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



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1. INTRODUCTION

On behalf of Revitalizing Auto Communities Environmental Response Trust (RACER), O'Brien & Gere Engineers, Inc., a Ramboll company (Ramboll) is pleased to present the results of the 2020 semiannual leak detection system (LDS) sampling event conducted in June 2020 for the Coldwater Road Landfill site (**Figure 1**). A total of 8,441 gallons of liquid have been removed from the leak detection vaults during 2020, and a total of 7,767 gallons of leachate have been removed from the leachate collection sumps during 2020. Volumes are reported in the Quarterly Status Reports.

2. SAMPLING AND ANALYSIS

During this event samples were collected from the six leak detection vaults (A through F) and the six leachate collection sumps (A through F) on June 15, 2020 and June 16, 2020 for laboratory analysis.

The samples were analyzed for total organic carbon (TOC, Method 5310C), total suspended solids (TSS, Method 2540D), specific conductivity (Method 120.1), dissolved chromium (Cr), dissolved copper (Cu), dissolved nickel (Ni), and dissolved zinc (Zn, Method 200.8). Samples collected from Sumps A through F were also analyzed for volatile organic compounds (VOCs, Method 8260). The event also included field measurements for pH, specific conductivity, and temperature.

The analytical results are summarized in four attached tables: Landfill Leak Detection Vaults – Historical Analytical Results, Inorganics and Metals (**Table 1**), Landfill Leachate Sumps – Historical Analytical Results, Inorganics and Metals (**Table 2**), Landfill Leachate Sumps – Analytical Results, Volatile Organic Compounds (**Table 3**), and Leachate Sump Depth to Water (**Table 4**). A Site Location Map (**Figure 1**) and Landfill Site Layout (**Figure 2**) are also attached. The Analytical Laboratory Report and the Chain of Custody are included as (**Appendix A**).

The samples for the leak detection vaults and sumps were collected on June 15, 2020 and June 16, 2020 using a peristaltic pump and tubing for each vault and sump. Duplicate samples were collected from Vault C and Sump C. Samples were placed directly into laboratory prepared containers, logged onto a chain of custody form, and placed on ice for transport to Merit Laboratories, Inc., in East Lansing, Michigan.

The laboratory analysis for TOC, TSS, dissolved metals, and the field parameters continue to show historical consistent concentrations for the vaults and sumps (**Tables 1** and **2**). A review of the analytical data presented in the attached tables indicate analytical results similar to previous sampling events. A summary of the data is provided below:

Vaults:

- Chromium concentrations were not detected above the method detection limit of 5 µg/L, which is similar or less than the historic sample results. Historic chromium results ranged from below the method detection limit to 30 µg/L at Vault A (6/20/2011).
- Copper concentrations were not detected above the method detection limit of 5 µg/L, which is similar or less than the historic sample results. Historic copper results ranged from below the method detection limit to 140 µg/L at Vault C (6/20/2000).
- Nickel concentrations were not detected above the method detection limit of 5 µg/L in Vault B and Vault E. Nickel was detected in Vault A (11 µg/L), Vault C (8 µg/L), Vault D (12 µg/L), and Vault F (18 µg/L). The results were similar or less than historic results, which ranged from below the method detection limit to 125 µg/L at Vault D (11/15/1997). However, in Vault F nickel was slightly higher than other recent past results.
- Zinc concentrations were not detected above the method detection limit of 5 µg/L in Vault A, Vault B, Vault C, Vault E, and Vault F. Zinc was detected in Vault D (6 µg/L). The results were similar or less than historic results, which ranged from below the method detection limit to 230 µg/L at Vault C (5/29/2019).

- TOC concentrations ranged from 6.0 mg/L in Vault E to 10.0 mg/L in Vault C (duplicate). The results were similar or less than historic results, which ranged from 1.8 mg/L at Vault F (11/17/2008) to 140 mg/L at Vault A (3/27/1996). However, results are slightly elevated over recent past results in each of the vaults.
- TSS concentrations were not detected above the method detection limit of 3 mg/L in Vault A, Vault B, Vault D, Vault E, and Vault F. TSS was detected in Vault C (3 mg/L). Historic TSS results ranged from below the method detection limit to 7,100 mg/L at Vault F (11/11/1996).
- pH concentrations ranged from 6.84 in Vault A to 7.23 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 1,165 $\mu\text{s}/\text{cm}$ in Vault B to 1,747 $\mu\text{s}/\text{cm}$ in Vault C. The results were similar or less than 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).

Sumps:

- Chromium concentrations ranged from 38 $\mu\text{g}/\text{L}$ in Sump F to 498 $\mu\text{g}/\text{L}$ in Sump B. The results were similar or less than historic results, with the exception of Sump C, where chromium concentrations have recently been increasing. However, other metals concentrations in Sump C have recently been decreasing. Historically chromium has ranged from below the method detection limit to 1,490 $\mu\text{g}/\text{L}$ at Sump B (6/6/2013).
- Copper concentrations ranged from 51 $\mu\text{g}/\text{L}$ in Sump F to 1,380 $\mu\text{g}/\text{L}$ in Sump D. The results were similar or less than historic results, which ranged from below the method detection limit in Sump E (5/7/1997) and Sump F (12/12/2003) to 18,000 at Sump C (3/23/1995).
- Nickel concentrations ranged from 14 $\mu\text{g}/\text{L}$ in Sump A to 946 $\mu\text{g}/\text{L}$ in Sump D. The results were similar or less than historic results, which ranged from below the method detection limit in Sump E (6/14/2010) and Sump F (6/14/2010) to 2,500 $\mu\text{g}/\text{L}$ at Sump C (11/11/1996).
- Zinc concentrations ranged from not detected above the method detection limit of 5 $\mu\text{g}/\text{L}$ in Sump A, Sump C, and Sump D to 15 $\mu\text{g}/\text{L}$ in Sump B. The results were similar or less than historic results, which ranged from below the method detection limit to 160 $\mu\text{g}/\text{L}$ at Sump F (5/31/2002).
- TOC concentrations ranged from 14.8 mg/L in Sump C to 280 mg/L in Sump D. The results were similar or less than historic results, which ranged from 2.9 mg/L at Sump F (11/10/2000) to 800 mg/L at Sump B (3/23/1995).
- TSS concentrations were not detected above the method detection limit of 3 mg/L. The results were similar or less than historic results, which ranged from below the method detection limit to 69,000 mg/L at Sump D (8/30/1995).
- pH ranged from 7.88 in Sump B to 12.44 in Sump D. The results were within the range of the historic results, which ranged from 5.60 in Sump E (11/6/1998) to 12.30 Sump D (3/23/1995).
- Specific conductivity ranged from 1,000 $\mu\text{s}/\text{cm}$ in Sump A to 5,840 $\mu\text{s}/\text{cm}$ in Sump D. The results were similar or less than historic results, which ranged from 682 $\mu\text{s}/\text{cm}$ at Sump F (4/26/1999) to 19,920 $\mu\text{s}/\text{cm}$ at Sump E (6/5/2015).
- Sump D was the only sump with VOCs detected. Acetone was detected in Sump D at a concentration of 3,407 $\mu\text{g}/\text{L}$. Acrylonitrile was detected at a concentration of 9 $\mu\text{g}/\text{L}$, and 2-Butanone was detected at 77 $\mu\text{g}/\text{L}$. VOCs have been detected in Sump D during previous events.

3. SUMMARY

Duplicate samples were collected during this sample event from Vault C and Sump C 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. There was a positive (increasing) trend for nickel in Vault F, and a negative (decreasing) trend for specific conductivity in Vault C. The trends were calculated using regression analysis over the last four sampling events per the Post Closure Care Plan, January 2014.

The positive and negative trends were not confirmed by the concentrations of other metals/parameters. The trends do not suggest there was a release from the landfill and will continue to be evaluated during future sampling events. No other trends or spikes were observed during this monitoring event. The Shewart control charts are included as [Appendix B](#).

The next semiannual sampling event will be completed in November 2020. If you have any questions, please feel free to contact Clifford Yantz at (313) 333-0211.

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	21	<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	<5	15	14
	Duplicate	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	
Re-sample	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	
Re-sample	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	
Duplicate	25-Jun-12	6.0	6	5.75	1872	11.9	<5	6	25	
5-Dec-12	5.8	2	6.76	1820	10.6	<5	<4	24	10	
Duplicate	5-Dec-12	5.8	3	6.76	1814	10.6	<5	<4	24	
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	
Duplicate	21-Jun-16	3.9	<3	6.93	1362	12.0	<5	<5	13	
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	

See notes on page 6.



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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 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	11	
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	16	
12-Nov-07	3.8	1.0	6.93	1690	12.6	2	5	16	14	
24-Jun-08	3.2	6.0	6.95	1880	14.0	<5	2	8	9	
17-Nov-08	2.4	<1	6.89	1818	9.6	<5	2	8	15	
Duplicate	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	
17-Nov-09	3	0	6.99	1970	10.9	<5	<4	9	17	
14-Jun-10	3	2	6.90	1810	12.1	8	<4	5	20	
8-Nov-10	4	3	6.93	1911	12.2	21	<4	11	17	
Re-sample	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	9	
25-Jun-12	3.0	4	6.16	1781	12.5	<5	<4	<5	8	
5-Dec-12	3.2	5	6.85	1936	10.2	<5	6	9	15	
6-Jun-13	3.2	<1	6.66	1455	10.8	<5	<4	6	7	
4-Nov-13	3.0	1	6.74	1750	11.8	<5	<4	5	14	
23-Jun-14	3.2	1	6.87	1369	12.3	<5	<4	<5	7	
18-Nov-14	2.7	3	7.05	1656	7.1	<5	<4	13	10	
25-Jun-15	3.0	<1	7.07	1513	13.4	<5	5	11	12	
17-Nov-15	2.6	3	6.76	1635	11.7	<5	<5	9	10	
21-Jun-16	2.7	<3	6.89	1176	13.7	<5	<5	<5	6	
28-Nov-16	2.2	<3	6.78	1654	11.3	<5	<5	<5	5	
19-Jun-17	2.5	<3	6.80	1110	11.6	<5	<5	<5	<5	
6-Nov-17	2.6	<3	6.28	1450	12.0	<5	<5	<5	7	
11-Jun-18	2.4	<3	6.51	1064	11.4	<5	<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	6	<5	
29-May-19	6.0	<3	7.21	1058	9.8	<5	<5	<5	7	
19-Nov-19	4.8	<3	7.00	1235	9.9	<5	<5	<5	8	
15-Jun-20	6.2	<3	6.93	1165	15.6	<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
	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
Vault C	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
Duplicate	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
Duplicate	20-Jun-11	5.9	5	7.28	1688	12.9	24	<4	14	21
Re-sample	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
	11-Jun-18	4.7	5	6.75	1774	12.1	<5	<5	8	<5
Duplicate	11-Jun-18	5.2	3	6.75	1789	12.1	<5	<5	8	<5
	7-Nov-18	5.3	<3	6.90	1696	4.0	<5	<5	11	<5
	29-May-19	8.0	6	7.17	1668	9.6	<5	<5	8	230
Re-sample	7-Jun-19	--	--	--	--	--	--	--	--	<5
	19-Nov-19	6.7	<3	7.08	1635	10.6	<5	<5	9	<5
Duplicate	19-Nov-19	6.9	<3	7.08	1638	10.6	<5	<5	10	<5
	16-Jun-20	9.7	3	7.13	1747	12.2	<5	<5	8	<5
Duplicate	16-Jun-20	10.0	3	7.13	1746	12.2	<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
		EGLE Residential Drinking Water Criteria & RBSLs					100 (A)	1,000 (E)	100 (A)	2,400
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	40	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	12.2	<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	10	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
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	
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	
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	
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	
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	
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	

See notes on page 6.



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

Vault	Sample Date	Indicator Parameters					Dissolved Metals (ug/L)			
		TOC (mg/L)	TSS (mg/L)	pH	SpC	Temp	Cr	Cu	Ni	Zn
		EGLE Residential Drinking Water Criteria & RBSLs					100 (A)	1,000 (E)	100 (A)	2,400
	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
Vault E	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
Duplicate	8-Nov-10	5.0	<1	7.02	1714	12.4	24	<4	<5	7
	8-Nov-10	5.0	3	7.02	1715	12.4	20	<4	<5	7
Re-sample	20-Jun-11	3.4	5	6.91	1711	13.0	29	<4	10	15
	14-Jul-11	--	--	--	--	--	<5	--	--	--
Duplicate	14-Nov-11	4.0	9	6.89	1637	11.7	<5	<4	<5	<5
	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
Duplicate	25-Jun-15	2.9	4	6.88	1456	12.6	<5	<5	7	8
	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

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	<5	
	11-Jun-18	2.2	<3	6.75	1685	13.6	<5	<5	<5	6	
	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	

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



TABLE 2
RACER Trust - Coldwater Road
Landfill Leak Detection Sumps - Historical Analytical Results
Inorganics and Metals

Sump	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>
	18-Jun-96	170.0	200	9.50	2800	--	50	4300	640	<20	
	11-Nov-96	350.0	3000	10.00	4400	--	150	8800	1300	30	
	7-May-97	85.0	62	7.86	2200	8.9	20	2450	422	10	
	5-Nov-97	110.0	14	8.50	2800	11.0	<1	1050	376	20	
	5-May-98	125.0	2	7.90	2280	9.1	40	1380	383	10	
Sump A	6-Nov-98	136.0	984	7.54	2750	11.7	40	2950	519	<10	
	26-Apr-99	110.0	253	9.49	1334	12.6	40	2380	375	<10	
	22-Oct-99	44.7	8	6.60	1750	12.1	20	960	155	30	
	20-Jun-00	53.4	16	8.20	1980	13.1	40	1160	187	20	
	10-Nov-00	66.7	31	7.70	2130	11.1	30	1050	174	20	
	24-May-01	70.0	16	8.59	2470	10.2	40	1030	163	20	
	16-Nov-01	69.6	300	7.87	2130	12.3	40	990	160	20	
	31-May-02	51.7	48	7.17	2340	15.3	80	880	127	20	
	12-Dec-03	55.2	25	7.40	1840	11.2	37	770	121	7	
	3-Jun-03	75.5	90	--	--	--	41	1180	156	22	
	8-Dec-03	67.0	115	8.75	2210	11.6	74	969	138	31	
	30-Jun-04	62.0	6	8.37	2501	12.6	104	1450	161	7	
	19-Nov-04	36.9	2.7	8.19	2070	11.4	31	492	70	20	
	15-Jun-05	89.0	18.0	8.95	3320	14.7	215	1930	200	<5	
	17-Jan-06	83.7	980.0	8.40	3970	6.9	70	1350	155	14	
	29-Jun-06	65.4	36.0	8.48	3640	11.7	192	1070	109	7	
	28-Nov-06	78.2	258	8.15	3660	12.9	132	1240	126	6	
	6-Jun-07	64.4	7	6.94	3350	10.0	95	1280	131	17	
	12-Nov-07	71.7	3	7.19	3970	11.8	41	1460	150	22	
	24-Jun-08	46.6	2	7.89	3210	12.4	123	1240	118	8	
	17-Nov-08	48.5	4	7.26	3670	10.6	65	1190	114	12	
	23-Jun-09	61.0	3	7.53	2900	12.8	222	1400	126	<5	
	17-Nov-09	69	40	8.42	3570	9.6	71	1040	100	14	
	14-Jun-10	120	4	9.09	2880	11.9	305	1380	124	<5	
	8-Nov-10	71	10	8.34	3560	10.9	113	1110	1030	23	
20-Jun-11	52.4	3	9.18	2380	11.1	330	965	91	<5		
14-Nov-11	62.0	1	8.09	3420	11.4	116	1000	94	6		
	25-Jun-12	53.0	3	7.40	3070	12.0	180	863	83	32	
Duplicate	25-Jun-12	52.0	3	7.40	3070	12.0	183	882	86	5	
	5-Dec-12	63.5	4	7.86	3640	9.2	115	1050	97	10	
Duplicate	5-Dec-12	63.5	4	7.86	3630	9.2	104	990	88	10	
	6-Jun-13	50.2	5	9.11	2210	11.2	323	936	87	<5	
	4-Nov-13	58.9	<1	7.96	3100	10.9	129	819	73	8	
	23-Jun-14	49.2	58	8.84	2290	12.3	196	860	82	<5	
	25-Jun-15	36.6	3	7.60	1831	11.5	452	437	42	27	
	21-Jun-16	39.8	<3	8.46	1866	12.0	317	645	55	<5	
Duplicate	21-Jun-16	39.9	<3	8.46	1867	12.0	315	659	54	<5	
	19-Jun-17	40.1	<3	9.43	1716	12.9	317	554	52	<5	
	11-Jun-18	35.1	50	7.93	1894	11.0	288	435	43	<5	
	29-May-19	38.4	<3	7.90	1735	8.8	274	481	42	<5	
	15-Jun-20	22.6	<3	8.83	1000	14.9	409	134	14	<5	

See notes on page 6.



TABLE 2
RACER Trust - Coldwater Road
Landfill Leak Detection Sumps - Historical Analytical Results
Inorganics and Metals

Sump	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>
Sump B	23-Mar-95	800.0	310	12.10	7100	--	220	14000	1700	91	
	30-Aug-95	590.0	7400	11.50	4600	--	220	9300	1100	<20	
	18-Jun-96	36.0	<10	8.60	720	--	100	760	100	<20	
	11-Nov-96	340.0	19	10.00	3100	--	180	6100	850	30	
	7-May-97	184.0	963	8.49	2340	8.1	150	3910	607	10	
	5-Nov-97	53.0	20	7.20	1600	10.0	50	1050	204	10	
	5-May-98	241.0	24	9.60	3010	9.2	280	5600	644	10	
	6-Nov-98	177.0	438	7.80	2950	12.1	100	2690	558	<10	
	26-Apr-99	75.0	10600	10.20	835	8.9	30	500	238	<10	
	22-Oct-99	126.0	1604	8.10	1410	11.9	30	750	387	<10	
	20-Jun-00	49.2	4	9.10	1880	12.6	160	1180	160	<10	
	10-Nov-00	78.2	80	8.60	1460	11.5	70	1170	205	<10	
	24-May-01	101.0	502	9.08	2800	10.4	120	1490	225	<10	
	16-Nov-01	189.0	13	9.50	3310	12.4	290	3050	426	<10	
	31-May-02	65.7	434	7.23	2530	14.7	160	1070	154	<10	
	12-Dec-03	118.0	15	8.90	2150	11.4	215	1790	260	27	
	3-Jun-03	113.0	44	--	--	--	118	1510	216	<5	
	8-Dec-03	87.8	22	7.13	1990	11.5	170	1380	199	45	
	30-Jun-04	110	14	8.10	1598	12.5	508	1880	225	7	
	19-Nov-04	66.2	2	8.23	2690	11.5	148	1100	163	13	
	15-Jun-05	84.0	8	8.80	3200	14.1	324	1050	160	19	
	5-Dec-05	35.7	6	7.10	2290	10.5	81	374	56	22	
	29-Jun-06	26.6	6	7.74	1650	10.9	156	358	48	23	
	28-Nov-06	47.5	6	8.17	2300	12.5	142	526	72	25	
	Duplicate	28-Nov-06	59.8	--	8.19	2370	12.5	142	522	72	15
	6-Jun-07	32.2	2	6.59	1950	9.8	18	275	46	18	
	12-Nov-07	22.6	1	7.91	2060	12.2	28	226	32	24	
	24-Jun-08	45.9	6	8.19	2430	11.9	659	877	99	16	
Duplicate	17-Nov-08	41.5	19	6.48	2560	10.6	401	767	91	20	
	17-Nov-08	39.8	38	6.48	2550	10.6	399	763	91	23	
	23-Jun-09	52.3	1	7.44	2250	13.2	685	696	82	17	
	17-Nov-09	52	2	8.06	2610	10.6	269	579	73	39	
	14-Jun-10	90	3	7.90	2720	12.4	908	1050	118	21	
	8-Nov-10	78	1	8.08	3450	12.1	163	669	76	8	
	20-Jun-11	75.5	5	8.10	2520	11.9	1070	867	97	7	
	14-Nov-11	83.0	3	8.09	3390	11.6	628	914	111	8	
	25-Jun-12	82.0	5	7.46	3240	12.4	657	1000	124	13	
	5-Dec-12	89.0	3	8.18	3830	9.5	352	904	111	17	
	6-Jun-13	77.4	3	8.98	2150	10.2	1490	1060	104	<5	
	4-Nov-13	79.0	2	8.04	3590	10.8	516	749	87	11	
	23-Jun-14	64.8	1	7.90	2520	12.1	735	563	65	11	
	25-Jun-15	79.1	2	7.68	3430	11.9	349	689	93	12	
	21-Jun-16	86.0	4	6.70	3260	12.4	935	796	77	20	
	19-Jun-17	69.6	<3	8.10	2680	13.9	649	526	65	12	
	11-Jun-18	53.2	59	7.67	2360	10.6	571	425	48	12	
	29-May-19	75.8	<3	8.10	3440	8.9	459	482	60	13	
	15-Jun-20	71.4	<3	7.88	3340	15.8	498	436	48	15	

See notes on page 6.



TABLE 2
RACER Trust - Coldwater Road
Landfill Leak Detection Sumps - Historical Analytical Results
Inorganics and Metals

Sump	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
Sump C	23-Mar-95	750.0	18	11.80	6000	--	21	18000	2400	36
	30-Aug-95	660.0	30000	10.90	4900	--	21	15000	2100	26
	18-Jun-96	280.0	1200	9.10	2700	--	<20	5100	820	<20
	11-Nov-96	730.0	93	10.00	5200	--	<20	15000	2500	50
	7-May-97	433.0	1200	8.58	4210	10.0	10	10200	2070	40
	5-Nov-97	289.0	83	8.30	3400	10.0	<10	3150	1320	20
	5-May-98	235.0	24	9.80	3520	9.8	60	5640	891	10
	6-Nov-98	418.0	164	7.90	4590	11.9	<10	4660	145	<10
	26-Apr-99	278.0	24	9.50	2520	8.6	<10	1730	1148	<10
	22-Oct-99	351.0	1604	8.20	1210	12.1	<10	1330	1050	<10
	20-Jun-00	156.0	12	8.50	2270	11.9	<10	3370	802	<10
	10-Nov-00	250.0	30	8.40	1920	11.4	<10	620	998	<10
	24-May-01	200.0	120	9.01	3660	10.3	<10	4950	1110	20
	16-Nov-01	269.0	191	8.54	3930	12.1	10	5470	1800	10
	31-May-02	113.0	24	7.23	2530	14.4	<10	2510	612	10
	12-Dec-03	198.0	18	8.10	4100	11.2	12	3020	1060	15
	3-Jun-03	178.0	34	--	--	--	15	4790	1030	8
	8-Dec-03	85.2	742	7.96	2140	11.9	9	607	708	62
	30-Jun-04	96.0	10	8.45	2708	12.0	46	2470	539	5
	Duplicate	19-Nov-04	126	16	8.38	3200	11.6	32	3190	874
15-Jun-05		95	10	7.20	2950	14.3	21	2350	505	16
5-Dec-05		56.7	12	7.90	2830	10.9	30	1570	363	12
7-Dec-05		62.0	2	--	2860	--	28	1700	364	<10
29-Jun-06		145.7	20	8.52	3810	11.4	25	3030	847	8
28-Nov-06		60.3	6	7.96	2340	12.9	43	1380	353	<5
6-Jun-07		3.9	1	6.97	2650	11.0	44	1570	365	<5
12-Nov-07		83.7	1	8.22	3660	12.2	44	2080	543	8
24-Jun-08		65.4	5	7.89	3530	13.0	8	1820	456	22
17-Nov-08		120.0	10	8.19	4510	10.6	30	2940	939	22
Duplicate	23-Jun-09	139.0	9	8.16	4240	12.7	25	3600	800	7
	17-Nov-09	90	4	7.91	3940	11.1	22	2280	447	12
	17-Nov-09	98	7	7.91	3950	11.1	21	2260	438	12
	14-Jun-10	120	14	8.06	4580	11.9	32	3200	714	18
	8-Nov-10	130	4	7.82	4910	12.1	55	3170	555	10
Duplicate	20-Jun-11	112	5	9.24	4560	12.1	133	2670	639	<5
	20-Jun-11	112	7	9.24	4570	12.1	129	2580	623	<5
	14-Nov-11	134	8	8.25	5320	11.9	28	3830	761	6
25-Jun-12	114	8	8.06	5380	12.2	29	3820	611	16	
5-Dec-12	121.7	6	8.30	5430	10.4	24	4130	580	8	
6-Jun-13	111.0	5	7.83	4950	10.9	25	3390	504	7	
4-Nov-13	132.0	1	8.16	5150	11.3	38	3410	539	7	
23-Jun-14	118.0	3	8.01	5040	11.2	17	3010	461	8	
25-Jun-15	122.0	3	7.93	4050	11.2	29	2870	539	14	
21-Jun-16	203.0	6	8.23	5170	12.2	37	4230	844	8	
19-Jun-17	108.0	3	8.06	4810	13.3	25	1880	505	8	
Duplicate	11-Jun-18	56.6	91	7.80	3150	11.3	80	1010	232	7
	11-Jun-18	51.4	26	7.80	3170	11.3	83	1030	235	9
29-May-19	43.0	<3	7.88	2240	9.5	105	690	162	8	
Duplicate	16-Jun-20	14.8	<3	8.34	1316	12.3	143	155	27	<5
	16-Jun-20	15.6	<3	8.34	1312	12.3	142	159	27	5

See notes on page 6.



TABLE 2
RACER Trust - Coldwater Road
Landfill Leak Detection Sumps - Historical Analytical Results
Inorganics and Metals

Sump	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>
	23-Mar-95	650.0	45	12.30	8400	--	360	7800	1600	<20	
	30-Aug-95	550.0	69000	12.00	6400	--	260	6100	1400	<20	
	18-Jun-96	300.0	230	11.00	3300	--	100	3100	850	<20	
	11-Nov-96	660.0	3500	12.00	5700	--	220	7200	1800	30	
	7-May-97	331.0	432	9.14	4020	10.2	30	4110	1330	<10	
	5-Nov-97	208.0	546	8.80	3400	10.2	20	3000	1020	20	
	5-May-98	251.0	<1	10.60	4200	9.7	110	3810	1120	10	
	6-Nov-98	193.0	8280	7.90	3940	11.4	10	2530	101	<10	
	26-Apr-99	177.0	29600	10.50	1237	8.0	10	770	1013	<10	
	22-Oct-99	199.0	10748	8.90	910	10.9	<10	70	735	<10	
	20-Jun-00	112.0	16	8.80	1190	11.6	<10	430	656	<10	
	10-Nov-00	159.0	100	9.10	2360	11.5	20	760	831	<10	
	24-May-01	196.0	124	10.80	3900	10.9	10	1000	1270	<10	
	16-Nov-01	64.2	268	8.87	1690	12.0	<10	100	414	<10	
	31-May-02	72.3	137	7.23	2020	14.3	<10	210	445	<10	
	3-Jun-03	80.8	6	--	--	--	7	878	540	<5	
	8-Dec-03	48.8	392	8.18	2470	10.9	7	651	423	18	
	12-Dec-03	130.0	4	8.80	1430	11.5	11	926	798	<5	
	30-Jun-04	160.0	34	10.20	3601	--	25	1670	1320	<5	
	19-Nov-04	157	14	10.39	4320	11.4	34	1550	1680	8	
	15-Jun-05	79	8	11.10	3160	12.2	14	737	822	<5	
Duplicate	15-Jun-05	76.0	26.0	--	--	--	12	724	812	<5	
	5-Dec-05	123.0	6.0	8.20	5320	10.9	35	1420	1340	<5	
	29-Jun-06	87.6	14.0	9.97	4120	12.4	16	714	995	5	
	28-Nov-06	128.9	2	10.10	5180	12.9	23	651	1300	<5	
	6-Jun-07	157.0	11	9.25	5980	11.0	62	955	1770	<5	
	12-Nov-07	115.0	78	10.20	5550	11.7	34	1680	1480	8	
Duplicate	12-Nov-07	109.0	28	10.23	5550	11.7	31	1540	1400	3	
	24-Jun-08	99.5	7	9.92	6170	11.8	20	990	1640	7	
	17-Nov-08	295.0	2	11.11	6220	10.8	62	2460	2090	5	
	23-Jun-09	308.0	7	10.91	6210	14.8	88	2170	1990	<5	
	17-Nov-09	130	10	9.78	4870	11.6	37	2240	1180	<5	
Duplicate	14-Jun-10	15	12	10.01	4880	12.0	62	1160	1340	5	
	14-Jun-10	150	12	10.01	4860	12.0	62	1180	1340	6	
	8-Nov-10	170	2	10.11	5830	12.6	119	1220	1520	<5	
	20-Jun-11	99.5	9	11.72	3470	12.0	97	645	413	<5	
	14-Nov-11	332.0	4	10.49	6440	11.6	92	3350	2200	<5	
	25-Jun-12	282.0	10	10.11	6220	12.4	126	1730	2190	<5	
	5-Dec-12	181.7	8	9.95	6070	8.8	81	1360	1610	5	
	6-Jun-13	227.0	4	10.46	5570	10.7	66	1710	1440	5	
	4-Nov-13	204.0	3	10.11	5740	11.4	78	2190	1400	6	
Duplicate	4-Nov-13	208.0	2	10.11	5760	11.4	75	2140	1370	<5	
	23-Jun-14	149.0	4	10.01	6350	12.6	37	890	1340	7	
Duplicate	23-Jun-14	150.0	4	10.01	6360	12.6	37	916	1360	9	
	25-Jun-15	131.0	8	9.83	6060	11.6	52	1310	1500	11	
	21-Jun-16	334.0	6	11.49	6380	13.3	140	3410	1460	9	
	19-Jun-17	268.0	<3	10.75	5830	13.9	61	1220	1460	5	
	11-Jun-18	256.0	<3	10.69	6140	12.0	67	1250	1350	<5	
	29-May-19	192.0	<3	10.73	5430	9.5	53	983	1130	6	
	16-Jun-20	280.0	<3	12.44	5840	12.5	140	1380	946	<5	

See notes on page 6.



TABLE 2
RACER Trust - Coldwater Road
Landfill Leak Detection Sumps - Historical Analytical Results
Inorganics and Metals

Sump	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
Sump E	23-Mar-95	250.0	1400	11.70	4000	--	79	1500	850	<20
	30-Aug-95	120.0	37000	9.70	2100	--	25	980	270	<20
	18-Jun-96	9.6	2000	7.60	1800	--	<20	<20	<20	40
	11-Nov-96	23.0	2200	8.20	1800	--	<20	20	50	<20
	7-May-97	6.0	188	6.76	1560	9.7	<10	<10	30	90
	11/05/97	10.0	3370	7.00	1600	10.0	<10	10	72	30
	5-May-98	10.0	13300	7.00	1750	10.1	<10	20	23	40
	6-Nov-98	5.0	2500	5.60	1500	11.9	<10	60	11	40
	26-Apr-99	8.6	7720	7.70	1428	8.2	<10	30	22	<10
	22-Oct-99	4.7	3485	6.80	1115	10.8	<10	50	10	30
	20-Jun-00	7.0	2	6.80	1410	12.4	<10	20	<10	20
	10-Nov-00	3.2	<1	7.30	1550	11.4	<10	30	7	20
	24-Feb-01	9.0	292	7.98	1660	10.6	<10	20	7	20
	16-Nov-01	4.4	350	7.26	1240	12.2	<10	10	23	30
	31-May-02	10.1	9	7.24	1470	14.6	<10	90	62	30
	12-Dec-03	4.5	310	7.70	1490	11.1	<5	21	12	<5
	3-Jun-03	9.0	1884	--	--	--	<5	20	11	7
	8-Dec-03	22.4	331	7.25	1320	11.4	63	132	53	34
	30-Jun-04	5.8	5	7.83	1061	--	<5	8	13	33
	19-Nov-04	6.2	2	7.62	1380	11.8	19	14	16	16
	15-Jun-05	230.0	10	--	19920	16.6	285	1220	337	5
5-Dec-05	257.0	396	7.30	9460	10.7	142	514	232	<5	
29-Jun-06	11.4	4	8.23	1690	11.6	18	48	34	6	
28-Nov-06	45.6	<1	8.11	2220	12.9	29	728	180	<5	
Duplicate	6-Jun-07	6.9	3	6.41	1630	11.6	12	13	10	23
	6-Jun-07	6.7	4	--	1630	--	11	15	10	20
	12-Nov-07	5.6	3	7.34	1570	12.0	5	11	14	19
24-Jun-08	3.8	3	7.35	1600	11.5	<5	6	6	9	
17-Nov-08	4.9	1	7.34	1660	11.3	24	10	7	13	
Duplicate	23-Jun-09	4.7	<1	6.93	1600	11.6	<5	6	6	14
	23-Jun-09	3.5	1	6.93	1580	11.6	<5	6	5	15
	17-Nov-09	5	1	7.44	1520	11.2	<5	4	20	24
14-Jun-10	6	4	7.55	1530	12.7	17	8	<5	17	
Duplicate	8-Nov-10	6	2	7.44	1647	12.5	18	10	9	101
	8-Nov-10	6	3	7.44	1647	12.5	16	10	9	108
20-Jun-11	7.6	<1	8.81	1760	12.2	7	20	15	12	
Duplicate	14-Nov-11	15.0	<1	7.81	1856	11.7	5	67	25	10
	14-Nov-11	15.0	2	7.81	1864	11.7	<5	69	24	10
25-Jun-12	12.0	4	7.58	2150	13.1	7	40	14	5	
5-Dec-12	26.5	3	8.01	2670	10.0	9	124	51	11	
6-Jun-13	17.2	<1	6.72	2190	9.8	5	60	32	6	
4-Nov-13	14.3	<1	7.92	2020	11.5	10	45	21	<5	
23-Jun-14	29.1	3	8.01	2250	15.2	45	271	44	6	
25-Jun-15	21.7	3	7.70	2220	11.6	15	151	34	8	
Duplicate	25-Jun-15	21.9	3	7.69	2230	11.6	14	143	33	7
	21-Jun-16	19.1	3	7.30	2340	13.1	6	86	21	9
Duplicate	19-Jun-17	13.7	184	--	1750	--	<5	31	24	<5
	19-Jun-17	13.8	132	--	1750	--	<5	32	19	8
11-Jun-18	23.1	20	8.02	1686	11.7	160	164	35	<5	
Duplicate	29-May-19	23.9	3	8.08	1866	9.4	33	177	42	7
	29-May-19	23.9	24	8.08	1861	9.4	36	177	43	7
	16-Jun-20	22.8	<3	8.08	1522	14.7	52	138	30	6

See notes on page 6.



TABLE 2
RACER Trust - Coldwater Road
Landfill Leak Detection Sumps - Historical Analytical Results
Inorganics and Metals

Sump	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>
Sump F	23-Mar-95	300.0	100	11.80	4100	--	61	3200	2200	<20
	30-Aug-95	100.0	250	7.50	1600	--	<20	300	85	<20
	18-Jun-96	5.4	19	7.40	1400	--	<20	<20	<20	40
	11-Nov-96	7.1	260	7.70	1200	--	<20	<20	30	50
	7-May-97	5.0	138	6.54	1190	9.6	<20	<20	18	80
	5-Nov-97	5.0	14	7.10	1300	11.0	<10	<10	49	40
	5-May-98	6.0	635	7.12	1250	10.5	<10	<10	6	30
	6-Nov-98	4.0	14	6.11	1340	12.3	<10	70	7	50
	26-Apr-99	5.3	38	8.10	682	8.2	<10	40	27	10
	22-Oct-99	3.4	11	6.60	1053	11.3	<10	30	6	20
	20-Jun-00	4.1	2	7.70	1170	11.4	<10	<10	<5	<10
	10-Nov-00	2.9	8	7.30	1340	11.1	<10	<10	30	30
	24-May-01	6.6	40	8.50	1310	10.6	<10	20	<10	20
	16-Nov-01	4.2	323	7.30	1070	12.1	<10	10	8	20
	31-May-02	5.2	150	7.23	1250	14.8	<10	20	<5	160
	12-Dec-03	3.4	7	7.70	1180	11.3	<5	<5	<5	<5
	3-Jun-03	5.9	336	--	--	--	<5	12	<5	21
	8-Dec-03	6.0	35	7.04	1210	11.3	<5	14	15	33
	30-Jun-04	4.7	2	7.72	949	11.1	<5	27	13	20
	19-Nov-04	6.7	3	7.86	1260	11.2	12	8	14	11
	15-Jun-05	13.0	8	6.37	1630	16.7	<5	9	13	55
	17-Jan-06	33.9	3263	7.50	2390	6.6	107	475	124	12
	29-Jun-06	7.0	2	7.64	1280	11.6	16	38	11	29
28-Nov-06	4.9	<1	7.99	1250	12.9	5	18	9	8	
6-Jun-07	22.1	8	6.75	1710	11.7	11	74	22	10	
12-Nov-07	3.8	1	7.74	1350	11.9	3	16	13	30	
24-Jun-08	4.0	2	7.97	1160	12.3	12	15	6	102	
Duplicate	24-Jun-08	3.9	1	7.97	1160	12.3	11	14	6	8
	17-Nov-08	13.6	2	7.60	1740	10.9	29	87	81	11
	23-Jun-09	14.4	<1	7.76	1500	12.2	43	100	30	9
	17-Nov-09	10	0	7.96	1570	10.9	25	46	19	23
	14-Jun-10	5	4	7.81	1010	11.7	9	15	<5	12
	8-Nov-10	9	<1	8.19	1260	12.1	17	19	8	6
	20-Jun-11	9	<1	7.86	1360	12.8	16	25	11	13
	14-Nov-11	38	2	8.13	3170	11.5	56	204	105	10
	25-Jun-12	40	4	7.68	3290	14.1	48	335	108	17
	5-Dec-12	44.3	5	8.37	3530	10.0	13	264	104	13
Duplicate	6-Jun-13	41.9	2	7.98	3580	10.0	16	250	86	24
	6-Jun-13	41.4	1	7.98	3580	10.0	15	238	85	28
	4-Nov-13	37.6	1	8.21	3770	11.2	23	124	55	37
	23-Jun-14	36.6	3	8.19	3800	11.5	17	117	46	29
	25-Jun-15	45.2	3	7.98	3930	12.2	44	372	94	33
	21-Jun-16	44.0	3	7.39	4020	12.4	17	248	69	34
	19-Jun-17	40.4	<3	8.51	3700	13.2	15	218	71	17
	11-Jun-18	32.2	<3	8.03	3840	11.3	24	86	31	16
	29-May-19	33.7	<3	8.18	3810	9.7	34	66	25	12
	16-Jun-20	35.6	<3	8.16	3830	14.8	38	51	22	11
Equipment	24-Jun-08	<1	1	--	4	--	<5	<1	<5	<5
Blank	17-Nov-08	1	2	--	4	--	<5	5	<5	23

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



TABLE 3
RACER Trust - Coldwater Road
Landfill Leachate Sumps - Analytical Results
Volatile Organic Compounds (µg/L)

Parameter	Sample ID & Sample Date								
	Sump A 15-Jun-20	Sump B 15-Jun-20	Sump C 16-Jun-20	Sump C (DUP-1) 16-Jun-20	Sump D 16-Jun-20	Sump D** Replicate 16-Jun-20	Sump E 16-Jun-20	Sump F 16-Jun-20	Trip Blank- 061620 16-Jun-20
Diethyl ether	<10	<10	<10	<10	<10	<500	<10	<10	<10
Acetone	<50	<50	<50	<50	3,407	3,300	<50	<50	<50
Methyl iodide	<1	<1	<1	<1	<1	<50	<1	<1	<1
Carbon Disulfide	<5	<5	<5	<5	<5	<300	<5	<5	<5
tert-Methyl butyl ether (MTBE)	<5	<5	<5	<5	<5	<300	<5	<5	<5
Acrylonitrile	<2	<2	<2	<2	9	<100	<2	<2	<2
2-Butanone	<25	<25	<25	<25	77	<1,300	<25	<25	<25
Dichlorodifluoromethane	<5	<5	<5	<5	<5	<300	<5	<5	<5
Chloromethane	<5	<5	<5	<5	<5	<300	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<50	<1	<1	<1
Bromomethane	<5	<5	<5	<5	<5	<300	<5	<5	<5
Chloroethane	<5	<5	<5	<5	<5	<300	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1	<1	<50	<1	<1	<1
1,1-Dichloroethene	<1	<1	<1	<1	<1	<50	<1	<1	<1
Methylene chloride	<5	<5	<5	<5	<5	<300	<5	<5	<5
trans-1,2-Dichloroethene	<1	<1	<1	<1	<1	<50	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1	<1	<50	<1	<1	<1
cis-1,2-Dichloroethene	<1	<1	<1	<1	<1	<50	<1	<1	<1
Tetrahydrofuran	<90	<90	<90	<90	<90	<4,500	<90	<90	<90
Chloroform	<1	<1	<1	<1	<1	<50	<1	<1	<1
Bromochloromethane	<1	<1	<1	<1	<1	<50	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1	<1	<50	<1	<1	<1
4-Methyl-2-pentanone	<50	<50	<50	<50	<50	<2,500	<50	<50	<50
2-Hexanone	<50	<50	<50	<50	<50	<2,500	<50	<50	<50
Carbon tetrachloride	<1	<1	<1	<1	<1	<50	<1	<1	<1
Benzene	<1	<1	<1	<1	<1	<50	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1	<1	<50	<1	<1	<1
Trichloroethene	<1	<1	<1	<1	<1	<50	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1	<1	<50	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<50	<1	<1	<1
Dibromomethane	<5	<5	<5	<5	<5	<300	<5	<5	<5
cis-1,3-Dichloropropene	<1	<1	<1	<1	<1	<50	<1	<1	<1
Toluene	<1	<1	<1	<1	<1	<50	<1	<1	<1
trans-1,3-Dichloropropene	<1	<1	<1	<1	<1	<50	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1	<1	<50	<1	<1	<1
Tetrachloroethene	<1	<1	<1	<1	<1	<50	<1	<1	<1
trans-1,4-Dichloro-2-butene	<1	<1	<1	<1	<1	<50	<1	<1	<1
Dibromochloromethane	<5	<5	<5	<5	<5	<300	<5	<5	<5
1,2-Dibromoethane	<1	<1	<1	<1	<1	<50	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1	<50	<1	<1	<1
1,1,1,2-Tetrachloroethane	<1	<1	<1	<1	<1	<50	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<50	<1	<1	<1
p,m-Xylene	<2	<2	<2	<2	<2	<100	<2	<2	<2
o-Xylene	<1	<1	<1	<1	<1	<50	<1	<1	<1
Styrene	<1	<1	<1	<1	<1	<50	<1	<1	<1
Isopropylbenzene	<5	<5	<5	<5	<5	<300	<5	<5	<5
Bromoform	<1	<1	<1	<1	<1	<50	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1	<1	<50	<1	<1	<1
1,2,3-Trichloropropane	<1	<1	<1	<1	<1	<50	<1	<1	<1
n-Propylbenzene	<1	<1	<1	<1	<1	<50	<1	<1	<1
Bromobenzene	<1	<1	<1	<1	<1	<50	<1	<1	<1
1,3,5-Trimethylbenzene	<1	<1	<1	<1	<1	<50	<1	<1	<1
tert-Butylbenzene	<1	<1	<1	<1	<1	<50	<1	<1	<1
1,2,4-Trimethylbenzene	<1	<1	<1	<1	<1	<50	<1	<1	<1
sec-Butylbenzene	<1	<1	<1	<1	<1	<50	<1	<1	<1
p-Isopropyltoluene	<5	<5	<5	<5	<5	<300	<5	<5	<5
1,3-Dichlorobenzene	<1	<1	<1	<1	<1	<50	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1	<1	<50	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1	<1	<50	<1	<1	<1
1,2,3-Trimethylbenzene	<1	<1	<1	<1	<1	<50	<1	<1	<1
n-Butylbenzene	<1	<1	<1	<1	<1	<50	<1	<1	<1
Hexachloroethane	<5	<5	<5	<5	<5	<300	<5	<5	<5
1,2-Dibromo-3-chloropropane	<5	<5	<5	<5	<5	<300	<5	<5	<5
1,2,4-Trichlorobenzene	<5	<5	<5	<5	<5	<300	<5	<5	<5
1,2,3-Trichlorobenzene	<5	<5	<5	<5	<5	<300	<5	<5	<5
Napthalene	<5	<5	<5	<5	<5	<300	<5	<5	<5
2-Methylnapthalene	<5	<5	<5	<5	<5	<300	<5	<5	<5

Notes: ** Elevated reporting limit due to high target concentration.
 EPA Method 8260 used for analysis.
 Dup- Duplicate analysis
 Analysis in µg/L

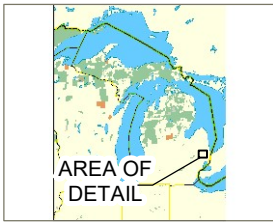
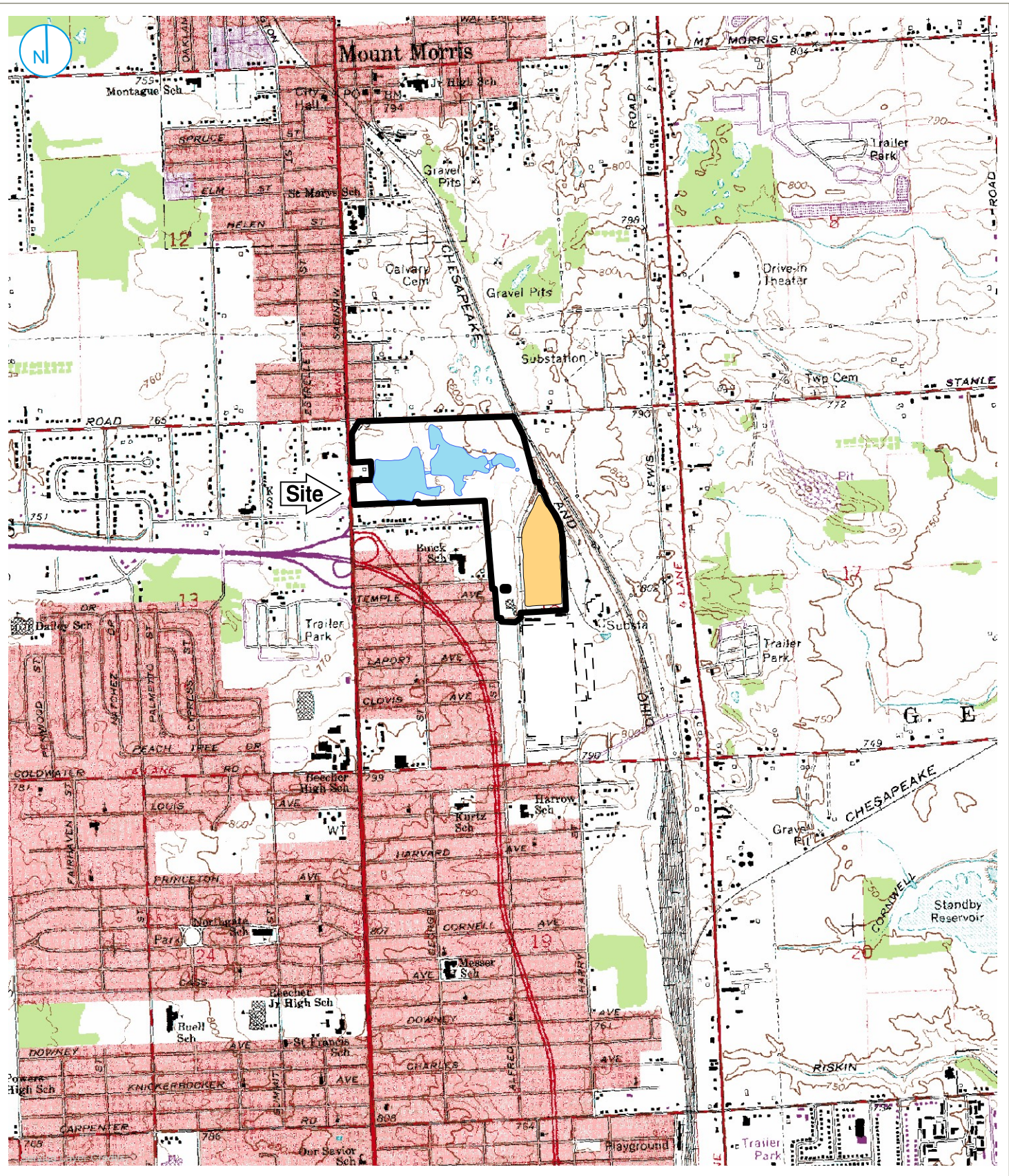


TABLE 4
RACER Trust - Coldwater Road
Landfill Leachate Sumps - Depth to Water Measurements

SUMP	DEPTH TO WATER
Sump A	17.50
Sump B	11.53
Sump C	13.05
Sump D	17.84
Sump E	20.03
Sump F	18.90

Notes:
Depth to water measured in feet below top of casing
Measurements collected on June 15, 2020 and June 16, 2020

FIGURES



Map Scale: 1:1,24,000;
Map Center: 83°41'9"W 43°5'51"N

- Wetlands
- Site Buildings
- Landfill-poly
- Former Powerhouse
- Former Plant
- Landfill Property

0 1,000 2,000 Feet

SITE LOCATION

FIGURE 01

O'BRIEN & GERE ENGINEERS, INC.
A RAMBOLL COMPANY

Racer Trust
Coldwater Road Landfill Facility
Flint, Michigan



PROJECT: 169000XXXXX | DATED: 8/11/2020 | DESIGNER: MONETANT
I:\Racer-Trust\153888\75178.Coldwater-2020\Docs\Reports\LD\Site\Semt-Annual Jun 2020\Figure\002 - Site_Layout_2020 SA Rpts (LDS-Rpt) (2020-08)_08112020.mxd



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



SITE LAYOUT

Racer Trust
Coldwater Road Landfill Facility
Flint, Michigan

FIGURE 02

O'BRIEN & GERE ENGINEERS, INC.
A RAMBOLL COMPANY



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus D.S., USDA, USGS, AeroGRID, IGN, and the GIS User Community

APPENDIX A ANALYTICAL LABORATORY REPORTS



Analytical Laboratory Report

Report ID: S14883.01(01)
Generated on 06/23/2020

Report to

Attention: Clifford Yantz
O'Brien & Gere Engineers, Inc.
2260 E Saginaw St
East Lansing, MI 48823

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

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): S14883.01-S14883.07
Project: RACER Coldwater Rd Landfill
Collected Date(s): 06/15/2020 - 06/16/2020
Submitted Date/Time: 06/16/2020 14:30
Sampled by: Kevin Schneider
P.O. #: 12000277

Table of Contents

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Laboratory Certifications (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).

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 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.

Full accreditation certificates are available upon request. Starred (*) analytes are not 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)

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001

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
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
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 2011
SM5310C	Standard Method 5310C 2011
SW3015A	SW 846 Method 3015A Revision 1 February 2007



Analytical Laboratory Report

Sample Summary (7 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S14883.01	Vault - A	Wastewater	06/15/20 16:16
S14883.02	Vault - B	Wastewater	06/15/20 17:10
S14883.03	Vault - C	Wastewater	06/16/20 10:00
S14883.04	Vault - D	Wastewater	06/16/20 11:05
S14883.05	Vault - E	Wastewater	06/16/20 11:58
S14883.06	Vault - F	Wastewater	06/16/20 12:50
S14883.07	DUP-2	Wastewater	06/16/20 00:01



Analytical Laboratory Report

Lab Sample ID: S14883.01

Sample Tag: Vault - A

Collected Date/Time: 06/15/2020 16:16

Matrix: Wastewater

COC Reference: 128655

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Plastic	None	Yes	3.5	IR
1	125ml Plastic	HNO3	Yes	3.5	IR
2	40ml Glass	H2SO4	Yes	3.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	06/19/20 10:30	CCM	

Inorganics

Method: E120.1, Run Date: 06/19/20 13:10, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,378	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/18/20 21:00, Analyst: ASB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1.00		

Method: SM5310C, Run Date: 06/22/20 14:45, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	7.9	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/19/20 12:50, 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	0.011	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S14883.02

Sample Tag: Vault - B

Collected Date/Time: 06/15/2020 17:10

Matrix: Wastewater

COC Reference: 128655

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Plastic	None	Yes	3.5	IR
1	125ml Plastic	HNO3	Yes	3.5	IR
2	40ml Glass	H2SO4	Yes	3.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	06/19/20 10:30	CCM	

Inorganics

Method: E120.1, Run Date: 06/19/20 13:14, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,165	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/18/20 21:00, Analyst: ASB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1.00		

Method: SM5310C, Run Date: 06/22/20 15:24, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	6.2	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/19/20 12:52, 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	



Analytical Laboratory Report

Lab Sample ID: S14883.03

Sample Tag: Vault - C

Collected Date/Time: 06/16/2020 10:00

Matrix: Wastewater

COC Reference: 128655

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Plastic	None	Yes	3.5	IR
1	125ml Plastic	HNO3	Yes	3.5	IR
2	40ml Glass	H2SO4	Yes	3.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	06/19/20 10:30	CCM	

Inorganics

Method: E120.1, Run Date: 06/19/20 13:16, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,747	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/18/20 21:00, Analyst: ASB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	3	3		mg/L	1.00		

Method: SM5310C, Run Date: 06/22/20 16:23, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	9.7	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/19/20 12:54, 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	



Analytical Laboratory Report

Lab Sample ID: S14883.04

Sample Tag: Vault - D

Collected Date/Time: 06/16/2020 11:05

Matrix: Wastewater

COC Reference: 128655

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Plastic	None	Yes	3.5	IR
1	125ml Plastic	HNO3	Yes	3.5	IR
2	40ml Glass	H2SO4	Yes	3.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	06/19/20 10:30	CCM	

Inorganics

Method: E120.1, Run Date: 06/19/20 13:18, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,586	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/18/20 21:00, Analyst: ASB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1.00		

Method: SM5310C, Run Date: 06/22/20 16:42, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	9.8	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/19/20 12:56, 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	0.012	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	0.006	0.005		mg/L	5	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S14883.05

Sample Tag: Vault - E

Collected Date/Time: 06/16/2020 11:58

Matrix: Wastewater

COC Reference: 128655

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Plastic	None	Yes	3.5	IR
1	125ml Plastic	HNO3	Yes	3.5	IR
2	40ml Glass	H2SO4	Yes	3.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	06/19/20 10:30	CCM	

Inorganics

Method: E120.1, Run Date: 06/19/20 13:20, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,210	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/18/20 21:00, Analyst: ASB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1.00		

Method: SM5310C, Run Date: 06/22/20 17:02, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	6.0	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/19/20 12:57, 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	



Analytical Laboratory Report

Lab Sample ID: S14883.06

Sample Tag: Vault - F

Collected Date/Time: 06/16/2020 12:50

Matrix: Wastewater

COC Reference: 128655

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Plastic	None	Yes	3.5	IR
1	125ml Plastic	HNO3	Yes	3.5	IR
2	40ml Glass	H2SO4	Yes	3.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	06/19/20 10:30	CCM	

Inorganics

Method: E120.1, Run Date: 06/19/20 13:22, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,623	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/18/20 21:00, Analyst: ASB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1.00		

Method: SM5310C, Run Date: 06/22/20 17:21, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	6.6	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/19/20 12:59, 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	



Analytical Laboratory Report

Lab Sample ID: S14883.07

Sample Tag: DUP-2

Collected Date/Time: 06/16/2020 00:01

Matrix: Wastewater

COC Reference: 128655

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Plastic	None	Yes	3.5	IR
1	125ml Plastic	HNO3	Yes	3.5	IR
2	40ml Glass	H2SO4	Yes	3.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	06/19/20 10:30	CCM	

Inorganics

Method: E120.1, Run Date: 06/19/20 13:24, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,746	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/18/20 21:00, Analyst: ASB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	3	3		mg/L	1.00		

Method: SM5310C, Run Date: 06/22/20 17:41, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	10.0	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/19/20 13:01, 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	

Merit Laboratories Login Checklist

Lab Set ID:S14883

Client:OBG02 (O'Brien & Gere Engineers, Inc.)

Project: RACER Coldwater Rd Landfill

Submitted:06/16/2020 14:30 Login User: MMC

Attention: Clifford Yantz

Address: O'Brien & Gere Engineers, Inc.
2260 E Saginaw St
East Lansing, MI 48823

Phone: 313-333-0211 FAX:

Email: Clifford.Yantz@obg.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 3.5 |
| 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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: |

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 type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

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: S14883 Submitted: 06/16/2020 14:30

Client: OBG02 (O'Brien & Gere Engineers, Inc.)

Project: RACER Coldwater Rd Landfill

Attention: Clifford Yantz
 Address: O'Brien & Gere Engineers, Inc.
 2260 E Saginaw St
 East Lansing, MI 48823

Initial Preservation Check: 06/16/2020 15:22 MMC

Preservation Recheck (E200.8): N/A

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

Lab ID	125 ml Plastic HNO ₃	250 ml Plastic HNO ₃	1 L Plastic HNO ₃	250 ml Plastic H ₂ SO ₄	125 ml Amber H ₂ SO ₄	32 oz Glass HCl	125 ml Plastic NaOH	125 ml Amber PbCO ₃ NaOH	pH					Notes
									<2	>12	other	ml add	new pH	
S14883.01	X								X					
S14883.02	X								X					
S14883.03	X								X					
S14883.04	X								X					
S14883.05	X								X					
S14883.06	X								X					
S14883.07	X								X					



Quality Control Report

Report ID: QC-S14883-01
Generated on 06/24/2020

Report to

Attention: Clifford Yantz
O'Brien & Gere Engineers, Inc.
2260 E Saginaw St
East Lansing, MI 48823

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): S14883.01-S14883.07
Project: RACER Coldwater Rd Landfill
Submitted Date/Time: 06/16/2020 14:30
Sampled by: Kevin Schneider
P.O. #: 12000277

QC Report Sections

Cover Page (Page 1)
Analysis Summary (Pages 2-8)
Prep Batch Summary (Pages 9-10)
Batch QC Results (Pages 11-15)

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: S14883.01

Sample Tag: Vault - A

Collected Date/Time: 06/15/2020 16:16

Matrix: Wastewater

COC Reference: 128655

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<i>Inorganics</i>						
Conductivity	E120.1	06/19/20 13:10	COND200619-W1	COND200619-W1	No	BLK/LCS/DUP
TOC	SM5310C	06/22/20 14:45	TOC200622-W1	TOC200622-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/18/20 21:00	TSS200618	TSS200618	No	BLK/LCS
<i>Metals</i>						
Chromium, Dissolved	E200.8	06/19/20 12:50	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/19/20 12:50	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/19/20 12:50	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/19/20 12:50	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD

QC Report - Analysis Summary

Lab Sample ID: S14883.02

Sample Tag: Vault - B

Collected Date/Time: 06/15/2020 17:10

Matrix: Wastewater

COC Reference: 128655

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<i>Inorganics</i>						
Conductivity	E120.1	06/19/20 13:14	COND200619-W1	COND200619-W1	No	BLK/LCS/DUP
TOC	SM5310C	06/22/20 15:24	TOC200622-W1	TOC200622-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/18/20 21:00	TSS200618	TSS200618	No	BLK/LCS
<i>Metals</i>						
Chromium, Dissolved	E200.8	06/19/20 12:52	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/19/20 12:52	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/19/20 12:52	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/19/20 12:52	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD

QC Report - Analysis Summary

Lab Sample ID: S14883.03

Sample Tag: Vault - C

Collected Date/Time: 06/16/2020 10:00

Matrix: Wastewater

COC Reference: 128655

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<i>Inorganics</i>						
Conductivity	E120.1	06/19/20 13:16	COND200619-W1	COND200619-W1	No	BLK/LCS/DUP
TOC	SM5310C	06/22/20 16:23	TOC200622-W1	TOC200622-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/18/20 21:00	TSS200618	TSS200618	No	BLK/LCS
<i>Metals</i>						
Chromium, Dissolved	E200.8	06/19/20 12:54	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/19/20 12:54	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/19/20 12:54	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/19/20 12:54	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD

QC Report - Analysis Summary

Lab Sample ID: S14883.04

Sample Tag: Vault - D

Collected Date/Time: 06/16/2020 11:05

Matrix: Wastewater

COC Reference: 128655

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<i>Inorganics</i>						
Conductivity	E120.1	06/19/20 13:18	COND200619-W1	COND200619-W1	No	BLK/LCS/DUP
TOC	SM5310C	06/22/20 16:42	TOC200622-W1	TOC200622-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/18/20 21:00	TSS200618	TSS200618	No	BLK/LCS
<i>Metals</i>						
Chromium, Dissolved	E200.8	06/19/20 12:56	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/19/20 12:56	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/19/20 12:56	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/19/20 12:56	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD

QC Report - Analysis Summary

Lab Sample ID: S14883.05

Sample Tag: Vault - E

Collected Date/Time: 06/16/2020 11:58

Matrix: Wastewater

COC Reference: 128655

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<i>Inorganics</i>						
Conductivity	E120.1	06/19/20 13:20	COND200619-W1	COND200619-W1	No	BLK/LCS/DUP
TOC	SM5310C	06/22/20 17:02	TOC200622-W1	TOC200622-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/18/20 21:00	TSS200618	TSS200618	No	BLK/LCS
<i>Metals</i>						
Chromium, Dissolved	E200.8	06/19/20 12:57	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/19/20 12:57	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/19/20 12:57	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/19/20 12:57	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD

QC Report - Analysis Summary

Lab Sample ID: S14883.06

Sample Tag: Vault - F

Collected Date/Time: 06/16/2020 12:50

Matrix: Wastewater

COC Reference: 128655

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<i>Inorganics</i>						
Conductivity	E120.1	06/19/20 13:22	COND200619-W1	COND200619-W1	No	BLK/LCS/DUP
TOC	SM5310C	06/22/20 17:21	TOC200622-W1	TOC200622-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/18/20 21:00	TSS200618	TSS200618	No	BLK/LCS
<i>Metals</i>						
Chromium, Dissolved	E200.8	06/19/20 12:59	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/19/20 12:59	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/19/20 12:59	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/19/20 12:59	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD

QC Report - Analysis Summary

Lab Sample ID: S14883.07

Sample Tag: DUP-2

Collected Date/Time: 06/16/2020 00:01

Matrix: Wastewater

COC Reference: 128655

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<i>Inorganics</i>						
Conductivity	E120.1	06/19/20 13:24	COND200619-W1	COND200619-W1	No	BLK/LCS/DUP
TOC	SM5310C	06/22/20 17:41	TOC200622-W1	TOC200622-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/18/20 21:00	TSS200618	TSS200618	No	BLK/LCS
<i>Metals</i>						
Chromium, Dissolved	E200.8	06/19/20 13:01	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/19/20 13:01	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/19/20 13:01	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/19/20 13:01	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD

QC Report - Prep Batch Summary

Inorganics, Prep Batch ID: COND200619-W1

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S14883.01	Conductivity	E120.1	06/19/20 13:10	COND200619-W1
S14883.02	Conductivity	E120.1	06/19/20 13:14	COND200619-W1
S14883.03	Conductivity	E120.1	06/19/20 13:16	COND200619-W1
S14883.04	Conductivity	E120.1	06/19/20 13:18	COND200619-W1
S14883.05	Conductivity	E120.1	06/19/20 13:20	COND200619-W1
S14883.06	Conductivity	E120.1	06/19/20 13:22	COND200619-W1
S14883.07	Conductivity	E120.1	06/19/20 13:24	COND200619-W1

Inorganics, Prep Batch ID: TOC200622-W1

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S14883.01	TOC	SM5310C	06/22/20 14:45	TOC200622-W1
S14883.02	TOC	SM5310C	06/22/20 15:24	TOC200622-W1
S14883.03	TOC	SM5310C	06/22/20 16:23	TOC200622-W1
S14883.04	TOC	SM5310C	06/22/20 16:42	TOC200622-W1
S14883.05	TOC	SM5310C	06/22/20 17:02	TOC200622-W1
S14883.06	TOC	SM5310C	06/22/20 17:21	TOC200622-W1
S14883.07	TOC	SM5310C	06/22/20 17:41	TOC200622-W1

Inorganics, Prep Batch ID: TSS200618

Surrogates: No, QC Types: BLK/LCS

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S14883.01	Total Suspended Solids	SM2540D	06/18/20 21:00	TSS200618
S14883.02	Total Suspended Solids	SM2540D	06/18/20 21:00	TSS200618
S14883.03	Total Suspended Solids	SM2540D	06/18/20 21:00	TSS200618
S14883.04	Total Suspended Solids	SM2540D	06/18/20 21:00	TSS200618
S14883.05	Total Suspended Solids	SM2540D	06/18/20 21:00	TSS200618
S14883.06	Total Suspended Solids	SM2540D	06/18/20 21:00	TSS200618
S14883.07	Total Suspended Solids	SM2540D	06/18/20 21:00	TSS200618

Metals, Prep Batch ID: MTD-061920-4

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S14883.01	Chromium, Dissolved	E200.8	06/19/20 12:50	MT4-20-0619A
S14883.01	Copper, Dissolved	E200.8	06/19/20 12:50	MT4-20-0619A
S14883.01	Nickel, Dissolved	E200.8	06/19/20 12:50	MT4-20-0619A
S14883.01	Zinc, Dissolved	E200.8	06/19/20 12:50	MT4-20-0619A
S14883.02	Chromium, Dissolved	E200.8	06/19/20 12:52	MT4-20-0619A
S14883.02	Copper, Dissolved	E200.8	06/19/20 12:52	MT4-20-0619A
S14883.02	Nickel, Dissolved	E200.8	06/19/20 12:52	MT4-20-0619A
S14883.02	Zinc, Dissolved	E200.8	06/19/20 12:52	MT4-20-0619A
S14883.03	Chromium, Dissolved	E200.8	06/19/20 12:54	MT4-20-0619A
S14883.03	Copper, Dissolved	E200.8	06/19/20 12:54	MT4-20-0619A
S14883.03	Nickel, Dissolved	E200.8	06/19/20 12:54	MT4-20-0619A
S14883.03	Zinc, Dissolved	E200.8	06/19/20 12:54	MT4-20-0619A
S14883.04	Chromium, Dissolved	E200.8	06/19/20 12:56	MT4-20-0619A
S14883.04	Copper, Dissolved	E200.8	06/19/20 12:56	MT4-20-0619A
S14883.04	Nickel, Dissolved	E200.8	06/19/20 12:56	MT4-20-0619A
S14883.04	Zinc, Dissolved	E200.8	06/19/20 12:56	MT4-20-0619A
S14883.05	Chromium, Dissolved	E200.8	06/19/20 12:57	MT4-20-0619A

QC Report - Prep Batch Summary

Metals, Prep Batch ID: MTD-061920-4 (continued)

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S14883.05	Copper, Dissolved	E200.8	06/19/20 12:57	MT4-20-0619A
S14883.05	Nickel, Dissolved	E200.8	06/19/20 12:57	MT4-20-0619A
S14883.05	Zinc, Dissolved	E200.8	06/19/20 12:57	MT4-20-0619A
S14883.06	Chromium, Dissolved	E200.8	06/19/20 12:59	MT4-20-0619A
S14883.06	Copper, Dissolved	E200.8	06/19/20 12:59	MT4-20-0619A
S14883.06	Nickel, Dissolved	E200.8	06/19/20 12:59	MT4-20-0619A
S14883.06	Zinc, Dissolved	E200.8	06/19/20 12:59	MT4-20-0619A
S14883.07	Chromium, Dissolved	E200.8	06/19/20 13:01	MT4-20-0619A
S14883.07	Copper, Dissolved	E200.8	06/19/20 13:01	MT4-20-0619A
S14883.07	Nickel, Dissolved	E200.8	06/19/20 13:01	MT4-20-0619A
S14883.07	Zinc, Dissolved	E200.8	06/19/20 13:01	MT4-20-0619A

QC Report - Batch QC Results

Inorganics, Prep Batch ID: COND200619-W1

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

Blank (BLK)

Lab Sample ID: COND200619-W1.LRB1

Run in Batch: COND200619-W1, Run Date: 06/19/2020 13:00, Prep Date: 06/19/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Conductivity		ND	1	mg/L

Laboratory Control Sample (LCS)

Lab Sample ID: COND200619-W1.LCS1

Run in Batch: COND200619-W1, Run Date: 06/19/2020 13:06, Prep Date: 06/19/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Conductivity		95	90	110

Duplicate (DUP)

Lab Sample ID: COND200619-W1.DP1, Parent Sample ID: S14883.01

Run in Batch: COND200619-W1, Run Date: 06/19/2020 13:12, Prep Date: 06/19/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
Conductivity		<1	15

QC Report - Batch QC Results

Inorganics, Prep Batch ID: TOC200622-W1

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

Blank (BLK)

Lab Sample ID: TOC200622-W1.LRB1

Run in Batch: TOC200622-W1, Run Date: 06/22/2020 12:25, Prep Date: 06/22/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
TOC		ND	1	mg/L

Laboratory Control Sample (LCS)

Lab Sample ID: TOC200622-W1.LCS1

Run in Batch: TOC200622-W1, Run Date: 06/22/2020 13:04, Prep Date: 06/22/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
TOC		108	90	110

Matrix Spike (MS)

Lab Sample ID: TOC200622-W1.MS1, Parent Sample ID: S14883.02

Run in Batch: TOC200622-W1, Run Date: 06/22/2020 15:43, Prep Date: 06/22/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
TOC		93	80	120

Matrix Spike Duplicate (MSD)

Lab Sample ID: TOC200622-W1.MSD1, Parent Sample ID: TOC200622-W1.MS1

Run in Batch: TOC200622-W1, Run Date: 06/22/2020 16:03, Prep Date: 06/22/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
TOC		92	80	120	1	15

Duplicate (DUP)

Lab Sample ID: TOC200622-W1.DP1, Parent Sample ID: S14883.01

Run in Batch: TOC200622-W1, Run Date: 06/22/2020 15:04, Prep Date: 06/22/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
TOC		2	15

QC Report - Batch QC Results

Inorganics, Prep Batch ID: TSS200618

Surrogates: No, QC Types: BLK/LCS

Blank (BLK)

Lab Sample ID: TSS200618.LRB1

Run in Batch: TSS200618, Run Date: 06/18/2020 21:00, Prep Date: 06/18/2020, Matrix: Liquid, Dilution: 1.00

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

Laboratory Control Sample (LCS)

Lab Sample ID: TSS200618.LCS1

Run in Batch: TSS200618, Run Date: 06/18/2020 21:00, Prep Date: 06/18/2020, Matrix: Liquid, Dilution: 10.0

Analyte	Flags	% Rec	LCL	UCL
Total Suspended Solids		99.2	81.9	111

Laboratory Control Sample (LCS)

Lab Sample ID: TSS200618.LCS2

Run in Batch: TSS200618, Run Date: 06/18/2020 21:00, Prep Date: 06/18/2020, Matrix: Liquid, Dilution: 10.0

Analyte	Flags	% Rec	LCL	UCL
Total Suspended Solids		99.2	81.9	111

QC Report - Batch QC Results

Metals, Prep Batch ID: MTD-061920-4

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

Blank (BLK)

Lab Sample ID: MT4-20-0619A.074.LRB

Run in Batch: MT4-20-0619A, Run Date: 06/19/2020 12:41, Prep Date: 06/19/2020, 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: MT4-20-0619A.072.LCS

Run in Batch: MT4-20-0619A, Run Date: 06/19/2020 12:35, Prep Date: 06/19/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Chromium		97	85	115
Copper		99	85	115
Nickel		98	85	115
Zinc		99	85	115

Matrix Spike (MS)

Lab Sample ID: MT4-20-0619A.095.MS, Parent Sample ID: S14883.07

Run in Batch: MT4-20-0619A, Run Date: 06/19/2020 13:03, Prep Date: 06/19/2020, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL
Chromium		98	75	125
Copper		93	75	125
Nickel		94	75	125
Zinc		98	75	125

Matrix Spike (MS)

Lab Sample ID: MT4-20-0619A.119.MS, Parent Sample ID: S14884.07

Run in Batch: MT4-20-0619A, Run Date: 06/19/2020 13:44, Prep Date: 06/19/2020, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL
Chromium		102	75	125
Copper		96	75	125
Nickel		96	75	125
Zinc		99	75	125

Matrix Spike Duplicate (MSD)

Lab Sample ID: MT4-20-0619A.096.MSD, Parent Sample ID: MT4-20-0619A.095.MS

Run in Batch: MT4-20-0619A, Run Date: 06/19/2020 13:04, Prep Date: 06/19/2020, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Chromium		99	75	125	1	20
Copper		95	75	125	3	20
Nickel		96	75	125	2	20
Zinc		99	75	125	2	20

QC Report - Batch QC Results

Metals, Prep Batch ID: MTD-061920-4 (continued)

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

Matrix Spike Duplicate (MSD)

Lab Sample ID: MT4-20-0619A.120.MSD, Parent Sample ID: MT4-20-0619A.119.MS

Run in Batch: MT4-20-0619A, Run Date: 06/19/2020 13:45, Prep Date: 06/19/2020, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Chromium		102	75	125	0	20
Copper		97	75	125	1	20
Nickel		95	75	125	1	20
Zinc		102	75	125	2	20



Analytical Laboratory Report

Report ID: S14884.01(01)
Generated on 06/24/2020

Report to

Attention: Clifford Yantz
O'Brien & Gere Engineers, Inc.
2260 E Saginaw St
East Lansing, MI 48823

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

Report produced by

Merit Laboratories, Inc.
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Contacts for report questions:

John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S14884.01-S14884.08
Project: RACER Coldwater Rd Landfill
Collected Date(s): 06/15/2020 - 06/16/2020
Submitted Date/Time: 06/16/2020 14:30
Sampled by: Kevin Schneider
P.O. #: 12000277

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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).

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 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.

Full accreditation certificates are available upon request. Starred (*) analytes are not 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)

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001

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
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
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
N/A	Not Applicable
SM2540D	Standard Method 2540 D 2011
SM5310C	Standard Method 5310C 2011
SW3015A	SW 846 Method 3015A Revision 1 February 2007
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003



Analytical Laboratory Report

Sample Summary (8 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S14884.01	SUMP - A	Wastewater	06/15/20 15:52
S14884.02	SUMP - B	Wastewater	06/15/20 16:40
S14884.03	SUMP - C	Wastewater	06/16/20 09:27
S14884.04	SUMP - D	Wastewater	06/16/20 10:40
S14884.05	SUMP - E	Wastewater	06/16/20 11:37
S14884.06	SUMP - F	Wastewater	06/16/20 12:28
S14884.07	DUP-1	Wastewater	06/16/20 00:01
S14884.08	Trip Blank 061620	Water	06/16/20 00:01



Analytical Laboratory Report

Lab Sample ID: S14884.01

Sample Tag: SUMP - A

Collected Date/Time: 06/15/2020 15:52

Matrix: Wastewater

COC Reference: 128656

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Plastic	None	Yes	3.5	IR
1	125ml Plastic	HNO3	Yes	3.5	IR
2	40ml Glass	H2SO4	Yes	3.5	IR
3	40ml Glass	HCL	Yes	3.5	IR
1	125ml Plastic	None	Yes	3.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/18/20 13:00	JML	
Metal Digestion	Completed	SW3015A	06/19/20 10:30	CCM	

Inorganics

Method: E120.1, Run Date: 06/19/20 13:26, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,000	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/21/20 21:45, Analyst: ASB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1.00		

Method: SM5310C, Run Date: 06/22/20 18:21, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	22.6	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/19/20 13:12, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	0.409	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	0.134	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.014	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 14:39, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	



Analytical Laboratory Report

Lab Sample ID: S14884.01 (continued)

Sample Tag: SUMP - A

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 14:39, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	



Analytical Laboratory Report

Lab Sample ID: S14884.01 (continued)

Sample Tag: SUMP - A

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 14:39, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S14884.02

Sample Tag: SUMP - B

Collected Date/Time: 06/15/2020 16:40

Matrix: Wastewater

COC Reference: 128656

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Plastic	None	Yes	3.5	IR
1	125ml Plastic	HNO3	Yes	3.5	IR
2	40ml Glass	H2SO4	Yes	3.5	IR
3	40ml Glass	HCL	Yes	3.5	IR
1	125ml Plastic	None	Yes	3.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/18/20 13:00	JML	
Metal Digestion	Completed	SW3015A	06/19/20 10:30	CCM	

Inorganics

Method: E120.1, Run Date: 06/19/20 13:28, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	3,340	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/21/20 21:45, Analyst: ASB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1.00		

Method: SM5310C, Run Date: 06/22/20 18:41, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	71.4	2		mg/L	2		

Metals

Method: E200.8, Run Date: 06/19/20 13:15, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	0.498	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	0.436	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.048	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	0.015	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 14:59, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	



Analytical Laboratory Report

Lab Sample ID: S14884.02 (continued)

Sample Tag: SUMP - B

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 14:59, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	



Analytical Laboratory Report

Lab Sample ID: S14884.02 (continued)

Sample Tag: SUMP - B

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 14:59, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S14884.03

Sample Tag: SUMP - C

Collected Date/Time: 06/16/2020 09:27

Matrix: Wastewater

COC Reference: 128656

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Plastic	None	Yes	3.5	IR
1	125ml Plastic	HNO3	Yes	3.5	IR
2	40ml Glass	H2SO4	Yes	3.5	IR
3	40ml Glass	HCL	Yes	3.5	IR
1	125ml Plastic	None	Yes	3.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/18/20 13:00	JML	
Metal Digestion	Completed	SW3015A	06/19/20 10:30	CCM	

Inorganics

Method: E120.1, Run Date: 06/19/20 13:30, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,316	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/21/20 21:45, Analyst: ASB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1.00		

Method: SM5310C, Run Date: 06/23/20 14:11, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	14.8	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/19/20 13:17, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	0.143	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	0.155	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.027	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 15:19, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	



Analytical Laboratory Report

Lab Sample ID: S14884.03 (continued)

Sample Tag: SUMP - C

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 15:19, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	



Analytical Laboratory Report

Lab Sample ID: S14884.03 (continued)

Sample Tag: SUMP - C

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 15:19, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S14884.04

Sample Tag: SUMP - D

Collected Date/Time: 06/16/2020 10:40

Matrix: Wastewater

COC Reference: 128656

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Plastic	None	Yes	3.5	IR
1	125ml Plastic	HNO3	Yes	3.5	IR
2	40ml Glass	H2SO4	Yes	3.5	IR
3	40ml Glass	HCL	Yes	3.5	IR
1	125ml Plastic	None	Yes	3.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/18/20 13:00	JML	
Metal Digestion	Completed	SW3015A	06/19/20 10:30	CCM	

Inorganics

Method: E120.1, Run Date: 06/19/20 13:32, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	5,840	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/21/20 21:45, Analyst: ASB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1.00		

Method: SM5310C, Run Date: 06/22/20 19:22, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	280	5		mg/L	5		

Metals

Method: E200.8, Run Date: 06/19/20 13:30, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	0.140	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	1.38	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.946	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 15:38, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	3,407	50		ug/L	1	67-64-1	E
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	9	2		ug/L	1	107-13-1	
2-Butanone (MEK)	77	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	

E-Concentration exceeds calibration range



Analytical Laboratory Report

Lab Sample ID: S14884.04 (continued)

Sample Tag: SUMP - D

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 15:38, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	



Analytical Laboratory Report

Lab Sample ID: S14884.04 (continued)

Sample Tag: SUMP - D

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 15:38, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Volatile Organics - DEQ List (Replicate 01), Method: SW5030C/8260C, Run Date: 06/19/20 03:18, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	500		ug/L	50	60-29-7	Y
Acetone	3,300	2,500		ug/L	50	67-64-1	Y
Methyl iodide	Not detected	50		ug/L	50	74-88-4	Y
Carbon disulfide	Not detected	300		ug/L	50	75-15-0	Y
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/L	50	1634-04-4	Y
Acrylonitrile	Not detected	100		ug/L	50	107-13-1	Y
2-Butanone (MEK)	Not detected	1,300		ug/L	50	78-93-3	Y
Dichlorodifluoromethane	Not detected	300		ug/L	50	75-71-8	Y
Chloromethane	Not detected	300		ug/L	50	74-87-3	Y
Vinyl chloride	Not detected	50		ug/L	50	75-01-4	Y
Bromomethane	Not detected	300		ug/L	50	74-83-9	Y
Chloroethane	Not detected	300		ug/L	50	75-00-3	Y
Trichlorofluoromethane	Not detected	50		ug/L	50	75-69-4	Y
1,1-Dichloroethene	Not detected	50		ug/L	50	75-35-4	Y
Methylene chloride	Not detected	300		ug/L	50	75-09-2	Y
trans-1,2-Dichloroethene	Not detected	50		ug/L	50	156-60-5	Y
1,1-Dichloroethane	Not detected	50		ug/L	50	75-34-3	Y
cis-1,2-Dichloroethene	Not detected	50		ug/L	50	156-59-2	Y
Tetrahydrofuran*	Not detected	4,500		ug/L	50	109-99-9	Y
Chloroform	Not detected	50		ug/L	50	67-66-3	Y
Bromochloromethane	Not detected	50		ug/L	50	74-97-5	Y
1,1,1-Trichloroethane	Not detected	50		ug/L	50	71-55-6	Y
4-Methyl-2-pentanone (MIBK)	Not detected	2,500		ug/L	50	108-10-1	Y
2-Hexanone	Not detected	2,500		ug/L	50	591-78-6	Y
Carbon tetrachloride	Not detected	50		ug/L	50	56-23-5	Y
Benzene	Not detected	50		ug/L	50	71-43-2	Y
1,2-Dichloroethane	Not detected	50		ug/L	50	107-06-2	Y
Trichloroethene	Not detected	50		ug/L	50	79-01-6	Y
1,2-Dichloropropane	Not detected	50		ug/L	50	78-87-5	Y
Bromodichloromethane	Not detected	50		ug/L	50	75-27-4	Y
Dibromomethane	Not detected	300		ug/L	50	74-95-3	Y
cis-1,3-Dichloropropene	Not detected	50		ug/L	50	10061-01-5	Y
Toluene	Not detected	50		ug/L	50	108-88-3	Y
trans-1,3-Dichloropropene	Not detected	50		ug/L	50	10061-02-6	Y
1,1,2-Trichloroethane	Not detected	50		ug/L	50	79-00-5	Y
Tetrachloroethene	Not detected	50		ug/L	50	127-18-4	Y
trans-1,4-Dichloro-2-butene	Not detected	50		ug/L	50	110-57-6	Y
Dibromochloromethane	Not detected	300		ug/L	50	124-48-1	Y
1,2-Dibromoethane	Not detected	50		ug/L	50	106-93-4	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S14884.04 (continued)

Sample Tag: SUMP - D

Volatile Organics - DEQ List (Replicate 01), Method: SW5030C/8260C, Run Date: 06/19/20 03:18, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chlorobenzene	Not detected	50		ug/L	50	108-90-7	Y
1,1,1,2-Tetrachloroethane	Not detected	50		ug/L	50	630-20-6	Y
Ethylbenzene	Not detected	50		ug/L	50	100-41-4	Y
p,m-Xylene*	Not detected	100		ug/L	50		Y
o-Xylene	Not detected	50		ug/L	50	95-47-6	Y
Styrene	Not detected	50		ug/L	50	100-42-5	Y
Isopropylbenzene	Not detected	300		ug/L	50	98-82-8	Y
Bromoform	Not detected	50		ug/L	50	75-25-2	Y
1,1,2,2-Tetrachloroethane	Not detected	50		ug/L	50	79-34-5	Y
1,2,3-Trichloropropane	Not detected	50		ug/L	50	96-18-4	Y
n-Propylbenzene	Not detected	50		ug/L	50	103-65-1	Y
Bromobenzene	Not detected	50		ug/L	50	108-86-1	Y
1,3,5-Trimethylbenzene	Not detected	50		ug/L	50	108-67-8	Y
tert-Butylbenzene	Not detected	50		ug/L	50	98-06-6	Y
1,2,4-Trimethylbenzene	Not detected	50		ug/L	50	95-63-6	Y
sec-Butylbenzene	Not detected	50		ug/L	50	135-98-8	Y
p-Isopropyltoluene	Not detected	300		ug/L	50	99-87-6	Y
1,3-Dichlorobenzene	Not detected	50		ug/L	50	541-73-1	Y
1,4-Dichlorobenzene	Not detected	50		ug/L	50	106-46-7	Y
1,2-Dichlorobenzene	Not detected	50		ug/L	50	95-50-1	Y
1,2,3-Trimethylbenzene	Not detected	50		ug/L	50	526-73-8	Y
n-Butylbenzene	Not detected	50		ug/L	50	104-51-8	Y
Hexachloroethane	Not detected	300		ug/L	50	67-72-1	Y
1,2-Dibromo-3-chloropropane	Not detected	300		ug/L	50	96-12-8	Y
1,2,4-Trichlorobenzene	Not detected	300		ug/L	50	120-82-1	Y
1,2,3-Trichlorobenzene	Not detected	300		ug/L	50	87-61-6	Y
Naphthalene	Not detected	300		ug/L	50	91-20-3	Y
2-Methylnaphthalene	Not detected	300		ug/L	50	91-57-6	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S14884.05

Sample Tag: SUMP - E

Collected Date/Time: 06/16/2020 11:37

Matrix: Wastewater

COC Reference: 128656

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Plastic	None	Yes	3.5	IR
1	125ml Plastic	HNO3	Yes	3.5	IR
2	40ml Glass	H2SO4	Yes	3.5	IR
3	40ml Glass	HCL	Yes	3.5	IR
1	125ml Plastic	None	Yes	3.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/18/20 13:00	JML	
Metal Digestion	Completed	SW3015A	06/19/20 10:30	CCM	

Inorganics

Method: E120.1, Run Date: 06/19/20 13:34, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,522	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/21/20 21:45, Analyst: ASB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1.00		

Method: SM5310C, Run Date: 06/22/20 19:43, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	22.8	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/19/20 13:20, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	0.052	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	0.138	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.030	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	0.006	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 15:57, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	



Analytical Laboratory Report

Lab Sample ID: S14884.05 (continued)

Sample Tag: SUMP - E

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 15:57, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	



Analytical Laboratory Report

Lab Sample ID: S14884.05 (continued)

Sample Tag: SUMP - E

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 15:57, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S14884.06

Sample Tag: SUMP - F

Collected Date/Time: 06/16/2020 12:28

Matrix: Wastewater

COC Reference: 128656

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Plastic	None	Yes	3.5	IR
1	125ml Plastic	HNO3	Yes	3.5	IR
2	40ml Glass	H2SO4	Yes	3.5	IR
3	40ml Glass	HCL	Yes	3.5	IR
1	125ml Plastic	None	Yes	3.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/18/20 13:00	JML	
Metal Digestion	Completed	SW3015A	06/19/20 10:30	CCM	

Inorganics

Method: E120.1, Run Date: 06/19/20 13:36, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	3,830	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/21/20 21:45, Analyst: ASB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1.00		

Method: SM5310C, Run Date: 06/22/20 20:03, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	35.6	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/19/20 13:24, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	0.038	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	0.051	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.022	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	0.011	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 16:16, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	



Analytical Laboratory Report

Lab Sample ID: S14884.06 (continued)

Sample Tag: SUMP - F

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 16:16, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	



Analytical Laboratory Report

Lab Sample ID: S14884.06 (continued)

Sample Tag: SUMP - F

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 16:16, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S14884.07

Sample Tag: DUP-1

Collected Date/Time: 06/16/2020 00:01

Matrix: Wastewater

COC Reference: 128656

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Plastic	None	Yes	3.5	IR
1	125ml Plastic	HNO3	Yes	3.5	IR
2	40ml Glass	H2SO4	Yes	3.5	IR
3	40ml Glass	HCL	Yes	3.5	IR
1	125ml Plastic	None	Yes	3.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/18/20 13:00	JML	
Metal Digestion	Completed	SW3015A	06/19/20 10:30	CCM	

Inorganics

Method: E120.1, Run Date: 06/19/20 13:38, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,312	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/21/20 21:45, Analyst: ASB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	Not detected	3		mg/L	1.00		

Method: SM5310C, Run Date: 06/22/20 20:24, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	15.6	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/19/20 13:27, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	0.142	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	0.159	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.027	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	0.005	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 16:36, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	



Analytical Laboratory Report

Lab Sample ID: S14884.07 (continued)

Sample Tag: DUP-1

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 16:36, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	



Analytical Laboratory Report

Lab Sample ID: S14884.07 (continued)

Sample Tag: DUP-1

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 16:36, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S14884.08

Sample Tag: Trip Blank 061620

Collected Date/Time: 06/16/2020 00:01

Matrix: Water

COC Reference: 128656

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	3.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/18/20 13:00	JML	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 10:51, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S14884.08 (continued)

Sample Tag: Trip Blank 061620

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/17/20 10:51, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Merit Laboratories Login Checklist

Lab Set ID:S14884

Client:OBG02 (O'Brien & Gere Engineers, Inc.)

Project: RACER Coldwater Rd Landfill

Submitted:06/16/2020 14:30 Login User: MMC

Attention: Clifford Yantz

Address: O'Brien & Gere Engineers, Inc.
2260 E Saginaw St
East Lansing, MI 48823

Phone: 313-333-0211 FAX:

Email: Clifford.Yantz@obg.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 3.5
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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to:
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do water VOC or TOX bottles contain headspace Samples .02, .03, and .08

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: S14884 Submitted: 06/16/2020 14:30

Client: OBG02 (O'Brien & Gere Engineers, Inc.)

Project: RACER Coldwater Rd Landfill

Attention: Clifford Yantz
 Address: O'Brien & Gere Engineers, Inc.
 2260 E Saginaw St
 East Lansing, MI 48823

Initial Preservation Check: 06/16/2020 15:26 MMC

Preservation Recheck (E200.8): 06/19/2020 14:25 MMC

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

Lab ID	125 ml Plastic HNO ₃	250 ml Plastic HNO ₃	1 L Plastic HNO ₃	250 ml Plastic H ₂ SO ₄	125 ml Amber H ₂ SO ₄	32 oz Glass HCl	125 ml Plastic NaOH	125 ml Amber PbCO ₃ NaOH	pH					Notes	
									<2	>12	other	ml add	new pH		
S14884.01	X								X						
S14884.02	X								X						
S14884.03	X								X						
S14884.04	X										6	0.5	<2	Lot# 237365	
S14884.05	X								X						
S14884.06	X								X						
S14884.07	X								X						



Merit
Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

128656

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Clifford Yantz
 COMPANY O'Brien & Gere, A Ramboll Company
 ADDRESS 2260 East Saginaw
 CITY East Lansing STATE Mi ZIP CODE 48823
 PHONE NO. 313-333-0211 FAX NO. _____ P.O. NO. _____
 E-MAIL ADDRESS clifford.yantz@ramboll.com QUOTE NO. _____

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

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME RACER Cobaltwater RS Landfill SAMPLER(S) - PLEASE PRINT/SIGN NAME Kevin Summers
 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=WIPE A=AIR W=WASTE

Containers & Preservatives

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	TSS	Dissolved Metals	VOCs							Certifications		Project Locations		Special Instructions
	DATE	TIME																				<input type="checkbox"/> OHIO VAP	<input type="checkbox"/> Drinking Water	<input type="checkbox"/> DoD	<input type="checkbox"/> NPDES	
14884 .01	6/15/20	1552	SUMP - A	WGW	8	2	3	1	2				X	X	X								<input type="checkbox"/>	<input type="checkbox"/>	Dissolved Metals were field filtered	
.02	↓	1640	SUMP - B										X	X	X								<input type="checkbox"/>	<input type="checkbox"/>		
.03	6/16/20	927	SUMP - C										X	X	X								<input type="checkbox"/>	<input type="checkbox"/>		
.04	↓	1040	SUMP - D										X	X	X								<input type="checkbox"/>	<input type="checkbox"/>	Metals ARE	
.05	↓	1137	SUMP - E										X	X	X								<input type="checkbox"/>	<input type="checkbox"/>	Cu, Cr, Ni, Zn	
.06	↓	1228	SUMP - F										X	X	X								<input type="checkbox"/>	<input type="checkbox"/>		
.07	↓	-	DUP-1										X	X	X								<input type="checkbox"/>	<input type="checkbox"/>		
.08	↓	-	Trip Blank 061620	QC	1	1																	<input type="checkbox"/>	<input type="checkbox"/>		
																							<input type="checkbox"/>	<input type="checkbox"/>		

RELINQUISHED BY: [Signature] Sampler DATE 6/16/20 TIME 13:22
 RECEIVED BY: [Signature] DATE 6/16/20 TIME 12:20
 RELINQUISHED BY: [Signature] DATE 6/18/20 TIME 14:30
 RECEIVED BY: [Signature] DATE 6/16/2020 TIME 14:30

RELINQUISHED BY: _____ DATE _____ TIME _____
 RECEIVED BY: _____ DATE _____ TIME _____
 SEAL NO. SEAL INTACT YES NO INITIALS _____ NOTES: TEMP. ON ARRIVAL 3.5
 SEAL NO. SEAL INTACT YES NO INITIALS _____

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



Quality Control Report

Report ID: QC-S14884-01
Generated on 06/24/2020

Report to

Attention: Clifford Yantz
O'Brien & Gere Engineers, Inc.
2260 E Saginaw St
East Lansing, MI 48823

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): S14884.01-S14884.08
Project: RACER Coldwater Rd Landfill
Submitted Date/Time: 06/16/2020 14:30
Sampled by: Kevin Schneider
P.O. #: 12000277

QC Report Sections

- Cover Page (Page 1)
- Analysis Summary (Pages 2-9)
- Prep Batch Summary (Pages 10-11)
- Surrogates per Lab Sample (Pages 12-19)
- Surrogates per QC Sample (Pages 20-21)
- Batch QC Results (Pages 22-37)

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: S14884.01

Sample Tag: SUMP - A

Collected Date/Time: 06/15/2020 15:52

Matrix: Wastewater

COC Reference: 128656

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<i>Inorganics</i>						
Conductivity	E120.1	06/19/20 13:26	COND200619-W1	COND200619-W1	No	BLK/LCS/DUP
TOC	SM5310C	06/22/20 18:21	TOC200622-W1	TOC200622-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/21/20 21:45	TSS200621	TSS200621	No	BLK/LCS
<i>Metals</i>						
Chromium, Dissolved	E200.8	06/19/20 13:12	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/19/20 13:12	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/19/20 13:12	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/19/20 13:12	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
<i>Organics - Volatiles</i>						
Volatile Organics - DEQ List	SW5030C/8260C	06/17/20 14:39	200617A7	VF200617W1	Yes	BLK/LCS/LCSD

QC Report - Analysis Summary

Lab Sample ID: S14884.02

Sample Tag: SUMP - B

Collected Date/Time: 06/15/2020 16:40

Matrix: Wastewater

COC Reference: 128656

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<i>Inorganics</i>						
Conductivity	E120.1	06/19/20 13:28	COND200619-W1	COND200619-W1	No	BLK/LCS/DUP
TOC	SM5310C	06/22/20 18:41	TOC200622-W1	TOC200622-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/21/20 21:45	TSS200621	TSS200621	No	BLK/LCS
<i>Metals</i>						
Chromium, Dissolved	E200.8	06/19/20 13:15	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/19/20 13:15	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/19/20 13:15	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/19/20 13:15	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
<i>Organics - Volatiles</i>						
Volatile Organics - DEQ List	SW5030C/8260C	06/17/20 14:59	200617A7	VF200617W1	Yes	BLK/LCS/LCSD

QC Report - Analysis Summary

Lab Sample ID: S14884.03

Sample Tag: SUMP - C

Collected Date/Time: 06/16/2020 09:27

Matrix: Wastewater

COC Reference: 128656

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<i>Inorganics</i>						
Conductivity	E120.1	06/19/20 13:30	COND200619-W1	COND200619-W1	No	BLK/LCS/DUP
TOC	SM5310C	06/23/20 14:11	TOC200623-W1	TOC200623-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/21/20 21:45	TSS200621	TSS200621	No	BLK/LCS
<i>Metals</i>						
Chromium, Dissolved	E200.8	06/19/20 13:17	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/19/20 13:17	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/19/20 13:17	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/19/20 13:17	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
<i>Organics - Volatiles</i>						
Volatile Organics - DEQ List	SW5030C/8260C	06/17/20 15:19	200617A7	VF200617W1	Yes	BLK/LCS/LCSD

QC Report - Analysis Summary

Lab Sample ID: S14884.04

Sample Tag: SUMP - D

Collected Date/Time: 06/16/2020 10:40

Matrix: Wastewater

COC Reference: 128656

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<i>Inorganics</i>						
Conductivity	E120.1	06/19/20 13:32	COND200619-W1	COND200619-W1	No	BLK/LCS/DUP
TOC	SM5310C	06/22/20 19:22	TOC200622-W1	TOC200622-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/21/20 21:45	TSS200621	TSS200621	No	BLK/LCS
<i>Metals</i>						
Chromium, Dissolved	E200.8	06/19/20 13:30	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/19/20 13:30	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/19/20 13:30	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/19/20 13:30	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
<i>Organics - Volatiles</i>						
Volatile Organics - DEQ List	SW5030C/8260C	06/17/20 15:38	200617A7	VF200617W1	Yes	BLK/LCS/LCSD
Volatile Organics - DEQ List (Replicate 01)	SW5030C/8260C	06/19/20 03:18	200618B7	VF200618W2	Yes	BLK/LCS/LCSD

QC Report - Analysis Summary

Lab Sample ID: S14884.05

Sample Tag: SUMP - E

Collected Date/Time: 06/16/2020 11:37

Matrix: Wastewater

COC Reference: 128656

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<i>Inorganics</i>						
Conductivity	E120.1	06/19/20 13:34	COND200619-W1	COND200619-W1	No	BLK/LCS/DUP
TOC	SM5310C	06/22/20 19:43	TOC200622-W1	TOC200622-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/21/20 21:45	TSS200621	TSS200621	No	BLK/LCS
<i>Metals</i>						
Chromium, Dissolved	E200.8	06/19/20 13:20	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/19/20 13:20	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/19/20 13:20	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/19/20 13:20	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
<i>Organics - Volatiles</i>						
Volatile Organics - DEQ List	SW5030C/8260C	06/17/20 15:57	200617A7	VF200617W1	Yes	BLK/LCS/LCSD

QC Report - Analysis Summary

Lab Sample ID: S14884.06

Sample Tag: SUMP - F

Collected Date/Time: 06/16/2020 12:28

Matrix: Wastewater

COC Reference: 128656

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<i>Inorganics</i>						
Conductivity	E120.1	06/19/20 13:36	COND200619-W1	COND200619-W1	No	BLK/LCS/DUP
TOC	SM5310C	06/22/20 20:03	TOC200622-W1	TOC200622-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/21/20 21:45	TSS200621	TSS200621	No	BLK/LCS
<i>Metals</i>						
Chromium, Dissolved	E200.8	06/19/20 13:24	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/19/20 13:24	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/19/20 13:24	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/19/20 13:24	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
<i>Organics - Volatiles</i>						
Volatile Organics - DEQ List	SW5030C/8260C	06/17/20 16:16	200617A7	VF200617W1	Yes	BLK/LCS/LCSD

QC Report - Analysis Summary

Lab Sample ID: S14884.07

Sample Tag: DUP-1

Collected Date/Time: 06/16/2020 00:01

Matrix: Wastewater

COC Reference: 128656

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<i>Inorganics</i>						
Conductivity	E120.1	06/19/20 13:38	COND200619-W1	COND200619-W1	No	BLK/LCS/DUP
TOC	SM5310C	06/22/20 20:24	TOC200622-W1	TOC200622-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/21/20 21:45	TSS200621	TSS200621	No	BLK/LCS
<i>Metals</i>						
Chromium, Dissolved	E200.8	06/19/20 13:27	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/19/20 13:27	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/19/20 13:27	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/19/20 13:27	MT4-20-0619A	MTD-061920-4	No	BLK/LCS/MS/MSD
<i>Organics - Volatiles</i>						
Volatile Organics - DEQ List	SW5030C/8260C	06/17/20 16:36	200617A7	VF200617W1	Yes	BLK/LCS/LCSD

QC Report - Analysis Summary

Lab Sample ID: S14884.08

Sample Tag: Trip Blank 061620

Collected Date/Time: 06/16/2020 00:01

Matrix: Water

COC Reference: 128656

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Organics - Volatiles						
Volatile Organics - DEQ List	SW5030C/8260C	06/17/20 10:51	200617A7	VF200617W1	Yes	BLK/LCS/LCSD

QC Report - Prep Batch Summary

Inorganics, Prep Batch ID: COND200619-W1

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S14884.01	Conductivity	E120.1	06/19/20 13:26	COND200619-W1
S14884.02	Conductivity	E120.1	06/19/20 13:28	COND200619-W1
S14884.03	Conductivity	E120.1	06/19/20 13:30	COND200619-W1
S14884.04	Conductivity	E120.1	06/19/20 13:32	COND200619-W1
S14884.05	Conductivity	E120.1	06/19/20 13:34	COND200619-W1
S14884.06	Conductivity	E120.1	06/19/20 13:36	COND200619-W1
S14884.07	Conductivity	E120.1	06/19/20 13:38	COND200619-W1

Inorganics, Prep Batch ID: TOC200622-W1

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S14884.01	TOC	SM5310C	06/22/20 18:21	TOC200622-W1
S14884.02	TOC	SM5310C	06/22/20 18:41	TOC200622-W1
S14884.04	TOC	SM5310C	06/22/20 19:22	TOC200622-W1
S14884.05	TOC	SM5310C	06/22/20 19:43	TOC200622-W1
S14884.06	TOC	SM5310C	06/22/20 20:03	TOC200622-W1
S14884.07	TOC	SM5310C	06/22/20 20:24	TOC200622-W1

Inorganics, Prep Batch ID: TOC200623-W1

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S14884.03	TOC	SM5310C	06/23/20 14:11	TOC200623-W1

Inorganics, Prep Batch ID: TSS200621

Surrogates: No, QC Types: BLK/LCS

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S14884.01	Total Suspended Solids	SM2540D	06/21/20 21:45	TSS200621
S14884.02	Total Suspended Solids	SM2540D	06/21/20 21:45	TSS200621
S14884.03	Total Suspended Solids	SM2540D	06/21/20 21:45	TSS200621
S14884.04	Total Suspended Solids	SM2540D	06/21/20 21:45	TSS200621
S14884.05	Total Suspended Solids	SM2540D	06/21/20 21:45	TSS200621
S14884.06	Total Suspended Solids	SM2540D	06/21/20 21:45	TSS200621
S14884.07	Total Suspended Solids	SM2540D	06/21/20 21:45	TSS200621

Metals, Prep Batch ID: MTD-061920-4

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S14884.01	Chromium, Dissolved	E200.8	06/19/20 13:12	MT4-20-0619A
S14884.01	Copper, Dissolved	E200.8	06/19/20 13:12	MT4-20-0619A
S14884.01	Nickel, Dissolved	E200.8	06/19/20 13:12	MT4-20-0619A
S14884.01	Zinc, Dissolved	E200.8	06/19/20 13:12	MT4-20-0619A
S14884.02	Chromium, Dissolved	E200.8	06/19/20 13:15	MT4-20-0619A
S14884.02	Copper, Dissolved	E200.8	06/19/20 13:15	MT4-20-0619A
S14884.02	Nickel, Dissolved	E200.8	06/19/20 13:15	MT4-20-0619A
S14884.02	Zinc, Dissolved	E200.8	06/19/20 13:15	MT4-20-0619A
S14884.03	Chromium, Dissolved	E200.8	06/19/20 13:17	MT4-20-0619A
S14884.03	Copper, Dissolved	E200.8	06/19/20 13:17	MT4-20-0619A
S14884.03	Nickel, Dissolved	E200.8	06/19/20 13:17	MT4-20-0619A
S14884.03	Zinc, Dissolved	E200.8	06/19/20 13:17	MT4-20-0619A
S14884.04	Chromium, Dissolved	E200.8	06/19/20 13:30	MT4-20-0619A

QC Report - Prep Batch Summary

Metals, Prep Batch ID: MTD-061920-4 (continued)

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S14884.04	Copper, Dissolved	E200.8	06/19/20 13:30	MT4-20-0619A
S14884.04	Nickel, Dissolved	E200.8	06/19/20 13:30	MT4-20-0619A
S14884.04	Zinc, Dissolved	E200.8	06/19/20 13:30	MT4-20-0619A
S14884.05	Chromium, Dissolved	E200.8	06/19/20 13:20	MT4-20-0619A
S14884.05	Copper, Dissolved	E200.8	06/19/20 13:20	MT4-20-0619A
S14884.05	Nickel, Dissolved	E200.8	06/19/20 13:20	MT4-20-0619A
S14884.05	Zinc, Dissolved	E200.8	06/19/20 13:20	MT4-20-0619A
S14884.06	Chromium, Dissolved	E200.8	06/19/20 13:24	MT4-20-0619A
S14884.06	Copper, Dissolved	E200.8	06/19/20 13:24	MT4-20-0619A
S14884.06	Nickel, Dissolved	E200.8	06/19/20 13:24	MT4-20-0619A
S14884.06	Zinc, Dissolved	E200.8	06/19/20 13:24	MT4-20-0619A
S14884.07	Chromium, Dissolved	E200.8	06/19/20 13:27	MT4-20-0619A
S14884.07	Copper, Dissolved	E200.8	06/19/20 13:27	MT4-20-0619A
S14884.07	Nickel, Dissolved	E200.8	06/19/20 13:27	MT4-20-0619A
S14884.07	Zinc, Dissolved	E200.8	06/19/20 13:27	MT4-20-0619A

Organics - Volatiles, Prep Batch ID: VF200617W1

Surrogates: Yes, QC Types: BLK/LCS/LCSD

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S14884.01	Volatile Organics - DEQ List	SW5030C/8260C	06/17/20 14:39	200617A7
S14884.02	Volatile Organics - DEQ List	SW5030C/8260C	06/17/20 14:59	200617A7
S14884.03	Volatile Organics - DEQ List	SW5030C/8260C	06/17/20 15:19	200617A7
S14884.04	Volatile Organics - DEQ List	SW5030C/8260C	06/17/20 15:38	200617A7
S14884.05	Volatile Organics - DEQ List	SW5030C/8260C	06/17/20 15:57	200617A7
S14884.06	Volatile Organics - DEQ List	SW5030C/8260C	06/17/20 16:16	200617A7
S14884.07	Volatile Organics - DEQ List	SW5030C/8260C	06/17/20 16:36	200617A7
S14884.08	Volatile Organics - DEQ List	SW5030C/8260C	06/17/20 10:51	200617A7

Organics - Volatiles, Prep Batch ID: VF200618W2

Surrogates: Yes, QC Types: BLK/LCS/LCSD

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S14884.04	Volatile Organics - DEQ List (Replicate 01)	SW5030C/8260C	06/19/20 03:18	200618B7

QC Report - Surrogates per Lab Sample

Lab Sample ID: S14884.01

Sample Tag: SUMP - A

Collected Date/Time: 06/15/2020 15:52

Matrix: Wastewater

COC Reference: 128656

Organics - Volatiles, Analysis: Volatile Organics - DEQ List

Run in Batch: 200617A7, Run Date: 06/17/2020 14:39, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		97.5	80.0	124.0
1,2-Dichloroethane-D4		97.2	72.0	125.0
Toluene-D8		97.9	89.0	112.0

QC Report - Surrogates per Lab Sample

Lab Sample ID: S14884.02

Sample Tag: SUMP - B

Collected Date/Time: 06/15/2020 16:40

Matrix: Wastewater

COC Reference: 128656

Organics - Volatiles, Analysis: Volatile Organics - DEQ List

Run in Batch: 200617A7, Run Date: 06/17/2020 14:59, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		95.5	80.0	124.0
1,2-Dichloroethane-D4		97.4	72.0	125.0
Toluene-D8		98.4	89.0	112.0

QC Report - Surrogates per Lab Sample

Lab Sample ID: S14884.03

Sample Tag: SUMP - C

Collected Date/Time: 06/16/2020 09:27

Matrix: Wastewater

COC Reference: 128656

Organics - Volatiles, Analysis: Volatile Organics - DEQ List

Run in Batch: 200617A7, Run Date: 06/17/2020 15:19, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		97.4	80.0	124.0
1,2-Dichloroethane-D4		96.4	72.0	125.0
Toluene-D8		97.6	89.0	112.0

QC Report - Surrogates per Lab Sample

Lab Sample ID: S14884.04

Sample Tag: SUMP - D

Collected Date/Time: 06/16/2020 10:40

Matrix: Wastewater

COC Reference: 128656

Organics - Volatiles, Analysis: Volatile Organics - DEQ List

Run in Batch: 200617A7, Run Date: 06/17/2020 15:38, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		97.1	80.0	124.0
1,2-Dichloroethane-D4		97.3	72.0	125.0
Toluene-D8		99.3	89.0	112.0

Organics - Volatiles, Analysis: Volatile Organics - DEQ List (Replicate 01)

Run in Batch: 200618B7, Run Date: 06/19/2020 03:18, Matrix: WW, Dilution: 50

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		94.4	80.0	124.0
1,2-Dichloroethane-D4		95.4	72.0	125.0
Toluene-D8		99.2	89.0	112.0

QC Report - Surrogates per Lab Sample

Lab Sample ID: S14884.05

Sample Tag: SUMP - E

Collected Date/Time: 06/16/2020 11:37

Matrix: Wastewater

COC Reference: 128656

Organics - Volatiles, Analysis: Volatile Organics - DEQ List

Run in Batch: 200617A7, Run Date: 06/17/2020 15:57, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		98.6	80.0	124.0
1,2-Dichloroethane-D4		96.5	72.0	125.0
Toluene-D8		98.3	89.0	112.0

QC Report - Surrogates per Lab Sample

Lab Sample ID: S14884.06

Sample Tag: SUMP - F

Collected Date/Time: 06/16/2020 12:28

Matrix: Wastewater

COC Reference: 128656

Organics - Volatiles, Analysis: Volatile Organics - DEQ List

Run in Batch: 200617A7, Run Date: 06/17/2020 16:16, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		96.0	80.0	124.0
1,2-Dichloroethane-D4		95.7	72.0	125.0
Toluene-D8		97.3	89.0	112.0

QC Report - Surrogates per Lab Sample

Lab Sample ID: S14884.07

Sample Tag: DUP-1

Collected Date/Time: 06/16/2020 00:01

Matrix: Wastewater

COC Reference: 128656

Organics - Volatiles, Analysis: Volatile Organics - DEQ List

Run in Batch: 200617A7, Run Date: 06/17/2020 16:36, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		96.8	80.0	124.0
1,2-Dichloroethane-D4		94.4	72.0	125.0
Toluene-D8		96.8	89.0	112.0

QC Report - Surrogates per Lab Sample

Lab Sample ID: S14884.08

Sample Tag: Trip Blank 061620

Collected Date/Time: 06/16/2020 00:01

Matrix: Water

COC Reference: 128656

Organics - Volatiles, Analysis: Volatile Organics - DEQ List

Run in Batch: 200617A7, Run Date: 06/17/2020 10:51, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		96.5	80.0	124.0
1,2-Dichloroethane-D4		98.3	72.0	125.0
Toluene-D8		99.7	89.0	112.0

QC Report - Surrogates per QC Sample

Organics - Volatiles, Prep Batch ID: VF200617W1

QC Types: BLK/LCS/LCSD

Blank (BLK)

Lab Sample ID: 200617A7.BLKW17A

Run in Batch: 200617A7, Run Date: 06/17/2020 10:32, Prep Date: 06/17/2020, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		96.5	80.0	124.0
1,2-Dichloroethane-D4		100.3	72.0	125.0
Toluene-D8		98.0	89.0	112.0

Laboratory Control Sample (LCS)

Lab Sample ID: 200617A7.LCSW17A

Run in Batch: 200617A7, Run Date: 06/17/2020 09:14, Prep Date: 06/17/2020, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		95.1	80.0	124.0
1,2-Dichloroethane-D4		100.3	72.0	125.0
Toluene-D8		98.0	89.0	112.0

Laboratory Control Sample Duplicate (LCSD)

Lab Sample ID: 200617A7.LCSDW17A, Parent Sample ID: 200617A7.LCSW17A

Run in Batch: 200617A7, Run Date: 06/17/2020 09:34, Prep Date: 06/17/2020, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		94.6	80.0	124.0
1,2-Dichloroethane-D4		104.2	72.0	125.0
Toluene-D8		98.3	89.0	112.0

QC Report - Surrogates per QC Sample

Organics - Volatiles, Prep Batch ID: VF200618W2

QC Types: BLK/LCS/LCSD

Blank (BLK)

Lab Sample ID: 200618B7.BLKW18B

Run in Batch: 200618B7, Run Date: 06/18/2020 21:10, Prep Date: 06/18/2020, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		94.9	80.0	124.0
1,2-Dichloroethane-D4		94.9	72.0	125.0
Toluene-D8		98.2	89.0	112.0

Laboratory Control Sample (LCS)

Lab Sample ID: 200618B7.LCSW18B

Run in Batch: 200618B7, Run Date: 06/18/2020 19:53, Prep Date: 06/18/2020, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		94.6	80.0	124.0
1,2-Dichloroethane-D4		92.5	72.0	125.0
Toluene-D8		99.7	89.0	112.0

Laboratory Control Sample Duplicate (LCSD)

Lab Sample ID: 200618B7.LCSDW18B, Parent Sample ID: 200618B7.LCSW18B

Run in Batch: 200618B7, Run Date: 06/18/2020 20:12, Prep Date: 06/18/2020, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		94.7	80.0	124.0
1,2-Dichloroethane-D4		95.9	72.0	125.0
Toluene-D8		99.7	89.0	112.0

QC Report - Batch QC Results

Inorganics, Prep Batch ID: COND200619-W1

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

Blank (BLK)

Lab Sample ID: COND200619-W1.LRB1

Run in Batch: COND200619-W1, Run Date: 06/19/2020 13:00, Prep Date: 06/19/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Conductivity		ND	1	mg/L

Laboratory Control Sample (LCS)

Lab Sample ID: COND200619-W1.LCS1

Run in Batch: COND200619-W1, Run Date: 06/19/2020 13:06, Prep Date: 06/19/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Conductivity		95	90	110

Duplicate (DUP)

Lab Sample ID: COND200619-W1.DP1, Parent Sample ID: S14883.01

Run in Batch: COND200619-W1, Run Date: 06/19/2020 13:12, Prep Date: 06/19/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
Conductivity		<1	15

QC Report - Batch QC Results

Inorganics, Prep Batch ID: TOC200622-W1

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

Blank (BLK)

Lab Sample ID: TOC200622-W1.LRB1

Run in Batch: TOC200622-W1, Run Date: 06/22/2020 12:25, Prep Date: 06/22/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
TOC		ND	1	mg/L

Laboratory Control Sample (LCS)

Lab Sample ID: TOC200622-W1.LCS1

Run in Batch: TOC200622-W1, Run Date: 06/22/2020 13:04, Prep Date: 06/22/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
TOC		108	90	110

Matrix Spike (MS)

Lab Sample ID: TOC200622-W1.MS1, Parent Sample ID: S14883.02

Run in Batch: TOC200622-W1, Run Date: 06/22/2020 15:43, Prep Date: 06/22/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
TOC		93	80	120

Matrix Spike Duplicate (MSD)

Lab Sample ID: TOC200622-W1.MSD1, Parent Sample ID: TOC200622-W1.MS1

Run in Batch: TOC200622-W1, Run Date: 06/22/2020 16:03, Prep Date: 06/22/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
TOC		92	80	120	1	15

Duplicate (DUP)

Lab Sample ID: TOC200622-W1.DP1, Parent Sample ID: S14883.01

Run in Batch: TOC200622-W1, Run Date: 06/22/2020 15:04, Prep Date: 06/22/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
TOC		2	15

QC Report - Batch QC Results

Inorganics, Prep Batch ID: TOC200623-W1

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

Blank (BLK)

Lab Sample ID: TOC200623-W1.LRB1

Run in Batch: TOC200623-W1, Run Date: 06/23/2020 13:12, Prep Date: 06/23/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
TOC		ND	1	mg/L

Laboratory Control Sample (LCS)

Lab Sample ID: TOC200623-W1.LCS1

Run in Batch: TOC200623-W1, Run Date: 06/23/2020 13:52, Prep Date: 06/23/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
TOC		105	90	110

Matrix Spike (MS)

Lab Sample ID: TOC200623-W1.MS1, Parent Sample ID: S14973.01

Run in Batch: TOC200623-W1, Run Date: 06/23/2020 15:11, Prep Date: 06/23/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
TOC		98	80	120

Matrix Spike Duplicate (MSD)

Lab Sample ID: TOC200623-W1.MSD1, Parent Sample ID: TOC200623-W1.MS1

Run in Batch: TOC200623-W1, Run Date: 06/23/2020 15:31, Prep Date: 06/23/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
TOC		98	80	120	0	15

Duplicate (DUP)

Lab Sample ID: TOC200623-W1.DP1, Parent Sample ID: S14884.03

Run in Batch: TOC200623-W1, Run Date: 06/23/2020 14:32, Prep Date: 06/23/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
TOC		2	15

QC Report - Batch QC Results

Inorganics, Prep Batch ID: TSS200621

Surrogates: No, QC Types: BLK/LCS

Blank (BLK)

Lab Sample ID: TSS200621.LRB1

Run in Batch: TSS200621, Run Date: 06/21/2020 21:45, Prep Date: 06/21/2020, Matrix: Liquid, Dilution: 1.00

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

Laboratory Control Sample (LCS)

Lab Sample ID: TSS200621.LCS1

Run in Batch: TSS200621, Run Date: 06/21/2020 21:45, Prep Date: 06/21/2020, Matrix: Liquid, Dilution: 1.00

Analyte	Flags	% Rec	LCL	UCL
Total Suspended Solids		100.4	81.9	111

Laboratory Control Sample (LCS)

Lab Sample ID: TSS200621.LCS2

Run in Batch: TSS200621, Run Date: 06/21/2020 21:45, Prep Date: 06/21/2020, Matrix: Liquid, Dilution: 1.00

Analyte	Flags	% Rec	LCL	UCL
Total Suspended Solids		103.9	81.9	111

QC Report - Batch QC Results

Metals, Prep Batch ID: MTD-061920-4

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

Blank (BLK)

Lab Sample ID: MT4-20-0619A.074.LRB

Run in Batch: MT4-20-0619A, Run Date: 06/19/2020 12:41, Prep Date: 06/19/2020, 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: MT4-20-0619A.072.LCS

Run in Batch: MT4-20-0619A, Run Date: 06/19/2020 12:35, Prep Date: 06/19/2020, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Chromium		97	85	115
Copper		99	85	115
Nickel		98	85	115
Zinc		99	85	115

Matrix Spike (MS)

Lab Sample ID: MT4-20-0619A.095.MS, Parent Sample ID: S14883.07

Run in Batch: MT4-20-0619A, Run Date: 06/19/2020 13:03, Prep Date: 06/19/2020, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL
Chromium		98	75	125
Copper		93	75	125
Nickel		94	75	125
Zinc		98	75	125

Matrix Spike (MS)

Lab Sample ID: MT4-20-0619A.119.MS, Parent Sample ID: S14884.07

Run in Batch: MT4-20-0619A, Run Date: 06/19/2020 13:44, Prep Date: 06/19/2020, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL
Chromium		102	75	125
Copper		96	75	125
Nickel		96	75	125
Zinc		99	75	125

Matrix Spike Duplicate (MSD)

Lab Sample ID: MT4-20-0619A.096.MSD, Parent Sample ID: MT4-20-0619A.095.MS

Run in Batch: MT4-20-0619A, Run Date: 06/19/2020 13:04, Prep Date: 06/19/2020, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Chromium		99	75	125	1	20
Copper		95	75	125	3	20
Nickel		96	75	125	2	20
Zinc		99	75	125	2	20

QC Report - Batch QC Results

Metals, Prep Batch ID: MTD-061920-4 (continued)

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

Matrix Spike Duplicate (MSD)

Lab Sample ID: MT4-20-0619A.120.MSD, Parent Sample ID: MT4-20-0619A.119.MS

Run in Batch: MT4-20-0619A, Run Date: 06/19/2020 13:45, Prep Date: 06/19/2020, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Chromium		102	75	125	0	20
Copper		97	75	125	1	20
Nickel		95	75	125	1	20
Zinc		102	75	125	2	20

QC Report - Batch QC Results

Organics - Volatiles, Prep Batch ID: VF200617W1

Surrogates: Yes, QC Types: BLK/LCS/LCSD

Blank (BLK)

Lab Sample ID: 200617A7.BLKW17A

Run in Batch: 200617A7, Run Date: 06/17/2020 10:32, Prep Date: 06/17/2020, Matrix: WW, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Diethyl ether		ND	1.00	ug/l
Acetone		ND	10.00	ug/l
Methyl iodide		ND	1.00	ug/l
Carbon disulfide		ND	1.00	ug/l
tert-Methyl butyl ether (MTBE)		ND	1.00	ug/l
Acrylonitrile		ND	1.00	ug/l
2-Butanone (MEK)		ND	10.00	ug/l
Dichlorodifluoromethane		ND	1.00	ug/l
Chloromethane		ND	1.00	ug/l
Vinyl chloride		ND	1.00	ug/l
Bromomethane		ND	1.00	ug/l
Chloroethane		ND	1.00	ug/l
Trichlorofluoromethane		ND	1.00	ug/l
1,1-Dichloroethene		ND	1.00	ug/l
Methylene chloride		ND	1.00	ug/l
trans-1,2-Dichloroethene		ND	1.00	ug/l
1,1-Dichloroethane		ND	1.00	ug/l
cis-1,2-Dichloroethene		ND	1.00	ug/l
Tetrahydrofuran		ND	10.00	ug/l
Chloroform		ND	1.00	ug/l
Bromochloromethane		ND	1.00	ug/l
1,1,1-Trichloroethane		ND	1.00	ug/l
4-Methyl-2-pentanone (MIBK)		ND	10.00	ug/l
2-Hexanone		ND	10.00	ug/l
Carbon tetrachloride		ND	1.00	ug/l
Benzene		ND	1.00	ug/l
1,2-Dichloroethane		ND	1.00	ug/l
Trichloroethene		ND	1.00	ug/l
1,2-Dichloropropane		ND	1.00	ug/l
Bromodichloromethane		ND	1.00	ug/l
Dibromomethane		ND	1.00	ug/l
cis-1,3-Dichloropropene		ND	1.00	ug/l
Toluene		ND	1.00	ug/l
trans-1,3-Dichloropropene		ND	1.00	ug/l
1,1,2-Trichloroethane		ND	1.00	ug/l
Tetrachloroethene		ND	1.00	ug/l
trans-1,4-Dichloro-2-butene		ND	1.00	ug/l
Dibromochloromethane		ND	1.00	ug/l
1,2-Dibromoethane		ND	1.00	ug/l
Chlorobenzene		ND	1.00	ug/l
1,1,1,2-Tetrachloroethane		ND	1.00	ug/l
Ethylbenzene		ND	1.00	ug/l
p,m-Xylene		ND	2.00	ug/l
o-Xylene		ND	1.00	ug/l
Styrene		ND	1.00	ug/l
Isopropylbenzene		ND	1.00	ug/l

QC Report - Batch QC Results

Organics - Volatiles, Prep Batch ID: VF200617W1 (continued)

Surrogates: Yes, QC Types: BLK/LCS/LCSD

Blank (BLK) (continued)

Lab Sample ID: 200617A7.BLKW17A

Run in Batch: 200617A7, Run Date: 06/17/2020 10:32, Prep Date: 06/17/2020, Matrix: WW, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Bromoform		ND	1.00	ug/l
1,1,2,2-Tetrachloroethane		ND	1.00	ug/l
1,2,3-Trichloropropane		ND	1.00	ug/l
n-Propylbenzene		ND	1.00	ug/l
Bromobenzene		ND	1.00	ug/l
1,3,5-Trimethylbenzene		ND	1.00	ug/l
tert-Butylbenzene		ND	1.00	ug/l
1,2,4-Trimethylbenzene		ND	1.00	ug/l
sec-Butylbenzene		ND	1.00	ug/l
p-Isopropyltoluene		ND	1.00	ug/l
1,3-Dichlorobenzene		ND	1.00	ug/l
1,4-Dichlorobenzene		ND	1.00	ug/l
1,2-Dichlorobenzene		ND	1.00	ug/l
1,2,3-Trimethylbenzene		ND	1.00	ug/l
n-Butylbenzene		ND	1.00	ug/l
Hexachloroethane		ND	1.00	ug/l
1,2-Dibromo-3-chloropropane		ND	1.00	ug/l
1,2,4-Trichlorobenzene		ND	1.00	ug/l
1,2,3-Trichlorobenzene		ND	1.00	ug/l
Naphthalene		ND	1.00	ug/l
2-Methylnaphthalene		ND	1.00	ug/l

Laboratory Control Sample (LCS)

Lab Sample ID: 200617A7.LCSW17A

Run in Batch: 200617A7, Run Date: 06/17/2020 09:14, Prep Date: 06/17/2020, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Diethyl ether		113.9	67.4	121.2
Acetone		88.2	29.9	161.5
Methyl iodide		104.8	68.8	116.4
Carbon disulfide		104.3	63.8	137.4
tert-Methyl butyl ether (MTBE)		111.1	73.2	122.4
Acrylonitrile		104.1	69.9	128.9
2-Butanone (MEK)		103.3	44.0	134.4
Dichlorodifluoromethane		140.8	10.0	222.8
Chloromethane		120.9	23.8	166.5
Vinyl chloride		117.4	43.5	149.1
Bromomethane		104.8	56.8	151.3
Chloroethane		110.7	53.4	149.4
Trichlorofluoromethane		101.7	59.7	151.8
1,1-Dichloroethene		106.6	69.6	139.4
Methylene chloride		105.3	73.3	121.1
trans-1,2-Dichloroethene		106.2	73.6	129.3
1,1-Dichloroethane		108.7	71.5	126.2
cis-1,2-Dichloroethene		106.8	76.6	122.1
Tetrahydrofuran		95.9	59.0	117.9
Chloroform		105.8	78.4	124.0

QC Report - Batch QC Results

Organics - Volatiles, Prep Batch ID: VF200617W1 (continued)

Surrogates: Yes, QC Types: BLK/LCS/LCSD

Laboratory Control Sample (LCS) (continued)

Lab Sample ID: 200617A7.LCSW17A

Run in Batch: 200617A7, Run Date: 06/17/2020 09:14, Prep Date: 06/17/2020, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Bromochloromethane		109.5	78.2	120.8
1,1,1-Trichloroethane		102.4	79.4	130.9
4-Methyl-2-pentanone (MIBK)		101.7	71.6	125.2
2-Hexanone		103.9	55.4	136.9
Carbon tetrachloride		97.0	72.6	133.0
Benzene		105.7	79.9	124.9
1,2-Dichloroethane		102.1	76.0	126.3
Trichloroethene		101.7	79.7	124.2
1,2-Dichloropropane		108.6	78.6	126.4
Bromodichloromethane		106.0	80.4	128.2
Dibromomethane		105.0	76.9	122.1
cis-1,3-Dichloropropene		108.9	79.8	129.9
Toluene		103.1	79.8	124.5
trans-1,3-Dichloropropene		108.8	74.0	131.3
1,1,2-Trichloroethane		107.1	78.7	123.1
Tetrachloroethene		93.1	74.5	124.5
trans-1,4-Dichloro-2-butene		102.7	68.6	135.4
Dibromochloromethane		106.5	74.6	127.2
1,2-Dibromoethane		107.2	70.3	133.7
Chlorobenzene		103.7	79.2	122.7
1,1,1,2-Tetrachloroethane		104.8	80.3	128.2
Ethylbenzene		105.2	79.5	129.1
p,m-Xylene		102.7	79.4	132.2
o-Xylene		105.2	80.2	131.0
Styrene		106.5	69.5	126.7
Isopropylbenzene		103.4	74.4	121.5
Bromoform		100.8	69.4	128.0
1,1,2,2-Tetrachloroethane		105.7	79.8	126.3
1,2,3-Trichloropropane		104.4	78.3	138.8
n-Propylbenzene		102.8	82.0	130.7
Bromobenzene		102.8	78.7	124.6
1,3,5-Trimethylbenzene		100.6	81.3	128.9
tert-Butylbenzene		97.3	80.7	128.9
1,2,4-Trimethylbenzene		100.5	81.4	130.8
sec-Butylbenzene		100.7	77.4	129.8
p-Isopropyltoluene		99.9	79.8	137.5
1,3-Dichlorobenzene		105.2	77.0	131.3
1,4-Dichlorobenzene		105.2	20.7	137.7
1,2-Dichlorobenzene		108.3	10.0	166.2
1,2,3-Trimethylbenzene		108.1	76.3	124.2
n-Butylbenzene		96.3	80.0	133.3
Hexachloroethane		92.6	23.8	138.1
1,2-Dibromo-3-chloropropane		101.7	21.2	189.4
1,2,4-Trichlorobenzene		104.4	27.4	143.4
1,2,3-Trichlorobenzene		103.6	75.4	131.4
Naphthalene		105.2	32.9	135.8

QC Report - Batch QC Results

Organics - Volatiles, Prep Batch ID: VF200617W1 (continued)

Surrogates: Yes, QC Types: BLK/LCS/LCSD

Laboratory Control Sample (LCS) (continued)

Lab Sample ID: 200617A7.LCSW17A

Run in Batch: 200617A7, Run Date: 06/17/2020 09:14, Prep Date: 06/17/2020, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
2-Methylnaphthalene		109.8	25.5	165.5

Laboratory Control Sample Duplicate (LCSD)

Lab Sample ID: 200617A7.LCSDW17A, Parent Sample ID: 200617A7.LCSW17A

Run in Batch: 200617A7, Run Date: 06/17/2020 09:34, Prep Date: 06/17/2020, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Diethyl ether		117.2	67.4	121.2	2.9	30.0
Acetone		102.0	29.9	161.5	14.5	30.0
Methyl iodide		112.4	68.8	116.4	7.0	30.0
Carbon disulfide		113.9	63.8	137.4	8.8	30.0
tert-Methyl butyl ether (MTBE)		113.9	73.2	122.4	2.5	30.0
Acrylonitrile		113.4	69.9	128.9	8.6	30.0
2-Butanone (MEK)		114.2	44.0	134.4	10.0	30.0
Dichlorodifluoromethane		145.9	10.0	222.8	3.6	30.0
Chloromethane		130.1	23.8	166.5	7.3	30.0
Vinyl chloride		126.6	43.5	149.1	7.5	30.0
Bromomethane		111.8	56.8	151.3	6.5	30.0
Chloroethane		119.6	53.4	149.4	7.7	30.0
Trichlorofluoromethane		107.1	59.7	151.8	5.2	30.0
1,1-Dichloroethene		113.9	69.6	139.4	6.6	30.0
Methylene chloride		109.5	73.3	121.1	3.9	30.0
trans-1,2-Dichloroethene		115.4	73.6	129.3	8.3	30.0
1,1-Dichloroethane		115.9	71.5	126.2	6.4	30.0
cis-1,2-Dichloroethene		113.8	76.6	122.1	6.3	30.0
Tetrahydrofuran		106.1	59.0	117.9	10.0	30.0
Chloroform		113.3	78.4	124.0	6.8	30.0
Bromochloromethane		112.9	78.2	120.8	3.1	30.0
1,1,1-Trichloroethane		110.2	79.4	130.9	7.3	30.0
4-Methyl-2-pentanone (MIBK)		111.9	71.6	125.2	9.6	30.0
2-Hexanone		111.4	55.4	136.9	7.0	30.0
Carbon tetrachloride		101.6	72.6	133.0	4.6	30.0
Benzene		110.9	79.9	124.9	4.8	30.0
1,2-Dichloroethane		101.2	76.0	126.3	0.8	30.0
Trichloroethene		107.4	79.7	124.2	5.5	30.0
1,2-Dichloropropane		111.9	78.6	126.4	3.0	30.0
Bromodichloromethane		107.8	80.4	128.2	1.7	30.0
Dibromomethane		106.1	76.9	122.1	1.1	30.0
cis-1,3-Dichloropropene		111.0	79.8	129.9	1.9	30.0
Toluene		108.4	79.8	124.5	5.1	30.0
trans-1,3-Dichloropropene		109.7	74.0	131.3	0.9	30.0
1,1,2-Trichloroethane		108.0	78.7	123.1	0.8	30.0
Tetrachloroethene		99.4	74.5	124.5	6.6	30.0
trans-1,4-Dichloro-2-butene		105.3	68.6	135.4	2.5	30.0
Dibromochloromethane		104.9	74.6	127.2	1.5	30.0
1,2-Dibromoethane		106.9	70.3	133.7	0.3	30.0
Chlorobenzene		105.0	79.2	122.7	1.3	30.0

QC Report - Batch QC Results

Organics - Volatiles, Prep Batch ID: VF200617W1 (continued)

Surrogates: Yes, QC Types: BLK/LCS/LCSD

Laboratory Control Sample Duplicate (LCSD) (continued)

Lab Sample ID: 200617A7.LCSDW17A, Parent Sample ID: 200617A7.LCSW17A

Run in Batch: 200617A7, Run Date: 06/17/2020 09:34, Prep Date: 06/17/2020, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
1,1,1,2-Tetrachloroethane		105.3	80.3	128.2	0.5	30.0
Ethylbenzene		109.0	79.5	129.1	3.5	30.0
p,m-Xylene		106.9	79.4	132.2	4.0	30.0
o-Xylene		108.4	80.2	131.0	3.0	30.0
Styrene		107.1	69.5	126.7	0.5	30.0
Isopropylbenzene		108.5	74.4	121.5	4.8	30.0
Bromoform		100.9	69.4	128.0	0.1	30.0
1,1,2,2-Tetrachloroethane		108.4	79.8	126.3	2.5	30.0
1,2,3-Trichloropropane		106.3	78.3	138.8	1.8	30.0
n-Propylbenzene		108.6	82.0	130.7	5.5	30.0
Bromobenzene		100.4	78.7	124.6	2.4	30.0
1,3,5-Trimethylbenzene		107.1	81.3	128.9	6.3	30.0
tert-Butylbenzene		102.4	80.7	128.9	5.0	30.0
1,2,4-Trimethylbenzene		104.5	81.4	130.8	4.0	30.0
sec-Butylbenzene		110.5	77.4	129.8	9.4	30.0
p-Isopropyltoluene		109.5	79.8	137.5	9.2	30.0
1,3-Dichlorobenzene		105.2	77.0	131.3	0.1	30.0
1,4-Dichlorobenzene		104.6	20.7	137.7	0.6	30.0
1,2-Dichlorobenzene		106.1	10.0	166.2	2.1	30.0
1,2,3-Trimethylbenzene		110.1	76.3	124.2	1.9	30.0
n-Butylbenzene		107.4	80.0	133.3	10.9	30.0
Hexachloroethane		99.5	23.8	138.1	7.2	30.0
1,2-Dibromo-3-chloropropane		107.5	21.2	189.4	5.6	30.0
1,2,4-Trichlorobenzene		102.2	27.4	143.4	2.1	30.0
1,2,3-Trichlorobenzene		101.3	75.4	131.4	2.3	30.0
Naphthalene		106.3	32.9	135.8	1.0	30.0
2-Methylnaphthalene		107.8	25.5	165.5	1.8	30.0

QC Report - Batch QC Results

Organics - Volatiles, Prep Batch ID: VF200618W2

Surrogates: Yes, QC Types: BLK/LCS/LCSD

Blank (BLK)

Lab Sample ID: 200618B7.BLKW18B

Run in Batch: 200618B7, Run Date: 06/18/2020 21:10, Prep Date: 06/18/2020, Matrix: WW, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Diethyl ether		ND	1.00	ug/l
Acetone		ND	10.00	ug/l
Methyl iodide		ND	1.00	ug/l
Carbon disulfide		ND	1.00	ug/l
tert-Methyl butyl ether (MTBE)		ND	1.00	ug/l
Acrylonitrile		ND	1.00	ug/l
2-Butanone (MEK)		ND	10.00	ug/l
Dichlorodifluoromethane		ND	1.00	ug/l
Chloromethane		ND	1.00	ug/l
Vinyl chloride		ND	1.00	ug/l
Bromomethane		ND	1.00	ug/l
Chloroethane		ND	1.00	ug/l
Trichlorofluoromethane		ND	1.00	ug/l
1,1-Dichloroethene		ND	1.00	ug/l
Methylene chloride		ND	1.00	ug/l
trans-1,2-Dichloroethene		ND	1.00	ug/l
1,1-Dichloroethane		ND	1.00	ug/l
cis-1,2-Dichloroethene		ND	1.00	ug/l
Tetrahydrofuran		ND	10.00	ug/l
Chloroform	*	1.84	1.00	ug/l
Bromochloromethane		ND	1.00	ug/l
1,1,1-Trichloroethane		ND	1.00	ug/l
4-Methyl-2-pentanone (MIBK)		ND	10.00	ug/l
2-Hexanone		ND	10.00	ug/l
Carbon tetrachloride		ND	1.00	ug/l
Benzene		ND	1.00	ug/l
1,2-Dichloroethane		ND	1.00	ug/l
Trichloroethene		ND	1.00	ug/l
1,2-Dichloropropane		ND	1.00	ug/l
Bromodichloromethane		ND	1.00	ug/l
Dibromomethane		ND	1.00	ug/l
cis-1,3-Dichloropropene		ND	1.00	ug/l
Toluene		ND	1.00	ug/l
trans-1,3-Dichloropropene		ND	1.00	ug/l
1,1,2-Trichloroethane		ND	1.00	ug/l
Tetrachloroethene		ND	1.00	ug/l
trans-1,4-Dichloro-2-butene		ND	1.00	ug/l
Dibromochloromethane		ND	1.00	ug/l
1,2-Dibromoethane		ND	1.00	ug/l
Chlorobenzene		ND	1.00	ug/l
1,1,1,2-Tetrachloroethane		ND	1.00	ug/l
Ethylbenzene		ND	1.00	ug/l
p,m-Xylene		ND	2.00	ug/l
o-Xylene		ND	1.00	ug/l
Styrene		ND	1.00	ug/l
Isopropylbenzene		ND	1.00	ug/l

QC Report - Batch QC Results

Organics - Volatiles, Prep Batch ID: VF200618W2 (continued)

Surrogates: Yes, QC Types: BLK/LCS/LCSD

Blank (BLK) (continued)

Lab Sample ID: 200618B7.BLKW18B

Run in Batch: 200618B7, Run Date: 06/18/2020 21:10, Prep Date: 06/18/2020, Matrix: WW, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Bromoform		ND	1.00	ug/l
1,1,2,2-Tetrachloroethane		ND	1.00	ug/l
1,2,3-Trichloropropane		ND	1.00	ug/l
n-Propylbenzene		ND	1.00	ug/l
Bromobenzene		ND	1.00	ug/l
1,3,5-Trimethylbenzene		ND	1.00	ug/l
tert-Butylbenzene		ND	1.00	ug/l
1,2,4-Trimethylbenzene		ND	1.00	ug/l
sec-Butylbenzene		ND	1.00	ug/l
p-Isopropyltoluene		ND	1.00	ug/l
1,3-Dichlorobenzene		ND	1.00	ug/l
1,4-Dichlorobenzene		ND	1.00	ug/l
1,2-Dichlorobenzene		ND	1.00	ug/l
1,2,3-Trimethylbenzene		ND	1.00	ug/l
n-Butylbenzene		ND	1.00	ug/l
Hexachloroethane		ND	1.00	ug/l
1,2-Dibromo-3-chloropropane		ND	1.00	ug/l
1,2,4-Trichlorobenzene		ND	1.00	ug/l
1,2,3-Trichlorobenzene		ND	1.00	ug/l
Naphthalene		ND	1.00	ug/l
2-Methylnaphthalene		ND	1.00	ug/l

Laboratory Control Sample (LCS)

Lab Sample ID: 200618B7.LCSW18B

Run in Batch: 200618B7, Run Date: 06/18/2020 19:53, Prep Date: 06/18/2020, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Diethyl ether		108.8	67.4	121.2
Acetone		111.8	29.9	161.5
Methyl iodide		103.2	68.8	116.4
Carbon disulfide		104.6	63.8	137.4
tert-Methyl butyl ether (MTBE)		105.4	73.2	122.4
Acrylonitrile		112.2	69.9	128.9
2-Butanone (MEK)		101.2	44.0	134.4
Dichlorodifluoromethane		128.8	10.0	222.8
Chloromethane		123.6	23.8	166.5
Vinyl chloride		120.5	43.5	149.1
Bromomethane		107.1	56.8	151.3
Chloroethane		112.7	53.4	149.4
Trichlorofluoromethane		100.3	59.7	151.8
1,1-Dichloroethene		104.4	69.6	139.4
Methylene chloride		101.4	73.3	121.1
trans-1,2-Dichloroethene		107.1	73.6	129.3
1,1-Dichloroethane		109.0	71.5	126.2
cis-1,2-Dichloroethene		105.7	76.6	122.1
Tetrahydrofuran		109.8	59.0	117.9
Chloroform		108.2	78.4	124.0

QC Report - Batch QC Results

Organics - Volatiles, Prep Batch ID: VF200618W2 (continued)

Surrogates: Yes, QC Types: BLK/LCS/LCSD

Laboratory Control Sample (LCS) (continued)

Lab Sample ID: 200618B7.LCSW18B

Run in Batch: 200618B7, Run Date: 06/18/2020 19:53, Prep Date: 06/18/2020, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Bromochloromethane		104.0	78.2	120.8
1,1,1-Trichloroethane		102.1	79.4	130.9
4-Methyl-2-pentanone (MIBK)		109.6	71.6	125.2
2-Hexanone		114.9	55.4	136.9
Carbon tetrachloride		96.9	72.6	133.0
Benzene		108.4	79.9	124.9
1,2-Dichloroethane		96.7	76.0	126.3
Trichloroethene		104.4	79.7	124.2
1,2-Dichloropropane		109.1	78.6	126.4
Bromodichloromethane		102.0	80.4	128.2
Dibromomethane		99.8	76.9	122.1
cis-1,3-Dichloropropene		105.5	79.8	129.9
Toluene		106.1	79.8	124.5
trans-1,3-Dichloropropene		105.4	74.0	131.3
1,1,2-Trichloroethane		106.3	78.7	123.1
Tetrachloroethene		119.5	74.5	124.5
trans-1,4-Dichloro-2-butene		94.6	68.6	135.4
Dibromochloromethane		97.7	74.6	127.2
1,2-Dibromoethane		102.2	70.3	133.7
Chlorobenzene		101.9	79.2	122.7
1,1,1,2-Tetrachloroethane		96.6	80.3	128.2
Ethylbenzene		103.6	79.5	129.1
p,m-Xylene		102.3	79.4	132.2
o-Xylene		100.5	80.2	131.0
Styrene		102.6	69.5	126.7
Isopropylbenzene		102.0	74.4	121.5
Bromoform		93.6	69.4	128.0
1,1,2,2-Tetrachloroethane		100.5	79.8	126.3
1,2,3-Trichloropropane		99.5	78.3	138.8
n-Propylbenzene		103.5	82.0	130.7
Bromobenzene		97.2	78.7	124.6
1,3,5-Trimethylbenzene		99.2	81.3	128.9
tert-Butylbenzene		96.6	80.7	128.9
1,2,4-Trimethylbenzene		97.6	81.4	130.8
sec-Butylbenzene		103.7	77.4	129.8
p-Isopropyltoluene		101.8	79.8	137.5
1,3-Dichlorobenzene		100.9	77.0	131.3
1,4-Dichlorobenzene		101.5	20.7	137.7
1,2-Dichlorobenzene		102.9	10.0	166.2
1,2,3-Trimethylbenzene		103.8	76.3	124.2
n-Butylbenzene		99.9	80.0	133.3
Hexachloroethane		95.5	23.8	138.1
1,2-Dibromo-3-chloropropane		101.8	21.2	189.4
1,2,4-Trichlorobenzene		94.8	27.4	143.4
1,2,3-Trichlorobenzene		91.7	75.4	131.4
Naphthalene		98.0	32.9	135.8

QC Report - Batch QC Results

Organics - Volatiles, Prep Batch ID: VF200618W2 (continued)

Surrogates: Yes, QC Types: BLK/LCS/LCSD

Laboratory Control Sample (LCS) (continued)

Lab Sample ID: 200618B7.LCSW18B

Run in Batch: 200618B7, Run Date: 06/18/2020 19:53, Prep Date: 06/18/2020, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
2-Methylnaphthalene		89.5	25.5	165.5

Laboratory Control Sample Duplicate (LCSD)

Lab Sample ID: 200618B7.LCSDW18B, Parent Sample ID: 200618B7.LCSW18B

Run in Batch: 200618B7, Run Date: 06/18/2020 20:12, Prep Date: 06/18/2020, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Diethyl ether		121.1	67.4	121.2	10.7	30.0
Acetone		122.5	29.9	161.5	9.1	30.0
Methyl iodide		113.0	68.8	116.4	9.1	30.0
Carbon disulfide		113.1	63.8	137.4	7.8	30.0
tert-Methyl butyl ether (MTBE)		118.2	73.2	122.4	11.5	30.0
Acrylonitrile		123.0	69.9	128.9	9.1	30.0
2-Butanone (MEK)		109.6	44.0	134.4	7.9	30.0
Dichlorodifluoromethane		135.9	10.0	222.8	5.3	30.0
Chloromethane		135.0	23.8	166.5	8.8	30.0
Vinyl chloride		129.3	43.5	149.1	7.1	30.0
Bromomethane		117.4	56.8	151.3	9.1	30.0
Chloroethane		124.0	53.4	149.4	9.5	30.0
Trichlorofluoromethane		106.4	59.7	151.8	5.9	30.0
1,1-Dichloroethene		112.1	69.6	139.4	7.1	30.0
Methylene chloride		113.3	73.3	121.1	11.1	30.0
trans-1,2-Dichloroethene		117.7	73.6	129.3	9.4	30.0
1,1-Dichloroethane		119.9	71.5	126.2	9.5	30.0
cis-1,2-Dichloroethene		117.8	76.6	122.1	10.8	30.0
Tetrahydrofuran	*	120.4	59.0	117.9	9.3	30.0
Chloroform		119.9	78.4	124.0	10.2	30.0
Bromochloromethane		116.9	78.2	120.8	11.6	30.0
1,1,1-Trichloroethane		110.3	79.4	130.9	7.7	30.0
4-Methyl-2-pentanone (MIBK)		116.6	71.6	125.2	6.2	30.0
2-Hexanone		122.5	55.4	136.9	6.5	30.0
Carbon tetrachloride		102.9	72.6	133.0	6.0	30.0
Benzene		117.8	79.9	124.9	8.3	30.0
1,2-Dichloroethane		105.8	76.0	126.3	9.0	30.0
Trichloroethene		113.4	79.7	124.2	8.3	30.0
1,2-Dichloropropane		119.1	78.6	126.4	8.8	30.0
Bromodichloromethane		112.7	80.4	128.2	9.9	30.0
Dibromomethane		110.3	76.9	122.1	10.0	30.0
cis-1,3-Dichloropropene		116.7	79.8	129.9	10.1	30.0
Toluene		115.9	79.8	124.5	8.9	30.0
trans-1,3-Dichloropropene		116.2	74.0	131.3	9.7	30.0
1,1,2-Trichloroethane		117.0	78.7	123.1	9.6	30.0
Tetrachloroethene	*	128.9	74.5	124.5	7.6	30.0
trans-1,4-Dichloro-2-butene		101.5	68.6	135.4	7.0	30.0
Dibromochloromethane		108.5	74.6	127.2	10.5	30.0
1,2-Dibromoethane		112.4	70.3	133.7	9.5	30.0
Chlorobenzene		112.4	79.2	122.7	9.8	30.0

QC Report - Batch QC Results

Organics - Volatiles, Prep Batch ID: VF200618W2 (continued)

Surrogates: Yes, QC Types: BLK/LCS/LCSD

Laboratory Control Sample Duplicate (LCSD) (continued)

Lab Sample ID: 200618B7.LCSDW18B, Parent Sample ID: 200618B7.LCSW18B

Run in Batch: 200618B7, Run Date: 06/18/2020 20:12, Prep Date: 06/18/2020, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
1,1,1,2-Tetrachloroethane		107.3	80.3	128.2	10.5	30.0
Ethylbenzene		114.2	79.5	129.1	9.7	30.0
p,m-Xylene		111.0	79.4	132.2	8.2	30.0
o-Xylene		111.1	80.2	131.0	10.0	30.0
Styrene		113.9	69.5	126.7	10.4	30.0
Isopropylbenzene		110.3	74.4	121.5	7.9	30.0
Bromoform		104.2	69.4	128.0	10.7	30.0
1,1,2,2-Tetrachloroethane		110.0	79.8	126.3	9.0	30.0
1,2,3-Trichloropropane		110.2	78.3	138.8	10.2	30.0
n-Propylbenzene		111.6	82.0	130.7	7.6	30.0
Bromobenzene		107.1	78.7	124.6	9.7	30.0
1,3,5-Trimethylbenzene		108.1	81.3	128.9	8.6	30.0
tert-Butylbenzene		105.4	80.7	128.9	8.7	30.0
1,2,4-Trimethylbenzene		108.0	81.4	130.8	10.1	30.0
sec-Butylbenzene		111.3	77.4	129.8	7.0	30.0
p-Isopropyltoluene		110.0	79.8	137.5	7.8	30.0
1,3-Dichlorobenzene		110.6	77.0	131.3	9.2	30.0
1,4-Dichlorobenzene		110.8	20.7	137.7	8.8	30.0
1,2-Dichlorobenzene		112.7	10.0	166.2	9.1	30.0
1,2,3-Trimethylbenzene		113.5	76.3	124.2	8.9	30.0
n-Butylbenzene		108.3	80.0	133.3	8.1	30.0
Hexachloroethane		104.2	23.8	138.1	8.8	30.0
1,2-Dibromo-3-chloropropane		110.7	21.2	189.4	8.4	30.0
1,2,4-Trichlorobenzene		104.5	27.4	143.4	9.7	30.0
1,2,3-Trichlorobenzene		102.3	75.4	131.4	11.0	30.0
Naphthalene		109.2	32.9	135.8	10.7	30.0
2-Methylnaphthalene		100.5	25.5	165.5	11.6	30.0



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C.O.C. PAGE # 1 OF 1

128656

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: Clifford Yantz
 COMPANY: O'Brien & Gere, A Ramboll Company
 ADDRESS: 2260 East Saginaw
 CITY: East Lansing STATE: Mi ZIP CODE: 48823
 PHONE NO.: 313-333-0211 FAX NO.: _____ P.O. NO.: _____
 E-MAIL ADDRESS: clifford.yantz@ramboll.com QUOTE NO.: _____

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

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME: RACER Colwater RS Landfill SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Summers
 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=WIPE A=AIR W=WASTE

Containers & Preservatives

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	TSS	Dissolved Metals	VOCs	TDS	Specific Conductivity	Certifications		Project Locations		Special Instructions
	DATE	TIME																<input type="checkbox"/> OHIO VAP	<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Detroit	<input type="checkbox"/> New York	
14884.01	6/15/20	1552	SUMP - A	WGW	8	2	3	1	2				X	X	X	X	X		<input type="checkbox"/>	<input type="checkbox"/>		Dissolved Metals were field filtered
.02	↓	1640	SUMP - B										X	X	X	X	X		<input type="checkbox"/>	<input type="checkbox"/>		
.03	6/16/20	927	SUMP - C										X	X	X	X	X		<input type="checkbox"/>	<input type="checkbox"/>		
.04	↓	1040	SUMP - D										X	X	X	X	X		<input type="checkbox"/>	<input type="checkbox"/>		Metals ARE
.05	↓	1137	SUMP - E										X	X	X	X	X		<input type="checkbox"/>	<input type="checkbox"/>		Cu, Cr, Ni, Zn
.06	↓	1228	SUMP - F										X	X	X	X	X		<input type="checkbox"/>	<input type="checkbox"/>		
.07	↓	—	DUP-1										X	X	X	X	X		<input type="checkbox"/>	<input type="checkbox"/>		
.08	↓	—	Trip Blank 061620		QC	1	1												<input type="checkbox"/>	<input type="checkbox"/>		

RELINQUISHED BY: [Signature] Sampler DATE: 6/16/20 TIME: 13:22
 RECEIVED BY: [Signature] DATE: 6/16/20 TIME: 12:20
 RELINQUISHED BY: [Signature] DATE: 6/18/20 TIME: 14:30
 RECEIVED BY: [Signature] DATE: 6/16/2020 TIME: 14:30

RELINQUISHED BY: _____ DATE: _____ TIME: _____
 RECEIVED BY: _____ DATE: _____ TIME: _____
 SEAL NO. SEAL INTACT YES NO INITIALS _____ NOTES: TEMP. ON ARRIVAL 3.5
 SEAL NO. SEAL INTACT YES NO INITIALS _____

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

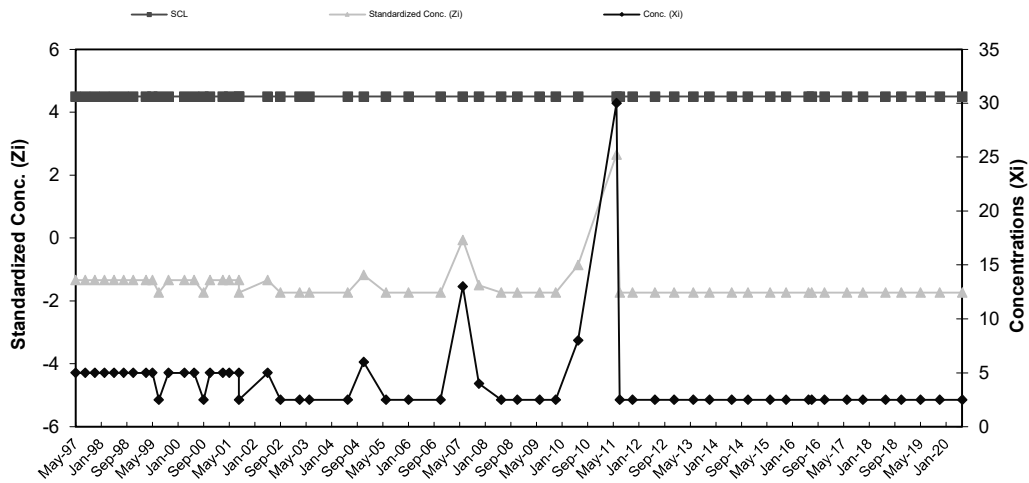
APPENDIX B
LEAK DETECTION VAULT CONTROL CHARTS

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

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	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					
29	Sep-02	4.5	2.5	-1.74					
30	Mar-03	4.5	2.5	-1.74					
31	Jun-03	4.5	2.5	-1.74					
32	Jun-04	4.5	2.5	-1.74					
33	Nov-04	4.5	6	-1.18					
34	Jun-05	4.5	2.5	-1.74					
35	Jan-06	4.5	2.5	-1.74					
36	Nov-06	4.5	2.5	-1.74					
37	Jun-07	4.5	13	-0.06					
38	Nov-07	4.5	4	-1.50					
39	Jun-08	4.5	2.5	-1.74					
40	Nov-08	4.5	2.5	-1.74					
41	Jun-09	4.5	2.5	-1.74					
42	Nov-09	4.5	2.5	-1.74					
43	Jun-10	4.5	8	-0.86					
44	Jun-11	4.5	30	2.66					
45	Jul-11	4.5	2.5	-1.74					

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

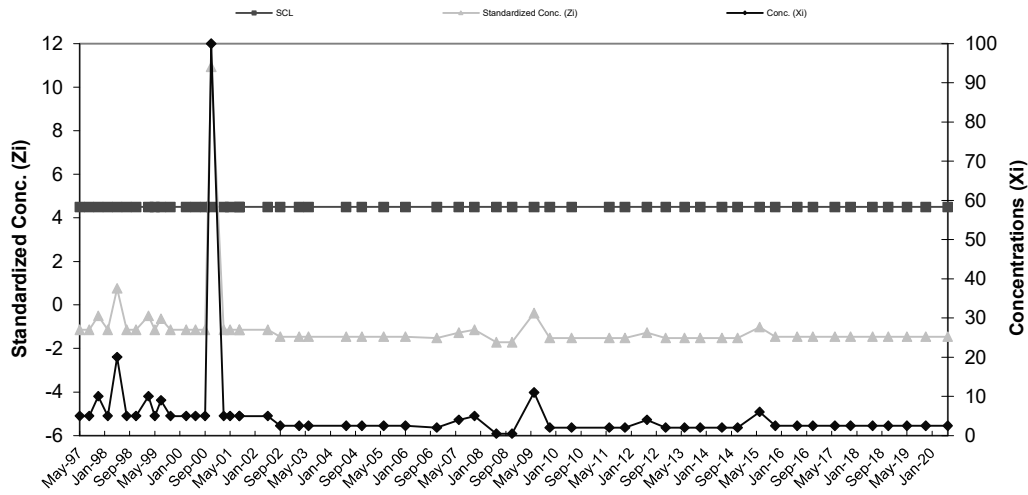


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - Copper**

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					
28	May-02	4.5	5	-1.14					
29	Sep-02	4.5	2.5	-1.46					
30	Mar-03	4.5	2.5	-1.46					
31	Jun-03	4.5	2.5	-1.46					
32	Jun-04	4.5	2.5	-1.46					
33	Nov-04	4.5	2.5	-1.46					
34	Jun-05	4.5	2.5	-1.46					
35	Jan-06	4.5	2.5	-1.46					
36	Nov-06	4.5	2	-1.52					
37	Jun-07	4.5	4	-1.27					
38	Nov-07	4.5	5	-1.14					
39	Jun-08	4.5	0.5	-1.71					
40	Nov-08	4.5	0.5	-1.71					
41	Jun-09	4.5	11	-0.38					
42	Nov-09	4.5	2	-1.52					
43	Jun-10	4.5	2	-1.52					
44	Jun-11	4.5	2	-1.52					

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

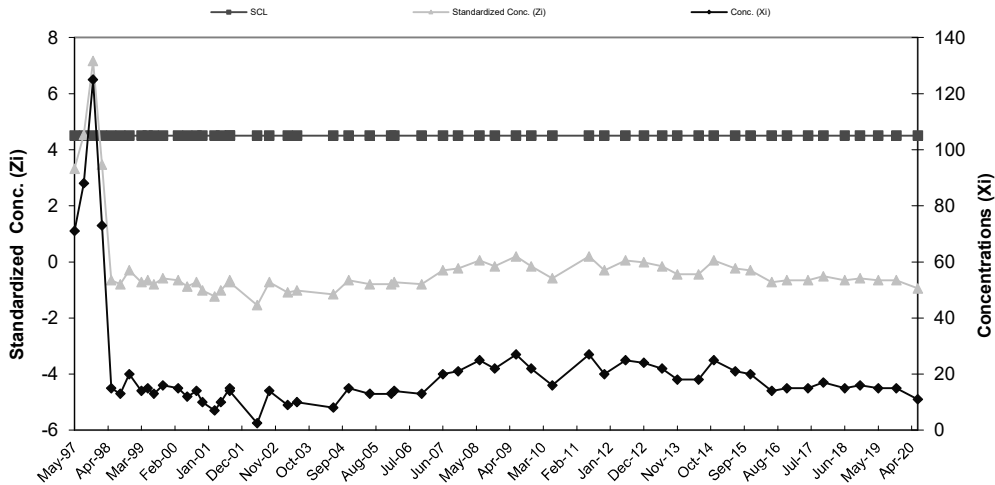


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - Nickel**

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					
28	May-02	4.5	2.5	-1.55					
29	Sep-02	4.5	14	-0.73					
30	Mar-03	4.5	9	-1.08					
31	Jun-03	4.5	10	-1.01					
32	Jun-04	4.5	8	-1.16					
33	Nov-04	4.5	15	-0.66					
34	Jun-05	4.5	13	-0.80					
35	Jan-06	4.5	13	-0.80					
36	Feb-06	4.5	14	-0.73					
37	Nov-06	4.5	13	-0.80					
38	Jun-07	4.5	20	-0.30					
39	Nov-07	4.5	21	-0.23					
40	Jun-08	4.5	25	0.05					
41	Nov-08	4.5	22	-0.16					
42	Jun-09	4.5	27	0.20					
43	Nov-09	4.5	22	-0.16					
44	Jun-10	4.5	16	-0.59					
45	Jun-11	4.5	27	0.20					

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

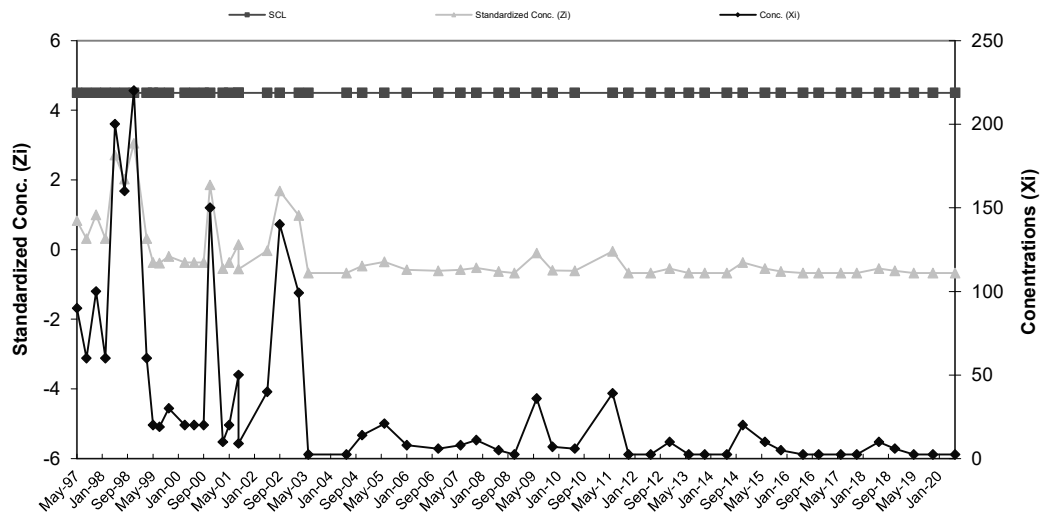


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - Zinc**

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					
28	May-02	4.5	40	-0.03					
29	Sep-02	4.5	140	1.68					
30	Mar-03	4.5	99	0.98					
31	Jun-03	4.5	2.5	-0.67					
32	Jun-04	4.5	2.5	-0.67					
33	Nov-04	4.5	14	-0.47					
34	Jun-05	4.5	21	-0.35					
35	Jan-06	4.5	8	-0.58					
36	Nov-06	4.5	6	-0.61					
37	Jun-07	4.5	8	-0.58					
38	Nov-07	4.5	11	-0.53					
39	Jun-08	4.5	5	-0.63					
40	Nov-08	4.5	2.5	-0.67					
41	Jun-09	4.5	36	-0.10					
42	Nov-09	4.5	7	-0.59					
43	Jun-10	4.5	6	-0.61					
44	Jun-11	4.5	39	-0.05					

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

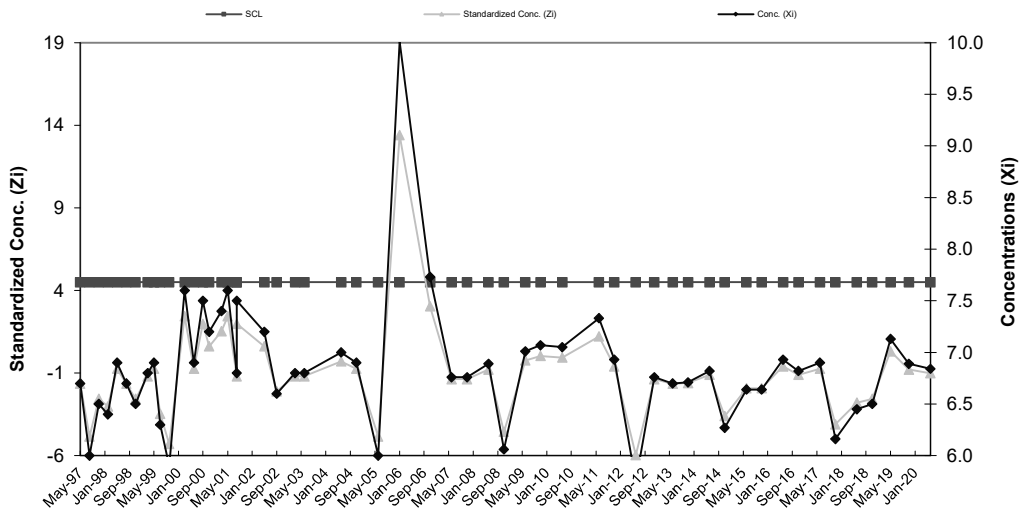


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - pH**

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					
28	May-02	4.5	7.20	0.63					
29	Sep-02	4.5	6.60	-2.10					
30	Mar-03	4.5	6.80	-1.19					
31	Jun-03	4.5	6.80	-1.19					
32	Jun-04	4.5	7.00	-0.28					
33	Nov-04	4.5	6.90	-0.74					
34	Jun-05	4.5	6.00	-4.83					
35	Jan-06	4.5	10.01	13.40					
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

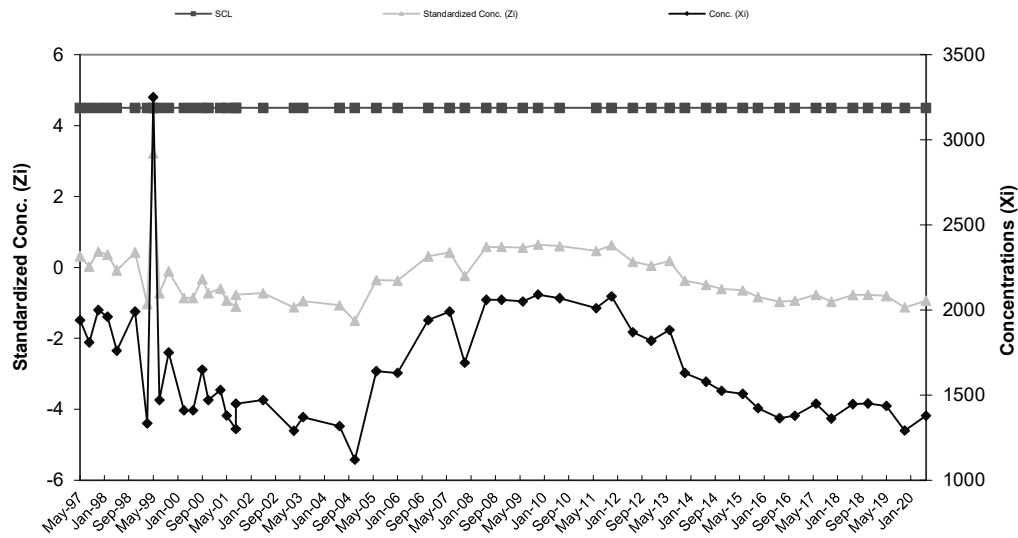


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - SpC**

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					
28	Mar-03	4.5	1290	-1.13					
29	Jun-03	4.5	1370	-0.95					
30	Jun-04	4.5	1318	-1.07					
31	Nov-04	4.5	1120	-1.51					
32	Jun-05	4.5	1640	-0.35					
33	Jan-06	4.5	1630	-0.37					
34	Nov-06	4.5	1940	0.31					
35	Jun-07	4.5	1990	0.42					
36	Nov-07	4.5	1690	-0.24					
37	Jun-08	4.5	2060	0.58					
38	Nov-08	4.5	2060	0.58					
39	Jun-09	4.5	2050	0.56					
40	Nov-09	4.5	2090	0.65					
41	Jun-10	4.5	2070	0.60					
42	Jun-11	4.5	2010	0.47					

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

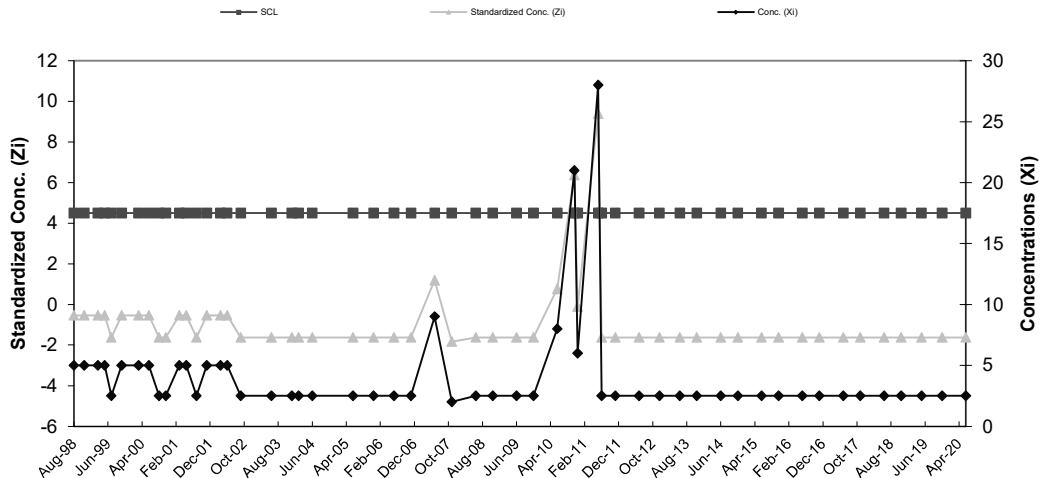


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - Chromium**

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					
28	Feb-04	4.5	2.5	-1.62					
29	Jun-04	4.5	2.5	-1.62					
30	Jun-05	4.5	2.5	-1.62					
31	Dec-05	4.5	2.5	-1.62					
32	Jun-06	4.5	2.5	-1.62					
33	Nov-06	4.5	2.5	-1.62					
34	Jun-07	4.5	9	1.19					
35	Nov-07	4.5	2	-1.84					
36	Jun-08	4.5	2.5	-1.62					
37	Nov-08	4.5	2.5	-1.62					
38	Jun-09	4.5	2.5	-1.62					
39	Nov-09	4.5	2.5	-1.62					
40	Jun-10	4.5	8	0.76					
41	Nov-10	4.5	21	6.37					
42	Dec-10	4.5	6	-0.11					
43	Jun-11	4.5	28	9.40					
44	Jul-11	4.5	2.5	-1.62					

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

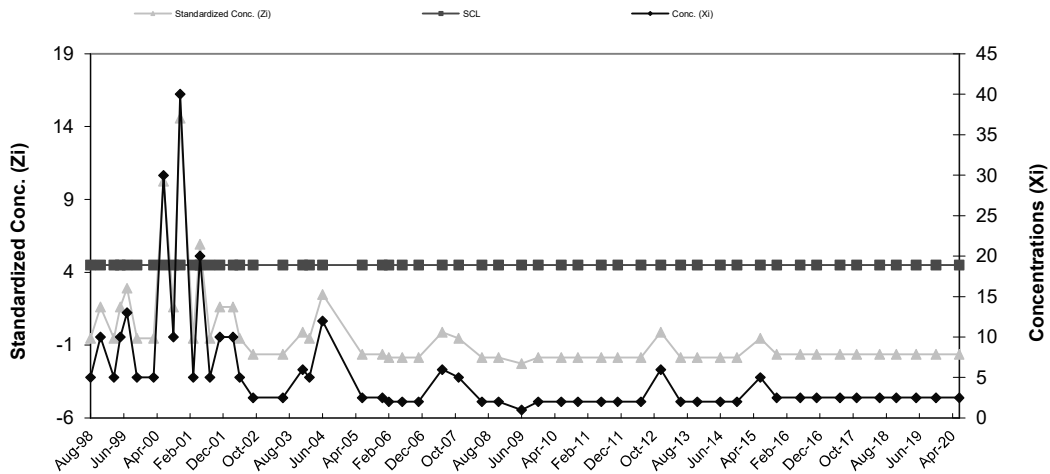


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - Copper**

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					
28	Feb-04	4.5	5	-0.54					
29	Jun-04	4.5	12	2.48					
30	Jun-05	4.5	2.5	-1.62					
31	Dec-05	4.5	2.5	-1.62					
32	Feb-06	4.5	2	-1.84					
33	Jun-06	4.5	2	-1.84					
34	Nov-06	4.5	2	-1.84					
35	Jun-07	4.5	6	-0.11					
36	Nov-07	4.5	5	-0.54					
37	Jun-08	4.5	2	-1.84					
38	Nov-08	4.5	2	-1.84					
39	Jun-09	4.5	1	-2.27					
40	Nov-09	4.5	2	-1.84					
41	Jun-10	4.5	2	-1.84					
42	Nov-10	4.5	2	-1.84					
43	Jun-11	4.5	2	-1.84					

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

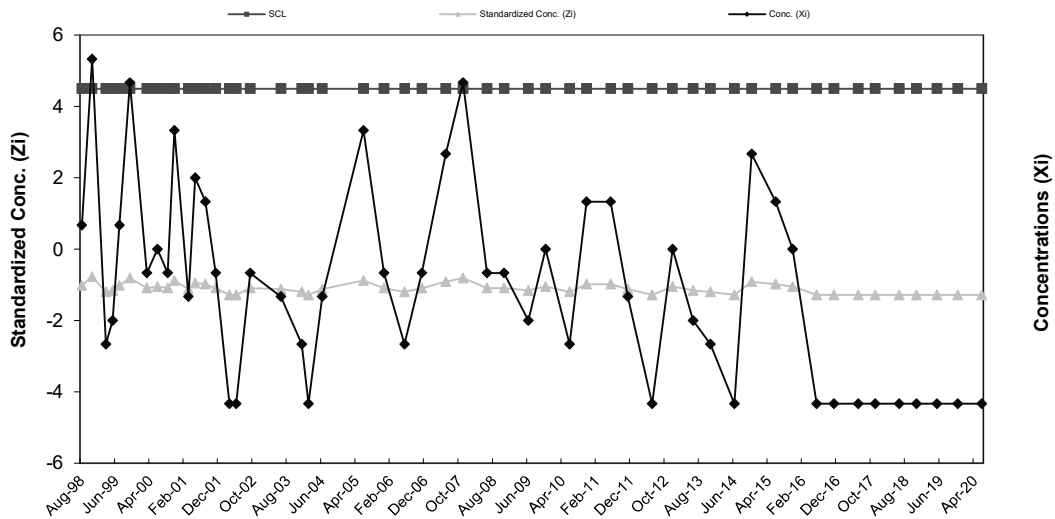


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - Nickel**

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					
28	Feb-04	4.5	2.5	-1.28					
29	Jun-04	4.5	7	-1.12					
30	Jun-05	4.5	14	-0.88					
31	Dec-05	4.5	8	-1.09					
32	Jun-06	4.5	5	-1.20					
33	Nov-06	4.5	8	-1.09					
34	Jun-07	4.5	13	-0.91					
35	Nov-07	4.5	16	-0.81					
36	Jun-08	4.5	8	-1.09					
37	Nov-08	4.5	8	-1.09					
38	Jun-09	4.5	6	-1.16					
39	Nov-09	4.5	9	-1.05					
40	Jun-10	4.5	5	-1.20					
41	Nov-10	4.5	11	-0.98					
42	Jun-11	4.5	11	-0.98					

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

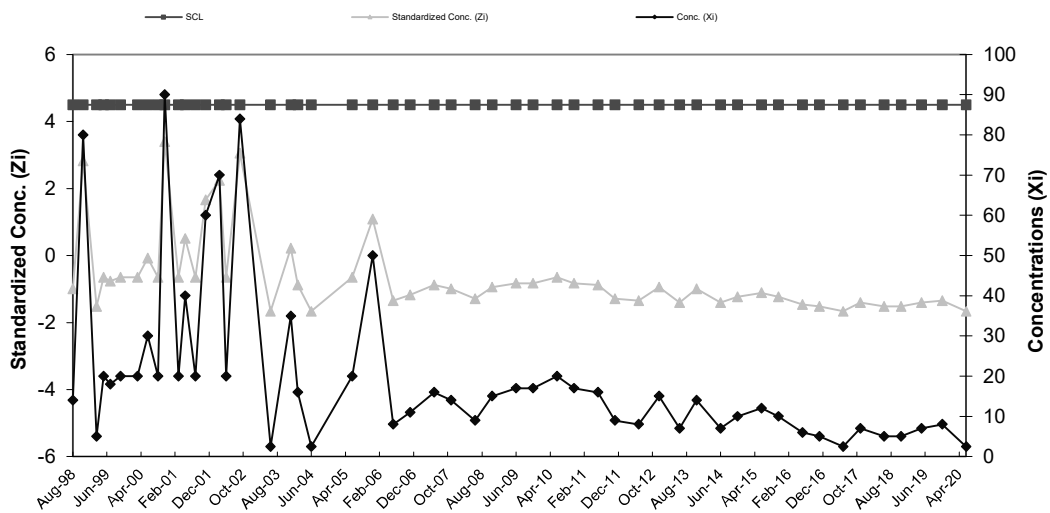


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - Zinc**

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					
28	Feb-04	4.5	16	-0.88					
29	Jun-04	4.5	2.5	-1.66					
30	Jun-05	4.5	20	-0.65					
31	Dec-05	4.5	50	1.09					
32	Jun-06	4.5	8	-1.35					
33	Nov-06	4.5	11	-1.17					
34	Jun-07	4.5	16	-0.88					
35	Nov-07	4.5	14	-1.00					
36	Jun-08	4.5	9	-1.29					
37	Nov-08	4.5	15	-0.94					
38	Jun-09	4.5	17	-0.83					
39	Nov-09	4.5	17	-0.83					
40	Jun-10	4.5	20	-0.65					
41	Nov-10	4.5	17	-0.83					
42	Jun-11	4.5	16	-0.88					

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

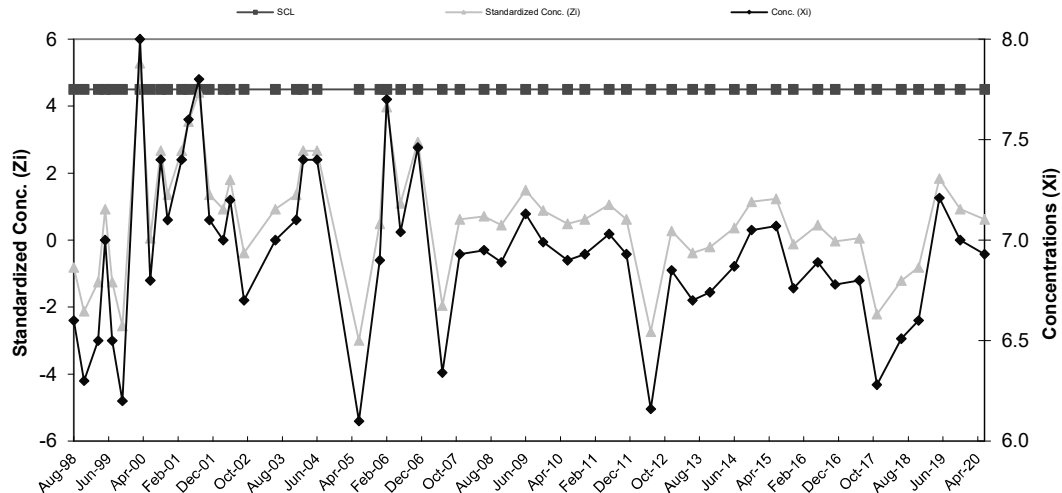


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - pH**

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	8.80	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					
28	Feb-04	4.5	7.40	2.67					
29	Jun-04	4.5	7.40	2.67					
30	Jun-05	4.5	6.10	-3.00					
31	Dec-05	4.5	6.90	0.49					
32	Feb-06	4.5	7.70	3.98					
33	Jun-06	4.5	7.04	1.10					
34	Nov-06	4.5	7.46	2.93					
35	Jun-07	4.5	6.34	-1.95					
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

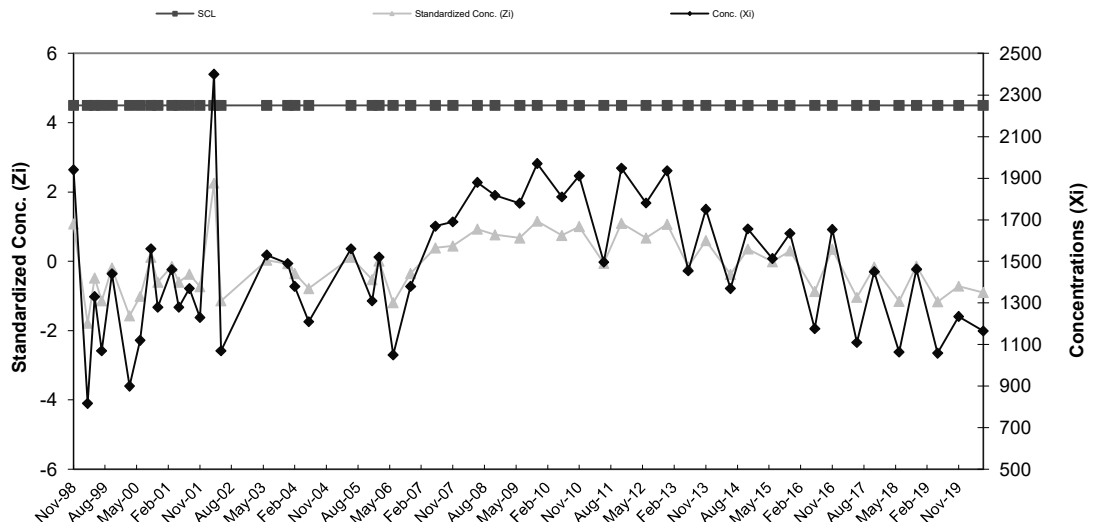


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - SpC**

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					
28	Jun-05	4.5	1560	0.11					
29	Dec-05	4.5	1310	-0.53					
30	Feb-06	4.5	1520	0.01					
31	Jun-06	4.5	1050	-1.19					
32	Nov-06	4.5	1380	-0.35					
33	Jun-07	4.5	1670	0.39					
34	Nov-07	4.5	1690	0.44					
35	Jun-08	4.5	1880	0.93					
36	Nov-08	4.5	1818	0.77					
37	Jun-09	4.5	1780	0.67					
38	Nov-09	4.5	1970	1.16					
39	Jun-10	4.5	1810	0.75					
40	Nov-10	4.5	1911	1.01					
41	Jun-11	4.5	1496	-0.05					

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

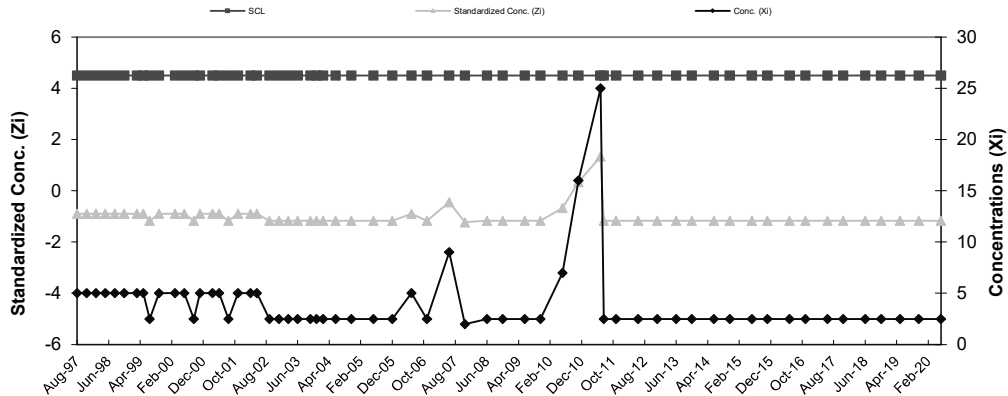


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - Chromium**

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					
29	May-02	4.5	5	-0.89					
30	Sep-02	4.5	2.5	-1.17					
31	Dec-02	4.5	2.5	-1.17					
32	Mar-03	4.5	2.5	-1.17					
33	Jun-03	4.5	2.5	-1.17					
34	Oct-03	4.5	2.5	-1.17					
35	Dec-03	4.5	2.5	-1.17					
36	Feb-04	4.5	2.5	-1.17					
37	Jun-04	4.5	2.5	-1.17					
38	Nov-04	4.5	2.5	-1.17					
39	Jun-05	4.5	2.5	-1.17					
40	Dec-05	4.5	2.5	-1.17					
41	Jun-06	4.5	5	-0.89					
42	Nov-06	4.5	2.5	-1.17					
43	Jun-07	4.5	9	-0.45					
44	Nov-07	4.5	2	-1.23					
45	Jun-08	4.5	2.5	-1.17					
46	Nov-08	4.5	2.5	-1.17					
47	Jun-09	4.5	2.5	-1.17					
48	Nov-09	4.5	2.5	-1.17					
49	Jun-10	4.5	7	-0.67					
50	Nov-10	4.5	16	0.33					
51	Jun-11	4.5	25	1.34					
52	Jul-11	4.5	2.5	-1.17					

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

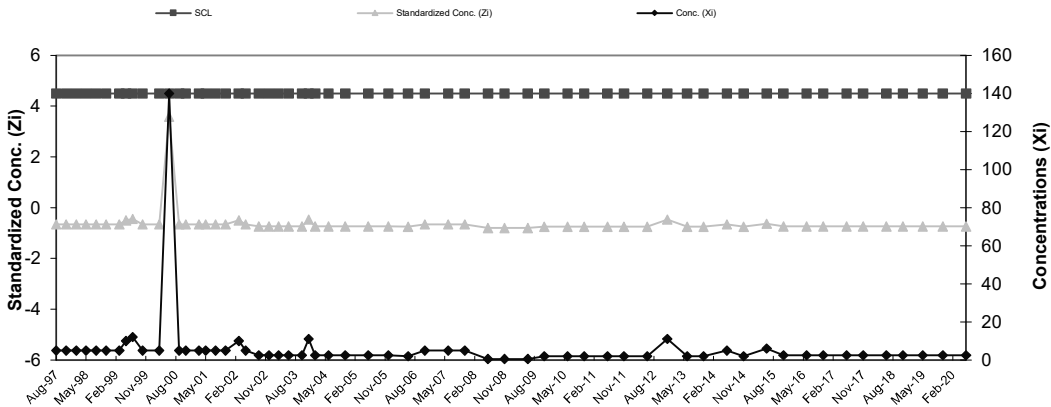


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - Copper

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					
29	May-02	4.5	5	-0.66					
30	Sep-02	4.5	2.5	-0.74					
31	Dec-02	4.5	2.5	-0.74					
32	Mar-03	4.5	2.5	-0.74					
33	Jun-03	4.5	2.5	-0.74					
34	Oct-03	4.5	2.5	-0.74					
35	Dec-03	4.5	11	-0.47					
36	Feb-04	4.5	2.5	-0.74					
37	Jun-04	4.5	2.5	-0.74					
38	Nov-04	4.5	2.5	-0.74					
39	Jun-05	4.5	2.5	-0.74					
40	Dec-05	4.5	2.5	-0.74					
41	Jun-06	4.5	2	-0.75					
42	Nov-06	4.5	5	-0.66					
43	Jun-07	4.5	5	-0.66					
44	Nov-07	4.5	5	-0.66					
45	Jun-08	4.5	0.5	-0.80					
46	Nov-08	4.5	0.5	-0.80					
47	Jun-09	4.5	0.5	-0.80					
48	Nov-09	4.5	2	-0.75					
49	Jun-10	4.5	2	-0.75					
50	Nov-10	4.5	2	-0.75					
51	Jun-11	4.5	2	-0.75					

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

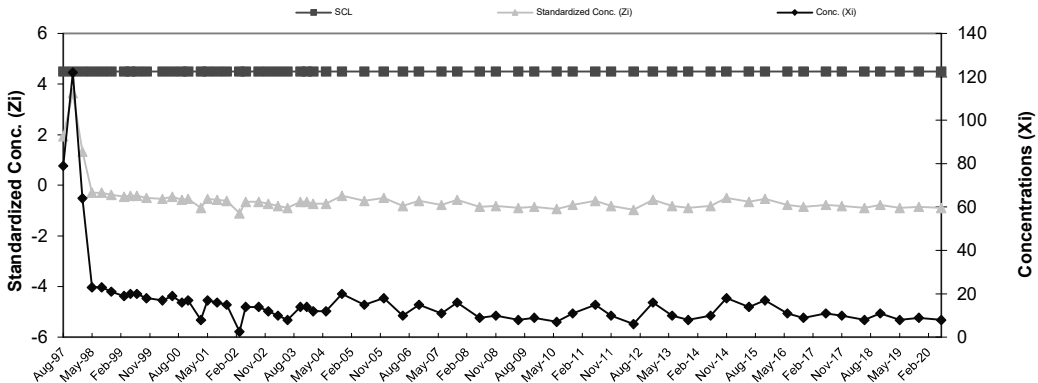


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - Nickel**

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					
29	May-02	4.5	14	-0.65					
30	Sep-02	4.5	14	-0.65					
31	Dec-02	4.5	12	-0.73					
32	Mar-03	4.5	10	-0.81					
33	Jun-03	4.5	8	-0.89					
34	Oct-03	4.5	14	-0.65					
35	Dec-03	4.5	14	-0.65					
36	Feb-04	4.5	12	-0.73					
37	Jun-04	4.5	12	-0.73					
38	Nov-04	4.5	20	-0.41					
39	Jun-05	4.5	15	-0.61					
40	Dec-05	4.5	18	-0.49					
41	Jun-06	4.5	10	-0.81					
42	Nov-06	4.5	15	-0.61					
43	Jun-07	4.5	11	-0.77					
44	Nov-07	4.5	16	-0.57					
45	Jun-08	4.5	9	-0.85					
46	Nov-08	4.5	10	-0.81					
47	Jun-09	4.5	8	-0.89					
48	Nov-09	4.5	9	-0.85					
49	Jun-10	4.5	7	-0.93					
50	Nov-10	4.5	11	-0.77					
51	Jun-11	4.5	15	-0.61					

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

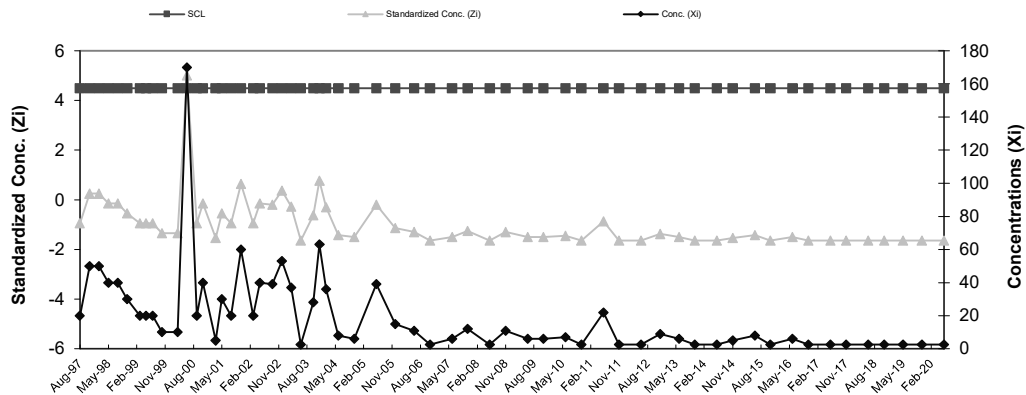


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - Zinc

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					
29	May-02	4.5	40	-0.15					
30	Sep-02	4.5	39	-0.19					
31	Dec-02	4.5	53	0.37					
32	Mar-03	4.5	37	-0.27					
33	Jun-03	4.5	2.5	-1.63					
34	Oct-03	4.5	28	-0.62					
35	Dec-03	4.5	63	0.76					
36	Feb-04	4.5	36	-0.31					
37	Jun-04	4.5	8	-1.42					
38	Nov-04	4.5	6	-1.50					
39	Jun-05	4.5	39	-0.19					
40	Dec-05	4.5	15	-1.14					
41	Jun-06	4.5	11	-1.30					
42	Nov-06	4.5	2.5	-1.63					
43	Jun-07	4.5	6	-1.50					
44	Nov-07	4.5	12	-1.26					
45	Jun-08	4.5	2.5	-1.63					
46	Nov-08	4.5	11	-1.30					
47	Jun-09	4.5	6	-1.50					
48	Nov-09	4.5	6	-1.50					
49	Jun-10	4.5	7	-1.46					
50	Nov-10	4.5	2.5	-1.63					
51	Jun-11	4.5	22	-0.86					

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

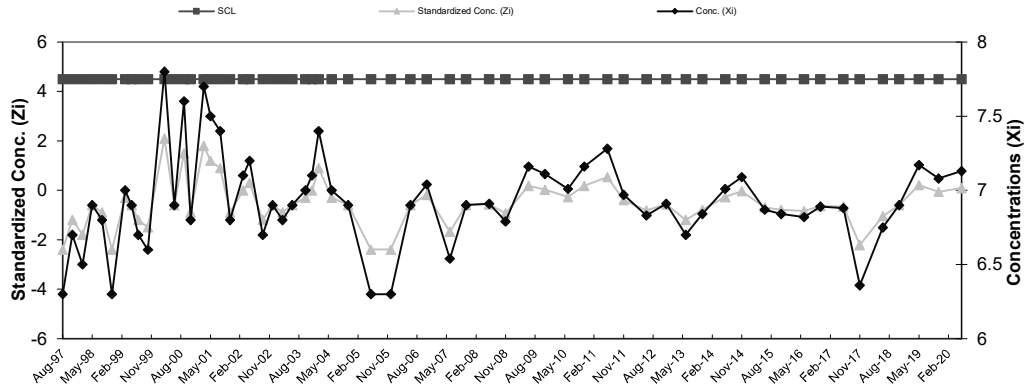


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - pH**

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					
29	May-02	4.5	7.2	0.30					
30	Sep-02	4.5	6.7	-1.20					
31	Dec-02	4.5	6.9	-0.60					
32	Mar-03	4.5	6.8	-0.90					
33	Jun-03	4.5	6.9	-0.60					
34	Oct-03	4.5	7	-0.30					
35	Dec-03	4.5	7.1	0.00					
36	Feb-04	4.5	7.4	0.90					
37	Jun-04	4.5	7	-0.30					
38	Nov-04	4.5	6.9	-0.60					
39	Jun-05	4.5	6.3	-2.40					
40	Dec-05	4.5	6.3	-2.40					
41	Jun-06	4.5	6.9	-0.60					
42	Nov-06	4.5	7.0	-0.18					
43	Jun-07	4.5	6.5	-1.68					
44	Nov-07	4.5	6.9	-0.60					
45	Jun-08	4.5	6.9	-0.57					
46	Nov-08	4.5	6.8	-0.93					
47	Jun-09	4.5	7.2	0.18					
48	Nov-09	4.5	7.1	0.03					
49	Jun-10	4.5	7.0	-0.27					
50	Nov-10	4.5	7.2	0.18					
51	Jun-11	4.5	7.3	0.54					

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

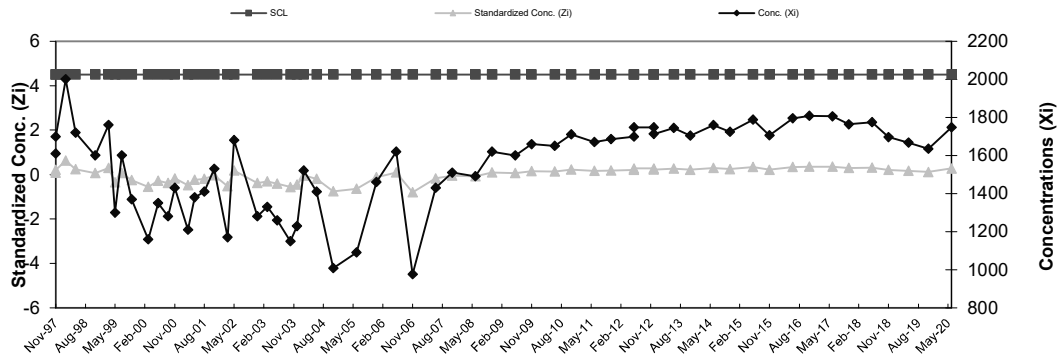


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - SpC**

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					
29	Dec-02	4.5	1330	-0.31					
30	Mar-03	4.5	1260	-0.41					
31	Jun-03	4.5	1150	-0.56					
32	Oct-03	4.5	1230	-0.45					
33	Dec-03	4.5	1520	-0.04					
34	Feb-04	4.5	1410	-0.20					
35	Jun-04	4.5	1008	-0.76					
36	Nov-04	4.5	1090	-0.64					
37	Jun-05	4.5	1460	-0.13					
38	Dec-05	4.5	1620	0.10					
39	Jun-06	4.5	977	-0.80					
40	Nov-06	4.5	1430	-0.17					
41	Jun-07	4.5	1510	-0.06					
42	Nov-07	4.5	1490	-0.09					
43	Jun-08	4.5	1620	0.10					
44	Nov-08	4.5	1600	0.07					
45	Jun-09	4.5	1660	0.15					
46	Nov-09	4.5	1650	0.14					
47	Jun-10	4.5	1710	0.22					
50	Nov-10	4.5	1670	0.17					
51	Jun-11	4.5	1686	0.19					
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

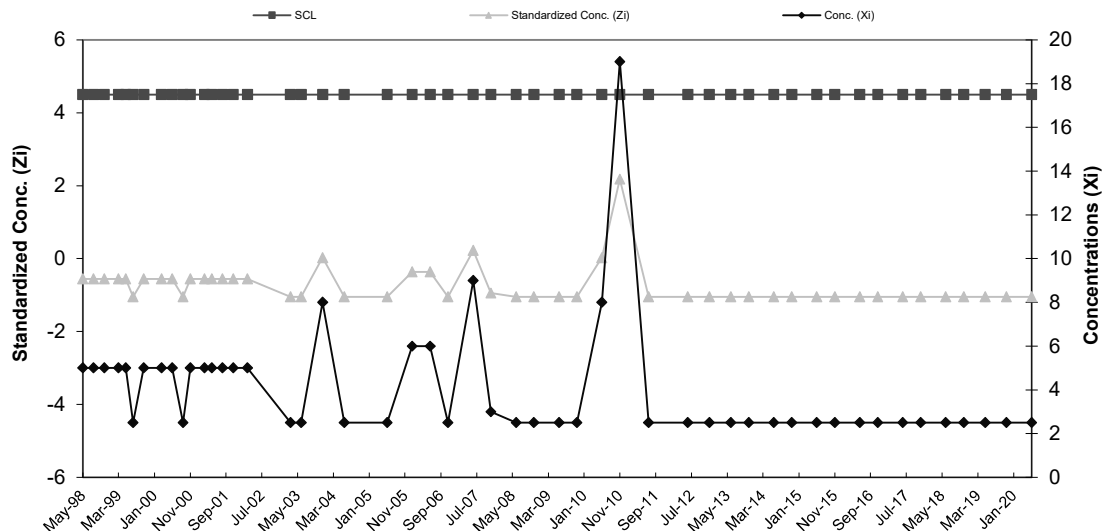


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - Chromium**

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					
28	Jun-04	4.5	2.5	-1.05					
29	Jun-05	4.5	2.5	-1.05					
30	Jan-06	4.5	6	-0.36					
31	Jun-06	4.5	6	-0.36					
32	Nov-06	4.5	2.5	-1.05					
33	Jun-07	4.5	9	0.22					
34	Nov-07	4.5	3	-0.95					
35	Jun-08	4.5	2.5	-1.05					
36	Nov-08	4.5	2.5	-1.05					
37	Jun-09	4.5	2.5	-1.05					
38	Nov-09	4.5	2.5	-1.05					
39	Jun-10	4.5	8	0.03					
40	Nov-10	4.5	19	2.18					

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

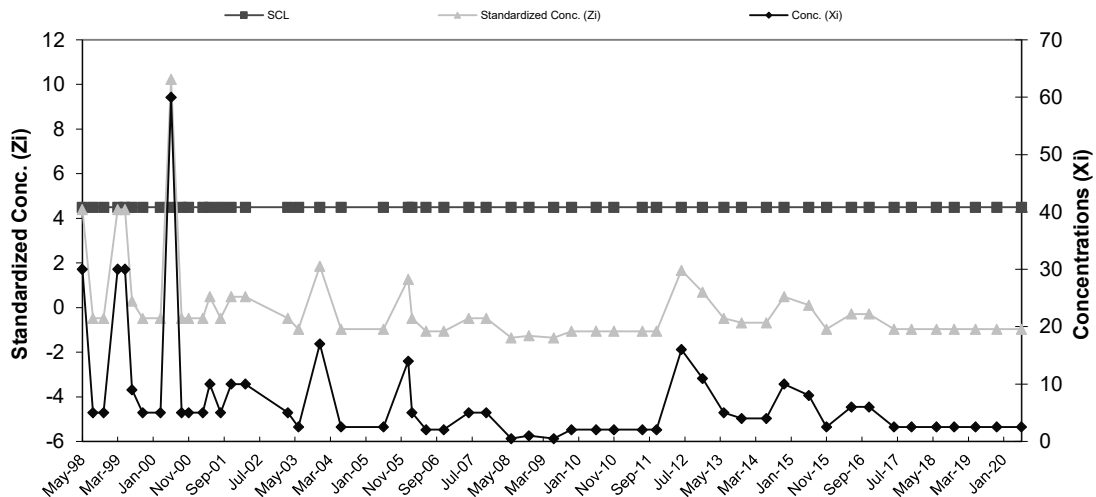


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - Copper**

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					
30	Jan-06	4.5	14	1.27					
31	Feb-06	4.5	5	-0.48					
32	Jun-06	4.5	2	-1.07					
33	Nov-06	4.5	2	-1.07					
34	Jun-07	4.5	5	-0.48					
35	Nov-07	4.5	5	-0.48					
36	Jun-08	4.5	0.5	-1.36					
37	Nov-08	4.5	1	-1.26					
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

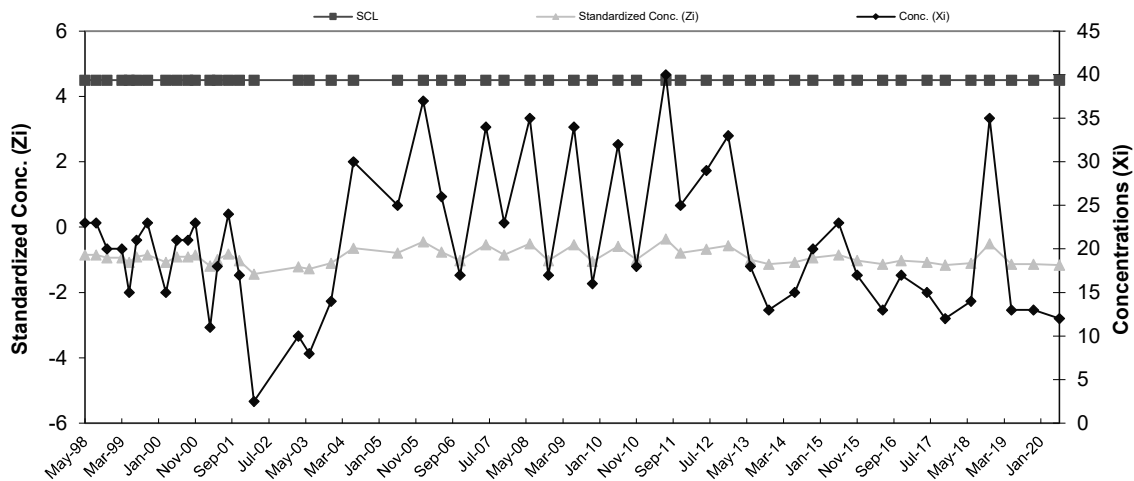


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - Nickel**

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					
29	Jun-05	4.5	25	-0.79					
30	Jan-06	4.5	37	-0.45					
31	Jun-06	4.5	26	-0.76					
32	Nov-06	4.5	17	-1.02					
33	Jun-07	4.5	34	-0.53					
34	Nov-07	4.5	23	-0.85					
35	Jun-08	4.5	35	-0.50					
36	Nov-08	4.5	17	-1.02					
37	Jun-09	4.5	34	-0.53					
38	Nov-09	4.5	16	-1.05					
39	Jun-10	4.5	32	-0.59					
40	Nov-10	4.5	18	-0.99					

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

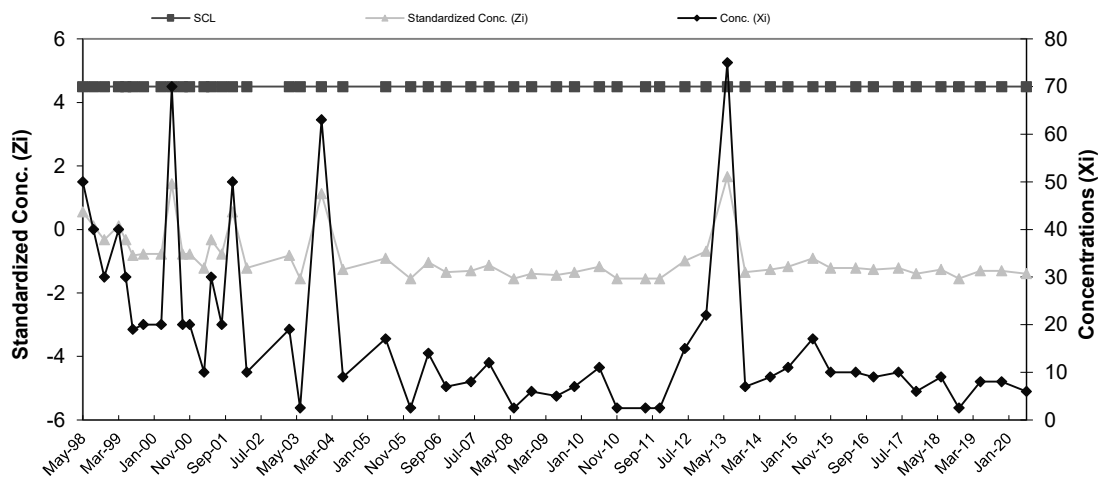


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - Zinc**

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					
28	Jun-04	4.5	9	-1.26					
29	Jun-05	4.5	17	-0.91					
30	Jan-06	4.5	2.5	-1.55					
31	Jun-06	4.5	14	-1.04					
32	Nov-06	4.5	7	-1.35					
33	Jun-07	4.5	8	-1.31					
34	Nov-07	4.5	12	-1.13					
35	Jun-08	4.5	2.5	-1.55					
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

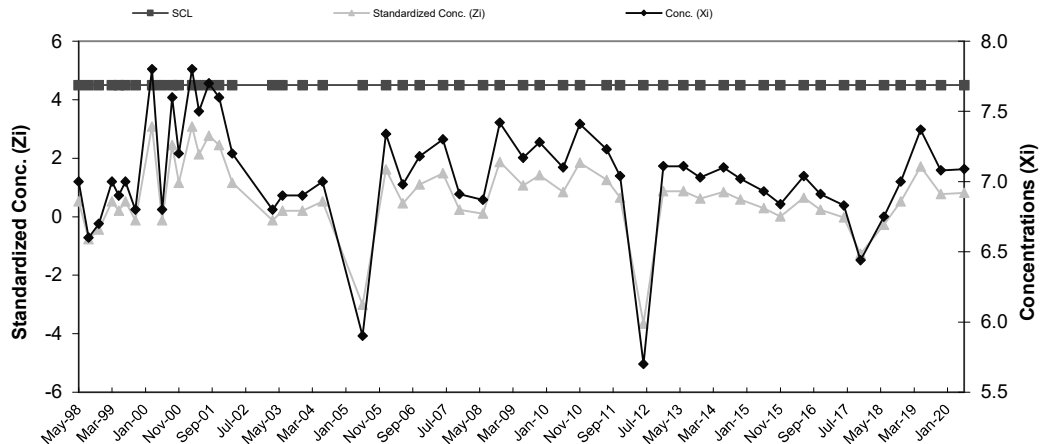


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - pH**

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					
28	Jun-04	4.5	7.00	0.52					
29	Jun-05	4.5	5.90	-3.01					
30	Jan-06	4.5	7.34	1.61					
31	Jun-06	4.5	6.98	0.46					
32	Nov-06	4.5	7.18	1.10					
33	Jun-07	4.5	7.30	1.49					
34	Nov-07	4.5	6.91	0.23					
35	Jun-08	4.5	6.87	0.10					
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

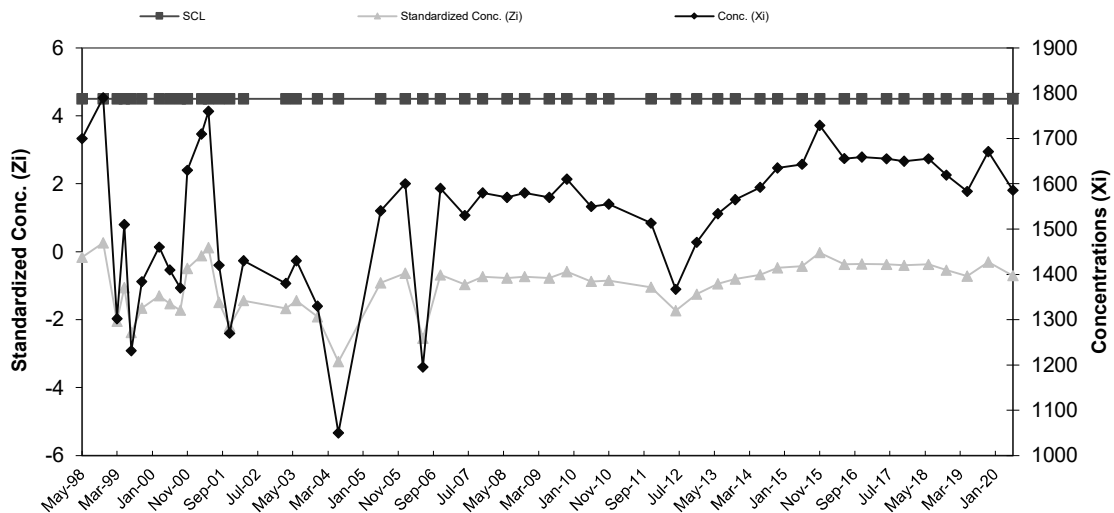


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - SpC**

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					
29	Jun-05	4.5	1540	-0.92					
30	Jan-06	4.5	1600	-0.64					
31	Jun-06	4.5	1195	-2.55					
32	Nov-06	4.5	1590	-0.68					
33	Jun-07	4.5	1530	-0.97					
34	Nov-07	4.5	1580	-0.73					
35	Jun-08	4.5	1570	-0.78					
36	Nov-08	4.5	1580	-0.73					
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

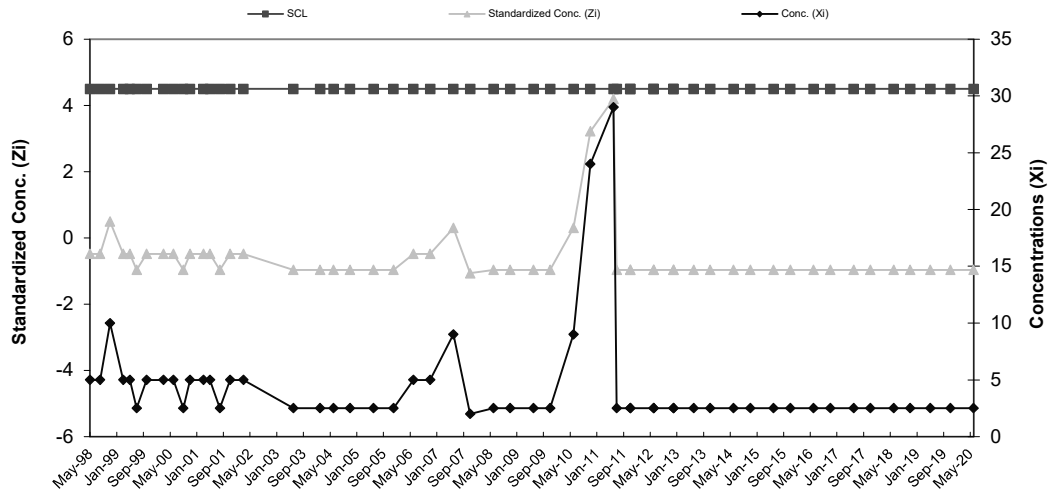


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - Chromium**

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					
28	Nov-04	4.5	2.5	-0.97					
29	Jun-05	4.5	2.5	-0.97					
30	Dec-05	4.5	2.5	-0.97					
31	Jun-06	4.5	5	-0.48					
32	Nov-06	4.5	5	-0.48					
33	Jun-07	4.5	9	0.30					
34	Nov-07	4.5	2	-1.07					
35	Jun-08	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

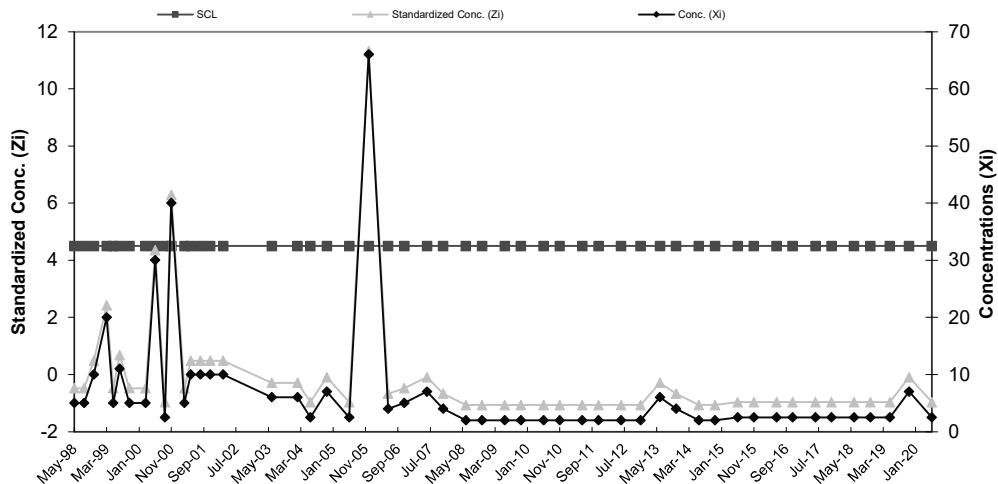


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - Copper

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	-0.10
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					
28	Nov-04	4.5	7	-0.10					
29	Jun-05	4.5	2.5	-0.97					
30	Dec-05	4.5	66	11.32					
31	Jun-06	4.5	4	-0.68					
32	Nov-06	4.5	5	-0.48					
33	Jun-07	4.5	7	-0.10					
34	Nov-07	4.5	4	-0.68					
35	Jun-08	4.5	2	-1.06					
36	Nov-08	4.5	2	-1.06					
37	Jun-09	4.5	2	-1.06					
38	Nov-09	4.5	2	-1.06					
39	Jun-10	4.5	2	-1.06					
40	Nov-10	4.5	2	-1.06					
41	Jun-11	4.5	2	-1.06					

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

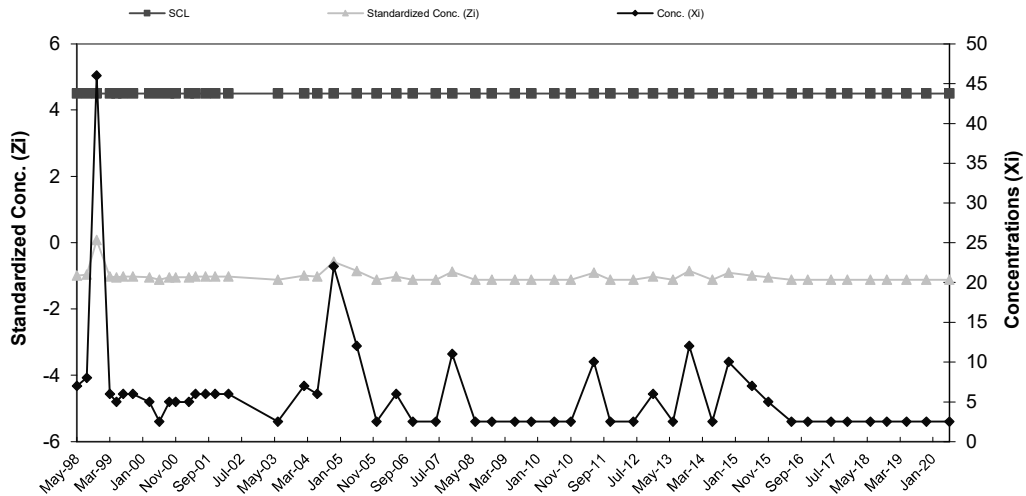


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - Nickel

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					
28	Nov-04	4.5	22	-0.58					
29	Jun-05	4.5	12	-0.85					
30	Dec-05	4.5	2.5	-1.11					
31	Jun-06	4.5	6	-1.02					
32	Nov-06	4.5	2.5	-1.11					
33	Jun-07	4.5	2.5	-1.11					
34	Nov-07	4.5	11	-0.88					
35	Jun-08	4.5	2.5	-1.11					
36	Nov-08	4.5	2.5	-1.11					
37	Jun-09	4.5	2.5	-1.11					
38	Nov-09	4.5	2.5	-1.11					
39	Jun-10	4.5	2.5	-1.11					
40	Nov-10	4.5	2.5	-1.11					
41	Jun-11	4.5	10	-0.91					

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

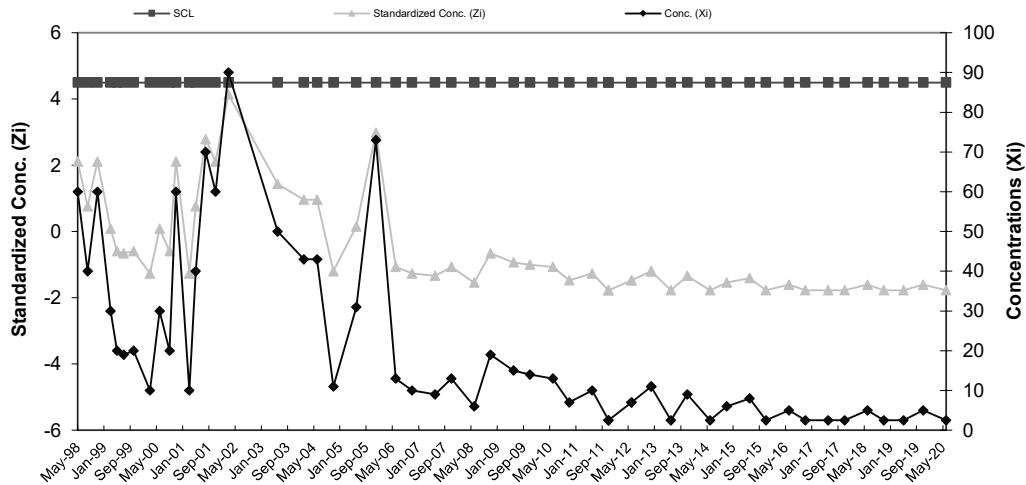


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - Zinc**

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					
28	Nov-04	4.5	11	-1.20					
29	Jun-05	4.5	31	0.15					
30	Dec-05	4.5	73	2.99					
31	Jun-06	4.5	13	-1.06					
32	Nov-06	4.5	10	-1.27					
33	Jun-07	4.5	9	-1.34					
34	Nov-07	4.5	13	-1.06					
35	Jun-08	4.5	6	-1.54					
36	Nov-08	4.5	19	-0.66					
37	Jun-09	4.5	15	-0.93					
38	Nov-09	4.5	14	-1.00					
39	Jun-10	4.5	13	-1.06					
40	Nov-10	4.5	7	-1.47					
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

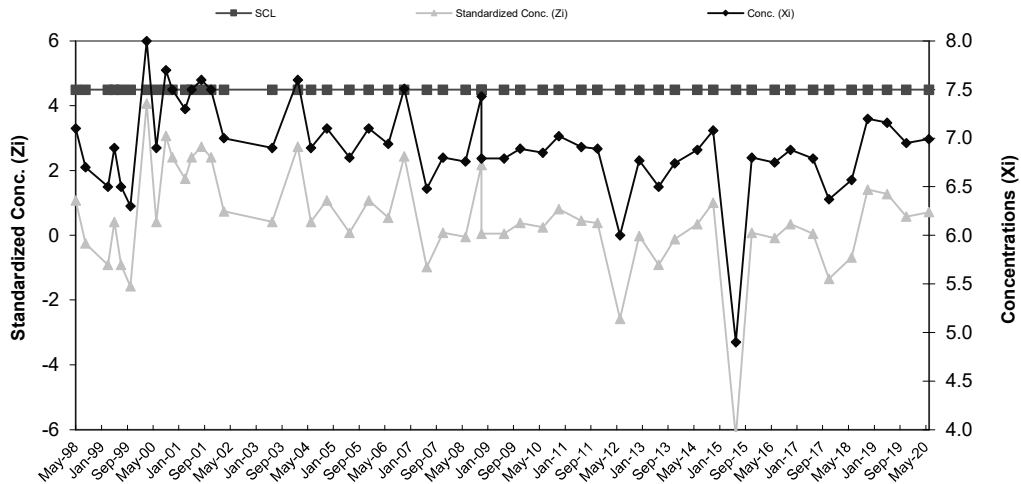


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - pH

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					
28	Jun-05	4.5	6.80	0.08					
29	Dec-05	4.5	7.10	1.08					
30	Jun-06	4.5	6.94	0.55					
31	Nov-06	4.5	7.51	2.44					
32	Jun-07	4.5	6.48	-0.98					
33	Nov-07	4.5	6.80	0.08					
34	Jun-08	4.5	6.76	-0.05					
35	Nov-08	4.5	7.43	2.17					
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

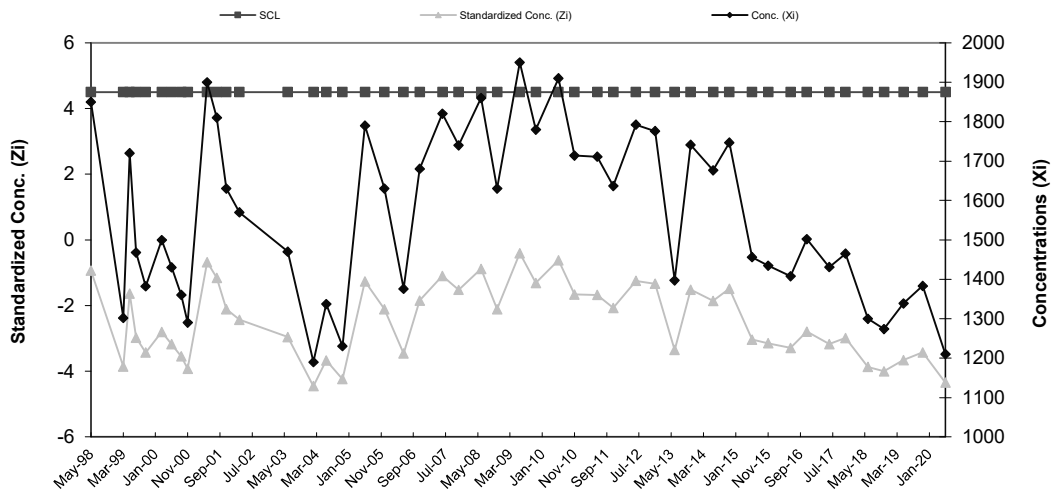


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - SpC

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					
28	Jun-06	4.5	1376	-3.46					
29	Nov-06	4.5	1680	-1.84					
30	Jun-07	4.5	1820	-1.10					
31	Nov-07	4.5	1740	-1.52					
32	Jun-08	4.5	1860	-0.89					
33	Nov-08	4.5	1630	-2.11					
34	Jun-09	4.5	1950	-0.41					
35	Nov-09	4.5	1780	-1.31					
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

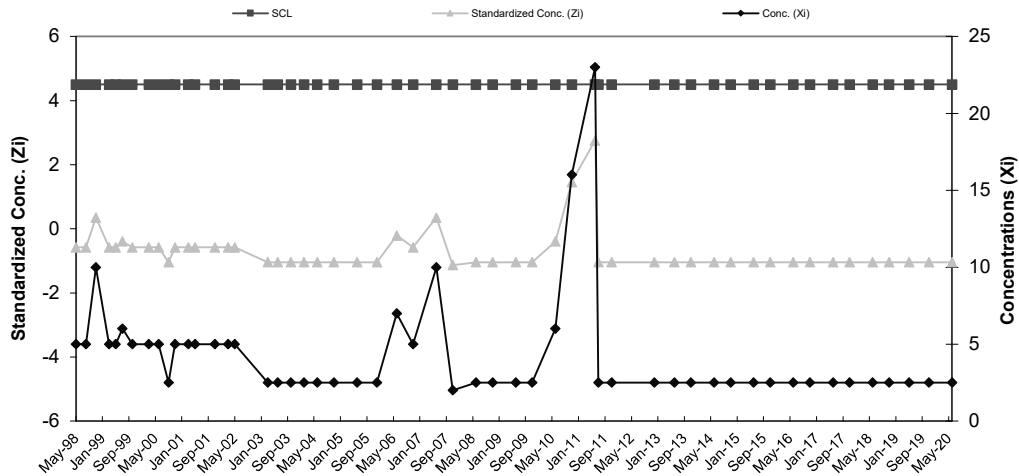


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - Chromium**

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					
28	Feb-04	4.5	2.5	-1.04					
29	Jun-04	4.5	2.5	-1.04					
30	Nov-04	4.5	2.5	-1.04					
31	Jun-05	4.5	2.5	-1.04					
32	Dec-05	4.5	2.5	-1.04					
33	Jun-06	4.5	7	-0.21					
34	Nov-06	4.5	5	-0.58					
35	Jun-07	4.5	10	0.35					
36	Nov-07	4.5	2	-1.14					
37	Jun-08	4.5	2.5	-1.04					
38	Nov-08	4.5	2.5	-1.04					
39	Jun-09	4.5	2.5	-1.04					
40	Nov-09	4.5	2.5	-1.04					
41	Jun-10	4.5	6	-0.39					
42	Nov-10	4.5	16	1.46					
43	Jun-11	4.5	23	2.75					

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

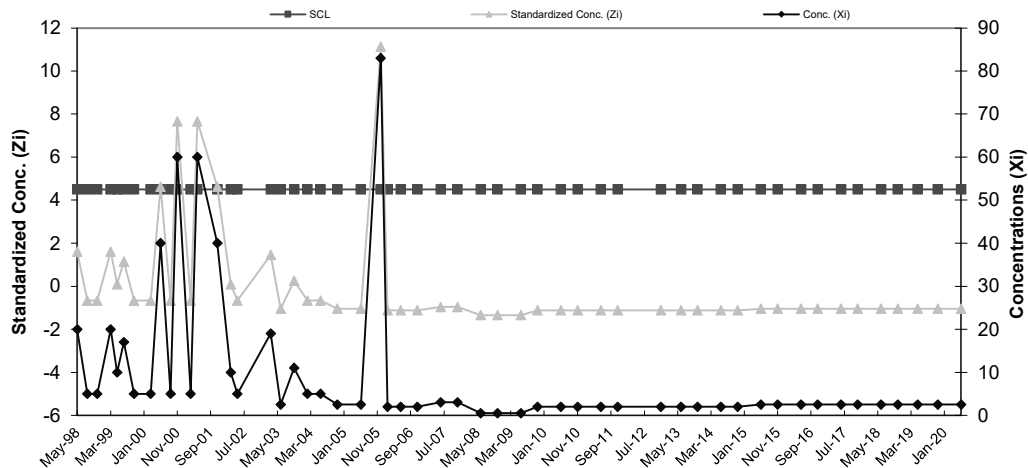


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - Copper

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					
28	Feb-04	4.5	5	-0.66					
29	Jun-04	4.5	5	-0.66					
30	Nov-04	4.5	2.5	-1.04					
31	Jun-05	4.5	2.5	-1.04					
32	Dec-05	4.5	83	11.14					
33	Feb-06	4.5	2	-1.12					
34	Jun-06	4.5	2	-1.12					
35	Nov-06	4.5	2	-1.12					
36	Jun-07	4.5	3	-0.97					
37	Nov-07	4.5	3	-0.97					
38	Jun-08	4.5	0.5	-1.34					
39	Nov-08	4.5	0.5	-1.34					
40	Jun-09	4.5	0.5	-1.34					
41	Nov-09	4.5	2	-1.12					
42	Jun-10	4.5	2	-1.12					
43	Nov-10	4.5	2	-1.12					

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

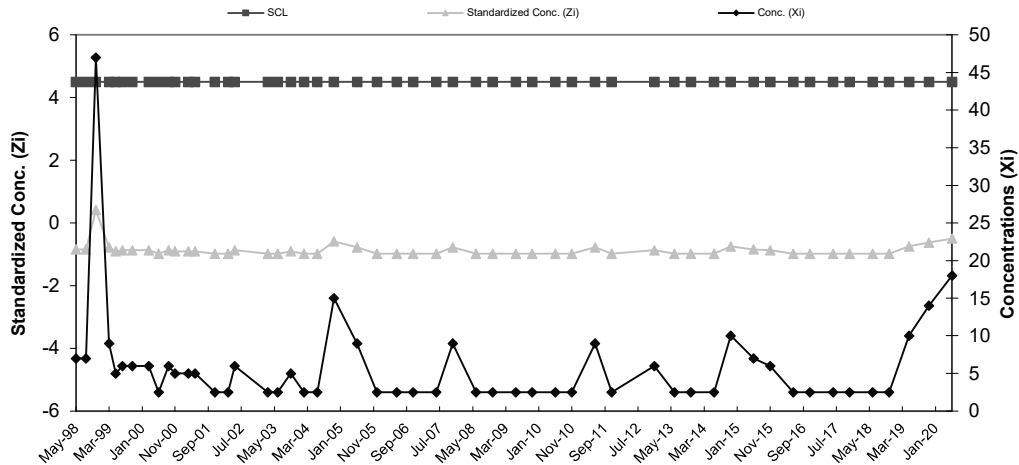


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - Nickel

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					
28	Feb-04	4.5	2.5	-0.98					
29	Jun-04	4.5	2.5	-0.98					
30	Nov-04	4.5	15	-0.59					
31	Jun-05	4.5	9	-0.78					
32	Dec-05	4.5	2.5	-0.98					
33	Jun-06	4.5	2.5	-0.98					
34	Nov-06	4.5	2.5	-0.98					
35	Jun-07	4.5	2.5	-0.98					
36	Nov-07	4.5	9	-0.78					
37	Jun-08	4.5	2.5	-0.98					
38	Nov-08	4.5	2.5	-0.98					
39	Jun-09	4.5	2.5	-0.98					
40	Nov-09	4.5	2.5	-0.98					
41	Jun-10	4.5	2.5	-0.98					
42	Nov-10	4.5	2.5	-0.98					

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

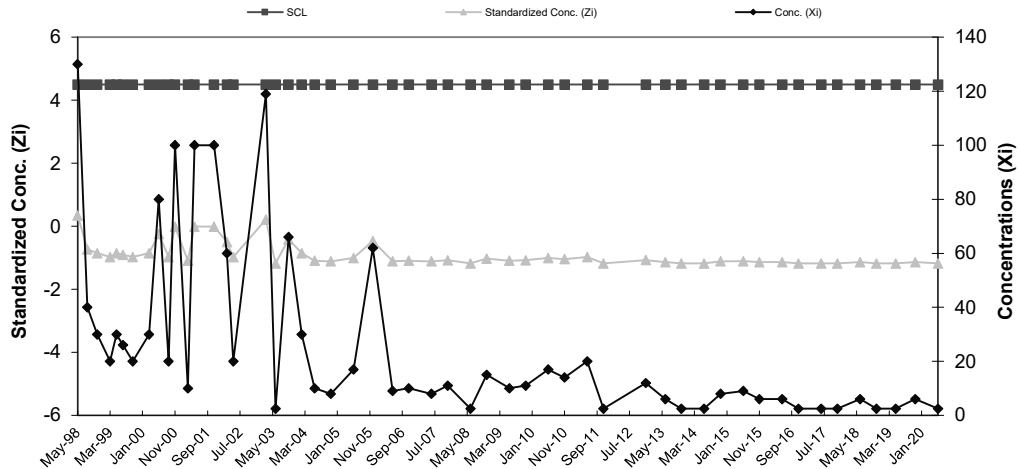


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - Zinc

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					
28	Feb-04	4.5	30	-0.85					
29	Jun-04	4.5	10	-1.09					
30	Nov-04	4.5	8	-1.12					
31	Jun-05	4.5	17	-1.01					
32	Dec-05	4.5	62	-0.47					
33	Jun-06	4.5	9	-1.10					
34	Nov-06	4.5	10	-1.09					
35	Jun-07	4.5	8	-1.12					
36	Nov-07	4.5	11	-1.08					
37	Jun-08	4.5	2.5	-1.18					
38	Nov-08	4.5	15	-1.03					
39	Jun-09	4.5	10	-1.09					
40	Nov-09	4.5	11	-1.08					
41	Jun-10	4.5	17	-1.01					
42	Nov-10	4.5	14	-1.04					

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

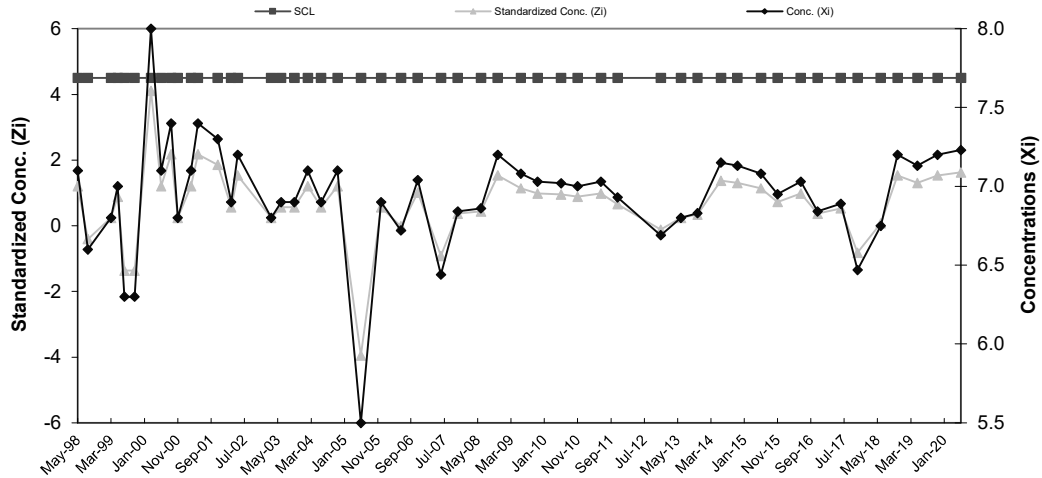


**COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - pH**

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					
28	Jun-04	4.5	6.90	0.56					
29	Nov-04	4.5	7.10	1.21					
30	Jun-05	4.5	5.50	-3.94					
31	Dec-05	4.5	6.90	0.56					
32	Jun-06	4.5	6.72	-0.02					
33	Nov-06	4.5	7.04	1.01					
34	Jun-07	4.5	6.44	-0.92					
35	Nov-07	4.5	6.84	0.37					
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					
28	Nov-04	4.5	1160	-1.72					
29	Jun-05	4.5	1780	1.12					
30	Dec-05	4.5	1640	0.48					
31	Jun-06	4.5	1355	-0.82					
32	Nov-06	4.5	1610	0.34					
33	Jun-07	4.5	1640	0.48					
34	Nov-07	4.5	1600	0.30					
35	Jun-08	4.5	1510	-0.11					
36	Nov-08	4.5	1510	-0.11					
37	Jun-09	4.5	1530	-0.02					
38	Nov-09	4.5	1550	0.07					
39	Jun-10	4.5	1540	0.02					
40	Nov-10	4.5	1590	0.25					

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

