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COLDWATER ROAD LANDFILL - MID 005 356 860 LANDFILL LEAK DETECTION SYSTEM



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COLDWATER ROAD LANDFILL - MID 005 356 860 LANDFILL LEAK DETECTION SYSTEM

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1. INTRODUCTION

On behalf of Revitalizing Auto Communities Environmental Response Trust (RACER), Ramboll Americas Engineering Solutions, Inc. (Ramboll), presents the results of the 2024 annual leak detection system (LDS) sampling event conducted in November 2024 for the Coldwater Road Landfill site (**Figure 1**). A total of 18,533 gallons of liquid were removed from the leak detection vaults during 2024. Volumes are reported in the Semiannual Status Reports and summarized in **Appendix A**.

2. SAMPLING AND ANALYSIS

During this event samples were collected on November 5, 2024 from the six leak detection vaults (A through F) for laboratory analysis. The six landfill leachate sumps (A through F) were not sampled this event per the Post Closure Care Plan, therefore, sump data was not included in this report.

The samples were analyzed for total organic carbon (TOC, Method 5310C), total suspended solids (TSS, Method 2540D), specific conductivity (Method 120.1), in addition to dissolved chromium (Cr), dissolved copper (Cu), dissolved nickel (Ni), and dissolved zinc (Zn), all of which were analyzed using Method 200.8. The event also included field measurements for pH, specific conductivity, and temperature.

The analytical results are summarized in the two attached tables: Landfill Leak Detection Vaults – Historical Analytical Results, Inorganics and Metals (**Table 1**), and Landfill Sump and Vault Sampling Log (**Table 2**). 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 B**).

The samples were collected using a peristaltic pump and tubing for each vault. Duplicate samples were collected from Vault A. 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 historical consistent concentrations for the vaults (**Table 1**). A summary of the data is provided below:

- Chromium concentrations were not detected above the reporting limit of 5 µg/l. The results were within the range of the historic results, which ranged from below the reporting limit to 30 µg/l at Vault A (6/20/2011).
- Copper concentrations were not detected above the reporting limit of 5 µg/l. The results were within the range of the historic results, which ranged from below the reporting limit to 140 µg/l at Vault C (6/20/2000).
- Nickel concentrations ranged from below the reporting limit of 5 µg/l in Vault B, Vault E, and Vault F to 35 µg/l in Vault D. The results were within the range of the historic results, which ranged from below the reporting limit to 125 µg/l at Vault D (11/15/1997).
- Zinc concentrations ranged from below the reporting limit of 5 µg/l in Vault-DUP-20241105 (Vault A), Vault C, Vault E, and Vault F to 13 µg/l in Vault D. The results were within the range of the historic results, which ranged from below the reporting limit to 230 µg/l at Vault C (5/29/2019).
- TOC concentrations ranged from 1.7 mg/l in Vault B and Vault E to 4.8 mg/l in Vault A and Vault-DUP-20241105 (Vault A). The results were similar or less than historic results, which

ranged from 1.8 mg/l at Vault F (11/17/2008) and Vault A (6/6/2023 to 140 mg/l at Vault A (3/27/1996).

- TSS concentrations were not detected above the reporting limit of 3 mg/l. The results were within the range of the historic results, which ranged from below the reporting limit to 7,100 mg/l at Vault F (11/11/1996).
- pH ranged from 6.58 in Vault C to 6.86 in Vault F. The results were within the range of the historic results, which ranged from 5.47 at Vault F (6/15/2005) to 10.01 at Vault A (1/17/2006).
- Specific conductivity ranged from 1201 $\mu\text{s}/\text{cm}$ in Vault B to 1,870 $\mu\text{s}/\text{cm}$ in Vault A and Vault-Dup-20241105 (Vault A). The results were within the range of the historic results, which ranged from 340 $\mu\text{s}/\text{cm}$ at Vault C (8/30/1995) to 3,250 $\mu\text{s}/\text{cm}$ at Vault A (5/6/1999).

3. SUMMARY

Duplicate samples were collected during this sampling event from Vault A and exhibited values consistent with the original results (within acceptable relative percent differences [RPD]).

There were no exceedances of the Shewart control limits (SCL) during this sampling event. No trends (calculated using regression analysis over the last four sampling events per the Post Closure Care Plan, March 2024) or spikes (calculated using mean plus one standard deviation of all the sampling events per the Post Closure Care Plan, March 2024) were observed during this monitoring event. The Shewart control charts are included as **Appendix C**.

Although not a statistical trend or spike, nickel concentrations in Vault D have increased during the last several events but is within the range of the historic results. Even though nickel concentrations have increased, chromium and copper have not been detected in Vault D and zinc, pH, and specific conductivity have been stable or decreasing. Therefore, this is not indicative of a leak from the landfill, but nevertheless will continue to be evaluated.

There were no spikes in the vault pH readings as observed during the semiannual sampling event in November 2023. The pH readings this event continue to be in range of historical results.

The next semiannual sampling event will be completed in June 2025. If you have any questions, please feel free to contact Clifford Yantz at (313) 333-0211.

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to 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 submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

On Behalf of RACER Trust



Clifford S. Yantz
Project Manager – Ramboll Americas Engineering Solutions, Inc.
Agent for RACER Trust

Date: February 28, 2025
cc: file

TABLES



TABLE 1
RACER Trust - Coldwater Road
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	Temp	Cr	Cu	Ni	Zn
		EGLE Residential Drinking Water Criteria & RBSLs					100 (A)	1,000 (E)	100 (A)	2,400
Vault A	23-Mar-95	4.6	<1	7.50	690	--	<20	<20	<40	180
	20-Jun-95	8.9	2.0	6.80	1900	--	24	21	<30	<20
	30-Aug-95	8.2	2.0	6.90	2000	--	<20	<20	<40	<20
	28-Nov-95	9.1	<1	7.00	1900	--	23	31	43	24
	27-Mar-96	140.0	<10	7.20	2000	--	<20	<20	46	<20
	18-Jun-96	12.0	<10	6.90	2000	--	<20	<20	<20	<20
	20-Aug-96	32.0	<5	7.10	1900	--	<20	<20	<20	30
	11-Nov-96	18.0	5.0	7.10	2000	--	<20	<20	30	60
	19-Feb-97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9-May-97	13.0	17.0	6.67	1940	9.7	<10	<10	71	90
	12-Aug-97	6.0	4.0	5.98	1810	12.8	<10	<10	88	60
	15-Nov-97	8.0	12.0	6.50	2000	12.0	<10	10	125	100
	9-Feb-98	6.0	8.0	6.40	1960	11.5	<10	<10	73	60
	14-May-98	12.0	15.0	6.90	1760	17.4	<10	20	13	200
	14-Aug-98	5.0	6.0	6.70	--	--	<10	<10	15	160
	13-Nov-98	5.0	12.0	6.50	1990	16.5	<10	<10	20	220
	19-Mar-99	5.7	8.0	6.80	1334	13.6	<10	10	14	60
	6-May-99	5.6	16.0	6.85	3250	26.2	<10	<10	15	20
	23-Jul-99	5.7	3.0	6.30	1470	18.9	<5	9	13	19
	22-Oct-99	5.0	3.0	5.86	1750	12.1	<10	<10	16	30
	14-Mar-00	5.6	<1	7.60	1410	10.7	<10	<10	15	20
	20-Jun-00	7.0	3.0	6.90	1410	18.3	<10	<10	12	20
	13-Sep-00	5.9	5.0	7.50	1650	15.1	<5	<10	14	20
	10-Nov-00	6.4	2.0	7.20	1470	11.8	<10	100	10	150
	12-Mar-01	6.0	1.0	7.43	1530	12.8	<10	<10	7	10
	24-May-01	9.4	10.0	7.56	1380	11.9	<10	<10	10	20
	31-Aug-01	5.3	10.6	7.49	1450	12.5	<5	<10	14	9
	16-Nov-01	5.1	3.0	6.77	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	7.23	1470	13.8	<10	<10	<5	40
	5-Sep-02	4.7	6.0	6.60	--	--	<5	<5	14	140
	12-Dec-02	NS	NS	NS	NS	NS	NS	NS	NS	NS
	18-Mar-03	6.7	8.0	6.81	1290	12	<5	<5	9	99
	4-Jun-03	2.0	11.0	6.78	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	6.99	1318	12.5	<5	<5	8	<5
	19-Nov-04	3.4	2.0	6.85	1120	11.4	6	6	15	14
	19-Nov-04	4.4	4.0	--	--	--	6	<5	18	16
15-Jun-05	6.0	8.0	6.00	1640	13.4	<5	<5	13	21	
17-Jan-06	5.9	12785	10.01	1630	8.4	<5	<5	13	8	
14-Feb-06	--	--	7.88	1800	8.5	--	--	14	--	
29-Jun-06	NS	NS	NS	NS	NS	NS	NS	NS	NS	
28-Nov-06	4.7	438	7.73	1940	13.2	<5	<4	13	6	
6-Jun-07	4.9	11	6.76	1990	11.7	13	4	20	8	
12-Nov-07	5.9	70	6.76	2030	12.4	4	5	21	11	
24-Jun-08	5.0	371	6.89	2060	13.3	<5	<1	25	5	
17-Nov-08	5.8	23	6.06	2060	9.2	<5	<1	22	<5	
23-Jun-09	5.5	88	7.01	2050	13.6	<5	11	27	36	
17-Nov-09	6	8	7.07	2090	10.3	<5	<4	22	7	
14-Jun-10	6	10	7.05	2070	13.1	8	<4	16	6	
20-Jun-11	6.7	9	7.33	2010	12.2	30	<4	27	39	
14-Jul-11	--	--	--	--	--	<5	--	--	--	
14-Nov-11	7.0	316	6.93	2080	11.5	<5	<4	20	<5	
25-Jun-12	6.0	6	5.75	1870	11.9	<5	4	25	<5	
25-Jun-12	6.0	6	5.75	1872	11.9	<5	6	25	10	
5-Dec-12	5.8	2	6.76	1820	10.6	<5	<4	24	10	
5-Dec-12	5.8	3	6.76	1814	10.6	<5	<4	24	8	
6-Jun-13	6.1	4	6.71	1882	11.0	<5	<4	22	<5	
4-Nov-13	5.0	<1	6.71	1630	11.2	<5	<4	18	<5	
23-Jun-14	5.0	3	6.82	1579	13.2	<5	<4	18	<5	
18-Nov-14	4.1	2	6.27	1525	6.6	<5	<4	25	20	
25-Jun-15	4.5	2	6.64	1507	11.2	<5	6	21	10	
17-Nov-15	3.6	1	6.64	1423	11.7	<5	5	20	5	
21-Jun-16	3.8	<3	6.93	1364	12.0	<5	<5	14	<5	
21-Jun-16	3.9	<3	6.93	1362	12.0	<5	<5	13	<5	
28-Nov-16	3.3	<3	6.82	1378	11.4	<5	<5	15	<5	
19-Jun-17	4.2	<3	6.90	1450	11.4	<5	<5	15	<5	
6-Nov-17	3.6	<3	6.16	1363	11.8	<5	<5	17	<5	
11-Jun-18	4.3	<3	6.45	1447	11.0	<5	<5	15	10	
7-Nov-18	4.1	<3	6.50	1451	6.0	<5	<5	16	6	
29-May-19	8.4	<3	7.13	1436	9.1	<5	<5	15	<5	
19-Nov-19	5.8	<3	6.89	1291	10.6	<5	<5	15	<5	
15-Jun-20	7.9	<3	6.84	1378	17.2	<5	<5	11	<5	
4-Nov-20	6.7	<3	6.69	1010	14.4	<5	<5	12	<5	
16-Jun-21	6.6	<3	6.89	1247	12.9	<5	<5	5	<5	
4-Nov-21	6.6	<3	6.94	1187	13.9	<5	<5	11	5	
6-Jun-22	8.1	<3	7.21	1280	13.1	<5	<5	29	27	
1-Nov-22	8.1	<3	6.55	1219	11.6	<5	5	10	10	
6-Jun-23	1.8	<3	6.82	1310	13.0	<5	<5	11	<5	
7-Nov-23	1.8	<4	7.45	1450	11.4	<5	<5	18	6	
4-Jun-24	3.0	<3	6.86	1389	15.6	<5	<5	13	5	
5-Nov-24	4.8	<3	6.68	1870	14.0	<5	<5	18	<5	
5-Nov-24	4.8	<3	6.68	1869	14.0	<5	<5	18	6	

See notes on page 6.



TABLE 1
RACER Trust - Coldwater Road
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	Temp	Cr	Cu	Ni	Zn
		<i>EGLE Residential Drinking Water Criteria & RBSLs</i>					<i>100 (A)</i>	<i>1,000 (E)</i>	<i>100 (A)</i>	<i>2,400</i>
Vault 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	6.90	1900	--	<20	<20	<20	<20
	20-Aug-96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11-Nov-96	17.0	66.0	7.00	1600	--	<20	<20	20	40
	19-Feb-97	7.0	4	7.10	1590	8.9	<10	<10	43	20
	7-May-97	7.0	4	6.50	1930	13.8	<10	<10	45	20
	12-Aug-97	5.0	3.0	6.45	663	26.0	<10	<10	26	60
	15-Nov-97	6.0	4.0	6.80	1400	11.0	<10	<10	96	50
	9-Feb-98	7.0	8.0	6.60	1560	12.6	<10	<10	57	20
	14-May-98	6.0	3.0	6.90	1490	11.2	<10	<10	14	30
	14-Aug-98	4.0	7.0	6.60	--	--	<10	<10	10	14
	13-Nov-98	6.0	18.0	6.30	1940	20.6	<10	10	17	80
	19-Mar-99	4.2	6.0	6.50	817	14.2	<10	<10	5	<10
	6-May-99	5.6	4.0	7.00	1330	26.2	<10	10	6	20
	23-Jul-99	5.8	3.0	6.50	1070	16.2	<5	13	10	18
	22-Oct-99	5.0	5.0	6.23	1440	11.0	<10	<10	16	20
	14-Mar-00	6.6	<1	8.00	900	11.0	<10	<10	8	20
	20-Jun-00	7.1	7.0	6.80	1120	17.3	<10	30	9	30
	13-Sep-00	5.4	<1	7.40	1560	15.6	<5	10	8	20
	10-Nov-00	6.8	1.0	7.10	1280	11.6	<5	40	14	90
	12-Mar-01	5.2	5.0	7.36	1460	12.3	<10	<10	7	20
	24-May-01	8.5	10.0	7.58	1280	13.0	<10	20	12	40
	31-Aug-01	3.9	<1.3	7.78	1370	12.9	<5	<10	11	20
	16-Nov-01	5.7	2.0	7.12	1230	13.1	<10	10	8	60
	8-Mar-02	5.4	2.0	6.99	2400	8.5	<10	10	<5	70
	31-May-02	5.1	3.0	7.23	1070	14.2	<10	<10	<5	20
	5-Sep-02	4.8	4.0	6.70	--	--	<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	6.98	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	7.12	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	7.42	1380	12.3	<5	5	<5	16
	30-Jun-04	4.1	396.0	6.98	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	6.07	1560	12.8	<5	<5	14	20
	1-Dec-05	4.7	<1	6.87	1310	9.1	<5	<5	8	50
	Re-sample	14-Feb-06	--	--	7.70	1520	6.1	--	<4	--
	Duplicate	29-Jun-06	2.6	1.0	7.04	1050	13.9	<5	<4	5
		28-Nov-06	5.5	4.0	7.46	1380	13.0	<5	<4	8
	Duplicate	28-Nov-06	4.7	--	7.17	1340	13.0	5	4	7
		6-Jun-07	4.7	2.0	6.34	1670	12.1	9	6	13
	12-Nov-07	3.8	1.0	6.93	1690	12.6	2	5	16	
	24-Jun-08	3.2	6.0	6.95	1880	14.0	<5	2	8	
Duplicate	17-Nov-08	2.4	<1	6.89	1818	9.6	<5	2	8	
	17-Nov-08	1.7	2.0	6.89	1820	9.6	<5	1	8	
	23-Jun-09	3.6	4.0	7.13	1780	13.3	<5	1	6	
	17-Nov-09	3	0	6.99	1970	10.9	<5	<4	9	
	14-Jun-10	3	2	6.90	1810	12.1	8	<4	5	
Re-sample	8-Nov-10	4	3	6.93	1911	12.2	21	<4	11	
	1-Dec-10	--	--	6.93	--	12.2	6	--	--	
Re-sample	20-Jun-11	3.4	1	7.03	1496	12.2	28	<4	11	
	14-Jul-11	--	--	--	--	<5	--	--	--	
	14-Nov-11	3.0	1	6.93	1948	12.0	<5	<4	7	
	25-Jun-12	3.0	4	6.16	1781	12.5	<5	<4	<5	
	5-Dec-12	3.2	5	6.85	1936	10.2	<5	6	9	
	6-Jun-13	3.2	<1	6.66	1455	10.8	<5	<4	6	
	4-Nov-13	3.0	1	6.74	1750	11.8	<5	<4	5	
	23-Jun-14	3.2	1	6.87	1369	12.3	<5	<4	<5	
	18-Nov-14	2.7	3	7.05	1656	7.1	<5	<4	13	
	25-Jun-15	3.0	<1	7.07	1513	13.4	<5	5	11	
	17-Nov-15	2.6	3	6.76	1635	11.7	<5	<5	9	
	21-Jun-16	2.7	<3	6.89	1176	13.7	<5	<5	<5	
	28-Nov-16	2.2	<3	6.78	1654	11.3	<5	<5	<5	
	19-Jun-17	2.5	<3	6.80	1110	11.6	<5	<5	<5	
	6-Nov-17	2.6	<3	6.28	1450	12.0	<5	<5	<5	
	11-Jun-18	2.4	<3	6.51	1064	11.4	<5	<5	<5	
Duplicate	7-Nov-18	2.9	<3	6.60	1463	5.0	<5	<5	<5	
	7-Nov-18	2.5	<3	6.60	1450	5.0	<5	<5	<5	
	29-May-19	6.0	<3	7.21	1058	9.8	<5	<5	<5	
	19-Nov-19	4.8	<3	7.00	1235	9.9	<5	<5	<5	
	15-Jun-20	6.2	<3	6.93	1165	15.6	<5	<5	<5	
Duplicate	4-Nov-20	7.4	<3	6.62	1053	12.5	<5	<5	<5	
	4-Nov-20	5.4	<3	6.62	1045	12.5	<5	<5	<5	
	16-Jun-21	6.0	<3	6.88	1046	15.4	<5	<5	<5	
	4-Nov-21	6.7	<3	6.86	1208	12.2	<5	<5	<5	
	7-Jun-22	6.6	<3	6.81	1170	10.9	<5	<5	<5	
	1-Nov-22	6.3	14	6.56	1283	11.9	<5	<5	<5	
	6-Jun-23	<1	<3	6.82	1290	15.0	<5	<5	<5	
	7-Nov-23	2.4	<3	7.60	1340	11.8	<5	<5	<5	
	4-Jun-24	1.2	<3	6.84	997	12.8	<5	<5	<5	
	5-Nov-24	1.7	<3	6.59	1201	14.6	<5	<5	<5	5

See notes on page 6.



TABLE 1
RACER Trust - Coldwater Road
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	Temp	Cr	Cu	Ni	Zn
EGLE Residential Drinking Water Criteria & RBSLs						100 (A)	1,000 (E)	100 (A)	2,400	
Vault C	23-Mar-95	NS	NS	NS	NS	NS	NS	NS	NS	NS
	20-Jun-95	4.4	<1	7.40	530	--	25	25	<30	60
	30-Aug-95	3.7	<1	7.40	340	--	<20	<20	<40	74
	28-Nov-95	7.6	<1	7.00	2200	--	29	37	67	36
	27-Mar-96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	18-Jun-96	7.7	<10	6.90	2000	--	<20	<20	<20	<20
	20-Aug-96	8.3	<5	6.90	1900	--	<20	<20	<20	40
	11-Nov-96	16.0	9.0	7.00	2100	--	<20	<20	<20	80
	19-Feb-97	7.0	1.0	7.60	1610	9.0	<10	<10	45	30
	7-May-97	6.0	10.0	6.57	1730	12.5	<10	100	66	20
	8-Aug-97	4.0	13.0	6.34	1610	24.1	<10	<10	79	20
	15-Nov-97	6.0	4.0	6.70	2000	12.0	<10	<10	122	50
	9-Feb-98	8.0	4.0	6.50	1720	12.2	<10	<10	64	50
	14-May-98	6.0	3.0	6.90	1600	12.1	<10	<10	23	40
	14-Aug-98	6.0	5.0	6.80	--	--	<10	<10	23	40
	13-Nov-98	6.0	12.0	6.30	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	7.00	1300	15.6	<10	<10	19	20
	6-May-99	6.1	8.0	6.90	1600	26.6	<10	10	20	20
	23-Jul-99	6.5	0.0	6.70	1370	17.3	<5	12	20	20
	22-Oct-99	6.4	5.0	6.57	1160	11.0	<10	<10	18	10
	14-Mar-00	6.5	1.0	7.80	1350	12.6	<10	<10	17	10
	20-Jun-00	6.0	4.0	6.90	1280	18.3	<10	140	19	170
	13-Sep-00	6.1	<1	7.60	1430	14.9	<5	<10	16	20
	10-Nov-00	10.6	4.0	6.80	1210	12.1	<10	<10	17	40
	12-Mar-01	6.3	4.0	7.69	1380	12.1	<10	<10	8	<10
	24-May-01	9.2	8.0	7.54	1410	13.3	<10	<10	17	30
	31-Aug-01	5.4	4.0	7.44	1530	13.1	<5	<10	16	20
	16-Nov-01	6.0	2.0	6.79	1170	13.2	<10	<10	15	60
	8-Mar-02	4.0	1.0	7.09	1680	11.3	<10	10	<5	20
	31-May-02	5.1	7.0	7.17	1280	14.2	<10	<10	14	40
	5-Sep-02	5.0	7.0	6.69	--	--	<5	<5	14	39
	12-Dec-02	4.2	7.0	6.90	1330	12.1	<5	<5	12	53
	18-Mar-03	5.7	4.0	6.80	1260	10.7	<5	<5	10	37
	4-Jun-03	4.4	6.0	6.92	1150	11.0	<5	<5	8	<5
	5-Oct-03	4.4	4.0	6.99	1230	13.6	<5	<5	14	28
	8-Dec-03	3.8	6.0	7.14	1520	11.6	<5	11	14	63
	27-Feb-04	4.6	1.0	7.39	1410	12.1	<5	<5	12	36
	30-Jun-04	3.7	14.0	6.96	1008	12.2	<5	<5	12	8
	19-Nov-04	4.3	4.0	6.90	1090	11.7	<5	<5	20	6
	15-Jun-05	5.0	6.0	6.26	1460	12.5	<5	<5	15	39
	1-Dec-05	5.9	2.0	6.92	1620	11.1	<5	<5	18	15
	29-Jun-06	2.6	5.0	6.90	2260	15.2	5	<4	10	11
	28-Nov-06	11.6	44.0	7.04	1430	13.4	<5	5	15	<5
	6-Jun-07	4.9	6.0	6.54	1510	12.2	9	5	11	6
	12-Nov-07	4.3	1.0	6.90	1490	13.2	2	5	16	12
	24-Jun-08	4.2	49.0	6.91	1620	13.4	<5	<1	9	<5
	17-Nov-08	4.4	6.0	6.79	1600	9.4	<5	<1	10	11
	23-Jun-09	4.6	9.0	7.16	1660	13.7	<5	<1	8	6
	17-Nov-09	5	15	7.11	1650	11.5	<5	<4	9	6
17-Nov-09	5	20	7.11	1650	11.5	<5	<4	9	6	
14-Jun-10	5	4	7.01	1710	12.4	7	<4	7	7	
8-Nov-10	6	7	7.16	1670	12.7	16	<4	11	<5	
20-Jun-11	5.4	5	7.28	1686	12.9	25	<4	15	22	
20-Jun-11	5.9	5	7.28	1688	12.9	24	<4	14	21	
14-Jul-11	--	--	--	--	--	<5	--	--	--	
14-Nov-11	5.0	5	6.97	1699	12.4	<5	<4	10	<5	
25-Jun-12	5.0	7	6.83	1748	13.0	<5	<4	6	<5	
5-Dec-12	5.4	1	6.91	1713	11.1	<5	11	16	9	
6-Jun-13	5.4	22	6.66	1744	12.2	<5	<4	10	6	
4-Nov-13	5.3	1	6.84	1703	11.8	<5	<4	8	<5	
23-Jun-14	5.7	4	7.01	1759	12.3	<5	5	10	<5	
18-Nov-14	4.6	4	7.09	1724	7.4	<5	<4	18	5	
25-Jun-15	5.1	6	6.87	1788	12.4	<5	6	14	8	
17-Nov-15	4.4	0	6.84	1706	12.1	<5	<5	17	<5	
21-Jun-16	5.0	6	6.82	1795	14.5	<5	<5	11	6	
28-Nov-16	4.9	4	6.89	1808	11.1	<5	<5	9	<5	
19-Jun-17	5.0	3	6.88	1805	12.2	<5	<5	11	<5	
6-Nov-17	4.9	3	6.36	1764	11.7	<5	<5	10	<5	
Duplicate	6-Nov-17	4.9	<3	6.36	1761	11.7	<5	<5	10	<5
Duplicate	11-Jun-18	4.7	5	6.75	1774	12.1	<5	8	<5	
Duplicate	11-Jun-18	5.2	3	6.75	1789	12.1	<5	8	<5	
Duplicate	7-Nov-18	5.3	<3	6.90	1696	4.0	<5	<5	11	<5
Duplicate	29-May-19	8.0	6	7.17	1668	9.6	<5	8	230	
Re-sample	7-Jul-19	--	--	--	--	--	--	--	<5	
Duplicate	19-Nov-19	6.7	<3	7.08	1635	10.6	<5	9	<5	
Duplicate	19-Nov-19	6.9	<3	7.08	1638	10.6	<5	10	<5	
Duplicate	16-Jun-20	9.7	3	7.13	1747	12.2	<5	8	<5	
Duplicate	16-Jun-20	10.0	3	7.13	1746	12.2	<5	8	<5	
Duplicate	4-Nov-20	7.4	1	6.67	1438	12.7	<5	10	<5	
Duplicate	16-Jun-21	8.2	4	6.96	1771	15.1	<5	8	<5	
Duplicate	16-Jun-21	7.6	3	6.96	1766	15.1	<5	9	<5	
Duplicate	4-Nov-21	7.5	<3	6.96	1649	11.6	<5	8	<5	
Duplicate	4-Nov-21	7.2	<3	6.96	1305	11.6	<5	8	<5	
Duplicate	7-Jun-22	9.0	<3	6.82	1760	11.7	<5	9	5	
Duplicate	7-Jun-22	8.6	<3	6.82	1740	11.7	<5	10	<5	
Duplicate	1-Nov-22	9.6	<3	6.63	1716	11.7	<5	9	<5	
Duplicate	1-Nov-22	9.8	3	6.63	1716	11.7	<5	9	<5	
Duplicate	6-Jun-23	3.0	<3	6.95	1720	13.7	<5	8	7	
Duplicate	6-Jun-23	2.9	<3	6.95	1730	13.7	<5	8	8	
Duplicate	7-Nov-23	4.1	<3	7.52	1660	11.7	<5	8	5	
Duplicate	4-Jun-24	4.2	<3	6.96	1708	15.0	<5	8	<5	
Duplicate	4-Jun-24	4.2	<3	6.96	1708	15.0	<5	7	<5	
	5-Nov-24	3.5	<3	6.58	1621	13.5	<5	<5	8	<5

See notes on page 6.



TABLE 1
RACER Trust - Coldwater Road
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	Temp	Cr	Cu	Ni	Zn	
		<i>EGLR Residential Drinking Water Criteria & RBSLs</i>					<i>100 (A)</i>	<i>1,000 (E)</i>	<i>100 (A)</i>	<i>2,400</i>	
Vault D	23-Mar-95	8.9	83.0	7.30	2200	--	13	<20	44	<20	
	20-Jun-95	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	6.90	1800	--	<20	<20	<20	<20	
	20-Aug-96	40.0	<5	7.20	1600	--	<20	<20	<20	40	
	11-Nov-96	23.0	9.0	7.00	1700	--	<20	<20	<20	70	
	19-Feb-97	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	9-May-97	23.0	76.0	6.69	1580	8.8	<10	<10	58	70	
	8-Aug-97	11.0	44.0	6.48	1540	28.5	<10	<10	79	20	
	15-Nov-97	12.0	6.0	6.60	1800	11.0	<10	<10	114	30	
	9-Feb-98	12.0	52.0	6.50	1655	12.5	<10	<10	66	40	
	14-May-98	10.0	40.0	7.00	1700	16.3	<10	30	23	50	
	14-Aug-98	11.0	57.0	6.60	--	--	<10	<10	23	40	
	13-Nov-98	11.0	22.0	6.70	1790	15.2	<10	<10	20	30	
	19-Mar-99	6.3	2.0	7.00	1302	14.8	<10	30	20	40	
	6-May-99	12.4	28.0	6.90	1510	25.2	<10	30	15	30	
	23-Jul-99	11.0	40.0	7.00	1231	21.0	<5	9	21	19	
	22-Oct-99	10.6	13.0	6.76	1384	10.3	<10	<10	23	20	
	14-Mar-00	10.7	57.0	7.80	1460	13.0	<10	<10	15	20	
	20-Jun-00	10.1	23.0	6.80	1410	18.7	<10	60	21	70	
	13-Sep-00	10.7	7.0	7.60	1370	16.1	<5	<10	21	20	
	10-Nov-00	7.0	10.0	7.20	1630	<10	<10	<10	23	20	
	12-Mar-01	5.6	33.0	7.84	1710	12.9	<10	<10	11	10	
	24-May-01	12.0	16.0	7.48	1760	13.1	<10	10	18	30	
	31-Aug-01	9.8	8.0	7.66	1420	12.8	5	<10	24	20	
	16-Nov-01	7.4	20.0	7.58	1270	12.9	<10	17	17	50	
	8-Mar-02	8.4	3.0	7.18	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	6.77	1380	11.6	<5	5.0	10.0	19	
	4-Jun-03	9.6	5.0	6.91	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	6.92	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	6.96	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	5.90	1540	12.9	<5	<5	25	17	
	17-Jan-06	6.2	8.0	7.34	1600	7.9	6	14	37	<5	
	14-Feb-06	--	--	7.96	1520	9.2	--	5	--	--	
	29-Jun-06	5.9	51.0	6.98	1570	13.9	6	<4	26	14	
	28-Nov-06	7.2	13.0	7.18	1590	13.1	<5	<4	17	7	
	6-Jun-07	6.9	7.0	7.30	1530	14.2	9	5	34	8	
	Duplicate	12-Nov-07	7.3	5.0	6.91	1580	12.3	3	5	23	12
		12-Nov-07	6.0	7.0	6.91	1570	12.3	3	5	23	9
24-Jun-08		4.1	4.0	6.87	1570	15.4	<5	<1	35	<5	
17-Nov-08	5.6	10.0	7.42	1580	8.0	<5	1	17	6		
23-Jun-09	7.0	20.0	7.17	1570	13.7	<5	<1	34	5		
17-Nov-09	6.0	7	7.28	1610	11.5	<5	<4	16	7		
Duplicate	14-Jun-10	7.0	35	7.10	1550	11.9	8	<4	32	11	
	14-Jun-10	7.0	1	7.10	1550	11.9	7	<4	33	11	
8-Nov-10	9.0	31	7.41	1555	13.4	19	<4	18	<5		
14-Jul-11	--	--	7.23	--	18.0	<5	<4	40	<5		
14-Nov-11	9.0	5	7.04	1513	11.8	<5	<4	25	<5		
25-Jun-12	5.0	3	5.70	1367	14.5	<5	16	29	15		
5-Dec-12	7.3	3	7.11	1471	10.4	<5	11	33	22		
6-Jun-13	7.5	3	6.76	1534	11.5	<5	5	18	75		
Duplicate	4-Nov-13	7.2	<1	7.03	1565	11.8	<5	4	13	7	
	4-Nov-13	7.6	<1	7.03	1562	11.8	<5	<4	13	9	
Duplicate	23-Jun-14	8.0	7	7.10	1592	12.2	<5	4	15	9	
	23-Jun-14	7.9	2	7.10	1591	12.2	<5	<4	16	8	
Duplicate	18-Nov-14	6.2	2	7.02	1635	7.6	<5	10	20	11	
	18-Nov-14	6.0	<1	7.02	1640	7.6	<5	5	21	12	
Duplicate	25-Jun-15	6.9	3	6.93	1643	11.8	<5	8	23	17	
	17-Nov-15	5.7	3	6.84	1729	12.2	<5	<5	17	10	
	21-Jun-16	6.9	3	7.04	1656	14.7	<5	6	13	10	
	28-Nov-16	5.2	<3	6.91	1659	10.7	<5	6	17	9	
	19-Jun-17	7.3	<3	6.83	1655	16.7	<5	<5	15	10	
	6-Nov-17	5.9	<3	6.44	1650	11.7	<5	<5	12	6	
	11-Jun-18	6.5	<3	6.82	1655	13.6	<5	<5	14	9	
	7-Nov-18	6.5	<3	7.00	1619	7.0	<5	<5	35	<5	
	29-May-19	9.9	<3	7.37	1583	10.2	<5	<5	13	8	
	19-Nov-19	6.7	<3	7.08	1671	10.6	<5	<5	13	8	
	16-Jun-20	9.8	<3	7.09	1586	13.8	<5	<5	12	6	
	4-Nov-20	9.8	<3	6.66	1406	13.3	<5	<5	12	6	
16-Jun-21	8.8	<3	6.92	1527	20.5	<5	<5	12	6		
4-Nov-21	8.8	<3	7.06	1186	11.2	<5	<5	19	7		
7-Jun-22	9.5	<3	6.72	1450	13.1	<5	<5	11	<5		
1-Nov-22	9.8	<3	6.61	1440	11.8	<5	6	9	7		
Duplicate	7-Jun-23	3.4	<3	6.86	1470	15.3	<5	<5	11	8	
	7-Nov-23	4.6	<3	7.49	1550	11.6	<5	<5	13	9	
	7-Nov-23	4.5	<3	7.49	1550	11.6	<5	<5	13	12	
	4-Jun-24	4.6	<3	6.94	1462	15.6	<5	<5	21	7	
	5-Nov-24	3.5	<3	6.68	1480	13.6	<5	<5	35	13	

See notes on page 6.



TABLE 1
RACER Trust - Coldwater Road
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	Temp	Cr	Cu	Ni	Zn
		EGLE Residential Drinking Water Criteria & RBSLs					100 (A)	1,000 (E)	100 (A)	2,400
Vault 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	7.20	2000	--	<20	<20	46	<20
	18-Jun-96	9.0	76.0	7.00	2400	--	<20	<20	<20	<20
	4-Oct-96	5.9	19.0	6.90	2000	--	<20	<20	<20	20
	11-Nov-96	12.0	11.0	7.00	1800	--	<20	<20	<20	30
	19-Feb-97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7-May-97	7.0	2.0	6.33	2120	15.6	<10	<10	35	30
	12-Aug-97	5.0	27.0	6.70	1840	14.9	<10	<10	64	40
	15-Nov-97	5.0	12.0	6.50	2100	11.0	<10	<10	116	40
	9-Feb-98	6.0	4.0	6.60	1950	12.6	<10	<10	54	50
	14-May-98	6.0	32.0	7.10	1850	13.5	<10	<10	7	60
	14-Aug-98	4.0	8.0	6.70	--	--	<10	<10	8	40
	30-Nov-98	3.0	14.0	--	--	--	10	<10	46	60
	19-Mar-99	4.8	20.0	6.50	1302	14.3	<10	20	6	30
	6-May-99	8.2	14.0	6.90	1720	27.4	<10	<10	5	20
	23-Jul-99	4.6	9.0	6.50	1468	21.8	<5	11	6	19
	22-Oct-99	3.5	6.0	6.33	1382	11.0	<10	<10	6	20
	14-Mar-00	5.6	48.0	8.00	1500	13.9	<10	<10	5	10
	20-Jun-00	6.3	22.0	6.90	1430	19.6	<10	30	<5	30
	13-Sep-00	4.1	5.0	7.70	1360	15.7	<5	<10	5	20
	10-Nov-00	4.3	4.0	7.50	1290	11.8	<10	40	5	60
	12-Mar-01	5.4	9.0	7.33	--	12.7	<10	<10	5	10
	24-May-01	8.6	10.0	7.52	1900	13.6	<10	10	6	40
	31-Aug-01	5.7	5.3	7.58	1810	13.2	<5	10	6	70
	16-Nov-01	3.6	<1.0	7.46	1630	12.8	<10	10	6	60
	8-Mar-02	6.0	<1.0	7.01	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	6.92	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	7.61	1190	12.1	<5	6	7	43
	30-Jun-04	4.9	390	6.91	1337	12.7	<5	<5	6	43
	19-Nov-04	4.3	3	7.06	1230	11.4	<5	7	22	11
	15-Jun-05	7.0	3	6.77	1790	12.6	<5	<5	12	31
1-Dec-05	3.7	<1	7.10	1630	10.9	<5	66	<5	73	
29-Jun-06	5.8	8.0	6.94	1790	14.0	5	4	6	13	
28-Nov-06	6.3	134.0	7.51	1680	13.1	5	5	<5	10	
6-Jun-07	4.6	3.0	6.48	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	6.80	1740	12.0	2	4	11	13
	24-Jun-08	6.0	2.0	6.76	1860	13.9	<5	2	<5	6
	17-Nov-08	4.1	1.0	7.43	1630	10.3	<5	2	<5	19
Duplicate	23-Jun-09	3.2	10.0	6.79	1950	14.0	<5	2	<5	15
	23-Jun-09	3.0	17.0	6.79	1960	14.0	<5	2	<5	14
	17-Nov-09	5.0	9	6.89	1780	11.2	<5	<4	<5	14
	14-Jun-10	4.0	21	6.85	1910	12.5	9	<4	<5	13
	8-Nov-10	5.0	<1	7.02	1714	12.4	24	<4	<5	7
Duplicate	8-Nov-10	5.0	3	7.02	1715	12.4	20	<4	<5	7
	20-Jun-11	3.4	5	6.91	1711	13.0	29	<4	10	15
Re-sample	14-Jul-11	--	--	--	--	--	<5	--	--	--
	14-Nov-11	4.0	9	6.89	1637	11.7	<5	<4	<5	<5
Duplicate	14-Nov-11	3.0	5	6.89	1635	11.7	<5	<4	<5	<5
	25-Jun-12	3.0	3	6.00	1792	12.9	<5	<4	<5	7
	5-Dec-12	3.4	0	6.77	1776	10.4	<5	<4	6	11
	6-Jun-13	3.3	8	6.54	1397	10.6	<5	6	<5	<5
	4-Nov-13	3.0	2	6.74	1741	12.0	<5	4	12	9
	23-Jun-14	3.3	<1	6.88	1677	11.7	<5	<4	<5	<5
	18-Nov-14	3.0	2	7.08	1747	7.5	<5	<4	10	6
	25-Jun-15	2.9	4	6.88	1456	12.6	<5	<5	7	8
Duplicate	25-Jun-15	2.9	3	6.88	1460	12.6	<5	<5	7	7
	17-Nov-15	2.7	2	6.80	1435	12.9	<5	<5	5	<5
	21-Jun-16	2.6	<3	6.75	1408	13.9	<5	<5	<5	5
	28-Nov-16	2.3	<3	6.88	1502	11.3	<5	<5	<5	<5
	19-Jun-17	2.6	3	6.79	1431	11.9	<5	<5	<5	<5
	19-Jun-17	2.7	<3	6.79	1430	11.9	<5	<5	<5	<5
	6-Nov-17	2.5	<3	6.37	1465	11.8	<5	<5	<5	<5
	11-Jun-18	2.6	<3	6.57	1300	14.3	<5	<5	<5	5
	7-Nov-18	3.1	<3	7.20	1274	5.0	<5	<5	<5	<5
Duplicate	29-May-19	5.3	<3	7.16	1339	10.4	<5	<5	<5	<5
	29-May-19	5.1	<3	7.16	1334	10.4	<5	<5	<5	<5
	19-Nov-19	5.0	<3	6.95	1383	10.6	<5	7	<5	5
	16-Jun-20	6.0	<3	6.99	1210	14.5	<5	<5	<5	<5
	4-Nov-20	4.8	<3	6.61	1188	12.2	<5	<5	<5	<5
	16-Jun-21	4.9	<3	6.89	1211	17.7	<5	<5	<5	<5
	4-Nov-21	5.7	<3	6.89	831	11.6	<5	<5	<5	<5
	7-Jun-22	6.0	<3	6.73	1150	14.0	<5	<5	<5	8
	1-Nov-22	7.8	<3	6.57	1201	11.8	<5	5	<5	5
	7-Jun-23	<1	<3	6.86	1270	18.6	<5	<5	<5	<5
	7-Nov-23	2.2	<3	7.50	1340	11.1	<5	<5	<5	<5
	4-Jun-24	1.4	<3	6.84	1176	14.0	<5	<5	<5	<5
	5-Nov-24	1.7	<3	6.59	1209	13.5	<5	<5	<5	<5

See notes on page 6.



TABLE 1
RACER Trust - Coldwater Road
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	Temp	Cr	Cu	Ni	Zn	
EGLE Residential Drinking Water Criteria & RBSLs											
							100 (A)	1,000 (E)	100 (A)	2,400	
Vault F	23-Mar-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	20-Jun-95	8.2	<1	6.80	1400	--	<20	<20	<30	190	
	30-Aug-95	6.1	<1	6.80	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	6.80	1600	--	<20	<20	<20	<20	
	20-Aug-96	4.8	1500.0	7.10	1500	--	<20	20	<20	50	
	11-Nov-96	14.0	7100.0	7.00	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	6.14	1530	20.6	<10	<10	64	20	
	15-Nov-97	7.0	56.0	6.70	1800	13.0	<10	<10	93	130	
	9-Feb-98	5.0	30.0	6.50	1750	13.5	<10	<10	49	160	
	14-May-98	5.0	16.0	7.07	1400	25.4	<10	20	7	130	
	14-Aug-98	3.0	25.0	6.60	--	--	<10	<10	7	40	
	30-Nov-98	4.0	38.0	--	--	--	10	<10	47	30	
	19-Mar-99	4.2	52.0	6.80	982	14.4	<10	<20	9	20	
	6-May-99	4.6	50.0	7.00	1460	28.0	<10	10	5	30	
	23-Jul-99	3.7	95.0	6.30	1262	21.2	6	17	6	26	
	22-Oct-99	3.7	12.0	6.29	1116	12.3	<10	<10	6	20	
	14-Mar-00	5.4	81.0	8.00	1250	14.9	<10	<10	6	30	
	20-Jun-00	4.4	66.0	7.10	1310	20.1	<10	40	<5	80	
	13-Sep-00	3.0	11.0	7.40	1440	15.6	<5	<10	6	20	
	10-Nov-00	3.9	41.0	6.80	1040	11.6	<10	60	5	100	
	12-Mar-01	5.5	24.0	7.12	1110	12.3	<10	<10	5	10	
	24-May-01	7.4	16.0	7.44	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	7.26	1110	12.9	<10	40	<5	100	
	8-Mar-02	4.4	11.0	6.92	1290	10.4	<10	10	<5	60	
	31-May-02	2.4	45.0	7.17	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	6.78	1270	12.4	<5	19	<5	119	
	4-Jun-03	2.5	4.0	6.92	1300	10.9	<5	<5	<5	<5	
	5-Oct-03	3.9	5.0	6.88	1040	13.5	<5	11	5	66	
	8-Dec-03	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	27-Feb-04	3.9	7.0	7.11	1920	12.2	<5	5	<5	30	
	30-Jun-04	3.5	1.0	6.89	1300	12.0	<5	5	<5	10	
	30-Jun-04	3.5	1.0	6.89	1300	12.0	<5	5	<5	10	
	19-Nov-04	3.2	4.0	7.07	1160	11.0	<5	<5	15	8	
	15-Jun-05	4.0	8.0	5.47	1780	12.3	<5	<5	9	17	
	1-Dec-05	3.7	3.0	6.92	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	--	--	7.90	1710	7.2	--	<4	--	--
		29-Jun-06	2.9	90.0	6.72	1710	15.3	7	<4	<5	9
		28-Nov-06	4.4	3.0	7.04	1610	13.9	5	<4	<5	10
		6-Jun-07	3.9	2.0	6.44	1640	15.5	10	3	<5	8
		12-Nov-07	2.2	53.0	6.84	1600	12.2	2	3	9	11
Duplicate	24-Jun-08	2.3	5.0	6.86	1510	14.5	<5	<1	<5	<5	
	24-Jun-08	2.8	3.0	6.86	1500	14.5	<5	<1	<5	<5	
	17-Nov-08	1.8	9.0	7.20	1510	9.5	<5	<1	<5	15	
	23-Jun-09	2.9	29.0	7.08	1530	13.1	<5	<1	<5	10	
	17-Nov-09	3	16	7.03	1550	11.0	<5	<4	<5	11	
	14-Jun-10	3	14	7.02	1540	12.1	6	<4	<5	17	
	8-Nov-10	3	2	7.00	1590	12.3	16	<4	<5	14	
Re-sample	20-Jun-11	2.5	47	7.03	1642	14.6	23	<4	9	20	
	14-Jul-11	--	--	--	--	--	<5	--	--	--	
	14-Nov-11	2.0	29	6.93	1651	11.4	<5	<4	<5	<5	
	25-Jun-12	--	--	--	--	--	--	--	--	--	
	5-Dec-12	2.8	7	6.69	1729	9.9	<5	<4	6	12	
Duplicate	6-Jun-13	2.7	2	6.78	1761	10.8	<5	<4	6	6	
	6-Jun-13	2.9	<1	6.78	1759	10.8	<5	<4	<5	6	
	4-Nov-13	2.6	1	6.83	1736	11.6	<5	<4	<5	<5	
	23-Jun-14	2.6	3	7.15	1710	13.3	<5	<4	<5	<5	
	18-Nov-14	2.4	2	7.13	1724	7.4	<5	<4	10	8	
	25-Jun-15	2.3	3	7.08	1669	14.0	<5	<5	7	9	
Duplicate	17-Nov-15	2.1	1	6.95	1686	13.5	<5	<5	6	6	
	17-Nov-15	2.1	1	6.95	1686	13.5	<5	<5	6	6	
	21-Jun-16	2.4	<3	7.03	1640	14.2	<5	<5	<5	6	
Duplicate	28-Nov-16	1.9	3	6.84	1641	11.1	<5	<5	<5	<5	
	28-Nov-16	1.9	<3	6.84	1640	11.1	<5	<5	<5	6	
	19-Jun-17	2.4	<3	6.89	1675	11.8	<5	<5	<5	<5	
	6-Nov-17	2.2	<3	6.47	1626	11.0	<5	<5	<5	6	
	11-Jun-18	2.2	<3	6.75	1685	13.6	<5	<5	<5	<5	
	7-Nov-18	2.9	<3	7.20	1637	5.0	<5	<5	<5	<5	
	29-May-19	5.3	<3	7.13	1563	11.3	<5	<5	10	<5	
	19-Nov-19	4.6	<3	7.20	1593	10.1	<5	<5	14	6	
	16-Jun-20	6.6	<3	7.23	1623	13.3	<5	<5	18	<5	
	4-Nov-20	5.2	<3	6.72	1347	13.1	<5	<5	12	<5	
	16-Jun-21	5.8	<3	6.84	1554	20.2	<5	<5	8	<5	
	4-Nov-21	5.8	<3	7.03	1398	10.8	<5	<5	10	<5	
	7-Jun-22	6.6	3	6.85	1620	14.4	<5	<5	9	<5	
	1-Nov-22	7.8	<3	6.71	1570	11.8	<5	<5	6	<5	
	7-Jun-23	<1	<3	7.00	1570	15.1	<5	<5	5	<5	
	7-Nov-23	2.2	<3	7.54	1580	11.0	<5	<5	<5	<5	
	4-Jun-24	1.7	<3	6.94	1570	16.8	<5	<5	7	<5	
	5-Nov-24	1.9	<3	6.86	1584	13.4	<5	<5	<5	<5	

Notes

- "<" - Not detected above specified detection limit.
- "NS" - Not sampled - no liquid.
- "SpC" - Specific conductivity in micro siemens (uS).
- "Temp" - Temperature in degrees celsius.
- "--" - Physical parameter not measured (instrument failure or duplicate sample).
- Exceedances of EGLE Residential Drinking Water Criteria highlighted in yellow.

- "A" - Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005.
- "E" - Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA)



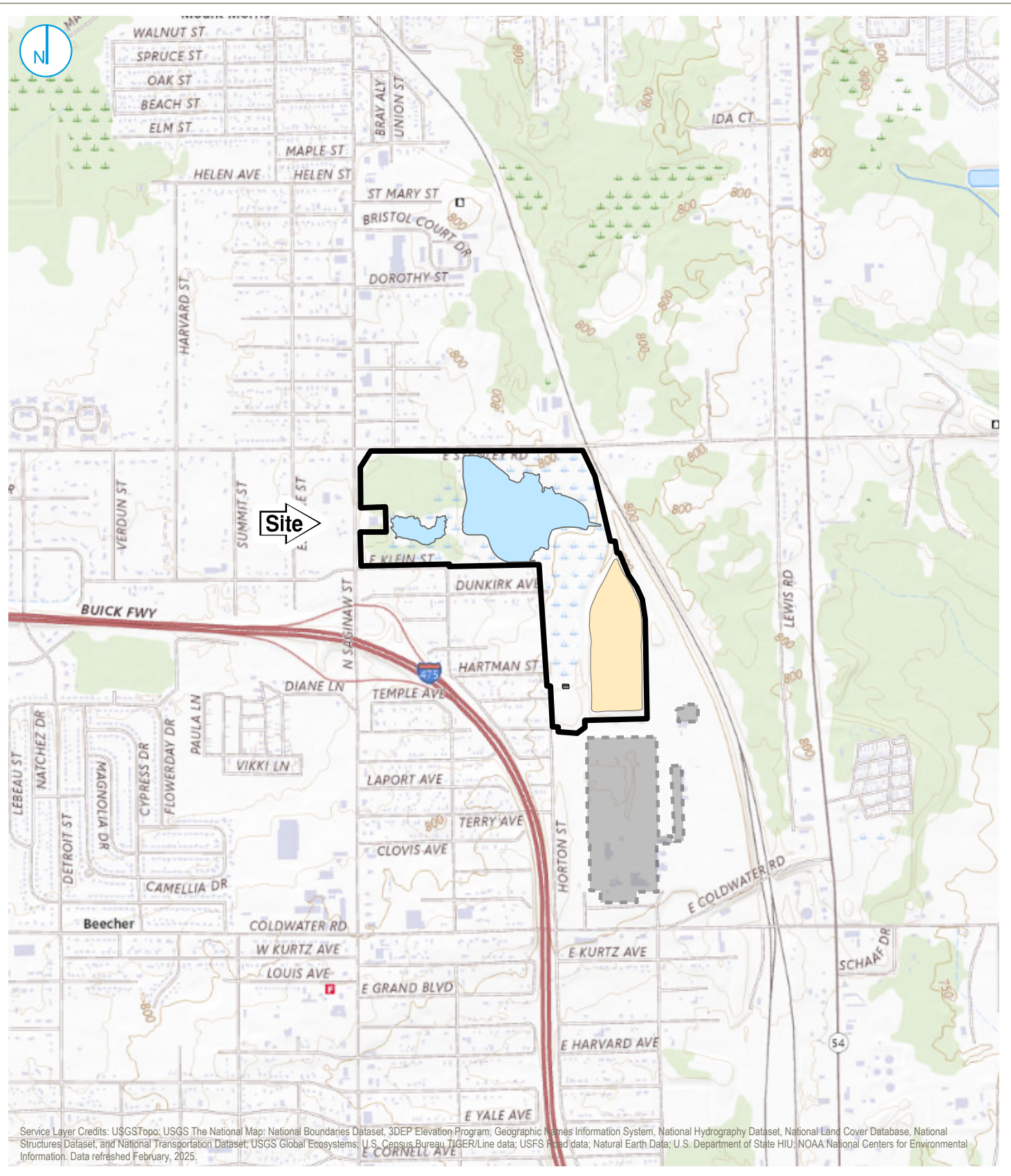
TABLE 2
RACER Trust - Coldwater Road
Vault Field Data
November 5, 2024

Name	Color	Temp	Spc (mS/cm)	pH	Sample Time
Vault A	clear	14.00	2.12	6.68	10:00
Vault B	clear	14.57	1.26	6.59	10:50
Vault C	clear	13.53	1.68	6.58	11:25
Vault D	clear	13.55	1.57	6.68	12:00
Vault E	clear	13.45	1.34	6.59	12:30
Vault F	clear	13.40	1.78	6.86	13:15

Notes:

Duplicate sample Vault-DUP-20241105 was collected at Vault A.

FIGURES



Service Layer Credits: USGSTopo; USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S. Department of State HIU; NOAA National Centers for Environmental Information. Data refreshed February, 2025.

Map Scale: 1:24,000 | Map Center: 83°41'17"W 43°6'2"N



KEY MAP (not to scale)

- PROPERTY BOUNDARY
- LANDFILL
- FORMER BUILDING
- FORMER POWERHOUSE
- SITE BUILDINGS
- PONDS



SITE LOCATION

FIGURE 1

RACER TRUST
COLDWATER ROAD
FLINT, MICHIGAN

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY



PROJECT: 1940103462 | DATED: 2/7/2023 | DESIGNER: MONETANT
I:\Racer-Trust\1088190\GIS\Coldwater_Road\ProRACER_Coldwater_Road_2022_Annual_LDS_and_GW_Figures\ProRACER_Coldwater_Road_2022_Annual_LDS_and_GW_Figures.aprx002 - Site_Layout 2022 SA Rpts (LDS-Rpt)_02032023



- ⊙ LEACHATE COLLECTION SUMP
- ACCESS PORT FOR LEAK DETECTION VAULT
- PROPERTY BOUNDARY



SITE LAYOUT

RACER Trust
Coldwater Road Landfill Facility
Flint, Michigan

FIGURE 02

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY



APPENDIX A
SUMMARY OF VOLUMES REMOVED



TABLE 1
RACER Trust - Coldwater Road
Liquid Volumes Removed from Leak Detection Vaults in 2024

Date 2024	VAULT A	VAULT B	VAULT C	VAULT D	VAULT E	VAULT F	TOTAL LDS GALLONS
11-Jan-2024	149	364	27	52	475	293	1360
21-Feb-2024	--	675	--	--	924	--	1599
13-Mar-2024	--	302	--	--	546	--	848
18-Apr-2024	349	522	55	200	1001	4	2131
23-May-2024	--	336	--	--	1134	--	1470
25-Jun-2024	--	231	--	--	1213	--	1444
18-Jul-2024	811	259	119	421	1090	0	2700
29-Aug-2024	--	377	--	--	1086	--	1463
30-Sep-2024	--	210	--	--	1573	--	1783
23-Oct-2024	875	61	212	822	458	5	2433
21-Nov-2024	239	43	63	104	304	2	755
17-Dec-2024	--	--	--	--	547	--	547
YEAR END TOTAL	2,423	3,380	476	1,599	10,351	304	18,533

Notes

Liquid volumes in gallons
 LDS - Leak Detection System
 -- Vault not dewatered

The dewatering was completed per the modified dewatering frequency approved by EGLE via letter on January 24, 2024. The dewatering for Vault B and Vault E occurred on an every other month basis unless more than 300 gallons of liquid were removed from a vault during a dewatering event. The vault dewatering frequency for Vaults A, C, D, and F occurred on a quarterly basis. If three or more vaults had more than 300 gallons removed during a dewatering event, then the next monthly dewatering event included all the vaults.

**APPENDIX B
ANALYTICAL LABORATORY REPORTS**



Analytical Laboratory Report

Report ID: S68216.01(01)
Generated on 11/18/2024

Report to

Attention: Clifford Yantz
Ramboll Americas
2090 Commonwealth Blvd
Ann Arbor, MI 48105

Phone: 313-333-0211 FAX:
Email: Clifford.Yantz@ramboll.com

Additional Contacts: Kevin Schneider

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

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

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S68216.01-S68216.07
Project: RACER Coldwater Rd
Collected Date(s): 11/05/2024
Submitted Date/Time: 11/06/2024 13:50
Sampled by: Kevin Schneider / Lee Trumball
P.O. #: 1940008845 TASK 1

Table of Contents

- Cover Page (Page 1)
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- Report Narrative (Page 2)
- Laboratory Accreditations (Page 3)
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- Glossary of Abbreviations (Page 3)
- Method Summary (Page 4)
- Sample Summary (Page 5)

Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition 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 reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Starred (*) analytes are not NY NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

All accreditations/certifications held by this laboratory are listed on page 3. Not all accreditations/certifications are applicable to this report.

For a specific list of accredited analytes, please feel free to contact the laboratory or visit <https://www.meritlabs.com/certifications>.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Accreditations (For Reference Only)

Authority	Accreditation ID
Michigan DEQ	#9956
DOD ELAP & ISO/IEC 17025:2017	#69699 PJLA Testing
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
o	Associated EIS outside of control limits
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
q	Qualifier ion ratio outside of control limits
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
E120.1	EPA Method 120.1 Revision 1982
E200.8	EPA Method 200.8 Revision 5.4
SM2540D	Standard Method 2540 D 2020
SW3015A	SW 846 Method 3015A Revision 1 February 2007



Analytical Laboratory Report

Sample Summary (7 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S68216.01	Vault-A-20241105	Wastewater	11/05/24 10:00
S68216.02	Vault-B-20241105	Wastewater	11/05/24 10:50
S68216.03	Vault-C-20241105	Wastewater	11/05/24 11:25
S68216.04	Vault-D-20241105	Wastewater	11/05/24 12:00
S68216.05	Vault-E-20241105	Wastewater	11/05/24 12:30
S68216.06	Vault-F-20241105	Wastewater	11/05/24 13:15
S68216.07	Vault-DUP-20241105	Wastewater	11/05/24 00:01



Analytical Laboratory Report

Lab Sample ID: S68216.01

Sample Tag: Vault-A-20241105

Collected Date/Time: 11/05/2024 10:00

Matrix: Wastewater

COC Reference: 176234

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40mL Glass	H2SO4	Yes	3.4	IR
1	125mL Plastic	HNO3	Yes	3.4	IR
1	1L Plastic	None	Yes	3.4	IR
1	250mL Plastic	None	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	11/07/24 11:30	CCM	

Inorganics

Method: , Run Date: 11/14/24 05:18, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC*	Completed				1		O

Method: E120.1, Run Date: 11/14/24 13:14, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,869	1		umhos/cm	1		

Method: SM2540D, Run Date: 11/07/24 14:30, Analyst: SRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1		

Metals

Method: E200.8, Run Date: 11/07/24 13:36, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	Not detected	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	Not detected	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.018	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	0.006	0.005		mg/L	5	7440-66-6	

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



Analytical Laboratory Report

Lab Sample ID: S68216.02

Sample Tag: Vault-B-20241105

Collected Date/Time: 11/05/2024 10:50

Matrix: Wastewater

COC Reference: 176234

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40mL Glass	H2SO4	Yes	3.4	IR
1	125mL Plastic	HNO3	Yes	3.4	IR
1	1L Plastic	None	Yes	3.4	IR
1	250mL Plastic	None	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	11/07/24 11:30	CCM	

Inorganics

Method: , Run Date: 11/14/24 05:45, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC*	Completed				1		O

Method: E120.1, Run Date: 11/14/24 13:16, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,201	1		umhos/cm	1		

Method: SM2540D, Run Date: 11/07/24 14:30, Analyst: SRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1		

Metals

Method: E200.8, Run Date: 11/07/24 13:39, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	Not detected	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	Not detected	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	Not detected	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	0.005	0.005		mg/L	5	7440-66-6	

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



Analytical Laboratory Report

Lab Sample ID: S68216.03

Sample Tag: Vault-C-20241105

Collected Date/Time: 11/05/2024 11:25

Matrix: Wastewater

COC Reference: 176234

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40mL Glass	H2SO4	Yes	3.4	IR
1	125mL Plastic	HNO3	Yes	3.4	IR
1	1L Plastic	None	Yes	3.4	IR
1	250mL Plastic	None	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	11/07/24 11:30	CCM	

Inorganics

Method: , Run Date: 11/14/24 08:54, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC*	Completed				1		O

Method: E120.1, Run Date: 11/14/24 13:18, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,621	1		umhos/cm	1		

Method: SM2540D, Run Date: 11/07/24 14:30, Analyst: SRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1		

Metals

Method: E200.8, Run Date: 11/07/24 13:40, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	Not detected	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	Not detected	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.008	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

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



Analytical Laboratory Report

Lab Sample ID: S68216.04

Sample Tag: Vault-D-20241105

Collected Date/Time: 11/05/2024 12:00

Matrix: Wastewater

COC Reference: 176234

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40mL Glass	H2SO4	Yes	3.4	IR
1	125mL Plastic	HNO3	Yes	3.4	IR
1	1L Plastic	None	Yes	3.4	IR
1	250mL Plastic	None	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	11/07/24 11:30	CCM	

Inorganics

Method: , Run Date: 11/14/24 09:21, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC*	Completed				1		O

Method: E120.1, Run Date: 11/14/24 13:20, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,480	1		umhos/cm	1		

Method: SM2540D, Run Date: 11/07/24 14:30, Analyst: SRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1		

Metals

Method: E200.8, Run Date: 11/07/24 13:44, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	Not detected	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	Not detected	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.035	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	0.013	0.005		mg/L	5	7440-66-6	

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



Analytical Laboratory Report

Lab Sample ID: S68216.05

Sample Tag: Vault-E-20241105

Collected Date/Time: 11/05/2024 12:30

Matrix: Wastewater

COC Reference: 176234

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40mL Glass	H2SO4	Yes	3.4	IR
1	125mL Plastic	HNO3	Yes	3.4	IR
1	1L Plastic	None	Yes	3.4	IR
1	250mL Plastic	None	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	11/07/24 11:30	CCM	

Inorganics

Method: , Run Date: 11/14/24 09:48, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC*	Completed				1		O

Method: E120.1, Run Date: 11/14/24 13:22, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,209	1		umhos/cm	1		

Method: SM2540D, Run Date: 11/07/24 14:30, Analyst: SRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1		

Metals

Method: E200.8, Run Date: 11/07/24 13:46, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	Not detected	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	Not detected	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	Not detected	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

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



Analytical Laboratory Report

Lab Sample ID: S68216.06

Sample Tag: Vault-F-20241105

Collected Date/Time: 11/05/2024 13:15

Matrix: Wastewater

COC Reference: 176234

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40mL Glass	H2SO4	Yes	3.4	IR
1	125mL Plastic	HNO3	Yes	3.4	IR
1	1L Plastic	None	Yes	3.4	IR
1	250mL Plastic	None	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	11/07/24 11:30	CCM	

Inorganics

Method: , Run Date: 11/14/24 10:15, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC*	Completed				1		O

Method: E120.1, Run Date: 11/14/24 13:24, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,584	1		umhos/cm	1		

Method: SM2540D, Run Date: 11/07/24 14:30, Analyst: SRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1		

Metals

Method: E200.8, Run Date: 11/07/24 13:47, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	Not detected	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	Not detected	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	Not detected	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

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



Analytical Laboratory Report

Lab Sample ID: S68216.07

Sample Tag: Vault-DUP-20241105

Collected Date/Time: 11/05/2024 00:01

Matrix: Wastewater

COC Reference: 176234

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40mL Glass	H2SO4	Yes	3.4	IR
1	125mL Plastic	HNO3	Yes	3.4	IR
1	1L Plastic	None	Yes	3.4	IR
1	250mL Plastic	None	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	11/07/24 11:30	CCM	

Inorganics

Method: , Run Date: 11/14/24 10:42, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC*	Completed				1		O

Method: E120.1, Run Date: 11/14/24 13:26, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,870	1		umhos/cm	1		

Method: SM2540D, Run Date: 11/07/24 14:30, Analyst: SRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1		

Metals

Method: E200.8, Run Date: 11/07/24 13:49, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	Not detected	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	Not detected	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.018	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

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

Merit Laboratories Login Checklist

Lab Set ID:S68216

Client:RAMBOLL (Ramboll Americas)

Project: RACER Coldwater Rd

Submitted: 11/06/2024 13:50 Login User: MMC

Attention: Clifford Yantz

Address: Ramboll Americas
2090 Commonwealth Blvd
Ann Arbor, MI 48105

Phone: 313-333-0211

FAX:

Email: Clifford.Yantz@ramboll.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 3.4 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--------------------------------------------------------------------------------------------------|---------------------------------------------------|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: Eurofins |

Preservation

- | | | |
|-----|--------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Do water VOC, TOX, DO or Alkalinity bottles contain |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

Merit Laboratories Bottle Preservation Check

Lab Set ID: S68216 Submitted: 11/06/2024 13:50

Client: RAMBOLL (Ramboll Americas)

Project: RACER Coldwater Rd

Initial Preservation Check: 11/06/2024 14:37 MMC

Preservation Recheck (E200.8): N/A

Attention: Clifford Yantz

Address: Ramboll Americas
2090 Commonwealth Blvd
Ann Arbor, MI 48105

Phone: 313-333-0211

FAX:

Email: Clifford.Yantz@ramboll.com

Sample ID	Bottle / Preservation	pH (Orig)	Add ml	pH (New)	Notes
S68216.01	125mL Plastic HNO3	<2			
S68216.02	125mL Plastic HNO3	<2			
S68216.03	125mL Plastic HNO3	<2			
S68216.04	125mL Plastic HNO3	<2			
S68216.05	125mL Plastic HNO3	<2			
S68216.06	125mL Plastic HNO3	<2			
S68216.07	125mL Plastic HNO3	<2			

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Lab Results
Merit Laboratories
2680 E Lansing Drive
East Lansing, Michigan 48823

Generated 11/15/2024 5:04:30 PM

JOB DESCRIPTION

S68216 TOC

JOB NUMBER

190-35699-1

Eurofins Michigan

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



Generated
11/15/2024 5:04:30 PM

Authorized for release by
Sue Schafer, Project Manager II
Sue.Schafer@et.eurofinsus.com
(810)229-2763



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Sample Summary

Client: Merit Laboratories
Project/Site: S68216 TOC

Job ID: 190-35699-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-35699-1	S68216.01	Water	11/05/24 10:00	11/07/24 11:21
190-35699-2	S68216.02	Water	11/05/24 10:50	11/07/24 11:21
190-35699-3	S68216.03	Water	11/05/24 11:25	11/07/24 11:21
190-35699-4	S68216.04	Water	11/05/24 12:00	11/07/24 11:21
190-35699-5	S68216.05	Water	11/05/24 12:30	11/07/24 11:21
190-35699-6	S68216.06	Water	11/05/24 13:15	11/07/24 11:21
190-35699-7	S68216.07	Water	11/05/24 00:01	11/07/24 11:21

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Case Narrative

Client: Merit Laboratories
Project: S68216 TOC

Job ID: 190-35699-1

Job ID: 190-35699-1

Eurofins Michigan

Job Narrative 190-35699-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 11/7/2024 11:21 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 6.0°C.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Michigan

Client Sample Results

Client: Merit Laboratories
Project/Site: S68216 TOC

Job ID: 190-35699-1

Client Sample ID: S68216.01

Lab Sample ID: 190-35699-1

Date Collected: 11/05/24 10:00

Matrix: Water

Date Received: 11/07/24 11:21

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310C-2011)	4.8		1.0	mg/L			11/14/24 05:18	1

Client Sample ID: S68216.02

Lab Sample ID: 190-35699-2

Date Collected: 11/05/24 10:50

Matrix: Water

Date Received: 11/07/24 11:21

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310C-2011)	1.7		1.0	mg/L			11/14/24 05:45	1

Client Sample ID: S68216.03

Lab Sample ID: 190-35699-3

Date Collected: 11/05/24 11:25

Matrix: Water

Date Received: 11/07/24 11:21

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310C-2011)	3.5		1.0	mg/L			11/14/24 08:54	1

Client Sample ID: S68216.04

Lab Sample ID: 190-35699-4

Date Collected: 11/05/24 12:00

Matrix: Water

Date Received: 11/07/24 11:21

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310C-2011)	3.5		1.0	mg/L			11/14/24 09:21	1

Client Sample ID: S68216.05

Lab Sample ID: 190-35699-5

Date Collected: 11/05/24 12:30

Matrix: Water

Date Received: 11/07/24 11:21

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310C-2011)	1.7		1.0	mg/L			11/14/24 09:48	1

Client Sample ID: S68216.06

Lab Sample ID: 190-35699-6

Date Collected: 11/05/24 13:15

Matrix: Water

Date Received: 11/07/24 11:21

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310C-2011)	1.9		1.0	mg/L			11/14/24 10:15	1

Client Sample Results

Client: Merit Laboratories
Project/Site: S68216 TOC

Job ID: 190-35699-1

Client Sample ID: S68216.07

Lab Sample ID: 190-35699-7

Date Collected: 11/05/24 00:01

Matrix: Water

Date Received: 11/07/24 11:21

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310C-2011)	4.8		1.0	mg/L			11/14/24 10:42	1

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QC Sample Results

Client: Merit Laboratories
 Project/Site: S68216 TOC

Job ID: 190-35699-1

Method: 5310C-2011 - Total Organic Carbon/Persulfate - Ultrav

Lab Sample ID: MB 240-635535/5
Matrix: Water
Analysis Batch: 635535

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<1.0		1.0	mg/L			11/13/24 22:04	1

Lab Sample ID: LCS 240-635535/22
Matrix: Water
Analysis Batch: 635535

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	26.6	26.6		mg/L		100	85 - 115
TOC Result 1	26.6	26.3		mg/L		99	85 - 115
TOC Result 2	26.6	27.0		mg/L		101	85 - 115

Lab Sample ID: LCS 240-635535/6
Matrix: Water
Analysis Batch: 635535

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	26.6	26.8		mg/L		101	85 - 115
TOC Result 1	26.6	26.5		mg/L		100	85 - 115
TOC Result 2	26.6	27.1		mg/L		102	85 - 115

Definitions/Glossary

Client: Merit Laboratories
Project/Site: S68216 TOC

Job ID: 190-35699-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Merit Laboratories
Project/Site: S68216 TOC

Job ID: 190-35699-1

General Chemistry

Analysis Batch: 635535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-35699-1	S68216.01	Total/NA	Water	5310C-2011	
190-35699-2	S68216.02	Total/NA	Water	5310C-2011	
190-35699-3	S68216.03	Total/NA	Water	5310C-2011	
190-35699-4	S68216.04	Total/NA	Water	5310C-2011	
190-35699-5	S68216.05	Total/NA	Water	5310C-2011	
190-35699-6	S68216.06	Total/NA	Water	5310C-2011	
190-35699-7	S68216.07	Total/NA	Water	5310C-2011	
MB 240-635535/5	Method Blank	Total/NA	Water	5310C-2011	
LCS 240-635535/22	Lab Control Sample	Total/NA	Water	5310C-2011	
LCS 240-635535/6	Lab Control Sample	Total/NA	Water	5310C-2011	

Lab Chronicle

Client: Merit Laboratories
Project/Site: S68216 TOC

Job ID: 190-35699-1

Client Sample ID: S68216.01

Lab Sample ID: 190-35699-1

Date Collected: 11/05/24 10:00

Matrix: Water

Date Received: 11/07/24 11:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310C-2011		1	635535	JWW	EET CLE	11/14/24 05:18

Client Sample ID: S68216.02

Lab Sample ID: 190-35699-2

Date Collected: 11/05/24 10:50

Matrix: Water

Date Received: 11/07/24 11:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310C-2011		1	635535	JWW	EET CLE	11/14/24 05:45

Client Sample ID: S68216.03

Lab Sample ID: 190-35699-3

Date Collected: 11/05/24 11:25

Matrix: Water

Date Received: 11/07/24 11:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310C-2011		1	635535	JWW	EET CLE	11/14/24 08:54

Client Sample ID: S68216.04

Lab Sample ID: 190-35699-4

Date Collected: 11/05/24 12:00

Matrix: Water

Date Received: 11/07/24 11:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310C-2011		1	635535	JWW	EET CLE	11/14/24 09:21

Client Sample ID: S68216.05

Lab Sample ID: 190-35699-5

Date Collected: 11/05/24 12:30

Matrix: Water

Date Received: 11/07/24 11:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310C-2011		1	635535	JWW	EET CLE	11/14/24 09:48

Client Sample ID: S68216.06

Lab Sample ID: 190-35699-6

Date Collected: 11/05/24 13:15

Matrix: Water

Date Received: 11/07/24 11:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310C-2011		1	635535	JWW	EET CLE	11/14/24 10:15

Client Sample ID: S68216.07

Lab Sample ID: 190-35699-7

Date Collected: 11/05/24 00:01

Matrix: Water

Date Received: 11/07/24 11:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310C-2011		1	635535	JWW	EET CLE	11/14/24 10:42

Lab Chronicle

Client: Merit Laboratories
Project/Site: S68216 TOC

Job ID: 190-35699-1

Client Sample ID: Method Blank

Lab Sample ID: MB 240-635535/5

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310C-2011		1	635535	JWW	EET CLE	11/13/24 22:04

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 240-635535/22

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310C-2011		1	635535	JWW	EET CLE	11/14/24 06:12

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 240-635535/6

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310C-2011		1	635535	JWW	EET CLE	11/13/24 22:42

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Analyst References:

Lab: EET CLE

Batch Type: Analysis

JWW = Joshua Weimer

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S68216 TOC

Job ID: 190-35699-1

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-28-25
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-25
Illinois	NELAP	200004	08-31-25
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-27-25
Kentucky (WW)	State	KY98016	12-30-24
Minnesota	NELAP	039-999-348	12-31-24
New Hampshire	NELAP	225024	09-30-25
New Jersey	NELAP	OH001	07-03-25
New York	NELAP	10975	04-02-25
Ohio VAP	State	ORELAP 4062	02-27-25
Oregon	NELAP	4062	02-27-25
Pennsylvania	NELAP	68-00340	08-31-25
Texas	NELAP	T104704517-22-19	08-31-25
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-25
West Virginia DEP	State	210	12-31-24

Method Summary

Client: Merit Laboratories
Project/Site: S68216 TOC

Job ID: 190-35699-1

Method	Method Description	Protocol	Laboratory
5310C-2011	Total Organic Carbon/Persulfate - Ultrav	SM	EET CLE

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

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Environment Testing
TestAmerica

SDS or Known Hazard Information Supplied by Client
 Discrepancies Client ID: Ment Laboratories
 Short Hold Work Oder #: 35899
 Rush 24 Hr 2-Day 3-Day 5-Day Other:
Receipt Evaluation Performed by: Initials: SO Date: 11/1 Time: 11:21

Cooler / Sample Receipt

After hours receipt: complete gray areas. Place cooler in walk-in, place form in Receiving box. Date: _____ Time: _____

Method of Shipment:

Walk-In Client Eurofins TA Field/Courier
Other Client / 3rd Party Courier: _____
Fed Ex Tracking #: _____
UPS Tracking #: _____
Other: _____

Shipping Container Type:

Cooler Box
 None Other: _____

Custody Seals Intact:

Yes No
 NA (not used or required)

Packing Materials:

Plastic Bags Foam
 Bubble Wrap Paper
 Packing Peanuts None
 Other: _____

Cooling Materials:

Ice (Solid) Ice (Melted)
 Blue Ice None
 Other: _____

Bacteriological Samples	Temp Corrected (°C)	Frozen?		Rec'd Within 2 Hrs?		Sample Flagged?	
		Yes	No	Yes	No	Yes	No

Received on same day sampled? Yes No

Additional Sheets Required? Yes No

Receipt Temperatures

Thermometer ID	Observed (°C)	Corrected (°C)	Temp Blank	Sample Temp	Acceptable	Cooler ID	Affected Samples
<u>CP313207</u>	<u>6.0</u>	<u>6.0</u>			<u>Y</u> <u>N</u>		
					<u>Y</u> <u>N</u>		
					<u>Y</u> <u>N</u>		

Receipt Questions**	Y	N	NA	"No" answers require additional comment
CoC present and ETA receipt signature, date, and time properly documented?	<input checked="" type="checkbox"/>			
Containers and Labels in good condition? (unbroken, not leaking, appropriately filled, labels legible & attached)	<input checked="" type="checkbox"/>			
Appropriate containers used and adequate volume provided?	<input checked="" type="checkbox"/>			Preserved bottles checked for pH?* Yes No
Number of sample containers match CoC?				pH strip lot # _____
Samples received within hold?				
Samples submitted for GRO and Volatiles analysis (8260, 624, 524) received without headspace?	<input checked="" type="checkbox"/>			
Was a Trip Blank received with VOA samples?			<input checked="" type="checkbox"/>	
Were the samples free of any questionable physical conformities? (i.e.; field duplicates or multiple bottles of the same sample do not significantly vary in appearance – color, solid proportions, etc.)	<input checked="" type="checkbox"/>			
Were the CoC bottle labels and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?	<input checked="" type="checkbox"/>			
**May not be applicable if samples are not for compliance testing				*Excludes FOG, VOAs, TOC Vials, HEM

Client Contact Record

Contact Via: Phone Email Other: _____ Person Contacted: _____ Date/Time: _____
 Discrepancy allowance agreement is on record in the client project file

Discussion / Resolution

Any additional documentation and clarification from the client must be noted in the narrative and/or scanned into the CoC directory.

Reviewed by [Signature] Date: 11/7/24

WI-MI-010_020720

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler: N/A	Lab PM: Schafer, Sue	Carrier Tracking No(s): N/A	COC No: 190-40635.1					
Client Contact: Shipping/Receiving		Phone: N/A	E-Mail: Sue.Schafer@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1					
Company: Eurofins Environment Testing North Centr			Accreditations Required (See note): N/A		Job #: 190-35699-1					
Address: 180 S. Van Buren Avenue,		Due Date Requested: 11/20/2024	Analysis Requested							
City: Barberton		TAT Requested (days): N/A								
State, Zip: OH, 44203		PO #: N/A	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	5310C/ TOC	Total Number of containers	Preservation Codes: -			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)		WO #: N/A					Other: N/A			
Email: N/A		Project #: 19001249	Special Instructions/Note:							
Project Name: S68216		SSOW#: N/A								
Site: N/A										
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	5310C/ TOC	Total Number of containers	Special Instructions/Note:	
Preservation Code: X X										
S68216.01 (190-35699-1)	11/5/24	10:00 Eastern	G	Water			X	2		
S68216.02 (190-35699-2)	11/5/24	10:50 Eastern	G	Water			X	2		
S68216.03 (190-35699-3)	11/5/24	11:25 Eastern	G	Water			X	2		
S68216.04 (190-35699-4)	11/5/24	12:00 Eastern	G	Water			X	2		
S68216.05 (190-35699-5)	11/5/24	12:30 Eastern	G	Water			X	2		
S68216.06 (190-35699-6)	11/5/24	13:15 Eastern	G	Water			X	2		
S68216.07 (190-35699-7)	11/5/24	00:01 Eastern	G	Water			X	2		
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.</p>										
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Unconfirmed					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)			Primary Deliverable Rank: 2		Special Instructions/QC Requirements:					
Empty Kit Relinquished by:			Date:		Time:		Method of Shipment:			
Relinquished by: <i>Jake Dwyer</i>			Date/Time: 11/7/24 11:35		Company: <i>ESTA</i>		Received by: JESSE MOROSKO		Date/Time: 11/7/24 12:10	Company: <i>ETA</i>
Relinquished by:			Date/Time:		Company:		Received by:		Date/Time:	Company:
Relinquished by:			Date/Time:		Company:		Received by:		Date/Time:	Company:
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:			Cooler Temperature(s) °C and Other Remarks:			11/15/2024		



Eurofins - Cleveland Sample Receipt Form/Narrative
 Barber's Facility

Client Eurofins Michigan Site Name _____ Login # _____
 Cooler unpacked by: JMORSEK

Cooler Received on 11/8/24 Opened on 11/8/24
 FedEx: 1st Grd Exp DPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

Receipt After-hours Drop-off Date/Time _____ Storage Location _____
 Eurofins Cooler # 26 Foam Box _____ Client Cooler _____ Box _____ Other _____

Packing material used: Bubble Wrap Foam Plastic Bag _____ None _____ Other _____
 COOLANT Wet Ice Blue Ice _____ Dry Ice _____ Water _____ None _____

1 Cooler temperature upon receipt: See Multiple Cooler Form
 IR GUN # 13 (CF 167 °C) Observed Cooler Temp 27 °C Corrected Cooler Temp 3.4 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 -Were tamper/custody seals intact and uncompromised? Yes No NA
 3 Shippers' packing slip attached to the cooler(s)? Yes No
 4 Did custody papers accompany the sample(s)? Yes No
 5 Were the custody papers relinquished & signed in the appropriate place? Yes No
 6 Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
 7 Did all bottles arrive in good condition (Unbroken)? Yes No
 8 Could all bottle labels (ID/Date/Time) be reconciled with the COC? Yes No
 9 For each sample, does the COC specify preservatives (Y/N) # of containers (Y/N), and sample type of grab/comp (Y/N)? Yes No
 10 Were correct bottle(s) used for the test(s) indicated? Yes No
 11 Sufficient quantity received to perform indicated analyses? Yes No
 12 Are these work share samples and all listed on the COC? Yes No
 If yes, Questions 13-17 have been checked at the originating laboratory

Tests that are not checked for pH by Receiving:
 VOAs
 Oil and Grease
 TOC

13 Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC448976
 14 Were VOAs on the COC? Yes No
 15 Were air bubbles >6 mm in any VOA vials? Larger than this Yes No
 16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
 17 Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____
 Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES additional next page Samples processed by: _____

19. 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)

20. SAMPLE PRESERVATION
 Sample(s) _____ were further preserved in the laboratory
 Time preserved. _____ Preservative(s) added/Lot number(s) _____
 VOA Sample Preservation - Date/Time VOAs Frozen _____



Quality Control Report

Report ID: QC-S68216-01
Generated on 11/18/2024

Report to

Attention: Clifford Yantz
Ramboll Americas
2090 Commonwealth Blvd
Ann Arbor, MI 48105

Phone: 313-333-0211 FAX:

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): S68216.01-S68216.07
Project: RACER Coldwater Rd
Submitted Date/Time: 11/06/2024 13:50
Sampled by: Kevin Schneider / Lee Trumball
P.O. #: 1940008845 TASK 1

QC Report Sections

Cover Page (Page 1)
Analysis Summary (Pages 2-8)
Prep Batch Summary (Page 9)
Batch QC Results (Pages 10-13)

Report Flag Descriptions

*: QC result is outside of indicated control limits
W: Surrogate result not applicable due to sample dilution

I certify that this data package is in compliance with the terms and conditions of the program, and project, and contractual requirements both technically and for completeness. Release of the data contained in this hardcopy data package and its computer-readable data submitted has been authorized by the Quality Assurance Manager and his/her designee, as verified by the following signature.

Barbara Ball
Quality Assurance Manager

QC Report - Analysis Summary

Lab Sample ID: S68216.01

Sample Tag: Vault-A-20241105

Collected Date/Time: 11/05/2024 10:00

Matrix: Wastewater

COC Reference: 176234

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	11/14/24 13:14	COND2411114-W1	COND2411114-W1	No	BLK/LCS/DUP
Total Suspended Solids	SM2540D	11/07/24 14:30	TSS241107A	TSS241107A	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	11/07/24 13:36	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	11/07/24 13:36	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	11/07/24 13:36	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	11/07/24 13:36	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD

QC Report - Analysis Summary

Lab Sample ID: S68216.02

Sample Tag: Vault-B-20241105

Collected Date/Time: 11/05/2024 10:50

Matrix: Wastewater

COC Reference: 176234

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<i>Inorganics</i>						
Conductivity	E120.1	11/14/24 13:16	COND2411114-W1	COND2411114-W1	No	BLK/LCS/DUP
Total Suspended Solids	SM2540D	11/07/24 14:30	TSS241107A	TSS241107A	No	BLK/LCS/DUP
<i>Metals</i>						
Chromium, Dissolved	E200.8	11/07/24 13:39	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	11/07/24 13:39	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	11/07/24 13:39	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	11/07/24 13:39	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD

QC Report - Analysis Summary

Lab Sample ID: S68216.03

Sample Tag: Vault-C-20241105

Collected Date/Time: 11/05/2024 11:25

Matrix: Wastewater

COC Reference: 176234

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	11/14/24 13:18	COND2411114-W1	COND2411114-W1	No	BLK/LCS/DUP
Total Suspended Solids	SM2540D	11/07/24 14:30	TSS241107A	TSS241107A	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	11/07/24 13:40	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	11/07/24 13:40	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	11/07/24 13:40	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	11/07/24 13:40	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD

QC Report - Analysis Summary

Lab Sample ID: S68216.04

Sample Tag: Vault-D-20241105

Collected Date/Time: 11/05/2024 12:00

Matrix: Wastewater

COC Reference: 176234

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	11/14/24 13:20	COND2411114-W1	COND2411114-W1	No	BLK/LCS/DUP
Total Suspended Solids	SM2540D	11/07/24 14:30	TSS241107A	TSS241107A	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	11/07/24 13:44	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	11/07/24 13:44	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	11/07/24 13:44	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	11/07/24 13:44	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD

QC Report - Analysis Summary

Lab Sample ID: S68216.05

Sample Tag: Vault-E-20241105

Collected Date/Time: 11/05/2024 12:30

Matrix: Wastewater

COC Reference: 176234

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	11/14/24 13:22	COND2411114-W1	COND2411114-W1	No	BLK/LCS/DUP
Total Suspended Solids	SM2540D	11/07/24 14:30	TSS241107A	TSS241107A	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	11/07/24 13:46	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	11/07/24 13:46	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	11/07/24 13:46	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	11/07/24 13:46	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD

QC Report - Analysis Summary

Lab Sample ID: S68216.06

Sample Tag: Vault-F-20241105

Collected Date/Time: 11/05/2024 13:15

Matrix: Wastewater

COC Reference: 176234

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	11/14/24 13:24	COND2411114-W1	COND2411114-W1	No	BLK/LCS/DUP
Total Suspended Solids	SM2540D	11/07/24 14:30	TSS241107A	TSS241107A	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	11/07/24 13:47	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	11/07/24 13:47	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	11/07/24 13:47	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	11/07/24 13:47	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD

QC Report - Analysis Summary

Lab Sample ID: S68216.07

Sample Tag: Vault-DUP-20241105

Collected Date/Time: 11/05/2024 00:01

Matrix: Wastewater

COC Reference: 176234

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	11/14/24 13:26	COND2411114-W1	COND2411114-W1	No	BLK/LCS/DUP
Total Suspended Solids	SM2540D	11/07/24 14:30	TSS241107A	TSS241107A	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	11/07/24 13:49	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	11/07/24 13:49	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	11/07/24 13:49	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	11/07/24 13:49	MT4-24-1107A	MTD-110724-4	No	BLK/LCS/MS/MSD

QC Report - Prep Batch Summary

Inorganics, Prep Batch ID: COND241114-W1

Surrogates: No, QC Types: BLK/LCS/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S68216.01	Conductivity	E120.1	11/14/24 13:14	COND241114-W1
S68216.02	Conductivity	E120.1	11/14/24 13:16	COND241114-W1
S68216.03	Conductivity	E120.1	11/14/24 13:18	COND241114-W1
S68216.04	Conductivity	E120.1	11/14/24 13:20	COND241114-W1
S68216.05	Conductivity	E120.1	11/14/24 13:22	COND241114-W1
S68216.06	Conductivity	E120.1	11/14/24 13:24	COND241114-W1
S68216.07	Conductivity	E120.1	11/14/24 13:26	COND241114-W1

Inorganics, Prep Batch ID: TSS241107A

Surrogates: No, QC Types: BLK/LCS/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S68216.01	Total Suspended Solids	SM2540D	11/07/24 14:30	TSS241107A
S68216.02	Total Suspended Solids	SM2540D	11/07/24 14:30	TSS241107A
S68216.03	Total Suspended Solids	SM2540D	11/07/24 14:30	TSS241107A
S68216.04	Total Suspended Solids	SM2540D	11/07/24 14:30	TSS241107A
S68216.05	Total Suspended Solids	SM2540D	11/07/24 14:30	TSS241107A
S68216.06	Total Suspended Solids	SM2540D	11/07/24 14:30	TSS241107A
S68216.07	Total Suspended Solids	SM2540D	11/07/24 14:30	TSS241107A

Metals, Prep Batch ID: MTD-110724-4

Surrogates: No, QC Types: BLK/LCS/MS/MSD

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S68216.01	Chromium, Dissolved	E200.8	11/07/24 13:36	MT4-24-1107A
S68216.01	Copper, Dissolved	E200.8	11/07/24 13:36	MT4-24-1107A
S68216.01	Nickel, Dissolved	E200.8	11/07/24 13:36	MT4-24-1107A
S68216.01	Zinc, Dissolved	E200.8	11/07/24 13:36	MT4-24-1107A
S68216.02	Chromium, Dissolved	E200.8	11/07/24 13:39	MT4-24-1107A
S68216.02	Copper, Dissolved	E200.8	11/07/24 13:39	MT4-24-1107A
S68216.02	Nickel, Dissolved	E200.8	11/07/24 13:39	MT4-24-1107A
S68216.02	Zinc, Dissolved	E200.8	11/07/24 13:39	MT4-24-1107A
S68216.03	Chromium, Dissolved	E200.8	11/07/24 13:40	MT4-24-1107A
S68216.03	Copper, Dissolved	E200.8	11/07/24 13:40	MT4-24-1107A
S68216.03	Nickel, Dissolved	E200.8	11/07/24 13:40	MT4-24-1107A
S68216.03	Zinc, Dissolved	E200.8	11/07/24 13:40	MT4-24-1107A
S68216.04	Chromium, Dissolved	E200.8	11/07/24 13:44	MT4-24-1107A
S68216.04	Copper, Dissolved	E200.8	11/07/24 13:44	MT4-24-1107A
S68216.04	Nickel, Dissolved	E200.8	11/07/24 13:44	MT4-24-1107A
S68216.04	Zinc, Dissolved	E200.8	11/07/24 13:44	MT4-24-1107A
S68216.05	Chromium, Dissolved	E200.8	11/07/24 13:46	MT4-24-1107A
S68216.05	Copper, Dissolved	E200.8	11/07/24 13:46	MT4-24-1107A
S68216.05	Nickel, Dissolved	E200.8	11/07/24 13:46	MT4-24-1107A
S68216.05	Zinc, Dissolved	E200.8	11/07/24 13:46	MT4-24-1107A
S68216.06	Chromium, Dissolved	E200.8	11/07/24 13:47	MT4-24-1107A
S68216.06	Copper, Dissolved	E200.8	11/07/24 13:47	MT4-24-1107A
S68216.06	Nickel, Dissolved	E200.8	11/07/24 13:47	MT4-24-1107A
S68216.06	Zinc, Dissolved	E200.8	11/07/24 13:47	MT4-24-1107A
S68216.07	Chromium, Dissolved	E200.8	11/07/24 13:49	MT4-24-1107A
S68216.07	Copper, Dissolved	E200.8	11/07/24 13:49	MT4-24-1107A
S68216.07	Nickel, Dissolved	E200.8	11/07/24 13:49	MT4-24-1107A
S68216.07	Zinc, Dissolved	E200.8	11/07/24 13:49	MT4-24-1107A

QC Report - Batch QC Results

Inorganics, Prep Batch ID: COND241114-W1

Surrogates: No, QC Types: BLK/LCS/DUP

Blank (BLK)

Lab Sample ID: COND241114-W1.LRB1

Run in Batch: COND241114-W1, Run Date: 11/14/2024 13:00, Prep Date: 11/14/2024, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Conductivity		ND	1	mg/L

Laboratory Control Sample (LCS)

Lab Sample ID: COND241114-W1.LCS1

Run in Batch: COND241114-W1, Run Date: 11/14/2024 13:06, Prep Date: 11/14/2024, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Conductivity		97	90	110

Laboratory Control Sample (LCS)

Lab Sample ID: COND241114-W1.LCS2

Run in Batch: COND241114-W1, Run Date: 11/14/2024 13:08, Prep Date: 11/14/2024, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Conductivity		91	90	110

Duplicate (DUP)

Lab Sample ID: COND241114-W1.DP1, Parent Sample ID: S68174.01

Run in Batch: COND241114-W1, Run Date: 11/14/2024 13:12, Prep Date: 11/14/2024, Matrix: Liquid, Dilution: 50

Analyte	Flags	RPD	RPD CL
Conductivity		<1	15

QC Report - Batch QC Results

Inorganics, Prep Batch ID: TSS241107A

Surrogates: No, QC Types: BLK/LCS/DUP

Blank (BLK)

Lab Sample ID: TSS241107A.LRB1

Run in Batch: TSS241107A, Run Date: 11/07/2024 14:30, Prep Date: 11/07/2024, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Total Suspended Solids		ND	3	mg/L

Laboratory Control Sample (LCS)

Lab Sample ID: TSS241107A.LCS1

Run in Batch: TSS241107A, Run Date: 11/07/2024 14:30, Prep Date: 11/07/2024, Matrix: Liquid, Dilution: 10

Analyte	Flags	% Rec	LCL	UCL
Total Suspended Solids		96.6	78.7	114

Duplicate (DUP)

Lab Sample ID: TSS241107A.DP1, Parent Sample ID: S68221.02

Run in Batch: TSS241107A, Run Date: 11/07/2024 14:30, Prep Date: 11/07/2024, Matrix: Liquid, Dilution: 11.76

Analyte	Flags	RPD	RPD CL
Total Suspended Solids		1.0	10

QC Report - Batch QC Results

Metals, Prep Batch ID: MTD-110724-4

Surrogates: No, QC Types: BLK/LCS/MS/MSD

Blank (BLK)

Lab Sample ID: MT4-24-1107A.054.LRB

Run in Batch: MT4-24-1107A, Run Date: 11/07/2024 13:29, Prep Date: 11/07/2024, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Chromium		ND	0.001	mg/L
Copper		ND	0.001	mg/L
Nickel		ND	0.001	mg/L
Zinc		ND	0.001	mg/L

Laboratory Control Sample (LCS)

Lab Sample ID: MT4-24-1107A.053.LCS

Run in Batch: MT4-24-1107A, Run Date: 11/07/2024 13:27, Prep Date: 11/07/2024, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Chromium		97	85	115
Copper		100	85	115
Nickel		96	85	115
Zinc		100	85	115

Matrix Spike (MS)

Lab Sample ID: MT4-24-1107A.070.MS, Parent Sample ID: S68216.01

Run in Batch: MT4-24-1107A, Run Date: 11/07/2024 14:06, Prep Date: 11/07/2024, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL
Chromium		107	75	125
Copper		99	75	125
Nickel		100	75	125
Zinc		107	75	125

Matrix Spike (MS)

Lab Sample ID: MT4-24-1107A.081.MS, Parent Sample ID: S68235.02

Run in Batch: MT4-24-1107A, Run Date: 11/07/2024 14:29, Prep Date: 11/07/2024, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL
Chromium		107	75	125
Copper		99	75	125
Nickel		100	75	125
Zinc		104	75	125

Matrix Spike Duplicate (MSD)

Lab Sample ID: MT4-24-1107A.071.MSD, Parent Sample ID: MT4-24-1107A.070.MS

Run in Batch: MT4-24-1107A, Run Date: 11/07/2024 14:07, Prep Date: 11/07/2024, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Chromium		107	75	125	0	20
Copper		100	75	125	0	20
Nickel		104	75	125	3	20
Zinc		103	75	125	3	20

QC Report - Batch QC Results

Metals, Prep Batch ID: MTD-110724-4 (continued)

Surrogates: No, QC Types: BLK/LCS/MS/MSD

Matrix Spike Duplicate (MSD)

Lab Sample ID: MT4-24-1107A.082.MSD, Parent Sample ID: MT4-24-1107A.081.MS

Run in Batch: MT4-24-1107A, Run Date: 11/07/2024 14:31, Prep Date: 11/07/2024, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Chromium		107	75	125	0	20
Copper		99	75	125	0	20
Nickel		102	75	125	2	20
Zinc		96	75	125	2	20



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C.O.C. PAGE # 1 OF 1

176234

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: Clifford Yantz / Kevin Schneider
 COMPANY: Ramboll
 ADDRESS: 2090 Commonwealth Blvd
 CITY: Ann Arbor STATE: MI ZIP CODE: 48105
 PHONE NO.: CELL NO.: 313-333-0211 P.O. NO.: 1940008845 Task 1
 E-MAIL ADDRESS: Kevin.Schneider@ramboll.com
 Clifford.Yantz@ramboll.com

CONTACT NAME: SAME
 COMPANY:
 ADDRESS:
 CITY: STATE: ZIP CODE:
 PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: RACER Coldwater Rd
 SAMPLER(S) - PLEASE PRINT/SIGN NAME: Lee Trumbull
 TURNAROUND TIME REQUIRED: 1 DAY 2 DAYS 3 DAYS STANDARD OTHER
 DELIVERABLES REQUIRED: LEVEL II LEVEL III LEVEL IV EDD OTHER

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
 OHIO VAP Drinking Water
 DoD NPDES
 Project Locations
 Detroit New York
 Other
 Special Instructions

MATRIX W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

Containers & Preservatives

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	COLLECTION		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	Dissolved Metals	TOC	Specific Conductivity	TDS
	DATE	TIME														
68216.01	11/5/24	1000	Vault-A-20241105	WW	5	2		1	2				X	X	X	X
.02		1050	Vault-B-20241105													
.03		1125	Vault-C-20241105													
.04		1200	Vault-D-20241105													
.05		1230	Vault-E-20241105													
.06		1315	Vault-F-20241105													
.07			Vault-DUP-20241105													

Dissolved Metals were field filtered
 Metals ARE:
 Cr, Cu, Ni, Zn

RELINQUISHED BY: [Signature] X Sampler DATE: 11/6/24 TIME: 13:01
 RECEIVED BY: [Signature] DATE: 11/6/24 TIME: 13:01
 RELINQUISHED BY: [Signature] DATE: 11/6/24 TIME: 13:53
 RECEIVED BY: [Signature] DATE: 11/6/24 TIME: 13:50

RELINQUISHED BY: DATE: TIME:
 RECEIVED BY: DATE: TIME:
 SEAL NO. SEAL INTACT YES NO INITIALS
 SEAL NO. SEAL INTACT YES NO INITIALS
 NOTES: TEMP. ON ARRIVAL 34

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE



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C.O.C. PAGE # 1 OF 1

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

CONTACT NAME **Project Management Team**
 COMPANY **Merit Laboratories**
 ADDRESS **2680 East Lansing Drive**
 CITY **East Lansing** STATE **MI** ZIP CODE **48823**
 PHONE NO. **517-332-0167** FAX NO. _____ P.O. NO. _____
 E-MAIL ADDRESS **results@meritlabs.com** QUOTE NO. _____

CONTACT NAME **Julie Teague** SAME
 COMPANY **Merit Laboratories**
 ADDRESS **2680 East Lansing Drive**
 CITY **East Lansing** STATE **MI** ZIP CODE **48823**
 PHONE NO. **517-332-0167** E-MAIL ADDRESS **juliet@meritlabs.com**

PROJECT NO./NAME **S68216** SAMPLER(S) - PLEASE PRINT/SIGN NAME _____
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIFE A=AIR W=WASTE

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives								TOC
	DATE	TIME				NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MnOH	OTHER		
	11/5/24	1000	S68216.01	ww	2				2					✓
	11/5/24	1050	S68216.02	ww	2				2					✓
	11/5/24	1125	S68216.03	ww	2				2					✓
	11/5/24	1200	S68216.04	ww	2				2					✓
	11/5/24	1230	S68216.05	ww	2				2					✓
	11/5/24	1315	S68216.06	ww	2				2					✓
	11/5/24	0001	S68216.07	ww	2				2					✓

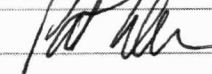
ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
 OHIO VAP Drinking Water
 DoD NPDES

Project Locations
 Detroit New York
 Other _____

Special Instructions
Method SM5310C

**** Subcontracted to Eurofins**

RELINQUISHED BY:  Sampler DATE _____ TIME _____
 RECEIVED BY: _____ DATE _____ TIME _____
 SIGNATURE/ORGANIZATION _____

RELINQUISHED BY: _____ DATE _____ TIME _____
 RECEIVED BY: _____ DATE _____ TIME _____
 SIGNATURE/ORGANIZATION _____

SEAL NO. _____ SEAL INTACT YES NO INITIALS _____
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____

NOTES: _____ TEMP. ON ARRIVAL _____

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

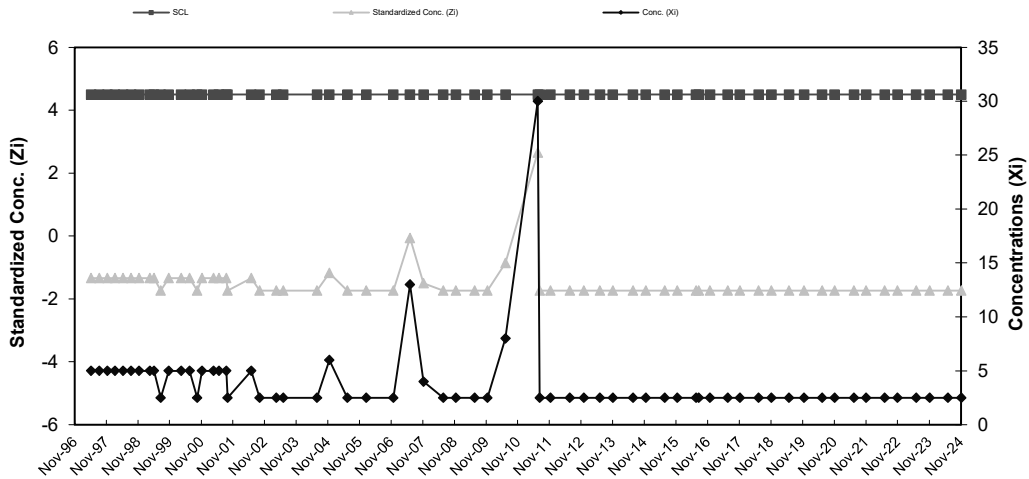
APPENDIX C
LEAK DETECTION VAULT CONTROL CHARTS

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

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	5	-1.34	46	Nov-11	4.5	2.5	-1.74
10	Aug-97	4.5	5	-1.34	47	Jun-12	4.5	2.5	-1.74
11	Nov-97	4.5	5	-1.34	48	Dec-12	4.5	2.5	-1.74
12	Feb-98	4.5	5	-1.34	49	Jun-13	4.5	2.5	-1.74
13	May-98	4.5	5	-1.34	50	Nov-13	4.5	2.5	-1.74
14	Aug-98	4.5	5	-1.34	51	Jun-14	4.5	2.5	-1.74
15	Nov-98	4.5	5	-1.34	52	Nov-14	4.5	2.5	-1.74
16	Mar-99	4.5	5	-1.34	53	Jun-15	4.5	2.5	-1.74
17	May-99	4.5	5	-1.34	54	Nov-15	4.5	2.5	-1.74
18	Jul-99	4.5	2.5	-1.74	55	Jun-16	4.5	2.5	-1.74
19	Oct-99	4.5	5	-1.34	56	Jul-16	4.5	2.5	-1.74
20	Mar-00	4.5	5	-1.34	57	Nov-16	4.5	2.5	-1.74
21	Jun-00	4.5	5	-1.34	58	Jun-17	4.5	2.5	-1.74
22	Sep-00	4.5	2.5	-1.74	59	Nov-17	4.5	2.5	-1.74
23	Nov-00	4.5	5	-1.34	60	Jun-18	4.5	2.5	-1.74
24	Mar-01	4.5	5	-1.34	61	Nov-18	4.5	2.5	-1.74
25	May-01	4.5	5	-1.34	62	May-19	4.5	2.5	-1.74
26	Aug-01	4.5	2.5	-1.74	63	Nov-19	4.5	2.5	-1.74
27	Aug-01	4.5	5	-1.34	64	Jun-20	4.5	2.5	-1.74
28	May-02	4.5	5	-1.34	65	Nov-20	4.5	2.5	-1.74
29	Sep-02	4.5	2.5	-1.74	66	Jun-21	4.5	2.5	-1.74
30	Mar-03	4.5	2.5	-1.74	67	Nov-21	4.5	2.5	-1.74
31	Jun-03	4.5	2.5	-1.74	68	Jun-22	4.5	2.5	-1.74
32	Jun-04	4.5	2.5	-1.74	69	Nov-22	4.5	2.5	-1.74
33	Nov-04	4.5	6	-1.18	70	Jun-23	4.5	2.5	-1.74
34	Jun-05	4.5	2.5	-1.74	71	Nov-23	4.5	2.5	-1.74
35	Jan-06	4.5	2.5	-1.74	72	Jun-24	4.5	2.5	-1.74
36	Nov-06	4.5	2.5	-1.74	73	Nov-24	4.5	2.5	-1.74
37	Jun-07	4.5	13	-0.06					
38	Nov-07	4.5	4	-1.50					
39	Jun-08	4.5	2.5	-1.74					
40	Nov-08	4.5	2.5	-1.74					
41	Jun-09	4.5	2.5	-1.74					
42	Nov-09	4.5	2.5	-1.74					
43	Jun-10	4.5	8	-0.86					
44	Jun-11	4.5	30	2.66					
45	Jul-11	4.5	2.5	-1.74					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

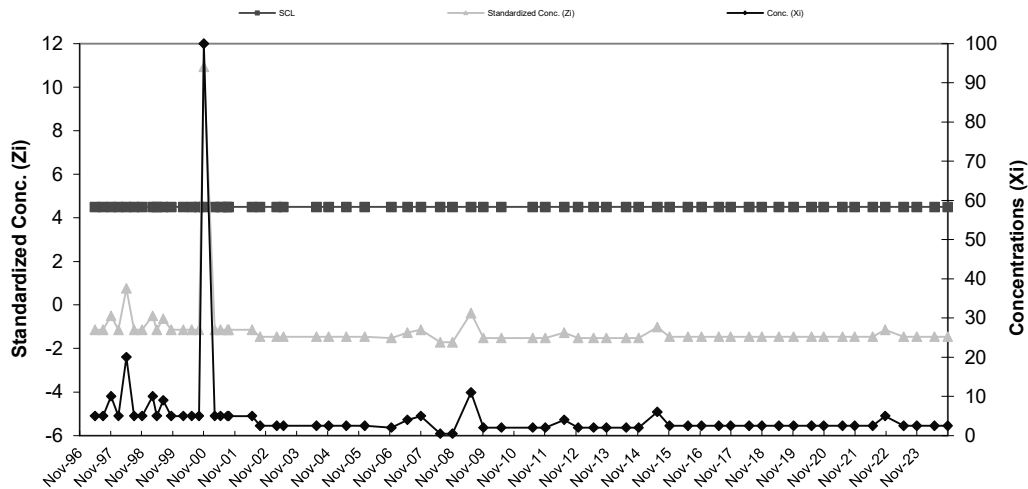


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - Copper**

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)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	5	-1.14	45	Nov-11	4.5	2	-1.52
10	Aug-97	4.5	5	-1.14	46	Jun-12	4.5	4	-1.27
11	Nov-97	4.5	10	-0.51	47	Dec-12	4.5	2	-1.52
12	Feb-98	4.5	5	-1.14	48	Jun-13	4.5	2	-1.52
13	May-98	4.5	20	0.76	49	Nov-13	4.5	2	-1.52
14	Aug-98	4.5	5	-1.14	50	Jun-14	4.5	2	-1.52
15	Nov-98	4.5	5	-1.14	51	Nov-14	4.5	2	-1.52
16	Mar-99	4.5	10	-0.51	52	Jun-15	4.5	6	-1.02
17	May-99	4.5	5	-1.14	53	Nov-15	4.5	2.5	-1.46
18	Jul-99	4.5	9	-0.64	54	Jun-16	4.5	2.5	-1.46
19	Oct-99	4.5	5	-1.14	55	Nov-16	4.5	2.5	-1.46
20	Mar-00	4.5	5	-1.14	56	Jun-17	4.5	2.5	-1.46
21	Jun-00	4.5	5	-1.14	57	Nov-17	4.5	2.5	-1.46
22	Sep-00	4.5	5	-1.14	58	Jun-18	4.5	2.5	-1.46
23	Nov-00	4.5	100	10.92	59	Nov-18	4.5	2.5	-1.46
24	Mar-01	4.5	5	-1.14	60	May-19	4.5	2.5	-1.46
25	May-01	4.5	5	-1.14	61	Nov-19	4.5	2.5	-1.46
26	Aug-01	4.5	5	-1.14	62	Jun-20	4.5	2.5	-1.46
27	Aug-01	4.5	5	-1.14	63	Nov-20	4.5	2.5	-1.46
28	May-02	4.5	5	-1.14	64	Jun-21	4.5	2.5	-1.46
29	Sep-02	4.5	2.5	-1.46	65	Nov-21	4.5	2.5	-1.46
30	Mar-03	4.5	2.5	-1.46	66	Jun-22	4.5	2.5	-1.46
31	Jun-03	4.5	2.5	-1.46	67	Nov-22	4.5	5	-1.14
32	Jun-04	4.5	2.5	-1.46	68	Jun-23	4.5	2.5	-1.46
33	Nov-04	4.5	2.5	-1.46	69	Nov-23	4.5	2.5	-1.46
34	Jun-05	4.5	2.5	-1.46	70	Jun-24	4.5	2.5	-1.46
35	Jan-06	4.5	2.5	-1.46	71	Nov-24	4.5	2.5	-1.46
36	Nov-06	4.5	2	-1.52					
37	Jun-07	4.5	4	-1.27					
38	Nov-07	4.5	5	-1.14					
39	Jun-08	4.5	0.5	-1.71					
40	Nov-08	4.5	0.5	-1.71					
41	Jun-09	4.5	11	-0.38					
42	Nov-09	4.5	2	-1.52					
43	Jun-10	4.5	2	-1.52					
44	Jun-11	4.5	2	-1.52					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

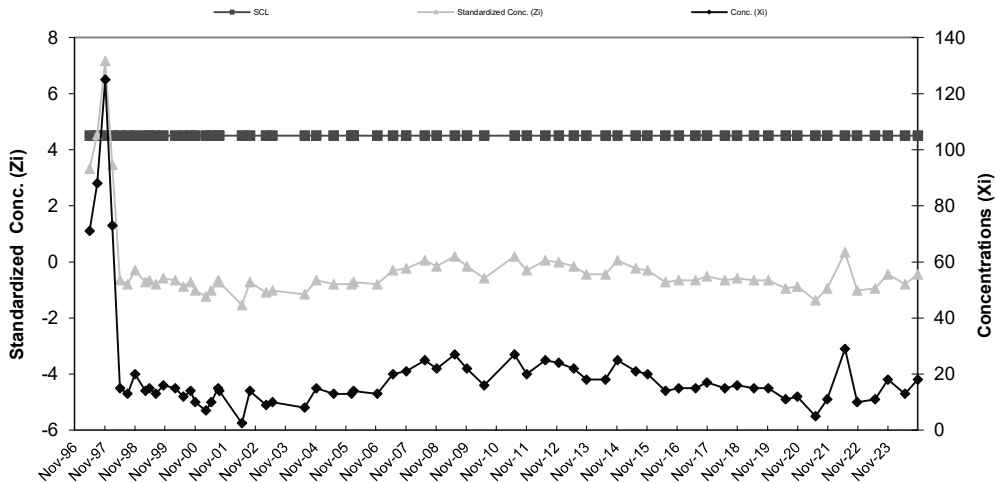


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - Nickel

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	71	3.32	46	Nov-11	4.5	20	-0.30
10	Aug-97	4.5	88	4.53	47	Jun-12	4.5	25	0.05
11	Nov-97	4.5	125	7.16	48	Dec-12	4.5	24	-0.02
12	Feb-98	4.5	73	3.47	49	Jun-13	4.5	22	-0.16
13	May-98	4.5	15	-0.66	50	Nov-13	4.5	18	-0.44
14	Aug-98	4.5	13	-0.80	51	Jun-14	4.5	18	-0.44
15	Nov-98	4.5	20	-0.30	52	Nov-14	4.5	25	0.05
16	Mar-99	4.5	14	-0.73	53	Jun-15	4.5	21	-0.23
17	May-99	4.5	15	-0.66	54	Nov-15	4.5	20	-0.30
18	Jul-99	4.5	13	-0.80	55	Jun-16	4.5	14	-0.73
19	Oct-99	4.5	16	-0.59	56	Nov-16	4.5	15	-0.66
20	Mar-00	4.5	15	-0.66	57	Jun-17	4.5	15	-0.66
21	Jun-00	4.5	12	-0.87	58	Nov-17	4.5	17	-0.52
22	Sep-00	4.5	14	-0.73	59	Jun-18	4.5	15	-0.66
23	Nov-00	4.5	10	-1.01	60	Nov-18	4.5	16	-0.59
24	Mar-01	4.5	7	-1.23	61	May-19	4.5	15	-0.66
25	May-01	4.5	10	-1.01	62	Nov-19	4.5	15	-0.66
26	Aug-01	4.5	14	-0.73	63	Jun-20	4.5	11	-0.94
27	Aug-01	4.5	15	-0.66	64	Nov-20	4.5	12	-0.87
28	May-02	4.5	2.5	-1.55	65	Jun-21	4.5	5	-1.37
29	Sep-02	4.5	14	-0.73	66	Nov-21	4.5	11	-0.94
30	Mar-03	4.5	9	-1.08	67	Jun-22	4.5	29	0.34
31	Jun-03	4.5	10	-1.01	68	Nov-22	4.5	10	-1.01
32	Jun-04	4.5	8	-1.16	69	Jun-23	4.5	11	-0.94
33	Nov-04	4.5	15	-0.66	70	Nov-23	4.5	18	-0.44
34	Jun-05	4.5	13	-0.80	71	Jun-24	4.5	13	-0.80
35	Jan-06	4.5	13	-0.80	72	Nov-24	4.5	18	-0.44
36	Feb-06	4.5	14	-0.73					
37	Nov-06	4.5	13	-0.80					
38	Jun-07	4.5	20	-0.30					
39	Nov-07	4.5	21	-0.23					
40	Jun-08	4.5	25	0.05					
41	Nov-08	4.5	22	-0.16					
42	Jun-09	4.5	27	0.20					
43	Nov-09	4.5	22	-0.16					
44	Jun-10	4.5	16	-0.59					
45	Jun-11	4.5	27	0.20					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

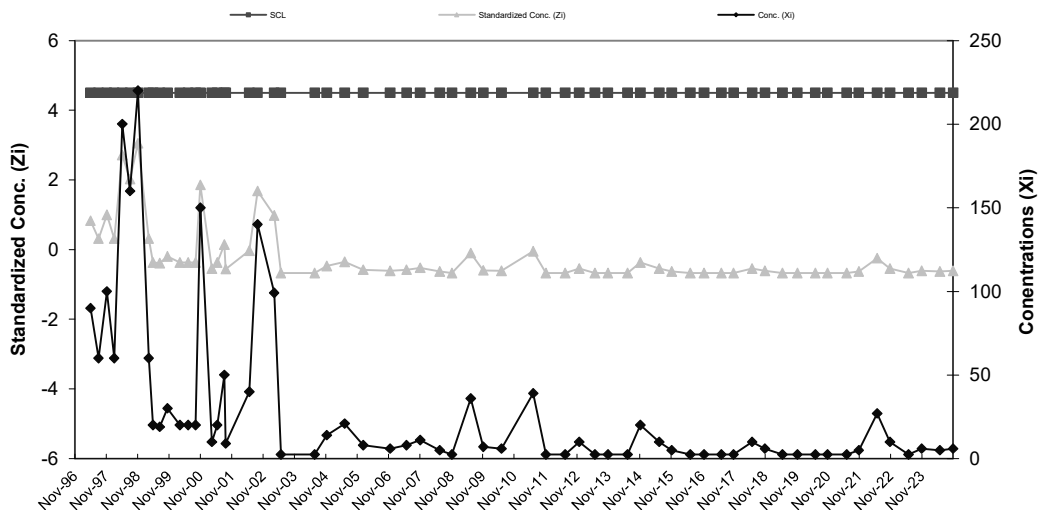


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - Zinc

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)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	90	0.83	45	Nov-11	4.5	2.5	-0.67
10	Aug-97	4.5	60	0.31	46	Jun-12	4.5	2.5	-0.67
11	Nov-97	4.5	100	1.00	47	Dec-12	4.5	10	-0.54
12	Feb-98	4.5	60	0.31	48	Jun-13	4.5	2.5	-0.67
13	May-98	4.5	200	2.71	49	Nov-13	4.5	2.5	-0.67
14	Aug-98	4.5	160	2.02	50	Jun-14	4.5	2.5	-0.67
15	Nov-98	4.5	220	3.05	51	Nov-14	4.5	20	-0.37
16	Mar-99	4.5	60	0.31	52	Jun-15	4.5	10	-0.54
17	May-99	4.5	20	-0.37	53	Nov-15	4.5	5	-0.63
18	Jul-99	4.5	19	-0.39	54	Jun-16	4.5	2.5	-0.67
19	Oct-99	4.5	30	-0.20	55	Nov-16	4.5	2.5	-0.67
20	Mar-00	4.5	20	-0.37	56	Jun-17	4.5	2.5	-0.67
21	Jun-00	4.5	20	-0.37	57	Nov-17	4.5	2.5	-0.67
22	Sep-00	4.5	20	-0.37	58	Jun-18	4.5	10	-0.54
23	Nov-00	4.5	150	1.85	59	Nov-18	4.5	6	-0.61
24	Mar-01	4.5	10	-0.54	60	May-19	4.5	2.5	-0.67
25	May-01	4.5	20	-0.37	61	Nov-19	4.5	2.5	-0.67
26	Aug-01	4.5	9	-0.56	62	Jun-20	4.5	2.5	-0.67
27	Aug-01	4.5	50	0.14	63	Nov-20	4.5	2.5	-0.67
28	May-02	4.5	40	-0.03	64	Jun-21	4.5	2.5	-0.67
29	Sep-02	4.5	140	1.68	65	Nov-21	4.5	5	-0.63
30	Mar-03	4.5	99	0.98	66	Jun-22	4.5	27	-0.25
31	Jun-03	4.5	2.5	-0.67	67	Nov-22	4.5	10	-0.54
32	Jun-04	4.5	2.5	-0.67	68	Jun-23	4.5	2.5	-0.67
33	Nov-04	4.5	14	-0.47	69	Nov-23	4.5	6	-0.61
34	Jun-05	4.5	21	-0.35	70	Jun-24	4.5	5	-0.63
35	Jan-06	4.5	8	-0.58	71	Nov-24	4.5	6	-0.61
36	Nov-06	4.5	6	-0.61					
37	Jun-07	4.5	8	-0.58					
38	Nov-07	4.5	11	-0.53					
39	Jun-08	4.5	5	-0.63					
40	Nov-08	4.5	2.5	-0.67					
41	Jun-09	4.5	36	-0.10					
42	Nov-09	4.5	7	-0.59					
43	Jun-10	4.5	6	-0.61					
44	Jun-11	4.5	39	-0.05					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

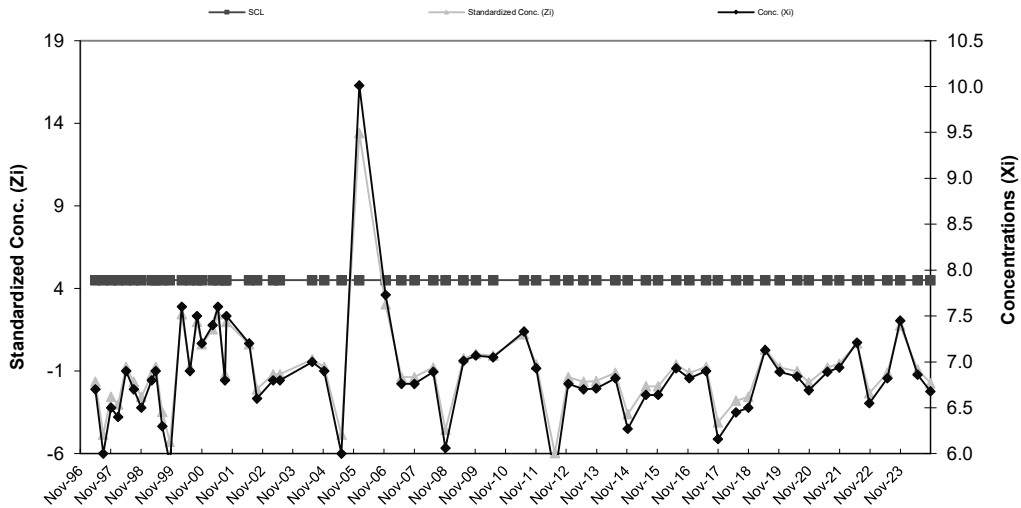


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - pH**

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)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	6.70	-1.65	45	Nov-11	4.5	6.93	-0.60
10	Aug-97	4.5	6.00	-4.83	46	Jun-12	4.5	5.75	-5.97
11	Nov-97	4.5	6.50	-2.56	47	Dec-12	4.5	6.76	-1.38
12	Feb-98	4.5	6.40	-3.01	48	Jun-13	4.5	6.7	-1.65
13	May-98	4.5	6.90	-0.74	49	Nov-13	4.5	6.71	-1.60
14	Aug-98	4.5	6.70	-1.65	50	Jun-14	4.5	6.82	-1.10
15	Nov-98	4.5	6.50	-2.56	51	Nov-14	4.5	6.27	-3.60
16	Mar-99	4.5	6.80	-1.19	52	Jun-15	4.5	6.64	-1.92
17	May-99	4.5	6.90	-0.74	53	Nov-15	4.5	6.64	-1.92
18	Jul-99	4.5	6.30	-3.47	54	Jun-16	4.5	6.93	-0.60
19	Oct-99	4.5	5.90	-5.28	55	Nov-16	4.5	6.82	-1.10
20	Mar-00	4.5	7.60	2.44	56	Jun-17	4.5	6.9	-0.74
21	Jun-00	4.5	6.90	-0.74	57	Nov-17	4.5	6.16	-4.10
22	Sep-00	4.5	7.50	1.99	58	Jun-18	4.5	6.45	-2.78
23	Nov-00	4.5	7.20	0.63	59	Nov-18	4.5	6.5	-2.56
24	Mar-01	4.5	7.40	1.53	60	May-19	4.5	7.13	0.31
25	May-01	4.5	7.60	2.44	61	Nov-19	4.5	6.89	-0.78
26	Aug-01	4.5	7.50	1.99	62	Jun-20	4.5	6.84	-1.01
27	Aug-01	4.5	6.80	-1.19	63	Nov-20	4.5	6.69	-1.69
28	May-02	4.5	7.20	0.63	64	Jun-21	4.5	6.89	-0.78
29	Sep-02	4.5	6.60	-2.10	65	Nov-21	4.5	6.94	-0.56
30	Mar-03	4.5	6.80	-1.19	66	Jun-22	4.5	7.21	0.67
31	Jun-03	4.5	6.80	-1.19	67	Nov-22	4.5	6.55	-2.33
32	Jun-04	4.5	7.00	-0.28	68	Jun-23	4.5	6.82	-1.10
33	Nov-04	4.5	6.90	-0.74	69	Nov-23	4.5	7.45	1.76
34	Jun-05	4.5	6.00	-4.83	70	Jun-24	4.5	6.86	-0.92
35	Jan-06	4.5	10.01	13.40	71	Nov-24	4.5	6.68	-1.74
36	Nov-06	4.5	7.73	3.03					
37	Jun-07	4.5	6.76	-1.38					
38	Nov-07	4.5	6.76	-1.38					
39	Jun-08	4.5	6.89	-0.78					
40	Nov-08	4.5	6.06	-4.56					
41	Jun-09	4.5	7.01	-0.24					
42	Nov-09	4.5	7.07	0.03					
43	Jun-10	4.5	7.05	-0.06					
44	Jun-11	4.5	7.33	1.22					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

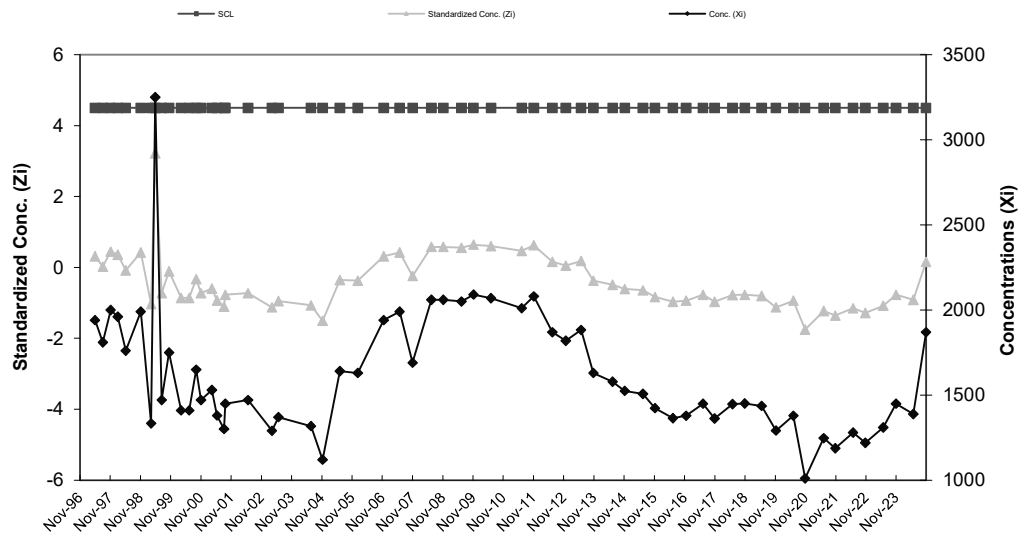


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - SpC**

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)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	1940	0.31	43	Nov-11	4.5	2080	0.62
10	Aug-97	4.5	1810	0.02	44	Jun-12	4.5	1870	0.16
11	Nov-97	4.5	2000	0.45	45	Dec-12	4.5	1820	0.05
12	Feb-98	4.5	1960	0.36	46	Jun-13	4.5	1882	0.18
13	May-98	4.5	1760	-0.09	47	Nov-13	4.5	1630	-0.37
14	Nov-98	4.5	1990	0.42	48	Jun-14	4.5	1579	-0.49
15	Mar-99	4.5	1334	-1.03	49	Nov-14	4.5	1525	-0.61
16	May-99	4.5	3250	3.22	50	Jun-15	4.5	1507	-0.65
17	Jul-99	4.5	1470	-0.73	51	Nov-15	4.5	1423	-0.83
18	Oct-99	4.5	1750	-0.11	52	Jun-16	4.5	1364	-0.96
19	Mar-00	4.5	1410	-0.86	53	Nov-16	4.5	1378	-0.93
20	Jun-00	4.5	1410	-0.86	54	Jun-17	4.5	1450	-0.77
21	Sep-00	4.5	1650	-0.33	55	Nov-17	4.5	1363	-0.97
22	Nov-00	4.5	1470	-0.73	56	Jun-18	4.5	1447	-0.78
23	Mar-01	4.5	1530	-0.60	57	Nov-18	4.5	1451	-0.77
24	May-01	4.5	1380	-0.93	58	May-19	4.5	1436	-0.80
25	Aug-01	4.5	1450	-0.77	59	Nov-19	4.5	1291	-1.13
26	Aug-01	4.5	1300	-1.11	60	Jun-20	4.5	1378	-0.93
27	May-02	4.5	1470	-0.73	61	Nov-20	4.5	1010	-1.75
28	Mar-03	4.5	1290	-1.13	62	Jun-21	4.5	1247	-1.22
29	Jun-03	4.5	1370	-0.95	63	Nov-21	4.5	1187	-1.36
30	Jun-04	4.5	1318	-1.07	64	Jun-22	4.5	1280	-1.15
31	Nov-04	4.5	1120	-1.51	65	Nov-22	4.5	1219	-1.29
32	Jun-05	4.5	1640	-0.35	66	Jun-23	4.5	1310	-1.08
33	Jan-06	4.5	1630	-0.37	67	Nov-23	4.5	1450	-0.77
34	Nov-06	4.5	1940	0.31	68	Jun-24	4.5	1389	-0.91
35	Jun-07	4.5	1990	0.42	69	Nov-24	4.5	1869	0.16
36	Nov-07	4.5	1690	-0.24					
37	Jun-08	4.5	2060	0.58					
38	Nov-08	4.5	2060	0.58					
39	Jun-09	4.5	2050	0.56					
40	Nov-09	4.5	2090	0.65					
41	Jun-10	4.5	2070	0.60					
42	Jun-11	4.5	2010	0.47					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

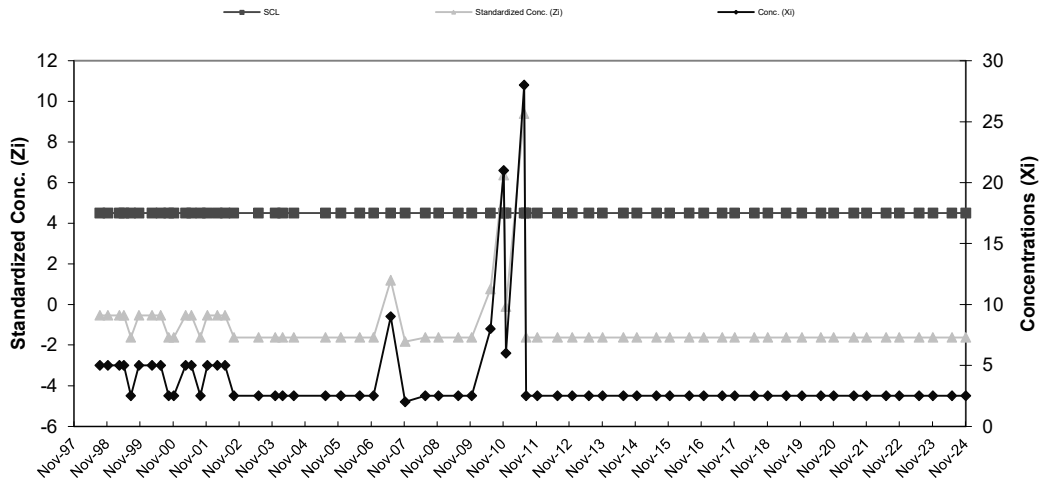


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - Chromium**

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-98	4.5	5	-0.54	45	Nov-11	4.5	2.5	-1.62
10	Nov-98	4.5	5	-0.54	46	Jun-12	4.5	2.5	-1.62
11	Mar-99	4.5	5	-0.54	47	Dec-12	4.5	2.5	-1.62
12	May-99	4.5	5	-0.54	48	Jun-13	4.5	2.5	-1.62
13	Jul-99	4.5	2.5	-1.62	49	Nov-13	4.5	2.5	-1.62
14	Oct-99	4.5	5	-0.54	50	Jun-14	4.5	2.5	-1.62
15	Mar-00	4.5	5	-0.54	51	Nov-14	4.5	2.5	-1.62
16	Jun-00	4.5	5	-0.54	52	Jun-15	4.5	2.5	-1.62
17	Sep-00	4.5	2.5	-1.62	53	Nov-15	4.5	2.5	-1.62
18	Nov-00	4.5	2.5	-1.62	54	Jun-16	4.5	2.5	-1.62
19	Mar-01	4.5	5	-0.54	55	Nov-16	4.5	2.5	-1.62
20	May-01	4.5	5	-0.54	56	Jun-17	4.5	2.5	-1.62
21	Aug-01	4.5	2.5	-1.62	57	Nov-17	4.5	2.5	-1.62
22	Nov-01	4.5	5	-0.54	58	Jun-18	4.5	2.5	-1.62
23	Mar-02	4.5	5	-0.54	59	Nov-18	4.5	2.5	-1.62
24	May-02	4.5	5	-0.54	60	May-19	4.5	2.5	-1.62
25	Sep-02	4.5	2.5	-1.62	61	Nov-19	4.5	2.5	-1.62
26	Jun-03	4.5	2.5	-1.62	62	Jun-20	4.5	2.5	-1.62
27	Dec-03	4.5	2.5	-1.62	63	Nov-20	4.5	2.5	-1.62
28	Feb-04	4.5	2.5	-1.62	64	Jun-21	4.5	2.5	-1.62
29	Jun-04	4.5	2.5	-1.62	65	Nov-21	4.5	2.5	-1.62
30	Jun-05	4.5	2.5	-1.62	66	Jun-22	4.5	2.5	-1.62
31	Dec-05	4.5	2.5	-1.62	67	Nov-22	4.5	2.5	-1.62
32	Jun-06	4.5	2.5	-1.62	68	Jun-23	4.5	2.5	-1.62
33	Nov-06	4.5	2.5	-1.62	69	Nov-23	4.5	2.5	-1.62
34	Jun-07	4.5	9	1.19	70	Jun-24	4.5	2.5	-1.62
35	Nov-07	4.5	2	-1.84	71	Nov-24	4.5	2.5	-1.62
36	Jun-08	4.5	2.5	-1.62					
37	Nov-08	4.5	2.5	-1.62					
38	Jun-09	4.5	2.5	-1.62					
39	Nov-09	4.5	2.5	-1.62					
40	Jun-10	4.5	8	0.76					
41	Nov-10	4.5	21	6.37					
42	Dec-10	4.5	6	-0.11					
43	Jun-11	4.5	28	9.40					
44	Jul-11	4.5	2.5	-1.62					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

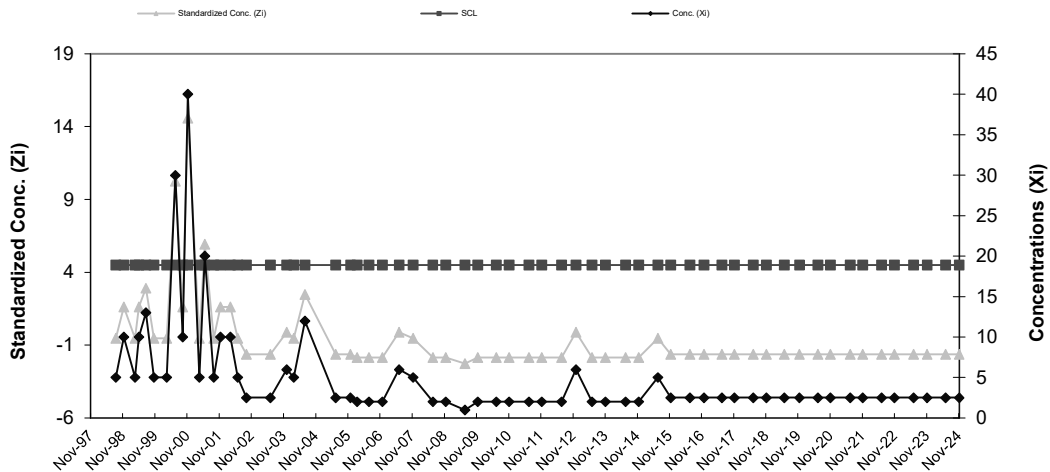


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - Copper**

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)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-98	4.5	5	-0.54	44	Nov-11	4.5	2	-1.84
10	Nov-98	4.5	10	1.62	45	Jun-12	4.5	2	-1.84
11	Mar-99	4.5	5	-0.54	46	Dec-12	4.5	6	-0.11
12	May-99	4.5	10	1.62	47	Jun-13	4.5	2	-1.84
13	Jul-99	4.5	13	2.92	48	Nov-13	4.5	2	-1.84
14	Oct-99	4.5	5	-0.54	49	Jun-14	4.5	2	-1.84
15	Mar-00	4.5	5	-0.54	50	Nov-14	4.5	2	-1.84
16	Jun-00	4.5	30	10.26	51	Jun-15	4.5	5	-0.54
17	Sep-00	4.5	10	1.62	52	Nov-15	4.5	2.5	-1.62
18	Nov-00	4.5	40	14.58	53	Jun-16	4.5	2.5	-1.62
19	Mar-01	4.5	5	-0.54	54	Nov-16	4.5	2.5	-1.62
20	May-01	4.5	20	5.94	55	Jun-17	4.5	2.5	-1.62
21	Aug-01	4.5	5	-0.54	56	Nov-17	4.5	2.5	-1.62
22	Nov-01	4.5	10	1.62	57	Jun-18	4.5	2.5	-1.62
23	Mar-02	4.5	10	1.62	58	Nov-18	4.5	2.5	-1.62
24	May-02	4.5	5	-0.54	59	May-19	4.5	2.5	-1.62
25	Sep-02	4.5	2.5	-1.62	60	Nov-19	4.5	2.5	-1.62
26	Jun-03	4.5	2.5	-1.62	61	Jun-20	4.5	2.5	-1.62
27	Dec-03	4.5	6	-0.11	62	Nov-20	4.5	2.5	-1.62
28	Feb-04	4.5	5	-0.54	63	Jun-21	4.5	2.5	-1.62
29	Jun-04	4.5	12	2.48	64	Nov-21	4.5	2.5	-1.62
30	Jun-05	4.5	2.5	-1.62	65	Jun-22	4.5	2.5	-1.62
31	Dec-05	4.5	2.5	-1.62	66	Nov-22	4.5	2.5	-1.62
32	Feb-06	4.5	2	-1.84	67	Jun-23	4.5	2.5	-1.62
33	Jun-06	4.5	2	-1.84	68	Nov-23	4.5	2.5	-1.62
34	Nov-06	4.5	2	-1.84	69	Jun-24	4.5	2.5	-1.62
35	Jun-07	4.5	6	-0.11	70	Nov-24	4.5	2.5	-1.62
36	Nov-07	4.5	5	-0.54					
37	Jun-08	4.5	2	-1.84					
38	Nov-08	4.5	2	-1.84					
39	Jun-09	4.5	1	-2.27					
40	Nov-09	4.5	2	-1.84					
41	Jun-10	4.5	2	-1.84					
42	Nov-10	4.5	2	-1.84					
43	Jun-11	4.5	2	-1.84					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

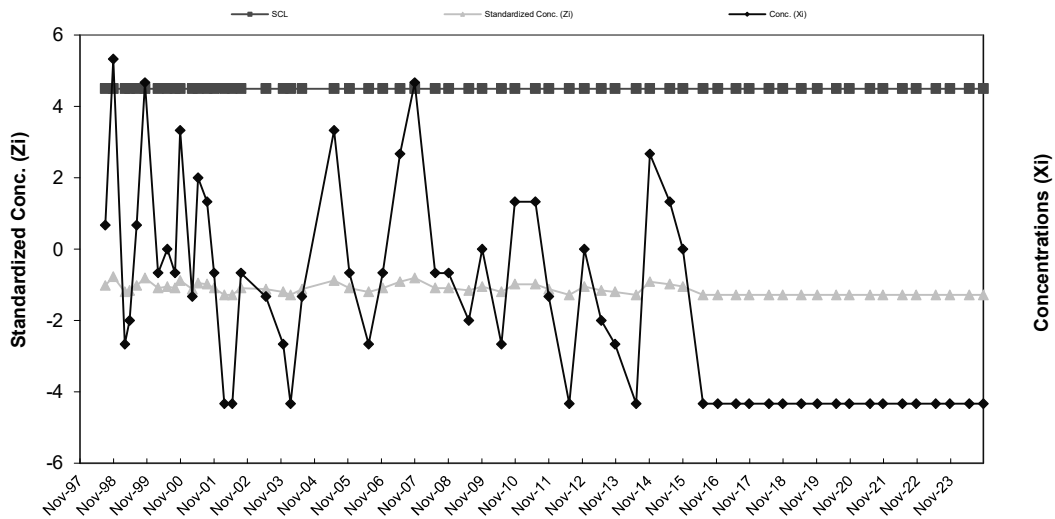


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - Nickel**

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)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-98	4.5	10	-1.02	43	Nov-11	4.5	7	-1.12
10	Nov-98	4.5	17	-0.77	44	Jun-12	4.5	2.5	-1.28
11	Mar-99	4.5	5	-1.20	45	Dec-12	4.5	9	-1.05
12	May-99	4.5	6	-1.16	46	Jun-13	4.5	6	-1.16
13	Jul-99	4.5	10	-1.02	47	Nov-13	4.5	5	-1.20
14	Oct-99	4.5	16	-0.81	48	Jun-14	4.5	2.5	-1.28
15	Mar-00	4.5	8	-1.09	49	Nov-14	4.5	13	-0.91
16	Jun-00	4.5	9	-1.05	50	Jun-15	4.5	11	-0.98
17	Sep-00	4.5	8	-1.09	51	Nov-15	4.5	9	-1.05
18	Nov-00	4.5	14	-0.88	52	Jun-16	4.5	2.5	-1.28
19	Mar-01	4.5	7	-1.12	53	Nov-16	4.5	2.5	-1.28
20	May-01	4.5	12	-0.95	54	Jun-17	4.5	2.5	-1.28
21	Aug-01	4.5	11	-0.98	55	Nov-17	4.5	2.5	-1.28
22	Nov-01	4.5	8	-1.09	56	Jun-18	4.5	2.5	-1.28
23	Mar-02	4.5	2.5	-1.28	57	Nov-18	4.5	2.5	-1.28
24	May-02	4.5	2.5	-1.28	58	May-19	4.5	2.5	-1.28
25	Sep-02	4.5	8	-1.09	59	Nov-19	4.5	2.5	-1.28
26	Jun-03	4.5	7	-1.12	60	Jun-20	4.5	2.5	-1.28
27	Dec-03	4.5	5	-1.20	61	Nov-20	4.5	2.5	-1.28
28	Feb-04	4.5	2.5	-1.28	62	Jun-21	4.5	2.5	-1.28
29	Jun-04	4.5	7	-1.12	63	Nov-21	4.5	2.5	-1.28
30	Jun-05	4.5	14	-0.88	64	Jun-22	4.5	2.5	-1.28
31	Dec-05	4.5	8	-1.09	65	Nov-22	4.5	2.5	-1.28
32	Jun-06	4.5	5	-1.20	66	Jun-23	4.5	2.5	-1.28
33	Nov-06	4.5	8	-1.09	67	Nov-23	4.5	2.5	-1.28
34	Jun-07	4.5	13	-0.91	68	Jun-24	4.5	2.5	-1.28
35	Nov-07	4.5	16	-0.81	69	Nov-24	4.5	2.5	-1.28
36	Jun-08	4.5	8	-1.09					
37	Nov-08	4.5	8	-1.09					
38	Jun-09	4.5	6	-1.16					
39	Nov-09	4.5	9	-1.05					
40	Jun-10	4.5	5	-1.20					
41	Nov-10	4.5	11	-0.98					
42	Jun-11	4.5	11	-0.98					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

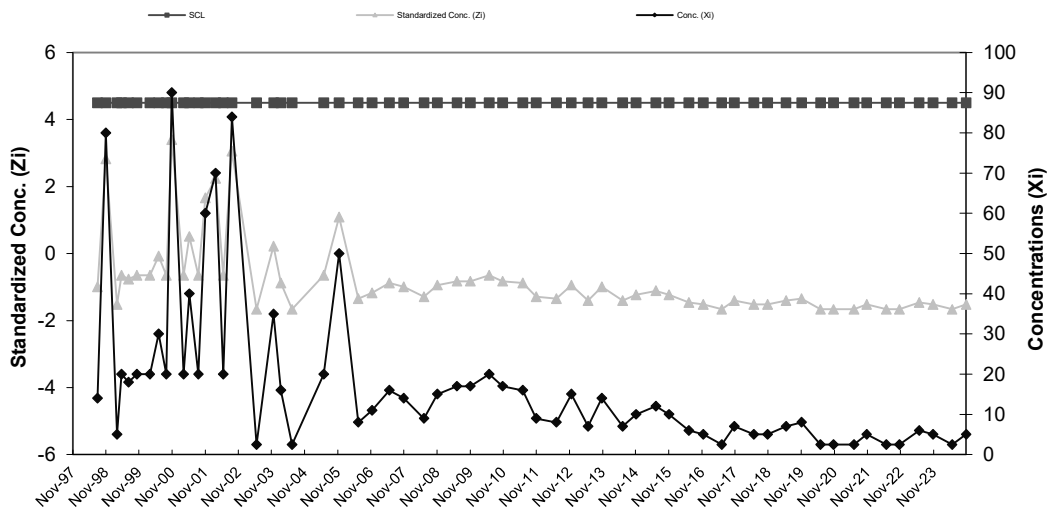


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - Zinc**

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)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-98	4.5	14	-1.00	43	Nov-11	4.5	9	-1.29
10	Nov-98	4.5	80	2.82	44	Jun-12	4.5	8	-1.35
11	Mar-99	4.5	5	-1.52	45	Dec-12	4.5	15	-0.94
12	May-99	4.5	20	-0.65	46	Jun-13	4.5	7	-1.40
13	Jul-99	4.5	18	-0.77	47	Nov-13	4.5	14	-1.00
14	Oct-99	4.5	20	-0.65	48	Jun-14	4.5	7	-1.40
15	Mar-00	4.5	20	-0.65	49	Nov-14	4.5	10	-1.23
16	Jun-00	4.5	30	-0.07	50	Jun-15	4.5	12	-1.11
17	Sep-00	4.5	20	-0.65	51	Nov-15	4.5	10	-1.23
18	Nov-00	4.5	90	3.40	52	Jun-16	4.5	6	-1.46
19	Mar-01	4.5	20	-0.65	53	Nov-16	4.5	5	-1.52
20	May-01	4.5	40	0.51	54	Jun-17	4.5	2.5	-1.66
21	Aug-01	4.5	20	-0.65	55	Nov-17	4.5	7	-1.40
22	Nov-01	4.5	60	1.66	56	Jun-18	4.5	5	-1.52
23	Mar-02	4.5	70	2.24	57	Nov-18	4.5	5	-1.52
24	May-02	4.5	20	-0.65	58	May-19	4.5	7	-1.40
25	Sep-02	4.5	84	3.05	59	Nov-19	4.5	8	-1.35
26	Jun-03	4.5	2.5	-1.66	60	Jun-20	4.5	2.5	-1.66
27	Dec-03	4.5	35	0.22	61	Nov-20	4.5	2.5	-1.66
28	Feb-04	4.5	16	-0.88	62	Jun-21	4.5	2.5	-1.66
29	Jun-04	4.5	2.5	-1.66	63	Nov-21	4.5	5	-1.52
30	Jun-05	4.5	20	-0.65	64	Jun-22	4.5	2.5	-1.66
31	Dec-05	4.5	50	1.09	65	Nov-22	4.5	2.5	-1.66
32	Jun-06	4.5	8	-1.35	66	Jun-23	4.5	6	-1.46
33	Nov-06	4.5	11	-1.17	67	Nov-23	4.5	5	-1.52
34	Jun-07	4.5	16	-0.88	68	Jun-24	4.5	2.5	-1.66
35	Nov-07	4.5	14	-1.00	69	Nov-24	4.5	5	-1.52
36	Jun-08	4.5	9	-1.29					
37	Nov-08	4.5	15	-0.94					
38	Jun-09	4.5	17	-0.83					
39	Nov-09	4.5	17	-0.83					
40	Jun-10	4.5	20	-0.65					
41	Nov-10	4.5	17	-0.83					
42	Jun-11	4.5	16	-0.88					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

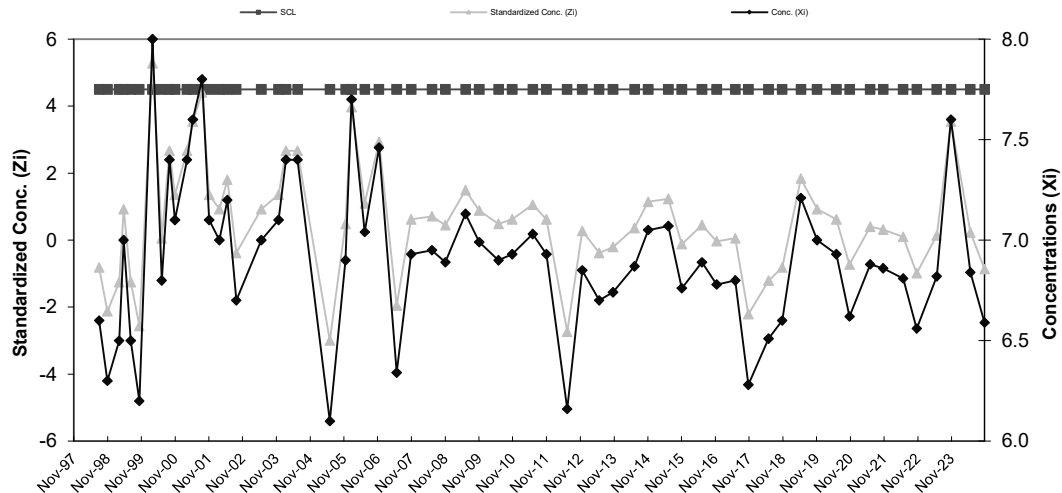


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - pH**

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)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-98	4.5	6.60	-0.82	44	Nov-11	4.5	6.93	0.62
10	Nov-98	4.5	6.30	-2.12	45	Jun-12	4.5	6.16	-2.73
11	Mar-99	4.5	6.50	-1.25	46	Dec-12	4.5	6.85	0.27
12	May-99	4.5	7.00	0.93	47	Jun-13	4.5	6.7	-0.38
13	Jul-99	4.5	6.50	-1.25	48	Nov-13	4.5	6.74	-0.21
14	Oct-99	4.5	6.20	-2.56	49	Jun-14	4.5	6.87	0.36
15	Mar-00	4.5	8.00	5.28	50	Nov-14	4.5	7.05	1.14
16	Jun-00	4.5	6.80	0.05	51	Jun-15	4.5	7.07	1.23
17	Sep-00	4.5	7.40	2.67	52	Nov-15	4.5	6.76	-0.12
18	Nov-00	4.5	7.10	1.36	53	Jun-16	4.5	6.89	0.45
19	Mar-01	4.5	7.40	2.67	54	Nov-16	4.5	6.78	-0.03
20	May-01	4.5	7.60	3.54	55	Jun-17	4.5	6.8	0.05
21	Aug-01	4.5	7.80	4.41	56	Nov-17	4.5	6.28	-2.21
22	Nov-01	4.5	7.10	1.36	57	Jun-18	4.5	6.51	-1.21
23	Mar-02	4.5	7.00	0.93	58	Nov-18	4.5	6.6	-0.82
24	May-02	4.5	7.20	1.80	59	May-19	4.5	7.21	1.84
25	Sep-02	4.5	6.70	-0.38	60	Nov-19	4.5	7	0.93
26	Jun-03	4.5	7.00	0.93	61	Jun-20	4.5	6.93	0.62
27	Dec-03	4.5	7.10	1.36	62	Nov-20	4.5	6.62	-0.73
28	Feb-04	4.5	7.40	2.67	63	Jun-21	4.5	6.88	0.40
29	Jun-04	4.5	7.40	2.67	64	Nov-21	4.5	6.86	0.32
30	Jun-05	4.5	6.10	-3.00	65	Jun-22	4.5	6.81	0.10
31	Dec-05	4.5	6.90	0.49	66	Nov-22	4.5	6.56	-0.99
32	Feb-06	4.5	7.70	3.98	67	Jun-23	4.5	6.82	0.14
33	Jun-06	4.5	7.04	1.10	68	Nov-23	4.5	7.6	3.54
34	Nov-06	4.5	7.46	2.93	69	Jun-24	4.5	6.84	0.23
35	Jun-07	4.5	6.34	-1.95	70	Nov-24	4.5	6.59	-0.86
36	Nov-07	4.5	6.93	0.62					
37	Jun-08	4.5	6.95	0.71					
38	Nov-08	4.5	6.89	0.45					
39	Jun-09	4.5	7.13	1.49					
40	Nov-09	4.5	6.99	0.88					
41	Jun-10	4.5	6.90	0.49					
42	Nov-10	4.5	6.93	0.62					
43	Jun-11	4.5	7.03	1.06					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

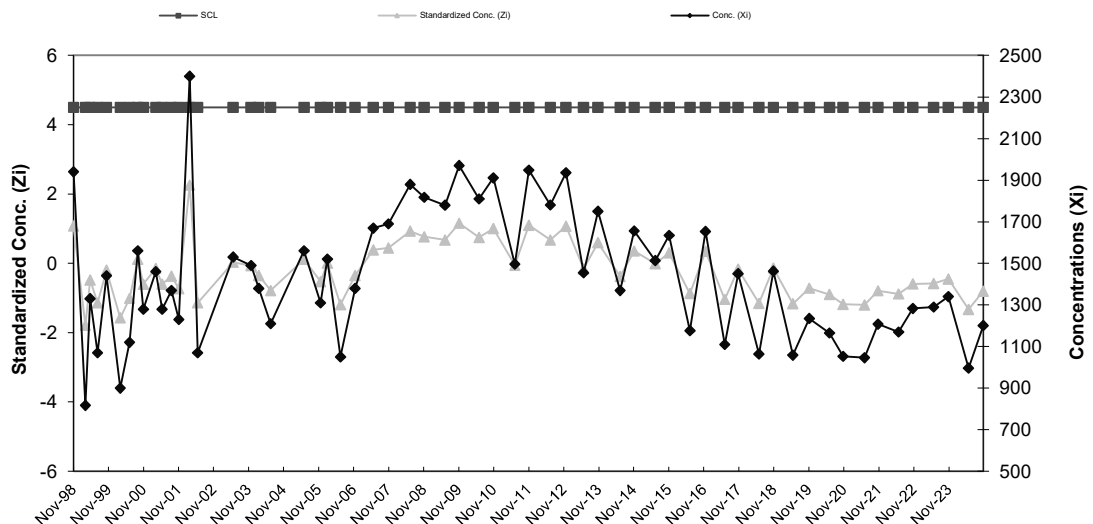


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - SpC**

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	1940	1.08	42	Nov-11	4.5	1948	1.10
10	Mar-99	4.5	817	-1.79	43	Jun-12	4.5	1781	0.67
11	May-99	4.5	1330	-0.48	44	Dec-12	4.5	1936	1.07
12	Jul-99	4.5	1070	-1.14	45	Jun-13	4.5	1455	-0.16
13	Oct-99	4.5	1440	-0.20	46	Nov-13	4.5	1750	0.60
14	Mar-00	4.5	900	-1.57	47	Jun-14	4.5	1369	-0.38
15	Jun-00	4.5	1120	-1.01	48	Nov-14	4.5	1656	0.36
16	Sep-00	4.5	1560	0.11	49	Jun-15	4.5	1513	-0.01
17	Nov-00	4.5	1280	-0.60	50	Nov-15	4.5	1635	0.30
18	Mar-01	4.5	1460	-0.14	51	Jun-16	4.5	1176	-0.87
19	May-01	4.5	1280	-0.60	52	Nov-16	4.5	1654	0.35
20	Aug-01	4.5	1370	-0.37	53	Jun-17	4.5	1110	-1.04
21	Nov-01	4.5	1230	-0.73	54	Nov-17	4.5	1450	-0.17
22	Mar-02	4.5	2400	2.25	55	Jun-18	4.5	1064	-1.15
23	May-02	4.5	1070	-1.14	56	Nov-18	4.5	1463	-0.14
24	Jun-03	4.5	1530	0.03	57	May-19	4.5	1058	-1.17
25	Dec-03	4.5	1490	-0.07	58	Nov-19	4.5	1235	-0.72
26	Feb-04	4.5	1380	-0.35	59	Jun-20	4.5	1165	-0.90
27	Jun-04	4.5	1210	-0.78	60	Nov-20	4.5	1053	-1.18
28	Jun-05	4.5	1560	0.11	61	Jun-21	4.5	1046	-1.20
29	Dec-05	4.5	1310	-0.53	62	Nov-21	4.5	1208	-0.79
30	Feb-06	4.5	1520	0.01	63	Jun-22	4.5	1170	-0.88
31	Jun-06	4.5	1050	-1.19	64	Nov-22	4.5	1283	-0.60
32	Nov-06	4.5	1380	-0.35	65	Jun-23	4.5	1290	-0.58
33	Jun-07	4.5	1670	0.39	66	Nov-23	4.5	1340	-0.45
34	Nov-07	4.5	1690	0.44	67	Jun-24	4.5	997	-1.33
35	Jun-08	4.5	1880	0.93	68	Nov-24	4.5	1201	-0.81
36	Nov-08	4.5	1818	0.77					
37	Jun-09	4.5	1780	0.67					
38	Nov-09	4.5	1970	1.16					
39	Jun-10	4.5	1810	0.75					
40	Nov-10	4.5	1911	1.01					
41	Jun-11	4.5	1496	-0.05					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

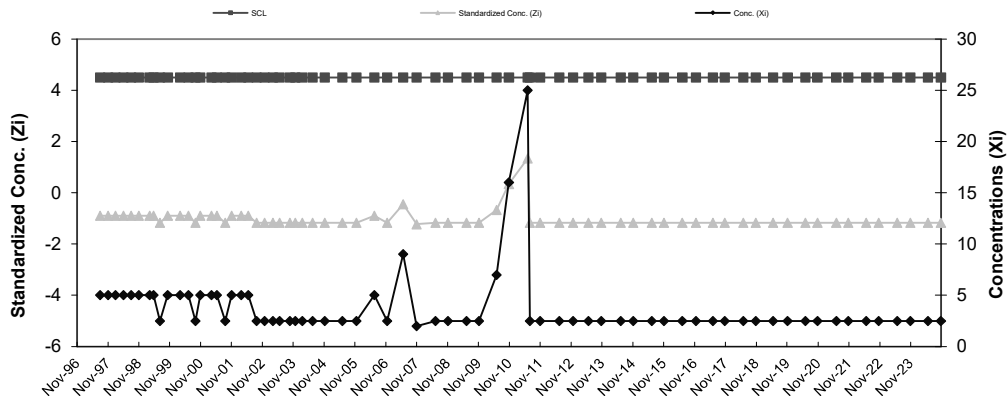


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - Chromium

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	5	-0.89	53	Nov-11	4.5	2.5	-1.17
10	Nov-97	4.5	5	-0.89	54	Jun-12	4.5	2.5	-1.17
11	Feb-98	4.5	5	-0.89	55	Dec-12	4.5	2.5	-1.17
12	May-98	4.5	5	-0.89	56	Jun-13	4.5	2.5	-1.17
14	Aug-98	4.5	5	-0.89	57	Nov-13	4.5	2.5	-1.17
15	Nov-98	4.5	5	-0.89	58	Jun-14	4.5	2.5	-1.17
16	Mar-99	4.5	5	-0.89	59	Nov-14	4.5	2.5	-1.17
17	May-99	4.5	5	-0.89	60	Jun-15	4.5	2.5	-1.17
18	Jul-99	4.5	2.5	-1.17	61	Nov-15	4.5	2.5	-1.17
19	Oct-99	4.5	5	-0.89	62	Jun-16	4.5	2.5	-1.17
20	Mar-00	4.5	5	-0.89	63	Nov-16	4.5	2.5	-1.17
21	Jun-00	4.5	5	-0.89	64	Jun-17	4.5	2.5	-1.17
22	Sep-00	4.5	2.5	-1.17	65	Nov-17	4.5	2.5	-1.17
23	Nov-00	4.5	5	-0.89	66	Jun-18	4.5	2.5	-1.17
24	Mar-01	4.5	5	-0.89	67	Nov-18	4.5	2.5	-1.17
25	May-01	4.5	5	-0.89	68	May-19	4.5	2.5	-1.17
26	Aug-01	4.5	2.5	-1.17	69	Nov-19	4.5	2.5	-1.17
27	Nov-01	4.5	5	-0.89	70	Jun-20	4.5	2.5	-1.17
28	Mar-02	4.5	5	-0.89	71	Nov-20	4.5	2.5	-1.17
29	May-02	4.5	5	-0.89	72	Jun-21	4.5	2.5	-1.17
30	Sep-02	4.5	2.5	-1.17	73	Nov-21	4.5	2.5	-1.17
31	Dec-02	4.5	2.5	-1.17	74	Jun-22	4.5	2.5	-1.17
32	Mar-03	4.5	2.5	-1.17	75	Nov-22	4.5	2.5	-1.17
33	Jun-03	4.5	2.5	-1.17	76	Jun-23	4.5	2.5	-1.17
34	Oct-03	4.5	2.5	-1.17	77	Nov-23	4.5	2.5	-1.17
35	Dec-03	4.5	2.5	-1.17	78	Jun-24	4.5	2.5	-1.17
36	Feb-04	4.5	2.5	-1.17	79	Nov-24	4.5	2.5	-1.17
37	Jun-04	4.5	2.5	-1.17					
38	Nov-04	4.5	2.5	-1.17					
39	Jun-05	4.5	2.5	-1.17					
40	Dec-05	4.5	2.5	-1.17					
41	Jun-06	4.5	5	-0.89					
42	Nov-06	4.5	2.5	-1.17					
43	Jun-07	4.5	9	-0.45					
44	Nov-07	4.5	2	-1.23					
45	Jun-08	4.5	2.5	-1.17					
46	Nov-08	4.5	2.5	-1.17					
47	Jun-09	4.5	2.5	-1.17					
48	Nov-09	4.5	2.5	-1.17					
49	Jun-10	4.5	7	-0.67					
50	Nov-10	4.5	16	0.33					
51	Jun-11	4.5	25	1.34					
52	Jul-11	4.5	2.5	-1.17					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

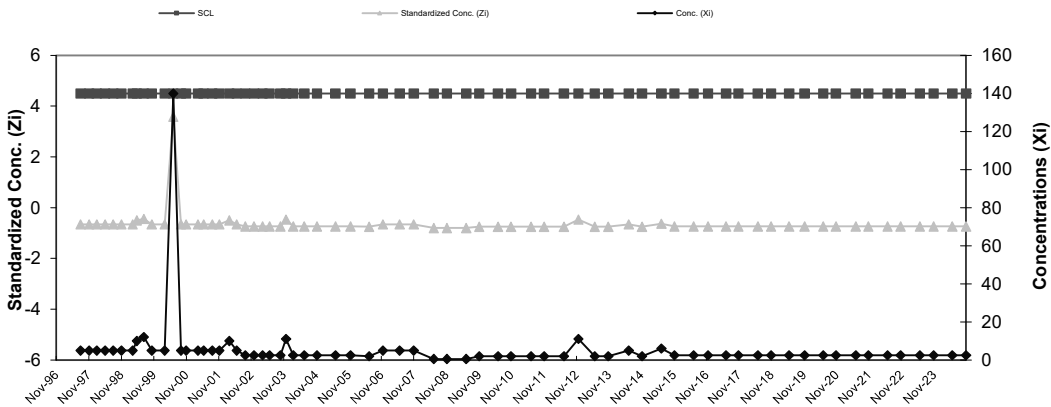


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - Copper**

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	5	-0.66	52	Nov-11	4.5	2	-0.75
10	Nov-97	4.5	5	-0.66	53	Jun-12	4.5	2	-0.75
11	Feb-98	4.5	5	-0.66	54	Dec-12	4.5	11	-0.47
12	May-98	4.5	5	-0.66	55	Jun-13	4.5	2	-0.75
14	Aug-98	4.5	5	-0.66	56	Nov-13	4.5	2	-0.75
15	Nov-98	4.5	5	-0.66	57	Jun-14	4.5	5	-0.66
16	Mar-99	4.5	5	-0.66	58	Nov-14	4.5	2	-0.75
17	May-99	4.5	10	-0.50	59	Jun-15	4.5	6	-0.63
18	Jul-99	4.5	12	-0.44	60	Nov-15	4.5	2.5	-0.74
19	Oct-99	4.5	5	-0.66	61	Jun-16	4.5	2.5	-0.74
20	Mar-00	4.5	5	-0.66	62	Nov-16	4.5	2.5	-0.74
21	Jun-00	4.5	140	3.59	63	Jun-17	4.5	2.5	-0.74
22	Sep-00	4.5	5	-0.66	64	Nov-17	4.5	2.5	-0.74
23	Nov-00	4.5	5	-0.66	65	Jun-18	4.5	2.5	-0.74
24	Mar-01	4.5	5	-0.66	66	Nov-18	4.5	2.5	-0.74
25	May-01	4.5	5	-0.66	67	May-19	4.5	2.5	-0.74
26	Aug-01	4.5	5	-0.66	68	Nov-19	4.5	2.5	-0.74
27	Nov-01	4.5	5	-0.66	69	Jun-20	4.5	2.5	-0.74
28	Mar-02	4.5	10	-0.50	70	Nov-20	4.5	2.5	-0.74
29	May-02	4.5	5	-0.66	71	Jun-21	4.5	2.5	-0.74
30	Sep-02	4.5	2.5	-0.74	72	Nov-21	4.5	2.5	-0.74
31	Dec-02	4.5	2.5	-0.74	73	Jun-22	4.5	2.5	-0.74
32	Mar-03	4.5	2.5	-0.74	74	Nov-22	4.5	2.5	-0.74
33	Jun-03	4.5	2.5	-0.74	75	Jun-23	4.5	2.5	-0.74
34	Oct-03	4.5	2.5	-0.74	76	Nov-23	4.5	2.5	-0.74
35	Dec-03	4.5	11	-0.47	77	Jun-24	4.5	2.5	-0.74
36	Feb-04	4.5	2.5	-0.74	78	Nov-24	4.5	2.5	-0.74
37	Jun-04	4.5	2.5	-0.74					
38	Nov-04	4.5	2.5	-0.74					
39	Jun-05	4.5	2.5	-0.74					
40	Dec-05	4.5	2.5	-0.74					
41	Jun-06	4.5	2	-0.75					
42	Nov-06	4.5	5	-0.66					
43	Jun-07	4.5	5	-0.66					
44	Nov-07	4.5	5	-0.66					
45	Jun-08	4.5	0.5	-0.80					
46	Nov-08	4.5	0.5	-0.80					
47	Jun-09	4.5	0.5	-0.80					
48	Nov-09	4.5	2	-0.75					
49	Jun-10	4.5	2	-0.75					
50	Nov-10	4.5	2	-0.75					
51	Jun-11	4.5	2	-0.75					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

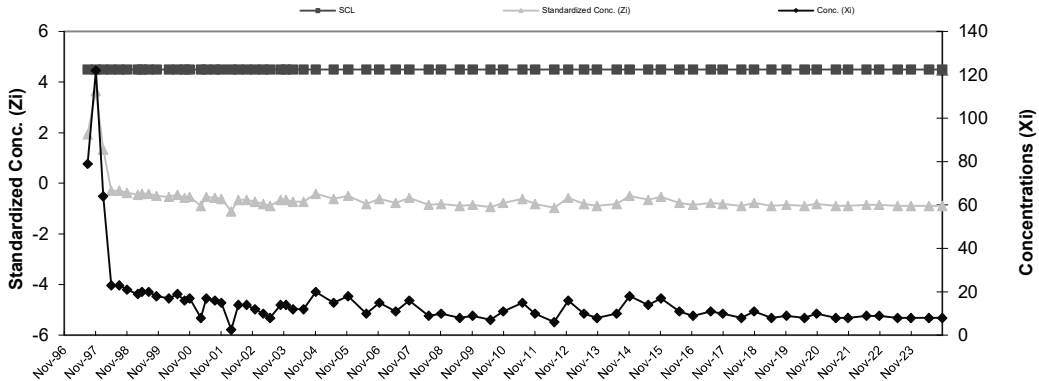


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - Nickel**

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	79	1.94	52	Nov-11	4.5	10	-0.81
10	Nov-97	4.5	122	3.65	53	Jun-12	4.5	6	-0.97
11	Feb-98	4.5	64	1.34	54	Dec-12	4.5	16	-0.57
12	May-98	4.5	23	-0.29	55	Jun-13	4.5	10	-0.81
14	Aug-98	4.5	23	-0.29	56	Nov-13	4.5	8	-0.89
15	Nov-98	4.5	21	-0.37	57	Jun-14	4.5	10	-0.81
16	Mar-99	4.5	19	-0.45	58	Nov-14	4.5	18	-0.49
17	May-99	4.5	20	-0.41	59	Jun-15	4.5	14	-0.65
18	Jul-99	4.5	20	-0.41	60	Nov-15	4.5	17	-0.53
19	Oct-99	4.5	18	-0.49	61	Jun-16	4.5	11	-0.77
20	Mar-00	4.5	17	-0.53	62	Nov-16	4.5	9	-0.85
21	Jun-00	4.5	19	-0.45	63	Jun-17	4.5	11	-0.77
22	Sep-00	4.5	16	-0.57	64	Nov-17	4.5	10	-0.81
23	Nov-00	4.5	17	-0.53	65	Jun-18	4.5	8	-0.89
24	Mar-01	4.5	8	-0.89	66	Nov-18	4.5	11	-0.77
25	May-01	4.5	17	-0.53	67	May-19	4.5	8	-0.89
26	Aug-01	4.5	16	-0.57	68	Nov-19	4.5	9	-0.85
27	Nov-01	4.5	15	-0.61	69	Jun-20	4.5	8	-0.89
28	Mar-02	4.5	2.5	-1.11	70	Nov-20	4.5	10	-0.81
29	May-02	4.5	14	-0.65	71	Jun-21	4.5	8	-0.89
30	Sep-02	4.5	14	-0.65	72	Nov-21	4.5	8	-0.89
31	Dec-02	4.5	12	-0.73	73	Jun-22	4.5	9	-0.85
32	Mar-03	4.5	10	-0.81	74	Nov-22	4.5	9	-0.85
33	Jun-03	4.5	8	-0.89	75	Jun-23	4.5	8	-0.89
34	Oct-03	4.5	14	-0.65	76	Nov-23	4.5	8	-0.89
35	Dec-03	4.5	14	-0.65	77	Jun-24	4.5	8	-0.89
36	Feb-04	4.5	12	-0.73	78	Nov-24	4.5	8	-0.89
37	Jun-04	4.5	12	-0.73					
38	Nov-04	4.5	20	-0.41					
39	Jun-05	4.5	15	-0.61					
40	Dec-05	4.5	18	-0.49					
41	Jun-06	4.5	10	-0.81					
42	Nov-06	4.5	15	-0.61					
43	Jun-07	4.5	11	-0.77					
44	Nov-07	4.5	16	-0.57					
45	Jun-08	4.5	9	-0.85					
46	Nov-08	4.5	10	-0.81					
47	Jun-09	4.5	8	-0.89					
48	Nov-09	4.5	9	-0.85					
49	Jun-10	4.5	7	-0.93					
50	Nov-10	4.5	11	-0.77					
51	Jun-11	4.5	15	-0.61					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

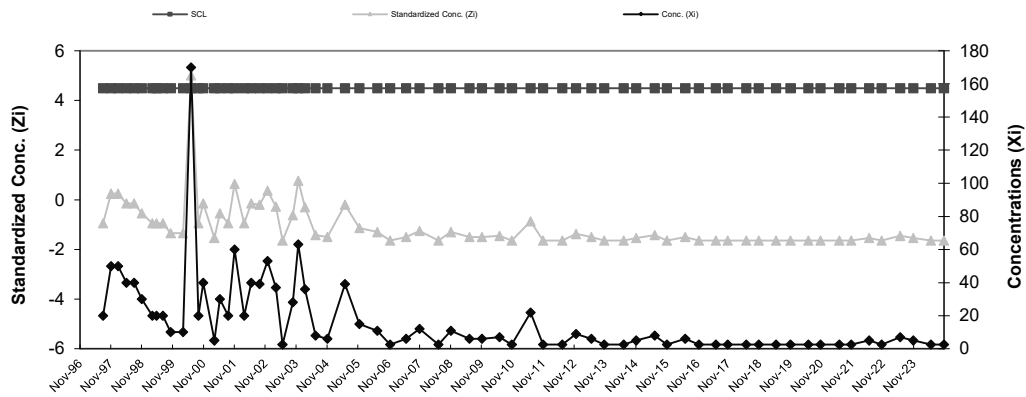


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - Zinc

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)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	20	-0.94	52	Nov-11	4.5	2.5	-1.63
10	Nov-97	4.5	50	0.25	53	Jun-12	4.5	2.5	-1.63
11	Feb-98	4.5	50	0.25	54	Dec-12	4.5	9	-1.38
12	May-98	4.5	40	-0.15	55	Jun-13	4.5	6	-1.50
14	Aug-98	4.5	40	-0.15	56	Nov-13	4.5	2.5	-1.63
15	Nov-98	4.5	30	-0.54	57	Jun-14	4.5	2.5	-1.63
16	Mar-99	4.5	20	-0.94	58	Nov-14	4.5	5	-1.54
17	May-99	4.5	20	-0.94	59	Jun-15	4.5	8	-1.42
18	Jul-99	4.5	20	-0.94	60	Nov-15	4.5	2.5	-1.63
19	Oct-99	4.5	10	-1.34	61	Jun-16	4.5	6	-1.50
20	Mar-00	4.5	10	-1.34	62	Nov-16	4.5	2.5	-1.63
21	Jun-00	4.5	170	5.00	63	Jun-17	4.5	2.5	-1.63
22	Sep-00	4.5	20	-0.94	64	Nov-17	4.5	2.5	-1.63
23	Nov-00	4.5	40	-0.15	65	Jun-18	4.5	2.5	-1.63
24	Mar-01	4.5	5	-1.54	66	Nov-18	4.5	2.5	-1.63
25	May-01	4.5	30	-0.54	67	May-19	4.5	2.5	-1.63
26	Aug-01	4.5	20	-0.94	68	Nov-19	4.5	2.5	-1.63
27	Nov-01	4.5	60	0.64	69	Jun-20	4.5	2.5	-1.63
28	Mar-02	4.5	20	-0.94	70	Nov-20	4.5	2.5	-1.63
29	May-02	4.5	40	-0.15	71	Jun-21	4.5	2.5	-1.63
30	Sep-02	4.5	39	-0.19	72	Nov-21	4.5	2.5	-1.63
31	Dec-02	4.5	53	0.37	73	Jun-22	4.5	5	-1.54
32	Mar-03	4.5	37	-0.27	74	Nov-22	4.5	2.5	-1.63
33	Jun-03	4.5	2.5	-1.63	75	Jun-23	4.5	7	-1.46
34	Oct-03	4.5	28	-0.62	76	Nov-23	4.5	5	-1.54
35	Dec-03	4.5	63	0.76	77	Jun-24	4.5	2.5	-1.63
36	Feb-04	4.5	36	-0.31	78	Nov-24	4.5	2.5	-1.63
37	Jun-04	4.5	8	-1.42					
38	Nov-04	4.5	6	-1.50					
39	Jun-05	4.5	39	-0.19					
40	Dec-05	4.5	15	-1.14					
41	Jun-06	4.5	11	-1.30					
42	Nov-06	4.5	2.5	-1.63					
43	Jun-07	4.5	6	-1.50					
44	Nov-07	4.5	12	-1.26					
45	Jun-08	4.5	2.5	-1.63					
46	Nov-08	4.5	11	-1.30					
47	Jun-09	4.5	6	-1.50					
48	Nov-09	4.5	6	-1.50					
49	Jun-10	4.5	7	-1.46					
50	Nov-10	4.5	2.5	-1.63					
51	Jun-11	4.5	22	-0.86					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

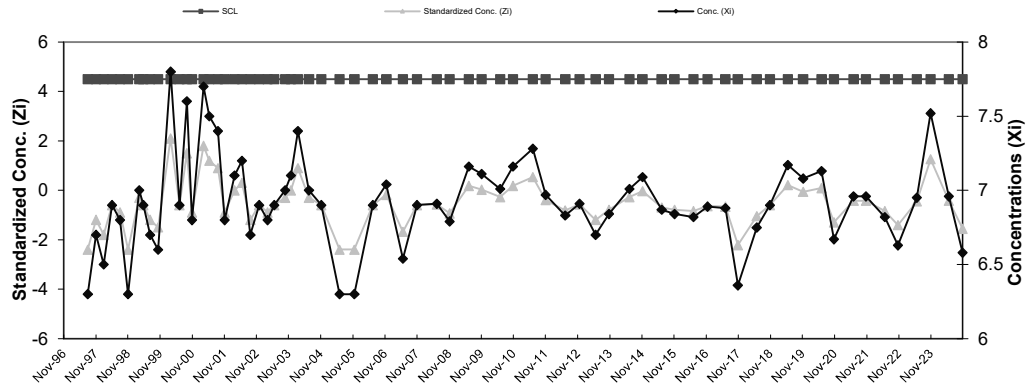


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - pH**

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	6.3	-2.40	52	Nov-11	4.5	7.0	-0.39
10	Nov-97	4.5	6.7	-1.20	53	Jun-12	4.5	6.83	-0.81
11	Feb-98	4.5	6.5	-1.80	54	Dec-12	4.5	6.91	-0.57
12	May-98	4.5	6.9	-0.60	55	Jun-13	4.5	6.7	-1.20
14	Aug-98	4.5	6.8	-0.90	56	Nov-13	4.5	6.84	-0.78
15	Nov-98	4.5	6.3	-2.40	57	Jun-14	4.5	7.01	-0.27
16	Mar-99	4.5	7	-0.30	58	Nov-14	4.5	7.09	-0.03
17	May-99	4.5	6.9	-0.60	59	Jun-15	4.5	6.87	-0.69
18	Jul-99	4.5	6.7	-1.20	60	Nov-15	4.5	6.84	-0.78
19	Oct-99	4.5	6.6	-1.50	61	Jun-16	4.5	6.82	-0.84
20	Mar-00	4.5	7.8	2.10	62	Nov-16	4.5	6.89	-0.63
21	Jun-00	4.5	6.9	-0.60	63	Jun-17	4.5	6.88	-0.66
22	Sep-00	4.5	7.6	1.50	64	Nov-17	4.5	6.36	-2.22
23	Nov-00	4.5	6.8	-0.90	65	Jun-18	4.5	6.75	-1.05
24	Mar-01	4.5	7.7	1.80	66	Nov-18	4.5	6.9	-0.60
25	May-01	4.5	7.5	1.20	67	May-19	4.5	7.17	0.21
26	Aug-01	4.5	7.4	0.90	68	Nov-19	4.5	7.08	-0.06
27	Nov-01	4.5	6.8	-0.90	69	Jun-20	4.5	7.13	0.09
28	Mar-02	4.5	7.1	0.00	70	Nov-20	4.5	6.67	-1.29
29	May-02	4.5	7.2	0.30	71	Jun-21	4.5	6.96	-0.42
30	Sep-02	4.5	6.7	-1.20	72	Nov-21	4.5	6.96	-0.42
31	Dec-02	4.5	6.9	-0.60	73	Jun-22	4.5	6.82	-0.84
32	Mar-03	4.5	6.8	-0.90	74	Nov-22	4.5	6.63	-1.41
33	Jun-03	4.5	6.9	-0.60	75	Jun-23	4.5	6.95	-0.45
34	Oct-03	4.5	7	-0.30	76	Nov-23	4.5	7.52	1.26
35	Dec-03	4.5	7.1	0.00	77	Jun-24	4.5	6.96	-0.42
36	Feb-04	4.5	7.4	0.90	78	Nov-24	4.5	6.58	-1.56
37	Jun-04	4.5	7	-0.30					
38	Nov-04	4.5	6.9	-0.60					
39	Jun-05	4.5	6.3	-2.40					
40	Dec-05	4.5	6.3	-2.40					
41	Jun-06	4.5	6.9	-0.60					
42	Nov-06	4.5	7.0	-0.18					
43	Jun-07	4.5	6.5	-1.68					
44	Nov-07	4.5	6.9	-0.60					
45	Jun-08	4.5	6.9	-0.57					
46	Nov-08	4.5	6.8	-0.93					
47	Jun-09	4.5	7.2	0.18					
48	Nov-09	4.5	7.1	0.03					
49	Jun-10	4.5	7.0	-0.27					
50	Nov-10	4.5	7.2	0.18					
51	Jun-11	4.5	7.3	0.54					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

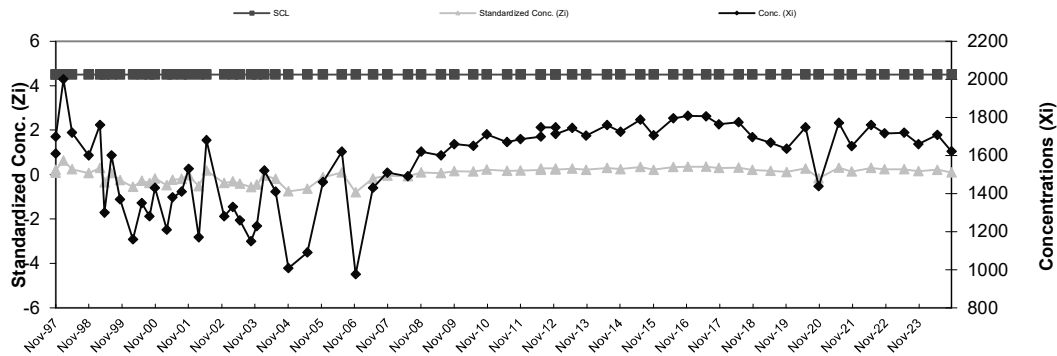


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - SpC

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	1610	0.08	52	Nov-11	4.5	1699	0.21
10	Nov-97	4.5	2000	0.63	53	Jun-12	4.5	1748	0.27
11	Feb-98	4.5	1720	0.24	54	Dec-12	4.5	1713	0.23
12	May-98	4.5	1600	0.07	55	Jun-13	4.5	1744	0.27
14	Nov-98	4.5	1760	0.29	56	Nov-13	4.5	1703	0.21
15	Mar-99	4.5	1300	-0.35	57	Jun-14	4.5	1759	0.29
16	May-99	4.5	1600	0.07	58	Nov-14	4.5	1724	0.24
17	Jul-99	4.5	1370	-0.25	59	Jun-15	4.5	1788	0.33
18	Oct-99	4.5	1160	-0.55	60	Nov-15	4.5	1706	0.22
19	Mar-00	4.5	1350	-0.28	61	Jun-16	4.5	1795	0.34
20	Jun-00	4.5	1280	-0.38	62	Nov-16	4.5	1808	0.36
21	Sep-00	4.5	1430	-0.17	63	Jun-17	4.5	1805	0.35
22	Nov-00	4.5	1210	-0.48	64	Nov-17	4.5	1764	0.30
23	Mar-01	4.5	1380	-0.24	65	Jun-18	4.5	1774	0.31
24	May-01	4.5	1410	-0.20	66	Nov-18	4.5	1696	0.20
25	Aug-01	4.5	1530	-0.03	67	May-19	4.5	1668	0.16
26	Nov-01	4.5	1170	-0.53	68	Nov-19	4.5	1635	0.12
27	Mar-02	4.5	1680	0.18	69	Jun-20	4.5	1747	0.27
28	May-02	4.5	1280	-0.38	70	Nov-20	4.5	1438	-0.16
29	Dec-02	4.5	1330	-0.31	71	Jun-21	4.5	1771	0.31
30	Mar-03	4.5	1260	-0.41	72	Nov-21	4.5	1649	0.14
31	Jun-03	4.5	1150	-0.56	73	Jun-22	4.5	1760	0.29
32	Oct-03	4.5	1230	-0.45	74	Nov-22	4.5	1716	0.23
33	Dec-03	4.5	1520	-0.04	75	Jun-23	4.5	1720	0.24
34	Feb-04	4.5	1410	-0.20	76	Nov-23	4.5	1660	0.15
35	Jun-04	4.5	1008	-0.76	77	Jun-24	4.5	1708	0.22
36	Nov-04	4.5	1090	-0.64	78	Nov-24	4.5	1621	0.10
37	Jun-05	4.5	1460	-0.13					
38	Dec-05	4.5	1620	0.10					
39	Jun-06	4.5	977	-0.80					
40	Nov-06	4.5	1430	-0.17					
41	Jun-07	4.5	1510	-0.06					
42	Nov-07	4.5	1490	-0.09					
43	Jun-08	4.5	1620	0.10					
44	Nov-08	4.5	1600	0.07					
45	Jun-09	4.5	1660	0.15					
46	Nov-09	4.5	1650	0.14					
47	Jun-10	4.5	1710	0.22					
50	Nov-10	4.5	1670	0.17					
51	Jun-11	4.5	1686	0.19					
52	Nov-11	4.5	1699	0.21					
53	Jun-12	4.5	1748	0.27					
54	Dec-12	4.5	1713	0.23					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

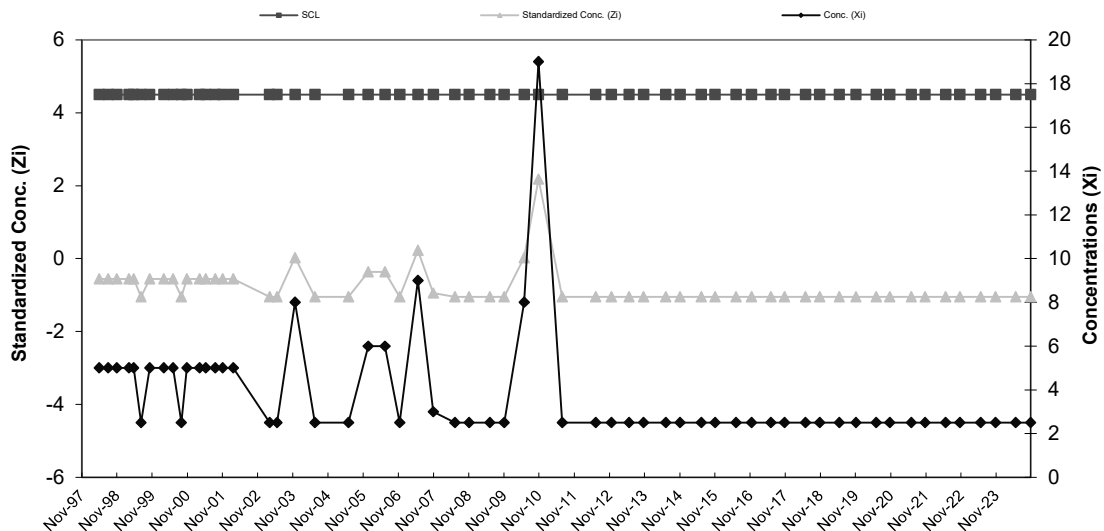


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - Chromium**

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)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.56	41	Jul-11	4.5	2.5	-1.05
10	Aug-98	4.5	5	-0.56	42	Jun-12	4.5	2.5	-1.05
11	Nov-98	4.5	5	-0.56	43	Dec-12	4.5	2.5	-1.05
12	Mar-99	4.5	5	-0.56	44	Jun-13	4.5	2.5	-1.05
13	May-99	4.5	5	-0.56	45	Nov-13	4.5	2.5	-1.05
14	Jul-99	4.5	2.5	-1.05	46	Jun-14	4.5	2.5	-1.05
15	Oct-99	4.5	5	-0.56	47	Nov-14	4.5	2.5	-1.05
16	Mar-00	4.5	5	-0.56	48	Jun-15	4.5	2.5	-1.05
17	Jun-00	4.5	5	-0.56	49	Nov-15	4.5	2.5	-1.05
18	Sep-00	4.5	2.5	-1.05	50	Jun-16	4.5	2.5	-1.05
19	Nov-00	4.5	5	-0.56	51	Nov-16	4.5	2.5	-1.05
20	Mar-01	4.5	5	-0.56	52	Jun-17	4.5	2.5	-1.05
21	May-01	4.5	5	-0.56	53	Nov-17	4.5	2.5	-1.05
22	Aug-01	4.5	5	-0.56	54	Jun-18	4.5	2.5	-1.05
23	Nov-01	4.5	5	-0.56	55	Nov-18	4.5	2.5	-1.05
24	Mar-02	4.5	5	-0.56	56	May-19	4.5	2.5	-1.05
25	Mar-03	4.5	2.5	-1.05	57	Nov-19	4.5	2.5	-1.05
26	Jun-03	4.5	2.5	-1.05	58	Jun-20	4.5	2.5	-1.05
27	Dec-03	4.5	8	0.03	59	Nov-20	4.5	2.5	-1.05
28	Jun-04	4.5	2.5	-1.05	60	Jun-21	4.5	2.5	-1.05
29	Jun-05	4.5	2.5	-1.05	61	Nov-21	4.5	2.5	-1.05
30	Jan-06	4.5	6	-0.36	62	Jun-22	4.5	2.5	-1.05
31	Jun-06	4.5	6	-0.36	63	Nov-22	4.5	2.5	-1.05
32	Nov-06	4.5	2.5	-1.05	64	Jun-23	4.5	2.5	-1.05
33	Jun-07	4.5	9	0.22	65	Nov-23	4.5	2.5	-1.05
34	Nov-07	4.5	3	-0.95	66	Jun-24	4.5	2.5	-1.05
35	Jun-08	4.5	2.5	-1.05	67	Nov-24	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					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

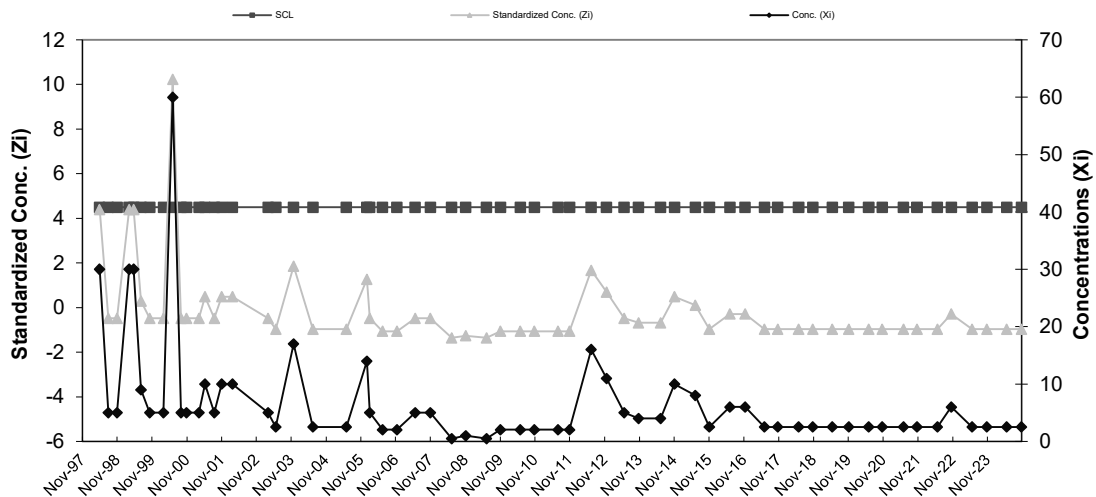


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - Copper**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-95	10	7.48	5.13
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)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	30	4.39	41	Nov-10	4.5	2	-1.07
10	Aug-98	4.5	5	-0.48	42	Jul-11	4.5	2	-1.07
11	Nov-98	4.5	5	-0.48	43	Nov-11	4.5	2	-1.07
12	Mar-99	4.5	30	4.39	44	Jun-12	4.5	16	1.66
13	May-99	4.5	30	4.39	45	Dec-12	4.5	11	0.69
14	Jul-99	4.5	9	0.30	46	Jun-13	4.5	5	-0.48
15	Oct-99	4.5	5	-0.48	47	Nov-13	4.5	4	-0.68
16	Mar-00	4.5	5	-0.48	48	Jun-14	4.5	4	-0.68
17	Jun-00	4.5	60	10.24	49	Nov-14	4.5	10	0.49
18	Sep-00	4.5	5	-0.48	50	Jun-15	4.5	8	0.10
19	Nov-00	4.5	5	-0.48	51	Nov-15	4.5	2.5	-0.97
20	Mar-01	4.5	5	-0.48	52	Jun-16	4.5	6	-0.29
21	May-01	4.5	10	0.49	53	Nov-16	4.5	6	-0.29
22	Aug-01	4.5	5	-0.48	54	Jun-17	4.5	2.5	-0.97
23	Nov-01	4.5	10	0.49	55	Nov-17	4.5	2.5	-0.97
24	Mar-02	4.5	10	0.49	56	Jun-18	4.5	2.5	-0.97
25	Mar-03	4.5	5	-0.48	57	Nov-18	4.5	2.5	-0.97
26	Jun-03	4.5	2.5	-0.97	58	May-19	4.5	2.5	-0.97
27	Dec-03	4.5	17	1.86	59	Nov-19	4.5	2.5	-0.97
28	Jun-04	4.5	2.5	-0.97	60	Jun-20	4.5	2.5	-0.97
29	Jun-05	4.5	2.5	-0.97	61	Nov-20	4.5	2.5	-0.97
30	Jan-06	4.5	14	1.27	62	Jun-21	4.5	2.5	-0.97
31	Feb-06	4.5	5	-0.48	63	Nov-21	4.5	2.5	-0.97
32	Jun-06	4.5	2	-1.07	64	Jun-22	4.5	2.5	-0.97
33	Nov-06	4.5	2	-1.07	65	Nov-22	4.5	6	-0.29
34	Jun-07	4.5	5	-0.48	66	Jun-23	4.5	2.5	-0.97
35	Nov-07	4.5	5	-0.48	67	Nov-23	4.5	2.5	-0.97
36	Jun-08	4.5	0.5	-1.36	68	Jun-24	4.5	2.5	-0.97
37	Nov-08	4.5	1	-1.26	69	Nov-24	4.5	2.5	-0.97
38	Jun-09	4.5	0.5	-1.36					
39	Nov-09	4.5	2	-1.07					
40	Jun-10	4.5	2	-1.07					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

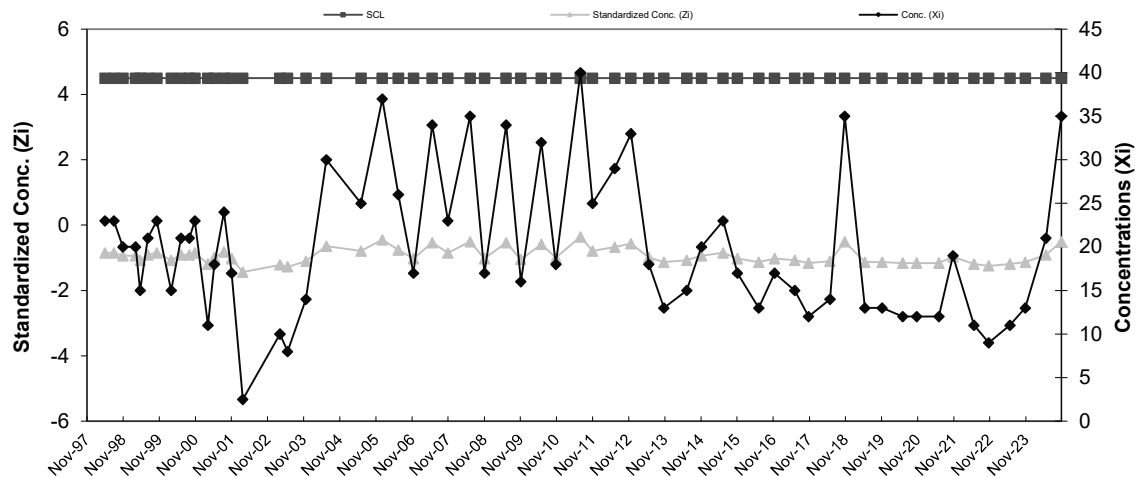


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - Nickel**

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	23	-0.85	41	Jul-11	4.5	40	-0.36
10	Aug-98	4.5	23	-0.85	42	Nov-11	4.5	25	-0.79
11	Nov-98	4.5	20	-0.93	43	Jun-12	4.5	29	-0.67
12	Mar-99	4.5	20	-0.93	44	Dec-12	4.5	33	-0.56
13	May-99	4.5	15	-1.07	45	Jun-13	4.5	18	-0.99
14	Jul-99	4.5	21	-0.90	46	Nov-13	4.5	13	-1.13
15	Oct-99	4.5	23	-0.85	47	Jun-14	4.5	15	-1.07
16	Mar-00	4.5	15	-1.07	48	Nov-14	4.5	20	-0.93
17	Jun-00	4.5	21	-0.90	49	Jun-15	4.5	23	-0.85
18	Sep-00	4.5	21	-0.90	50	Nov-15	4.5	17	-1.02
19	Nov-00	4.5	23	-0.85	51	Jun-16	4.5	13	-1.13
20	Mar-01	4.5	11	-1.19	52	Nov-16	4.5	17	-1.02
21	May-01	4.5	18	-0.99	53	Jun-17	4.5	15	-1.07
22	Aug-01	4.5	24	-0.82	54	Nov-17	4.5	12	-1.16
23	Nov-01	4.5	17	-1.02	55	Jun-18	4.5	14	-1.10
24	Mar-02	4.5	2.5	-1.43	56	Nov-18	4.5	35	-0.50
25	Mar-03	4.5	10	-1.22	57	May-19	4.5	13	-1.13
26	Jun-03	4.5	8	-1.27	58	Nov-19	4.5	13	-1.13
27	Dec-03	4.5	14	-1.10	59	Jun-20	4.5	12	-1.16
28	Jun-04	4.5	30	-0.65	60	Nov-20	4.5	12	-1.16
29	Jun-05	4.5	25	-0.79	61	Jun-21	4.5	12	-1.16
30	Jan-06	4.5	37	-0.45	62	Nov-21	4.5	19	-0.96
31	Jun-06	4.5	26	-0.76	63	Jun-22	4.5	11	-1.19
32	Nov-06	4.5	17	-1.02	64	Nov-22	4.5	9	-1.25
33	Jun-07	4.5	34	-0.53	65	Jun-23	4.5	11	-1.19
34	Nov-07	4.5	23	-0.85	66	Nov-23	4.5	13	-1.13
35	Jun-08	4.5	35	-0.50	67	Jun-24	4.5	21	-0.90
36	Nov-08	4.5	17	-1.02	68	Nov-24	4.5	35	-0.50
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					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

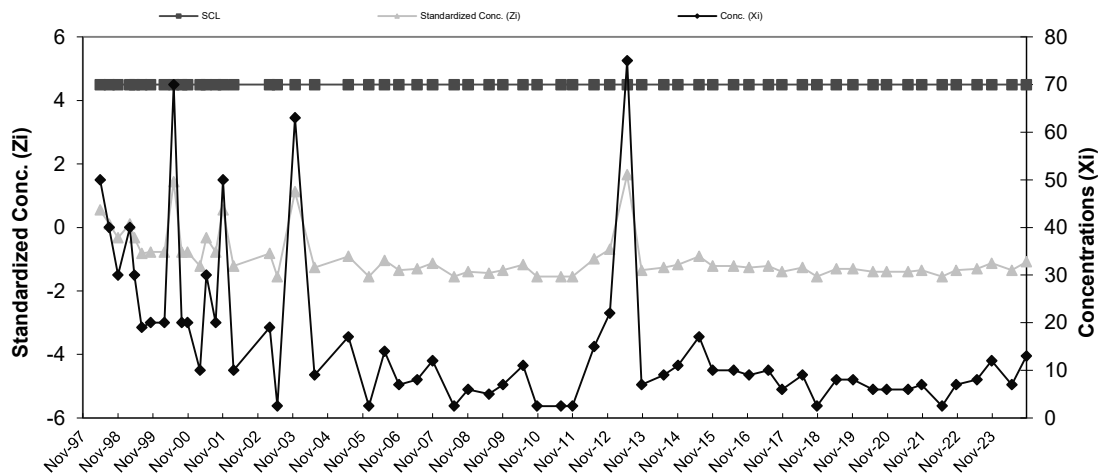


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - Zinc**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-95	20	37.49	22.59
2	Jun-96	10		
3	Aug-96	40		
4	Nov-96	70		
5	May-97	70		
6	Aug-97	20		
7	Nov-97	30		
8	Feb-98	40		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	50	0.55	42	Nov-11	4.5	2.5	-1.55
10	Aug-98	4.5	40	0.11	43	Jun-12	4.5	15	-1.00
11	Nov-98	4.5	30	-0.33	44	Dec-12	4.5	22	-0.69
12	Mar-99	4.5	40	0.11	45	Jun-13	4.5	75	1.66
13	May-99	4.5	30	-0.33	46	Nov-13	4.5	7	-1.35
14	Jul-99	4.5	19	-0.82	47	Jun-14	4.5	9	-1.26
15	Oct-99	4.5	20	-0.77	48	Nov-14	4.5	11	-1.17
16	Mar-00	4.5	20	-0.77	49	Jun-15	4.5	17	-0.91
17	Jun-00	4.5	70	1.44	50	Nov-15	4.5	10	-1.22
18	Sep-00	4.5	20	-0.77	51	Jun-16	4.5	10	-1.22
19	Nov-00	4.5	20	-0.77	52	Nov-16	4.5	9	-1.26
20	Mar-01	4.5	10	-1.22	53	Jun-17	4.5	10	-1.22
21	May-01	4.5	30	-0.33	54	Nov-17	4.5	6	-1.39
22	Aug-01	4.5	20	-0.77	55	Jun-18	4.5	9	-1.26
23	Nov-01	4.5	50	0.55	56	Nov-18	4.5	2.5	-1.55
24	Mar-02	4.5	10	-1.22	57	May-19	4.5	8	-1.31
25	Mar-03	4.5	19	-0.82	58	Nov-19	4.5	8	-1.31
26	Jun-03	4.5	2.5	-1.55	59	Jun-20	4.5	6	-1.39
27	Dec-03	4.5	63	1.13	60	Nov-20	4.5	6	-1.39
28	Jun-04	4.5	9	-1.26	61	Jun-21	4.5	6	-1.39
29	Jun-05	4.5	17	-0.91	62	Nov-21	4.5	7	-1.35
30	Jan-06	4.5	2.5	-1.55	63	Jun-22	4.5	2.5	-1.55
31	Jun-06	4.5	14	-1.04	64	Nov-22	4.5	7	-1.35
32	Nov-06	4.5	7	-1.35	65	Jun-23	4.5	8	-1.31
33	Jun-07	4.5	8	-1.31	66	Nov-23	4.5	12	-1.13
34	Nov-07	4.5	12	-1.13	67	Jun-24	4.5	7	-1.35
35	Jun-08	4.5	2.5	-1.55	68	Nov-24	4.5	13	-1.08
36	Nov-08	4.5	6	-1.39					
37	Jun-09	4.5	5	-1.44					
38	Nov-09	4.5	7	-1.35					
39	Jun-10	4.5	11	-1.17					
40	Nov-10	4.5	2.5	-1.55					
41	Jul-11	4.5	2.5	-1.55					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

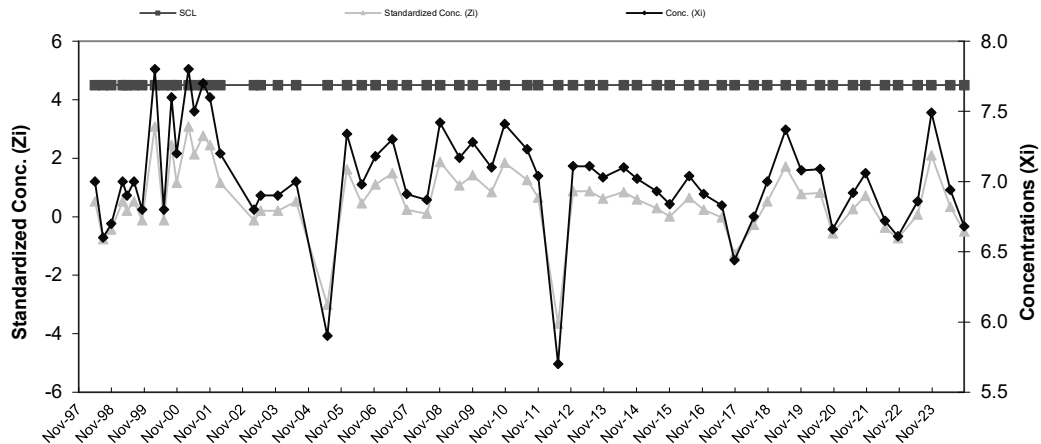


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - pH

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	7.00	0.52	42	Nov-11	4.5	7.0	0.65
10	Aug-98	4.5	6.60	-0.76	43	Jun-12	4.5	5.7	-3.65
11	Nov-98	4.5	6.70	-0.44	44	Dec-12	4.5	7.11	0.88
12	Mar-99	4.5	7.00	0.52	45	Jun-13	4.5	7.11	0.88
13	May-99	4.5	6.90	0.20	46	Nov-13	4.5	7.03	0.62
14	Jul-99	4.5	7.00	0.52	47	Jun-14	4.5	7.1	0.84
15	Oct-99	4.5	6.80	-0.12	48	Nov-14	4.5	7.02	0.59
16	Mar-00	4.5	7.80	3.09	49	Jun-15	4.5	6.93	0.30
17	Jun-00	4.5	6.80	-0.12	50	Nov-15	4.5	6.84	0.01
18	Sep-00	4.5	7.60	2.45	51	Jun-16	4.5	7.04	0.65
19	Nov-00	4.5	7.20	1.16	52	Nov-16	4.5	6.91	0.23
20	Mar-01	4.5	7.80	3.09	53	Jun-17	4.5	6.83	-0.02
21	May-01	4.5	7.50	2.13	54	Nov-17	4.5	6.44	-1.28
22	Aug-01	4.5	7.70	2.77	55	Jun-18	4.5	6.75	-0.28
23	Nov-01	4.5	7.60	2.45	56	Nov-18	4.5	7	0.52
24	Mar-02	4.5	7.20	1.16	57	May-19	4.5	7.37	1.71
25	Mar-03	4.5	6.80	-0.12	58	Nov-19	4.5	7.08	0.78
26	Jun-03	4.5	6.90	0.20	59	Jun-20	4.5	7.09	0.81
27	Dec-03	4.5	6.90	0.20	60	Nov-20	4.5	6.66	-0.57
28	Jun-04	4.5	7.00	0.52	61	Jun-21	4.5	6.92	0.26
29	Jun-05	4.5	5.90	-3.01	62	Nov-21	4.5	7.06	0.71
30	Jan-06	4.5	7.34	1.61	63	Jun-22	4.5	6.72	-0.38
31	Jun-06	4.5	6.98	0.46	64	Nov-22	4.5	6.61	-0.73
32	Nov-06	4.5	7.18	1.10	65	Jun-23	4.5	6.86	0.07
33	Jun-07	4.5	7.30	1.49	66	Nov-23	4.5	7.49	2.10
34	Nov-07	4.5	6.91	0.23	67	Jun-24	4.5	6.94	0.33
35	Jun-08	4.5	6.87	0.10	68	Nov-24	4.5	6.68	-0.51
36	Nov-08	4.5	7.42	1.87					
37	Jun-09	4.5	7.17	1.07					
38	Nov-09	4.5	7.28	1.42					
39	Jun-10	4.5	7.10	0.84					
40	Nov-10	4.5	7.41	1.84					
41	Jul-11	4.5	7.23	1.26					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

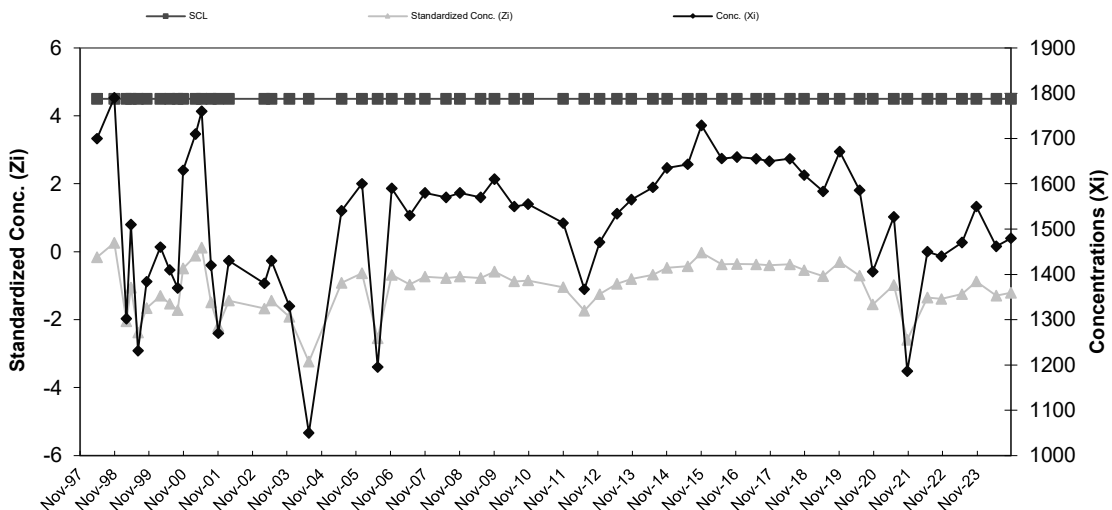


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - SpC

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-95	2200	1,734.38	211.31
2	Jun-96	1800		
3	Aug-96	1600		
4	Nov-96	1700		
5	May-97	1580		
6	Aug-97	1540		
7	Nov-97	1800		
8	Feb-98	1655		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	1700	-0.16	41	Nov-11	4.5	1513	-1.05
11	Nov-98	4.5	1790	0.26	42	Jun-12	4.5	1367	-1.74
12	Mar-99	4.5	1302	-2.05	43	Dec-12	4.5	1471	-1.25
13	May-99	4.5	1510	-1.06	44	Jun-13	4.5	1534	-0.95
14	Jul-99	4.5	1231	-2.38	45	Nov-13	4.5	1565	-0.80
15	Oct-99	4.5	1384	-1.66	46	Jun-14	4.5	1592	-0.67
16	Mar-00	4.5	1460	-1.30	47	Nov-14	4.5	1635	-0.47
17	Jun-00	4.5	1410	-1.54	48	Jun-15	4.5	1643	-0.43
18	Sep-00	4.5	1370	-1.72	49	Nov-15	4.5	1729	-0.03
19	Nov-00	4.5	1630	-0.49	50	Jun-16	4.5	1656	-0.37
20	Mar-01	4.5	1710	-0.12	51	Nov-16	4.5	1659	-0.36
21	May-01	4.5	1760	0.12	52	Jun-17	4.5	1655	-0.38
22	Aug-01	4.5	1420	-1.49	53	Nov-17	4.5	1650	-0.40
23	Nov-01	4.5	1270	-2.20	54	Jun-18	4.5	1655	-0.38
24	Mar-02	4.5	1430	-1.44	55	Nov-18	4.5	1619	-0.55
25	Mar-03	4.5	1380	-1.68	56	May-19	4.5	1583	-0.72
26	Jun-03	4.5	1430	-1.44	57	Nov-19	4.5	1671	-0.30
27	Dec-03	4.5	1330	-1.91	58	Jun-20	4.5	1586	-0.70
28	Jun-04	4.5	1050	-3.24	59	Nov-20	4.5	1406	-1.55
29	Jun-05	4.5	1540	-0.92	60	Jun-21	4.5	1527	-0.98
30	Jan-06	4.5	1600	-0.64	61	Nov-21	4.5	1186	-2.60
31	Jun-06	4.5	1195	-2.55	62	Jun-22	4.5	1450	-1.35
32	Nov-06	4.5	1590	-0.68	63	Nov-22	4.5	1440	-1.39
33	Jun-07	4.5	1530	-0.97	64	Jun-23	4.5	1470	-1.25
34	Nov-07	4.5	1580	-0.73	65	Nov-23	4.5	1550	-0.87
35	Jun-08	4.5	1570	-0.78	66	Jun-24	4.5	1462	-1.29
36	Nov-08	4.5	1580	-0.73	67	Nov-24	4.5	1480	-1.20
37	Jun-09	4.5	1570	-0.78					
38	Nov-09	4.5	1610	-0.59					
39	Jun-10	4.5	1550	-0.87					
40	Nov-10	4.5	1555	-0.85					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

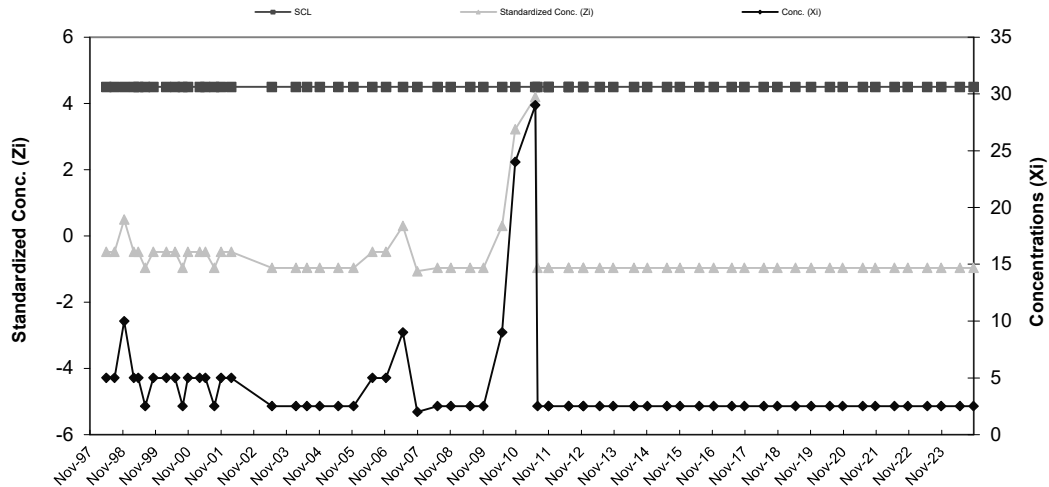


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - Chromium

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-96	10	7.48	5.13
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)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.48	43	Nov-11	4.5	2.5	-0.97
10	Aug-98	4.5	5	-0.48	44	Jun-12	4.5	2.5	-0.97
11	Nov-98	4.5	10	0.49	45	Dec-12	4.5	2.5	-0.97
12	Mar-99	4.5	5	-0.48	46	Jun-13	4.5	2.5	-0.97
13	May-99	4.5	5	-0.48	47	Nov-13	4.5	2.5	-0.97
14	Jul-99	4.5	2.5	-0.97	48	Jun-14	4.5	2.5	-0.97
15	Oct-99	4.5	5	-0.48	49	Nov-14	4.5	2.5	-0.97
16	Mar-00	4.5	5	-0.48	50	Jun-15	4.5	2.5	-0.97
17	Jun-00	4.5	5	-0.48	51	Nov-15	4.5	2.5	-0.97
18	Sep-00	4.5	2.5	-0.97	52	Jun-16	4.5	2.5	-0.97
19	Nov-00	4.5	5	-0.48	53	Nov-16	4.5	2.5	-0.97
20	Mar-01	4.5	5	-0.48	54	Jun-17	4.5	2.5	-0.97
21	May-01	4.5	5	-0.48	55	Nov-17	4.5	2.5	-0.97
22	Aug-01	4.5	2.5	-0.97	56	Jun-18	4.5	2.5	-0.97
23	Nov-01	4.5	5	-0.48	57	Nov-18	4.5	2.5	-0.97
24	Mar-02	4.5	5	-0.48	58	May-19	4.5	2.5	-0.97
25	Jun-03	4.5	2.5	-0.97	59	Nov-19	4.5	2.5	-0.97
26	Feb-04	4.5	2.5	-0.97	60	Jun-20	4.5	2.5	-0.97
27	Jun-04	4.5	2.5	-0.97	61	Nov-20	4.5	2.5	-0.97
28	Nov-04	4.5	2.5	-0.97	62	Jun-21	4.5	2.5	-0.97
29	Jun-05	4.5	2.5	-0.97	63	Nov-21	4.5	2.5	-0.97
30	Dec-05	4.5	2.5	-0.97	64	Jun-22	4.5	2.5	-0.97
31	Jun-06	4.5	5	-0.48	65	Nov-22	4.5	2.5	-0.97
32	Nov-06	4.5	5	-0.48	66	Jun-23	4.5	2.5	-0.97
33	Jun-07	4.5	9	0.30	67	Nov-23	4.5	2.5	-0.97
34	Nov-07	4.5	2	-1.07	68	Jun-24	4.5	2.5	-0.97
35	Jun-08	4.5	2.5	-0.97	69	Nov-24	4.5	2.5	-0.97
36	Nov-08	4.5	2.5	-0.97					
37	Jun-09	4.5	2.5	-0.97					
38	Nov-09	4.5	2.5	-0.97					
39	Jun-10	4.5	9	0.30					
40	Nov-10	4.5	24	3.22					
41	Jun-11	4.5	29	4.19					
42	Jul-11	4.5	2.5	-0.97					
43	Nov-11	4.5	2.5	-0.97					
44	Jun-12	4.5	2.5	-0.97					
45	Dec-12	4.5	2.5	-0.97					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

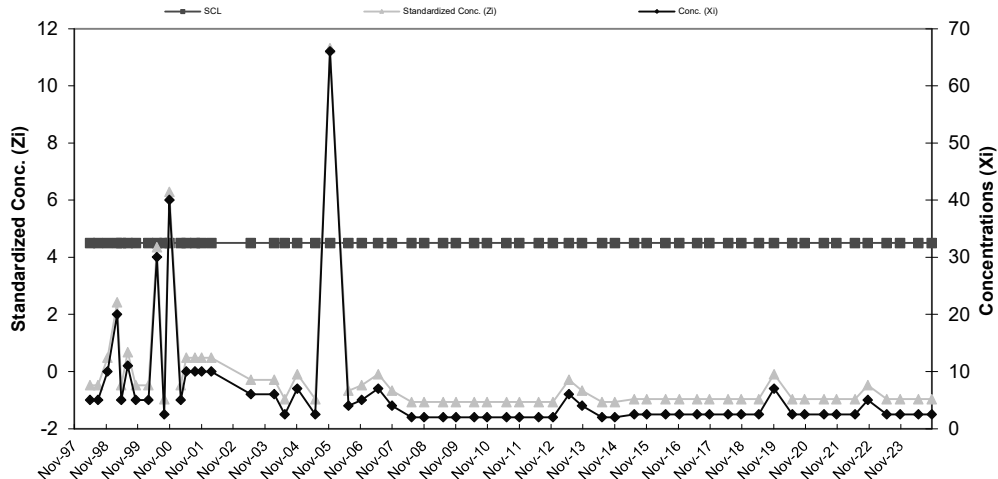


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - Copper

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)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.48	42	Nov-11	4.5	2	-1.06
10	Aug-98	4.5	5	-0.48	43	Jun-12	4.5	2	-1.06
11	Nov-98	4.5	10	0.48	44	Dec-12	4.5	2	-1.06
12	Mar-99	4.5	20	2.42	45	Jun-13	4.5	6	-0.29
13	May-99	4.5	5	-0.48	46	Nov-13	4.5	4	-0.68
14	Jul-99	4.5	11	0.68	47	Jun-14	4.5	2	-1.06
15	Oct-99	4.5	5	-0.48	48	Nov-14	4.5	2	-1.06
16	Mar-00	4.5	5	-0.48	49	Jun-15	4.5	2.5	-0.97
17	Jun-00	4.5	30	4.35	50	Nov-15	4.5	2.5	-0.97
18	Sep-00	4.5	2.5	-0.97	51	Jun-16	4.5	2.5	-0.97
19	Nov-00	4.5	40	6.29	52	Nov-16	4.5	2.5	-0.97
20	Mar-01	4.5	5	-0.48	53	Jun-17	4.5	2.5	-0.97
21	May-01	4.5	10	0.48	54	Nov-17	4.5	2.5	-0.97
22	Aug-01	4.5	10	0.48	55	Jun-18	4.5	2.5	-0.97
23	Nov-01	4.5	10	0.48	56	Nov-18	4.5	2.5	-0.97
24	Mar-02	4.5	10	0.48	57	May-19	4.5	2.5	-0.97
25	Jun-03	4.5	6	-0.29	58	Nov-19	4.5	7	-1.10
26	Feb-04	4.5	6	-0.29	59	Jun-20	4.5	2.5	-0.97
27	Jun-04	4.5	2.5	-0.97	60	Nov-20	4.5	2.5	-0.97
28	Nov-04	4.5	7	-0.10	61	Jun-21	4.5	2.5	-0.97
29	Jun-05	4.5	2.5	-0.97	62	Nov-21	4.5	2.5	-0.97
30	Dec-05	4.5	66	11.32	63	Jun-22	4.5	2.5	-0.97
31	Jun-06	4.5	4	-0.68	64	Nov-22	4.5	5	-0.48
32	Nov-06	4.5	5	-0.48	65	Jun-23	4.5	2.5	-0.97
33	Jun-07	4.5	7	-0.10	66	Nov-23	4.5	2.5	-0.97
34	Nov-07	4.5	4	-0.68	67	Jun-24	4.5	2.5	-0.97
35	Jun-08	4.5	2	-1.06	68	Nov-24	4.5	2.5	-0.97
36	Nov-08	4.5	2	-1.06					
37	Jun-09	4.5	2	-1.06					
38	Nov-09	4.5	2	-1.06					
39	Jun-10	4.5	2	-1.06					
40	Nov-10	4.5	2	-1.06					
41	Jun-11	4.5	2	-1.06					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

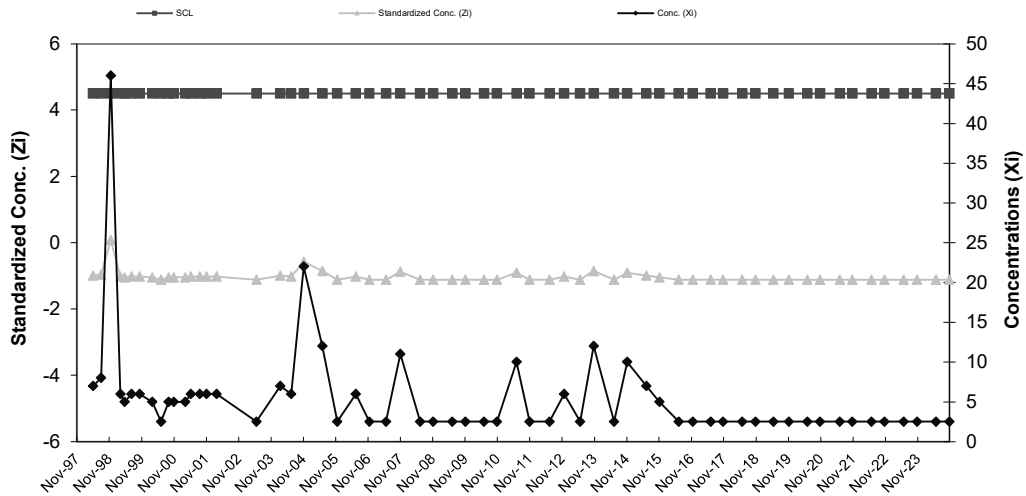


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - Nickel

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	7	-0.99	42	Nov-11	4.5	2.5	-1.11
10	Aug-98	4.5	8	-0.96	43	Jun-12	4.5	2.5	-1.11
11	Nov-98	4.5	46	0.08	44	Dec-12	4.5	6	-1.02
12	Mar-99	4.5	6	-1.02	45	Jun-13	4.5	2.5	-1.11
13	May-99	4.5	5	-1.05	46	Nov-13	4.5	12	-0.85
14	Jul-99	4.5	6	-1.02	47	Jun-14	4.5	2.5	-1.11
15	Oct-99	4.5	6	-1.02	48	Nov-14	4.5	10	-0.91
16	Mar-00	4.5	5	-1.05	49	Jun-15	4.5	7	-0.99
17	Jun-00	4.5	2.5	-1.11	50	Nov-15	4.5	5	-1.05
18	Sep-00	4.5	5	-1.05	51	Jun-16	4.5	2.5	-1.11
19	Nov-00	4.5	5	-1.05	52	Nov-16	4.5	2.5	-1.11
20	Mar-01	4.5	5	-1.05	53	Jun-17	4.5	2.5	-1.11
21	May-01	4.5	6	-1.02	54	Nov-17	4.5	2.5	-1.11
22	Aug-01	4.5	6	-1.02	55	Jun-18	4.5	2.5	-1.11
23	Nov-01	4.5	6	-1.02	56	Nov-18	4.5	2.5	-1.11
24	Mar-02	4.5	6	-1.02	57	May-19	4.5	2.5	-1.11
25	Jun-03	4.5	2.5	-1.11	58	Nov-19	4.5	2.5	-1.11
26	Feb-04	4.5	7	-0.99	59	Jun-20	4.5	2.5	-1.11
27	Jun-04	4.5	6	-1.02	60	Nov-20	4.5	2.5	-1.11
28	Nov-04	4.5	22	-0.58	61	Jun-21	4.5	2.5	-1.11
29	Jun-05	4.5	12	-0.85	62	Nov-21	4.5	2.5	-1.11
30	Dec-05	4.5	2.5	-1.11	63	Jun-22	4.5	2.5	-1.11
31	Jun-06	4.5	6	-1.02	64	Nov-22	4.5	2.5	-1.11
32	Nov-06	4.5	2.5	-1.11	65	Jun-23	4.5	2.5	-1.11
33	Jun-07	4.5	2.5	-1.11	66	Nov-23	4.5	2.5	-1.11
34	Nov-07	4.5	11	-0.88	67	Jun-24	4.5	2.5	-1.11
35	Jun-08	4.5	2.5	-1.11	68	Nov-24	4.5	2.5	-1.11
36	Nov-08	4.5	2.5	-1.11					
37	Jun-09	4.5	2.5	-1.11					
38	Nov-09	4.5	2.5	-1.11					
39	Jun-10	4.5	2.5	-1.11					
40	Nov-10	4.5	2.5	-1.11					
41	Jun-11	4.5	10	-0.91					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

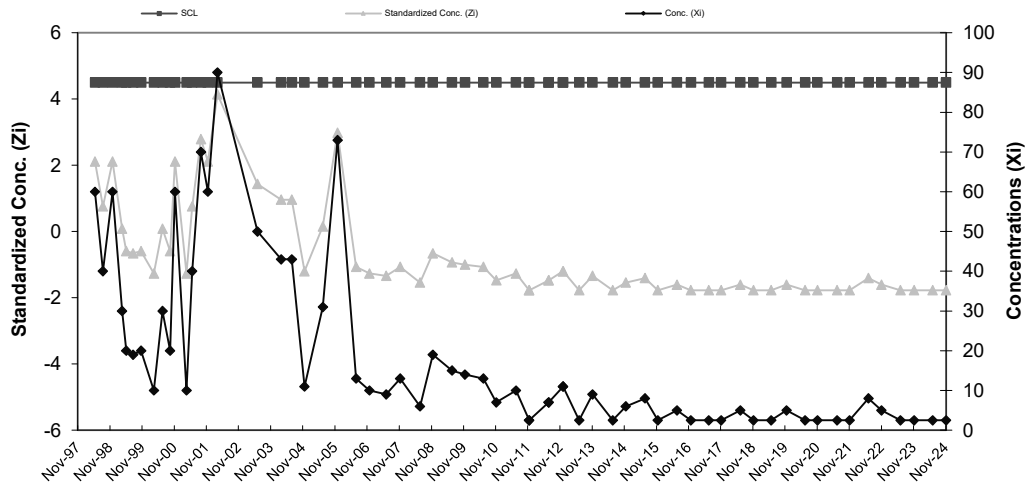


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - Zinc

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)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	60	2.11	42	Nov-11	4.5	2.5	-1.77
10	Aug-98	4.5	40	0.76	43	Jun-12	4.5	7	-1.47
11	Nov-98	4.5	60	2.11	44	Dec-12	4.5	11	-1.20
12	Mar-99	4.5	30	0.08	45	Jun-13	4.5	2.5	-1.77
13	May-99	4.5	20	-0.59	46	Nov-13	4.5	9	-1.34
14	Jul-99	4.5	19	-0.66	47	Jun-14	4.5	2.5	-1.77
15	Oct-99	4.5	20	-0.59	48	Nov-14	4.5	6	-1.54
16	Mar-00	4.5	10	-1.27	49	Jun-15	4.5	8	-1.40
17	Jun-00	4.5	30	0.08	50	Nov-15	4.5	2.5	-1.77
18	Sep-00	4.5	20	-0.59	51	Jun-16	4.5	5	-1.61
19	Nov-00	4.5	60	2.11	52	Nov-16	4.5	2.5	-1.77
20	Mar-01	4.5	10	-1.27	53	Jun-17	4.5	2.5	-1.77
21	May-01	4.5	40	0.76	54	Nov-17	4.5	2.5	-1.77
22	Aug-01	4.5	70	2.79	55	Jun-18	4.5	5	-1.61
23	Nov-01	4.5	60	2.11	56	Nov-18	4.5	2.5	-1.77
24	Mar-02	4.5	90	4.14	57	May-19	4.5	2.5	-1.77
25	Jun-03	4.5	50	1.44	58	Nov-19	4.5	5	-1.61
26	Feb-04	4.5	43	0.96	59	Jun-20	4.5	2.5	-1.77
27	Jun-04	4.5	43	0.96	60	Nov-20	4.5	2.5	-1.77
28	Nov-04	4.5	11	-1.20	61	Jun-21	4.5	2.5	-1.77
29	Jun-05	4.5	31	0.15	62	Nov-21	4.5	2.5	-1.77
30	Dec-05	4.5	73	2.99	63	Jun-22	4.5	8	-1.40
31	Jun-06	4.5	13	-1.06	64	Nov-22	4.5	5	-1.61
32	Nov-06	4.5	10	-1.27	65	Jun-23	4.5	2.5	-1.77
33	Jun-07	4.5	9	-1.34	66	Nov-23	4.5	2.5	-1.77
34	Nov-07	4.5	13	-1.06	67	Jun-24	4.5	2.5	-1.77
35	Jun-08	4.5	6	-1.54	68	Nov-24	4.5	2.5	-1.77
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					
41	Jun-11	4.5	10	-1.27					
42	Nov-11	4.5	2.5	-1.77					
43	Jun-12	4.5	7	-1.47					
44	Dec-12	4.5	11	-1.20					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

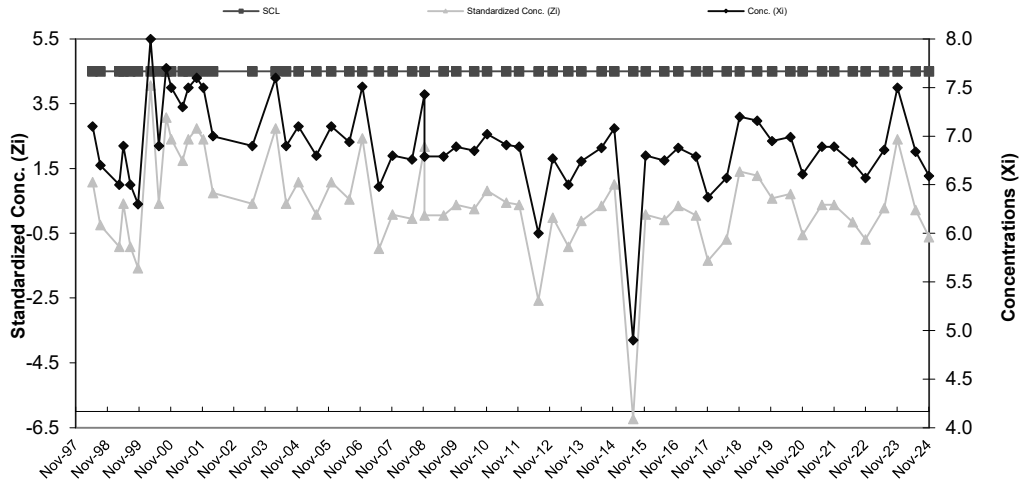


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - pH**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-96	7.2	6.78	0.30
2	Jun-96	7		
3	Oct-96	6.9		
4	Nov-96	7		
5	May-97	6.3		
6	Aug-97	6.7		
7	Nov-97	6.5		
8	Feb-98	6.6		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	7.10	1.08	41	Nov-11	4.5	6.9	0.38
10	Aug-98	4.5	6.70	-0.25	42	Jun-12	4.5	6	-2.57
11	Mar-99	4.5	6.50	-0.91	43	Dec-12	4.5	6.77	-0.02
12	May-99	4.5	6.90	0.42	44	Jun-13	4.5	6.5	-0.91
13	Jul-99	4.5	6.50	-0.91	45	Nov-13	4.5	6.74	-0.12
14	Oct-99	4.5	6.30	-1.58	46	Jun-14	4.5	6.88	0.35
15	Mar-00	4.5	8.00	4.07	47	Nov-14	4.5	7.08	1.01
16	Jun-00	4.5	6.90	0.42	48	Jun-15	4.5	4.9	-6.23
17	Sep-00	4.5	7.70	3.07	49	Nov-15	4.5	6.8	0.08
18	Nov-00	4.5	7.50	2.41	50	Jun-16	4.5	6.75	-0.08
19	Mar-01	4.5	7.30	1.74	51	Nov-16	4.5	6.88	0.35
20	May-01	4.5	7.50	2.41	52	Jun-17	4.5	6.79	0.05
21	Aug-01	4.5	7.60	2.74	53	Nov-17	4.5	6.37	-1.34
22	Nov-01	4.5	7.50	2.41	54	Jun-18	4.5	6.57	-0.68
23	Mar-02	4.5	7.00	0.75	55	Nov-18	4.5	7.2	1.41
24	Jun-03	4.5	6.90	0.42	56	May-19	4.5	7.16	1.28
25	Feb-04	4.5	7.60	2.74	57	Nov-19	4.5	6.95	0.58
26	Jun-04	4.5	6.90	0.42	58	Jun-20	4.5	6.99	0.71
27	Nov-04	4.5	7.10	1.08	59	Nov-20	4.5	6.61	-0.55
28	Jun-05	4.5	6.80	0.08	60	Jun-21	4.5	6.89	0.38
29	Dec-05	4.5	7.10	1.08	61	Nov-21	4.5	6.89	0.38
30	Jun-06	4.5	6.94	0.55	62	Jun-22	4.5	6.73	-0.15
31	Nov-06	4.5	7.51	2.44	63	Nov-22	4.5	6.57	-0.68
32	Jun-07	4.5	6.48	-0.98	64	Jun-23	4.5	6.86	0.28
33	Nov-07	4.5	6.80	0.08	65	Nov-23	4.5	7.5	2.41
34	Jun-08	4.5	6.76	-0.05	66	Jun-24	4.5	6.84	0.22
35	Nov-08	4.5	7.43	2.17	67	Nov-24	4.5	6.59	-0.61
35	Nov-08	4.5	6.79	0.05					
36	Jun-09	4.5	6.79	0.05					
37	Nov-09	4.5	6.89	0.38					
38	Jun-10	4.5	6.85	0.25					
39	Nov-10	4.5	7.02	0.81					
40	Jun-11	4.5	6.91	0.45					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

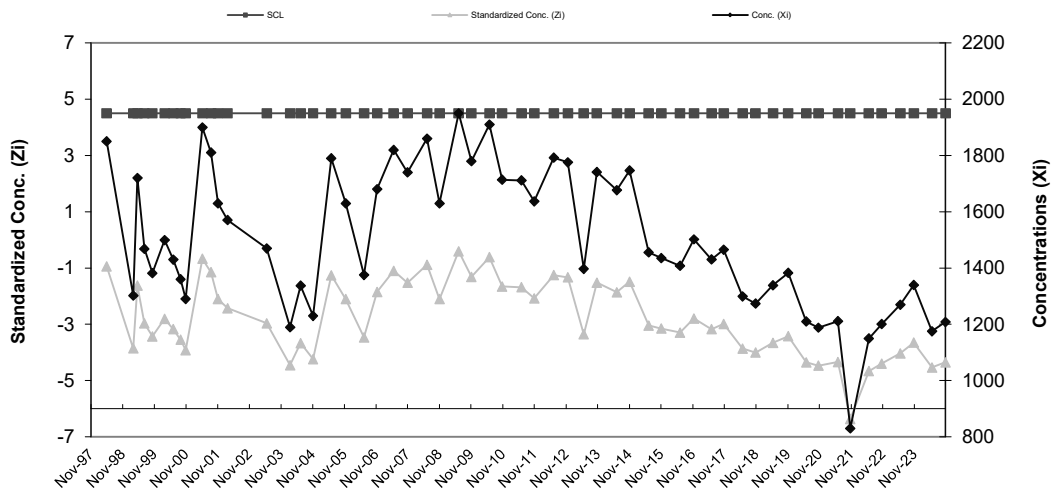


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - SpC**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-96	2000	2,026.25	187.84
2	Jun-96	2400		
3	Oct-96	2000		
4	Nov-96	1800		
5	May-97	2120		
6	Aug-97	1840		
7	Nov-97	2100		
8	Feb-98	1950		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	1850	-0.94	39	Nov-11	4.5	1637	-2.07
10	Mar-99	4.5	1302	-3.86	40	Jun-12	4.5	1792	-1.25
11	May-99	4.5	1720	-1.63	41	Dec-12	4.5	1776	-1.33
12	Jul-99	4.5	1468	-2.97	42	Jun-13	4.5	1397	-3.35
13	Oct-99	4.5	1382	-3.43	43	Nov-13	4.5	1741	-1.52
14	Mar-00	4.5	1500	-2.80	44	Jun-14	4.5	1677	-1.86
15	Jun-00	4.5	1430	-3.17	45	Nov-14	4.5	1747	-1.49
16	Sep-00	4.5	1360	-3.55	46	Jun-15	4.5	1456	-3.04
17	Nov-00	4.5	1290	-3.92	47	Nov-15	4.5	1435	-3.15
18	May-01	4.5	1900	-0.67	48	Jun-16	4.5	1408	-3.29
19	Aug-01	4.5	1810	-1.15	49	Nov-16	4.5	1502	-2.79
20	Nov-01	4.5	1630	-2.11	50	Jun-17	4.5	1431	-3.17
21	Mar-02	4.5	1570	-2.43	51	Nov-17	4.5	1465	-2.99
22	Jun-03	4.5	1470	-2.96	52	Jun-18	4.5	1300	-3.87
23	Feb-04	4.5	1190	-4.45	53	Nov-18	4.5	1274	-4.00
24	Jun-04	4.5	1337	-3.67	54	May-19	4.5	1339	-3.66
25	Nov-04	4.5	1230	-4.24	55	Nov-19	4.5	1383	-3.42
26	Jun-05	4.5	1790	-1.26	56	Jun-20	4.5	1210	-4.35
27	Dec-05	4.5	1630	-2.11	57	Nov-20	4.5	1188	-4.46
28	Jun-06	4.5	1376	-3.46	58	Jun-21	4.5	1211	-4.34
29	Nov-06	4.5	1680	-1.84	59	Nov-21	4.5	831	-6.36
30	Jun-07	4.5	1820	-1.10	60	Jun-22	4.5	1150	-4.66
31	Nov-07	4.5	1740	-1.52	61	Nov-22	4.5	1201	-4.39
32	Jun-08	4.5	1860	-0.89	62	Jun-23	4.5	1270	-4.03
33	Nov-08	4.5	1630	-2.11	63	Nov-23	4.5	1340	-3.65
34	Jun-09	4.5	1950	-0.41	64	Jun-24	4.5	1176	-4.53
35	Nov-09	4.5	1780	-1.31	65	Nov-24	4.5	1209	-4.35
36	Jun-10	4.5	1910	-0.62					
37	Nov-10	4.5	1714	-1.66					
38	Jun-11	4.5	1711	-1.68					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

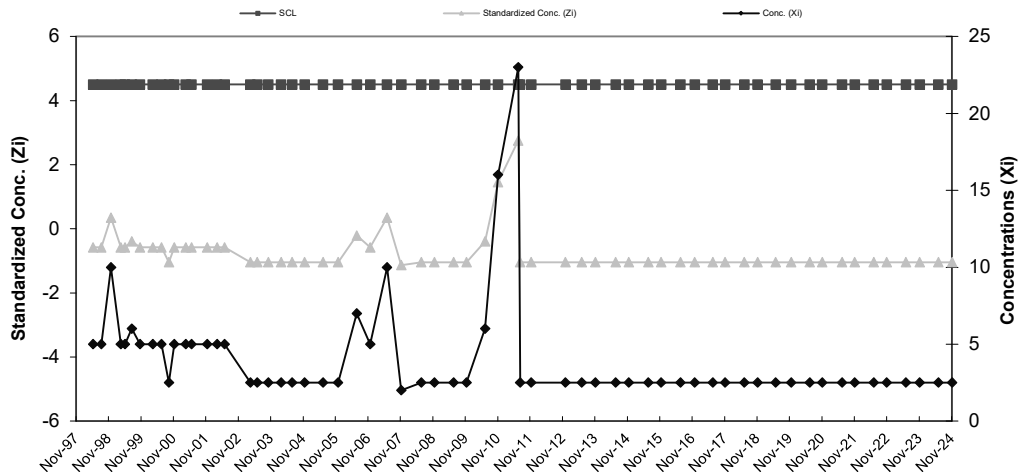


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - Chromium

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.58	44	Jul-11	4.5	2.5	-1.04
10	Aug-98	4.5	5	-0.58	45	Nov-11	4.5	2.5	-1.04
11	Nov-98	4.5	10	0.35	46	Dec-12	4.5	2.5	-1.04
12	Mar-99	4.5	5	-0.58	47	Jun-13	4.5	2.5	-1.04
13	May-99	4.5	5	-0.58	48	Nov-13	4.5	2.5	-1.04
14	Jul-99	4.5	6	-0.39	49	Jun-14	4.5	2.5	-1.04
15	Oct-99	4.5	5	-0.58	50	Nov-14	4.5	2.5	-1.04
16	Mar-00	4.5	5	-0.58	51	Jun-15	4.5	2.5	-1.04
17	Jun-00	4.5	5	-0.58	52	Nov-15	4.5	2.5	-1.04
18	Sep-00	4.5	2.5	-1.04	53	Jun-16	4.5	2.5	-1.04
19	Nov-00	4.5	5	-0.58	54	Nov-16	4.5	2.5	-1.04
20	Mar-01	4.5	5	-0.58	55	Jun-17	4.5	2.5	-1.04
21	May-01	4.5	5	-0.58	56	Nov-17	4.5	2.5	-1.04
22	Nov-01	4.5	5	-0.58	57	Jun-18	4.5	2.5	-1.04
23	Mar-02	4.5	5	-0.58	58	Nov-18	4.5	2.5	-1.04
24	May-02	4.5	5	-0.58	59	May-19	4.5	2.5	-1.04
25	Mar-03	4.5	2.5	-1.04	60	Nov-19	4.5	2.5	-1.04
26	Jun-03	4.5	2.5	-1.04	61	Jun-20	4.5	2.5	-1.04
27	Oct-03	4.5	2.5	-1.04	62	Nov-20	4.5	2.5	-1.04
28	Feb-04	4.5	2.5	-1.04	63	Jun-21	4.5	2.5	-1.04
29	Jun-04	4.5	2.5	-1.04	64	Nov-21	4.5	2.5	-1.04
30	Nov-04	4.5	2.5	-1.04	65	Jun-22	4.5	2.5	-1.04
31	Jun-05	4.5	2.5	-1.04	66	Nov-22	4.5	2.5	-1.04
32	Dec-05	4.5	2.5	-1.04	67	Jun-23	4.5	2.5	-1.04
33	Jun-06	4.5	7	-0.21	68	Nov-23	4.5	2.5	-1.04
34	Nov-06	4.5	5	-0.58	69	Jun-24	4.5	2.5	-1.04
35	Jun-07	4.5	10	0.35	70	Nov-24	4.5	2.5	-1.04
36	Nov-07	4.5	2	-1.14					
37	Jun-08	4.5	2.5	-1.04					
38	Nov-08	4.5	2.5	-1.04					
39	Jun-09	4.5	2.5	-1.04					
40	Nov-09	4.5	2.5	-1.04					
41	Jun-10	4.5	6	-0.39					
42	Nov-10	4.5	16	1.46					
43	Jun-11	4.5	23	2.75					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

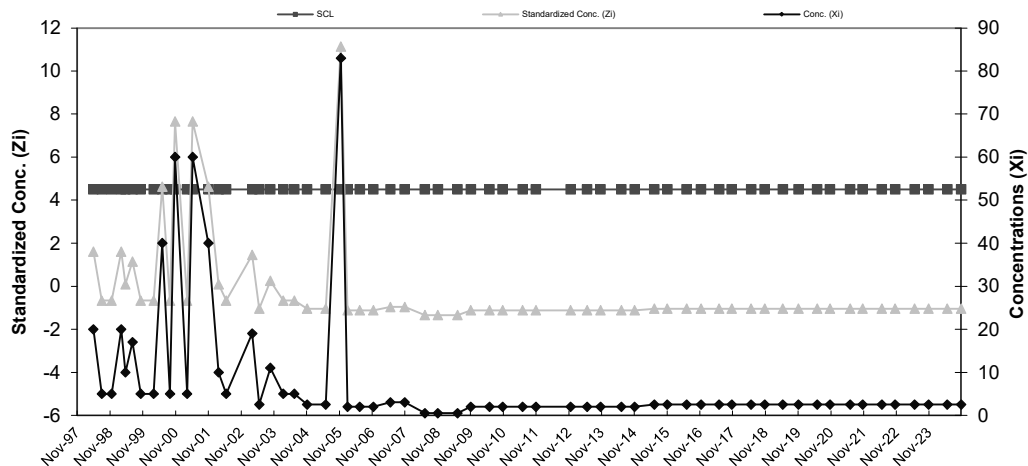


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - Copper

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	20	1.61	44	Jun-11	4.5	2	-1.12
10	Aug-98	4.5	5	-0.66	45	Nov-11	4.5	2	-1.12
11	Nov-98	4.5	5	-0.66	46	Dec-12	4.5	2	-1.12
12	Mar-99	4.5	20	1.61	47	Jun-13	4.5	2	-1.12
13	May-99	4.5	10	0.09	48	Nov-13	4.5	2	-1.12
14	Jul-99	4.5	17	1.15	49	Jun-14	4.5	2	-1.12
15	Oct-99	4.5	5	-0.66	50	Nov-14	4.5	2	-1.12
16	Mar-00	4.5	5	-0.66	51	Jun-15	4.5	2.5	-1.04
17	Jun-00	4.5	40	4.63	52	Nov-15	4.5	2.5	-1.04
18	Sep-00	4.5	5	-0.66	53	Jun-16	4.5	2.5	-1.04
19	Nov-00	4.5	60	7.66	54	Nov-16	4.5	2.5	-1.04
20	Mar-01	4.5	5	-0.66	55	Jun-17	4.5	2.5	-1.04
21	May-01	4.5	60	7.66	56	Nov-17	4.5	2.5	-1.04
22	Nov-01	4.5	40	4.63	57	Jun-18	4.5	2.5	-1.04
23	Mar-02	4.5	10	0.09	58	Nov-18	4.5	2.5	-1.04
24	May-02	4.5	5	-0.66	59	May-19	4.5	2.5	-1.04
25	Mar-03	4.5	19	1.46	60	Nov-19	4.5	2.5	-1.04
26	Jun-03	4.5	2.5	-1.04	61	Jun-20	4.5	2.5	-1.04
27	Oct-03	4.5	11	0.25	62	Nov-20	4.5	2.5	-1.04
28	Feb-04	4.5	5	-0.66	63	Jun-21	4.5	2.5	-1.04
29	Jun-04	4.5	5	-0.66	64	Nov-21	4.5	2.5	-1.04
30	Nov-04	4.5	2.5	-1.04	65	Jun-22	4.5	2.5	-1.04
31	Jun-05	4.5	2.5	-1.04	66	Nov-22	4.5	2.5	-1.04
32	Dec-05	4.5	83	11.14	67	Jun-23	4.5	2.5	-1.04
33	Feb-06	4.5	2	-1.12	68	Nov-23	4.5	2.5	-1.04
34	Jun-06	4.5	2	-1.12	69	Jun-24	4.5	2.5	-1.04
35	Nov-06	4.5	2	-1.12	70	Nov-24	4.5	2.5	-1.04
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					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

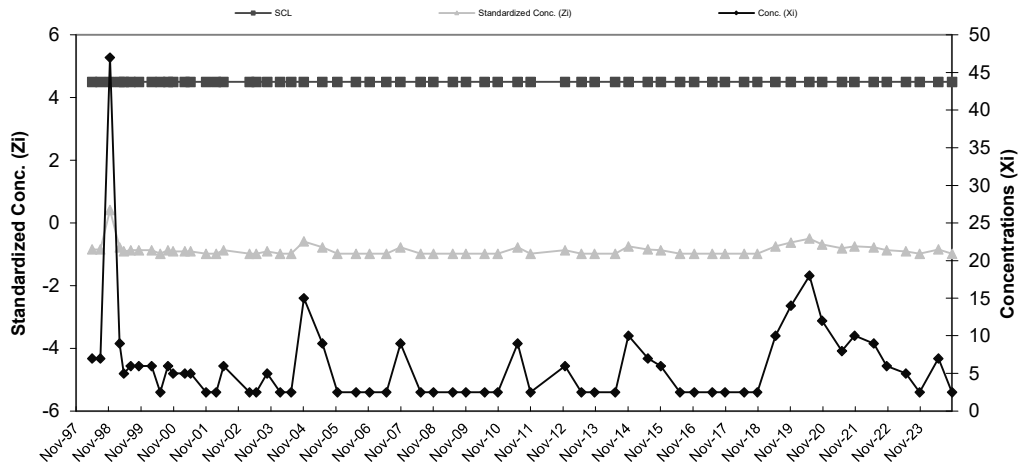


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - Nickel

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	7	-0.84	43	Jun-11	4.5	9	-0.78
10	Aug-98	4.5	7	-0.84	44	Nov-11	4.5	2.5	-0.98
11	Nov-98	4.5	47	0.41	45	Dec-12	4.5	6	-0.87
12	Mar-99	4.5	9	-0.78	46	Jun-13	4.5	2.5	-0.98
13	May-99	4.5	5	-0.90	47	Nov-13	4.5	2.5	-0.98
14	Jul-99	4.5	6	-0.87	48	Jun-14	4.5	2.5	-0.98
15	Oct-99	4.5	6	-0.87	49	Nov-14	4.5	10	-0.75
16	Mar-00	4.5	6	-0.87	50	Jun-15	4.5	7	-0.84
17	Jun-00	4.5	2.5	-0.98	51	Nov-15	4.5	6	-0.87
18	Sep-00	4.5	6	-0.87	52	Jun-16	4.5	2.5	-0.98
19	Nov-00	4.5	5	-0.90	53	Nov-16	4.5	2.5	-0.98
20	Mar-01	4.5	5	-0.90	54	Jun-17	4.5	2.5	-0.98
21	May-01	4.5	5	-0.90	55	Nov-17	4.5	2.5	-0.98
22	Nov-01	4.5	2.5	-0.98	56	Jun-18	4.5	2.5	-0.98
23	Mar-02	4.5	2.5	-0.98	57	Nov-18	4.5	2.5	-0.98
24	May-02	4.5	6	-0.87	58	May-19	4.5	10	-0.75
25	Mar-03	4.5	2.5	-0.98	59	Nov-19	4.5	14	-0.62
26	Jun-03	4.5	2.5	-0.98	60	Jun-20	4.5	18	-0.50
27	Oct-03	4.5	5	-0.90	61	Nov-20	4.5	12	-0.68
28	Feb-04	4.5	2.5	-0.98	62	Jun-21	4.5	8	-0.81
29	Jun-04	4.5	2.5	-0.98	63	Nov-21	4.5	10	-0.75
30	Nov-04	4.5	15	-0.59	64	Jun-22	4.5	9	-0.78
31	Jun-05	4.5	9	-0.78	65	Nov-22	4.5	6	-0.87
32	Dec-05	4.5	2.5	-0.98	66	Jun-23	4.5	5	-0.90
33	Jun-06	4.5	2.5	-0.98	67	Nov-23	4.5	2.5	-0.98
34	Nov-06	4.5	2.5	-0.98	68	Jun-24	4.5	7	-0.84
35	Jun-07	4.5	2.5	-0.98	69	Nov-24	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					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean



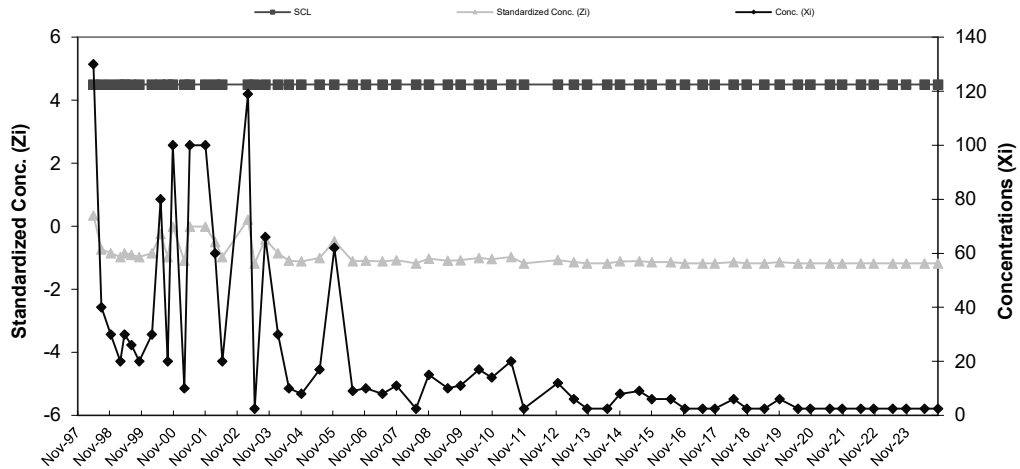
**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART**

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)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	130	0.34	43	Jun-11	4.5	20	-0.97
10	Aug-98	4.5	40	-0.73	44	Nov-11	4.5	2.5	-1.18
11	Nov-98	4.5	30	-0.85	45	Dec-12	4.5	12	-1.07
12	Mar-99	4.5	20	-0.97	46	Jun-13	4.5	6	-1.14
13	May-99	4.5	30	-0.85	47	Nov-13	4.5	2.5	-1.18
14	Jul-99	4.5	26	-0.90	48	Jun-14	4.5	2.5	-1.18
15	Oct-99	4.5	20	-0.97	49	Nov-14	4.5	8	-1.12
16	Mar-00	4.5	30	-0.85	50	Jun-15	4.5	9	-1.10
17	Jun-00	4.5	80	-0.25	51	Nov-15	4.5	6	-1.14
18	Sep-00	4.5	20	-0.97	52	Jun-16	4.5	6	-1.14
19	Nov-00	4.5	100	-0.01	53	Nov-16	4.5	2.5	-1.18
20	Mar-01	4.5	10	-1.09	54	Jun-17	4.5	2.5	-1.18
21	May-01	4.5	100	-0.01	55	Nov-17	4.5	2.5	-1.18
22	Nov-01	4.5	100	-0.01	56	Jun-18	4.5	6	-1.14
23	Mar-02	4.5	60	-0.49	57	Nov-18	4.5	2.5	-1.18
24	May-02	4.5	20	-0.97	58	May-19	4.5	2.5	-1.18
25	Mar-03	4.5	119	0.21	59	Nov-19	4.5	6	-1.14
26	Jun-03	4.5	2.5	-1.18	60	Jun-20	4.5	2.5	-1.18
27	Oct-03	4.5	66	-0.42	61	Nov-20	4.5	2.5	-1.18
28	Feb-04	4.5	30	-0.85	62	Jun-21	4.5	2.5	-1.18
29	Jun-04	4.5	10	-1.09	63	Nov-21	4.5	2.5	-1.18
30	Nov-04	4.5	8	-1.12	64	Jun-22	4.5	2.5	-1.18
31	Jun-05	4.5	17	-1.01	65	Nov-22	4.5	2.5	-1.18
32	Dec-05	4.5	62	-0.47	66	Jun-23	4.5	2.5	-1.18
33	Jun-06	4.5	9	-1.10	67	Nov-23	4.5	2.5	-1.18
34	Nov-06	4.5	10	-1.09	68	Jun-24	4.5	2.5	-1.18
35	Jun-07	4.5	8	-1.12	69	Nov-24	4.5	2.5	-1.18
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					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

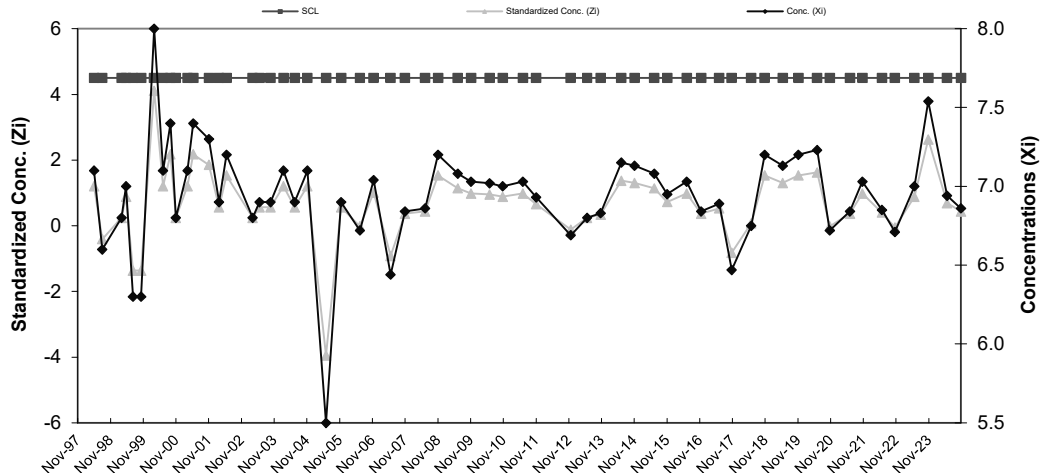


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - pH

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)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	7.10	1.21	42	Jun-11	4.5	7.0	0.98
10	Aug-98	4.5	6.60	-0.40	43	Nov-11	4.5	6.93	0.66
11	Mar-99	4.5	6.80	0.24	44	Dec-12	4.5	6.69	-0.11
12	May-99	4.5	7.00	0.89	45	Jun-13	4.5	6.8	0.24
13	Jul-99	4.5	6.30	-1.37	46	Nov-13	4.5	6.83	0.34
14	Oct-99	4.5	6.30	-1.37	47	Jun-14	4.5	7.15	1.37
15	Mar-00	4.5	8.00	4.11	48	Nov-14	4.5	7.13	1.30
16	Jun-00	4.5	7.10	1.21	49	Jun-15	4.5	7.08	1.14
17	Sep-00	4.5	7.40	2.17	50	Nov-15	4.5	6.95	0.72
18	Nov-00	4.5	6.80	0.24	51	Jun-16	4.5	7.03	0.98
19	Mar-01	4.5	7.10	1.21	52	Nov-16	4.5	6.84	0.37
20	May-01	4.5	7.40	2.17	53	Jun-17	4.5	6.89	0.53
21	Nov-01	4.5	7.30	1.85	54	Nov-17	4.5	6.47	-0.82
22	Mar-02	4.5	6.90	0.56	55	Jun-18	4.5	6.75	0.08
23	May-02	4.5	7.20	1.53	56	Nov-18	4.5	7.2	1.53
24	Mar-03	4.5	6.80	0.24	57	May-19	4.5	7.13	1.30
25	Jun-03	4.5	6.90	0.56	58	Nov-19	4.5	7.2	1.53
26	Oct-03	4.5	6.90	0.56	59	Jun-20	4.5	7.23	1.63
27	Feb-04	4.5	7.10	1.21	60	Nov-20	4.5	6.72	-0.02
28	Jun-04	4.5	6.90	0.56	61	Jun-21	4.5	6.84	0.37
29	Nov-04	4.5	7.10	1.21	62	Nov-21	4.5	7.03	0.98
30	Jun-05	4.5	5.50	-3.94	63	Jun-22	4.5	6.85	0.40
31	Dec-05	4.5	6.90	0.56	64	Nov-22	4.5	6.71	-0.05
32	Jun-06	4.5	6.72	-0.02	65	Jun-23	4.5	7	0.89
33	Nov-06	4.5	7.04	1.01	67	Nov-23	4.5	7.54	2.62
34	Jun-07	4.5	6.44	-0.92	68	Jun-24	4.5	6.94	0.69
35	Nov-07	4.5	6.84	0.37	69	Nov-24	4.5	6.86	0.43
36	Jun-08	4.5	6.86	0.43					
37	Nov-08	4.5	7.20	1.53					
38	Jun-09	4.5	7.08	1.14					
39	Nov-09	4.5	7.03	0.98					
40	Jun-10	4.5	7.02	0.95					
41	Nov-10	4.5	7.00	0.89					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean



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

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	1400	-0.62	41	Jun-11	4.5	1642	0.49
10	Mar-99	4.5	982	-2.53	42	Nov-11	4.5	1651	0.53
11	May-99	4.5	1460	-0.34	43	Dec-12	4.5	1729	0.89
12	Jul-99	4.5	1262	-1.25	44	Jun-13	4.5	1759	1.03
13	Oct-99	4.5	1116	-1.92	45	Nov-13	4.5	1736	0.92
14	Mar-00	4.5	1250	-1.31	46	Jun-14	4.5	1710	0.80
15	Jun-00	4.5	1310	-1.03	47	Nov-14	4.5	1724	0.87
16	Sep-00	4.5	1440	-0.44	48	Jun-15	4.5	1669	0.61
17	Nov-00	4.5	1040	-2.27	49	Nov-15	4.5	1686	0.69
18	Mar-01	4.5	1110	-1.95	50	Jun-16	4.5	1640	0.48
19	May-01	4.5	1470	-0.30	51	Nov-16	4.5	1641	0.49
20	Nov-01	4.5	1110	-1.95	52	Jun-17	4.5	1675	0.64
21	Mar-02	4.5	1290	-1.12	53	Nov-17	4.5	1626	0.42
22	May-02	4.5	1200	-1.53	54	Jun-18	4.5	1685	0.69
23	Mar-03	4.5	1270	-1.21	55	Nov-18	4.5	1637	0.47
24	Jun-03	4.5	1300	-1.08	56	May-19	4.5	1563	0.13
25	Oct-03	4.5	1040	-2.27	57	Nov-19	4.5	1593	0.27
26	Feb-04	4.5	1920	1.76	58	Jun-20	4.5	1623	0.40
27	Jun-04	4.5	1300	-1.08	59	Nov-20	4.5	1347	-0.86
28	Nov-04	4.5	1160	-1.72	60	Jun-21	4.5	1554	0.09
29	Jun-05	4.5	1780	1.12	61	Nov-21	4.5	1398	-0.63
30	Dec-05	4.5	1640	0.48	62	Jun-22	4.5	1620	0.39
31	Jun-06	4.5	1355	-0.82	63	Nov-22	4.5	1570	0.16
32	Nov-06	4.5	1610	0.34	64	Jun-23	4.5	1570	0.16
33	Jun-07	4.5	1640	0.48	65	Nov-23	4.5	1580	0.21
34	Nov-07	4.5	1600	0.30	66	Jun-24	4.5	1570	0.16
35	Jun-08	4.5	1510	-0.11	67	Nov-24	4.5	1584	0.22
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					

h = Decision Value for CUSUM, SCL = Shewart Control Limit, k = Standard Error Shift Detection Parameter, Zi = Standardized Mean

