLE							
Depth of installation* (m):							
Length of screened section (m):							
Depth to top of screen* (m):							
Measured Data							
Condition of well:		GOOD		Procedure/Equipment:		INTERFACE METER	
Procedure/Equipment:		INTERFACE METER		Depth to water surface (m):		1.34	
Well height above ground (m):		0.60		Depth to bottom (m):		3.00	
Diameter of well (m):		2"		Free product thickness (mm):			
Calculations							
Depth of water (m):		1.34		Evidence of sludge:		_____	
Well volume of water (L):		3.30		Evidence of freezing/siltation:		_____	
Static water level* (m):		0.74					
Length of screen collecting water (m):							
Development/Purging Information							
Equipment:		BAILER					
Date & Time	Volume Removed (L)	Temperature (°C)	pH	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water	
16-AUG-08	4.0 L	1.70	6.90	0544	54.0	C/C, Sheen on water Hydrocarbon colour	
Water Sampling				Soil Sampling			
Date & Time Collected:		16-AUG-08		Date and Time Collected:		14-AUG-08	
Sample Number - Water:		MW-16		Sample Number - Soil:		MW 16-15 MW 16-90	
						Refused @ 90cm	
Sample Containers:		3 FROM ANTERIOR 2 LIX'S		Sample Containers:		2 / 250 mL Clear PER SAMPLE	
Procedure/Equipment:		BAILER		Procedure/Equipment:		TROWEL	
Water Description:		C/C, Sheen on TOP OF WATER Hydrocarbon colour		Soil Description:		Sandy silt Till Brown DARK	
Sampling Equipment Decontamination (Y/N):		Y		Sampling Equipment Decontamination (Y/N):		Y	
Number Washes:		2		Number Washes:		3	
Number Rinses:		3		Number Rinses:		3	

n/a=not applicable

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2008 Monitoring Well Sampling Log (MW # 8)

Site name:		CAM-4	
Date of sampling event:		AUG-14-16/2008	
Names of samplers:		TFB	
Monitoring well ID:		MW-8	
Facility:		UPPER SITE	
Known Data			
Depth of installation* (m):		4.08	
Length of screened section (m):		2.01	
Depth to top of screen* (m):		0.97	
Measured Data			
Condition of well:		GOOD	
Procedure/Equipment:		INTERFACE METER	
Well height above ground (m):		0.97	
Diameter of well (m):		2"	
Procedure/Equipment:		INTERFACE METER	
Depth to water surface (m):		0.97	
Depth to bottom (m):		2.45	
Free product thickness (mm):		—	
Calculations		Notes	
Depth of water (m):		Evidence of sludge:	
Well volume of water (L):		Evidence of freezing/siltation:	
Static water level* (m):		—	
Length of screen collecting water (m):		—	
Development/Purging Information			
Equipment: PERISTALTIC PUMP			
Date & Time	Volume Removed (L)	Temperature (°C)	pH
16-AUG-08	3.0L	3.70	7.01
		Conductivity (µS/cm)	Turbidity (NTU)
		1.15 mS/cm	10.7
		Description of Water	
		C/L strong chemical odor	
Water Sampling		Soil Sampling	
Date & Time Collected:		Date and Time Collected:	
16-AUG-08		14-AUG-08	
Sample Number - Water:		Sample Number - Soil:	
MW-8		MW8-10	
		MW8-20	
Sample Containers:		Sample Containers:	
3 500 mL AMMERS		2 / 250 mL	
2 100 mL		Clear	
Procedure/Equipment:		Procedure/Equipment:	
PERISTALTIC PUMP		TROWER	
Water Description:		Soil Description:	
C/L strong chemical odor		Sandy silt Till brown DTPC GRNCLY	
Sampling Equipment Decontamination (Y/N):		Sampling Equipment Decontamination (Y/N):	
Y		Y	
Number Washes:		Number Washes:	
1		2	
Number Rinses:		Number Rinses:	
2		3	

n/a=not applicable

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2008 Monitoring Well Sampling Log (MW # 9)

Site name: <u>CAM-4</u>						
Date of sampling event: <u>AUG-14-16/2008</u>						
Names of samplers: <u>TFB</u>						
Monitoring well ID: <u>MW-9</u>						
Facility: <u>UPPER SITE</u>						
Known Data						
Depth of installation* (m):	<u>3.32</u>					
Length of screened section (m):	<u>2.01</u>					
Depth to top of screen* (m):	<u>0.40</u>					
Measured Data						
Condition of well:	<u>GOOD</u>					
Procedure/Equipment:	<u>INTERFACE METER</u>					
Well height above ground (m):	<u>0.33</u>					
Diameter of well (m):	<u>2"</u>					
Procedure/Equipment:	<u>INTERFACE METER</u>					
Depth to water surface (m):	<u>0.29</u>					
Depth to bottom (m):	<u>1.89</u>					
Free product thickness (mm):	<u>—</u>					
Calculations						
Depth of water (m):	<u>0.29 m bT</u>					
Well volume of water (L):	<u>3.20</u>					
Static water level* (m):	<u>-0.04</u>					
Length of screen collecting water (m):	<u>1.16</u>					
Notes						
Evidence of sludge:	<u>—</u>					
Evidence of freezing/siltation:	<u>—</u>					
Development/Purging Information						
Equipment: <u>PERISTALTIC PUMP</u>						
<u>FORCED DLY</u>						
Date & Time	Volume Removed (L)	Temperature (°C)	pH	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water
<u>15-AUG-08</u>	<u>4.2L</u>	<u>2.62</u>	<u>11.34</u>	<u>1.06 ms/cm</u>	<u>41.3</u>	<u>CL Chemical odour</u>
Water Sampling				Soil Sampling		
Date & Time Collected:	<u>16-AUG-08</u>	Date and Time Collected:	<u>19-AUG-08</u>			
Sample Number - Water:	<u>MW 9</u>	Sample Number - Soil:	<u>MW 9-15</u>			
	<u>1.01 m bT</u>		<u>MW 9-25</u>			
			<u>Refusal @ 25cm</u>			
Sample Containers:	<u>3 500ml AMBERS</u> <u>2 VIALS</u>	Sample Containers:	<u>2/500ml</u> <u>clear</u> <u>PER SAMPLE</u>			
Procedure/Equipment:	<u>PERISTALTIC PUMP</u>	Procedure/Equipment:	<u>TROVEL</u>			
Water Description:	<u>CL</u> <u>Chemical odour</u>	Soil Description:	<u>SANDY SILT</u> <u>TILL, GRAVELY</u> <u>Brown, DPL</u>			
Sampling Equipment Decontamination (Y/N):	<u>Y</u>	Sampling Equipment Decontamination (Y/N):	<u>Y</u>			
Number Washes:	<u>1</u>	Number Washes:	<u>2</u>			
Number Rinses:	<u>1</u>	Number Rinses:	<u>3</u>			

n/a=not applicable

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2008 Monitoring Well Sampling Log (MW # 5)

Site name: <u>CAM-4</u>																				
Date of sampling event: <u>AUG-19-16/2008</u>																				
Names of samplers: <u>TFB</u>																				
Monitoring well ID: <u>MW-5</u>																				
Facility: <u>UNDER SITE</u>																				
Known Data																				
Depth of installation* (m):	<u>3.60</u>																			
Length of screened section (m):	<u>2.03</u>																			
Depth to top of screen* (m):	<u>0.60</u>																			
Measured Data																				
Condition of well:	<u>GOOD</u>																			
Procedure/Equipment:	<u>INTERFACE METER</u>																			
Well height above ground (m):	<u>0.60</u>																			
Diameter of well (m):	<u>2"</u>																			
Procedure/Equipment:	<u>INTERFACE METER</u>																			
Depth to water surface (m):	<u>1.17 m b/d</u>																			
Depth to bottom (m):	<u>3.25 m b/d</u>																			
Free product thickness (mm):																				
Calculations																				
Depth of water (m):	<u>1.17 m b/d</u>																			
Well volume of water (L):	<u>4.20</u>																			
Static water level* (m):	<u>0.57</u>																			
Length of screen collecting water (m):	<u>2.05</u>																			
Notes																				
Evidence of sludge:	<u>---</u>																			
Evidence of freezing/siltation:	<u>---</u>																			
Development/Purging Information																				
Equipment:	<u>PERMEABLE PUMP</u>																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Date & Time</th> <th>Volume Removed (L)</th> <th>Temperature (°C)</th> <th>pH</th> <th>Conductivity (µS/cm)</th> <th>Turbidity (NTU)</th> <th>Description of Water</th> </tr> </thead> <tbody> <tr> <td><u>19-AUG-08</u></td> <td><u>4.80</u></td> <td><u>2.05</u></td> <td><u>7.32</u></td> <td><u>0.887</u></td> <td><u>6.1</u></td> <td><u>CAC</u> <u>SLIGHT chemical odor</u></td> </tr> </tbody> </table>							Date & Time	Volume Removed (L)	Temperature (°C)	pH	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water	<u>19-AUG-08</u>	<u>4.80</u>	<u>2.05</u>	<u>7.32</u>	<u>0.887</u>	<u>6.1</u>	<u>CAC</u> <u>SLIGHT chemical odor</u>
Date & Time	Volume Removed (L)	Temperature (°C)	pH	Conductivity (µS/cm)	Turbidity (NTU)	Description of Water														
<u>19-AUG-08</u>	<u>4.80</u>	<u>2.05</u>	<u>7.32</u>	<u>0.887</u>	<u>6.1</u>	<u>CAC</u> <u>SLIGHT chemical odor</u>														
Water Sampling				Soil Sampling																
Date & Time Collected:		<u>19-AUG-08</u>		Date and Time Collected:		<u>19-AUG-08</u>														
Sample Number - Water:		<u>MW-5</u>		Sample Number - Soil:		<u>MW 5-10</u> <u>MW 5-25</u>														
Sample Containers:		<u>2 500 mL bottles</u> <u>2 100 mL vials</u>		Sample Containers:		<u>2 / 250 mL</u> <u>Clear</u> <u>PER SAMPLE</u>														
Procedure/Equipment:		<u>PERMEABLE PUMP</u>		Procedure/Equipment:		<u>TROVEL</u>														
Water Description:		<u>CAC</u> <u>Slight chemical odor</u>		Soil Description:		<u>SANDY SILT</u> <u>FINE, GRAVELLY</u> <u>BROWN MTL</u>														
Sampling Equipment Decontamination (Y/N):		<u>Y</u>		Sampling Equipment Decontamination (Y/N):		<u>Y</u>														
Number Washes:		<u>1</u>		Number Washes:		<u>4</u>														
Number Rinses:		<u>2</u>		Number Rinses:		<u>4</u>														

n/a=not applicable

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Gartner

VT-8 DOWNLOADED AT 4:55AM

BAT. MAIN 11.34V
 AUX 13.02V

CHANNEL	TEMP (°C)
1	11.33
2	9.42
3	4.93
4	3.17
5	0.201
6	-1.84
7	-3.60
8	-4.82
9	-5.73
10	-6.57

- CHECKED PROGRAMMING
- UPDATED CLK AND "STOP WHEN FULL"
- RESTARTED DATA LOGGING

WEATHER / TEMP. \Rightarrow VERN WINDY,
 $\sim 0^{\circ}\text{C}$, COLO

VT-5 DOWNLOADED AT 5:10AM

BAT. MAIN 11.34V
 AUX 13.14V

CHANNEL	TEMP (°C)
1	8.43
2	10.86
3	3.37
4	1.41
5	-0.51
6	-2.31
7	-3.42
8	-4.44
9	-5.50
10	-6.35
11	-7.13
12	-7.86
13	-8.02

- CHECKED PROGRAMMING
- UPDATED CLK & "STOP WHEN FULL"
- RESTARTED DATA LOGGING

VT-6 DOWNLOADED AT 5:25 PM
 BATTERY MAIN 11.34V
 AUX 13.02V

CHANNEL	TEMP (°C)
1	9.92
2	9.44
3	4.86
4	3.09
5	0.201
6	-1.45
7	-3.00
8	-4.26
9	-5.36
10	-5.58

- CHECKED PROGRAMMING
- CHANGED CLOCK & "STOP WHEN FULL"
- RESTARTED DATA LOGGER

VT-7 DOWNLOADED AT 5:40 PM
 BATTERY MAIN 11.34V
 AUX 13.14V

CHANNEL	TEMP (°C)
1	4.55
2	2.36
3	-0.39
4	-1.98
5	-3.32
6	-4.48
7	-5.45
8	-6.49
9	-7.39
10	-8.14
11	-8.69
12	-9.25
13	-9.65
14	-9.98
15	-9.78
16	-9.40

- CHECKED PROGRAMMING
- CHANGED/UPDATED CLOCK AND
 CHECKED "STOP WHEN FULL"
- RESTARTED DATA LOGGER