

2010 ANNUAL REPORT – FINAL REPORT

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

**Motors Liquidation Company  
Birmingham, Michigan**

February 2011



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

Prepared for:

**Motors Liquidation Company  
Birmingham, Michigan**



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



February 16, 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 2010 Annual Report  
Coldwater Road Landfill, Flint, Michigan  
MID 005 356 860

FILE: 14774 / 46317 #5

Dear Mr. Conforti:

On behalf of Motors Liquidation Company, O'Brien & Gere is pleased to present the results of the 2010 annual leak detection system sampling event conducted in November 2010 for the Coldwater Road Landfill site (Figure 1). Samples from five leak detection vaults (B through F) and six leachate collection sumps (A through F) were collected on November 8, 2010 for laboratory analysis. An analytical sample could not be collected from Vault A 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). 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). The event also included field measurements for pH, specific conductivity and temperature.

The analytical results are summarized in three 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), and Leachate Sump Depth to Water (Table 3). 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 November 8, 2010 using a peristaltic pump and tubing for each vault and sump. Duplicate samples were collected from Vault E and Sump E. 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.

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 increased
- Copper concentrations were not detected
- Nickel concentrations were not detected or decreased, except in Vaults B and C where nickel increased, but were consistent with historical results
- Zinc concentrations were not detected or decreased

- TOC concentrations stayed similar or increased, but were consistent with historical results
- TSS concentrations increased, but were consistent with historical results, except in Vault F where TSS decreased
- pH stayed similar or increased slightly
- Specific conductivity increased, but was consistent with historical results, except in Vaults C and E where specific conductivity decreased

**SUMPS:**

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

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

Chromium in the Vaults B through F spiked during this sampling event. There were no other spikes or trends for the additional constituents (copper, nickel, and zinc) monitored in the vaults; therefore, the spikes were not confirmed spikes and do not suggest there was a release from the landfill. There was one exceedance of the Shewart control limits during this sampling event in Vault B for chromium (Appendix B). Vault B was resampled for chromium on December 1, 2010 and had a result of 0.006 mg/L, which was below the initial result of 0.021 mg/L, and just above the reporting limit of 0.005 mg/L. Because chromium was detected at only 0.006 mg/L in the resample and chromium was the only constituent that spiked during this sampling event, it suggests there was not a release from the landfill. These spikes will continue to be reviewed during future sampling events. No other trends or spikes were observed during this monitoring event.

The next semi-annual sampling event will be completed in June 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, P.E.  
Vice President

Very truly yours,

**O'BRIEN & GERE ENGINEERS, INC.**



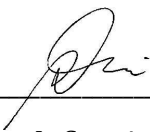
Clifford S. Yantz, P.G.  
Technical Associate

Enclosure

cc: David Favero – Motors Liquidation Company  
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 Motors Liquidation Company

  
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Scott L. Cormier, P.E.  
Agent for Motors Liquidation Company

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

Title

February 16, 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
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	
Duplicate	19-Nov-04	3.4	2.0	6.9	1120	11.4	6	<5	15	14
	19-Nov-04	4.4	4.0	--	--	--	6	<5	18	16
15-Jun-05	6.0	8.0	6.0	1640	13.4	<5	<5	13	21	
17-Jan-06	5.9	12785	10.0	1630	8.4	<5	<5	13	8	
Re-sample	14-Feb-06	--	--	7.9	1800	8.5	--	--	14	--
	29-Jun-06	NS	NS	NS	NS	NS	NS	NS	NS	NS
28-Nov-06	4.7	438	7.7	1940	13.2	<5	<4	13	6	
6-Jun-07	4.9	11	6.8	1990	11.7	13	4	20	8	
12-Nov-07	5.9	70	6.8	2030	12.4	4	5	21	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	

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
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
Duplicate	28-Nov-06	5.5	4.0	7.5	1380	13.0	<5	<4	8	11
	28-Nov-06	4.7	--	7.2	1340	13.0	5	4	7	11
Duplicate	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
	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	--	--

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
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	
	<b>8-Nov-10</b>	<b>6</b>	<b>7</b>	<b>7.2</b>	<b>1670</b>	<b>12.7</b>	<b>16</b>	<b>&lt;4</b>	<b>11</b>	<b>&lt;5</b>

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
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
	12-Nov-07	7.3	5.0	6.9	1580	12.3	3	5	23	12
Duplicate	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
	14-Jun-10	7	35	7.1	1550	11.9	8	<4	32	11
Duplicate	14-Jun-10	7	1	7.1	1550	11.9	7	<4	33	11
	<b>8-Nov-10</b>	<b>9</b>	<b>31</b>	<b>7.4</b>	<b>1555</b>	<b>13.4</b>	<b>19</b>	<b>&lt;4</b>	<b>18</b>	<b>&lt;5</b>

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
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	
Duplicate	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	
Duplicate	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	
<b>8-Nov-10</b>	<b>5</b>	<b>&lt;1</b>	<b>7.0</b>	<b>1714</b>	<b>12.4</b>	<b>24</b>	<b>&lt;4</b>	<b>&lt;5</b>	<b>7</b>	
<b>Duplicate</b>	<b>8-Nov-10</b>	<b>5</b>	<b>3</b>	<b>7.0</b>	<b>1715</b>	<b>12.4</b>	<b>20</b>	<b>&lt;4</b>	<b>&lt;5</b>	<b>7</b>

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
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
	<b>8-Nov-10</b>	<b>3</b>	<b>2</b>	<b>7.0</b>	<b>1590</b>	<b>12.3</b>	<b>16</b>	<b>&lt;4</b>	<b>&lt;5</b>	<b>14</b>

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).

**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	
	<b>8-Nov-10</b>	<b>71</b>	<b>10</b>	<b>8.3</b>	<b>3560</b>	<b>10.9</b>	<b>113</b>	<b>1110</b>	<b>1030</b>	<b>23</b>

See notes on page 3.

**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>B</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
	<b>8-Nov-10</b>	<b>78</b>	<b>1</b>	<b>8.1</b>	<b>3450</b>	<b>12.1</b>	<b>163</b>	<b>669</b>	<b>76</b>	<b>8</b>

See notes on page 3.

**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>C</b>	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	
<b>8-Nov-10</b>	<b>130</b>	<b>4</b>	<b>7.8</b>	<b>4910</b>	<b>12.1</b>	<b>55</b>	<b>3170</b>	<b>555</b>	<b>10</b>	

See notes on page 3.

**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>D</b>	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
Duplicate	12-Nov-07	115.0	78	10.2	5550	11.7	34	1680	1480	8
	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
	<b>8-Nov-10</b>	<b>170</b>	<b>2</b>	<b>10.1</b>	<b>5830</b>	<b>12.6</b>	<b>119</b>	<b>1220</b>	<b>1520</b>	<b>&lt;5</b>

See notes on page 3.

**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
	14-Jun-10	6	4	7.6	1530	12.7	17	8	<5	17
	<b>8-Nov-10</b>	<b>6</b>	<b>2</b>	<b>7.4</b>	<b>1647</b>	<b>12.5</b>	<b>18</b>	<b>10</b>	<b>9</b>	<b>101</b>
<b>Duplicate</b>	<b>8-Nov-10</b>	<b>6</b>	<b>3</b>	<b>7.4</b>	<b>1647</b>	<b>12.5</b>	<b>16</b>	<b>10</b>	<b>9</b>	<b>108</b>

See notes on page 3.

**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	
	<b>8-Nov-10</b>	<b>9</b>	<b>&lt;1</b>	<b>8.2</b>	<b>1260</b>	<b>12.1</b>	<b>17</b>	<b>19</b>	<b>8</b>	<b>6</b>	
Equipment	24-Jun-08	<1	1	--	4	--	<5	<1	<5	<5	
Blank	<b>17-Nov-08</b>	<b>1</b>	<b>2</b>	--	<b>4</b>	--	<b>&lt;5</b>	<b>5</b>	<b>&lt;5</b>	<b>23</b>	

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**  
**Coldwater Road Landfill Facility**  
**Leachate Sump Depth to Water**

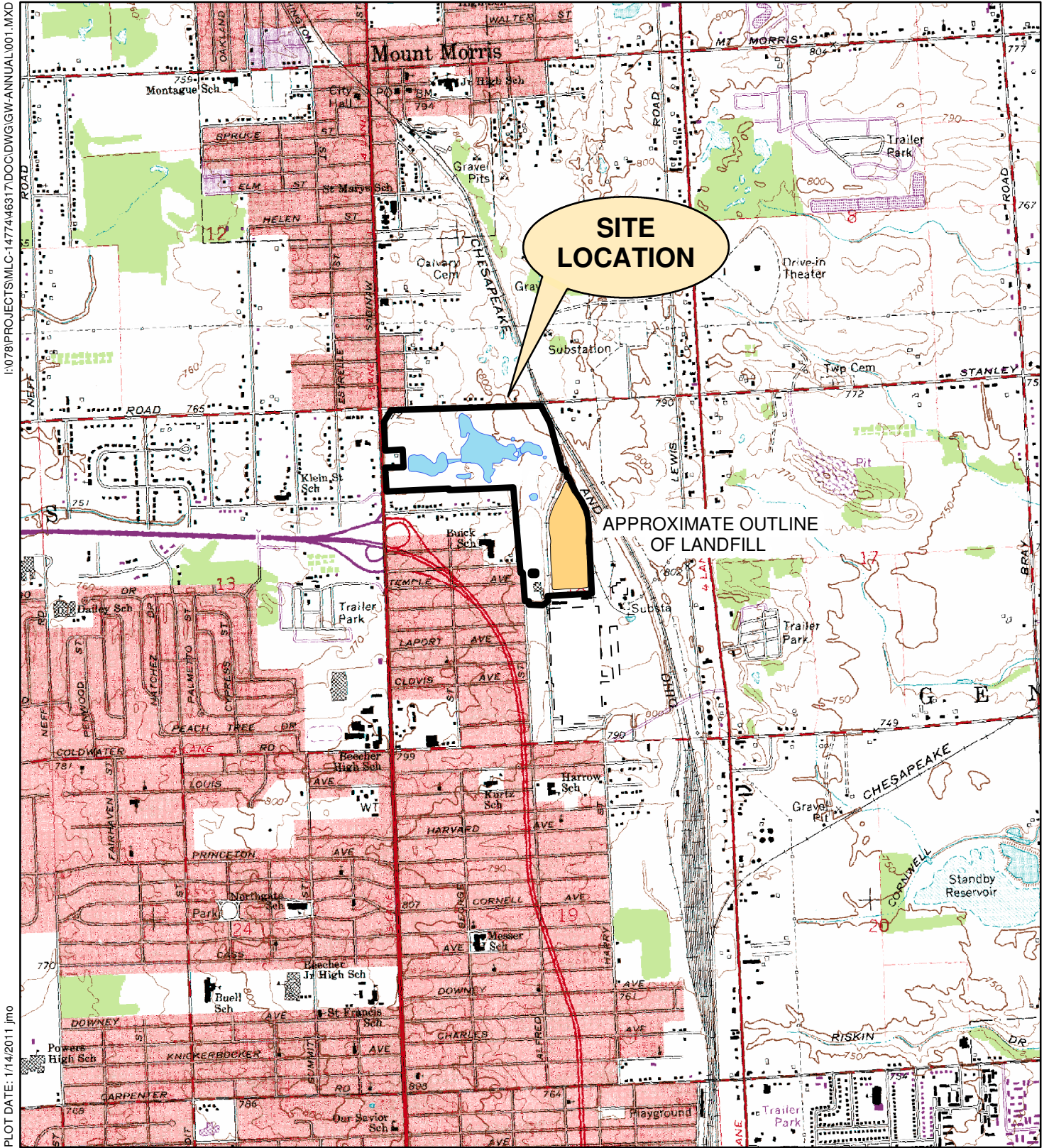
November 8, 2010

Sump	DTW
A	20.55
B	11.49
C	16.20
D	18.16
E	19.57
F	19.95

Notes:

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

***FIGURES***



MOTORS LIQUIDATION COMPANY  
 COLDWATER ROAD LANDFILL FACILITY  
 FLINT, MICHIGAN

**SITE LOCATION MAP**



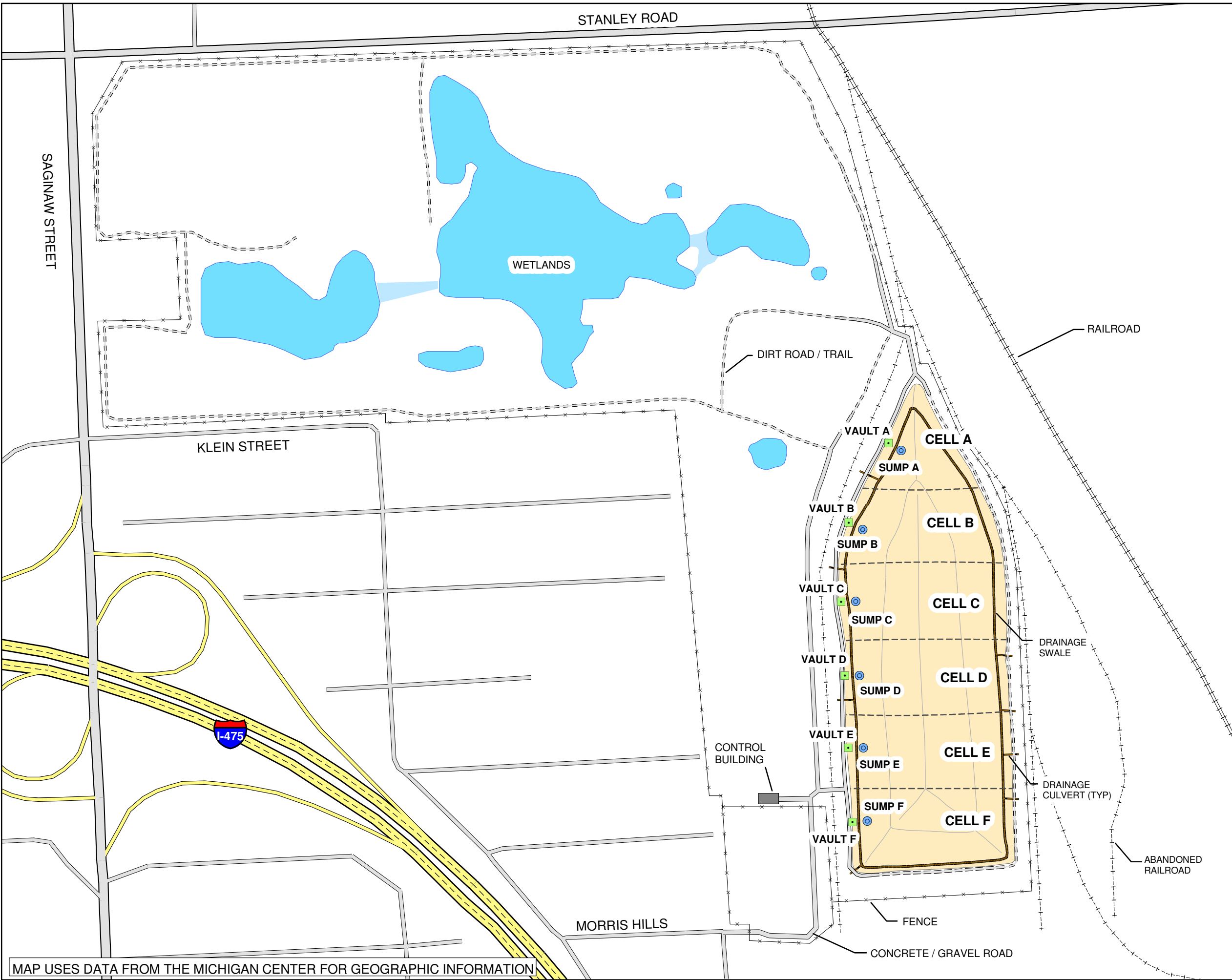




FIGURE 2

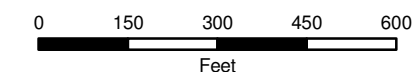


**LEGEND**

-  LEACHATE COLLECTION SUMP
-  ACCESS PORT FOR LEAK DETECTION VAULT

REALM  
COLDWATER ROAD  
LANDFILL FACILITY  
FLINT, MICHIGAN

**SITE LAYOUT**



AUGUST 2009  
14774/46317-008



*APPENDICES*

*APPENDIX A*  
*Analytical Laboratory*  
*Report*



# Analytical Laboratory Report

Report ID: S46610.01(01)  
Generated on 11/22/2010

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): S46610.01-S46610.14  
Project: Coldwater Road Landfill Annual Sampling  
Collected Date: 11/08/2010  
Submitted Date/Time: 11/09/2010 14:35  
Sampled by: Kevin Schneider  
P.O. #: 11018537

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
S46610.01	Sump A	Sump Water	11/08/2010 09:30
S46610.02	Sump B	Sump Water	11/08/2010 10:45
S46610.03	Vault-B	Wastewater	11/08/2010 11:10
S46610.04	Sump C	Sump Water	11/08/2010 11:30
S46610.05	Vault C	Wastewater	11/08/2010 11:45
S46610.06	Sump D	Sump Water	11/08/2010 12:55
S46610.07	Vault D	Wastewater	11/08/2010 13:10
S46610.08	Sump E	Sump Water	11/08/2010 13:40
S46610.09	Vault E	Wastewater	11/08/2010 14:00
S46610.10	Sump F	Sump Water	11/08/2010 14:30
S46610.11	Vault F	Wastewater	11/08/2010 14:45
S46610.12	B-7	Groundwater	11/08/2010 15:50
S46610.13	Dup-01	Sump Water	11/08/2010
S46610.14	Dup-01	Wastewater	11/08/2010



# Analytical Laboratory Report

Lab Sample ID: S46610.01  
 Sample Tag: Sump A  
 Collected Date/Time: 11/08/2010 09:30  
 Matrix: Sump Water  
 COC Reference: 59809

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.4	IR
1	500ml Plastic	None	Yes	4.4	IR
2	40ml Glass	H2SO4	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Extraction / Prep.</b>								
Metal Digestion	Completed			3015A	11/18/10 09:00	JRT		
<b>Inorganics</b>								
Conductivity	3,560	umhos/cm		120.1	11/16/10 16:06	JKB		
TOC	71	mg/L	4	EPA 415	11/13/10 12:00	TestA		O
Total Suspended Solids	10	mg/L	1	2540 D	11/11/10 14:30	DJS		
<b>Metals</b>								
Chromium, Dissolved	0.113	mg/L	0.005	200.8	11/18/10 13:24	SLS	7440-47-3	
Copper, Dissolved	1.11	mg/L	0.004	200.8	11/18/10 13:24	SLS	7440-50-8	
Nickel, Dissolved	0.103	mg/L	0.005	200.8	11/18/10 13:24	SLS	7440-02-0	
Zinc, Dissolved	0.023	mg/L	0.005	200.8	11/18/10 13:24	SLS	7440-66-6	

O-Analysis performed by outside laboratory. See attached report.



# Analytical Laboratory Report

Lab Sample ID: S46610.02  
 Sample Tag: Sump B  
 Collected Date/Time: 11/08/2010 10:45  
 Matrix: Sump Water  
 COC Reference: 59809

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.4	IR
1	500ml Plastic	None	Yes	4.4	IR
2	40ml Glass	H2SO4	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Extraction / Prep.</b>								
Metal Digestion	Completed			3015A	11/18/10 09:00	JRT		
<b>Inorganics</b>								
Conductivity	3,450	umhos/cm		120.1	11/16/10 16:10	JKB		
TOC	78	mg/L	4	EPA 415	11/13/10 12:00	TestA		O
Total Suspended Solids	1	mg/L	1	2540 D	11/11/10 14:30	DJS		
<b>Metals</b>								
Chromium, Dissolved	0.163	mg/L	0.005	200.8	11/18/10 13:26	SLS	7440-47-3	
Copper, Dissolved	0.669	mg/L	0.004	200.8	11/18/10 13:26	SLS	7440-50-8	
Nickel, Dissolved	0.076	mg/L	0.005	200.8	11/18/10 13:26	SLS	7440-02-0	
Zinc, Dissolved	0.008	mg/L	0.005	200.8	11/18/10 13:26	SLS	7440-66-6	

O-Analysis performed by outside laboratory. See attached report.



# Analytical Laboratory Report

Lab Sample ID: S46610.03  
 Sample Tag: Vault-B  
 Collected Date/Time: 11/08/2010 11:10  
 Matrix: Wastewater  
 COC Reference: 59809

## Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.4	IR
1	500ml Plastic	None	Yes	4.4	IR
2	40ml Glass	H2SO4	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Extraction / Prep.</b>								
Metal Digestion	Completed			3015A	11/18/10 09:00	JRT		
<b>Inorganics</b>								
Conductivity	1,911	umhos/cm		120.1	11/16/10 16:12	JKB		
TOC	4	mg/L	1	EPA 415	11/12/10 12:00	TestA		O
Total Suspended Solids	3	mg/L	1	2540 D	11/11/10 14:30	DJS		
<b>Metals</b>								
Chromium, Dissolved	0.021	mg/L	0.005	200.8	11/18/10 13:28	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/18/10 13:28	SLS	7440-50-8	
Nickel, Dissolved	0.011	mg/L	0.005	200.8	11/18/10 13:28	SLS	7440-02-0	
Zinc, Dissolved	0.017	mg/L	0.005	200.8	11/18/10 13:28	SLS	7440-66-6	

O-Analysis performed by outside laboratory. See attached report.



# Analytical Laboratory Report

Lab Sample ID: S46610.04  
 Sample Tag: Sump C  
 Collected Date/Time: 11/08/2010 11:30  
 Matrix: Sump Water  
 COC Reference: 59809

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.4	IR
1	500ml Plastic	None	Yes	4.4	IR
2	40ml Glass	H2SO4	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Extraction / Prep.</b>								
Metal Digestion	Completed			3015A	11/18/10 09:00	JRT		
<b>Inorganics</b>								
Conductivity	4,910	umhos/cm		120.1	11/16/10 16:14	JKB		
TOC	130	mg/L	10	EPA 415	11/13/10 12:00	TestA		O
Total Suspended Solids	4	mg/L	1	2540 D	11/11/10 14:30	DJS		
<b>Metals</b>								
Chromium, Dissolved	0.055	mg/L	0.005	200.8	11/18/10 13:31	SLS	7440-47-3	
Copper, Dissolved	3.17	mg/L	0.004	200.8	11/18/10 13:31	SLS	7440-50-8	
Nickel, Dissolved	0.555	mg/L	0.005	200.8	11/18/10 13:31	SLS	7440-02-0	
Zinc, Dissolved	0.010	mg/L	0.005	200.8	11/18/10 13:31	SLS	7440-66-6	

O-Analysis performed by outside laboratory. See attached report.



# Analytical Laboratory Report

Lab Sample ID: S46610.05  
 Sample Tag: Vault C  
 Collected Date/Time: 11/08/2010 11:45  
 Matrix: Wastewater  
 COC Reference: 59809

## Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.4	IR
1	500ml Plastic	None	Yes	4.4	IR
2	40ml Glass	H2SO4	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Extraction / Prep.</b>								
Metal Digestion	Completed			3015A	11/18/10 09:00	JRT		
<b>Inorganics</b>								
Conductivity	1,670	umhos/cm		120.1	11/16/10 16:16	JKB		
TOC	6	mg/L	1	EPA 415	11/12/10 12:00	TestA		O
Total Suspended Solids	7	mg/L	1	2540 D	11/11/10 14:30	DJS		
<b>Metals</b>								
Chromium, Dissolved	0.016	mg/L	0.005	200.8	11/18/10 13:33	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/18/10 13:33	SLS	7440-50-8	
Nickel, Dissolved	0.011	mg/L	0.005	200.8	11/18/10 13:33	SLS	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	200.8	11/18/10 13:33	SLS	7440-66-6	

O-Analysis performed by outside laboratory. See attached report.



# Analytical Laboratory Report

Lab Sample ID: S46610.06  
 Sample Tag: Sump D  
 Collected Date/Time: 11/08/2010 12:55  
 Matrix: Sump Water  
 COC Reference: 59809

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.4	IR
1	500ml Plastic	None	Yes	4.4	IR
2	40ml Glass	H2SO4	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Extraction / Prep.</b>								
Metal Digestion	Completed			3015A	11/18/10 09:00	JRT		
<b>Inorganics</b>								
Conductivity	5,830	umhos/cm		120.1	11/16/10 16:18	JKB		
TOC	170	mg/L	10	EPA 415	11/13/10 12:00	TestA		O
Total Suspended Solids	2	mg/L	1	2540 D	11/11/10 14:30	DJS		
<b>Metals</b>								
Chromium, Dissolved	0.119	mg/L	0.005	200.8	11/18/10 13:35	SLS	7440-47-3	
Copper, Dissolved	1.22	mg/L	0.004	200.8	11/18/10 13:35	SLS	7440-50-8	
Nickel, Dissolved	1.52	mg/L	0.005	200.8	11/18/10 13:35	SLS	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	200.8	11/18/10 13:35	SLS	7440-66-6	

O-Analysis performed by outside laboratory. See attached report.



# Analytical Laboratory Report

Lab Sample ID: S46610.07  
 Sample Tag: Vault D  
 Collected Date/Time: 11/08/2010 13:10  
 Matrix: Wastewater  
 COC Reference: 59809

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.4	IR
1	500ml Plastic	None	Yes	4.4	IR
2	40ml Glass	H2SO4	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Extraction / Prep.</b>								
Metal Digestion	Completed			3015A	11/18/10 09:00	JRT		
<b>Inorganics</b>								
Conductivity	1,555	umhos/cm		120.1	11/16/10 16:20	JKB		
TOC	9	mg/L	1	EPA 415	11/12/10 12:00	TestA		O
Total Suspended Solids	31	mg/L	1	2540 D	11/11/10 14:30	DJS		
<b>Metals</b>								
Chromium, Dissolved	0.019	mg/L	0.005	200.8	11/18/10 13:38	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/18/10 13:38	SLS	7440-50-8	
Nickel, Dissolved	0.018	mg/L	0.005	200.8	11/18/10 13:38	SLS	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	200.8	11/18/10 13:38	SLS	7440-66-6	

O-Analysis performed by outside laboratory. See attached report.



# Analytical Laboratory Report

Lab Sample ID: S46610.08  
 Sample Tag: Sump E  
 Collected Date/Time: 11/08/2010 13:40  
 Matrix: Sump Water  
 COC Reference: 59809

## Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.4	IR
1	500ml Plastic	None	Yes	4.4	IR
2	40ml Glass	H2SO4	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Extraction / Prep.</b>								
Metal Digestion	Completed			3015A	11/18/10 09:00	JRT		
<b>Inorganics</b>								
Conductivity	1,647	umhos/cm		120.1	11/16/10 16:22	JKB		
TOC	6	mg/L	1	EPA 415	11/12/10 12:00	TestA		O
Total Suspended Solids	2	mg/L	1	2540 D	11/11/10 14:30	DJS		
<b>Metals</b>								
Chromium, Dissolved	0.018	mg/L	0.005	200.8	11/18/10 13:40	SLS	7440-47-3	
Copper, Dissolved	0.010	mg/L	0.004	200.8	11/18/10 13:40	SLS	7440-50-8	
Nickel, Dissolved	0.009	mg/L	0.005	200.8	11/18/10 13:40	SLS	7440-02-0	
Zinc, Dissolved	0.101	mg/L	0.005	200.8	11/18/10 13:40	SLS	7440-66-6	

O-Analysis performed by outside laboratory. See attached report.



# Analytical Laboratory Report

Lab Sample ID: S46610.09  
 Sample Tag: Vault E  
 Collected Date/Time: 11/08/2010 14:00  
 Matrix: Wastewater  
 COC Reference: 59809

## Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.4	IR
1	500ml Plastic	None	Yes	4.4	IR
2	40ml Glass	H2SO4	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Extraction / Prep.</b>								
Metal Digestion	Completed			3015A	11/18/10 09:00	JRT		
<b>Inorganics</b>								
Conductivity	1,714	umhos/cm		120.1	11/16/10 16:24	JKB		
TOC	5	mg/L	1	EPA 415	11/12/10 12:00	TestA		O
Total Suspended Solids	<1	mg/L	1	2540 D	11/11/10 14:30	DJS		
<b>Metals</b>								
Chromium, Dissolved	0.024	mg/L	0.005	200.8	11/18/10 13:42	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/18/10 13:42	SLS	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	200.8	11/18/10 13:42	SLS	7440-02-0	
Zinc, Dissolved	0.007	mg/L	0.005	200.8	11/18/10 13:42	SLS	7440-66-6	

O-Analysis performed by outside laboratory. See attached report.



# Analytical Laboratory Report

Lab Sample ID: S46610.10  
 Sample Tag: Sump F  
 Collected Date/Time: 11/08/2010 14:30  
 Matrix: Sump Water  
 COC Reference: 59809

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.4	IR
1	500ml Plastic	None	Yes	4.4	IR
2	40ml Glass	H2SO4	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Extraction / Prep.</b>								
Metal Digestion	Completed			3015A	11/18/10 09:00	JRT		
<b>Inorganics</b>								
Conductivity	1,260	umhos/cm		120.1	11/16/10 16:26	JKB		
TOC	9	mg/L	1	EPA 415	11/12/10 12:00	TestA		O
Total Suspended Solids	<1	mg/L	1	2540 D	11/11/10 14:30	DJS		
<b>Metals</b>								
Chromium, Dissolved	0.017	mg/L	0.005	200.8	11/18/10 13:44	SLS	7440-47-3	
Copper, Dissolved	0.019	mg/L	0.004	200.8	11/18/10 13:44	SLS	7440-50-8	
Nickel, Dissolved	0.008	mg/L	0.005	200.8	11/18/10 13:44	SLS	7440-02-0	
Zinc, Dissolved	0.006	mg/L	0.005	200.8	11/18/10 13:44	SLS	7440-66-6	

O-Analysis performed by outside laboratory. See attached report.



# Analytical Laboratory Report

Lab Sample ID: S46610.11  
 Sample Tag: Vault F  
 Collected Date/Time: 11/08/2010 14:45  
 Matrix: Wastewater  
 COC Reference: 59809

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.4	IR
1	500ml Plastic	None	Yes	4.4	IR
2	40ml Glass	H2SO4	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Extraction / Prep.</b>								
Metal Digestion	Completed			3015A	11/18/10 09:00	JRT		
<b>Inorganics</b>								
Conductivity	1,590	umhos/cm		120.1	11/16/10 16:30	JKB		
TOC	3	mg/L	1	EPA 415	11/12/10 12:00	TestA		O
Total Suspended Solids	2	mg/L	1	2540 D	11/11/10 14:30	DJS		
<b>Metals</b>								
Chromium, Dissolved	0.016	mg/L	0.005	200.8	11/18/10 13:56	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/18/10 13:56	SLS	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	200.8	11/18/10 13:56	SLS	7440-02-0	
Zinc, Dissolved	0.014	mg/L	0.005	200.8	11/18/10 13:56	SLS	7440-66-6	

O-Analysis performed by outside laboratory. See attached report.



# Analytical Laboratory Report

Lab Sample ID: S46610.13  
 Sample Tag: Dup-01  
 Collected Date/Time: 11/08/2010 :  
 Matrix: Sump Water  
 COC Reference: 59808

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.4	IR
1	500ml Plastic	None	Yes	4.4	IR
2	40ml Glass	H2SO4	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Extraction / Prep.</b>								
Metal Digestion	Completed			3015A	11/18/10 09:00	JRT		
<b>Inorganics</b>								
Conductivity	1,647	umhos/cm		120.1	11/16/10 16:34	JKB		
TOC	6	mg/L	1	EPA 415	11/12/10 12:00	TestA		O
Total Suspended Solids	3	mg/L	1	2540 D	11/11/10 14:30	DJS		
<b>Metals</b>								
Chromium, Dissolved	0.016	mg/L	0.005	200.8	11/18/10 14:01	SLS	7440-47-3	
Copper, Dissolved	0.010	mg/L	0.004	200.8	11/18/10 14:01	SLS	7440-50-8	
Nickel, Dissolved	0.009	mg/L	0.005	200.8	11/18/10 14:01	SLS	7440-02-0	
Zinc, Dissolved	0.108	mg/L	0.005	200.8	11/18/10 14:01	SLS	7440-66-6	

O-Analysis performed by outside laboratory. See attached report.



# Analytical Laboratory Report

Lab Sample ID: S46610.14  
 Sample Tag: Dup-01  
 Collected Date/Time: 11/08/2010 :  
 Matrix: Wastewater  
 COC Reference: 59808

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.4	IR
1	500ml Plastic	None	Yes	4.4	IR
2	40ml Glass	H2SO4	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Extraction / Prep.</b>								
Metal Digestion	Completed			3015A	11/18/10 09:00	JRT		
<b>Inorganics</b>								
Conductivity	1,715	umhos/cm		120.1	11/16/10 16:36	JKB		
TOC	5	mg/L	1	EPA 415	11/12/10 12:00	TestA		O
Total Suspended Solids	3	mg/L	1	2540 D	11/11/10 14:30	DJS		
<b>Metals</b>								
Chromium, Dissolved	0.020	mg/L	0.005	200.8	11/18/10 14:03	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/18/10 14:03	SLS	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	200.8	11/18/10 14:03	SLS	7440-02-0	
Zinc, Dissolved	0.007	mg/L	0.005	200.8	11/18/10 14:03	SLS	7440-66-6	

O-Analysis performed by outside laboratory. See attached report.

## ANALYTICAL REPORT

PROJECT NO. 46610

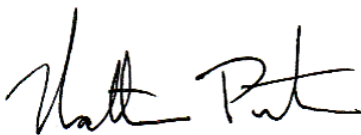
46610

Lot #: A0K100433

Paula Shaw

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TESTAMERICA LABORATORIES, INC.



Designee for

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Approved for release.  
Nathan Pietras  
Project Manager  
11/22/2010 12:14 PM

November 22, 2010

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## CASE NARRATIVE

A0K100433

The following report contains the analytical results for fourteen water samples submitted to TestAmerica North Canton by Merit Laboratories from the 46610 Site, project number 46610. The samples were received November 10, 2010, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

All parameters were evaluated to the method detection limit and include qualified results where applicable.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Denise D. Heckler, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

## **CASE NARRATIVE (continued)**

### **SUPPLEMENTAL QC INFORMATION**

#### **SAMPLE RECEIVING**

The temperature of the cooler upon sample receipt was 2.9°C.

#### **GENERAL CHEMISTRY**

The analytical results met the requirements of the laboratory's QA/QC program.

## QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

### **QC BATCH**

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

### **LABORATORY CONTROL SAMPLE**

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the reparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

### **METHOD BLANK**

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

<b><u>Volatile (GC or GC/MS)</u></b>	<b><u>Semivolatile (GC/MS)</u></b>	<b><u>Metals ICP-MS</u></b>	<b><u>Metals ICP Trace</u></b>
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

## QUALITY CONTROL ELEMENTS NARRATIVE (continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.
- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

### **MATRIX SPIKE/MATRIX SPIKE DUPLICATE**

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

### **SURROGATE COMPOUNDS**

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.



### **TestAmerica Certifications and Approvals:**

*The laboratory is certified for the analytes listed on the documents below. These are available upon request.*  
California (#01144CA), Connecticut (#PH-0590), Florida (#E87225),  
Illinois (#200004), Kansas (#E10336), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Nevada  
(#OH-000482008A), OhioVAP (#CL0024), Pennsylvania (#008), West Virginia (#210), Wisconsin (#999518190), NAVY,  
ARMY, USDA Soil Permit

N:\QAQC\Customer Service\Narrative - Combined RCRA\_CWA 032609.doc

## EXECUTIVE SUMMARY - Detection Highlights

A0K100433

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
46610.01 11/08/10 09:30 001 Total Organic Carbon	71	4	mg/L	MCAWW 415.1
46610.02 11/08/10 10:45 002 Total Organic Carbon	78	4	mg/L	MCAWW 415.1
46610.03 11/08/10 11:10 003 Total Organic Carbon	4	1	mg/L	MCAWW 415.1
46610.04 11/08/10 11:30 004 Total Organic Carbon	130	10	mg/L	MCAWW 415.1
46610.05 11/08/10 11:45 005 Total Organic Carbon	6	1	mg/L	MCAWW 415.1
46610.06 11/08/10 12:55 006 Total Organic Carbon	170	10	mg/L	MCAWW 415.1
46610.07 11/08/10 13:10 007 Total Organic Carbon	9	1	mg/L	MCAWW 415.1
46610.08 11/08/10 13:40 008 Total Organic Carbon	6	1	mg/L	MCAWW 415.1
46610.09 11/08/10 14:00 009 Total Organic Carbon	5	1	mg/L	MCAWW 415.1

(Continued on next page)

## EXECUTIVE SUMMARY - Detection Highlights

A0K100433

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
<b>46610.10 11/08/10 14:30 010</b>				
Total Organic Carbon	9	1	mg/L	MCAWW 415.1
<b>46610.11 11/08/10 14:45 011</b>				
Total Organic Carbon	3	1	mg/L	MCAWW 415.1
<b>46610.12 11/08/10 15:50 012</b>				
Total Organic Carbon	8	1	mg/L	MCAWW 415.1
Total Organic Halogens	103	30.0	ug/L	SW846 9020B
<b>46610.13 11/08/10 013</b>				
Total Organic Carbon	6	1	mg/L	MCAWW 415.1
<b>46610.14 11/08/10 014</b>				
Total Organic Carbon	5	1	mg/L	MCAWW 415.1

# ANALYTICAL METHODS SUMMARY

A0K100433

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>
Total Organic Carbon	MCAWW 415.1
Total Organic Halogens	SW846 9020B

## References:

- MCAWW "Methods for Chemical Analysis of Water and Wastes",  
EPA-600/4-79-020, March 1983 and subsequent revisions.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical  
Methods", Third Edition, November 1986 and its updates.

# SAMPLE SUMMARY

A0K100433

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
L9R13	001	46610.01	11/08/10	09:30
L9R15	002	46610.02	11/08/10	10:45
L9R18	003	46610.03	11/08/10	11:10
L9R2A	004	46610.04	11/08/10	11:30
L9R2D	005	46610.05	11/08/10	11:45
L9R2E	006	46610.06	11/08/10	12:55
L9R2F	007	46610.07	11/08/10	13:10
L9R2H	008	46610.08	11/08/10	13:40
L9R2J	009	46610.09	11/08/10	14:00
L9R2K	010	46610.10	11/08/10	14:30
L9R2L	011	46610.11	11/08/10	14:45
L9R2N	012	46610.12	11/08/10	15:50
L9R2P	013	46610.13	11/08/10	
L9R2R	014	46610.14	11/08/10	

## **NOTE(S) :**

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Merit Laboratories

Client Sample ID: 46610.01

General Chemistry

Lot-Sample #...: A0K100433-001    Work Order #...: L9R13    Matrix.....: WG

Date Sampled...: 11/08/10 09:30    Date Received..: 11/10/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Organic Carbon	71	4	mg/L	MCAWW 415.1	11/13/10	0316206

Dilution Factor: 4

MDL.....: 1

Merit Laboratories

Client Sample ID: 46610.02

General Chemistry

Lot-Sample #...: A0K100433-002    Work Order #...: L9R15    Matrix.....: WG

Date Sampled...: 11/08/10 10:45    Date Received..: 11/10/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Organic Carbon	78	4	mg/L	MCAWW 415.1	11/13/10	0316206

Dilution Factor: 4

MDL.....: 1

Merit Laboratories

Client Sample ID: 46610.03

General Chemistry

Lot-Sample #...: A0K100433-003    Work Order #...: L9R18    Matrix.....: WG  
Date Sampled...: 11/08/10 11:10    Date Received..: 11/10/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Organic Carbon	4	1	mg/L	MCAWW 415.1	11/12/10	0316206

Dilution Factor: 1

MDL.....: 0.2

Merit Laboratories

Client Sample ID: 46610.04

General Chemistry

Lot-Sample #...: A0K100433-004    Work Order #...: L9R2A    Matrix.....: WG

Date Sampled...: 11/08/10 11:30    Date Received..: 11/10/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Organic Carbon	130	10	mg/L	MCAWW 415.1	11/13/10	0316206

Dilution Factor: 10

MDL.....: 2

Merit Laboratories

Client Sample ID: 46610.05

General Chemistry

Lot-Sample #...: A0K100433-005    Work Order #...: L9R2D    Matrix.....: WG

Date Sampled...: 11/08/10 11:45    Date Received..: 11/10/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Organic Carbon	6	1	mg/L	MCAWW 415.1	11/12/10	0316206

Dilution Factor: 1

MDL.....: 0.2

Merit Laboratories

Client Sample ID: 46610.06

General Chemistry

Lot-Sample #...: A0K100433-006    Work Order #...: L9R2E    Matrix.....: WG

Date Sampled...: 11/08/10 12:55    Date Received..: 11/10/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Organic Carbon	170	10	mg/L	MCAWW 415.1	11/13/10	0316206

Dilution Factor: 10

MDL.....: 2

Merit Laboratories

Client Sample ID: 46610.07

General Chemistry

Lot-Sample #...: A0K100433-007    Work Order #...: L9R2F    Matrix.....: WG  
Date Sampled...: 11/08/10 13:10    Date Received..: 11/10/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Organic Carbon	9	1	mg/L	MCAWW 415.1	11/12/10	0316206

Dilution Factor: 1

MDL.....: 0.2

Merit Laboratories

Client Sample ID: 46610.08

General Chemistry

Lot-Sample #...: A0K100433-008    Work Order #...: L9R2H    Matrix.....: WG

Date Sampled...: 11/08/10 13:40    Date Received..: 11/10/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Organic Carbon	6	1	mg/L	MCAWW 415.1	11/12/10	0316206

Dilution Factor: 1

MDL.....: 0.2

Merit Laboratories

Client Sample ID: 46610.09

General Chemistry

Lot-Sample #...: A0K100433-009    Work Order #...: L9R2J    Matrix.....: WG  
Date Sampled...: 11/08/10 14:00    Date Received..: 11/10/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Organic Carbon	5	1	mg/L	MCAWW 415.1	11/12/10	0316206

Dilution Factor: 1

MDL.....: 0.2

Merit Laboratories

Client Sample ID: 46610.10

General Chemistry

Lot-Sample #...: A0K100433-010    Work Order #...: L9R2K    Matrix.....: WG  
Date Sampled...: 11/08/10 14:30    Date Received..: 11/10/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Organic Carbon	9	1	mg/L	MCAWW 415.1	11/12/10	0316206

Dilution Factor: 1

MDL.....: 0.2

Merit Laboratories

Client Sample ID: 46610.11

General Chemistry

Lot-Sample #...: A0K100433-011    Work Order #...: L9R2L    Matrix.....: WG

Date Sampled...: 11/08/10 14:45    Date Received..: 11/10/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Organic Carbon	3	1	mg/L	MCAWW 415.1	11/12/10	0316206

Dilution Factor: 1

MDL.....: 0.2

Merit Laboratories

Client Sample ID: 46610.12

General Chemistry

Lot-Sample #...: A0K100433-012    Work Order #...: L9R2N    Matrix.....: WG  
Date Sampled...: 11/08/10 15:50    Date Received..: 11/10/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Organic Carbon	8	1	mg/L	MCAWW 415.1	11/12/10	0316206
			Dilution Factor: 1	MDL.....: 0.2		
Total Organic Halogens	103	30.0	ug/L	SW846 9020B	11/15/10	0320354
			Dilution Factor: 1	MDL.....: 17.0		

Merit Laboratories

Client Sample ID: 46610.13

General Chemistry

Lot-Sample #...: A0K100433-013

Work Order #...: L9R2P

Matrix.....: WG

Date Sampled...: 11/08/10

Date Received..: 11/10/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Organic Carbon	6	1	mg/L	MCAWW 415.1	11/12/10	0316206

Dilution Factor: 1

MDL.....: 0.2

Merit Laboratories

Client Sample ID: 46610.14

General Chemistry

Lot-Sample #...: A0K100433-014

Work Order #...: L9R2R

Matrix.....: WG

Date Sampled...: 11/08/10

Date Received..: 11/10/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Organic Carbon	5	1	mg/L	MCAWW 415.1	11/12/10	0316206

Dilution Factor: 1

MDL.....: 0.2

# ***QUALITY CONTROL SECTION***

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A0K100433

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Total Organic Carbon	ND	1	mg/L	MCAWW 415.1	11/12/10	0316206
		Dilution Factor: 1				
Total Organic Halogens	ND	30.0	ug/L	SW846 9020B	11/15/10	0320354
		Dilution Factor: 1				

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

**LABORATORY CONTROL SAMPLE EVALUATION REPORT**

**General Chemistry**

**Client Lot #...:** A0K100433

**Matrix.....:** WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Organic Carbon	101	(88 - 115)	MCAWW 415.1 Dilution Factor: 1	11/12/10	0316206
			Work Order #: L90CK1AC	LCS Lot-Sample#: A0K120000-206	
Total Organic Halogens	103	(67 - 115)	SW846 9020B Dilution Factor: 1	11/15/10	0320354
			Work Order #: L95JA1AC	LCS Lot-Sample#: A0K160000-354	

**NOTE(S):**

---

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A0K100433

Matrix.....: WG

Date Sampled...: 11/08/10 11:10 Date Received...: 11/10/10

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Organic Carbon			WO#: L9R181AC-MS/L9R181AD-MSD			MS Lot-Sample #: A0K100433-003	
	103	(72 - 136)			MCAWW 415.1	11/12/10	0316206
	102	(72 - 136)	0.31	(0-20)	MCAWW 415.1	11/12/10	0316206
			Dilution Factor: 1				

**NOTE(S):**

---

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A0K100433

Matrix.....: WATER

Date Sampled...: 11/04/10 10:15 Date Received...: 11/05/10

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Organic Halogens			WO#: L9MW71CK-MS/L9MW71CL-MSD			MS Lot-Sample #: C0K060410-001	
	99	(59 - 126)			SW846 9020B	11/15/10	0320354
	83	(59 - 126)	16	(0-99)	SW846 9020B	11/15/10	0320354
			Dilution Factor: 1				

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

# Chain of Custody Record

TestAmerica Laboratory location:  DW  NPDES  RCRA  Other

<b>Client Contact</b> Company Name: <u>Merit Labs</u> Address: <u>2680 East Lansing Dr.</u> City/State/Zip: <u>East Lansing, MI 48823</u> Phone: <u>517-332-0167</u> Project Name: <u>46610</u> Project Number: <u>46610</u> PO #: <u>46610</u>		<b>Client Project Manager:</b> Denise Heckler Telephone: _____ Email: _____		<b>Site Contact:</b> Paula Shaw Telephone: _____		<b>Lab Contact:</b> _____ Telephone: _____		TestAmerica Laboratories, Inc. COC No: <u>1</u> of <u>2</u> COCs							
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		Special Instructions/QC Requirements & Comments:		TAT if different from below: <input type="checkbox"/> 3 weeks <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Analysis Turnaround Time		Months							
Relinquished by: <u>Wanda M</u> Company: <u>Merit</u> Date/Time: <u>11-9-10 1600</u>		Relinquished by: _____ Company: _____ Date/Time: _____		Received in Laboratory by: <u>Andy</u> Company: <u>TAL</u> Date/Time: <u>11/10/10 950</u>		Received by: _____ Company: _____ Date/Time: _____		Special Specific Notes / Special Instructions:							
Sample Identification	Sample Date	Sample Time	Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Analysis
46610, 01	11-8-10	0930	X					2							TOC
.02		1045	X												
.03		1110	X												
.04		1130	X												
.05		1145	X												
.06		1255	X												
.07		1310	X												
.08		1340	X												
.09		1400	X												
.10		1430	X												

# Chain of Custody Record

TestAmerica Laboratory location:  DW  NPDES  RCRA  Other \_\_\_\_\_

Regulatory program: \_\_\_\_\_

TestAmerica Laboratories, Inc. COC No: \_\_\_\_\_

<b>Client Contact</b> Company Name: <u>Merit Labs</u> Address: _____ City/State/Zip: _____ Phone: _____ Project Name: <u>46610</u> Project Number: _____ P O #: _____		<b>Client Project Manager:</b> Name: _____ Telephone: _____ Email: _____		<b>Site Contact:</b> Name: _____ Telephone: _____ Email: _____		<b>Lab Contact:</b> Name: _____ Telephone: _____ Email: _____		COC No: <u>2 of 2</u> COCs											
Method of Shipment/Carrier: _____ Shipping/Tracking No: _____		TAT if different from below: _____ <input type="checkbox"/> 3 weeks <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Maximum Retention of Samples: _____ (in 195 days)		Date of Receipt: _____ Date of Release: _____		Sample Specific Notes / Special Instructions: _____											
Sample Identification	Sample Date	Sample Time	Matrix				Chemicals				Analyses	Sample Specific Notes / Special Instructions							
			Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl			NaOH	ZnAc/NaOH	Unpres	Other:			
46610.11	11-8-10	1445	X																
,12		1550	X																
,13			X																
,14			X																

Possible Hazard Identification:  Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown

Special Instructions/QC Requirements & Comments: \_\_\_\_\_

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month):  Return to Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Reinquired by: [Signature] Company: Merit Date/Time: 11-9-10 1600 Received by: [Signature] Company: TAL Date/Time: 11/10/10 950

Reinquished by: \_\_\_\_\_ Company: \_\_\_\_\_ Date/Time: \_\_\_\_\_

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**TestAmerica Cooler Receipt Form/Narrative**

Lot Number: AOK100433

**North Canton Facility**

Client Ment Labs Project \_\_\_\_\_ By: [Signature]

Cooler Received on 11-10-10 Opened on 11-10-10 (Signature)

FedEx  UPS  DHL  FAS  Stetson  Client Drop Off  TestAmerica Courier  Other \_\_\_\_\_

TestAmerica Cooler # 104 Multiple Coolers  Foam Box  Client Cooler  Other \_\_\_\_\_

1. Were custody seals on the outside of the cooler(s)? Yes  No  Intact? Yes  No  NA

If YES, Quantity \_\_\_\_\_ Quantity Unsalvageable \_\_\_\_\_

Were custody seals on the outside of cooler(s) signed and dated? Yes  No  NA

Were custody seals on the bottle(s)? Yes  No

If YES, are there any exceptions? \_\_\_\_\_

2. Shippers' packing slip attached to the cooler(s)? Yes  No

3. Did custody papers accompany the sample(s)? Yes  No  Relinquished by client? Yes  No

4. Were the custody papers signed in the appropriate place? Yes  No

5. Packing material used: Bubble Wrap  Foam  None  Other \_\_\_\_\_

6. Cooler temperature upon receipt 2.9 °C See back of form for multiple coolers/temps

METHOD: IR  Other

COOLANT: Wet Ice  Blue Ice  Dry Ice  Water  None

7. Did all bottles arrive in good condition (Unbroken)? Yes  No

8. Could all bottle labels be reconciled with the COC? Yes  No

9. Were sample(s) at the correct pH upon receipt? Yes  No  NA

10. Were correct bottle(s) used for the test(s) indicated? Yes  No

11. Were air bubbles >6 mm in any VOA vials? Yes  No  NA

12. Sufficient quantity received to perform indicated analyses? Yes  No

13. Was a trip blank present in the cooler(s)? Yes  No  Were VOAs on the COC? Yes  No

Contacted PM \_\_\_\_\_ Date \_\_\_\_\_ by \_\_\_\_\_ via Verbal  Voice Mail  Other

Concerning \_\_\_\_\_

**14. CHAIN OF CUSTODY**

The following discrepancies occurred:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**15. SAMPLE CONDITION**

Sample(s) \_\_\_\_\_ were received after the recommended holding time had expired.

Sample(s) \_\_\_\_\_ were received in a broken container.

Sample(s) \_\_\_\_\_ were received with bubble >6 mm in diameter. (Notify PM)

**16. SAMPLE PRESERVATION**

Sample(s) \_\_\_\_\_ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 051010-HNO<sub>3</sub>; Sulfuric Acid Lot# 051010-H<sub>2</sub>SO<sub>4</sub>; Sodium Hydroxide Lot# 100108 -NaOH; Hydrochloric Acid Lot# 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH<sub>3</sub>COO)<sub>2</sub>ZN/NaOH. What time was preservative added to sample(s)? \_\_\_\_\_

Client ID	pH	Date	Initials
<u>12</u>	<u>12</u>	<u>11/10/10</u>	<u>CSL</u>



***END OF REPORT***



2680 East Lansing Dr., East Lansing, MI 48823  
 Phone (517) 332-0167 Fax (517) 332-6333  
 www.meritlabs.com

C.O.C. PAGE # 1 OF 2

59809

**REPORT TO** **CHAIN OF CUSTODY RECORD** **INVOICE TO**

CONTACT NAME: Cliff Yantz  
 COMPANY: O'Brien & Gere  
 ADDRESS: 3700 Grand River  
 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: \_\_\_\_\_  GAME  
 COMPANY: \_\_\_\_\_  
 ADDRESS: \_\_\_\_\_  
 CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_  
 PHONE NO.: \_\_\_\_\_ FAX NO.: \_\_\_\_\_ P.O. NO.: \_\_\_\_\_

**ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)**

PROJECT NO./NAME: coldwater rd landfill Annual Sampling SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Schwede Todd Kane  
 TURNAROUND TIME REQUIRED:  24 HR  48 HR  72 HR  STANDARD  OTHER  
 DELIVERABLES REQUIRED:  STANDARD  LEVEL II  LEVEL III  OTHER  
 MATRIX CODE: GW (GW=GROUNDWATER, WW=WASTEWATER, S=SOIL, L=LIQUID, SD=SOLID, SL=SLUDGE, O=OIL, A=AIR, W=WASTE, M=MISC) # Containers & Preservatives: \_\_\_\_\_  
 SPECIAL INSTRUCTIONS/NOTES: Metals Are: Cu, Cr, Ni, Zn

MERIT LAB NO.	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCL	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NHOH	MeOH	OTHER	TOC	Specific Conductivity	Dissolved Metals	TSS	TOX
	DATE	TIME															
46610.01	11/8/10	930	SUMP-A	WSW	4	1		2					X	X	X	X	
.02		1045	SUMP-B	WSW	4	1		2					X	X	X	X	
.03		1110	Vault-B	WW	4	1		2					X	X	X	X	
.04		1130	SUMP-C	WSW	4	1		2					X	X	X	X	
.05		1145	Vault-C	WW	4	1		2					X	X	X	X	
.06		1255	SUMP-D	WSW	4	1		2					X	X	X	X	
.07		1310	Vault-D	WW	4	1		2					X	X	X	X	
.08		1340	SUMP-E	WSW	4	1		2					X	X	X	X	
.09		1400	Vault-E	WW	4	1		2					X	X	X	X	
.10		1430	SUMP-F	WSW	4	1		2					X	X	X	X	
.11		1445	Vault-F	WW	4	1		2					X	X	X	X	
.12		1550	B-7	GW	5	1		3					X	X	X	X	

RELINQUISHED BY: [Signature] O'Brien & Gere DATE: 11/9/10 TIME: 1250  
 RECEIVED BY: [Signature] DATE: 11/9/10 TIME: 1300  
 RELINQUISHED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_  
 RECEIVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

RELINQUISHED BY: [Signature] DATE: 11/9/10 TIME: 1435  
 RECEIVED BY: [Signature] DATE: 11/9/10 TIME: 1435  
 SEAL NO.: \_\_\_\_\_ SEAL INTACT: YES  NO  INITIALS: \_\_\_\_\_ NOTES: TEMP. ON ARRIVAL: 4.4  
 SEAL NO.: \_\_\_\_\_ SEAL INTACT: YES  NO  INITIALS: \_\_\_\_\_





# Analytical Laboratory Report

Report ID: S46932.01(01)  
Generated on 12/03/2010

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): S46932.01  
Project: Coldwater Road Landfill Annual Sampling  
Collected Date: 12/01/2010  
Submitted Date/Time: 12/02/2010 16:50  
Sampled by: Kevin Schneider  
P.O. #: 11018537

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 (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S46932.01	Vault B-R	Wastewater	12/01/2010 11:45



# Analytical Laboratory Report

Lab Sample ID: S46932.01  
Sample Tag: Vault B-R  
Collected Date/Time: 12/01/2010 11:45  
Matrix: Wastewater  
COC Reference: 57850

## Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Extraction / Prep.</b>								
Metal Digestion	Completed			3015A	12/03/10 12:00	PER		
<b>Metals</b>								
Chromium, Dissolved	0.006	mg/L	0.005	200.8	12/03/10 13:28	PER	7440-47-3	

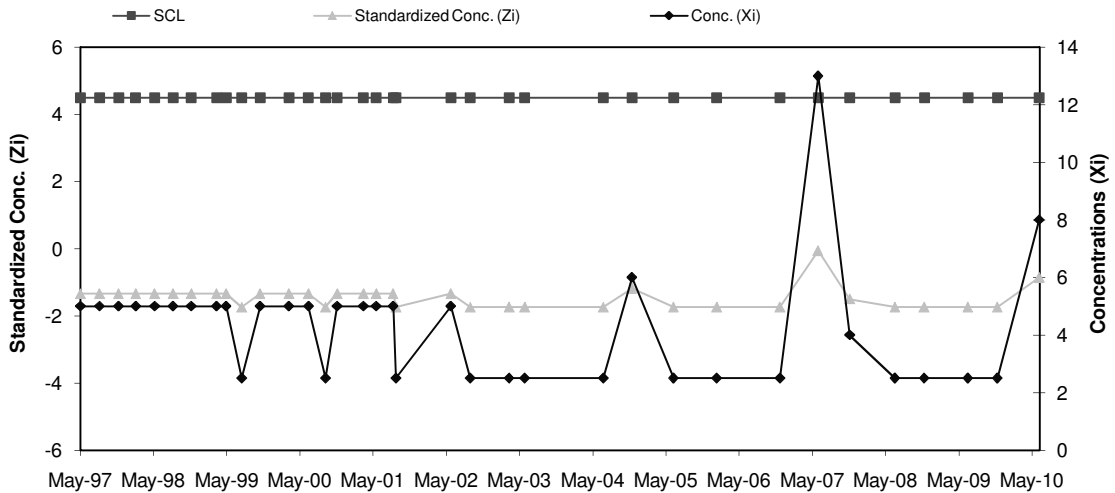


***APPENDIX B***  
***Leak Detection Vault***  
***Control Charts***

**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	<b>13.38</b>	<b>6.25</b>
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		

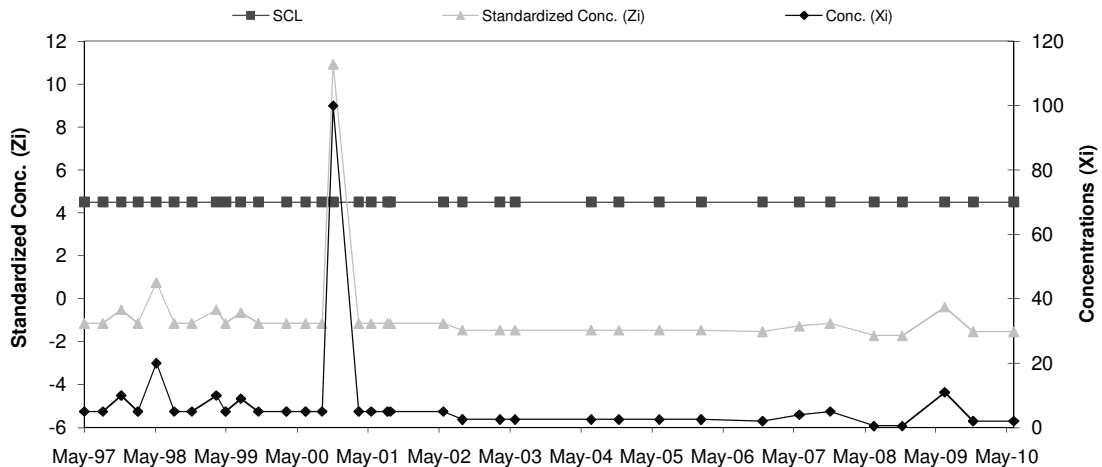
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	5	-1.34
10	Aug-97	4.5	5	-1.34
11	Nov-97	4.5	5	-1.34
12	Feb-98	4.5	5	-1.34
13	May-98	4.5	5	-1.34
14	Aug-98	4.5	5	-1.34
15	Nov-98	4.5	5	-1.34
16	Mar-99	4.5	5	-1.34
17	May-99	4.5	5	-1.34
18	Jul-99	4.5	2.5	-1.74
19	Oct-99	4.5	5	-1.34
20	Mar-00	4.5	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



**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		

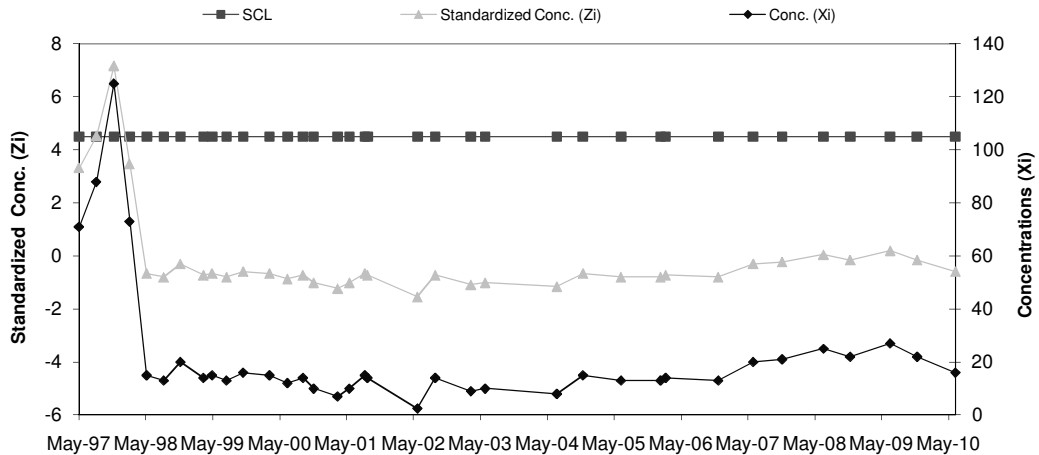
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	5	-1.14
10	Aug-97	4.5	5	-1.14
11	Nov-97	4.5	10	-0.51
12	Feb-98	4.5	5	-1.14
13	May-98	4.5	20	0.76
14	Aug-98	4.5	5	-1.14
15	Nov-98	4.5	5	-1.14
16	Mar-99	4.5	10	-0.51
17	May-99	4.5	5	-1.14
18	Jul-99	4.5	9	-0.64
19	Oct-99	4.5	5	-1.14
20	Mar-00	4.5	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



**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	<b>24.25</b>	<b>14.07</b>
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		

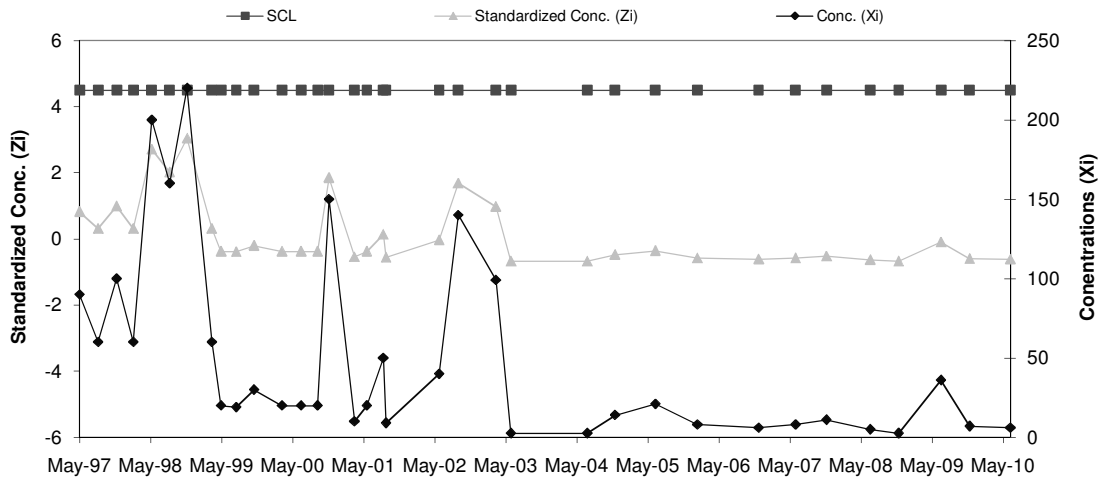
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	71	3.32
10	Aug-97	4.5	88	4.53
11	Nov-97	4.5	125	7.16
12	Feb-98	4.5	73	3.47
13	May-98	4.5	15	-0.66
14	Aug-98	4.5	13	-0.80
15	Nov-98	4.5	20	-0.30
16	Mar-99	4.5	14	-0.73
17	May-99	4.5	15	-0.66
18	Jul-99	4.5	13	-0.80
19	Oct-99	4.5	16	-0.59
20	Mar-00	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



**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		

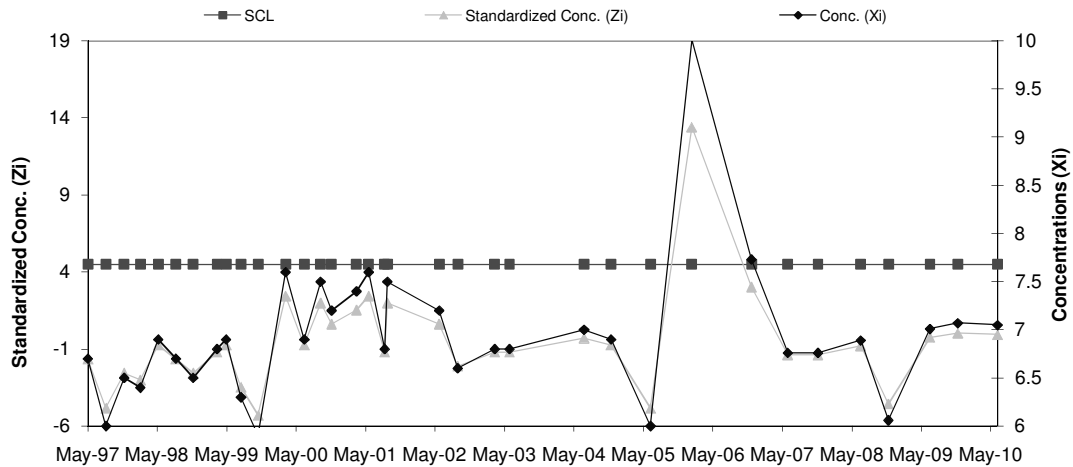
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	90	0.83
10	Aug-97	4.5	60	0.31
11	Nov-97	4.5	100	1.00
12	Feb-98	4.5	60	0.31
13	May-98	4.5	200	2.71
14	Aug-98	4.5	160	2.02
15	Nov-98	4.5	220	3.05
16	Mar-99	4.5	60	0.31
17	May-99	4.5	20	-0.37
18	Jul-99	4.5	19	-0.39
19	Oct-99	4.5	30	-0.20
20	Mar-00	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



**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		

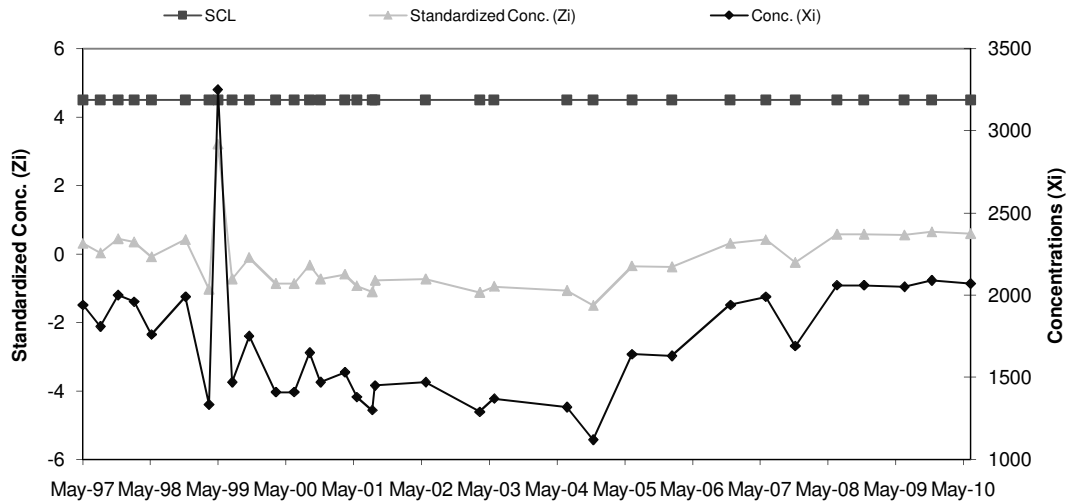
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	6.7	-1.65
10	Aug-97	4.5	6	-4.83
11	Nov-97	4.5	6.5	-2.56
12	Feb-98	4.5	6.4	-3.01
13	May-98	4.5	6.9	-0.74
14	Aug-98	4.5	6.7	-1.65
15	Nov-98	4.5	6.5	-2.56
16	Mar-99	4.5	6.8	-1.19
17	May-99	4.5	6.9	-0.74
18	Jul-99	4.5	6.3	-3.47
19	Oct-99	4.5	5.9	-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



**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		

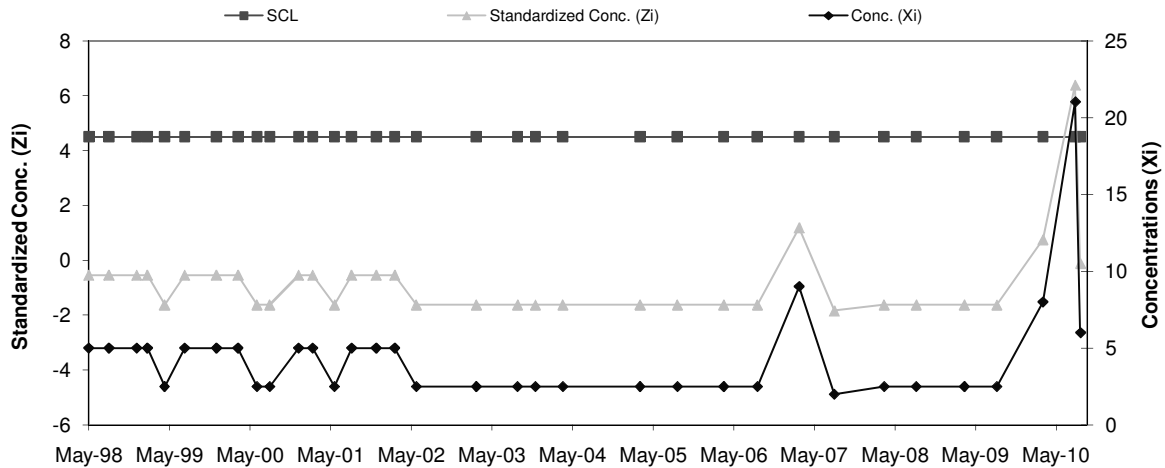
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	1940	0.31
10	Aug-97	4.5	1810	0.02
11	Nov-97	4.5	2000	0.45
12	Feb-98	4.5	1960	0.36
13	May-98	4.5	1760	-0.09
14	Nov-98	4.5	1990	0.42
15	Mar-99	4.5	1334	-1.03
16	May-99	4.5	3250	3.22
17	Jul-99	4.5	1470	-0.73
18	Oct-99	4.5	1750	-0.11
19	Mar-00	4.5	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



**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	<b>6.25</b>	<b>2.31</b>
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		

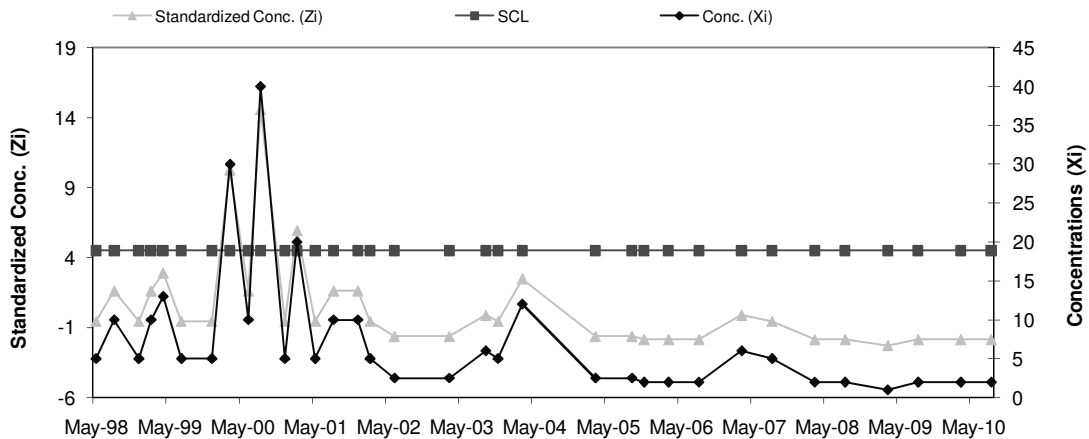
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-98	4.5	5	-0.54
10	Nov-98	4.5	5	-0.54
11	Mar-99	4.5	5	-0.54
12	May-99	4.5	5	-0.54
13	Jul-99	4.5	2.5	-1.62
14	Oct-99	4.5	5	-0.54
15	Mar-00	4.5	5	-0.54
16	Jun-00	4.5	5	-0.54
17	Sep-00	4.5	2.5	-1.62
18	Nov-00	4.5	2.5	-1.62
19	Mar-01	4.5	5	-0.54
20	May-01	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



**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		

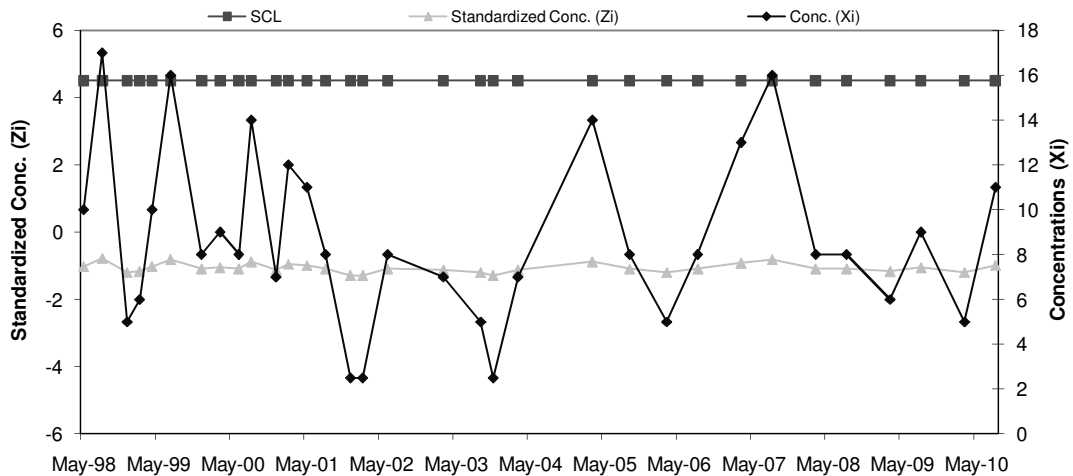
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-98	4.5	5	-0.54
10	Nov-98	4.5	10	1.62
11	Mar-99	4.5	5	-0.54
12	May-99	4.5	10	1.62
13	Jul-99	4.5	13	2.92
14	Oct-99	4.5	5	-0.54
15	Mar-00	4.5	5	-0.54
16	Jun-00	4.5	30	10.26
17	Sep-00	4.5	10	1.62
18	Nov-00	4.5	40	14.58
19	Mar-01	4.5	5	-0.54
20	May-01	4.5	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



**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		

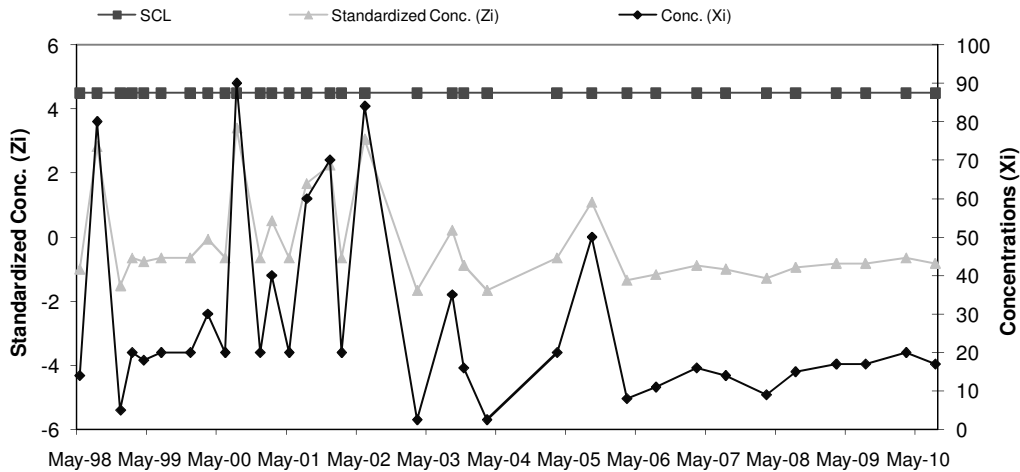
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-98	4.5	10	-1.02
10	Nov-98	4.5	17	-0.77
11	Mar-99	4.5	5	-1.20
12	May-99	4.5	6	-1.16
13	Jul-99	4.5	10	-1.02
14	Oct-99	4.5	16	-0.81
15	Mar-00	4.5	8	-1.09
16	Jun-00	4.5	9	-1.05
17	Sep-00	4.5	8	-1.09
18	Nov-00	4.5	14	-0.88
19	Mar-01	4.5	7	-1.12
20	May-01	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



**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

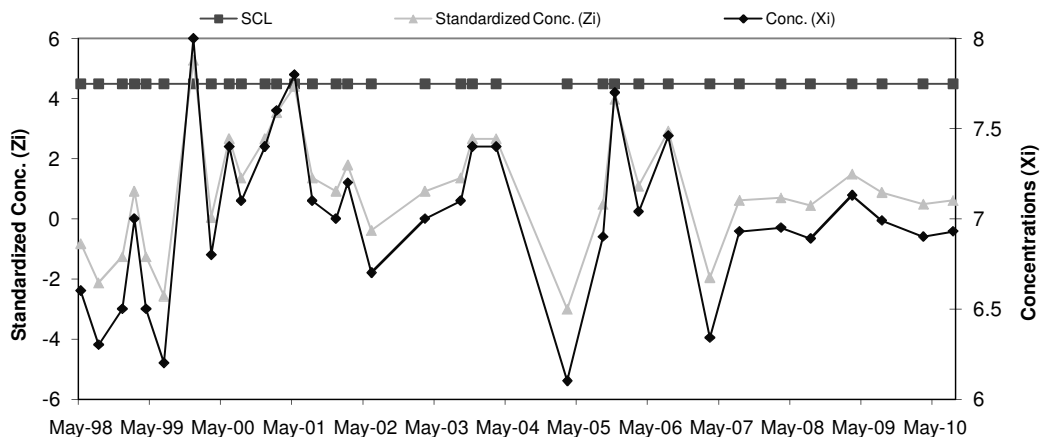


**COLDWATER ROAD LANDFILL FACILITY  
RCRA LANDFILL LEAK DETECTION SYSTEM  
SHEWART CONTROL CHART**

**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		

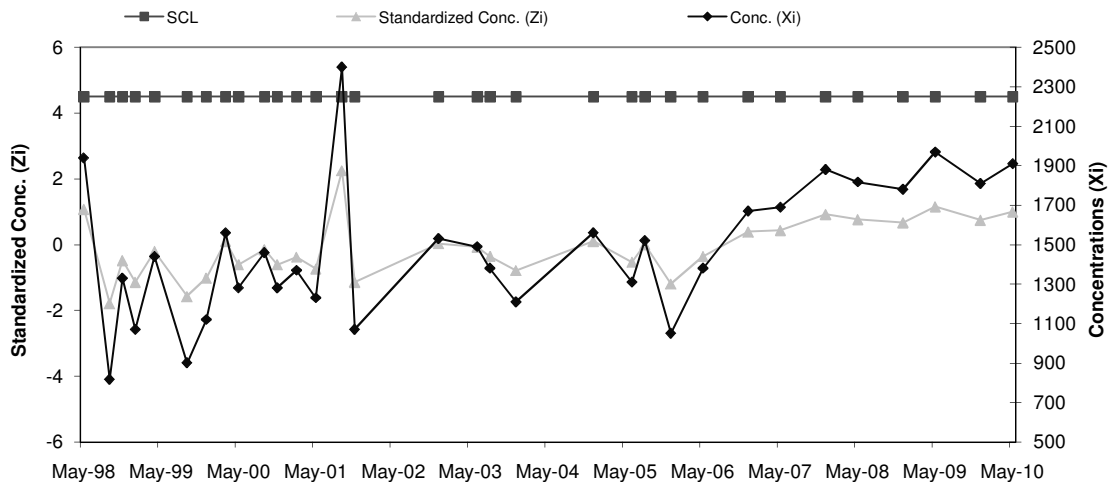
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-98	4.5	6.6	-0.82
10	Nov-98	4.5	6.3	-2.12
11	Mar-99	4.5	6.5	-1.25
12	May-99	4.5	7	0.93
13	Jul-99	4.5	6.5	-1.25
14	Oct-99	4.5	6.2	-2.56
15	Mar-00	4.5	8	5.28
16	Jun-00	4.5	6.8	0.05
17	Sep-00	4.5	7.4	2.67
18	Nov-00	4.5	7.1	1.36
19	Mar-01	4.5	7.4	2.67
20	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



**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	<b>1,516.63</b>	<b>391.89</b>
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		

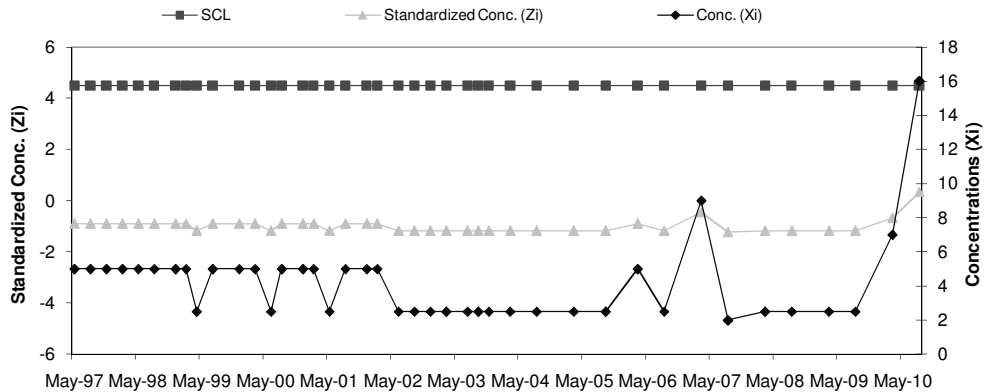
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	1940	1.08
10	Mar-99	4.5	817	-1.79
11	May-99	4.5	1330	-0.48
12	Jul-99	4.5	1070	-1.14
13	Oct-99	4.5	1440	-0.20
14	Mar-00	4.5	900	-1.57
15	Jun-00	4.5	1120	-1.01
16	Sep-00	4.5	1560	0.11
17	Nov-00	4.5	1280	-0.60
18	Mar-01	4.5	1460	-0.14
19	May-01	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



**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	<b>13.00</b>	<b>8.98</b>
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		

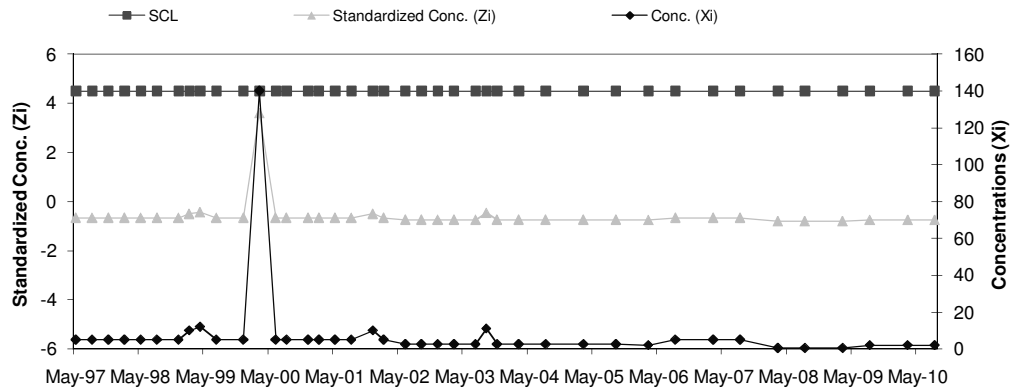
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	5	-0.89
10	Nov-97	4.5	5	-0.89
11	Feb-98	4.5	5	-0.89
12	May-98	4.5	5	-0.89
14	Aug-98	4.5	5	-0.89
15	Nov-98	4.5	5	-0.89
16	Mar-99	4.5	5	-0.89
17	May-99	4.5	5	-0.89
18	Jul-99	4.5	2.5	-1.17
19	Oct-99	4.5	5	-0.89
20	Mar-00	4.5	5	-0.89
21	Jun-00	4.5	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



**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	<b>25.88</b>	<b>31.76</b>
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		

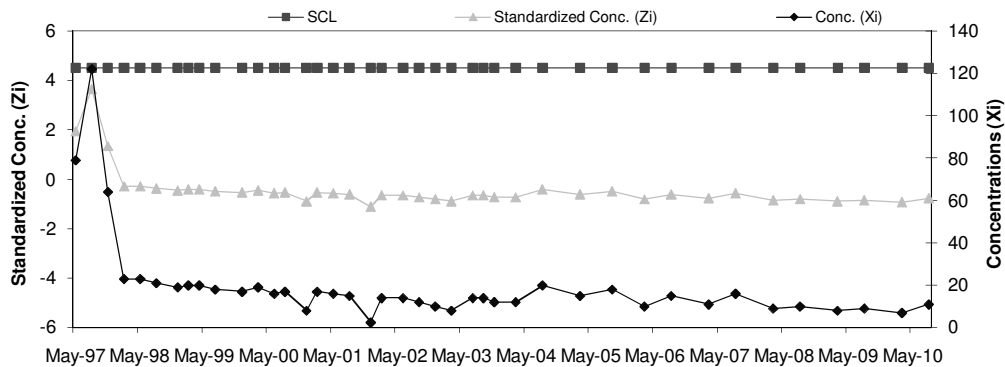
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	5	-0.66
10	Nov-97	4.5	5	-0.66
11	Feb-98	4.5	5	-0.66
12	May-98	4.5	5	-0.66
14	Aug-98	4.5	5	-0.66
15	Nov-98	4.5	5	-0.66
16	Mar-99	4.5	5	-0.66
17	May-99	4.5	10	-0.50
18	Jul-99	4.5	12	-0.44
19	Oct-99	4.5	5	-0.66
20	Mar-00	4.5	5	-0.66
21	Jun-00	4.5	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



**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	<b>30.38</b>	<b>25.11</b>
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		

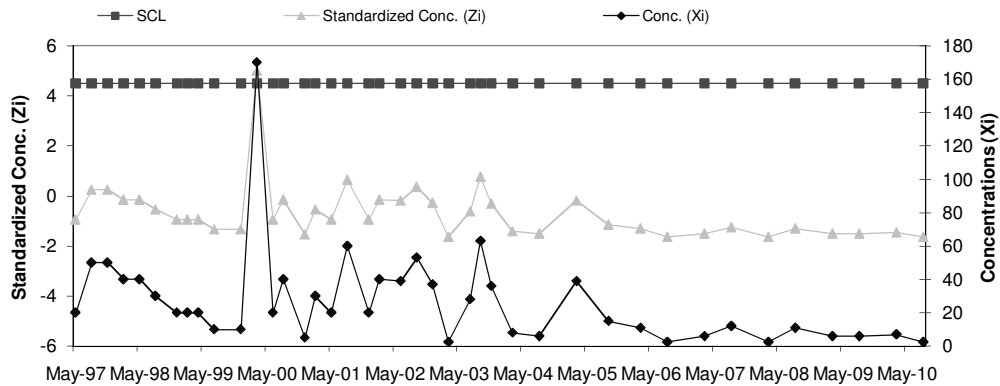
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	79	1.94
10	Nov-97	4.5	122	3.65
11	Feb-98	4.5	64	1.34
12	May-98	4.5	23	-0.29
14	Aug-98	4.5	23	-0.29
15	Nov-98	4.5	21	-0.37
16	Mar-99	4.5	19	-0.45
17	May-99	4.5	20	-0.41
18	Jul-99	4.5	20	-0.41
19	Oct-99	4.5	18	-0.49
20	Mar-00	4.5	17	-0.53
21	Jun-00	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



**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		

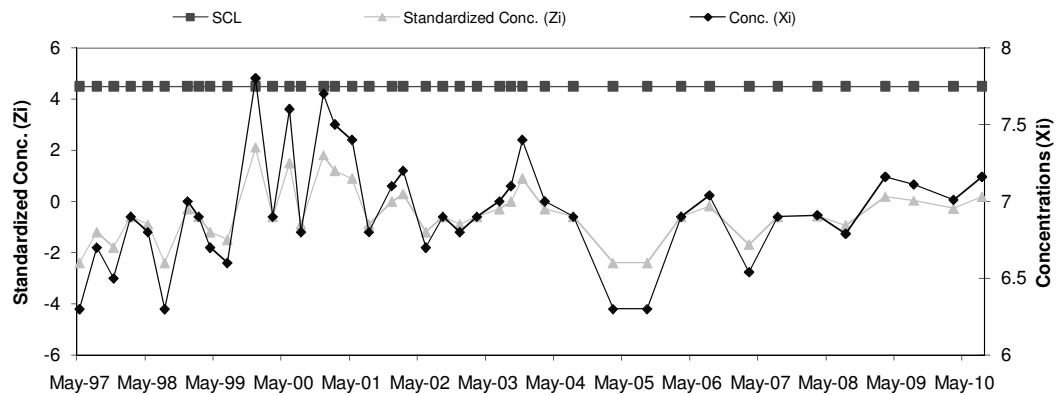
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	20	-0.94
10	Nov-97	4.5	50	0.25
11	Feb-98	4.5	50	0.25
12	May-98	4.5	40	-0.15
14	Aug-98	4.5	40	-0.15
15	Nov-98	4.5	30	-0.54
16	Mar-99	4.5	20	-0.94
17	May-99	4.5	20	-0.94
18	Jul-99	4.5	20	-0.94
19	Oct-99	4.5	10	-1.34
20	Mar-00	4.5	10	-1.34
21	Jun-00	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



**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	<b>7.10</b>	<b>0.33</b>
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		

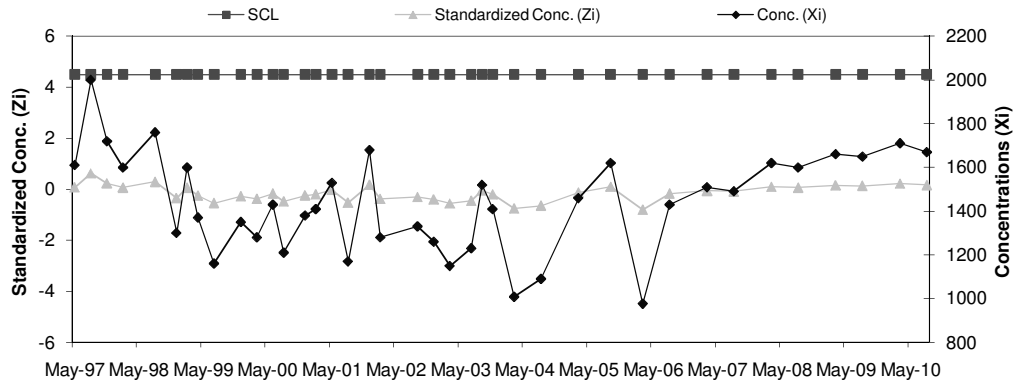
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	6.3	-2.40
10	Nov-97	4.5	6.7	-1.20
11	Feb-98	4.5	6.5	-1.80
12	May-98	4.5	6.9	-0.60
14	Aug-98	4.5	6.8	-0.90
15	Nov-98	4.5	6.3	-2.40
16	Mar-99	4.5	7	-0.30
17	May-99	4.5	6.9	-0.60
18	Jul-99	4.5	6.7	-1.20
19	Oct-99	4.5	6.6	-1.50
20	Mar-00	4.5	7.8	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



**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	<b>1,551.25</b>	<b>716.19</b>
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		

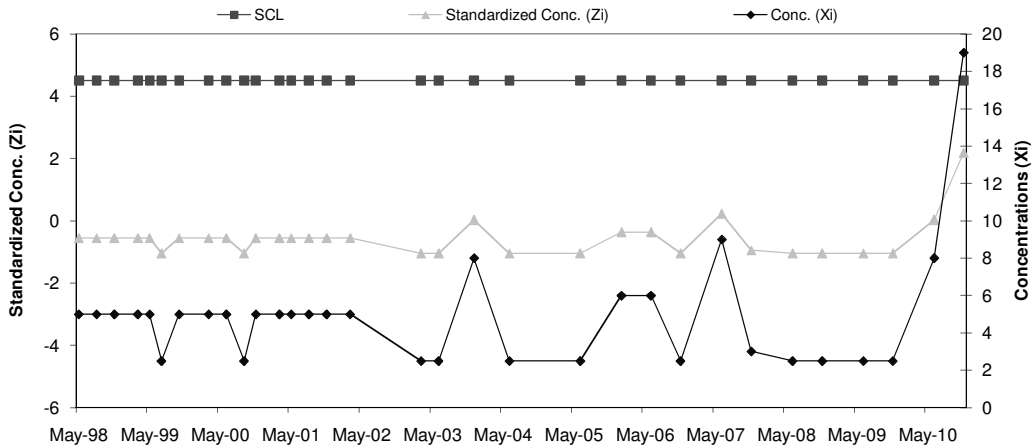
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	1610	0.08
10	Nov-97	4.5	2000	0.63
11	Feb-98	4.5	1720	0.24
12	May-98	4.5	1600	0.07
14	Nov-98	4.5	1760	0.29
15	Mar-99	4.5	1300	-0.35
16	May-99	4.5	1600	0.07
17	Jul-99	4.5	1370	-0.25
18	Oct-99	4.5	1160	-0.55
19	Mar-00	4.5	1350	-0.28
20	Jun-00	4.5	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



**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

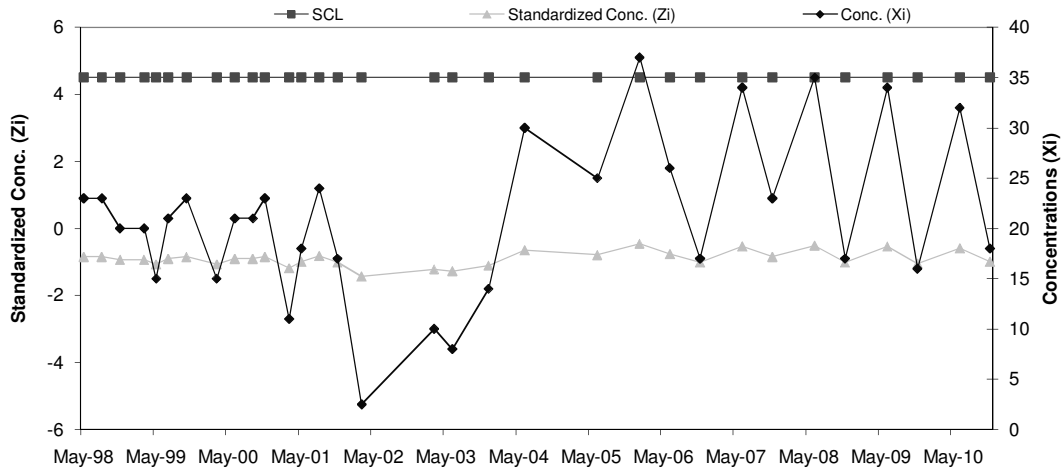




**COLDWATER ROAD LANDFILL FACILITY  
RCRA LANDFILL LEAK DETECTION SYSTEM  
SHEWART CONTROL CHART  
Vault D - Nickel**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-95	44	<b>52.63</b>	<b>35.01</b>
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







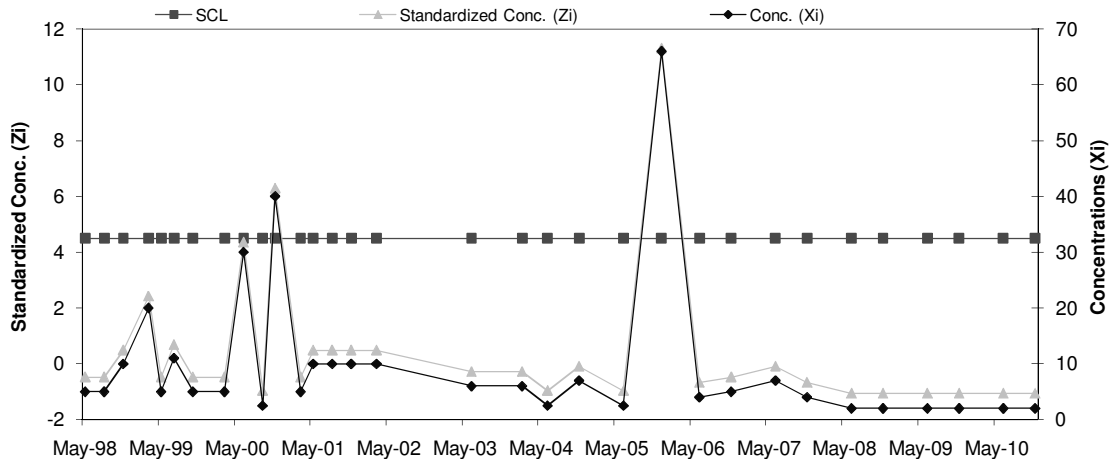




**COLDWATER ROAD LANDFILL FACILITY  
RCRA LANDFILL LEAK DETECTION SYSTEM  
SHEWART CONTROL CHART  
Vault E - Copper**

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

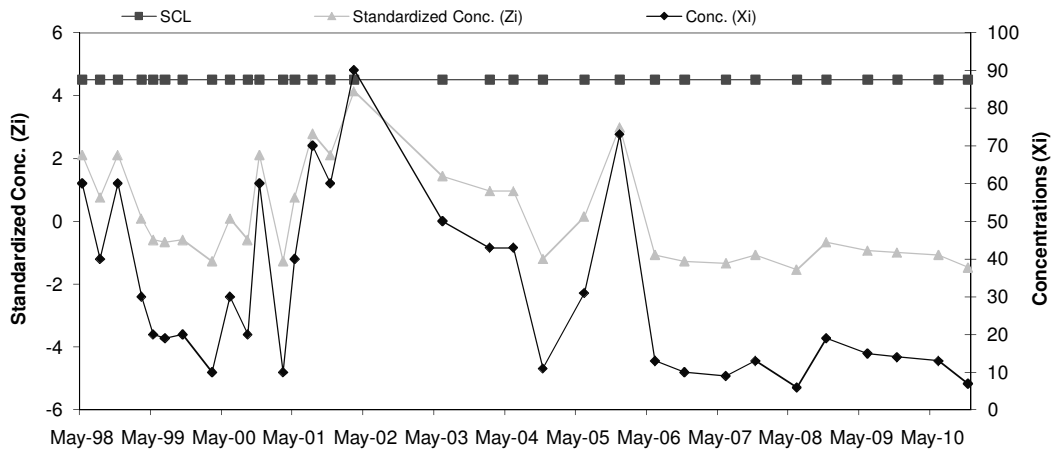




**COLDWATER ROAD LANDFILL FACILITY  
RCRA LANDFILL LEAK DETECTION SYSTEM  
SHEWART CONTROL CHART  
Vault E - Zinc**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-96	10	28.75	14.79
2	Jun-96	10		
3	Oct-96	20		
4	Nov-96	30		
5	May-97	30		
6	Aug-97	40		
7	Nov-97	40		
8	Feb-98	50		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	60	2.11
10	Aug-98	4.5	40	0.76
11	Nov-98	4.5	60	2.11
12	Mar-99	4.5	30	0.08
13	May-99	4.5	20	-0.59
14	Jul-99	4.5	19	-0.66
15	Oct-99	4.5	20	-0.59
16	Mar-00	4.5	10	-1.27
17	Jun-00	4.5	30	0.08
18	Sep-00	4.5	20	-0.59
19	Nov-00	4.5	60	2.11
20	Mar-01	4.5	10	-1.27
21	May-01	4.5	40	0.76
22	Aug-01	4.5	70	2.79
23	Nov-01	4.5	60	2.11
24	Mar-02	4.5	90	4.14
25	Jun-03	4.5	50	1.44
26	Feb-04	4.5	43	0.96
27	Jun-04	4.5	43	0.96
28	Nov-04	4.5	11	-1.20
29	Jun-05	4.5	31	0.15
30	Dec-05	4.5	73	2.99
31	Jun-06	4.5	13	-1.06
32	Nov-06	4.5	10	-1.27
33	Jun-07	4.5	9	-1.34
34	Nov-07	4.5	13	-1.06
35	Jun-08	4.5	6	-1.54
36	Nov-08	4.5	19	-0.66
37	Jun-09	4.5	15	-0.93
38	Nov-09	4.5	14	-1.00
39	Jun-10	4.5	13	-1.06
40	Nov-10	4.5	7	-1.47



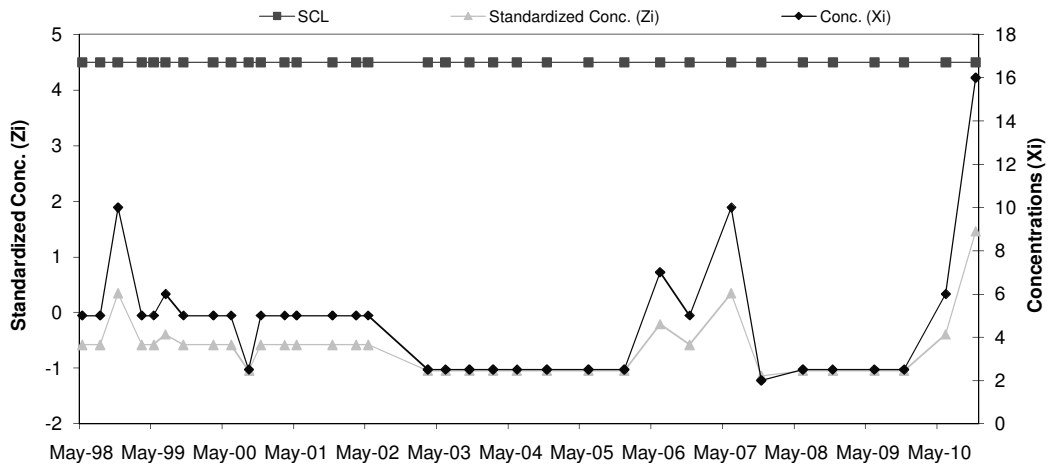




**COLDWATER ROAD LANDFILL FACILITY  
RCRA LANDFILL LEAK DETECTION SYSTEM  
SHEWART CONTROL CHART  
Vault F - Chromium**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10	<b>8.13</b>	<b>5.40</b>
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		

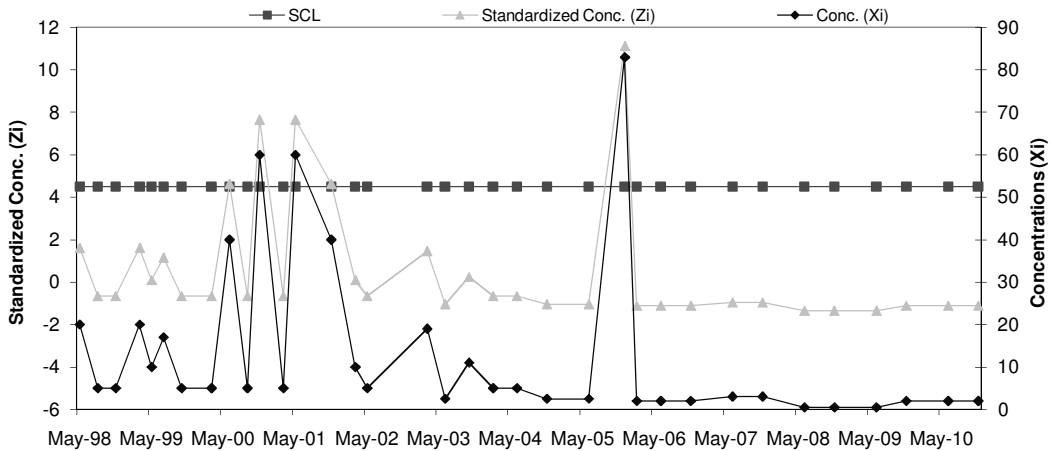
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.58
10	Aug-98	4.5	5	-0.58
11	Nov-98	4.5	10	0.35
12	Mar-99	4.5	5	-0.58
13	May-99	4.5	5	-0.58
14	Jul-99	4.5	6	-0.39
15	Oct-99	4.5	5	-0.58
16	Mar-00	4.5	5	-0.58
17	Jun-00	4.5	5	-0.58
18	Sep-00	4.5	2.5	-1.04
19	Nov-00	4.5	5	-0.58
20	Mar-01	4.5	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



**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	<b>9.38</b>	<b>6.61</b>
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		

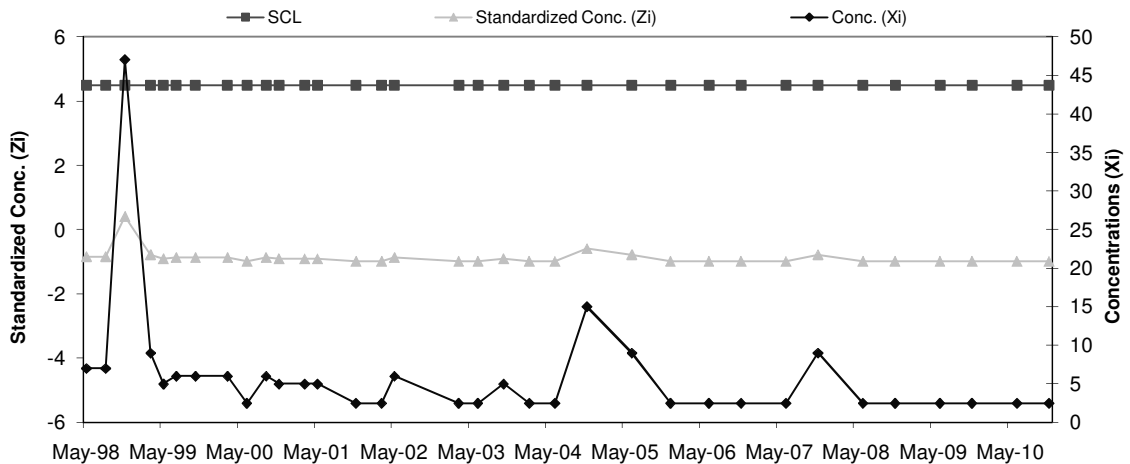
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	20	1.61
10	Aug-98	4.5	5	-0.66
11	Nov-98	4.5	5	-0.66
12	Mar-99	4.5	20	1.61
13	May-99	4.5	10	0.09
14	Jul-99	4.5	17	1.15
15	Oct-99	4.5	5	-0.66
16	Mar-00	4.5	5	-0.66
17	Jun-00	4.5	40	4.63
18	Sep-00	4.5	5	-0.66
19	Nov-00	4.5	60	7.66
20	Mar-01	4.5	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



**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	<b>33.88</b>	<b>31.96</b>
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		

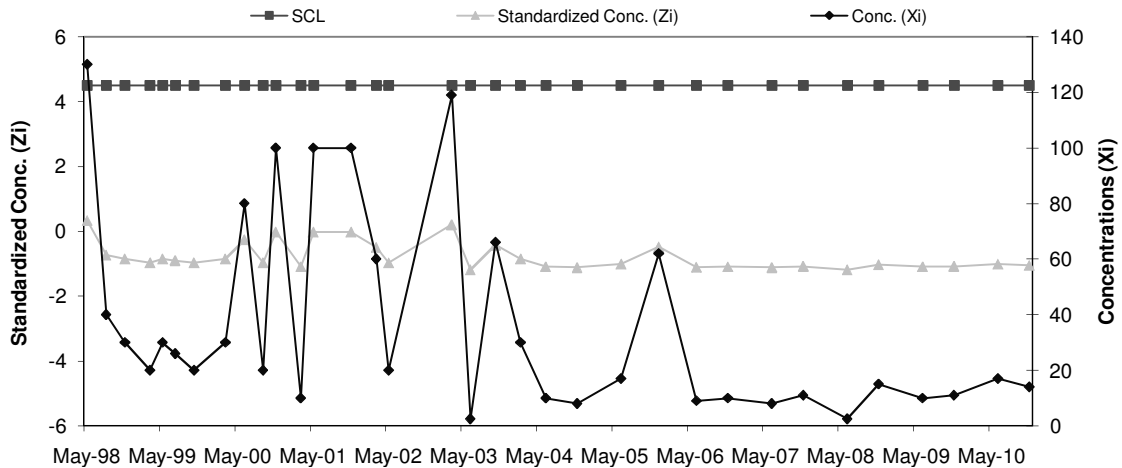
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	7	-0.84
10	Aug-98	4.5	7	-0.84
11	Nov-98	4.5	47	0.41
12	Mar-99	4.5	9	-0.78
13	May-99	4.5	5	-0.90
14	Jul-99	4.5	6	-0.87
15	Oct-99	4.5	6	-0.87
16	Mar-00	4.5	6	-0.87
17	Jun-00	4.5	2.5	-0.98
18	Sep-00	4.5	6	-0.87
19	Nov-00	4.5	5	-0.90
20	Mar-01	4.5	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



**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		

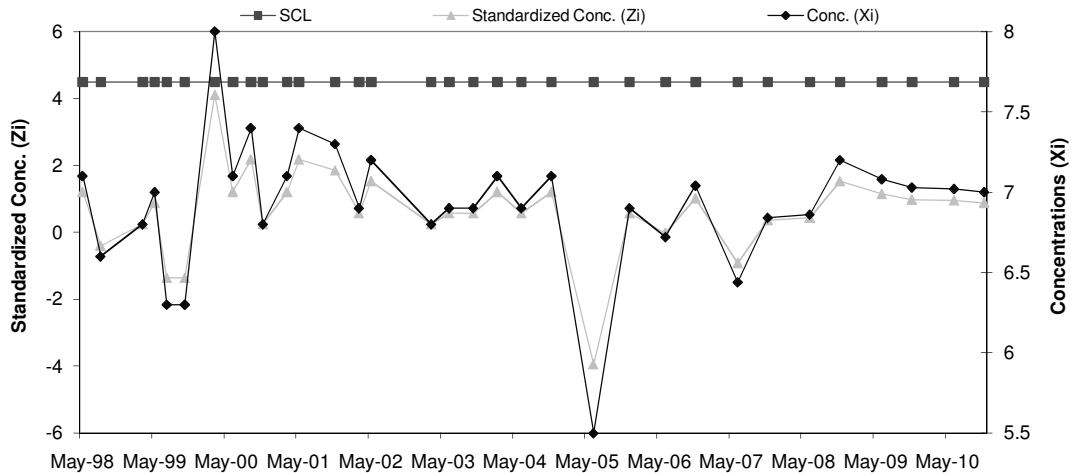
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	130	0.34
10	Aug-98	4.5	40	-0.73
11	Nov-98	4.5	30	-0.85
12	Mar-99	4.5	20	-0.97
13	May-99	4.5	30	-0.85
14	Jul-99	4.5	26	-0.90
15	Oct-99	4.5	20	-0.97
16	Mar-00	4.5	30	-0.85
17	Jun-00	4.5	80	-0.25
18	Sep-00	4.5	20	-0.97
19	Nov-00	4.5	100	-0.01
20	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



**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		

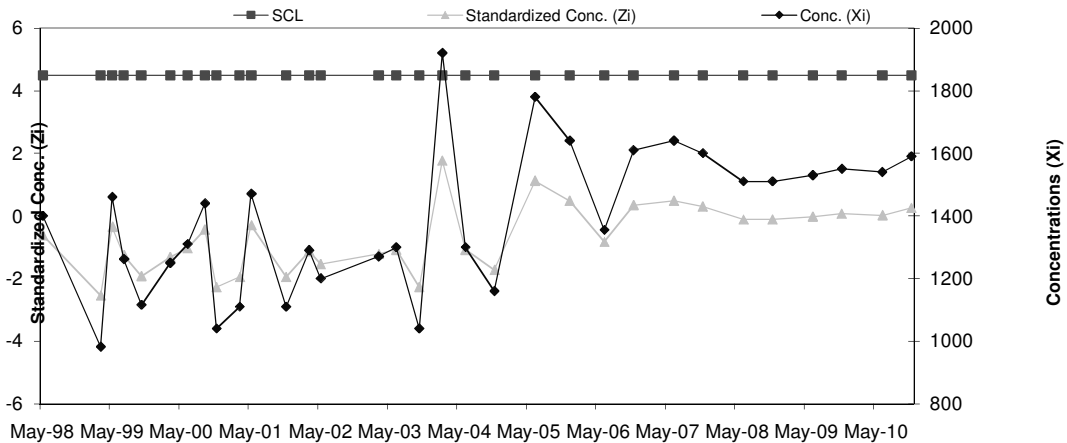
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	7.1	1.21
10	Aug-98	4.5	6.6	-0.40
11	Mar-99	4.5	6.8	0.24
12	May-99	4.5	7	0.89
13	Jul-99	4.5	6.3	-1.37
14	Oct-99	4.5	6.3	-1.37
15	Mar-00	4.5	8	4.11
16	Jun-00	4.5	7.1	1.21
17	Sep-00	4.5	7.4	2.17
18	Nov-00	4.5	6.8	0.24
19	Mar-01	4.5	7.1	1.21
20	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



**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	<b>1,535.00</b>	<b>218.31</b>
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



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