

2011 SEMIANNUAL REPORT – FINAL REPORT

**Landfill Leak Detection Systems
Coldwater Road Landfill
Flint, Michigan
MID 005 356 860**


**RACER TRUST
Ypsilanti, Michigan**

August 2011

**Landfill Leak Detection System
Coldwater Road Landfill
Flint, Michigan
MID 005 356 860**

Prepared for:

**RACER TRUST
Ypsilanti, Michigan**



**SCOTT L. CORMIER, P.E.
VICE PRESIDENT
O'BRIEN & GERE**



August 31, 2011

Mr. Richard Conforti, P.E.

Environmental Engineer
Michigan Department of Environmental Quality
Waste and Hazardous Material Division
P.O. Box 30241
Lansing, Michigan 48909-7741

RE: Landfill Leak Detection System 2011 Semiannual Report
Coldwater Road Landfill, Flint, Michigan
MID 005 356 860

FILE: 15388 /47850/rep

Dear Mr. Conforti:

On behalf of Revitalizing Auto Communities Environmental Response Trust (RACER), O'Brien & Gere is pleased to present the results of the 2011 semiannual leak detection system (LDS) sampling event conducted in June 2011 for the Coldwater Road Landfill site (Figure 1). Samples from six leak detection vaults (A through F) and six leachate collection sumps (A through F) were collected on June 20, 2011 for laboratory analysis. The analytical sample for Vault D was not collected during the initial sampling due to low liquid level in the vault (*i.e.*, the vault was "dry" with only a little moist sediment on the bottom of the vault), but was collected during the re-sampling of the vaults on July 14, 2011. The samples were analyzed for total organic carbon (TOC, Method 415.1), total suspended solids (TSS, Method 160.2), specific conductivity (Method 120.1), and dissolved chromium (Cr), dissolved copper (Cu), dissolved nickel (Ni) and dissolved zinc (Zn, Method 200.8); expect for Vault D which was only analyzed for the dissolved metals. Samples collected from sumps A through F were also analyzed for volatile organic compounds (VOCs, Method 8260). The event also included field measurements for pH, specific conductivity and temperature.

The analytical results are summarized in four attached tables: Landfill Leak Detection Vaults – Historical Analytical Results, Inorganics and Metals (Table 1), Landfill Leachate Sumps – Historical Analytical Results, Inorganics and Metals (Table 2), Landfill Leachate Sumps – Analytical Results, Volatile Organic Compounds (Table 3), and Leachate Sump Depth to Water (Table 4). A Site Location Map (Figure 1) and Landfill Site Layout (Figure 2) are also attached. The Analytical Laboratory Report and the Chain of Custody are included as (Appendix A). The samples for the leak detection vaults and leachate sumps were collected on June 20, 2011 using a peristaltic pump and tubing for each vault and sump. Duplicate samples were collected from Vault C and Sump C. Samples were placed directly into laboratory prepared containers, logged onto a chain of custody form and placed on ice for transport to Merit Laboratories, Inc., in East Lansing, Michigan.

Chromium spiked, as defined in the decision tree of the Post Closure Care Plan that specifies a spike as a result greater than the mean plus one standard deviation, or was at elevated concentrations in the LDS vaults and the monitoring wells at the site during the recent LDS and groundwater monitoring sampling events. Furthermore, chromium spiked during the last sampling event and has spiked more often recently than in past sampling events. However, there were no other spikes or significant upward trends for the remaining inorganic constituents (copper, nickel, and zinc) in samples analyzed from the

vaults during this or other sampling events, for which there was no apparent reason. In particular, because upon re-sampling the analyses were non-detect for chromium.

At the request of O'Brien & Gere, Merit Laboratories conducted research utilizing the remaining portions of the site's groundwater samples that were still at the laboratory, and determined that the samples contain high levels of carbon (in the low part per million range) in comparison to the chromium concentrations at the site. Carbon has an isotope (*i.e.*, atomic weight) of 12. The carbon is likely the result of natural organic material decay within the landfill that is releasing carbon. Argon gas, which is used as a carrier gas by the laboratory analyzing instrument, has an isotope of 40. When added together, they result in 52, which is the method recommended isotope value used for the identification of chromium. Therefore, the sample concentrations were calculated using the Chromium-52 isotope identification value, and those concentrations, a sum of the chromium and argon/carbon combination, were originally reported by the laboratory. The laboratory re-analyzed the groundwater samples on two different instruments utilizing digested and non-digested sample aliquots, and confirmed the reported chromium results were greater than the actual chromium concentrations due to carbon interference. The USEPA Method 200.8, recommends not digesting samples for dissolved metals analysis. However, for future sampling events, we propose to alter the current USEPA 200.8 method to include digestion to reduce the carbon levels within the samples, and reduce the potential for the laboratory reporting non-representative high concentrations for the chromium analysis. The spikes in chromium concentrations will continue to be reviewed during future sampling events.

O'Brien & Gere recommends that for the last sampling event that only the re-sample results be utilized, and for sampling events with non-detect or lower concentration re-sample results that the database and statistical analysis only include the re-sample results for the vaults. Table 1 contains both the sample and re-sample results for this event; however, the rest of the discussion of results for this report only considers the re-sample results and assuming that the MDEQ agrees with our proposal the database will be modified for the next submittal to only show the re-sample results.

The laboratory analysis for TOC, TSS, dissolved metals, and the field parameters continue to show historically consistent concentrations for the vaults and sumps (Tables 1 and 2). A review of the analytical data presented in the attached tables indicates analytical results similar to previous sampling events with the following exceptions:

VAULTS:

- Chromium concentrations were not detected
- Copper concentrations were not detected
- Nickel concentrations stayed similar or increased, but were similar to historic concentrations
- Zinc concentrations stayed similar or increased, but were similar to historic concentrations
- TOC concentrations stayed similar or decreased, but were consistent with historical results
- TSS concentrations decreased; except in Vault E and Vault F where TSS concentrations increased
- pH stayed similar or increased slightly
- Specific conductivity stayed similar or decreased; except in Vault C and F where specific conductivity increased

SUMPS:

- Chromium concentrations decreased in Sumps D, E, and F; and increased in Sumps A, B, and C
- Copper concentrations decreased in Sumps A, C and D; and increased in Sumps B, E and F

- Nickel concentrations increased; except in Sumps A and D where nickel decreased
- Zinc concentrations decreased; except in Sump F where zinc increased
- TOC concentrations stayed similar or decreased; except in Sumps E where TOC increased
- TSS concentrations decreased in Sumps A, E, and F; and increased in Sumps B, C, and D
- pH remained similar or increased slightly; except in Sump F where pH decreased
- Specific conductivity decreased; except in Sumps E and F where specific conductivity increased

The duplicate samples collected this sample event from Vault C and Sump C exhibited values consistent with the original results.

There were no exceedances of the Shewart control limits (SCL) during this sampling event (Appendix B). Because chromium was not detected in the re-samples, and there were no other spikes or significant upward trends for the remaining inorganic constituents (copper, nickel, and zinc) in samples analyzed from the vaults during this sampling event, it suggests there was not a release from the landfill.

The next semiannual sampling event will be completed in November 2011. If you have any questions, please feel free to contact either of us at (248) 477-5701.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.



Scott L. Cormier, PE
Vice President

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.



Clifford S. Yantz
Technical Associate

cc: David Favero – RACER Trust
Kevin Schneider – O'Brien & Gere

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

On Behalf of RACER Trust



Scott L. Cormier, P.E.
Agent for RACER Trust

Vice President – O'Brien & Gere Engineers, Inc.

Title

August 31, 2011

Date

cc: file

TABLES

Table 1
Coldwater Road Landfill Facility
Landfill Leak Detection Vaults - Historical Analytical Results
Inorganics and Metals

Vault	Sample Date	Indicator Parameters					Dissolved Metals (ug/L)			
		TOC (mg/L)	TSS (mg/L)	pH	SpC	T	Cr	Cu	Ni	Zn
		MDEQ Residential Drinking Water Criteria & RBSLs					100 (A)	1,000 (E)	100 (A)	2,400
A	23-Mar-95	4.6	<1	7.5	690	--	<20	<20	<40	180
	20-Jun-95	8.9	2.0	6.8	1900	--	24	21	<30	<20
	30-Aug-95	8.2	2.0	6.9	2000	--	<20	<20	<40	<20
	28-Nov-95	9.1	<1	7.0	1900	--	23	31	43	24
	27-Mar-96	140.0	<10	7.2	2000	--	<20	<20	46	<20
	18-Jun-96	12.0	<10	6.9	2000	--	<20	<20	<20	<20
	20-Aug-96	32.0	<5	7.1	1900	--	<20	<20	<20	30
	11-Nov-96	18.0	5.0	7.1	2000	--	<20	<20	30	60
	19-Feb-97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9-May-97	13.0	17.0	6.7	1940	9.7	<10	<10	71	90
	12-Aug-97	6.0	4.0	6.0	1810	12.8	<10	<10	88	60
	15-Nov-97	8.0	12.0	6.5	2000	12.0	<10	10	125	100
	9-Feb-98	6.0	8.0	6.4	1960	11.5	<10	<10	73	60
	14-May-98	12.0	15.0	6.9	1760	17.4	<10	20	13	200
	14-Aug-98	5.0	6.0	6.7	--	--	<10	<10	15	160
	13-Nov-98	5.0	12.0	6.5	1990	16.5	<10	<10	20	220
	19-Mar-99	5.7	8.0	6.8	1334	13.6	<10	10	14	60
	6-May-99	5.6	16.0	6.9	3250	26.2	<10	<10	15	20
	23-Jul-99	5.7	3.0	6.3	1470	18.9	<5	9	13	19
	22-Oct-99	5.0	3.0	5.9	1750	12.1	<10	<10	16	30
	14-Mar-00	5.6	<1	7.6	1410	10.7	<10	<10	15	20
	20-Jun-00	7.0	3.0	6.9	1410	18.3	<10	<10	12	20
	13-Sep-00	5.9	5.0	7.5	1650	15.1	<5	<10	14	20
	10-Nov-00	6.4	2.0	7.2	1470	11.8	<10	100	10	150
	12-Mar-01	6.0	1.0	7.4	1530	12.8	<10	<10	7	10
	24-May-01	9.4	10.0	7.6	1380	11.9	<10	<10	10	20
	31-Aug-01	5.3	10.6	7.5	1450	12.5	<5	<10	14	9
	16-Nov-01	5.1	3.0	6.8	1300	12.4	<10	<10	15	50
	8-Mar-02	NS	NS	NS	NS	NS	NS	NS	NS	NS
	31-May-02	2.4	54.0	7.2	1470	13.8	<10	<10	<5	40
	5-Sep-02	4.7	6.0	6.6	--	--	<5	<5	14	140
	12-Dec-02	NS	NS	NS	NS	NS	NS	NS	NS	NS
	18-Mar-03	6.7	8.0	6.8	1290	12	<5	<5	9	99
4-Jun-03	2.0	11.0	6.8	1370	11.3	<5	<5	10	<5	
5-Oct-03	NS	NS	NS	NS	NS	NS	NS	NS	NS	
8-Dec-03	NS	NS	NS	NS	NS	NS	NS	NS	NS	
27-Feb-04	NS	NS	NS	NS	NS	NS	NS	NS	NS	
30-Jun-04	4.5	55.0	7.0	1318	12.5	<5	<5	8	<5	
19-Nov-04	3.4	2.0	6.9	1120	11.4	6	<5	15	14	
Duplicate	19-Nov-04	4.4	4.0	--	--	6	<5	18	16	
	15-Jun-05	6.0	8.0	6.0	1640	13.4	<5	13	21	
Re-sample	17-Jan-06	5.9	12785	10.0	1630	8.4	<5	13	8	
	14-Feb-06	--	--	7.9	1800	8.5	--	14	--	
	29-Jun-06	NS	NS	NS	NS	NS	NS	NS	NS	
	28-Nov-06	4.7	438	7.7	1940	13.2	<5	13	6	
	6-Jun-07	4.9	11	6.8	1990	11.7	13	4	8	
	12-Nov-07	5.9	70	6.8	2030	12.4	4	5	11	
	24-Jun-08	5.0	371	6.9	2060	13.3	<5	<1	25	5
	17-Nov-08	5.8	23	6.1	2060	9.2	<5	<1	22	<5
	23-Jun-09	5.5	88	7.0	2050	13.6	<5	11	27	36
	17-Nov-09	6	8	7.1	2090	10.3	<5	<4	22	7
	14-Jun-10	6	10	7.1	2070	13.1	8	<4	16	6
Re-sample	20-Jun-11	6.7	9	7.3	2010	12.2	30	<4	27	39
	14-Jul-11	--	--	--	--	--	<5	--	--	--

See notes on page 6.

Table 1
Coldwater Road Landfill Facility
Landfill Leak Detection Vaults - Historical Analytical Results
Inorganics and Metals

Vault	Sample Date	Indicator Parameters					Dissolved Metals (ug/L)				
		TOC (mg/L)	TSS (mg/L)	pH	SpC	T	Cr	Cu	Ni	Zn	
		MDEQ Residential Drinking Water Criteria & RBSLs					100 (A)	1,000 (E)	100 (A)	2,400	
B	23-Mar-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	20-Jun-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	30-Aug-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	28-Nov-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	27-Mar-96	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	18-Jun-96	11.0	<10	6.9	1900	--	<20	<20	<20	<20	
	20-Aug-96	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	11-Nov-96	17.0	66.0	7.0	1600	--	<20	<20	20	40	
	19-Feb-97	7.0	4	7.1	1590	8.9	<10	<10	43	20	
	7-May-97	7.0	4	6.5	1930	13.8	<10	<10	45	20	
	12-Aug-97	5.0	3.0	6.5	663	26.0	<10	<10	26	60	
	15-Nov-97	6.0	4.0	6.8	1400	11.0	<10	<10	96	50	
	9-Feb-98	7.0	8.0	6.6	1560	12.6	<10	<10	57	20	
	14-May-98	6.0	3.0	6.9	1490	11.2	<10	<10	14	30	
	14-Aug-98	4.0	7.0	6.6	--	--	<10	<10	10	14	
	13-Nov-98	6.0	18.0	6.3	1940	20.6	<10	10	17	80	
	19-Mar-99	4.2	6.0	6.5	817	14.2	<10	<10	5	<10	
	6-May-99	5.6	4.0	7.0	1330	26.2	<10	10	6	20	
	23-Jul-99	5.8	3.0	6.5	1070	16.2	<5	13	10	18	
	22-Oct-99	5.0	5.0	6.2	1440	11.0	<10	<10	16	20	
	14-Mar-00	6.6	<1	8.0	900	11.0	<10	<10	8	20	
	20-Jun-00	7.1	7.0	6.8	1120	17.3	<10	30	9	30	
	13-Sep-00	5.4	<1	7.4	1560	15.6	<5	10	8	20	
	10-Nov-00	6.8	1.0	7.1	1280	11.6	<5	40	14	90	
	12-Mar-01	5.2	5.0	7.4	1460	12.3	<10	<10	7	20	
	24-May-01	8.5	10.0	7.6	1280	13.0	<10	20	12	40	
	31-Aug-01	3.9	<1.3	7.8	1370	12.9	<5	<10	11	20	
	16-Nov-01	5.7	2.0	7.1	1230	13.1	<10	10	8	60	
	8-Mar-02	5.4	2.0	7.0	2400	8.5	<10	10	<5	70	
	31-May-02	5.1	3.0	7.2	1070	14.2	<10	<10	<5	20	
	5-Sep-02	4.8	4.0	6.7	--	--	<5	<5	8	84	
	12-Dec-02	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	18-Mar-03	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	4-Jun-03	5.5	3.0	7.0	1530	10.1	<5	<5	7	<5	
	5-Oct-03	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	8-Dec-03	4.7	2.0	7.1	1490	11.5	<5	6	5	35	
	8-Dec-03	4.7	7.0	--	--	--	<5	6	5	35	
	27-Feb-04	4.0	12.0	7.4	1380	12.3	<5	5	<5	16	
	30-Jun-04	4.1	396.0	7.0	1210	11.8	<5	12	7	<5	
	19-Nov-04	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	15-Jun-05	6.0	6.0	6.1	1560	12.8	<5	<5	14	20	
	1-Dec-05	4.7	<1	6.9	1310	9.1	<5	<5	8	50	
	Re-sample	14-Feb-06	--	--	7.7	1520	6.1	--	<4	--	--
	Duplicate	29-Jun-06	2.6	1.0	7.0	1050	13.9	<5	<4	5	8
		28-Nov-06	5.5	4.0	7.5	1380	13.0	<5	<4	8	11
Duplicate	28-Nov-06	4.7	--	7.2	1340	13.0	5	4	7	11	
	6-Jun-07	4.7	2.0	6.3	1670	12.1	9	6	13	16	
	12-Nov-07	3.8	1.0	6.9	1690	12.6	2	5	16	14	
	24-Jun-08	3.2	6.0	7.0	1880	14.0	<5	2	8	9	
	17-Nov-08	2.4	<1	6.9	1818	9.6	<5	2	8	15	
Duplicate	17-Nov-08	1.7	2.0	6.9	1820	9.6	<5	1	8	15	
	23-Jun-09	3.6	4.0	7.1	1780	13.3	<5	1	6	17	
	17-Nov-09	3	0	7.0	1970	10.9	<5	<4	9	17	
	14-Jun-10	3	2	6.9	1810	12.1	8	<4	5	20	
	8-Nov-10	4	3	6.9	1911	12.2	21	<4	11	17	
Re-sample	1-Dec-10	--	--	6.9	--	12.2	6	--	--	--	
	20-Jun-11	3.4	1	7.0	1496	12.2	28	<4	11	16	
Re-sample	14-Jul-11	--	--	--	--	--	<5	--	--	--	

See notes on page 6.

Table 1
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Landfill Leak Detection Vaults - Historical Analytical Results
Inorganics and Metals

Vault	Sample Date	Indicator Parameters					Dissolved Metals (ug/L)			
		TOC (mg/L)	TSS (mg/L)	pH	SpC	T	Cr	Cu	Ni	Zn
		MDEQ Residential Drinking Water Criteria & RBSLs					100 (A)	1,000 (E)	100 (A)	2,400
C	23-Mar-95	NS	NS	NS	NS	NS	NS	NS	NS	NS
	20-Jun-95	4.4	<1	7.4	530	--	25	25	<30	60
	30-Aug-95	3.7	<1	7.4	340	--	<20	<20	<40	74
	28-Nov-95	7.6	<1	7.0	2200	--	29	37	67	36
	27-Mar-96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	18-Jun-96	7.7	<10	6.9	2000	--	<20	<20	<20	<20
	20-Aug-96	8.3	<5	6.9	1900	--	<20	<20	<20	40
	11-Nov-96	16.0	9.0	7.0	2100	--	<20	<20	<20	80
	19-Feb-97	7.0	1.0	7.6	1610	9.0	<10	<10	45	30
	7-May-97	6.0	10.0	6.6	1730	12.5	<10	100	66	20
	8-Aug-97	4.0	13.0	6.3	1610	24.1	<10	<10	79	20
	15-Nov-97	6.0	4.0	6.7	2000	12.0	<10	<10	122	50
	9-Feb-98	8.0	4.0	6.5	1720	12.2	<10	<10	64	50
	14-May-98	6.0	3.0	6.9	1600	12.1	<10	<10	23	40
	14-Aug-98	6.0	5.0	6.8	--	--	<10	<10	23	40
	13-Nov-98	6.0	12.0	6.3	1760	21.4	<10	<10	21	30
	13-Nov-98	6.0	10.0	--	--	--	<10	<10	21	30
	19-Mar-99	6.3	2.0	7.0	1300	15.6	<10	<10	19	20
	6-May-99	6.1	8.0	6.9	1600	26.6	<10	10	20	20
	23-Jul-99	6.5	0.0	6.7	1370	17.3	<5	12	20	20
	22-Oct-99	6.4	5.0	6.6	1160	11.0	<10	<10	18	10
	14-Mar-00	6.5	1.0	7.8	1350	12.6	<10	<10	17	10
	20-Jun-00	6.0	4.0	6.9	1280	18.3	<10	140	19	170
	13-Sep-00	6.1	<1	7.6	1430	14.9	<5	<10	16	20
	10-Nov-00	10.6	4.0	6.8	1210	12.1	<10	<10	17	40
	12-Mar-01	6.3	4.0	7.7	1380	12.1	<10	<10	8	<10
	24-May-01	9.2	8.0	7.5	1410	13.3	<10	<10	17	30
	31-Aug-01	5.4	4.0	7.4	1530	13.1	<5	<10	16	20
	16-Nov-01	6.0	2.0	6.8	1170	13.2	<10	<10	15	60
	8-Mar-02	4.0	1.0	7.1	1680	11.3	<10	10	<5	20
	31-May-02	5.1	7.0	7.2	1280	14.2	<10	<10	14	40
	5-Sep-02	5.0	7.0	6.7	--	--	<5	<5	14	39
	12-Dec-02	4.2	7.0	6.9	1330	12.1	<5	<5	12	53
	18-Mar-03	5.7	4.0	6.8	1260	10.7	<5	<5	10	37
	4-Jun-03	4.4	6.0	6.9	1150	11.0	<5	<5	8	<5
	5-Oct-03	4.4	4.0	7.0	1230	13.6	<5	<5	14	28
	8-Dec-03	3.8	6.0	7.1	1520	11.6	<5	11	14	63
	27-Feb-04	4.6	1.0	7.4	1410	12.1	<5	<5	12	36
	30-Jun-04	3.7	14.0	7.0	1008	12.2	<5	<5	12	8
	19-Nov-04	4.3	4.0	6.9	1090	11.7	<5	<5	20	6
	15-Jun-05	5.0	6.0	6.3	1460	12.5	<5	<5	15	39
	1-Dec-05	5.9	2.0	6.9	1620	11.1	<5	<5	18	15
	29-Jun-06	2.6	5.0	6.9	2260	15.2	5	<4	10	11
28-Nov-06	11.6	44.0	7.0	1430	13.4	<5	5	15	<5	
6-Jun-07	4.9	6.0	6.5	1510	12.2	9	5	11	6	
12-Nov-07	4.3	1.0	6.9	1490	13.2	2	5	16	12	
24-Jun-08	4.2	49.0	6.9	1620	13.4	<5	<1	9	<5	
17-Nov-08	4.4	6.0	6.8	1600	9.4	<5	<1	10	11	
23-Jun-09	4.6	9.0	7.2	1660	13.7	<5	<1	8	6	
17-Nov-09	5	15	7.1	1650	11.5	<5	<4	9	6	
17-Nov-09	5	20	7.1	1650	11.5	<5	<4	9	6	
14-Jun-10	5	4	7.0	1710	12.4	7	<4	7	7	
8-Nov-10	6	7	7.2	1670	12.7	16	<4	11	<5	
20-Jun-11	5.4	5	7.3	1688	12.9	25	<4	15	22	
Duplicate	20-Jun-11	5.9	5	7.3	1688	12.9	24	<4	14	21
Re-sample	14-Jul-11	--	--	--	--	<5	--	--	--	--

See notes on page 6.

Table 1
Coldwater Road Landfill Facility
Landfill Leak Detection Vaults - Historical Analytical Results
Inorganics and Metals

Vault	Sample Date	Indicator Parameters					Dissolved Metals (ug/L)			
		TOC (mg/L)	TSS (mg/L)	pH	SpC	T	Cr	Cu	Ni	Zn
		MDEQ Residential Drinking Water Criteria & RBSLs					100 (A)	1,000 (E)	100 (A)	2,400
D	23-Mar-95	8.9	83.0	7.3	2200	--	13	<20	44	<20
	20-Jun-95	NS	NS	NS	NS	NS	NS	NS	NS	NS
	30-Aug-95	NS	NS	NS	NS	NS	NS	NS	NS	NS
	28-Nov-95	NS	NS	NS	NS	NS	NS	NS	NS	NS
	27-Mar-96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	18-Jun-96	11.0	150.0	6.9	1800	--	<20	<20	<20	20
	20-Aug-96	40.0	<5	7.2	1600	--	<20	<20	<20	40
	11-Nov-96	23.0	9.0	7.0	1700	--	<20	<20	40	70
	19-Feb-97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9-May-97	23.0	76.0	6.7	1580	8.8	<10	<10	58	70
	8-Aug-97	11.0	44.0	6.5	1540	28.5	<10	<10	79	20
	15-Nov-97	12.0	6.0	6.6	1800	11.0	<10	<10	114	30
	9-Feb-98	12.0	52.0	6.5	1655	12.5	<10	<10	66	40
	14-May-98	10.0	40.0	7.0	1700	16.3	<10	30	23	50
	14-Aug-98	11.0	57.0	6.6	--	--	<10	<10	23	40
	13-Nov-98	11.0	22.0	6.7	1790	15.2	<10	<10	20	30
	19-Mar-99	6.3	2.0	7.0	1302	14.8	<10	30	20	40
	6-May-99	12.4	28.0	6.9	1510	25.2	<10	30	15	30
	23-Jul-99	11.0	40.0	7.0	1231	21.0	<5	9	21	19
	22-Oct-99	10.6	13.0	6.8	1384	10.3	<10	<10	23	20
	14-Mar-00	10.7	57.0	7.8	1460	13.0	<10	<10	15	20
	20-Jun-00	10.1	23.0	6.8	1410	18.7	<10	60	21	70
	13-Sep-00	10.7	7.0	7.6	1370	16.1	<5	<10	21	20
	10-Nov-00	7.0	10.0	7.2	1630	12.2	<10	<10	23	20
	12-Mar-01	5.6	33.0	7.8	1710	12.9	<10	<10	11	10
	24-May-01	12.0	16.0	7.5	1760	13.1	<10	10	18	30
	31-Aug-01	9.8	8.0	7.7	1420	12.8	5	<10	24	20
	16-Nov-01	7.4	20.0	7.6	1270	12.9	<10	10	17	50
	8-Mar-02	8.4	3.0	7.2	1430	10.9	<10	10	<5	10
	31-May-02	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5-Sep-02	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12-Dec-02	NS	NS	NS	NS	NS	NS	NS	NS	NS
	18-Mar-03	8.9	15.0	6.8	1380	11.6	<5	5.0	10.0	19
	4-Jun-03	9.6	5.0	6.9	1430	11.0	<5	<5	8	<5
	5-Oct-03	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8-Dec-03	6.1	4.0	6.9	1330	11.0	8	17	14	63
	27-Feb-04	NS	NS	NS	NS	NS	NS	NS	NS	NS
	30-Jun-04	6.5	5.0	7.0	1050	12.1	<5	<5	30	9
	19-Nov-04	NS	NS	NS	NS	NS	NS	NS	NS	NS
	15-Jun-05	6.0	6.0	5.9	1540	12.9	<5	<5	25	17
17-Jan-06	6.2	8.0	7.3	1600	7.9	6	14	37	<5	
Re-sample	14-Feb-06	--	--	8.0	1520	9.2	--	5	--	--
	29-Jun-06	5.9	51.0	7.0	1570	13.9	6	<4	26	14
	28-Nov-06	7.2	13.0	7.2	1590	13.1	<5	<4	17	7
	6-Jun-07	6.9	7.0	7.3	1530	14.2	9	5	34	8
Duplicate	12-Nov-07	7.3	5.0	6.9	1580	12.3	3	5	23	12
	12-Nov-07	6.0	7.0	6.9	1570	12.3	3	5	23	9
	24-Jun-08	4.1	4.0	6.9	1570	15.4	<5	<1	35	<5
	17-Nov-08	5.6	10.0	7.4	1580	8.0	<5	1	17	6
	23-Jun-09	7.0	20.0	7.2	1570	13.7	<5	<1	34	5
	17-Nov-09	6	7	7.3	1610	11.5	<5	<4	16	7
Duplicate	14-Jun-10	7	35	7.1	1550	11.9	8	<4	32	11
	14-Jun-10	7	1	7.1	1550	11.9	7	<4	33	11
	8-Nov-10	9	31	7.4	1555	13.4	19	<4	18	<5
	14-Jul-11	--	--	7.2	--	18.0	<5	<4	40	<5

See notes on page 6.

Table 1
Coldwater Road Landfill Facility
Landfill Leak Detection Vaults - Historical Analytical Results
Inorganics and Metals

Vault	Sample Date	Indicator Parameters					Dissolved Metals (ug/L)			
		TOC (mg/L)	TSS (mg/L)	pH	SpC	T	Cr	Cu	Ni	Zn
		MDEQ Residential Drinking Water Criteria & RBSLs					100 (A)	1,000 (E)	100 (A)	2,400
E	23-Mar-95	NS	NS	NS	NS	NS	NS	NS	NS	NS
	20-Jun-95	NS	NS	NS	NS	NS	NS	NS	NS	NS
	30-Aug-95	NS	NS	NS	NS	NS	NS	NS	NS	NS
	28-Nov-95	NS	NS	NS	NS	NS	NS	NS	NS	NS
	27-Mar-96	110.0	<10	7.2	2000	--	<20	<20	46	<20
	18-Jun-96	9.0	76.0	7.0	2400	--	<20	<20	<20	<20
	10/04/96	5.9	19.0	6.9	2000	--	<20	<20	<20	20
	11-Nov-96	12.0	11.0	7.0	1800	--	<20	<20	<20	30
	19-Feb-97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7-May-97	7.0	2.0	6.3	2120	15.6	<10	<10	35	30
	12-Aug-97	5.0	27.0	6.7	1840	14.9	<10	<10	64	40
	15-Nov-97	5.0	12.0	6.5	2100	11.0	<10	<10	116	40
	9-Feb-98	6.0	4.0	6.6	1950	12.6	<10	<10	54	50
	14-May-98	6.0	32.0	7.1	1850	13.5	<10	<10	7	60
	14-Aug-98	4.0	8.0	6.7	--	--	<10	<10	8	40
	30-Nov-98	3.0	14.0	--	--	--	10	<10	46	60
	19-Mar-99	4.8	20.0	6.5	1302	14.3	<10	20	6	30
	6-May-99	8.2	14.0	6.9	1720	27.4	<10	<10	5	20
	23-Jul-99	4.6	9.0	6.5	1468	21.8	<5	11	6	19
	22-Oct-99	3.5	6.0	6.3	1382	11.0	<10	<10	6	20
	14-Mar-00	5.6	48.0	8.0	1500	13.9	<10	<10	5	10
	20-Jun-00	6.3	22.0	6.9	1430	19.6	<10	30	<5	30
	13-Sep-00	4.1	5.0	7.7	1360	15.7	<5	<10	5	20
	10-Nov-00	4.3	4.0	7.5	1290	11.8	<10	40	5	60
	12-Mar-01	5.4	9.0	7.3	--	12.7	<10	<10	5	10
	24-May-01	8.6	10.0	7.5	1900	13.6	<10	10	6	40
	31-Aug-01	5.7	5.3	7.6	1810	13.2	<5	10	6	70
	16-Nov-01	3.6	<1.0	7.5	1630	12.8	<10	10	6	60
	8-Mar-02	6.0	<1.0	7.0	1570	9.8	<10	10	6	90
	31-May-02	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5-Sep-02	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12-Dec-02	NS	NS	NS	NS	NS	NS	NS	NS	NS
	18-Mar-03	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4-Jun-03	5.1	6.0	6.9	1470	11.0	<5	6.0	<5	50
	5-Oct-03	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8-Dec-03	NS	NS	NS	NS	NS	NS	NS	NS	NS
	27-Feb-04	5.4	4.0	7.6	1190	12.1	<5	6	7	43
	30-Jun-04	4.9	390	6.9	1337	12.7	<5	<5	6	43
	19-Nov-04	4.3	3	7.1	1230	11.4	<5	7	22	11
	15-Jun-05	7.0	3	6.8	1790	12.6	<5	<5	12	31
1-Dec-05	3.7	<1	7.1	1630	10.9	<5	66	<5	73	
29-Jun-06	5.8	8.0	6.9	1790	14.0	5	4	6	13	
28-Nov-06	6.3	134.0	7.5	1680	13.1	5	5	<5	10	
6-Jun-07	4.6	3.0	6.5	1820	12.7	9	7	<5	9	
6-Jun-07	4.8	3.0	--	1820	--	10	5	<5	8	
12-Nov-07	3.9	4.0	6.8	1740	12.0	2	4	11	13	
24-Jun-08	6.0	2.0	6.8	1860	13.9	<5	2	<5	6	
17-Nov-08	4.1	1.0	7.4	1630	10.3	<5	2	<5	19	
23-Jun-09	3.2	10.0	6.8	1950	14.0	<5	2	<5	15	
23-Jun-09	3.0	17.0	6.8	1960	14.0	<5	2	<5	14	
17-Nov-09	5	9	6.9	1780	11.2	<5	<4	<5	14	
14-Jun-10	4	21	6.9	1910	12.5	9	<4	<5	13	
8-Nov-10	5	<1	7.0	1714	12.4	24	<4	<5	7	
8-Nov-10	5	3	7.0	1715	12.4	20	<4	<5	7	
20-Jun-11	3.4	5	6.9	1711	13.0	29	<4	10	15	
Re-sample	14-Jul-11	--	--	--	--	<5	--	--	--	

See notes on page 6.

Table 1
Coldwater Road Landfill Facility
Landfill Leak Detection Vaults - Historical Analytical Results
Inorganics and Metals

Vault	Sample Date	Indicator Parameters					Dissolved Metals (ug/L)				
		TOC (mg/L)	TSS (mg/L)	pH	SpC	T	Cr	Cu	Ni	Zn	
		MDEQ Residential Drinking Water Criteria & RBSLs					100 (A)	1,000 (E)	100 (A)	2,400	
F	23-Mar-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	20-Jun-95	8.2	<1	6.8	1400	--	<20	<20	<30	190	
	30-Aug-95	6.1	<1	6.8	1100	NS	<20	<20	<40	220	
	28-Nov-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	27-Mar-96	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	18-Jun-96	6.2	77.0	6.8	1600	--	<20	<20	<20	<20	
	20-Aug-96	4.8	1500.0	7.1	1500	--	<20	20	<20	50	
	11-Nov-96	14.0	7100.0	7.0	1600	--	<20	<20	<20	30	
	19-Feb-97	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	9-May-97	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	8-Aug-97	3.0	21.0	6.1	1530	20.6	<10	<10	64	20	
	15-Nov-97	7.0	56.0	6.7	1800	13.0	<10	<10	93	130	
	9-Feb-98	5.0	30.0	6.5	1750	13.5	<10	<10	49	160	
	14-May-98	5.0	16.0	7.1	1400	25.4	<10	20	7	130	
	14-Aug-98	3.0	25.0	6.6	--	--	<10	<10	7	40	
	30-Nov-98	4.0	38.0	--	--	--	10	<10	47	30	
	19-Mar-99	4.2	52.0	6.8	982	14.4	<10	20	9	20	
	6-May-99	4.6	50.0	7.0	1460	28.0	<10	10	5	30	
	23-Jul-99	3.7	95.0	6.3	1262	21.2	6	17	6	26	
	22-Oct-99	3.7	12.0	6.3	1116	12.3	<10	<10	6	20	
	14-Mar-00	5.4	81.0	8.0	1250	14.9	<10	<10	6	30	
	20-Jun-00	4.4	66.0	7.1	1310	20.1	<10	40	<5	80	
	13-Sep-00	3.0	11.0	7.4	1440	15.6	<5	<10	6	20	
	10-Nov-20	3.9	41.0	6.8	1040	11.6	<10	60	5	100	
	12-Mar-01	5.5	24.0	7.1	1110	12.3	<10	<10	5	10	
	24-May-01	7.4	16.0	7.4	1470	12.8	<10	60	5	100	
	31-Aug-01	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	16-Nov-01	4.2	68.0	7.3	1110	12.9	<10	40	<5	100	
	8-Mar-02	4.4	11.0	6.9	1290	10.4	<10	10	<5	60	
	31-May-02	2.4	45.0	7.2	1200	14.3	<10	<10	6	20	
	5-Sep-02	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12-Dec-02	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	18-Mar-03	3.7	7.0	6.8	1270	12.4	<5	19	<5	119	
	4-Jun-03	2.5	4.0	6.9	1300	10.9	<5	<5	<5	<5	
	5-Oct-03	3.9	5.0	6.9	1040	13.5	<5	11	5	66	
	8-Dec-03	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	1-Dec-05	3.7	3.0	6.9	1640	10.7	<5	83	<5	62	
	Duplicate	7-Dec-05	4.7	5.0	--	1540	--	<5	31	19	<10
	Re-sample	14-Feb-06	--	--	7.9	1710	7.2	--	<4	--	--
		29-Jun-06	2.9	90.0	6.7	1710	15.3	7	<4	<5	9
	28-Nov-06	4.4	3.0	7.0	1610	13.9	5	<4	<5	10	
	6-Jun-07	3.9	2.0	6.4	1640	15.5	10	3	<5	8	
	12-Nov-07	2.2	53.0	6.8	1600	12.2	2	3	9	11	
Duplicate	24-Jun-08	2.3	5.0	6.9	1510	14.5	<5	<1	<5	<5	
	24-Jun-08	2.8	3.0	6.9	1500	14.5	<5	<1	<5	<5	
	17-Nov-08	1.8	9.0	7.2	1510	9.5	<5	<1	<5	15	
	23-Jun-09	2.9	29.0	7.1	1530	13.1	<5	<1	<5	10	
	17-Nov-09	3	16	7.0	1550	11.0	<5	<4	<5	11	
	14-Jun-10	3	14	7.0	1540	12.1	6	<4	<5	17	
	8-Nov-10	3	2	7.0	1590	12.3	16	<4	<5	14	
Re-sample	20-Jun-11	2.5	47	7.0	1642	14.6	23	<4	9	20	
	14-Jul-11	--	--	--	--	--	<5	--	--	--	

Notes: "<" - Not detected above specified detection limit.

"NS" - Not sampled - no liquid.

"SpC" - Specific conductivity in micro siemens (uS).

"T" - Temperature in degrees celsius.

"--" - Physical parameter not measured (instrument failure or duplicate sample).

Exceeds MDEQ Residential Drinking Water Criteria

"A" - Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005.

"E" - Criterion is the aesthetic drinking water value, as required by Section 20120a(5)

of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA)

Table 2
Coldwater Road Landfill Facility
Landfill Leachate Sumps - Historical Analytical Results
Inorganics and Metals

Sump	Sample Date	Indicator Parameters					Dissolved Metals (ug/L)			
		TOC (mg/L)	TSS (mg/L)	pH	SpC	T	Cr	Cu	Ni	Zn
A	23-Mar-95	400.0	22	11.2	4500	--	260	8900	1200	70
	30-Aug-95	290.0	9800	11.3	4000	--	250	7400	830	<20
	18-Jun-96	170.0	200	9.5	2800	--	50	4300	640	<20
	11-Nov-96	350.0	3000	10.0	4400	--	150	8800	1300	30
	7-May-97	85.0	62	7.9	2200	8.9	20	2450	422	10
	5-Nov-97	110.0	14	8.5	2800	11.0	<1	1050	376	20
	5-May-98	125.0	2	7.9	2280	9.1	40	1380	383	10
	6-Nov-98	136.0	984	7.5	2750	11.7	40	2950	519	<10
	26-Apr-99	110.0	253	9.5	1334	12.6	40	2380	375	<10
	22-Oct-99	44.7	8	6.6	1750	12.1	20	960	155	30
	20-Jun-00	53.4	16	8.2	1980	13.1	40	1160	187	20
	10-Nov-00	66.7	31	7.7	2130	11.1	30	1050	174	20
	24-May-01	70.0	16	8.6	2470	10.2	40	1030	163	20
	16-Nov-01	69.6	300	7.9	2130	12.3	40	990	160	20
	31-May-02	51.7	48	7.2	2340	15.3	80	880	127	20
	12-Dec-03	55.2	25	7.4	1840	11.2	37	770	121	7
	3-Jun-03	75.5	90	--	--	--	41	1180	156	22
	8-Dec-03	67.0	115	8.8	2210	11.6	74	969	138	31
	30-Jun-04	62.0	6	8.4	2501	12.6	104	1450	161	7
	19-Nov-04	36.9	2.7	8.2	2070	11.4	31	492	70	20
	15-Jun-05	89.0	18.0	9.0	3320	14.7	215	1930	200	<5
	17-Jan-06	83.7	980.0	8.4	3970	6.9	70	1350	155	14
	29-Jun-06	65.4	36.0	8.5	3640	11.7	192	1070	109	7
	28-Nov-06	78.2	258	8.2	3660	12.9	132	1240	126	6
	6-Jun-07	64.4	7	6.9	3350	10.0	95	1280	131	17
	12-Nov-07	71.7	3	7.2	3970	11.8	41	1460	150	22
	24-Jun-08	46.6	2	7.9	3210	12.4	123	1240	118	8
	17-Nov-08	48.5	4	7.3	3670	10.6	65	1190	114	12
	23-Jun-09	61.0	3	7.5	2900	12.8	222	1400	126	<5
	17-Nov-09	69	40	8.4	3570	9.6	71	1040	100	14
14-Jun-10	120	4	9.1	2880	11.9	305	1380	124	<5	
8-Nov-10	71	10	8.3	3560	10.9	113	1110	1030	23	
20-Jun-11	52.4	3	9.2	2380	11.1	330	965	91	<5	

See notes on page 6.

Table 2
Coldwater Road Landfill Facility
Landfill Leachate Sumps - Historical Analytical Results
Inorganics and Metals

Sump	Sample Date	Indicator Parameters					Dissolved Metals (ug/L)			
		TOC (mg/L)	TSS (mg/L)	pH	SpC	T	Cr	Cu	Ni	Zn
B	23-Mar-95	800.0	310	12.1	7100	--	220	14000	1700	91
	30-Aug-95	590.0	7400	11.5	4600	--	220	9300	1100	<20
	18-Jun-96	36.0	<10	8.6	720	--	100	760	100	<20
	11-Nov-96	340.0	19	10.0	3100	--	180	6100	850	30
	7-May-97	184.0	963	8.5	2340	8.1	150	3910	607	10
	5-Nov-97	53.0	20	7.2	1600	10.0	50	1050	204	10
	5-May-98	241.0	24	9.6	3010	9.2	280	5600	644	10
	6-Nov-98	177.0	438	7.8	2950	12.1	100	2690	558	<10
	26-Apr-99	75.0	10600	10.2	835	8.9	30	500	238	<10
	22-Oct-99	126.0	1604	8.1	1410	11.9	30	750	387	<10
	20-Jun-00	49.2	4	9.1	1880	12.6	160	1180	160	<10
	10-Nov-00	78.2	80	8.6	1460	11.5	70	1170	205	<10
	24-May-01	101.0	502	9.1	2800	10.4	120	1490	225	<10
	16-Nov-01	189.0	13	9.5	3310	12.4	290	3050	426	<10
	31-May-02	65.7	434	7.2	2530	14.7	160	1070	154	<10
	12-Dec-03	118.0	15	8.9	2150	11.4	215	1790	260	27
	3-Jun-03	113.0	44	--	--	--	118	1510	216	<5
	8-Dec-03	87.8	22	7.1	1990	11.5	170	1380	199	45
	30-Jun-04	110	14	8.1	1598	12.5	508	1880	225	7
	19-Nov-04	66.2	2	8.2	2690	11.5	148	1100	163	13
15-Jun-05	84.0	8	8.8	3200	14.1	324	1050	160	19	
5-Dec-05	35.7	6	7.1	2290	10.5	81	374	56	22	
29-Jun-06	26.6	6	7.7	1650	10.9	156	358	48	23	
28-Nov-06	47.5	6	8.2	2300	12.5	142	526	72	25	
Duplicate	28-Nov-06	59.8	--	8.2	2370	12.5	142	522	72	15
	6-Jun-07	32.2	2	6.6	1950	9.8	18	275	46	18
	12-Nov-07	22.6	1	7.9	2060	12.2	28	226	32	24
	24-Jun-08	45.9	6	8.2	2430	11.9	659	877	99	16
	17-Nov-08	41.5	19	6.5	2560	10.6	401	767	91	20
Duplicate	17-Nov-08	39.8	38	6.5	2550	10.6	399	763	91	23
	23-Jun-09	52.3	1	7.4	2250	13.2	685	696	82	17
	17-Nov-09	52	2	8.1	2610	10.6	269	579	73	39
	14-Jun-10	90	3	7.9	2720	12.4	908	1050	118	21
	8-Nov-10	78	1	8.1	3450	12.1	163	669	76	8
	20-Jun-11	75.5	5	8.1	2520	11.9	1070	867	97	7

See notes on page 6.

Table 2
Coldwater Road Landfill Facility
Landfill Leachate Sumps - Historical Analytical Results
Inorganics and Metals

Sump	Sample Date	Indicator Parameters					Dissolved Metals (ug/L)			
		TOC (mg/L)	TSS (mg/L)	pH	SpC	T	Cr	Cu	Ni	Zn
C	23-Mar-95	750.0	18	11.8	6000	--	21	18000	2400	36
	30-Aug-95	660.0	30000	10.9	4900	--	21	15000	2100	26
	18-Jun-96	280.0	1200	9.1	2700	--	<20	5100	820	<20
	11-Nov-96	730.0	93	10.0	5200	--	<20	15000	2500	50
	7-May-97	433.0	1200	8.6	4210	10.0	10	10200	2070	40
	5-Nov-97	289.0	83	8.3	3400	10.0	<10	3150	1320	20
	5-May-98	235.0	24	9.8	3520	9.8	60	5640	891	10
	6-Nov-98	418.0	164	7.9	4590	11.9	<10	4660	145	<10
	26-Apr-99	278.0	24	9.5	2520	8.6	<10	1730	1148	<10
	22-Oct-99	351.0	1604	8.2	1210	12.1	<10	1330	1050	<10
	20-Jun-00	156.0	12	8.5	2270	11.9	<10	3370	802	<10
	10-Nov-00	250.0	30	8.4	1920	11.4	<10	620	998	<10
	24-May-01	200.0	120	9.0	3660	10.3	<10	4950	1110	20
	16-Nov-01	269.0	191	8.5	3930	12.1	10	5470	1800	10
	31-May-02	113.0	24	7.2	2530	14.4	<10	2510	612	10
	12-Dec-03	198.0	18	8.1	4100	11.2	12	3020	1060	15
	3-Jun-03	178.0	34	--	--	--	15	4790	1030	8
	8-Dec-03	85.2	742	8.0	2140	11.9	9	607	708	62
	30-Jun-04	96.0	10	8.5	2708	12.0	46	2470	539	5
	19-Nov-04	126	16	8.4	3200	11.6	32	3190	874	13
15-Jun-05	95	10	7.2	2950	14.3	21	2350	505	16	
5-Dec-05	56.7	12	7.9	2830	10.9	30	1570	363	12	
Duplicate	7-Dec-05	62.0	2	--	2860	--	28	1700	364	<10
	29-Jun-06	145.7	20	8.5	3810	11.4	25	3030	847	8
	28-Nov-06	60.3	6	8.0	2340	12.9	43	1380	353	<5
	6-Jun-07	3.9	1	7.0	2650	11.0	44	1570	365	<5
	12-Nov-07	83.7	1	8.2	3660	12.2	44	2080	543	8
	24-Jun-08	65.4	5	7.9	3530	13.0	8	1820	456	22
	17-Nov-08	120.0	10	8.2	4510	10.6	30	2940	939	22
	23-Jun-09	139.0	9	8.2	4240	12.7	25	3600	800	7
	17-Nov-09	90	4	7.9	3940	11.1	22	2280	447	12
Duplicate	17-Nov-09	98	7	7.9	3950	11.1	21	2260	438	12
	14-Jun-10	120	14	8.1	4580	11.9	32	3200	714	18
	8-Nov-10	130	4	7.8	4910	12.1	55	3170	555	10
	20-Jun-11	112	5	9.2	4560	12.1	133	2670	639	<5
Duplicate	20-Jun-11	112	7	9.2	4570	12.1	129	2580	623	<5

See notes on page 6.

Table 2
Coldwater Road Landfill Facility
Landfill Leachate Sumps - Historical Analytical Results
Inorganics and Metals

Sump	Sample Date	Indicator Parameters					Dissolved Metals (ug/L)			
		TOC (mg/L)	TSS (mg/L)	pH	SpC	T	Cr	Cu	Ni	Zn
D	23-Mar-95	650.0	45	12.3	8400	--	360	7800	1600	<20
	30-Aug-95	550.0	69000	12.0	6400	--	260	6100	1400	<20
	18-Jun-96	300.0	230	11.0	3300	--	100	3100	850	<20
	11-Nov-96	660.0	3500	12.0	5700	--	220	7200	1800	30
	7-May-97	331.0	432	9.1	4020	10.2	30	4110	1330	<10
	5-Nov-97	208.0	546	8.8	3400	10.2	20	3000	1020	20
	5-May-98	251.0	<1	10.6	4200	9.7	110	3810	1120	10
	6-Nov-98	193.0	8280	7.9	3940	11.4	10	2530	101	<10
	26-Apr-99	177.0	29600	10.5	1237	8.0	10	770	1013	<10
	22-Oct-99	199.0	10748	8.9	910	10.9	<10	70	735	<10
	20-Jun-00	112.0	16	8.8	1190	11.6	<10	430	656	<10
	10-Nov-00	159.0	100	9.1	2360	11.5	20	760	831	<10
	24-May-01	196.0	124	10.8	3900	10.9	10	1000	1270	<10
	16-Nov-01	64.2	268	8.9	1690	12.0	<10	100	414	<10
	31-May-02	72.3	137	7.2	2020	14.3	<10	210	445	<10
	12-Dec-03	130.0	4	8.8	1430	11.5	11	926	798	<5
	3-Jun-03	80.8	6	--	--	--	7	878	540	<5
	8-Dec-03	48.8	392	8.2	2470	10.9	7	651	423	18
	30-Jun-04	160.0	34	10.2	3601	--	25	1670	1320	<5
	19-Nov-04	157	14	10.4	4320	11.4	34	1550	1680	8
15-Jun-05	79	8	11.1	3160	12.2	14	737	822	<5	
Duplicate	15-Jun-05	76.0	26.0	--	--	--	12	724	812	<5
	5-Dec-05	123.0	6.0	8.2	5320	10.9	35	1420	1340	<5
	29-Jun-06	87.6	14.0	10.0	4120	12.4	16	714	995	5
	28-Nov-06	128.9	2	10.1	5180	12.9	23	651	1300	<5
	6-Jun-07	157.0	11	9.3	5980	11.0	62	955	1770	<5
	12-Nov-07	115.0	78	10.2	5550	11.7	34	1680	1480	8
Duplicate	12-Nov-07	109.0	28	10.2	5550	11.7	31	1540	1400	3
	24-Jun-08	99.5	7	9.9	6170	11.8	20	990	1640	7
	17-Nov-08	295.0	2	11.1	6220	10.8	62	2460	2090	5
	23-Jun-09	308.0	7	10.9	6210	14.8	88	2170	1990	<5
	17-Nov-09	130	10	9.8	4870	11.6	37	2240	1180	<5
	14-Jun-10	15	12	10.0	4880	12.0	62	1160	1340	5
Duplicate	14-Jun-10	150	12	10.0	4860	12.0	62	1180	1340	6
	8-Nov-10	170	2	10.1	5830	12.6	119	1220	1520	<5
	20-Jun-11	99.5	9	11.7	3470	12.0	97	645	413	<5

See notes on page 6.

Table 2
Coldwater Road Landfill Facility
Landfill Leachate Sumps - Historical Analytical Results
Inorganics and Metals

Sump	Sample Date	Indicator Parameters					Dissolved Metals (ug/L)			
		TOC (mg/L)	TSS (mg/L)	pH	SpC	T	Cr	Cu	Ni	Zn
E	23-Mar-95	250.0	1400	11.7	4000	--	79	1500	850	<20
	30-Aug-95	120.0	37000	9.7	2100	--	25	980	270	<20
	18-Jun-96	9.6	2000	7.6	1800	--	<20	<20	<20	40
	11-Nov-96	23.0	2200	8.2	1800	--	<20	20	50	<20
	7-May-97	6.0	188	6.8	1560	9.7	<10	<10	30	90
	11/05/97	10.0	3370	7.0	1600	10.0	<10	10	72	30
	5-May-98	10.0	13300	7.0	1750	10.1	<10	20	23	40
	6-Nov-98	5.0	2500	5.6	1500	11.9	<10	60	11	40
	26-Apr-99	8.6	7720	7.7	1428	8.2	<10	30	22	<10
	22-Oct-99	4.7	3485	6.8	1115	10.8	<10	50	10	30
	20-Jun-00	7.0	2	6.8	1410	12.4	<10	20	<10	20
	10-Nov-00	3.2	<1	7.3	1550	11.4	<10	30	7	20
	24-Feb-01	9.0	292	8.0	1660	10.6	<10	20	7	20
	16-Nov-01	4.4	350	7.3	1240	12.2	<10	10	23	30
	31-May-02	10.1	9	7.2	1470	14.6	<10	90	62	30
	12-Dec-03	4.5	310	7.7	1490	11.1	<5	21	12	<5
	3-Jun-03	9.0	1884	--	--	--	<5	20	11	7
	8-Dec-03	22.4	331	7.3	1320	11.4	63	132	53	34
	30-Jun-04	5.8	5	7.8	1061	--	<5	8	13	33
	19-Nov-04	6.2	2	7.6	1380	11.8	19	14	16	16
15-Jun-05	230.0	10	--	19920	16.6	285	1220	337	5	
5-Dec-05	257.0	396	7.3	9460	10.7	142	514	232	<5	
29-Jun-06	11.4	4	8.2	1690	11.6	18	48	34	6	
28-Nov-06	45.6	<1	8.1	2220	12.9	29	728	180	<5	
Duplicate	6-Jun-07	6.9	3	6.4	1630	11.6	12	13	10	23
	6-Jun-07	6.7	4	--	1630	--	11	15	10	20
	12-Nov-07	5.6	3	7.3	1570	12.0	5	11	14	19
	24-Jun-08	3.8	3	7.4	1600	11.5	<5	6	6	9
	17-Nov-08	4.9	1	7.3	1660	11.3	24	10	7	13
Duplicate	23-Jun-09	4.7	<1	6.9	1600	11.6	<5	6	6	14
	23-Jun-09	3.5	1	6.9	1580	11.6	<5	6	5	15
	17-Nov-09	5	1	7.4	1520	11.2	<5	4	20	24
Duplicate	14-Jun-10	6	4	7.6	1530	12.7	17	8	<5	17
	8-Nov-10	6	2	7.4	1647	12.5	18	10	9	101
	8-Nov-10	6	3	7.4	1647	12.5	16	10	9	108
	20-Jun-11	7.6	<1	8.8	1760	12.2	7	20	15	12

See notes on page 6.

Table 2
Coldwater Road Landfill Facility
Landfill Leachate Sumps - Historical Analytical Results
Inorganics and Metals

Sump	Sample Date	Indicator Parameters					Dissolved Metals (ug/L)				
		TOC (mg/L)	TSS (mg/L)	pH	SpC	T	Cr	Cu	Ni	Zn	
F	23-Mar-95	300.0	100	11.8	4100	--	61	3200	2200	<20	
	30-Aug-95	100.0	250	7.5	1600	--	<20	300	85	<20	
	18-Jun-96	5.4	19	7.4	1400	--	<20	<20	<20	40	
	11-Nov-96	7.1	260	7.7	1200	--	<20	<20	30	50	
	7-May-97	5.0	138	6.5	1190	9.6	<20	<20	18	80	
	5-Nov-97	5.0	14	7.1	1300	11.0	<10	<10	49	40	
	5-May-98	6.0	635	7.1	1250	10.5	<10	<10	6	30	
	6-Nov-98	4.0	14	6.1	1340	12.3	<10	70	7	50	
	26-Apr-99	5.3	38	8.1	682	8.2	<10	40	27	10	
	22-Oct-99	3.4	11	6.6	1053	11.3	<10	30	6	20	
	20-Jun-00	4.1	2	7.7	1170	11.4	<10	<10	<5	<10	
	10-Nov-00	2.9	8	7.3	1340	11.1	<10	<10	30	30	
	24-May-01	6.6	40	8.5	1310	10.6	<10	20	<10	20	
	16-Nov-01	4.2	323	7.3	1070	12.1	<10	10	8	20	
	31-May-02	5.2	150	7.2	1250	14.8	<10	20	<5	160	
	12-Dec-03	3.4	7	7.7	1180	11.3	<5	<5	<5	<5	
	3-Jun-03	5.9	336	--	--	--	<5	12	<5	21	
	8-Dec-03	6.0	35	7.0	1210	11.3	<5	14	15	33	
	30-Jun-04	4.7	2	7.7	949	11.1	<5	27	13	20	
	19-Nov-04	6.7	3	7.9	1260	11.2	12	8	14	11	
	15-Jun-05	13.0	8	6.4	1630	16.7	<5	9	13	55	
	17-Jan-06	33.9	3263	7.5	2390	6.6	107	475	124	12	
	29-Jun-06	7.0	2	7.6	1280	11.6	16	38	11	29	
	28-Nov-06	4.9	<1	8.0	1250	12.9	5	18	9	8	
	6-Jun-07	22.1	8	6.8	1710	11.7	11	74	22	10	
	12-Nov-07	3.8	1	7.7	1350	11.9	3	16	13	30	
	Duplicate	24-Jun-08	4.0	2	8.0	1160	12.3	12	15	6	102
		24-Jun-08	3.9	1	8.0	1160	12.3	11	14	6	8
		17-Nov-08	13.6	2	7.6	1740	10.9	29	87	81	11
		23-Jun-09	14.4	<1	7.8	1500	12.2	43	100	30	9
17-Nov-09		10	0	8.0	1570	10.9	25	46	19	23	
14-Jun-10		5	4	7.8	1010	11.7	9	15	<5	12	
8-Nov-10		9	<1	8.2	1260	12.1	17	19	8	6	
20-Jun-11		9	<1	7.9	1360	12.8	16	25	11	13	
Equipment	24-Jun-08	<1	1	--	4	--	<5	<1	<5	<5	
Blank	17-Nov-08	1	2	--	4	--	<5	5	<5	23	

Notes: "<" - Not detected above specified detection limit.
"NS" - Not sampled - no liquid.
"SpC" - Specific conductivity in micro siemens (uS).
"T" - Temperature in degrees celsius.
"--" - Physical parameter not measured (insturment failure or duplicate sample).

Table 3
GM/REALM - Coldwater Road Facility
Landfill Leachate Sumps - Analytical Results
Volatile Organic Compounds (mg/L)

Parameter	Sample ID and Sample Date							
	Sump A	Sump B	Sump C	Sump C (Dup 1)	Sump D	Sump E	Sump F	TB-1
	20-Jun-11	20-Jun-11	20-Jun-11	20-Jun-11	20-Jun-11	20-Jun-11	20-Jun-11	20-Jun-11
Acrolein	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Acrylonitrile	<0.001	<0.001	<0.001	<0.001	<0.007	<0.001	<0.001	<0.001
Benzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bromodichloromethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bromoform	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bromomethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Carbon tetrachloride	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chlorobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chloroethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2-Chloroethylvinyl ether	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chloroform	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chloromethane	<0.001	<0.001	0.002	0.002	<0.001	<0.001	<0.001	<0.001
Dibromochloromethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1-Dichloroethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dichloroethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1-Dichloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
trans-1,2-Dichloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dichloropropane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
cis-1,3-Dichloropropene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
trans-1,3-Dichloropropene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Ethylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Methylene chloride	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1,2,2-Tetrachloroethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Tetrachloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Toluene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1,1-Trichloroethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1,2-Trichloroethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Trichloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vinyl chloride	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Table 4
Coldwater Road Landfill Facility
Leachate Sump Depth to Water

June 20, 2011

Sump	DTW
A	19.24
B	14.05
C	15.59
D	17.49
E	19.96
F	20.48

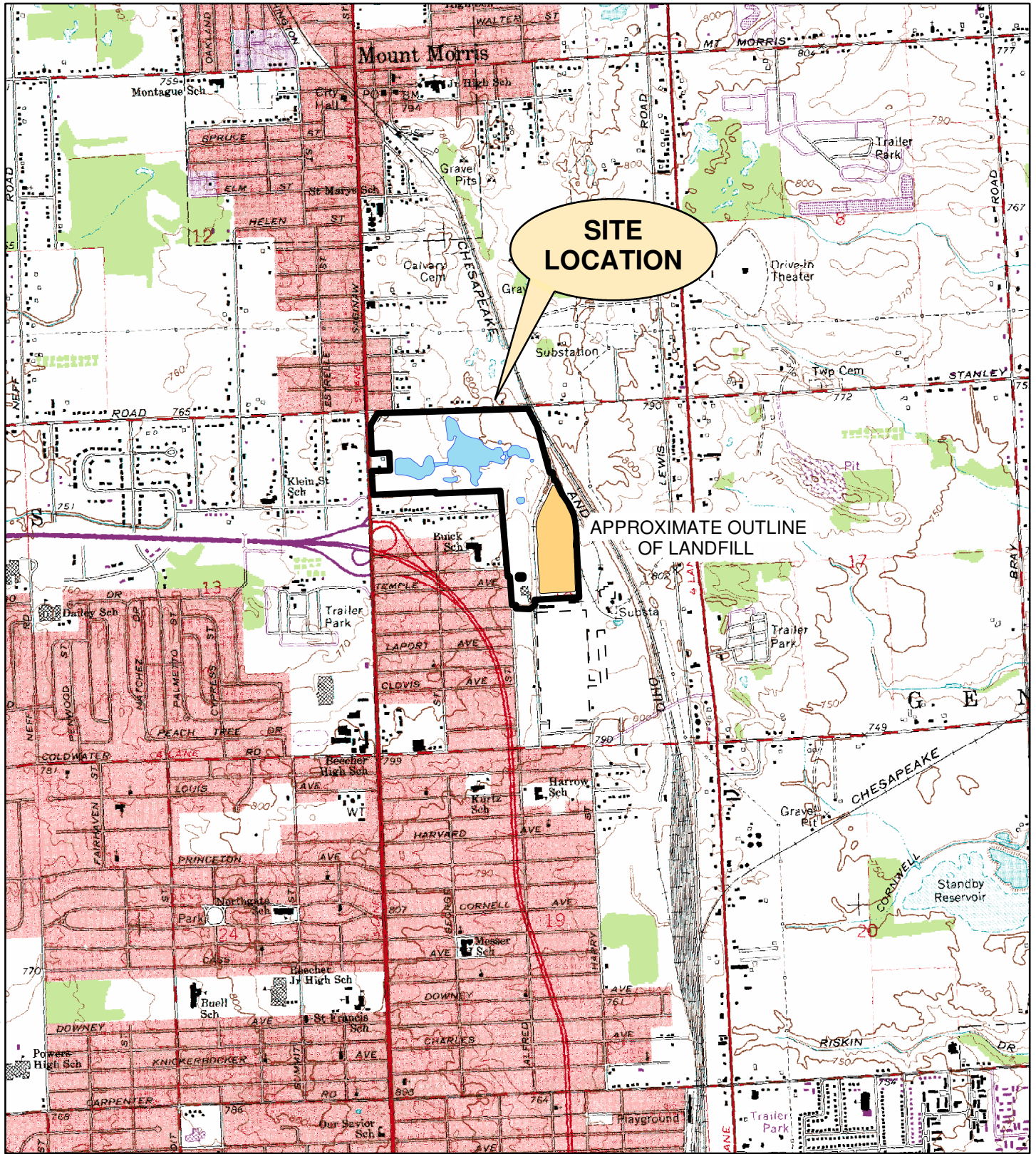
Notes:

DTW= Depth to Water, measured in feet below top of casing

FIGURES

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PLOT DATE: 8/22/2011 ajf



RACER TRUST
 COLDWATER ROAD LANDFILL FACILITY
 FLINT, MICHIGAN

SITE LOCATION MAP



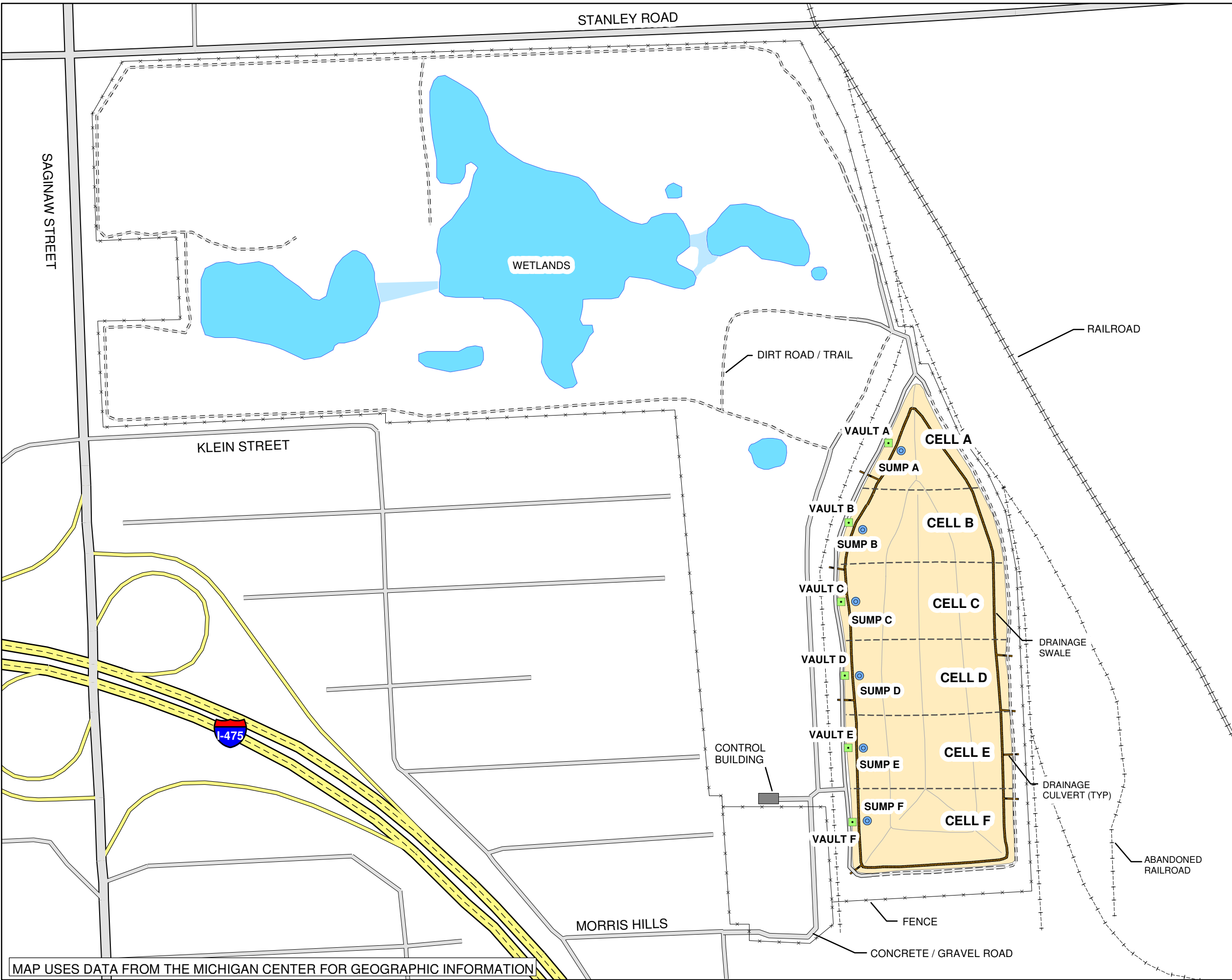




FIGURE 2

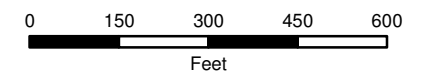


LEGEND

-  LEACHATE COLLECTION SUMP
-  ACCESS PORT FOR LEAK DETECTION VAULT

RACER TRUST
COLDWATER ROAD
LANDFILL FACILITY
FLINT, MICHIGAN

SITE LAYOUT



AUGUST 2011
14774/46317-009



APPENDIX A
Analytical Laboratory
Reports



Analytical Laboratory Report

Report ID: S49090.01(01)
Generated on 07/01/2011

Report to

Attention: Clifford Yantz
O'Brien & Gere Engineers, Inc.
37000 Grand River Ave.
Suite 260
Farmington, MI 48335

Phone: 248-477-5701 FAX:
Email: YantzCS@obg.com/SecresME@obg.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S49090.01-S49090.14
Project: Coldwater Road Landfill Annual Sampling
Collected Date: 06/20/2011
Submitted Date/Time: 06/21/2011 14:30
Sampled by: Kevin Schneider
P.O. #:

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:

Michigan DNRE (#9956), Ohio EPA (#CL0002), NELAC NY (#11814), NELAC FL (#E871045), WBENC (#2005110032)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Sample Summary (14 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S49090.01	Sump A	Sump Water	06/20/2011 09:20
S49090.02	Vault A	Wastewater	06/20/2011 09:55
S49090.03	Sump B	Sump Water	06/20/2011 10:20
S49090.04	Vault B	Wastewater	06/20/2011 11:00
S49090.05	Sump C	Sump Water	06/20/2011 11:40
S49090.06	Vault C	Wastewater	06/20/2011 12:20
S49090.07	Sump D	Sump Water	06/20/2011 13:15
S49090.08	Sump E	Sump Water	06/20/2011 14:10
S49090.09	Vault E	Wastewater	06/20/2011 14:40
S49090.10	Sump F	Sump Water	06/20/2011 15:15
S49090.11	Vault F	Wastewater	06/20/2011 15:30
S49090.12	Dup-1	Sump Water	06/20/2011 00:01
S49090.13	Dup-2	Wastewater	06/20/2011 00:01
S49090.14	TB-1	Quality Control	06/20/2011 00:01



Analytical Laboratory Report

Lab Sample ID: S49090.01
 Sample Tag: Sump A
 Collected Date/Time: 06/20/2011 09:20
 Matrix: Sump Water
 COC Reference: 47571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR
2	40ml Glass	H2SO4	Yes	4.5	IR
2	40ml Glass	HCL	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Metal Digestion	Completed			3015A	06/24/11 13:00	PER		
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Inorganics

Conductivity	2,380	umhos/cm		120.1	06/30/11 15:08	JKB		
TOC	52.4	mg/L	1	EPA 415.1	06/28/11 17:52	JKB		
Total Suspended Solids	3	mg/L	1	2540 D	06/23/11 11:00	DJS		

Metals

Chromium, Dissolved	0.330	mg/L	0.005	200.8	06/24/11 15:52	PER	7440-47-3	
Copper, Dissolved	0.965	mg/L	0.004	200.8	06/24/11 15:52	PER	7440-50-8	
Nickel, Dissolved	0.091	mg/L	0.005	200.8	06/24/11 15:52	PER	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	200.8	06/24/11 15:52	PER	7440-66-6	

Organics - Volatiles

VOCs, TTO List

Acrolein	Not detected	ug/L	10	624	06/27/11 15:56	WAT	107-02-8	
Acrylonitrile	Not detected	ug/L	1	624	06/27/11 15:56	WAT	107-13-1	
Benzene	Not detected	ug/L	1	624	06/27/11 15:56	WAT	71-43-2	
Bromodichloromethane	Not detected	ug/L	1	624	06/27/11 15:56	WAT	75-27-4	
Bromoform	Not detected	ug/L	1	624	06/27/11 15:56	WAT	75-25-2	
Bromomethane	Not detected	ug/L	1	624	06/27/11 15:56	WAT	74-83-9	
Carbon tetrachloride	Not detected	ug/L	1	624	06/27/11 15:56	WAT	56-23-5	
Chlorobenzene	Not detected	ug/L	1	624	06/27/11 15:56	WAT	108-90-7	
Chloroethane	Not detected	ug/L	1	624	06/27/11 15:56	WAT	75-00-3	
2-Chloroethylvinyl ether	Not detected	ug/L	1	624	06/27/11 15:56	WAT	110-75-8	
Chloroform	Not detected	ug/L	1	624	06/27/11 15:56	WAT	67-66-3	
Chloromethane	Not detected	ug/L	1	624	06/27/11 15:56	WAT	74-87-3	
Dibromochloromethane	Not detected	ug/L	1	624	06/27/11 15:56	WAT	124-48-1	
1,1-Dichloroethane	Not detected	ug/L	1	624	06/27/11 15:56	WAT	75-34-3	
1,2-Dichloroethane	Not detected	ug/L	1	624	06/27/11 15:56	WAT	107-06-2	
1,1-Dichloroethene	Not detected	ug/L	1	624	06/27/11 15:56	WAT	75-35-4	
trans-1,2-Dichloroethene	Not detected	ug/L	1	624	06/27/11 15:56	WAT	156-60-5	
1,2-Dichloropropane	Not detected	ug/L	1	624	06/27/11 15:56	WAT	78-87-5	
cis-1,3-Dichloropropene	Not detected	ug/L	1	624	06/27/11 15:56	WAT	10061-01-5	
trans-1,3-Dichloropropene	Not detected	ug/L	1	624	06/27/11 15:56	WAT	10061-02-6	
Ethylbenzene	Not detected	ug/L	1	624	06/27/11 15:56	WAT	100-41-4	
Methylene chloride	Not detected	ug/L	5	624	06/27/11 15:56	WAT	75-09-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	624	06/27/11 15:56	WAT	79-34-5	
Tetrachloroethene	Not detected	ug/L	1	624	06/27/11 15:56	WAT	127-18-4	
Toluene	Not detected	ug/L	1	624	06/27/11 15:56	WAT	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S49090.01 (continued)

Sample Tag: Sump A

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
VOCs, TTO List (continued)								
1,1,1-Trichloroethane	Not detected	ug/L	1	624	06/27/11 15:56	WAT	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	624	06/27/11 15:56	WAT	79-00-5	
Trichloroethene	Not detected	ug/L	1	624	06/27/11 15:56	WAT	79-01-6	
Vinyl chloride	Not detected	ug/L	1	624	06/27/11 15:56	WAT	75-01-4	



Analytical Laboratory Report

Lab Sample ID: S49090.02
 Sample Tag: Vault A
 Collected Date/Time: 06/20/2011 09:55
 Matrix: Wastewater
 COC Reference: 47571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR
2	40ml Glass	H2SO4	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	06/24/11 13:00	PER		
Inorganics								
Conductivity	2,010	umhos/cm		120.1	06/30/11 15:12	JKB		
TOC	6.7	mg/L	1	EPA 415.1	06/28/11 18:10	JKB		
Total Suspended Solids	9	mg/L	1	2540 D	06/23/11 11:00	DJS		
Metals								
Chromium, Dissolved	0.030	mg/L	0.005	200.8	06/24/11 15:56	PER	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	06/24/11 15:56	PER	7440-50-8	
Nickel, Dissolved	0.027	mg/L	0.005	200.8	06/24/11 15:56	PER	7440-02-0	
Zinc, Dissolved	0.039	mg/L	0.005	200.8	06/24/11 15:56	PER	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S49090.03
 Sample Tag: Sump B
 Collected Date/Time: 06/20/2011 10:20
 Matrix: Sump Water
 COC Reference: 47571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR
2	40ml Glass	H2SO4	Yes	4.5	IR
2	40ml Glass	HCL	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Metal Digestion	Completed			3015A	06/24/11 13:00	PER		
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Inorganics

Conductivity	2,520	umhos/cm		120.1	06/30/11 15:14	JKB		
TOC	75.5	mg/L	1	EPA 415.1	06/28/11 18:28	JKB		
Total Suspended Solids	5	mg/L	1	2540 D	06/23/11 11:00	DJS		

Metals

Chromium, Dissolved	1.07	mg/L	0.005	200.8	06/24/11 15:57	PER	7440-47-3	
Copper, Dissolved	0.867	mg/L	0.004	200.8	06/24/11 15:57	PER	7440-50-8	
Nickel, Dissolved	0.097	mg/L	0.005	200.8	06/24/11 15:57	PER	7440-02-0	
Zinc, Dissolved	0.007	mg/L	0.005	200.8	06/24/11 15:57	PER	7440-66-6	

Organics - Volatiles

VOCs, TTO List

Acrolein	Not detected	ug/L	10	624	06/27/11 16:14	WAT	107-02-8	
Acrylonitrile	Not detected	ug/L	1	624	06/27/11 16:14	WAT	107-13-1	
Benzene	Not detected	ug/L	1	624	06/27/11 16:14	WAT	71-43-2	
Bromodichloromethane	Not detected	ug/L	1	624	06/27/11 16:14	WAT	75-27-4	
Bromoform	Not detected	ug/L	1	624	06/27/11 16:14	WAT	75-25-2	
Bromomethane	Not detected	ug/L	1	624	06/27/11 16:14	WAT	74-83-9	
Carbon tetrachloride	Not detected	ug/L	1	624	06/27/11 16:14	WAT	56-23-5	
Chlorobenzene	Not detected	ug/L	1	624	06/27/11 16:14	WAT	108-90-7	
Chloroethane	Not detected	ug/L	1	624	06/27/11 16:14	WAT	75-00-3	
2-Chloroethylvinyl ether	Not detected	ug/L	1	624	06/27/11 16:14	WAT	110-75-8	
Chloroform	Not detected	ug/L	1	624	06/27/11 16:14	WAT	67-66-3	
Chloromethane	Not detected	ug/L	1	624	06/27/11 16:14	WAT	74-87-3	
Dibromochloromethane	Not detected	ug/L	1	624	06/27/11 16:14	WAT	124-48-1	
1,1-Dichloroethane	Not detected	ug/L	1	624	06/27/11 16:14	WAT	75-34-3	
1,2-Dichloroethane	Not detected	ug/L	1	624	06/27/11 16:14	WAT	107-06-2	
1,1-Dichloroethene	Not detected	ug/L	1	624	06/27/11 16:14	WAT	75-35-4	
trans-1,2-Dichloroethene	Not detected	ug/L	1	624	06/27/11 16:14	WAT	156-60-5	
1,2-Dichloropropane	Not detected	ug/L	1	624	06/27/11 16:14	WAT	78-87-5	
cis-1,3-Dichloropropene	Not detected	ug/L	1	624	06/27/11 16:14	WAT	10061-01-5	
trans-1,3-Dichloropropene	Not detected	ug/L	1	624	06/27/11 16:14	WAT	10061-02-6	
Ethylbenzene	Not detected	ug/L	1	624	06/27/11 16:14	WAT	100-41-4	
Methylene chloride	Not detected	ug/L	5	624	06/27/11 16:14	WAT	75-09-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	624	06/27/11 16:14	WAT	79-34-5	
Tetrachloroethene	Not detected	ug/L	1	624	06/27/11 16:14	WAT	127-18-4	
Toluene	Not detected	ug/L	1	624	06/27/11 16:14	WAT	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S49090.03 (continued)

Sample Tag: Sump B

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
VOCs, TTO List (continued)								
1,1,1-Trichloroethane	Not detected	ug/L	1	624	06/27/11 16:14	WAT	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	624	06/27/11 16:14	WAT	79-00-5	
Trichloroethene	Not detected	ug/L	1	624	06/27/11 16:14	WAT	79-01-6	
Vinyl chloride	Not detected	ug/L	1	624	06/27/11 16:14	WAT	75-01-4	



Analytical Laboratory Report

Lab Sample ID: S49090.04
 Sample Tag: Vault B
 Collected Date/Time: 06/20/2011 11:00
 Matrix: Wastewater
 COC Reference: 47571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR
2	40ml Glass	H2SO4	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Metal Digestion	Completed			3015A	06/24/11 13:00	PER		
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Inorganics

Conductivity	1,496	umhos/cm		120.1	06/30/11 15:16	JKB		
TOC	3.4	mg/L	1	EPA 415.1	06/28/11 18:46	JKB		
Total Suspended Solids	1	mg/L	1	2540 D	06/23/11 11:00	DJS		

Metals

Chromium, Dissolved	0.028	mg/L	0.005	200.8	06/24/11 15:59	PER	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	06/24/11 15:59	PER	7440-50-8	
Nickel, Dissolved	0.011	mg/L	0.005	200.8	06/24/11 15:59	PER	7440-02-0	
Zinc, Dissolved	0.016	mg/L	0.005	200.8	06/24/11 15:59	PER	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S49090.05
 Sample Tag: Sump C
 Collected Date/Time: 06/20/2011 11:40
 Matrix: Sump Water
 COC Reference: 47571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR
2	40ml Glass	H2SO4	Yes	4.5	IR
2	40ml Glass	HCL	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Metal Digestion	Completed			3015A	06/24/11 13:00	PER		
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Inorganics

Conductivity	4,560	umhos/cm		120.1	06/30/11 15:18	JKB		
TOC	112	mg/L	1	EPA 415.1	06/28/11 19:04	JKB		
Total Suspended Solids	5	mg/L	1	2540 D	06/23/11 11:00	DJS		

Metals

Chromium, Dissolved	0.133	mg/L	0.005	200.8	06/24/11 16:01	PER	7440-47-3	
Copper, Dissolved	2.67	mg/L	0.004	200.8	06/24/11 16:01	PER	7440-50-8	
Nickel, Dissolved	0.639	mg/L	0.005	200.8	06/24/11 16:01	PER	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	200.8	06/24/11 16:01	PER	7440-66-6	

Organics - Volatiles

VOCs, TTO List

Acrolein	Not detected	ug/L	10	624	06/27/11 16:33	WAT	107-02-8	
Acrylonitrile	Not detected	ug/L	1	624	06/27/11 16:33	WAT	107-13-1	
Benzene	Not detected	ug/L	1	624	06/27/11 16:33	WAT	71-43-2	
Bromodichloromethane	Not detected	ug/L	1	624	06/27/11 16:33	WAT	75-27-4	
Bromoform	Not detected	ug/L	1	624	06/27/11 16:33	WAT	75-25-2	
Bromomethane	Not detected	ug/L	1	624	06/27/11 16:33	WAT	74-83-9	
Carbon tetrachloride	Not detected	ug/L	1	624	06/27/11 16:33	WAT	56-23-5	
Chlorobenzene	Not detected	ug/L	1	624	06/27/11 16:33	WAT	108-90-7	
Chloroethane	Not detected	ug/L	1	624	06/27/11 16:33	WAT	75-00-3	
2-Chloroethylvinyl ether	Not detected	ug/L	1	624	06/27/11 16:33	WAT	110-75-8	
Chloroform	Not detected	ug/L	1	624	06/27/11 16:33	WAT	67-66-3	
Chloromethane	2	ug/L	1	624	06/27/11 16:33	WAT	74-87-3	
Dibromochloromethane	Not detected	ug/L	1	624	06/27/11 16:33	WAT	124-48-1	
1,1-Dichloroethane	Not detected	ug/L	1	624	06/27/11 16:33	WAT	75-34-3	
1,2-Dichloroethane	Not detected	ug/L	1	624	06/27/11 16:33	WAT	107-06-2	
1,1-Dichloroethene	Not detected	ug/L	1	624	06/27/11 16:33	WAT	75-35-4	
trans-1,2-Dichloroethene	Not detected	ug/L	1	624	06/27/11 16:33	WAT	156-60-5	
1,2-Dichloropropane	Not detected	ug/L	1	624	06/27/11 16:33	WAT	78-87-5	
cis-1,3-Dichloropropene	Not detected	ug/L	1	624	06/27/11 16:33	WAT	10061-01-5	
trans-1,3-Dichloropropene	Not detected	ug/L	1	624	06/27/11 16:33	WAT	10061-02-6	
Ethylbenzene	Not detected	ug/L	1	624	06/27/11 16:33	WAT	100-41-4	
Methylene chloride	Not detected	ug/L	5	624	06/27/11 16:33	WAT	75-09-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	624	06/27/11 16:33	WAT	79-34-5	
Tetrachloroethene	Not detected	ug/L	1	624	06/27/11 16:33	WAT	127-18-4	
Toluene	Not detected	ug/L	1	624	06/27/11 16:33	WAT	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S49090.05 (continued)

Sample Tag: Sump C

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
VOCs, TTO List (continued)								
1,1,1-Trichloroethane	Not detected	ug/L	1	624	06/27/11 16:33	WAT	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	624	06/27/11 16:33	WAT	79-00-5	
Trichloroethene	Not detected	ug/L	1	624	06/27/11 16:33	WAT	79-01-6	
Vinyl chloride	Not detected	ug/L	1	624	06/27/11 16:33	WAT	75-01-4	



Analytical Laboratory Report

Lab Sample ID: S49090.06
 Sample Tag: Vault C
 Collected Date/Time: 06/20/2011 12:20
 Matrix: Wastewater
 COC Reference: 47571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR
2	40ml Glass	H2SO4	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	06/24/11 13:00	PER		
Inorganics								
Conductivity	1,686	umhos/cm		120.1	06/30/11 15:20	JKB		
TOC	5.4	mg/L	1	EPA 415.1	06/28/11 19:21	JKB		
Total Suspended Solids	5	mg/L	1	2540 D	06/23/11 11:00	DJS		
Metals								
Chromium, Dissolved	0.025	mg/L	0.005	200.8	06/24/11 16:03	PER	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	06/24/11 16:03	PER	7440-50-8	
Nickel, Dissolved	0.015	mg/L	0.005	200.8	06/24/11 16:03	PER	7440-02-0	
Zinc, Dissolved	0.022	mg/L	0.005	200.8	06/24/11 16:03	PER	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S49090.07
 Sample Tag: Sump D
 Collected Date/Time: 06/20/2011 13:15
 Matrix: Sump Water
 COC Reference: 47571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR
2	40ml Glass	H2SO4	Yes	4.5	IR
2	40ml Glass	HCL	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Metal Digestion	Completed			3015A	06/24/11 13:00	PER		
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Inorganics

Conductivity	3,470	umhos/cm		120.1	06/30/11 15:22	JKB		
TOC	99.5	mg/L	1	EPA 415.1	06/28/11 19:39	JKB		
Total Suspended Solids	9	mg/L	1	2540 D	06/23/11 11:00	DJS		

Metals

Chromium, Dissolved	0.097	mg/L	0.005	200.8	06/24/11 16:05	PER	7440-47-3	
Copper, Dissolved	0.645	mg/L	0.004	200.8	06/24/11 16:05	PER	7440-50-8	
Nickel, Dissolved	0.413	mg/L	0.005	200.8	06/24/11 16:05	PER	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	200.8	06/24/11 16:05	PER	7440-66-6	

Organics - Volatiles

VOCs, TTO List

Acrolein	Not detected	ug/L	10	624	06/27/11 16:51	WAT	107-02-8	
Acrylonitrile	Not detected	ug/L	7	624	06/27/11 16:51	WAT	107-13-1	X
Benzene	Not detected	ug/L	1	624	06/27/11 16:51	WAT	71-43-2	
Bromodichloromethane	Not detected	ug/L	1	624	06/27/11 16:51	WAT	75-27-4	
Bromoform	Not detected	ug/L	1	624	06/27/11 16:51	WAT	75-25-2	
Bromomethane	Not detected	ug/L	1	624	06/27/11 16:51	WAT	74-83-9	
Carbon tetrachloride	Not detected	ug/L	1	624	06/27/11 16:51	WAT	56-23-5	
Chlorobenzene	Not detected	ug/L	1	624	06/27/11 16:51	WAT	108-90-7	
Chloroethane	Not detected	ug/L	1	624	06/27/11 16:51	WAT	75-00-3	
2-Chloroethylvinyl ether	Not detected	ug/L	1	624	06/27/11 16:51	WAT	110-75-8	
Chloroform	Not detected	ug/L	1	624	06/27/11 16:51	WAT	67-66-3	
Chloromethane	Not detected	ug/L	1	624	06/27/11 16:51	WAT	74-87-3	
Dibromochloromethane	Not detected	ug/L	1	624	06/27/11 16:51	WAT	124-48-1	
1,1-Dichloroethane	Not detected	ug/L	1	624	06/27/11 16:51	WAT	75-34-3	
1,2-Dichloroethane	Not detected	ug/L	1	624	06/27/11 16:51	WAT	107-06-2	
1,1-Dichloroethene	Not detected	ug/L	1	624	06/27/11 16:51	WAT	75-35-4	
trans-1,2-Dichloroethene	Not detected	ug/L	1	624	06/27/11 16:51	WAT	156-60-5	
1,2-Dichloropropane	Not detected	ug/L	1	624	06/27/11 16:51	WAT	78-87-5	
cis-1,3-Dichloropropene	Not detected	ug/L	1	624	06/27/11 16:51	WAT	10061-01-5	
trans-1,3-Dichloropropene	Not detected	ug/L	1	624	06/27/11 16:51	WAT	10061-02-6	
Ethylbenzene	Not detected	ug/L	1	624	06/27/11 16:51	WAT	100-41-4	
Methylene chloride	Not detected	ug/L	5	624	06/27/11 16:51	WAT	75-09-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	624	06/27/11 16:51	WAT	79-34-5	
Tetrachloroethene	Not detected	ug/L	1	624	06/27/11 16:51	WAT	127-18-4	

X-Elevated reporting limit due to matrix interference



Analytical Laboratory Report

Lab Sample ID: S49090.07 (continued)

Sample Tag: Sump D

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
VOCs, TTO List (continued)								
Toluene	Not detected	ug/L	1	624	06/27/11 16:51	WAT	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	624	06/27/11 16:51	WAT	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	624	06/27/11 16:51	WAT	79-00-5	
Trichloroethene	Not detected	ug/L	1	624	06/27/11 16:51	WAT	79-01-6	
Vinyl chloride	Not detected	ug/L	1	624	06/27/11 16:51	WAT	75-01-4	



Analytical Laboratory Report

Lab Sample ID: S49090.08
 Sample Tag: Sump E
 Collected Date/Time: 06/20/2011 14:10
 Matrix: Sump Water
 COC Reference: 47571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR
2	40ml Glass	H2SO4	Yes	4.5	IR
2	40ml Glass	HCL	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Metal Digestion	Completed			3015A	06/24/11 13:00	PER		
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Inorganics

Conductivity	1,760	umhos/cm		120.1	06/30/11 15:24	JKB		
TOC	7.6	mg/L	1	EPA 415.1	06/28/11 20:18	JKB		
Total Suspended Solids	<1	mg/L	1	2540 D	06/23/11 11:00	DJS		

Metals

Chromium, Dissolved	0.007	mg/L	0.005	200.8	06/24/11 16:15	PER	7440-47-3	
Copper, Dissolved	0.020	mg/L	0.004	200.8	06/24/11 16:15	PER	7440-50-8	
Nickel, Dissolved	0.015	mg/L	0.005	200.8	06/24/11 16:15	PER	7440-02-0	
Zinc, Dissolved	0.012	mg/L	0.005	200.8	06/24/11 16:15	PER	7440-66-6	

Organics - Volatiles

VOCs, TTO List

Acrolein	Not detected	ug/L	10	624	06/27/11 17:46	WAT	107-02-8	
Acrylonitrile	Not detected	ug/L	1	624	06/27/11 17:46	WAT	107-13-1	
Benzene	Not detected	ug/L	1	624	06/27/11 17:46	WAT	71-43-2	
Bromodichloromethane	Not detected	ug/L	1	624	06/27/11 17:46	WAT	75-27-4	
Bromoform	Not detected	ug/L	1	624	06/27/11 17:46	WAT	75-25-2	
Bromomethane	Not detected	ug/L	1	624	06/27/11 17:46	WAT	74-83-9	
Carbon tetrachloride	Not detected	ug/L	1	624	06/27/11 17:46	WAT	56-23-5	
Chlorobenzene	Not detected	ug/L	1	624	06/27/11 17:46	WAT	108-90-7	
Chloroethane	Not detected	ug/L	1	624	06/27/11 17:46	WAT	75-00-3	
2-Chloroethylvinyl ether	Not detected	ug/L	1	624	06/27/11 17:46	WAT	110-75-8	
Chloroform	Not detected	ug/L	1	624	06/27/11 17:46	WAT	67-66-3	
Chloromethane	Not detected	ug/L	1	624	06/27/11 17:46	WAT	74-87-3	
Dibromochloromethane	Not detected	ug/L	1	624	06/27/11 17:46	WAT	124-48-1	
1,1-Dichloroethane	Not detected	ug/L	1	624	06/27/11 17:46	WAT	75-34-3	
1,2-Dichloroethane	Not detected	ug/L	1	624	06/27/11 17:46	WAT	107-06-2	
1,1-Dichloroethene	Not detected	ug/L	1	624	06/27/11 17:46	WAT	75-35-4	
trans-1,2-Dichloroethene	Not detected	ug/L	1	624	06/27/11 17:46	WAT	156-60-5	
1,2-Dichloropropane	Not detected	ug/L	1	624	06/27/11 17:46	WAT	78-87-5	
cis-1,3-Dichloropropene	Not detected	ug/L	1	624	06/27/11 17:46	WAT	10061-01-5	
trans-1,3-Dichloropropene	Not detected	ug/L	1	624	06/27/11 17:46	WAT	10061-02-6	
Ethylbenzene	Not detected	ug/L	1	624	06/27/11 17:46	WAT	100-41-4	
Methylene chloride	Not detected	ug/L	5	624	06/27/11 17:46	WAT	75-09-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	624	06/27/11 17:46	WAT	79-34-5	
Tetrachloroethene	Not detected	ug/L	1	624	06/27/11 17:46	WAT	127-18-4	
Toluene	Not detected	ug/L	1	624	06/27/11 17:46	WAT	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S49090.08 (continued)

Sample Tag: Sump E

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
VOCs, TTO List (continued)								
1,1,1-Trichloroethane	1	ug/L	1	624	06/27/11 17:46	WAT	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	624	06/27/11 17:46	WAT	79-00-5	
Trichloroethene	Not detected	ug/L	1	624	06/27/11 17:46	WAT	79-01-6	
Vinyl chloride	Not detected	ug/L	1	624	06/27/11 17:46	WAT	75-01-4	



Analytical Laboratory Report

Lab Sample ID: S49090.09
 Sample Tag: Vault E
 Collected Date/Time: 06/20/2011 14:40
 Matrix: Wastewater
 COC Reference: 47571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR
2	40ml Glass	H2SO4	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	06/24/11 13:00	PER		
Inorganics								
Conductivity	1,711	umhos/cm		120.1	06/30/11 15:26	JKB		
TOC	3.4	mg/L	1	EPA 415.1	06/28/11 20:35	JKB		
Total Suspended Solids	5	mg/L	1	2540 D	06/23/11 11:00	DJS		
Metals								
Chromium, Dissolved	0.029	mg/L	0.005	200.8	06/24/11 16:17	PER	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	06/24/11 16:17	PER	7440-50-8	
Nickel, Dissolved	0.010	mg/L	0.005	200.8	06/24/11 16:17	PER	7440-02-0	
Zinc, Dissolved	0.015	mg/L	0.005	200.8	06/24/11 16:17	PER	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S49090.10
 Sample Tag: Sump F
 Collected Date/Time: 06/20/2011 15:15
 Matrix: Sump Water
 COC Reference: 47571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR
2	40ml Glass	H2SO4	Yes	4.5	IR
2	40ml Glass	HCL	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Metal Digestion	Completed			3015A	06/24/11 13:00	PER		
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Inorganics

Conductivity	1,360	umhos/cm		120.1	06/30/11 15:28	JKB		
TOC	9.0	mg/L	1	EPA 415.1	06/28/11 20:52	JKB		
Total Suspended Solids	<1	mg/L	1	2540 D	06/23/11 11:00	DJS		

Metals

Chromium, Dissolved	0.016	mg/L	0.005	200.8	06/24/11 16:19	PER	7440-47-3	
Copper, Dissolved	0.025	mg/L	0.004	200.8	06/24/11 16:19	PER	7440-50-8	
Nickel, Dissolved	0.011	mg/L	0.005	200.8	06/24/11 16:19	PER	7440-02-0	
Zinc, Dissolved	0.013	mg/L	0.005	200.8	06/24/11 16:19	PER	7440-66-6	

Organics - Volatiles

VOCs, TTO List

Acrolein	Not detected	ug/L	10	624	06/27/11 18:04	WAT	107-02-8	
Acrylonitrile	Not detected	ug/L	1	624	06/27/11 18:04	WAT	107-13-1	
Benzene	Not detected	ug/L	1	624	06/27/11 18:04	WAT	71-43-2	
Bromodichloromethane	Not detected	ug/L	1	624	06/27/11 18:04	WAT	75-27-4	
Bromoform	Not detected	ug/L	1	624	06/27/11 18:04	WAT	75-25-2	
Bromomethane	Not detected	ug/L	1	624	06/27/11 18:04	WAT	74-83-9	
Carbon tetrachloride	Not detected	ug/L	1	624	06/27/11 18:04	WAT	56-23-5	
Chlorobenzene	Not detected	ug/L	1	624	06/27/11 18:04	WAT	108-90-7	
Chloroethane	Not detected	ug/L	1	624	06/27/11 18:04	WAT	75-00-3	
2-Chloroethylvinyl ether	Not detected	ug/L	1	624	06/27/11 18:04	WAT	110-75-8	
Chloroform	Not detected	ug/L	1	624	06/27/11 18:04	WAT	67-66-3	
Chloromethane	Not detected	ug/L	1	624	06/27/11 18:04	WAT	74-87-3	
Dibromochloromethane	Not detected	ug/L	1	624	06/27/11 18:04	WAT	124-48-1	
1,1-Dichloroethane	Not detected	ug/L	1	624	06/27/11 18:04	WAT	75-34-3	
1,2-Dichloroethane	Not detected	ug/L	1	624	06/27/11 18:04	WAT	107-06-2	
1,1-Dichloroethene	Not detected	ug/L	1	624	06/27/11 18:04	WAT	75-35-4	
trans-1,2-Dichloroethene	Not detected	ug/L	1	624	06/27/11 18:04	WAT	156-60-5	
1,2-Dichloropropane	Not detected	ug/L	1	624	06/27/11 18:04	WAT	78-87-5	
cis-1,3-Dichloropropene	Not detected	ug/L	1	624	06/27/11 18:04	WAT	10061-01-5	
trans-1,3-Dichloropropene	Not detected	ug/L	1	624	06/27/11 18:04	WAT	10061-02-6	
Ethylbenzene	Not detected	ug/L	1	624	06/27/11 18:04	WAT	100-41-4	
Methylene chloride	Not detected	ug/L	5	624	06/27/11 18:04	WAT	75-09-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	624	06/27/11 18:04	WAT	79-34-5	
Tetrachloroethene	Not detected	ug/L	1	624	06/27/11 18:04	WAT	127-18-4	
Toluene	Not detected	ug/L	1	624	06/27/11 18:04	WAT	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S49090.10 (continued)

Sample Tag: Sump F

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
VOCs, TTO List (continued)								
1,1,1-Trichloroethane	Not detected	ug/L	1	624	06/27/11 18:04	WAT	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	624	06/27/11 18:04	WAT	79-00-5	
Trichloroethene	Not detected	ug/L	1	624	06/27/11 18:04	WAT	79-01-6	
Vinyl chloride	Not detected	ug/L	1	624	06/27/11 18:04	WAT	75-01-4	



Analytical Laboratory Report

Lab Sample ID: S49090.11
 Sample Tag: Vault F
 Collected Date/Time: 06/20/2011 15:30
 Matrix: Wastewater
 COC Reference: 47571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR
2	40ml Glass	H2SO4	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	06/24/11 13:00	PER		
Inorganics								
Conductivity	1,642	umhos/cm		120.1	06/30/11 15:30	JKB		
TOC	2.5	mg/L	1	EPA 415.1	06/28/11 21:09	JKB		
Total Suspended Solids	47	mg/L	1	2540 D	06/23/11 11:00	DJS		
Metals								
Chromium, Dissolved	0.023	mg/L	0.005	200.8	06/24/11 16:20	PER	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	06/24/11 16:20	PER	7440-50-8	
Nickel, Dissolved	0.009	mg/L	0.005	200.8	06/24/11 16:20	PER	7440-02-0	
Zinc, Dissolved	0.020	mg/L	0.005	200.8	06/24/11 16:20	PER	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S49090.12
 Sample Tag: Dup-1
 Collected Date/Time: 06/20/2011 00:01
 Matrix: Sump Water
 COC Reference: 47572

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR
2	40ml Glass	H2SO4	Yes	4.5	IR
2	40ml Glass	HCL	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Metal Digestion	Completed			3015A	06/24/11 13:00	PER		
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Inorganics

Conductivity	4,570	umhos/cm		120.1	06/30/11 15:32	JKB		
TOC	112	mg/L	1	EPA 415.1	06/28/11 21:26	JKB		
Total Suspended Solids	7	mg/L	1	2540 D	06/23/11 11:00	DJS		

Metals

Chromium, Dissolved	0.129	mg/L	0.005	200.8	06/24/11 16:22	PER	7440-47-3	
Copper, Dissolved	2.58	mg/L	0.004	200.8	06/24/11 16:22	PER	7440-50-8	
Nickel, Dissolved	0.623	mg/L	0.005	200.8	06/24/11 16:22	PER	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	200.8	06/24/11 16:22	PER	7440-66-6	

Organics - Volatiles

VOCs, TTO List

Acrolein	Not detected	ug/L	10	624	06/27/11 18:22	WAT	107-02-8	
Acrylonitrile	Not detected	ug/L	1	624	06/27/11 18:22	WAT	107-13-1	
Benzene	Not detected	ug/L	1	624	06/27/11 18:22	WAT	71-43-2	
Bromodichloromethane	Not detected	ug/L	1	624	06/27/11 18:22	WAT	75-27-4	
Bromoform	Not detected	ug/L	1	624	06/27/11 18:22	WAT	75-25-2	
Bromomethane	Not detected	ug/L	1	624	06/27/11 18:22	WAT	74-83-9	
Carbon tetrachloride	Not detected	ug/L	1	624	06/27/11 18:22	WAT	56-23-5	
Chlorobenzene	Not detected	ug/L	1	624	06/27/11 18:22	WAT	108-90-7	
Chloroethane	Not detected	ug/L	1	624	06/27/11 18:22	WAT	75-00-3	
2-Chloroethylvinyl ether	Not detected	ug/L	1	624	06/27/11 18:22	WAT	110-75-8	
Chloroform	Not detected	ug/L	1	624	06/27/11 18:22	WAT	67-66-3	
Chloromethane	2	ug/L	1	624	06/27/11 18:22	WAT	74-87-3	
Dibromochloromethane	Not detected	ug/L	1	624	06/27/11 18:22	WAT	124-48-1	
1,1-Dichloroethane	Not detected	ug/L	1	624	06/27/11 18:22	WAT	75-34-3	
1,2-Dichloroethane	Not detected	ug/L	1	624	06/27/11 18:22	WAT	107-06-2	
1,1-Dichloroethene	Not detected	ug/L	1	624	06/27/11 18:22	WAT	75-35-4	
trans-1,2-Dichloroethene	Not detected	ug/L	1	624	06/27/11 18:22	WAT	156-60-5	
1,2-Dichloropropane	Not detected	ug/L	1	624	06/27/11 18:22	WAT	78-87-5	
cis-1,3-Dichloropropene	Not detected	ug/L	1	624	06/27/11 18:22	WAT	10061-01-5	
trans-1,3-Dichloropropene	Not detected	ug/L	1	624	06/27/11 18:22	WAT	10061-02-6	
Ethylbenzene	Not detected	ug/L	1	624	06/27/11 18:22	WAT	100-41-4	
Methylene chloride	Not detected	ug/L	5	624	06/27/11 18:22	WAT	75-09-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	624	06/27/11 18:22	WAT	79-34-5	
Tetrachloroethene	Not detected	ug/L	1	624	06/27/11 18:22	WAT	127-18-4	
Toluene	Not detected	ug/L	1	624	06/27/11 18:22	WAT	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S49090.12 (continued)

Sample Tag: Dup-1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
VOCs, TTO List (continued)								
1,1,1-Trichloroethane	Not detected	ug/L	1	624	06/27/11 18:22	WAT	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	624	06/27/11 18:22	WAT	79-00-5	
Trichloroethene	Not detected	ug/L	1	624	06/27/11 18:22	WAT	79-01-6	
Vinyl chloride	Not detected	ug/L	1	624	06/27/11 18:22	WAT	75-01-4	



Analytical Laboratory Report

Lab Sample ID: S49090.13
 Sample Tag: Dup-2
 Collected Date/Time: 06/20/2011 00:01
 Matrix: Wastewater
 COC Reference: 47572

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR
2	40ml Glass	H2SO4	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	06/24/11 13:00	PER		
Inorganics								
Conductivity	1,688	umhos/cm		120.1	06/30/11 15:34	JKB		
TOC	5.9	mg/L	1	EPA 415.1	06/28/11 21:44	JKB		
Total Suspended Solids	5	mg/L	1	2540 D	06/23/11 11:00	DJS		
Metals								
Chromium, Dissolved	0.024	mg/L	0.005	200.8	06/24/11 16:24	PER	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	06/24/11 16:24	PER	7440-50-8	
Nickel, Dissolved	0.014	mg/L	0.005	200.8	06/24/11 16:24	PER	7440-02-0	
Zinc, Dissolved	0.021	mg/L	0.005	200.8	06/24/11 16:24	PER	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S49090.14
 Sample Tag: TB-1
 Collected Date/Time: 06/20/2011 00:01
 Matrix: Quality Control
 COC Reference: 47572

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
----------	---------	-------	----	--------	---------------	---------	-------	-------

Organics - Volatiles

VOCs, TTO List

Acrolein	Not detected	ug/L	10	624	06/27/11 18:40	WAT	107-02-8	
Acrylonitrile	Not detected	ug/L	1	624	06/27/11 18:40	WAT	107-13-1	
Benzene	Not detected	ug/L	1	624	06/27/11 18:40	WAT	71-43-2	
Bromodichloromethane	Not detected	ug/L	1	624	06/27/11 18:40	WAT	75-27-4	
Bromoform	Not detected	ug/L	1	624	06/27/11 18:40	WAT	75-25-2	
Bromomethane	Not detected	ug/L	1	624	06/27/11 18:40	WAT	74-83-9	
Carbon tetrachloride	Not detected	ug/L	1	624	06/27/11 18:40	WAT	56-23-5	
Chlorobenzene	Not detected	ug/L	1	624	06/27/11 18:40	WAT	108-90-7	
Chloroethane	Not detected	ug/L	1	624	06/27/11 18:40	WAT	75-00-3	
2-Chloroethylvinyl ether	Not detected	ug/L	1	624	06/27/11 18:40	WAT	110-75-8	
Chloroform	Not detected	ug/L	1	624	06/27/11 18:40	WAT	67-66-3	
Chloromethane	Not detected	ug/L	1	624	06/27/11 18:40	WAT	74-87-3	
Dibromochloromethane	Not detected	ug/L	1	624	06/27/11 18:40	WAT	124-48-1	
1,1-Dichloroethane	Not detected	ug/L	1	624	06/27/11 18:40	WAT	75-34-3	
1,2-Dichloroethane	Not detected	ug/L	1	624	06/27/11 18:40	WAT	107-06-2	
1,1-Dichloroethene	Not detected	ug/L	1	624	06/27/11 18:40	WAT	75-35-4	
trans-1,2-Dichloroethene	Not detected	ug/L	1	624	06/27/11 18:40	WAT	156-60-5	
1,2-Dichloropropane	Not detected	ug/L	1	624	06/27/11 18:40	WAT	78-87-5	
cis-1,3-Dichloropropene	Not detected	ug/L	1	624	06/27/11 18:40	WAT	10061-01-5	
trans-1,3-Dichloropropene	Not detected	ug/L	1	624	06/27/11 18:40	WAT	10061-02-6	
Ethylbenzene	Not detected	ug/L	1	624	06/27/11 18:40	WAT	100-41-4	
Methylene chloride	Not detected	ug/L	5	624	06/27/11 18:40	WAT	75-09-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	624	06/27/11 18:40	WAT	79-34-5	
Tetrachloroethene	Not detected	ug/L	1	624	06/27/11 18:40	WAT	127-18-4	
Toluene	Not detected	ug/L	1	624	06/27/11 18:40	WAT	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	624	06/27/11 18:40	WAT	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	624	06/27/11 18:40	WAT	79-00-5	
Trichloroethene	Not detected	ug/L	1	624	06/27/11 18:40	WAT	79-01-6	
Vinyl chloride	Not detected	ug/L	1	624	06/27/11 18:40	WAT	75-01-4	



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C.O.C. PAGE # 1 OF 2

47571

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: Clifford Yantz
 COMPANY: O'Brien & Gere
 ADDRESS: 37000 Grand River Ave Ste 260
 CITY: Farmington Hills STATE: MI ZIP CODE: 48335
 PHONE NO.: 248-4775701 FAX NO.: _____ P.O. NO.: _____
 E-MAIL ADDRESS: _____ QUOTE NO.: _____

CONTACT NAME: _____ SAME
 COMPANY: _____
 ADDRESS: _____
 CITY: _____ STATE: _____ ZIP CODE: _____
 PHONE NO.: _____ FAX NO.: _____ P.O. NO.: _____

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

PROJECT NO./NAME: Calumet Rd Landfill Spill Remediation Sampling SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Smoak K S
 TURNAROUND TIME REQUIRED: 24 HR 48 HR 72 HR STANDARD OTHER
 DELIVERABLES REQUIRED: STANDARD LEVEL II LEVEL III OTHER

SPECIAL INSTRUCTIONS/NOTES
Metals Are:
 Co, Cr, Ni, Zn

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

MERIT LAB NO.	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	Pb	PbO ₂	As ₂ O ₃	NiOH	MeOH	OTHER	TOC	Specific Conductivity	Dissolved Metals	TSS	VOCs	# Containers & Preservatives
	DATE	TIME																
49090.01	6/20/11	920	SUMP A	WSP	6	1	2	1	2				X	X	X	X	X	
.02		955	Vault A	WSP	4	1		1	2				X	X	X	X		
.03		1020	SUMP B	WSP	6	1	2	1	2				X	X	X	X	X	
.04		1100	Vault B	WSP	4	1		1	2				X	X	X	X		
.05		1140	SUMP C	WSP	6	1	2	1	2				X	X	X	X	X	
.06		1220	Vault C	WSP	4	1		1	2				X	X	X	X		
.07		1315	SUMP D	WSP	6	1	2	1	2				X	X	X	X	X	
			Vault D															
.08		1410	SUMPE	WSP	6	1	2	1	2				X	X	X	X	X	
.09		1440	Vault E	WSP	4	1		1	2				X	X	X	X		
.10		1515	SUMP F	WSP	6	1	2	1	2				X	X	X	X	X	
.11		1530	Vault F	WSP	4	1		1	2				X	X	X	X		

RELINQUISHED BY: [Signature] ORGANIZATION: OBG DATE: 6/21/11 TIME: 1318
 RECEIVED BY: [Signature] ORGANIZATION: _____ DATE: 6/21/11 TIME: 1320

RELINQUISHED BY: [Signature] ORGANIZATION: _____ DATE: 6/21/11 TIME: 1430
 RECEIVED BY: [Signature] ORGANIZATION: _____ DATE: 6/21/11 TIME: 1430

SEAL NO. _____ SEAL INTACT YES NO INITIALS _____ NOTES: _____ TEMP. ON ARRIVAL: 4.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Merit

Laboratories, Inc.

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C.O.C. PAGE # 2 OF 2

47572

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: Clifford Kartz
 COMPANY: O'Brien & Gere
 ADDRESS: 37000 Grand River Ave Ste 260
 CITY: Farmington Hills STATE: MI ZIP CODE: 48335
 PHONE NO.: 248-477-5901 FAX NO.: _____ P.O. NO.: _____
 E-MAIL ADDRESS: _____ QUOTE NO.: _____

CONTACT NAME: _____ SAME
 COMPANY: _____
 ADDRESS: _____
 CITY: _____ STATE: _____ ZIP CODE: _____
 PHONE NO.: _____ FAX NO.: _____ P.O. NO.: _____

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

PROJECT NO./NAME: Colchester Rd Landfill SAMPLER(S) PLEASE PRINT/SIGN NAME: Kevin Sumner
 TURNAROUND TIME REQUIRED: 24 HR 48 HR 172 HR STANDARD OTHER
 DELIVERABLES REQUIRED: STANDARD LEVEL II LEVEL III OTHER

SPECIAL INSTRUCTIONS/NOTES

Metals Are
Cu, Cr, Ni, Zn

MATRIX CODE: GW=GROUNDWATER SL=SLUDGE WW=WASTEWATER O=OIL S=SOIL A=AIR L=LIQUID W=WASTE SD=SOLID M=MISC

Containers & Preservatives

MERIT LAB NO.	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCL	HNO3	H2SO4	NHOH	METH	OTHER	TDC specific conductivity dissolved metals	TSS	VOCs
	DATE	TIME													
<u>49010</u>	<u>12</u>	<u>6/22/11</u>	<u>DUP-1</u>	<u>ww</u>	<u>6</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>				<u>X</u>	<u>X</u>	<u>X</u>
<u>13</u>	<u>6/22/11</u>	<u>---</u>	<u>DUP-2</u>	<u>ww</u>	<u>4</u>	<u>1</u>		<u>1</u>	<u>2</u>				<u>X</u>	<u>X</u>	<u>X</u>
<u>14</u>	<u>6/20/11</u>	<u>---</u>	<u>TB-1</u>	<u>SL</u>	<u>1</u>	<u>1</u>								<u>X</u>	

RELINQUISHED BY: [Signature] OBG DATE: 6/21/11 TIME: 1318
 RECEIVED BY: [Signature] DATE: 6-21-11 TIME: 1320

RELINQUISHED BY: [Signature] DATE: 6-21-11 TIME: 1430
 RECEIVED BY: [Signature] DATE: 6-21-11 TIME: 1430
 SEAL NO. SEAL INTACT YES NO INITIALS: _____ NOTES: _____ TEMP. ON ARRIVAL: 4.5



Analytical Laboratory Report

Report ID: S49347.01(01)
Generated on 07/20/2011

Report to

Attention: Clifford Yantz
O'Brien & Gere Engineers, Inc.
37000 Grand River Ave.
Suite 260
Farmington, MI 48335

Phone: 248-477-5701 FAX:
Email: YantzCS@obg.com/SecresME@obg.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S49347.01-S49347.07
Project: Coldwater Road Landfill
Collected Date: 07/14/2011
Submitted Date/Time: 07/14/2011 14:00
Sampled by: Kevin Schneider
P.O. #: MLT1103

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:

Michigan DNRE (#9956), Ohio EPA (#CL0002), NELAC NY (#11814), NELAC FL (#E871045), WBENC (#2005110032)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Sample Summary (7 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S49347.01	Vault A	Wastewater	07/14/2011 09:35
S49347.02	Vault B	Wastewater	07/14/2011 09:55
S49347.03	Vault C	Wastewater	07/14/2011 10:25
S49347.04	EB-1	Wastewater	07/14/2011 10:40
S49347.05	Vault D	Wastewater	07/14/2011 11:00
S49347.06	Vault E	Wastewater	07/14/2011 11:20
S49347.07	Vault F	Wastewater	07/14/2011 11:45



Analytical Laboratory Report

Lab Sample ID: S49347.01
Sample Tag: Vault A
Collected Date/Time: 07/14/2011 09:35
Matrix: Wastewater
COC Reference: 47568

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	07/19/11 14:00	PER		
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	07/20/11 14:58	PER	7440-47-3	



Analytical Laboratory Report

Lab Sample ID: S49347.02
Sample Tag: Vault B
Collected Date/Time: 07/14/2011 09:55
Matrix: Wastewater
COC Reference: 47568

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	07/19/11 14:00	PER		
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	07/20/11 14:59	PER	7440-47-3	



Analytical Laboratory Report

Lab Sample ID: S49347.03
Sample Tag: Vault C
Collected Date/Time: 07/14/2011 10:25
Matrix: Wastewater
COC Reference: 47568

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	07/19/11 14:00	PER		
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	07/20/11 15:00	PER	7440-47-3	



Analytical Laboratory Report

Lab Sample ID: S49347.04
Sample Tag: EB-1
Collected Date/Time: 07/14/2011 10:40
Matrix: Wastewater
COC Reference: 47568

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	07/20/11 14:00	PER		
Metals								
Chromium	Not detected	mg/L	0.005	200.8	07/20/11 14:55	PER	7440-47-3	



Analytical Laboratory Report

Lab Sample ID: S49347.05
Sample Tag: Vault D
Collected Date/Time: 07/14/2011 11:00
Matrix: Wastewater
COC Reference: 47568

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Metal Digestion	Completed			3015A	07/19/11 14:00	PER		
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Metals

Chromium, Dissolved	Not detected	mg/L	0.005	200.8	07/20/11 15:02	PER	7440-47-3	
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Analytical Laboratory Report

Lab Sample ID: S49347.06
Sample Tag: Vault E
Collected Date/Time: 07/14/2011 11:20
Matrix: Wastewater
COC Reference: 47568

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	07/19/11 14:00	PER		
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	07/20/11 15:03	PER	7440-47-3	



Analytical Laboratory Report

Lab Sample ID: S49347.07
Sample Tag: Vault F
Collected Date/Time: 07/14/2011 11:45
Matrix: Wastewater
COC Reference: 47568

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
----------	---------	-------	----	--------	---------------	---------	-------	-------

Extraction / Prep.

Metal Digestion	Completed			3015A	07/19/11 14:00	PER		
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Metals

Chromium, Dissolved	Not detected	mg/L	0.005	200.8	07/20/11 15:05	PER	7440-47-3	
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47568

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Clifford Yantz
 COMPANY O'Brien & Gere
 ADDRESS 37000 Grand River ave ste 260
 CITY Farmington Hills STATE Mi ZIP CODE 48335
 PHONE NO. 248-477-5701 FAX NO. _____ P.O. NO. _____
 E-MAIL ADDRESS clifford.yantz@obg.com QUOTE NO. _____

CONTACT NAME _____ SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ FAX NO. _____ P.O. NO. _____

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

PROJECT NO./NAME			SAMPLER(S) - PLEASE PRINT/SIGN NAME										SPECIAL INSTRUCTIONS/NOTES				
<u>Colony Rd Landfill</u>			<u>[Signature]</u> <u>Kevin Snieder</u>										<u>Equipment Blank</u> <u>NOT Field Filtered</u>				
TURNAROUND TIME REQUIRED			# Containers & Preservatives												Dissolved Chromium Total Chromium		
<input type="checkbox"/> 24 HR <input type="checkbox"/> 48 HR <input type="checkbox"/> 72 HR <input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> OTHER			<input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> LEVEL II <input type="checkbox"/> LEVEL III <input type="checkbox"/> OTHER														
MATRIX CODE	GW=GROUNDWATER SL=SLUDGE	WW=WASTEWATER O=OIL	S=SOIL A=AIR	L=LIQUID W=WASTE	SD=SOLID M=MISC	NONE	HCL	HNO3	H2SO4	NaOH	MeOH	OTHER					
MERIT LAB NO.	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION				MATRIX	# OF BOTTLES									
	DATE	TIME															
<u>49347.01</u>	<u>7/14</u>	<u>935</u>	<u>Vault A</u>				<u>ww</u>	<u>1</u>								<u>X</u>	
<u>.02</u>		<u>755</u>	<u>Vault B</u>				<u>ww</u>	<u>1</u>								<u>X</u>	
<u>.03</u>		<u>1035</u>	<u>Vault C</u>				<u>ww</u>	<u>1</u>								<u>X</u>	
<u>.04</u>		<u>1040</u>	<u>EB-1</u>				<u>QC</u>	<u>1</u>								<u>X</u>	
<u>.05</u>		<u>1100</u>	<u>Vault D</u>				<u>ww</u>	<u>1</u>								<u>X</u>	
<u>.06</u>		<u>1120</u>	<u>Vault E</u>				<u>ww</u>	<u>1</u>								<u>X</u>	
<u>.07</u>		<u>1145</u>	<u>Vault F</u>				<u>ww</u>	<u>1</u>								<u>X</u>	

RELINQUISHED BY: [Signature] OBG DATE 7-14-11 TIME 1045
 RECEIVED BY: [Signature] DATE 7-14-11 TIME 1205
 RELINQUISHED BY: _____ DATE _____ TIME _____
 RECEIVED BY: _____ DATE _____ TIME _____

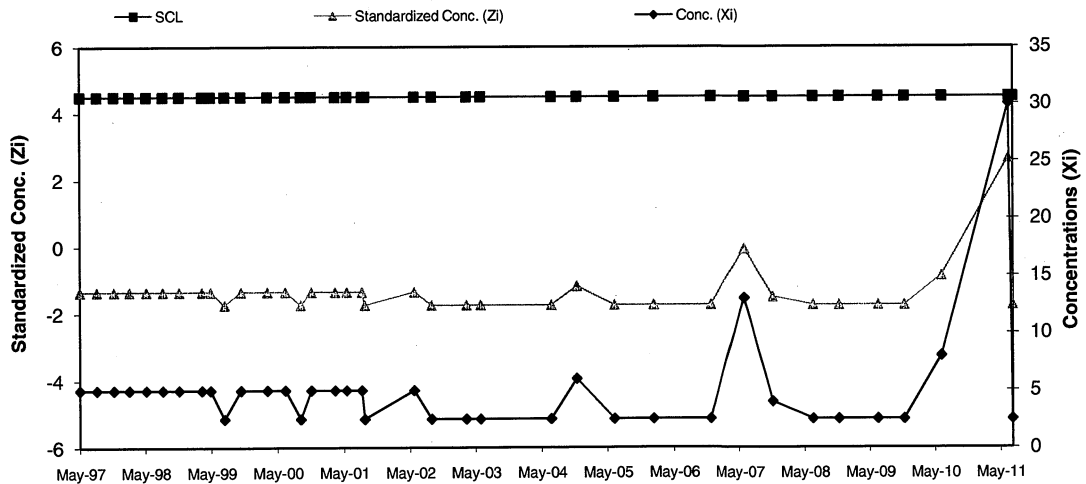
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 RECEIVED BY: [Signature] DATE 7-14-11 TIME 1400
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____ NOTES: _____ TEMP. ON ARRIVAL 47
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____

APPENDIX B
Leak Detection Vault
Control Charts

**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - Chromium**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-95	10	13.38	6.25
2	Jun-95	24		
3	Aug-95	10		
4	Nov-95	23		
5	Mar-96	10		
6	Jun-96	10		
7	Aug-96	10		
8	Nov-96	10		

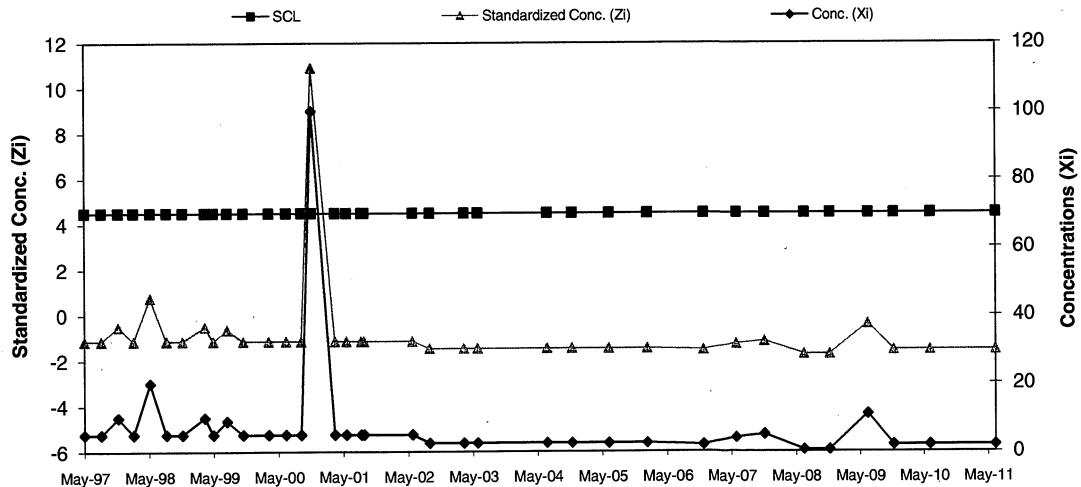
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	5	-1.34
10	Aug-97	4.5	5	-1.34
11	Nov-97	4.5	5	-1.34
12	Feb-98	4.5	5	-1.34
13	May-98	4.5	5	-1.34
14	Aug-98	4.5	5	-1.34
15	Nov-98	4.5	5	-1.34
16	Mar-99	4.5	5	-1.34
17	May-99	4.5	5	-1.34
18	Jul-99	4.5	2.5	-1.74
19	Oct-99	4.5	5	-1.34
20	Mar-00	4.5	5	-1.34
21	Jun-00	4.5	5	-1.34
22	Sep-00	4.5	2.5	-1.74
23	Nov-00	4.5	5	-1.34
24	Mar-01	4.5	5	-1.34
25	May-01	4.5	5	-1.34
26	Aug-01	4.5	2.5	-1.74
27	Aug-01	4.5	5	-1.34
28	May-02	4.5	5	-1.34
29	Sep-02	4.5	2.5	-1.74
30	Mar-03	4.5	2.5	-1.74
31	Jun-03	4.5	2.5	-1.74
32	Jun-04	4.5	2.5	-1.74
33	Nov-04	4.5	6	-1.18
34	Jun-05	4.5	2.5	-1.74
35	Jan-06	4.5	2.5	-1.74
36	Nov-06	4.5	2.5	-1.74
37	Jun-07	4.5	13	-0.06
38	Nov-07	4.5	4	-1.50
39	Jun-08	4.5	2.5	-1.74
40	Nov-08	4.5	2.5	-1.74
41	Jun-09	4.5	2.5	-1.74
42	Nov-09	4.5	2.5	-1.74
43	Jun-10	4.5	8	-0.86
44	Jun-11	4.5	30	2.66
45	Jul-11	4.5	2.5	-1.74



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - Copper**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-95	10	14	7.87
2	Jun-95	21		
3	Aug-95	10		
4	Nov-95	31		
5	Mar-96	10		
6	Jun-96	10		
7	Aug-96	10		
8	Nov-96	10		

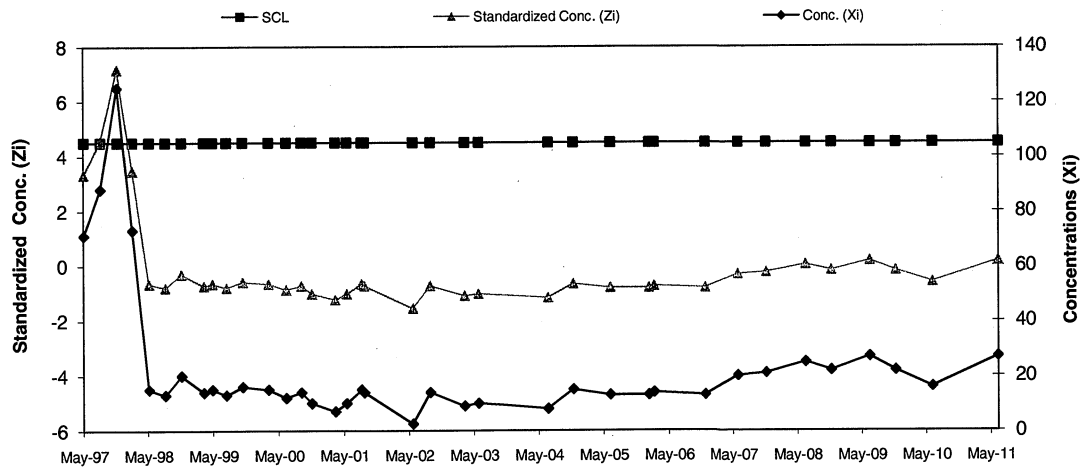
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	5	-1.14
10	Aug-97	4.5	5	-1.14
11	Nov-97	4.5	10	-0.51
12	Feb-98	4.5	5	-1.14
13	May-98	4.5	20	0.76
14	Aug-98	4.5	5	-1.14
15	Nov-98	4.5	5	-1.14
16	Mar-99	4.5	10	-0.51
17	May-99	4.5	5	-1.14
18	Jul-99	4.5	9	-0.64
19	Oct-99	4.5	5	-1.14
20	Mar-00	4.5	5	-1.14
21	Jun-00	4.5	5	-1.14
22	Sep-00	4.5	5	-1.14
23	Nov-00	4.5	100	10.92
24	Mar-01	4.5	5	-1.14
25	May-01	4.5	5	-1.14
26	Aug-01	4.5	5	-1.14
27	Aug-01	4.5	5	-1.14
28	May-02	4.5	5	-1.14
29	Sep-02	4.5	2.5	-1.46
30	Mar-03	4.5	2.5	-1.46
31	Jun-03	4.5	2.5	-1.46
32	Jun-04	4.5	2.5	-1.46
33	Nov-04	4.5	2.5	-1.46
34	Jun-05	4.5	2.5	-1.46
35	Jan-06	4.5	2.5	-1.46
36	Nov-06	4.5	2	-1.52
37	Jun-07	4.5	4	-1.27
38	Nov-07	4.5	5	-1.14
39	Jun-08	4.5	0.5	-1.71
40	Nov-08	4.5	0.5	-1.71
41	Jun-09	4.5	11	-0.38
42	Nov-09	4.5	2	-1.52
43	Jun-10	4.5	2	-1.52
44	Jun-11	4.5	2	-1.52



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - Nickel**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-95	20	24.25	14.07
2	Jun-95	15		
3	Aug-95	20		
4	Nov-95	43		
5	Mar-96	46		
6	Jun-96	10		
7	Aug-96	10		
8	Nov-96	30		

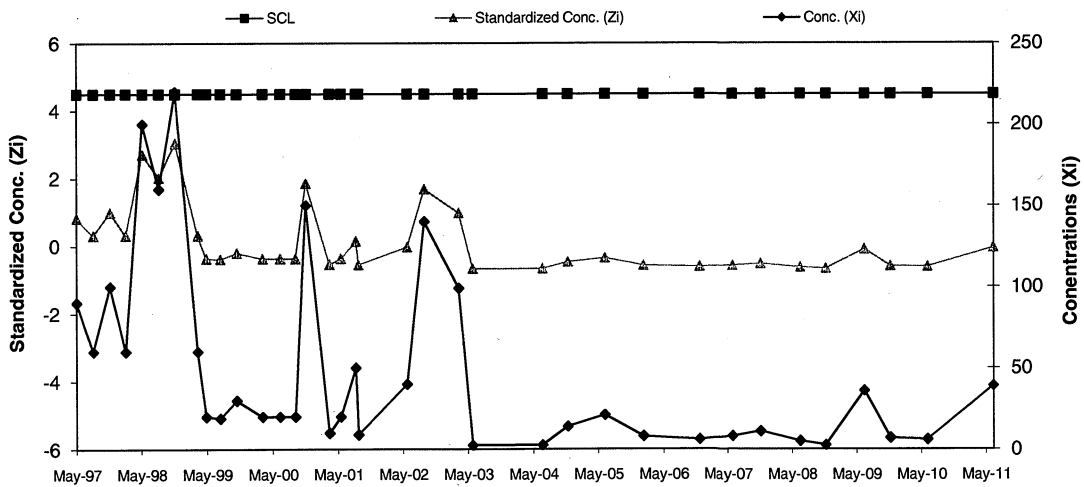
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	71	3.32
10	Aug-97	4.5	88	4.53
11	Nov-97	4.5	125	7.16
12	Feb-98	4.5	73	3.47
13	May-98	4.5	15	-0.66
14	Aug-98	4.5	13	-0.80
15	Nov-98	4.5	20	-0.30
16	Mar-99	4.5	14	-0.73
17	May-99	4.5	15	-0.66
18	Jul-99	4.5	13	-0.80
19	Oct-99	4.5	16	-0.59
20	Mar-00	4.5	15	-0.66
21	Jun-00	4.5	12	-0.87
22	Sep-00	4.5	14	-0.73
23	Nov-00	4.5	10	-1.01
24	Mar-01	4.5	7	-1.23
25	May-01	4.5	10	-1.01
26	Aug-01	4.5	14	-0.73
27	Aug-01	4.5	15	-0.66
28	May-02	4.5	2.5	-1.55
29	Sep-02	4.5	14	-0.73
30	Mar-03	4.5	9	-1.08
31	Jun-03	4.5	10	-1.01
32	Jun-04	4.5	8	-1.16
33	Nov-04	4.5	15	-0.66
34	Jun-05	4.5	13	-0.80
35	Jan-06	4.5	13	-0.80
36	Feb-06	4.5	14	-0.73
37	Nov-06	4.5	13	-0.80
38	Jun-07	4.5	20	-0.30
39	Nov-07	4.5	21	-0.23
40	Jun-08	4.5	25	0.05
41	Nov-08	4.5	22	-0.16
42	Jun-09	4.5	27	0.20
43	Nov-09	4.5	22	-0.16
44	Jun-10	4.5	16	-0.59
45	Jun-11	4.5	27	0.20



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - Zinc**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-95	180	41.75	58.47
2	Jun-95	10		
3	Aug-95	10		
4	Nov-95	24		
5	Mar-96	10		
6	Jun-96	10		
7	Aug-96	30		
8	Nov-96	60		

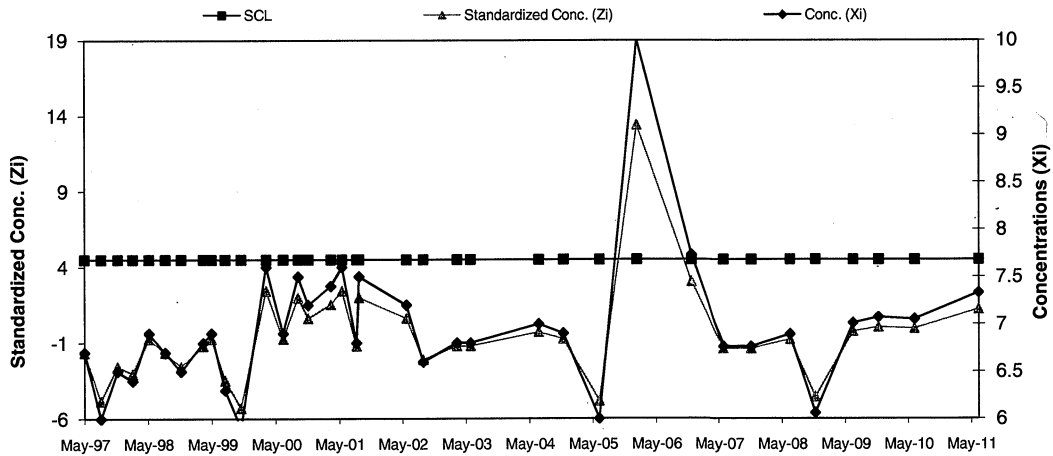
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	90	0.83
10	Aug-97	4.5	60	0.31
11	Nov-97	4.5	100	1.00
12	Feb-98	4.5	60	0.31
13	May-98	4.5	200	2.71
14	Aug-98	4.5	160	2.02
15	Nov-98	4.5	220	3.05
16	Mar-99	4.5	60	0.31
17	May-99	4.5	20	-0.37
18	Jul-99	4.5	19	-0.39
19	Oct-99	4.5	30	-0.20
20	Mar-00	4.5	20	-0.37
21	Jun-00	4.5	20	-0.37
22	Sep-00	4.5	20	-0.37
23	Nov-00	4.5	150	1.85
24	Mar-01	4.5	10	-0.54
25	May-01	4.5	20	-0.37
26	Aug-01	4.5	9	-0.56
27	Aug-01	4.5	50	0.14
28	May-02	4.5	40	-0.03
29	Sep-02	4.5	140	1.68
30	Mar-03	4.5	99	0.98
31	Jun-03	4.5	2.5	-0.67
32	Jun-04	4.5	2.5	-0.67
33	Nov-04	4.5	14	-0.47
34	Jun-05	4.5	21	-0.35
35	Jan-06	4.5	8	-0.58
36	Nov-06	4.5	6	-0.61
37	Jun-07	4.5	8	-0.58
38	Nov-07	4.5	11	-0.53
39	Jun-08	4.5	5	-0.63
40	Nov-08	4.5	2.5	-0.67
41	Jun-09	4.5	36	-0.10
42	Nov-09	4.5	7	-0.59
43	Jun-10	4.5	6	-0.61
44	Jun-11	4.5	39	-0.05



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - pH**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-95	7.5	7.06	0.22
2	Jun-95	6.8		
3	Aug-95	6.9		
4	Nov-95	7		
5	Mar-96	7.2		
6	Jun-96	6.9		
7	Aug-96	7.1		
8	Nov-96	7.1		

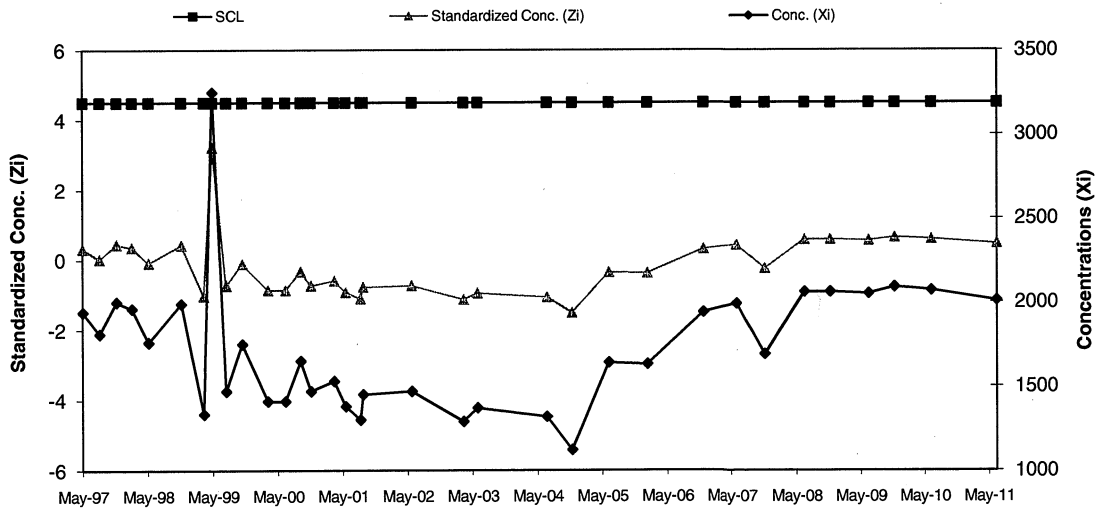
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	6.7	-1.65
10	Aug-97	4.5	6	-4.83
11	Nov-97	4.5	6.5	-2.56
12	Feb-98	4.5	6.4	-3.01
13	May-98	4.5	6.9	-0.74
14	Aug-98	4.5	6.7	-1.65
15	Nov-98	4.5	6.5	-2.56
16	Mar-99	4.5	6.8	-1.19
17	May-99	4.5	6.9	-0.74
18	Jul-99	4.5	6.3	-3.47
19	Oct-99	4.5	5.9	-5.28
20	Mar-00	4.5	7.6	2.44
21	Jun-00	4.5	6.9	-0.74
22	Sep-00	4.5	7.5	1.99
23	Nov-00	4.5	7.2	0.63
24	Mar-01	4.5	7.4	1.53
25	May-01	4.5	7.6	2.44
26	Aug-01	4.5	7.5	1.99
27	Aug-01	4.5	6.8	-1.19
28	May-02	4.5	7.2	0.63
29	Sep-02	4.5	6.6	-2.10
30	Mar-03	4.5	6.8	-1.19
31	Jun-03	4.5	6.8	-1.19
32	Jun-04	4.5	7	-0.28
33	Nov-04	4.5	6.9	-0.74
34	Jun-05	4.5	6	-4.83
35	Jan-06	4.5	10.0	13.40
36	Nov-06	4.5	7.7	3.03
37	Jun-07	4.5	6.8	-1.38
38	Nov-07	4.5	6.8	-1.38
39	Jun-08	4.5	6.9	-0.78
40	Nov-08	4.5	6.1	-4.56
41	Jun-09	4.5	7.0	-0.24
42	Nov-09	4.5	7.1	0.03
43	Jun-10	4.5	7.1	-0.06
44	Jun-11	4.5	7.3	1.22



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - SpC**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-95	690	1,798.75	450.73
2	Jun-95	1900		
3	Aug-95	2000		
4	Nov-95	1900		
5	Mar-96	2000		
6	Jun-96	2000		
7	Aug-96	1900		
8	Nov-96	2000		

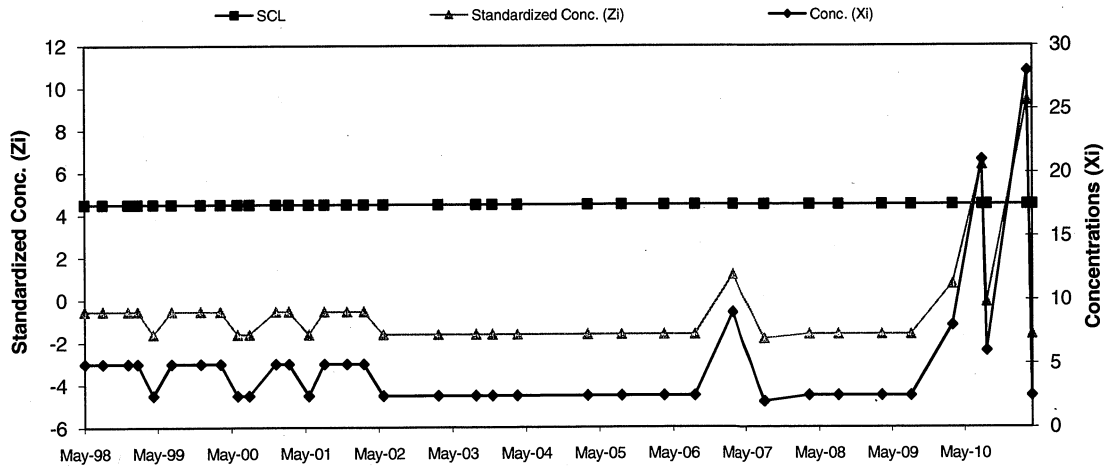
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	1940	0.31
10	Aug-97	4.5	1810	0.02
11	Nov-97	4.5	2000	0.45
12	Feb-98	4.5	1960	0.36
13	May-98	4.5	1760	-0.09
14	Nov-98	4.5	1990	0.42
15	Mar-99	4.5	1334	-1.03
16	May-99	4.5	3250	3.22
17	Jul-99	4.5	1470	-0.73
18	Oct-99	4.5	1750	-0.11
19	Mar-00	4.5	1410	-0.86
20	Jun-00	4.5	1410	-0.86
21	Sep-00	4.5	1650	-0.33
22	Nov-00	4.5	1470	-0.73
23	Mar-01	4.5	1530	-0.60
24	May-01	4.5	1380	-0.93
25	Aug-01	4.5	1450	-0.77
26	Aug-01	4.5	1300	-1.11
27	May-02	4.5	1470	-0.73
28	Mar-03	4.5	1290	-1.13
29	Jun-03	4.5	1370	-0.95
30	Jun-04	4.5	1318	-1.07
31	Nov-04	4.5	1120	-1.51
32	Jun-05	4.5	1640	-0.35
33	Jan-06	4.5	1630	-0.37
34	Nov-06	4.5	1940	0.31
35	Jun-07	4.5	1990	0.42
36	Nov-07	4.5	1690	-0.24
37	Jun-08	4.5	2060	0.58
38	Nov-08	4.5	2060	0.58
39	Jun-09	4.5	2050	0.56
40	Nov-09	4.5	2090	0.65
41	Jun-10	4.5	2070	0.60
42	Jun-11	4.5	2010	0.47



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - Chromium**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-96	10	6.25	2.31
2	Nov-96	10		
3	Feb-97	5		
4	May-97	5		
5	Aug-97	5		
6	Nov-97	5		
7	Feb-98	5		
8	May-98	5		

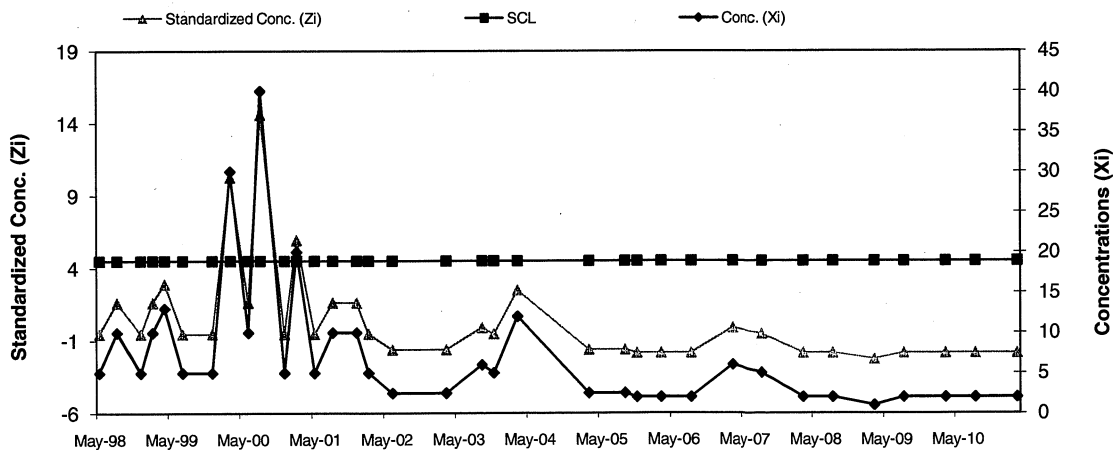
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-98	4.5	5	-0.54
10	Nov-98	4.5	5	-0.54
11	Mar-99	4.5	5	-0.54
12	May-99	4.5	5	-0.54
13	Jul-99	4.5	2.5	-1.62
14	Oct-99	4.5	5	-0.54
15	Mar-00	4.5	5	-0.54
16	Jun-00	4.5	5	-0.54
17	Sep-00	4.5	2.5	-1.62
18	Nov-00	4.5	2.5	-1.62
19	Mar-01	4.5	5	-0.54
20	May-01	4.5	5	-0.54
21	Aug-01	4.5	2.5	-1.62
22	Nov-01	4.5	5	-0.54
23	Mar-02	4.5	5	-0.54
24	May-02	4.5	5	-0.54
25	Sep-02	4.5	2.5	-1.62
26	Jun-03	4.5	2.5	-1.62
27	Dec-03	4.5	2.5	-1.62
28	Feb-04	4.5	2.5	-1.62
29	Jun-04	4.5	2.5	-1.62
30	Jun-05	4.5	2.5	-1.62
31	Dec-05	4.5	2.5	-1.62
32	Jun-06	4.5	2.5	-1.62
33	Nov-06	4.5	2.5	-1.62
34	Jun-07	4.5	9	1.19
35	Nov-07	4.5	2	-1.84
36	Jun-08	4.5	2.5	-1.62
37	Nov-08	4.5	2.5	-1.62
38	Jun-09	4.5	2.5	-1.62
39	Nov-09	4.5	2.5	-1.62
40	Jun-10	4.5	8	0.76
41	Nov-10	4.5	21	6.37
42	Dec-10	4.5	6	-0.11
43	Jun-11	4.5	28	9.40
44	Jul-11	4.5	2.5	-1.62



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - Copper**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-96	10	6.25	2.31
2	Nov-96	10		
3	Feb-97	5		
4	May-97	5		
5	Aug-97	5		
6	Nov-97	5		
7	Feb-98	5		
8	May-98	5		

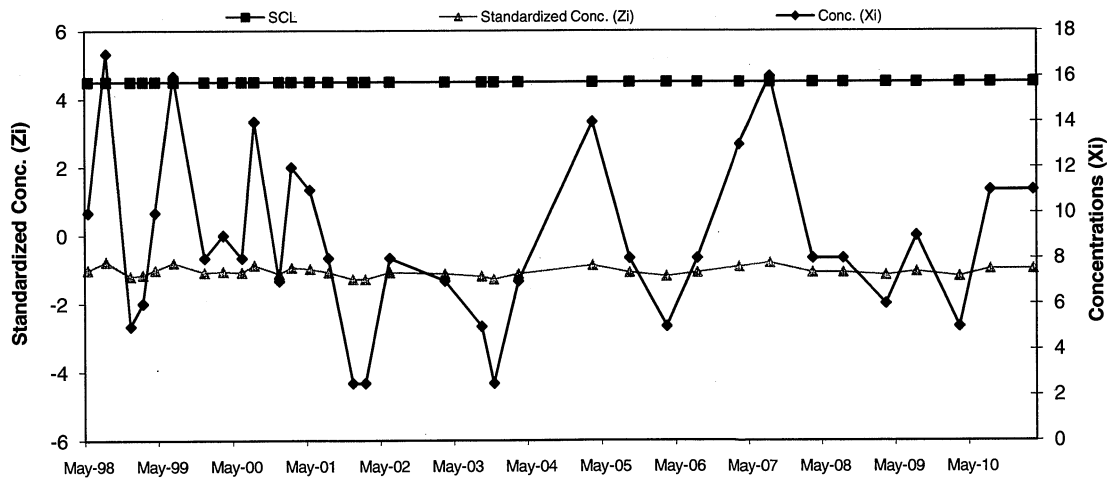
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-98	4.5	5	-0.54
10	Nov-98	4.5	10	1.62
11	Mar-99	4.5	5	-0.54
12	May-99	4.5	10	1.62
13	Jul-99	4.5	13	2.92
14	Oct-99	4.5	5	-0.54
15	Mar-00	4.5	5	-0.54
16	Jun-00	4.5	30	10.26
17	Sep-00	4.5	10	1.62
18	Nov-00	4.5	40	14.58
19	Mar-01	4.5	5	-0.54
20	May-01	4.5	20	5.94
21	Aug-01	4.5	5	-0.54
22	Nov-01	4.5	10	1.62
23	Mar-02	4.5	10	1.62
24	May-02	4.5	5	-0.54
25	Sep-02	4.5	2.5	-1.62
26	Jun-03	4.5	2.5	-1.62
27	Dec-03	4.5	6	-0.11
28	Feb-04	4.5	5	-0.54
29	Jun-04	4.5	12	2.48
30	Jun-05	4.5	2.5	-1.62
31	Dec-05	4.5	2.5	-1.62
32	Feb-06	4.5	2	-1.84
33	Jun-06	4.5	2	-1.84
34	Nov-06	4.5	2	-1.84
35	Jun-07	4.5	6	-0.11
36	Nov-07	4.5	5	-0.54
37	Jun-08	4.5	2	-1.84
38	Nov-08	4.5	2	-1.84
39	Jun-09	4.5	1	-2.27
40	Nov-09	4.5	2	-1.84
41	Jun-10	4.5	2	-1.84
42	Nov-10	4.5	2	-1.84
43	Jun-11	4.5	2	-1.84



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - Nickel**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-96	10	38.88	28.34
2	Nov-96	20		
3	Feb-97	43		
4	May-97	45		
5	Aug-97	26		
6	Nov-97	96		
7	Feb-98	57		
8	May-98	14		

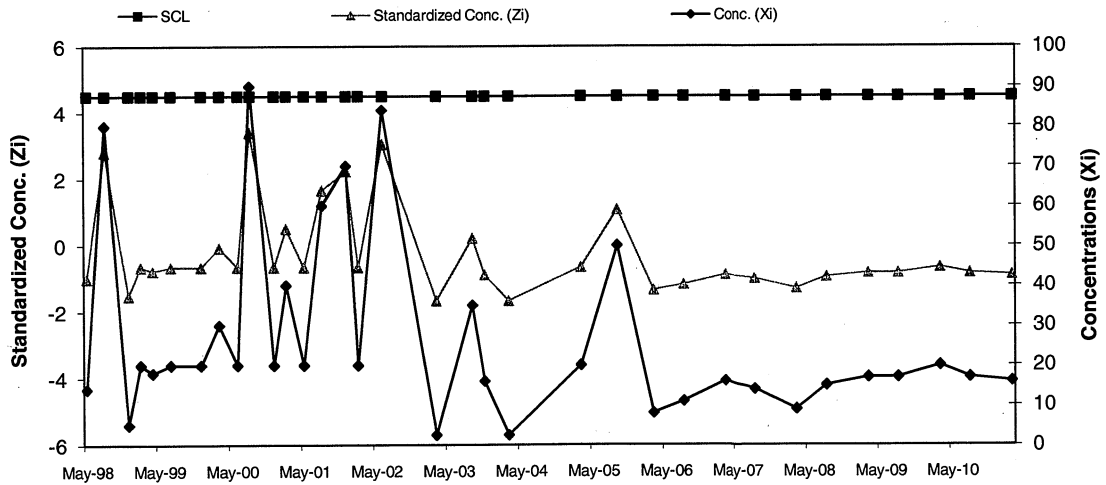
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-98	4.5	10	-1.02
10	Nov-98	4.5	17	-0.77
11	Mar-99	4.5	5	-1.20
12	May-99	4.5	6	-1.16
13	Jul-99	4.5	10	-1.02
14	Oct-99	4.5	16	-0.81
15	Mar-00	4.5	8	-1.09
16	Jun-00	4.5	9	-1.05
17	Sep-00	4.5	8	-1.09
18	Nov-00	4.5	14	-0.88
19	Mar-01	4.5	7	-1.12
20	May-01	4.5	12	-0.95
21	Aug-01	4.5	11	-0.98
22	Nov-01	4.5	8	-1.09
23	Mar-02	4.5	2.5	-1.28
24	May-02	4.5	2.5	-1.28
25	Sep-02	4.5	8	-1.09
26	Jun-03	4.5	7	-1.12
27	Dec-03	4.5	5	-1.20
28	Feb-04	4.5	2.5	-1.28
29	Jun-04	4.5	7	-1.12
30	Jun-05	4.5	14	-0.88
31	Dec-05	4.5	8	-1.09
32	Jun-06	4.5	5	-1.20
33	Nov-06	4.5	8	-1.09
34	Jun-07	4.5	13	-0.91
35	Nov-07	4.5	16	-0.81
36	Jun-08	4.5	8	-1.09
37	Nov-08	4.5	8	-1.09
38	Jun-09	4.5	6	-1.16
39	Nov-09	4.5	9	-1.05
40	Jun-10	4.5	5	-1.20
41	Nov-10	4.5	11	-0.98
42	Jun-11	4.5	11	-0.98



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - Zinc**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-96	10	31.25	17.27
2	Nov-96	40		
3	Feb-97	20		
4	May-97	20		
5	Aug-97	60		
6	Nov-97	50		
7	Feb-98	20		
8	May-98	30		

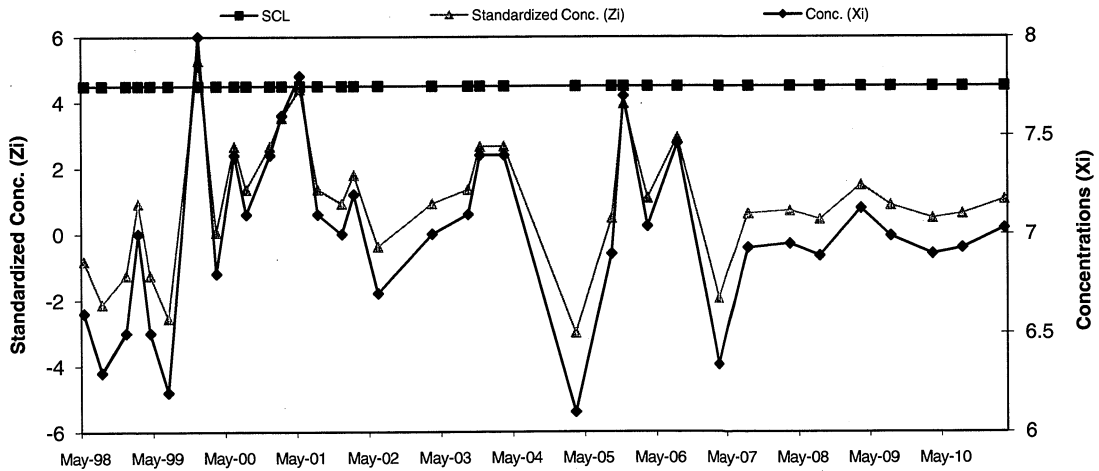
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-98	4.5	14	-1.00
10	Nov-98	4.5	80	2.82
11	Mar-99	4.5	5	-1.52
12	May-99	4.5	20	-0.65
13	Jul-99	4.5	18	-0.77
14	Oct-99	4.5	20	-0.65
15	Mar-00	4.5	20	-0.65
16	Jun-00	4.5	30	-0.07
17	Sep-00	4.5	20	-0.65
18	Nov-00	4.5	90	3.40
19	Mar-01	4.5	20	-0.65
20	May-01	4.5	40	0.51
21	Aug-01	4.5	20	-0.65
22	Nov-01	4.5	60	1.66
23	Mar-02	4.5	70	2.24
24	May-02	4.5	20	-0.65
25	Sep-02	4.5	84	3.05
26	Jun-03	4.5	2.5	-1.66
27	Dec-03	4.5	35	0.22
28	Feb-04	4.5	16	-0.88
29	Jun-04	4.5	2.5	-1.66
30	Jun-05	4.5	20	-0.65
31	Dec-05	4.5	50	1.09
32	Jun-06	4.5	8	-1.35
33	Nov-06	4.5	11	-1.17
34	Jun-07	4.5	16	-0.88
35	Nov-07	4.5	14	-1.00
36	Jun-08	4.5	9	-1.29
37	Nov-08	4.5	15	-0.94
38	Jun-09	4.5	17	-0.83
39	Nov-09	4.5	17	-0.83
40	Jun-10	4.5	20	-0.65
41	Nov-10	4.5	17	-0.83
42	Jun-11	4.5	16	-0.88



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - pH**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-96	6.9	6.79	0.23
2	Nov-96	7		
3	Feb-97	7.1		
4	May-97	6.5		
5	Aug-97	6.5		
6	Nov-97	6.8		
7	Feb-98	6.6		
8	May-98	6.9		

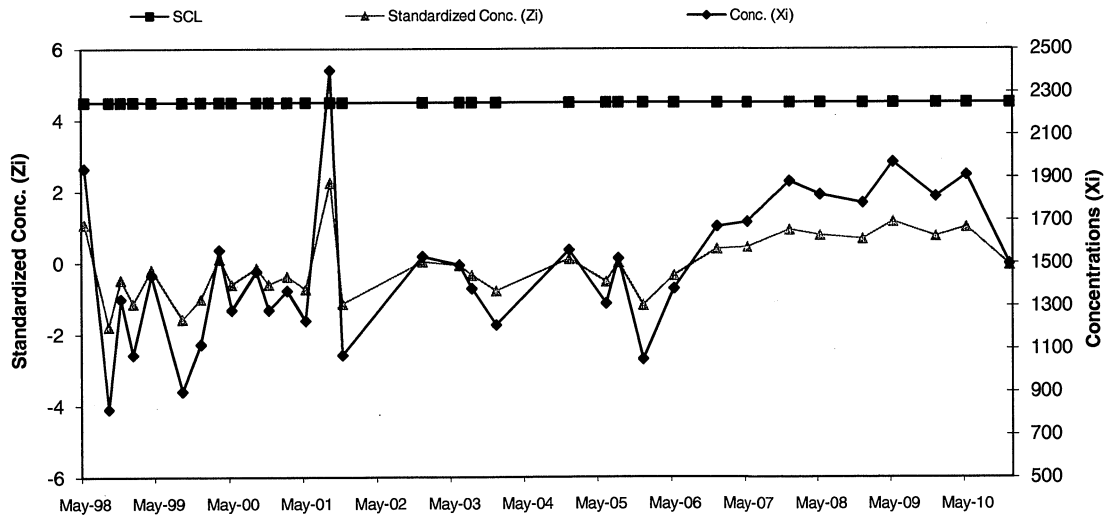
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-98	4.5	6.6	-0.82
10	Nov-98	4.5	6.3	-2.12
11	Mar-99	4.5	6.5	-1.25
12	May-99	4.5	7	0.93
13	Jul-99	4.5	6.5	-1.25
14	Oct-99	4.5	6.2	-2.56
15	Mar-00	4.5	8	5.28
16	Jun-00	4.5	6.8	0.05
17	Sep-00	4.5	7.4	2.67
18	Nov-00	4.5	7.1	1.36
19	Mar-01	4.5	7.4	2.67
20	May-01	4.5	7.6	3.54
21	Aug-01	4.5	7.8	4.41
22	Nov-01	4.5	7.1	1.36
23	Mar-02	4.5	7	0.93
24	May-02	4.5	7.2	1.80
25	Sep-02	4.5	6.7	-0.38
26	Jun-03	4.5	7	0.93
27	Dec-03	4.5	7.1	1.36
28	Feb-04	4.5	7.4	2.67
29	Jun-04	4.5	7.4	2.67
30	Jun-05	4.5	6.1	-3.00
31	Dec-05	4.5	6.9	0.49
32	Feb-06	4.5	7.7	3.98
33	Jun-06	4.5	7.0	1.10
34	Nov-06	4.5	7.5	2.93
35	Jun-07	4.5	6.3	-1.95
36	Nov-07	4.5	6.9	0.62
37	Jun-08	4.5	7.0	0.71
38	Nov-08	4.5	6.9	0.45
39	Jun-09	4.5	7.1	1.49
40	Nov-09	4.5	7.0	0.88
41	Jun-10	4.5	6.9	0.49
42	Nov-10	4.5	6.9	0.62
43	Jun-11	4.5	7.0	1.06



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - SpC**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-96	1900	1,516.63	391.89
2	Nov-96	1600		
3	Feb-97	1590		
4	May-97	1930		
5	Aug-97	663		
6	Nov-97	1400		
7	Feb-98	1560		
8	May-98	1490		

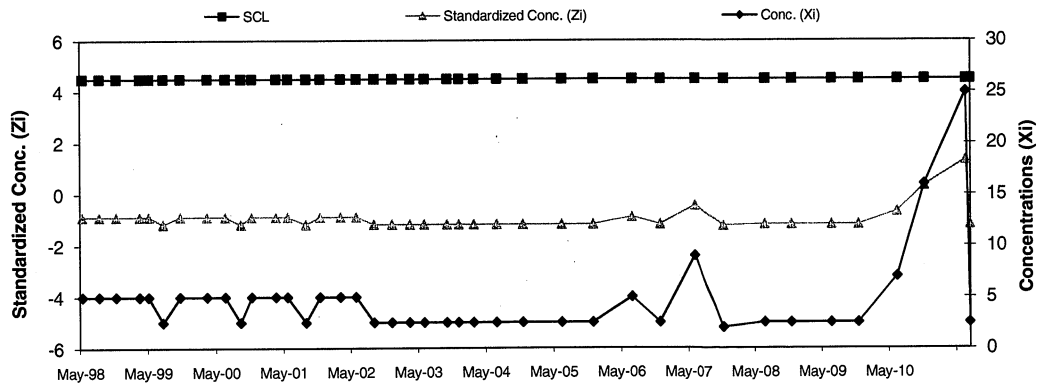
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	1940	1.08
10	Mar-99	4.5	817	-1.79
11	May-99	4.5	1330	-0.48
12	Jul-99	4.5	1070	-1.14
13	Oct-99	4.5	1440	-0.20
14	Mar-00	4.5	900	-1.57
15	Jun-00	4.5	1120	-1.01
16	Sep-00	4.5	1560	0.11
17	Nov-00	4.5	1280	-0.60
18	Mar-01	4.5	1460	-0.14
19	May-01	4.5	1280	-0.60
20	Aug-01	4.5	1370	-0.37
21	Nov-01	4.5	1230	-0.73
22	Mar-02	4.5	2400	2.25
23	May-02	4.5	1070	-1.14
24	Jun-03	4.5	1530	0.03
25	Dec-03	4.5	1490	-0.07
26	Feb-04	4.5	1380	-0.35
27	Jun-04	4.5	1210	-0.78
28	Jun-05	4.5	1560	0.11
29	Dec-05	4.5	1310	-0.53
30	Feb-06	4.5	1520	0.01
31	Jun-06	4.5	1050	-1.19
32	Nov-06	4.5	1380	-0.35
33	Jun-07	4.5	1670	0.39
34	Nov-07	4.5	1690	0.44
35	Jun-08	4.5	1880	0.93
36	Nov-08	4.5	1818	0.77
37	Jun-09	4.5	1780	0.67
38	Nov-09	4.5	1970	1.16
39	Jun-10	4.5	1810	0.75
40	Nov-10	4.5	1911	1.01
41	Jun-11	4.5	1496	-0.05



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - Chromium**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	25	13.00	8.98
2	Aug-95	10		
3	Nov-95	29		
4	Jun-96	10		
5	Aug-96	10		
6	Nov-96	10		
7	Feb-97	5		
8	May-97	5		

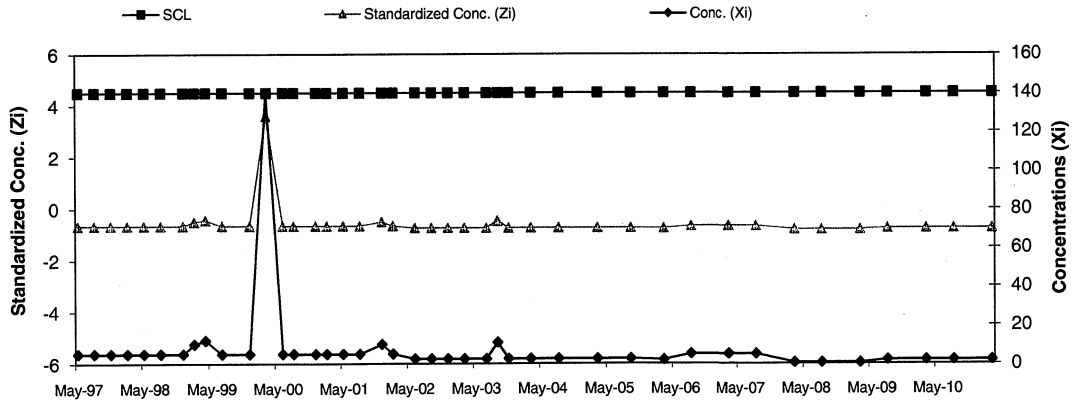
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	5	-0.89
10	Nov-97	4.5	5	-0.89
11	Feb-98	4.5	5	-0.89
12	May-98	4.5	5	-0.89
14	Aug-98	4.5	5	-0.89
15	Nov-98	4.5	5	-0.89
16	Mar-99	4.5	5	-0.89
17	May-99	4.5	5	-0.89
18	Jul-99	4.5	2.5	-1.17
19	Oct-99	4.5	5	-0.89
20	Mar-00	4.5	5	-0.89
21	Jun-00	4.5	5	-0.89
22	Sep-00	4.5	2.5	-1.17
23	Nov-00	4.5	5	-0.89
24	Mar-01	4.5	5	-0.89
25	May-01	4.5	5	-0.89
26	Aug-01	4.5	2.5	-1.17
27	Nov-01	4.5	5	-0.89
28	Mar-02	4.5	5	-0.89
29	May-02	4.5	5	-0.89
30	Sep-02	4.5	2.5	-1.17
31	Dec-02	4.5	2.5	-1.17
32	Mar-03	4.5	2.5	-1.17
33	Jun-03	4.5	2.5	-1.17
34	Oct-03	4.5	2.5	-1.17
35	Dec-03	4.5	2.5	-1.17
36	Feb-04	4.5	2.5	-1.17
37	Jun-04	4.5	2.5	-1.17
38	Nov-04	4.5	2.5	-1.17
39	Jun-05	4.5	2.5	-1.17
40	Dec-05	4.5	2.5	-1.17
41	Jun-06	4.5	5	-0.89
42	Nov-06	4.5	2.5	-1.17
43	Jun-07	4.5	9	-0.45
44	Nov-07	4.5	2	-1.23
45	Jun-08	4.5	2.5	-1.17
46	Nov-08	4.5	2.5	-1.17
47	Jun-09	4.5	2.5	-1.17
48	Nov-09	4.5	2.5	-1.17
49	Jun-10	4.5	7	-0.67
50	Nov-10	4.5	16	0.33
51	Jun-11	4.5	25	1.34
52	Jul-11	4.5	2.5	-1.17



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - Copper**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	25	25.88	31.76
2	Aug-95	10		
3	Nov-95	37		
4	Jun-96	10		
5	Aug-96	10		
6	Nov-96	10		
7	Feb-97	5		
8	May-97	100		

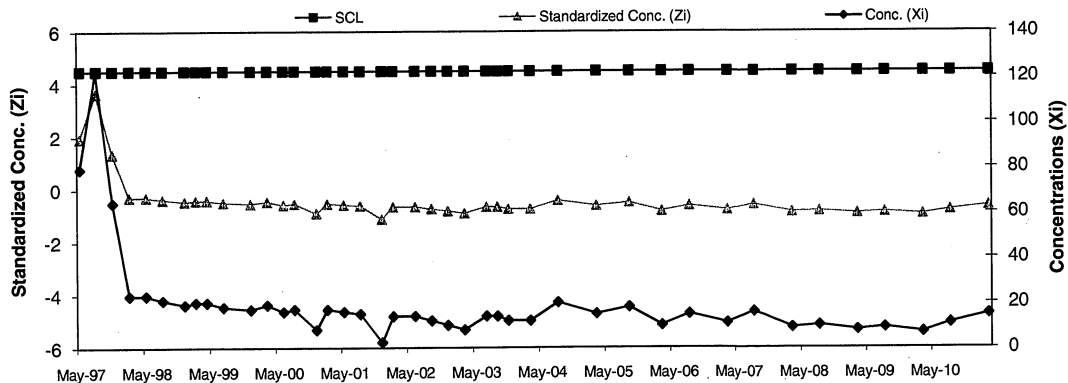
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	5	-0.66
10	Nov-97	4.5	5	-0.66
11	Feb-98	4.5	5	-0.66
12	May-98	4.5	5	-0.66
14	Aug-98	4.5	5	-0.66
15	Nov-98	4.5	5	-0.66
16	Mar-99	4.5	5	-0.66
17	May-99	4.5	10	-0.50
18	Jul-99	4.5	12	-0.44
19	Oct-99	4.5	5	-0.66
20	Mar-00	4.5	5	-0.66
21	Jun-00	4.5	140	3.59
22	Sep-00	4.5	5	-0.66
23	Nov-00	4.5	5	-0.66
24	Mar-01	4.5	5	-0.66
25	May-01	4.5	5	-0.66
26	Aug-01	4.5	5	-0.66
27	Nov-01	4.5	5	-0.66
28	Mar-02	4.5	10	-0.50
29	May-02	4.5	5	-0.66
30	Sep-02	4.5	2.5	-0.74
31	Dec-02	4.5	2.5	-0.74
32	Mar-03	4.5	2.5	-0.74
33	Jun-03	4.5	2.5	-0.74
34	Oct-03	4.5	2.5	-0.74
35	Dec-03	4.5	11	-0.47
36	Feb-04	4.5	2.5	-0.74
37	Jun-04	4.5	2.5	-0.74
38	Nov-04	4.5	2.5	-0.74
39	Jun-05	4.5	2.5	-0.74
40	Dec-05	4.5	2.5	-0.74
41	Jun-06	4.5	2	-0.75
42	Nov-06	4.5	5	-0.66
43	Jun-07	4.5	5	-0.66
44	Nov-07	4.5	5	-0.66
45	Jun-08	4.5	0.5	-0.80
46	Nov-08	4.5	0.5	-0.80
47	Jun-09	4.5	0.5	-0.80
48	Nov-09	4.5	2	-0.75
49	Jun-10	4.5	2	-0.75
50	Nov-10	4.5	2	-0.75
51	Jun-11	4.5	2	-0.75



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - Nickel**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	15	30.38	25.11
2	Aug-95	20		
3	Nov-95	67		
4	Jun-96	10		
5	Aug-96	10		
6	Nov-96	10		
7	Feb-97	45		
8	May-97	66		

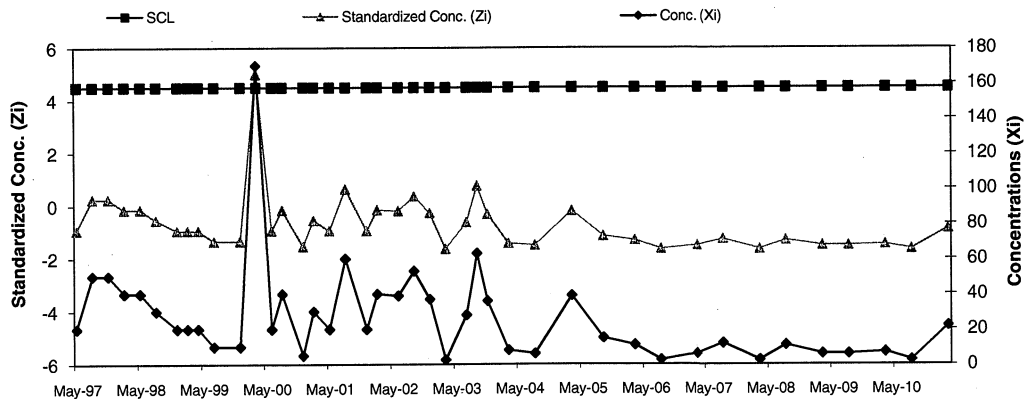
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	79	1.94
10	Nov-97	4.5	122	3.65
11	Feb-98	4.5	64	1.34
12	May-98	4.5	23	-0.29
14	Aug-98	4.5	23	-0.29
15	Nov-98	4.5	21	-0.37
16	Mar-99	4.5	19	-0.45
17	May-99	4.5	20	-0.41
18	Jul-99	4.5	20	-0.41
19	Oct-99	4.5	18	-0.49
20	Mar-00	4.5	17	-0.53
21	Jun-00	4.5	19	-0.45
22	Sep-00	4.5	16	-0.57
23	Nov-00	4.5	17	-0.53
24	Mar-01	4.5	8	-0.89
25	May-01	4.5	17	-0.53
26	Aug-01	4.5	16	-0.57
27	Nov-01	4.5	15	-0.61
28	Mar-02	4.5	2.5	-1.11
29	May-02	4.5	14	-0.65
30	Sep-02	4.5	14	-0.65
31	Dec-02	4.5	12	-0.73
32	Mar-03	4.5	10	-0.81
33	Jun-03	4.5	8	-0.89
34	Oct-03	4.5	14	-0.65
35	Dec-03	4.5	14	-0.65
36	Feb-04	4.5	12	-0.73
37	Jun-04	4.5	12	-0.73
38	Nov-04	4.5	20	-0.41
39	Jun-05	4.5	15	-0.61
40	Dec-05	4.5	18	-0.49
41	Jun-06	4.5	10	-0.81
42	Nov-06	4.5	15	-0.61
43	Jun-07	4.5	11	-0.77
44	Nov-07	4.5	16	-0.57
45	Jun-08	4.5	9	-0.85
46	Nov-08	4.5	10	-0.81
47	Jun-09	4.5	8	-0.89
48	Nov-09	4.5	9	-0.85
49	Jun-10	4.5	7	-0.93
50	Nov-10	4.5	11	-0.77
51	Jun-11	4.5	15	-0.61



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - Zinc**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	60	43.75	25.24
2	Aug-95	74		
3	Nov-95	36		
4	Jun-96	10		
5	Aug-96	40		
6	Nov-96	80		
7	Feb-97	30		
8	May-97	20		

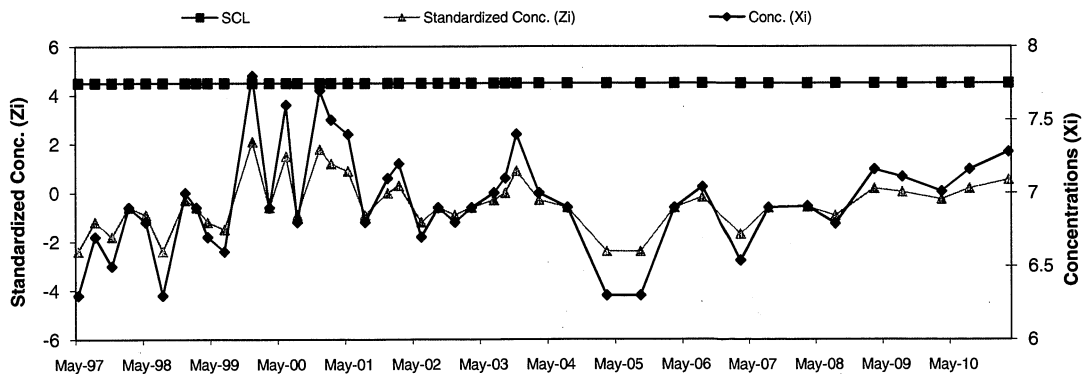
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	20	-0.94
10	Nov-97	4.5	50	0.25
11	Feb-98	4.5	50	0.25
12	May-98	4.5	40	-0.15
14	Aug-98	4.5	40	-0.15
15	Nov-98	4.5	30	-0.54
16	Mar-99	4.5	20	-0.94
17	May-99	4.5	20	-0.94
18	Jul-99	4.5	20	-0.94
19	Oct-99	4.5	10	-1.34
20	Mar-00	4.5	10	-1.34
21	Jun-00	4.5	170	5.00
22	Sep-00	4.5	20	-0.94
23	Nov-00	4.5	40	-0.15
24	Mar-01	4.5	5	-1.54
25	May-01	4.5	30	-0.54
26	Aug-01	4.5	20	-0.94
27	Nov-01	4.5	60	0.64
28	Mar-02	4.5	20	-0.94
29	May-02	4.5	40	-0.15
30	Sep-02	4.5	39	-0.19
31	Dec-02	4.5	53	0.37
32	Mar-03	4.5	37	-0.27
33	Jun-03	4.5	2.5	-1.63
34	Oct-03	4.5	28	-0.62
35	Dec-03	4.5	63	0.76
36	Feb-04	4.5	36	-0.31
37	Jun-04	4.5	8	-1.42
38	Nov-04	4.5	6	-1.50
39	Jun-05	4.5	39	-0.19
40	Dec-05	4.5	15	-1.14
41	Jun-06	4.5	11	-1.30
42	Nov-06	4.5	2.5	-1.63
43	Jun-07	4.5	6	-1.50
44	Nov-07	4.5	12	-1.26
45	Jun-08	4.5	2.5	-1.63
46	Nov-08	4.5	11	-1.30
47	Jun-09	4.5	6	-1.50
48	Nov-09	4.5	6	-1.50
49	Jun-10	4.5	7	-1.46
50	Nov-10	4.5	2.5	-1.63
51	Jun-11	4.5	22	-0.86



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - pH**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	7.4	7.10	0.33
2	Aug-95	7.4		
3	Nov-95	7		
4	Jun-96	6.9		
5	Aug-96	6.9		
6	Nov-96	7		
7	Feb-97	7.6		
8	May-97	6.6		

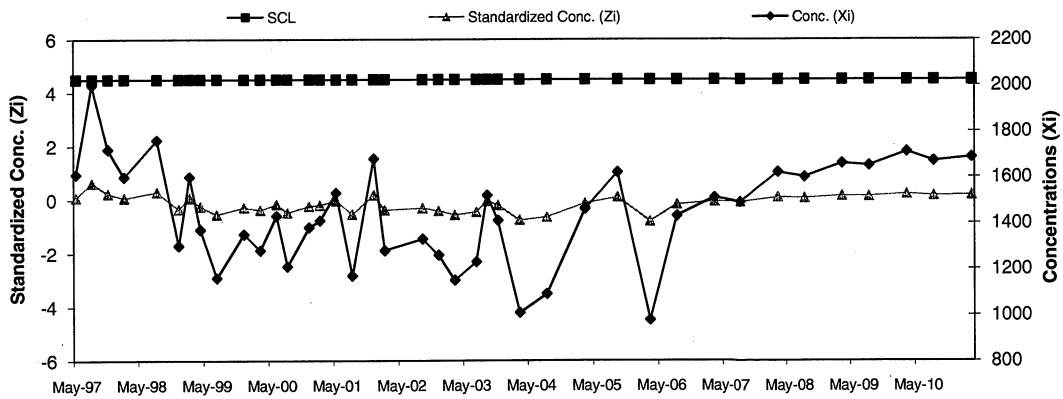
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	6.3	-2.40
10	Nov-97	4.5	6.7	-1.20
11	Feb-98	4.5	6.5	-1.80
12	May-98	4.5	6.9	-0.60
14	Aug-98	4.5	6.8	-0.90
15	Nov-98	4.5	6.3	-2.40
16	Mar-99	4.5	7	-0.30
17	May-99	4.5	6.9	-0.60
18	Jul-99	4.5	6.7	-1.20
19	Oct-99	4.5	6.6	-1.50
20	Mar-00	4.5	7.8	2.10
21	Jun-00	4.5	6.9	-0.60
22	Sep-00	4.5	7.6	1.50
23	Nov-00	4.5	6.8	-0.90
24	Mar-01	4.5	7.7	1.80
25	May-01	4.5	7.5	1.20
26	Aug-01	4.5	7.4	0.90
27	Nov-01	4.5	6.8	-0.90
28	Mar-02	4.5	7.1	0.00
29	May-02	4.5	7.2	0.30
30	Sep-02	4.5	6.7	-1.20
31	Dec-02	4.5	6.9	-0.60
32	Mar-03	4.5	6.8	-0.90
33	Jun-03	4.5	6.9	-0.60
34	Oct-03	4.5	7	-0.30
35	Dec-03	4.5	7.1	0.00
36	Feb-04	4.5	7.4	0.90
37	Jun-04	4.5	7	-0.30
38	Nov-04	4.5	6.9	-0.60
39	Jun-05	4.5	6.3	-2.40
40	Dec-05	4.5	6.3	-2.40
41	Jun-06	4.5	6.9	-0.60
42	Nov-06	4.5	7.0	-0.18
43	Jun-07	4.5	6.5	-1.68
44	Nov-07	4.5	6.9	-0.60
45	Jun-08	4.5	6.9	-0.57
46	Nov-08	4.5	6.8	-0.93
47	Jun-09	4.5	7.2	0.18
48	Nov-09	4.5	7.1	0.03
49	Jun-10	4.5	7.0	-0.27
50	Nov-10	4.5	7.2	0.18
51	Jun-11	4.5	7.3	0.54



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - SpC**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	530	1,551.25	716.19
2	Aug-95	340		
3	Nov-95	2200		
4	Jun-96	2000		
5	Aug-96	1900		
6	Nov-96	2100		
7	Feb-97	1610		
8	May-97	1730		

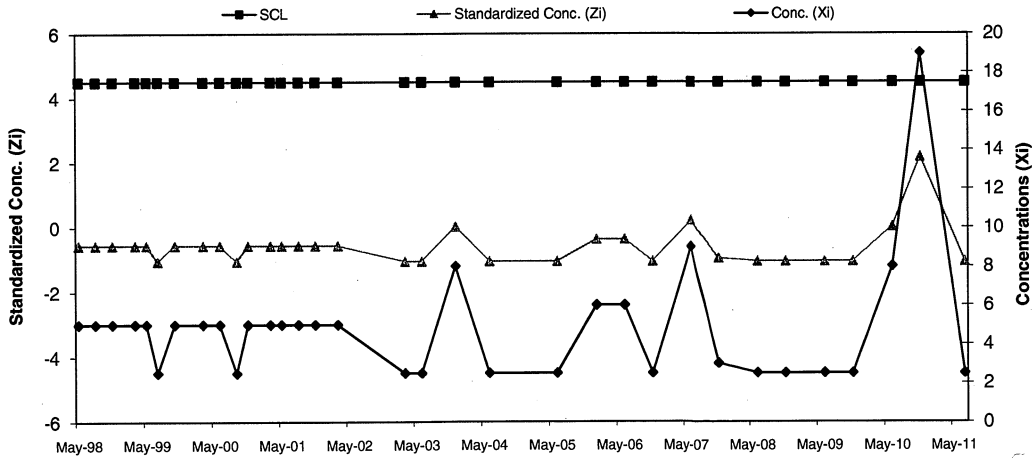
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	1610	0.08
10	Nov-97	4.5	2000	0.63
11	Feb-98	4.5	1720	0.24
12	May-98	4.5	1600	0.07
14	Nov-98	4.5	1760	0.29
15	Mar-99	4.5	1300	-0.35
16	May-99	4.5	1600	0.07
17	Jul-99	4.5	1370	-0.25
18	Oct-99	4.5	1160	-0.55
19	Mar-00	4.5	1350	-0.28
20	Jun-00	4.5	1280	-0.38
21	Sep-00	4.5	1430	-0.17
22	Nov-00	4.5	1210	-0.48
23	Mar-01	4.5	1380	-0.24
24	May-01	4.5	1410	-0.20
25	Aug-01	4.5	1530	-0.03
26	Nov-01	4.5	1170	-0.53
27	Mar-02	4.5	1680	0.18
28	May-02	4.5	1280	-0.38
29	Dec-02	4.5	1330	-0.31
30	Mar-03	4.5	1260	-0.41
31	Jun-03	4.5	1150	-0.56
32	Oct-03	4.5	1230	-0.45
33	Dec-03	4.5	1520	-0.04
34	Feb-04	4.5	1410	-0.20
35	Jun-04	4.5	1008	-0.76
36	Nov-04	4.5	1090	-0.64
37	Jun-05	4.5	1460	-0.13
38	Dec-05	4.5	1620	0.10
39	Jun-06	4.5	977	-0.80
40	Nov-06	4.5	1430	-0.17
41	Jun-07	4.5	1510	-0.06
42	Nov-07	4.5	1490	-0.09
43	Jun-08	4.5	1620	0.10
44	Nov-08	4.5	1600	0.07
45	Jun-09	4.5	1660	0.15
46	Nov-09	4.5	1650	0.14
47	Jun-10	4.5	1710	0.22
50	Nov-10	4.5	1670	0.17
51	Jun-11	4.5	1686	0.19



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - Chromium**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-95	13	7.86	5.11
2	Jun-96	10		
3	Aug-96	10		
4	Nov-96	10		
5	May-97	5		
6	Aug-97	5		
7	Nov-97	5		
8	Feb-98	5		

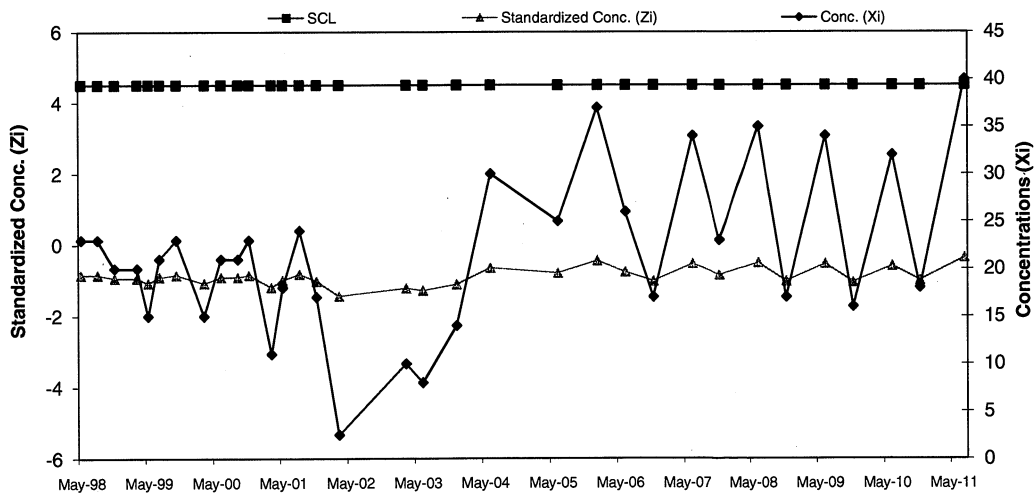
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.56
10	Aug-98	4.5	5	-0.56
11	Nov-98	4.5	5	-0.56
12	Mar-99	4.5	5	-0.56
13	May-99	4.5	5	-0.56
14	Jul-99	4.5	2.5	-1.05
15	Oct-99	4.5	5	-0.56
16	Mar-00	4.5	5	-0.56
17	Jun-00	4.5	5	-0.56
18	Sep-00	4.5	2.5	-1.05
19	Nov-00	4.5	5	-0.56
20	Mar-01	4.5	5	-0.56
21	May-01	4.5	5	-0.56
22	Aug-01	4.5	5	-0.56
23	Nov-01	4.5	5	-0.56
24	Mar-02	4.5	5	-0.56
25	Mar-03	4.5	2.5	-1.05
26	Jun-03	4.5	2.5	-1.05
27	Dec-03	4.5	8	0.03
28	Jun-04	4.5	2.5	-1.05
29	Jun-05	4.5	2.5	-1.05
30	Jan-06	4.5	6	-0.36
31	Jun-06	4.5	6	-0.36
32	Nov-06	4.5	2.5	-1.05
33	Jun-07	4.5	9	0.22
34	Nov-07	4.5	3	-0.95
35	Jun-08	4.5	2.5	-1.05
36	Nov-08	4.5	2.5	-1.05
37	Jun-09	4.5	2.5	-1.05
38	Nov-09	4.5	2.5	-1.05
39	Jun-10	4.5	8	0.03
40	Nov-10	4.5	19	2.18
41	Jul-11	4.5	2.5	-1.05



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - Nickel**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-95	44	52.63	35.01
2	Jun-96	10		
3	Aug-96	10		
4	Nov-96	40		
5	May-97	58		
6	Aug-97	79		
7	Nov-97	114		
8	Feb-98	66		

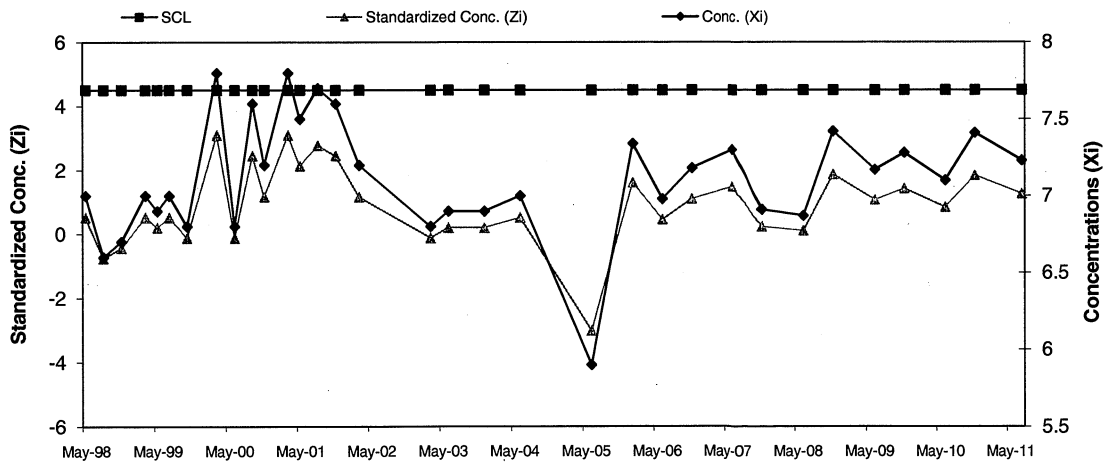
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	23	-0.85
10	Aug-98	4.5	23	-0.85
11	Nov-98	4.5	20	-0.93
12	Mar-99	4.5	20	-0.93
13	May-99	4.5	15	-1.07
14	Jul-99	4.5	21	-0.90
15	Oct-99	4.5	23	-0.85
16	Mar-00	4.5	15	-1.07
17	Jun-00	4.5	21	-0.90
18	Sep-00	4.5	21	-0.90
19	Nov-00	4.5	23	-0.85
20	Mar-01	4.5	11	-1.19
21	May-01	4.5	18	-0.99
22	Aug-01	4.5	24	-0.82
23	Nov-01	4.5	17	-1.02
24	Mar-02	4.5	2.5	-1.43
25	Mar-03	4.5	10	-1.22
26	Jun-03	4.5	8	-1.27
27	Dec-03	4.5	14	-1.10
28	Jun-04	4.5	30	-0.65
29	Jun-05	4.5	25	-0.79
30	Jan-06	4.5	37	-0.45
31	Jun-06	4.5	26	-0.76
32	Nov-06	4.5	17	-1.02
33	Jun-07	4.5	34	-0.53
34	Nov-07	4.5	23	-0.85
35	Jun-08	4.5	35	-0.50
36	Nov-08	4.5	17	-1.02
37	Jun-09	4.5	34	-0.53
38	Nov-09	4.5	16	-1.05
39	Jun-10	4.5	32	-0.59
40	Nov-10	4.5	18	-0.99
41	Jul-11	4.5	40	-0.36



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - pH**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-95	7.3	6.84	0.31
2	Jun-96	6.9		
3	Aug-96	7.2		
4	Nov-96	7		
5	May-97	6.7		
6	Aug-97	6.5		
7	Nov-97	6.6		
8	Feb-98	6.5		

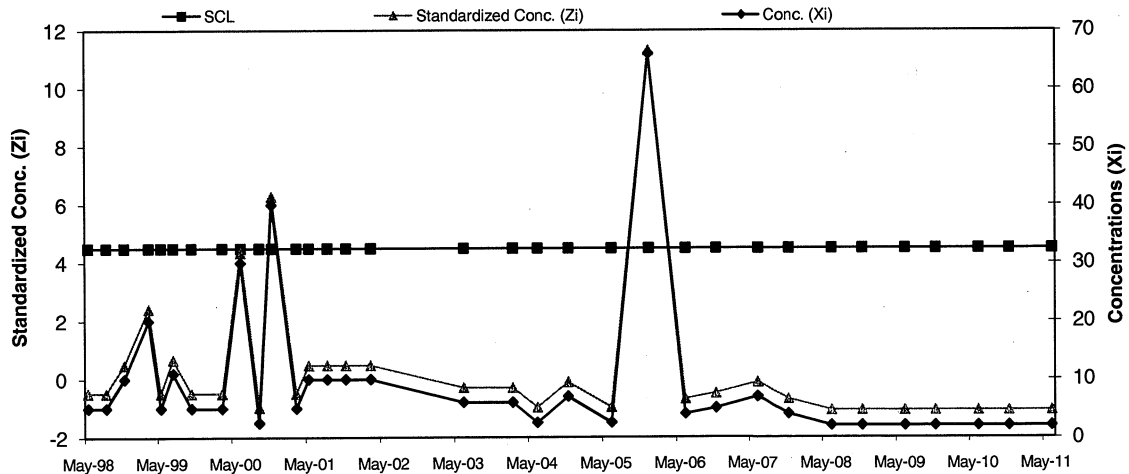
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	7	0.52
10	Aug-98	4.5	6.6	-0.76
11	Nov-98	4.5	6.7	-0.44
12	Mar-99	4.5	7	0.52
13	May-99	4.5	6.9	0.20
14	Jul-99	4.5	7	0.52
15	Oct-99	4.5	6.8	-0.12
16	Mar-00	4.5	7.8	3.09
17	Jun-00	4.5	6.8	-0.12
18	Sep-00	4.5	7.6	2.45
19	Nov-00	4.5	7.2	1.16
20	Mar-01	4.5	7.8	3.09
21	May-01	4.5	7.5	2.13
22	Aug-01	4.5	7.7	2.77
23	Nov-01	4.5	7.6	2.45
24	Mar-02	4.5	7.2	1.16
25	Mar-03	4.5	6.8	-0.12
26	Jun-03	4.5	6.9	0.20
27	Dec-03	4.5	6.9	0.20
28	Jun-04	4.5	7	0.52
29	Jun-05	4.5	5.9	-3.01
30	Jan-06	4.5	7.3	1.61
31	Jun-06	4.5	7.0	0.46
32	Nov-06	4.5	7.2	1.10
33	Jun-07	4.5	7.3	1.49
34	Nov-07	4.5	6.9	0.23
35	Jun-08	4.5	6.9	0.10
36	Nov-08	4.5	7.4	1.87
37	Jun-09	4.5	7.2	1.07
38	Nov-09	4.5	7.3	1.42
39	Jun-10	4.5	7.1	0.84
40	Nov-10	4.5	7.4	1.84
41	Jul-11	4.5	7.2	1.26



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - Copper**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-96	10	7.50	5.17
2	Jun-96	10		
3	Oct-96	10		
4	Nov-96	10		
5	May-97	5		
6	Aug-97	5		
7	Nov-97	5		
8	Feb-98	5		

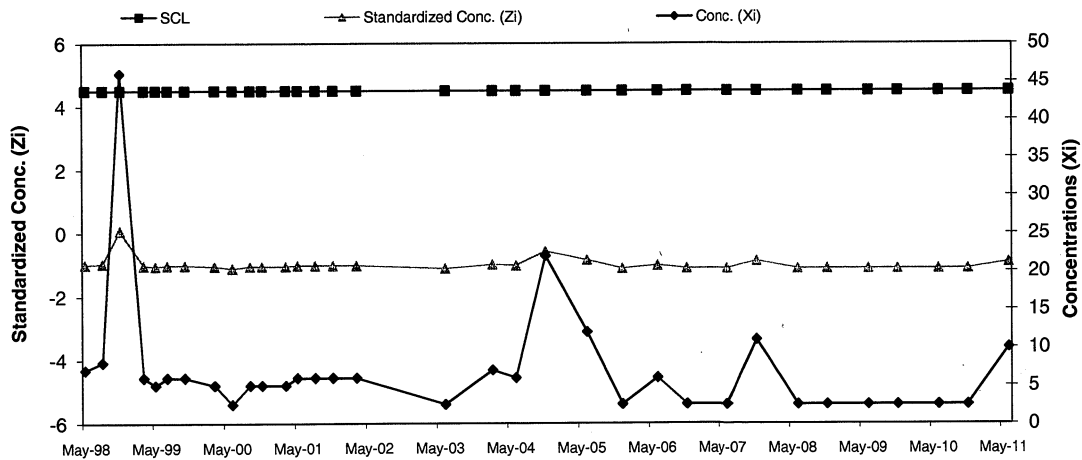
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.48
10	Aug-98	4.5	5	-0.48
11	Nov-98	4.5	10	0.48
12	Mar-99	4.5	20	2.42
13	May-99	4.5	5	-0.48
14	Jul-99	4.5	11	0.68
15	Oct-99	4.5	5	-0.48
16	Mar-00	4.5	5	-0.48
17	Jun-00	4.5	30	4.35
18	Sep-00	4.5	2.5	-0.97
19	Nov-00	4.5	40	6.29
20	Mar-01	4.5	5	-0.48
21	May-01	4.5	10	0.48
22	Aug-01	4.5	10	0.48
23	Nov-01	4.5	10	0.48
24	Mar-02	4.5	10	0.48
25	Jun-03	4.5	6	-0.29
26	Feb-04	4.5	6	-0.29
27	Jun-04	4.5	2.5	-0.97
28	Nov-04	4.5	7	-0.10
29	Jun-05	4.5	2.5	-0.97
30	Dec-05	4.5	66	11.32
31	Jun-06	4.5	4	-0.68
32	Nov-06	4.5	5	-0.48
33	Jun-07	4.5	7	-0.10
34	Nov-07	4.5	4	-0.68
35	Jun-08	4.5	2	-1.06
36	Nov-08	4.5	2	-1.06
37	Jun-09	4.5	2	-1.06
38	Nov-09	4.5	2	-1.06
39	Jun-10	4.5	2	-1.06
40	Nov-10	4.5	2	-1.06
41	Jun-11	4.5	2	-1.06



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - Nickel**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-96	46	43.13	36.46
2	Jun-96	10		
3	Oct-96	10		
4	Nov-96	10		
5	May-97	35		
6	Aug-97	64		
7	Nov-97	116		
8	Feb-98	54		

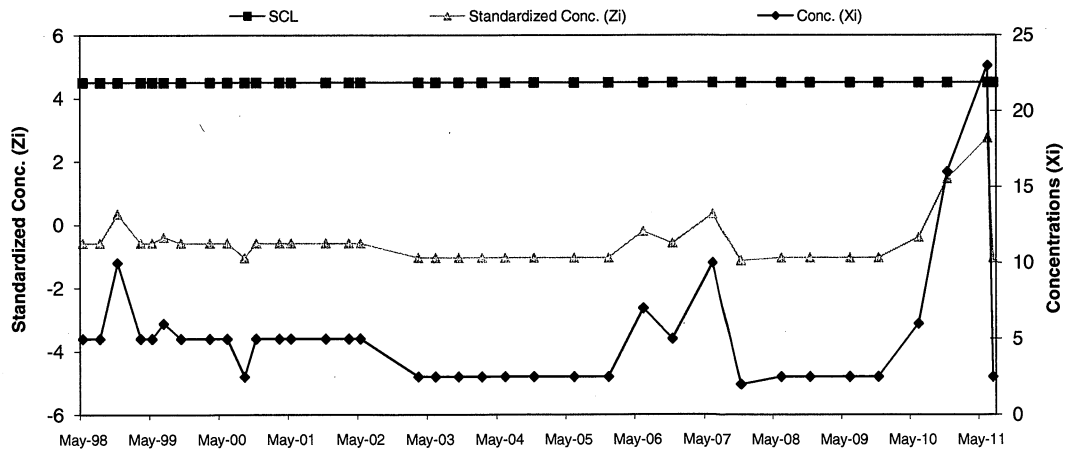
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	7	-0.99
10	Aug-98	4.5	8	-0.96
11	Nov-98	4.5	46	0.08
12	Mar-99	4.5	6	-1.02
13	May-99	4.5	5	-1.05
14	Jul-99	4.5	6	-1.02
15	Oct-99	4.5	6	-1.02
16	Mar-00	4.5	5	-1.05
17	Jun-00	4.5	2.5	-1.11
18	Sep-00	4.5	5	-1.05
19	Nov-00	4.5	5	-1.05
20	Mar-01	4.5	5	-1.05
21	May-01	4.5	6	-1.02
22	Aug-01	4.5	6	-1.02
23	Nov-01	4.5	6	-1.02
24	Mar-02	4.5	6	-1.02
25	Jun-03	4.5	2.5	-1.11
26	Feb-04	4.5	7	-0.99
27	Jun-04	4.5	6	-1.02
28	Nov-04	4.5	22	-0.58
29	Jun-05	4.5	12	-0.85
30	Dec-05	4.5	2.5	-1.11
31	Jun-06	4.5	6	-1.02
32	Nov-06	4.5	2.5	-1.11
33	Jun-07	4.5	2.5	-1.11
34	Nov-07	4.5	11	-0.88
35	Jun-08	4.5	2.5	-1.11
36	Nov-08	4.5	2.5	-1.11
37	Jun-09	4.5	2.5	-1.11
38	Nov-09	4.5	2.5	-1.11
39	Jun-10	4.5	2.5	-1.11
40	Nov-10	4.5	2.5	-1.11
41	Jun-11	4.5	10	-0.91



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - Chromium**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10	8.13	5.40
2	Aug-95	10		
3	Jun-96	10		
4	Aug-96	10		
5	Nov-96	10		
6	Aug-97	5		
7	Nov-97	5		
8	Feb-98	5		

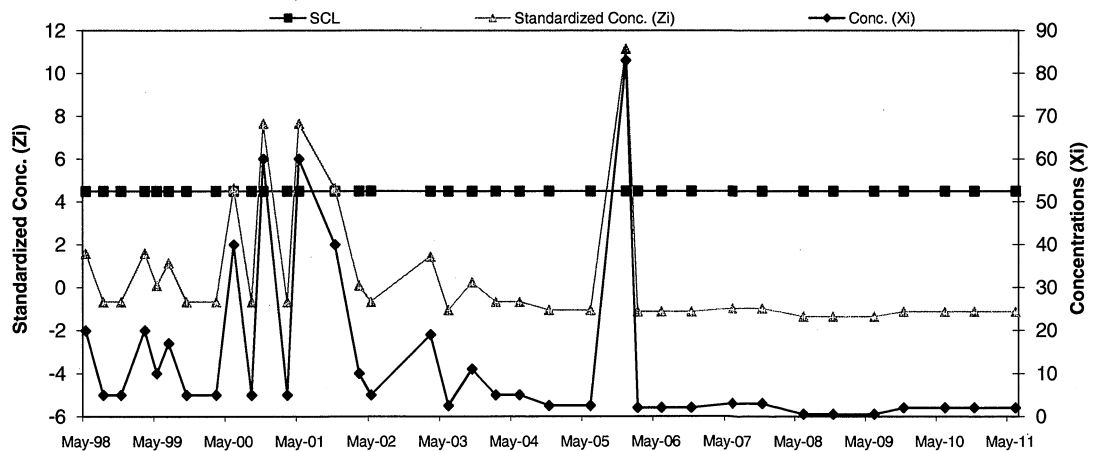
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.58
10	Aug-98	4.5	5	-0.58
11	Nov-98	4.5	10	0.35
12	Mar-99	4.5	5	-0.58
13	May-99	4.5	5	-0.58
14	Jul-99	4.5	6	-0.39
15	Oct-99	4.5	5	-0.58
16	Mar-00	4.5	5	-0.58
17	Jun-00	4.5	5	-0.58
18	Sep-00	4.5	2.5	-1.04
19	Nov-00	4.5	5	-0.58
20	Mar-01	4.5	5	-0.58
21	May-01	4.5	5	-0.58
22	Nov-01	4.5	5	-0.58
23	Mar-02	4.5	5	-0.58
24	May-02	4.5	5	-0.58
25	Mar-03	4.5	2.5	-1.04
26	Jun-03	4.5	2.5	-1.04
27	Oct-03	4.5	2.5	-1.04
28	Feb-04	4.5	2.5	-1.04
29	Jun-04	4.5	2.5	-1.04
30	Nov-04	4.5	2.5	-1.04
31	Jun-05	4.5	2.5	-1.04
32	Dec-05	4.5	2.5	-1.04
33	Jun-06	4.5	7	-0.21
34	Nov-06	4.5	5	-0.58
35	Jun-07	4.5	10	0.35
36	Nov-07	4.5	2	-1.14
37	Jun-08	4.5	2.5	-1.04
38	Nov-08	4.5	2.5	-1.04
39	Jun-09	4.5	2.5	-1.04
40	Nov-09	4.5	2.5	-1.04
41	Jun-10	4.5	6	-0.39
42	Nov-10	4.5	16	1.46
43	Jun-11	4.5	23	2.75
44	Jul-11	4.5	2.5	-1.04



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - Copper**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10	9.38	6.61
2	Aug-95	10		
3	Jun-96	10		
4	Aug-96	20		
5	Nov-96	10		
6	Aug-97	5		
7	Nov-97	5		
8	Feb-98	5		

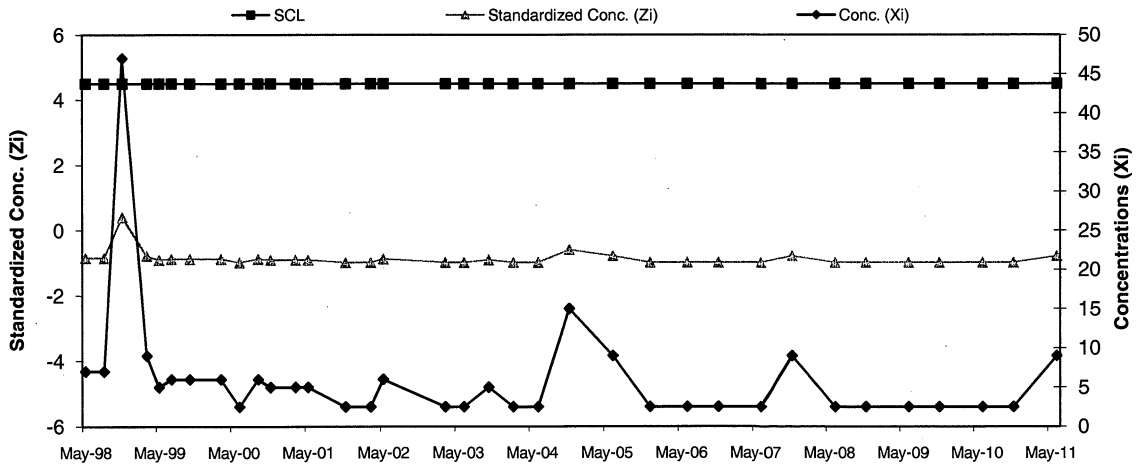
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	20	1.61
10	Aug-98	4.5	5	-0.66
11	Nov-98	4.5	5	-0.66
12	Mar-99	4.5	20	1.61
13	May-99	4.5	10	0.09
14	Jul-99	4.5	17	1.15
15	Oct-99	4.5	5	-0.66
16	Mar-00	4.5	5	-0.66
17	Jun-00	4.5	40	4.63
18	Sep-00	4.5	5	-0.66
19	Nov-00	4.5	60	7.66
20	Mar-01	4.5	5	-0.66
21	May-01	4.5	60	7.66
22	Nov-01	4.5	40	4.63
23	Mar-02	4.5	10	0.09
24	May-02	4.5	5	-0.66
25	Mar-03	4.5	19	1.46
26	Jun-03	4.5	2.5	-1.04
27	Oct-03	4.5	11	0.25
28	Feb-04	4.5	5	-0.66
29	Jun-04	4.5	5	-0.66
30	Nov-04	4.5	2.5	-1.04
31	Jun-05	4.5	2.5	-1.04
32	Dec-05	4.5	83	11.14
33	Feb-06	4.5	2	-1.12
34	Jun-06	4.5	2	-1.12
35	Nov-06	4.5	2	-1.12
36	Jun-07	4.5	3	-0.97
37	Nov-07	4.5	3	-0.97
38	Jun-08	4.5	0.5	-1.34
39	Nov-08	4.5	0.5	-1.34
40	Jun-09	4.5	0.5	-1.34
41	Nov-09	4.5	2	-1.12
42	Jun-10	4.5	2	-1.12
43	Nov-10	4.5	2	-1.12
44	Jun-11	4.5	2	-1.12



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - Nickel**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	15	33.88	31.96
2	Aug-95	20		
3	Jun-96	10		
4	Aug-96	10		
5	Nov-96	10		
6	Aug-97	64		
7	Nov-97	93		
8	Feb-98	49		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	7	-0.84
10	Aug-98	4.5	7	-0.84
11	Nov-98	4.5	47	0.41
12	Mar-99	4.5	9	-0.78
13	May-99	4.5	5	-0.90
14	Jul-99	4.5	6	-0.87
15	Oct-99	4.5	6	-0.87
16	Mar-00	4.5	6	-0.87
17	Jun-00	4.5	2.5	-0.98
18	Sep-00	4.5	6	-0.87
19	Nov-00	4.5	5	-0.90
20	Mar-01	4.5	5	-0.90
21	May-01	4.5	5	-0.90
22	Nov-01	4.5	2.5	-0.98
23	Mar-02	4.5	2.5	-0.98
24	May-02	4.5	6	-0.87
25	Mar-03	4.5	2.5	-0.98
26	Jun-03	4.5	2.5	-0.98
27	Oct-03	4.5	5	-0.90
28	Feb-04	4.5	2.5	-0.98
29	Jun-04	4.5	2.5	-0.98
30	Nov-04	4.5	15	-0.59
31	Jun-05	4.5	9	-0.78
32	Dec-05	4.5	2.5	-0.98
33	Jun-06	4.5	2.5	-0.98
34	Nov-06	4.5	2.5	-0.98
35	Jun-07	4.5	2.5	-0.98
36	Nov-07	4.5	9	-0.78
37	Jun-08	4.5	2.5	-0.98
38	Nov-08	4.5	2.5	-0.98
39	Jun-09	4.5	2.5	-0.98
40	Nov-09	4.5	2.5	-0.98
41	Jun-10	4.5	2.5	-0.98
42	Nov-10	4.5	2.5	-0.98
43	Jun-11	4.5	9	-0.78

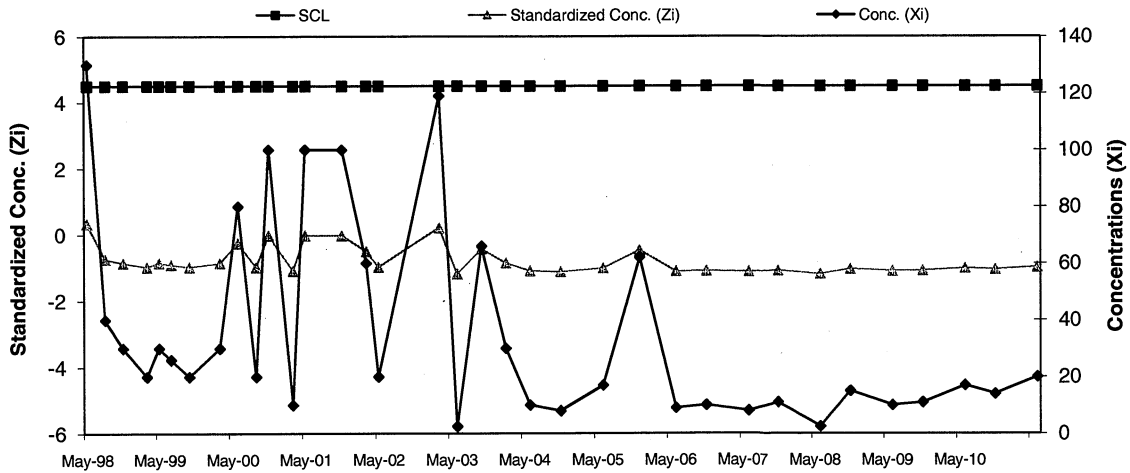


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART**

Vault F - Zinc

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	190	101.24	83.60
2	Aug-95	220		
3	Jun-96	10		
4	Aug-96	50		
5	Nov-96	30		
6	Aug-97	20		
7	Nov-97	130		
8	Feb-98	160		

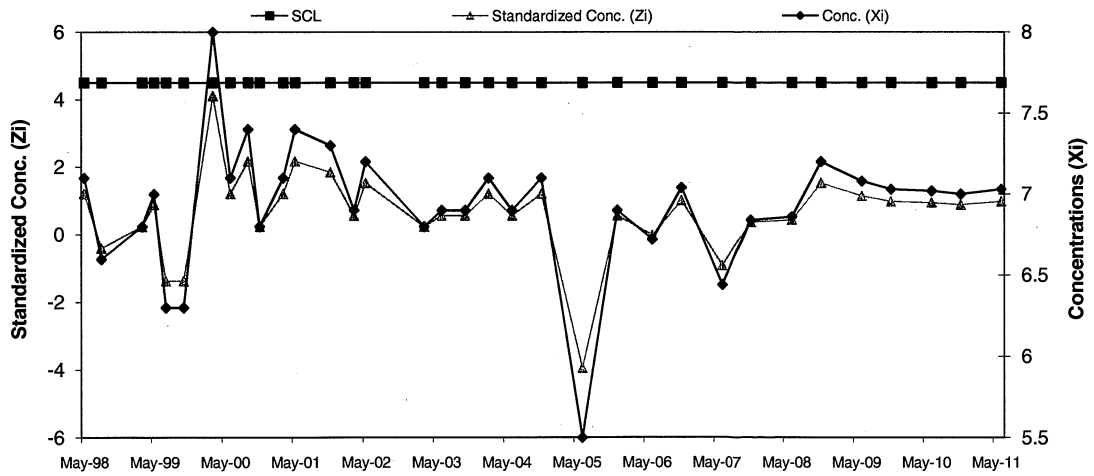
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	130	0.34
10	Aug-98	4.5	40	-0.73
11	Nov-98	4.5	30	-0.85
12	Mar-99	4.5	20	-0.97
13	May-99	4.5	30	-0.85
14	Jul-99	4.5	26	-0.90
15	Oct-99	4.5	20	-0.97
16	Mar-00	4.5	30	-0.85
17	Jun-00	4.5	80	-0.25
18	Sep-00	4.5	20	-0.97
19	Nov-00	4.5	100	-0.01
20	Mar-01	4.5	10	-1.09
21	May-01	4.5	100	-0.01
22	Nov-01	4.5	100	-0.01
23	Mar-02	4.5	60	-0.49
24	May-02	4.5	20	-0.97
25	Mar-03	4.5	119	0.21
26	Jun-03	4.5	2.5	-1.18
27	Oct-03	4.5	66	-0.42
28	Feb-04	4.5	30	-0.85
29	Jun-04	4.5	10	-1.09
30	Nov-04	4.5	8	-1.12
31	Jun-05	4.5	17	-1.01
32	Dec-05	4.5	62	-0.47
33	Jun-06	4.5	9	-1.10
34	Nov-06	4.5	10	-1.09
35	Jun-07	4.5	8	-1.12
36	Nov-07	4.5	11	-1.08
37	Jun-08	4.5	2.5	-1.18
38	Nov-08	4.5	15	-1.03
39	Jun-09	4.5	10	-1.09
40	Nov-09	4.5	11	-1.08
41	Jun-10	4.5	17	-1.01
42	Nov-10	4.5	14	-1.04
43	Jun-11	4.5	20	-0.97



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - pH**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	6.8	6.73	0.31
2	Aug-95	6.8		
3	Jun-96	6.8		
4	Aug-96	7.1		
5	Nov-96	7		
6	Aug-97	6.1		
7	Nov-97	6.7		
8	Feb-98	6.5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	7.1	1.21
10	Aug-98	4.5	6.6	-0.40
11	Mar-99	4.5	6.8	0.24
12	May-99	4.5	7	0.89
13	Jul-99	4.5	6.3	-1.37
14	Oct-99	4.5	6.3	-1.37
15	Mar-00	4.5	8	4.11
16	Jun-00	4.5	7.1	1.21
17	Sep-00	4.5	7.4	2.17
18	Nov-00	4.5	6.8	0.24
19	Mar-01	4.5	7.1	1.21
20	May-01	4.5	7.4	2.17
21	Nov-01	4.5	7.3	1.85
22	Mar-02	4.5	6.9	0.56
23	May-02	4.5	7.2	1.53
24	Mar-03	4.5	6.8	0.24
25	Jun-03	4.5	6.9	0.56
26	Oct-03	4.5	6.9	0.56
27	Feb-04	4.5	7.1	1.21
28	Jun-04	4.5	6.9	0.56
29	Nov-04	4.5	7.1	1.21
30	Jun-05	4.5	5.5	-3.94
31	Dec-05	4.5	6.9	0.56
32	Jun-06	4.5	6.7	-0.02
33	Nov-06	4.5	7.0	1.01
34	Jun-07	4.5	6.4	-0.92
35	Nov-07	4.5	6.8	0.37
36	Jun-08	4.5	6.9	0.43
37	Nov-08	4.5	7.2	1.53
38	Jun-09	4.5	7.1	1.14
39	Nov-09	4.5	7.0	0.98
40	Jun-10	4.5	7.0	0.95
41	Nov-10	4.5	7.0	0.89
42	Jun-11	4.5	7.0	0.98



**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - SpC**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	1400	1,535.00	218.31
2	Aug-95	1100		
3	Jun-96	1600		
4	Aug-96	1500		
5	Nov-96	1600		
6	Aug-97	1530		
7	Nov-97	1800		
8	Feb-98	1750		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	1400	-0.62
10	Mar-99	4.5	982	-2.53
11	May-99	4.5	1460	-0.34
12	Jul-99	4.5	1262	-1.25
13	Oct-99	4.5	1116	-1.92
14	Mar-00	4.5	1250	-1.31
15	Jun-00	4.5	1310	-1.03
16	Sep-00	4.5	1440	-0.44
17	Nov-00	4.5	1040	-2.27
18	Mar-01	4.5	1110	-1.95
19	May-01	4.5	1470	-0.30
20	Nov-01	4.5	1110	-1.95
21	Mar-02	4.5	1290	-1.12
22	May-02	4.5	1200	-1.53
23	Mar-03	4.5	1270	-1.21
24	Jun-03	4.5	1300	-1.08
25	Oct-03	4.5	1040	-2.27
26	Feb-04	4.5	1920	1.76
27	Jun-04	4.5	1300	-1.08
28	Nov-04	4.5	1160	-1.72
29	Jun-05	4.5	1780	1.12
30	Dec-05	4.5	1640	0.48
31	Jun-06	4.5	1355	-0.82
32	Nov-06	4.5	1610	0.34
33	Jun-07	4.5	1640	0.48
34	Nov-07	4.5	1600	0.30
35	Jun-08	4.5	1510	-0.11
36	Nov-08	4.5	1510	-0.11
37	Jun-09	4.5	1530	-0.02
38	Nov-09	4.5	1550	0.07
39	Jun-10	4.5	1540	0.02
40	Nov-10	4.5	1590	0.25
41	Jun-11	4.5	1642	0.49

