Intended for

Michigan Department of Environment, Great Lakes, and Energy

Document type

Landfill Leak Detection System Semiannual Report 2022

Date

August 2022

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

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LANDFILL LEAK DETECTION SYSTEM

Project name	**RACER Trust Coldwater Road Landfill**
Project no.	**15388/1940102192**
Recipient	**Jacob Runge**
Document type	**Semiannual Report**
Version	**1**
Date	**August 29, 2022**
Prepared by	**Kevin Schneider**
Checked by	**Clifford Yantz**
Approved by	**Clifford Yantz**
Description	**Landfill Leak Detection System Semiannual Report**

Ramboll
2090 Commonwealth Boulevard
Ann Arbor, MI 48105
USA

T 734-761-4000
F 734-761-2050
https://ramboll.com

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1. INTRODUCTION

On behalf of Revitalizing Auto Communities Environmental Response Trust (RACER), Ramboll Americas Engineering Solutions, Inc. (Ramboll), presents the results of the 2022 semiannual leak detection system (LDS) sampling event conducted in June 2022 for the Coldwater Road Landfill site (**Figure 1**). A total of 10,882 gallons of liquid have been removed from the leak detection vaults through June 30, 2022, and a total of 5,463 gallons of leachate have been removed from the leachate collection sumps through June 30, 2022. Volumes are reported in the Quarterly Status Reports and summarized in **Appendix A**.

2. SAMPLING AND ANALYSIS

During this event samples were collected on June 6, 2022 and June 7, 2022 from the six leak detection vaults (A through F) for laboratory analysis and the six leachate collection sumps (A through F) 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 B**).

The samples for the leak detection vaults were collected on June 6, 2022 and June 7, 2022, using a peristaltic pump and tubing for each vault. 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 (**Table 1**). 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 reporting limit of 5 µg/L. The results were within the range of the historic results, which ranged from below the reporting limit to 30 µg/L at Vault A (6/20/2011).
- Copper concentrations were not detected above the reporting limit of 5 µg/L. The results were within the range of the historic results, which ranged from below the reporting limit to 140 µg/L at Vault C (6/20/2000).
- Nickel concentrations ranged from below the reporting limit of 5 µg/L in Vault B and Vault E to 29 µg/L in Vault A. The results were within the range of the historic results, which ranged from below the reporting limit to 125 µg/L at Vault D (11/15/1997).
- Zinc concentrations ranged from below the reporting limit of 5 µg/L in Vault B, Vault C duplicate, Vault D, and Vault F to 27 µg/L in Vault A. The results were within the range of the historic results, which ranged from below the reporting limit to 230 µg/L at Vault C (5/29/2019).
- TOC concentrations ranged from 6.0 mg/L in Vault E to 9.5 mg/L in Vault D. The results were within the range of the 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).

- TSS concentrations were not detected above the reporting limit of 3 mg/L; except in Vault F which was detected at a concentration of 3 mg/L. The results were within the range of the historic results, which ranged from below the reporting limit to 7,100 mg/L at Vault F (11/11/1996).
- pH concentrations ranged from 6.72 in Vault D to 7.21 in Vault A. 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 1,150 µs/cm in Vault E to 1,760 µs/cm in Vault C duplicate. The results were within the range of the historic results, which ranged from 340 µs/cm at Vault C (8/30/1995) to 3,250 µs/cm at Vault A (5/6/1999).

Sumps:

- Chromium concentrations ranged from 11 µg/L in Sump F to 520 µg/L in Sump B. The results were similar or less than historic results, which ranged from below the reporting limit to 1,490 µg/L at Sump B (6/6/2013).
- Copper concentrations ranged from 61 µg/L in Sump E to 1,660 µg/L in Sump C duplicate. The results were similar or less than historic results, which ranged from below the reporting 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 17 µg/L in Sump E to 510 µg/L in Sump D. The results were similar or less than historic results, which ranged from below the reporting limit in Sump E (6/14/2010) and Sump F (6/14/2010) to 2,500 µg/L at Sump C (11/11/1996).
- Zinc concentrations ranged from not detected above the reporting limit of 5 µg/L in Sump A, Sump C duplicate, Sump D, and Sump E to 19 µg/L in Sump B. The results were similar or less than historic results, which ranged from below the reporting limit to 160 µg/L at Sump F (5/31/2002).
- TOC concentrations ranged from 17.7 mg/L in Sump E to 170 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 reporting limit of 3 mg/L in Sump A, Sump B, Sump E, and Sump F to 8 mg/L in Sump C duplicate. The results were similar or less than historic results, which ranged from below the reporting limit to 69,000 mg/L at Sump D (8/30/1995).
- pH ranged from 7.84 in Sump C to 12.22 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 1,590 µs/cm in Sump E to 4,310 µs/cm in Sump D. The results were similar or less than historic results, which ranged from 682 µs/cm at Sump F (4/26/1999) to 19,920 µs/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 2,800 µg/L. VOCs have been detected in Sump D during previous events.

3. SUMMARY

Duplicate samples were collected during this sampling event from Vault C and Sump C and exhibited values consistent with the original results (within acceptable relative percent differences [RPD]), except for zinc. The zinc sample concentration was 5 ug/L in the original samples and in the duplicate sample the concentration was below the laboratory reporting limit of 5 ug/L. Therefore, the sample results for zinc in Vault C and Sump C and Vault-Dup-060722 and Sump-Dup-060722 should be considered as estimated (J).

There were no exceedances of the Shewart control limits (SCL) during this sampling event. There was a positive (increasing) trend for pH in Vault A. The trend was calculated using regression analysis over the last four sampling events per the Post Closure Care Plan, January 2014.

The positive trend does 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 C**.

The next semiannual sampling event will be completed in November 2022. If you have any questions, please feel free to contact Clifford Yantz at (313) 333-0211.

Certification

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

On Behalf of RACER Trust

Clifford S. Yantz
Managing Hydrogeologist – Ramboll Americas Engineering Solutions, Inc.
Agent for RACER Trust

Date: August 29, 2022
cc: file

TABLES

TABLE 1
RACER Trust - Coldwater Road
Landfill Leak Detection Vaults - Historical Analytical Results
Inorganics and Metals

		Indicator Parameters					Dissolved Metals (ug/L)			
Vault	**Sample Date**	**TOC (mg/L)**	**TSS (mg/L)**	**pH**	**SpC**	**Temp**	**Cr**	**Cu**	**Ni**	**Zn**
		EGLE Residential Drinking Water Criteria & RBSLs					*100 (A)*	*1,000 (E)*	*100 (A)*	*2,400*
Vault A	23-Mar-95	4.6	<1	7.50	690	--	<20	<20	<40	180
	20-Jun-95	8.9	2.0	6.80	1900	--	24	21	<30	<20
	30-Aug-95	8.2	2.0	6.90	2000	--	<20	<20	<40	<20
	28-Nov-95	9.1	<1	7.00	1900	--	23	31	43	24
	27-Mar-96	140.0	<10	7.20	2000	--	<20	<20	46	<20
	18-Jun-96	12.0	<10	6.90	2000	--	<20	<20	<20	<20
	20-Aug-96	32.0	<5	7.10	1900	--	<20	<20	<20	30
	11-Nov-96	18.0	5.0	7.10	2000	--	<20	<20	30	60
	19-Feb-97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9-May-97	13.0	17.0	6.67	1940	9.7	<10	<10	71	90
	12-Aug-97	6.0	4.0	5.98	1810	12.8	<10	<10	88	60
	15-Nov-97	8.0	12.0	6.50	2000	12.0	<10	10	125	100
	9-Feb-98	6.0	8.0	6.40	1960	11.5	<10	<10	73	60
	14-May-98	12.0	15.0	6.90	1760	17.4	<10	20	13	200
	14-Aug-98	5.0	6.0	6.70	--	--	<10	<10	15	160
	13-Nov-98	5.0	12.0	6.50	1990	16.5	<10	<10	20	220
	19-Mar-99	5.7	8.0	6.80	1334	13.6	<10	10	14	60
	6-May-99	5.6	16.0	6.85	3250	26.2	<10	<10	15	20
	23-Jul-99	5.7	3.0	6.30	1470	18.9	<5	9	13	19
	22-Oct-99	5.0	3.0	5.86	1750	12.1	<10	<10	16	30
	14-Mar-00	5.6	<1	7.60	1410	10.7	<10	<10	15	20
	20-Jun-00	7.0	3.0	6.90	1410	18.3	<10	<10	12	20
	13-Sep-00	5.9	5.0	7.50	1650	15.1	<5	<10	14	20
	10-Nov-00	6.4	2.0	7.20	1470	11.8	<10	100	10	150
	12-Mar-01	6.0	1.0	7.43	1530	12.8	<10	<10	7	10
	24-May-01	9.4	10.0	7.56	1380	11.9	<10	<10	10	20
	31-Aug-01	5.3	10.6	7.49	1450	12.5	<5	<10	14	9
	16-Nov-01	5.1	3.0	6.77	1300	12.4	<10	<10	15	50
	8-Mar-02	NS	NS	NS	NS	NS	NS	NS	NS	NS
	31-May-02	2.4	54.0	7.23	1470	13.8	<10	<10	<5	40
	5-Sep-02	4.7	6.0	6.60	--	--	<5	<5	14	140
	12-Dec-02	NS	NS	NS	NS	NS	NS	NS	NS	NS
	18-Mar-03	6.7	8.0	6.81	1290	12	<5	<5	9	99
	4-Jun-03	2.0	11.0	6.78	1370	11.3	<5	<5	10	<5
	5-Oct-03	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8-Dec-03	NS	NS	NS	NS	NS	NS	NS	NS	NS
	27-Feb-04	NS	NS	NS	NS	NS	NS	NS	NS	NS
	30-Jun-04	4.5	55.0	6.99	1318	12.5	<5	<5	8	<5
	19-Nov-04	3.4	2.0	6.85	1120	11.4	6	<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	10
	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	8
	6-Jun-13	6.1	4	6.71	1882	11.0	<5	<4	22	<5
	4-Nov-13	5.0	<1	6.71	1630	11.2	<5	<4	18	<5
	23-Jun-14	5.0	3	6.82	1579	13.2	<5	<4	18	<5
	18-Nov-14	4.1	2	6.27	1525	6.6	<5	<4	25	20
	25-Jun-15	4.5	2	6.64	1507	11.2	<5	6	21	10
	17-Nov-15	3.6	1	6.64	1423	11.7	<5	<5	20	5
	21-Jun-16	3.8	<3	6.93	1364	12.0	<5	<5	14	<5
Duplicate	21-Jun-16	3.9	<3	6.93	1362	12.0	<5	<5	13	<5
	28-Nov-16	3.3	<3	6.82	1378	11.4	<5	<5	15	<5
	19-Jun-17	4.2	<3	6.90	1450	11.4	<5	<5	15	<5
	6-Nov-17	3.6	<3	6.16	1363	11.8	<5	<5	17	<5
	11-Jun-18	4.3	<3	6.45	1447	11.0	<5	<5	15	10
	7-Nov-18	4.1	<3	6.50	1451	6.0	<5	<5	16	6
	29-May-19	8.4	<3	7.13	1436	9.1	<5	<5	15	<5
	19-Nov-19	5.8	<3	6.89	1291	10.6	<5	<5	15	<5
	15-Jun-20	7.9	<3	6.84	1378	17.2	<5	<5	11	<5
	4-Nov-20	6.7	<3	6.69	1010	14.4	<5	<5	12	<5
	16-Jun-21	6.6	<3	6.89	1247	12.9	<5	<5	5	<5
	4-Nov-21	6.6	<3	6.94	1187	13.9	<5	<5	11	5
	6-Jun-22	**8.1**	**<3**	**7.21**	**1280**	**13.1**	**<5**	**<5**	**29**	**27**

See notes on page 6.

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		Indicator Parameters					Dissolved Metals (ug/L)			
Vault	**Sample Date**	**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
	27-Mar-96	NS	NS	NS	NS	NS	NS	NS	NS	NS
Vault B	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	8
	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	11
	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	15
	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	--	--	--
	20-Jun-11	3.4	1	7.03	1496	12.2	28	<4	11	16
Re-sample	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
	7-Nov-18	2.9	<3	6.60	1463	5.0	<5	<5	<5	5
Duplicate	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
	4-Nov-20	7.4	<3	6.62	1053	12.5	<5	<5	<5	<5
Duplicate	4-Nov-20	5.4	<3	6.62	1045	12.5	<5	<5	<5	<5
	16-Jun-21	6.0	<3	6.88	1046	15.4	<5	<5	<5	<5
	4-Nov-21	6.7	<3	6.86	1208	12.2	<5	<5	<5	5
	7-Jun-22	**6.6**	**<3**	**6.81**	**1170**	**10.9**	**<5**	**<5**	**<5**	**<5**

See notes on page 6.

RAMBOLL

TABLE 1
RACER Trust - Coldwater Road
Landfill Leak Detection Vaults - Historical Analytical Results
Inorganics and Metals

		Indicator Parameters					Dissolved Metals (ug/L)			
Vault	Sample Date	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
	4-Nov-20	7.4	1	6.67	1438	12.7	<5	<5	10	<5
	16-Jun-21	8.2	4	6.96	1771	15.1	<5	<5	8	<5
Duplicate	16-Jun-21	7.6	3	6.96	1766	15.1	<5	<5	9	<5
	4-Nov-21	7.5	<3	6.96	1649	11.6	<5	<5	8	<5
Duplicate	4-Nov-21	7.2	<3	6.96	1305	11.6	<5	<5	8	<5
	7-Jun-22	**9.0**	**<3**	**6.82**	**1760**	**11.7**	**<5**	**<5**	**9**	**5**
Duplicate	**7-Jun-22**	**8.6**	**<3**	**6.82**	**1740**	**11.7**	**<5**	**<5**	**10**	**<5**

See notes on page 6.

TABLE 1
RACER Trust - Coldwater Road
Landfill Leak Detection Vaults - Historical Analytical Results
Inorganics and Metals

		Indicator Parameters					Dissolved Metals (ug/L)			
Vault	**Sample Date**	**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	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
Vault D	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
Re-sample	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
Duplicate	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
Duplicate	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
Duplicate	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
Duplicate	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
Duplicate	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
	4-Nov-20	9.8	<3	6.66	1406	13.3	<5	<5	12	6
	16-Jun-21	8.8	<3	6.92	1527	20.5	<5	<5	12	6
	4-Nov-21	8.8	<3	7.06	1186	11.2	<5	<5	19	7
	7-Jun-22	**9.5**	**<3**	**6.72**	**1450**	**13.1**	**<5**	**<5**	**11**	**<5**

See notes on page 6.

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TABLE 1
RACER Trust - Coldwater Road
Landfill Leak Detection Vaults - Historical Analytical Results
Inorganics and Metals

		Indicator Parameters					Dissolved Metals (ug/L)			
Vault	**Sample Date**	**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
	27-Mar-96	110.0	<10	7.20	2000	--	<20	<20	46	<20
Vault E	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
	23-Jun-09	3.2	10.0	6.79	1950	14.0	<5	2	<5	15
Duplicate	23-Jun-09	3.0	17.0	6.79	1960	14.0	<5	2	<5	14
	17-Nov-09	5.0	9	6.89	1780	11.2	<5	<4	<5	14
	14-Jun-10	4.0	21	6.85	1910	12.5	9	<4	<5	13
	8-Nov-10	5.0	<1	7.02	1714	12.4	24	<4	<5	7
Duplicate	8-Nov-10	5.0	3	7.02	1715	12.4	20	<4	<5	7
	20-Jun-11	3.4	5	6.91	1711	13.0	29	<4	10	15
Re-sample	14-Jul-11	--	--	--	--	--	<5	--	--	--
	14-Nov-11	4.0	9	6.89	1637	11.7	<5	<4	<5	<5
Duplicate	14-Nov-11	3.0	5	6.89	1635	11.7	<5	<4	<5	<5
	25-Jun-12	3.0	3	6.00	1792	12.9	<5	<4	<5	7
	5-Dec-12	3.4	0	6.77	1776	10.4	<5	<4	6	11
	6-Jun-13	3.3	8	6.54	1397	10.6	<5	6	<5	<5
	4-Nov-13	3.0	2	6.74	1741	12.0	<5	4	12	9
	23-Jun-14	3.3	<1	6.88	1677	11.7	<5	<4	<5	<5
	18-Nov-14	3.0	2	7.08	1747	7.5	<5	<4	10	6
	25-Jun-15	2.9	4	6.88	1456	12.6	<5	<5	7	8
Duplicate	25-Jun-15	2.9	3	6.88	1460	12.6	<5	<5	7	7
	17-Nov-15	2.7	2	6.80	1435	12.9	<5	<5	5	<5
	21-Jun-16	2.6	<3	6.75	1408	13.9	<5	<5	<5	5
	28-Nov-16	2.3	<3	6.88	1502	11.3	<5	<5	<5	<5
	19-Jun-17	2.6	3	6.79	1431	11.9	<5	<5	<5	<5
	19-Jun-17	2.7	<3	6.79	1430	11.9	<5	<5	<5	<5
	6-Nov-17	2.5	<3	6.37	1465	11.8	<5	<5	<5	<5
	11-Jun-18	2.6	<3	6.57	1300	14.3	<5	<5	<5	5
	7-Nov-18	3.1	<3	7.20	1274	5.0	<5	<5	<5	<5
	29-May-19	5.3	<3	7.16	1339	10.4	<5	<5	<5	<5
Duplicate	29-May-19	5.1	<3	7.16	1334	10.4	<5	<5	<5	<5
	19-Nov-19	5.0	<3	6.95	1383	10.6	<5	7	<5	5
	16-Jun-20	6.0	<3	6.99	1210	14.5	<5	<5	<5	<5
	4-Nov-20	4.8	<3	6.61	1188	12.2	<5	<5	<5	<5
	16-Jun-21	4.9	<3	6.89	1211	17.7	<5	<5	<5	<5
	4-Nov-21	5.7	<3	6.89	831	11.6	<5	<5	<5	<5
	7-Jun-22	**6.0**	**<3**	**6.73**	**1150**	**14.0**	**<5**	**<5**	**<5**	**8**

See notes on page 6.

RAMBOLL

TABLE 1
RACER Trust - Coldwater Road
Landfill Leak Detection Vaults - Historical Analytical Results
Inorganics and Metals

		Indicator Parameters					Dissolved Metals (ug/L)			
Vault	Sample Date	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
	24-Jun-08	2.3	5.0	6.86	1510	14.5	<5	<1	<5	<5
Duplicate	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
	20-Jun-11	2.5	47	7.03	1642	14.6	23	<4	9	20
Re-sample	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
	6-Jun-13	2.7	2	6.78	1761	10.8	<5	<4	6	6
Duplicate	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
	17-Nov-15	2.1	1	6.95	1686	13.5	<5	<5	6	6
Duplicate	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
	28-Nov-16	1.9	3	6.84	1641	11.1	<5	<5	<5	<5
Duplicate	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
	4-Nov-20	5.2	<3	6.72	1347	13.1	<5	<5	12	<5
	16-Jun-21	5.8	<3	6.84	1554	20.2	<5	<5	8	<5
	4-Nov-21	5.8	<3	7.03	1398	10.8	<5	<5	10	<5
	7-Jun-22	**6.6**	**3**	**6.85**	**1620**	**14.4**	**<5**	**<5**	**9**	**<5**

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

"A" - Criterion is the state of Michigan drinking water standard estat 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 Environmenta Protection Act, 1994 PA 451, as amended (NREPA)

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

		Indicator Parameters					Dissolved Metals (ug/L)			
Sump	**Sample Date**	**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 A	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
	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
	16-Jun-21	36.5	<3	8.09	1920	17.9	252	385	35	<5
	6-Jun-22	**30.2**	**<3**	**8.07**	**1670**	**11.7**	**209**	**331**	**34**	**<5**

See notes on page 6.

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

		Indicator Parameters					Dissolved Metals (ug/L)			
Sump	**Sample Date**	**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	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
Sump B	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
	17-Nov-08	41.5	19	6.48	2560	10.6	401	767	91	20
Duplicate	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
	16-Jun-21	78.4	<3	8.05	3850	14.4	609	477	56	12
	7-Jun-22	**71.0**	**<3**	**7.95**	**4090**	**11.3**	**520**	**445**	**49**	**19**

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

		Indicator Parameters					Dissolved Metals (ug/L)			
Sump	**Sample Date**	**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	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
Sump C	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
	19-Nov-04	126	16	8.38	3200	11.6	32	3190	874	13
	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
Duplicate	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
	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
Duplicate	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
	20-Jun-11	112	5	9.24	4560	12.1	133	2670	639	<5
Duplicate	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
	11-Jun-18	56.6	91	7.80	3150	11.3	80	1010	232	7
Duplicate	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
	16-Jun-20	14.8	<3	8.34	1316	12.3	143	155	27	<5
Duplicate	16-Jun-20	15.6	<3	8.34	1312	12.3	142	159	27	5
	16-Jun-21	108	<3	7.98	4860	19.4	17	2080	460	10
Duplicate	16-Jun-21	107	<3	7.98	4890	19.4	17	2040	453	9
	7-Jun-22	**101**	**7**	**7.84**	**4230**	**11.9**	**46**	**1650**	**349**	**5**
Duplicate	**7-Jun-22**	**105**	**8**	**7.84**	**4250**	**11.9**	**47**	**1660**	**349**	**<5**

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TABLE 2
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		Indicator Parameters					Dissolved Metals (ug/L)			
Sump	**Sample Date**	**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	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
Sump D	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
	14-Jun-10	15	12	10.01	4880	12.0	62	1160	1340	5
Duplicate	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
	16-Jun-21	237	4	11.98	5200	21.8	174	1420	893	6
	7-Jun-22	**170**	**6**	**12.22**	**4310**	**13.2**	**355**	**825**	**510**	**<5**

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TABLE 2
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		Indicator Parameters					Dissolved Metals (ug/L)			
Sump	Sample Date	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
	6-Jun-07	6.9	3	6.41	1630	11.6	12	13	10	23
Duplicate	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
	23-Jun-09	4.7	<1	6.93	1600	11.6	<5	6	6	14
Duplicate	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
	8-Nov-10	6	2	7.44	1647	12.5	18	10	9	101
Duplicate	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
	14-Nov-11	15.0	<1	7.81	1856	11.7	5	67	25	10
Duplicate	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
	19-Jun-17	13.7	184	--	1750	--	<5	31	24	<5
Duplicate	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
	29-May-19	23.9	3	8.08	1866	9.4	33	177	42	7
Duplicate	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
	16-Jun-21	17.1	<3	8.63	1703	17.1	9	77	20	5
	7-Jun-22	**17.7**	**<3**	**8.09**	**1590**	**14.1**	**18**	**61**	**17**	**<5**

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Inorganics and Metals

		Indicator Parameters					Dissolved Metals (ug/L)			
Sump	**Sample Date**	**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 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
	6-Jun-13	41.9	2	7.98	3580	10.0	16	250	86	24
Duplicate	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
	16-Jun-21	32	<3	8.27	4150	16.4	43	49	22	9
	7-Jun-22	**34.0**	**<3**	**8.03**	**3680**	**13.0**	**11**	**110**	**48**	**13**
Equipment Blank	24-Jun-08	<1	1	--	4	--	<5	<1	<5	<5
	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)

	Sample ID & Sample Date							
Parameter	Sump A 6-Jun-22	Sump B 7-Jun-22	Sump C 7-Jun-22	Sump C (SUMP-DUP-060722) 7-Jun-22	Sump D** 7-Jun-22	Sump E 7-Jun-22	Sump F 7-Jun-22	Trip Blank-060722 7-Jun-22
Diethyl ether	<10	<10	<10	<10	<200	<10	<10	<10
Acetone	<50	<50	<50	<50	**2,800**	<50	<50	<50
Methyl iodide	<1	<1	<1	<1	<20	<1	<1	<1
Carbon disulfide	<5	<5	<5	<5	<100	<5	<5	<5
tert-Methyl butyl ether (MTBE)	<5	<5	<5	<5	<100	<5	<5	<5
Acrylonitrile	<2	<2	<2	<2	<40	<2	<2	<2
2-Butanone (MEK)	<25	<25	<25	<25	<500	<25	<25	<25
Dichlorodifluoromethane	<5	<5	<5	<5	<100	<5	<5	<5
Chloromethane	<5	<5	<5	<5	<100	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<20	<1	<1	<1
Bromomethane	<5	<5	<5	<5	<100	<5	<5	<5
Chloroethane	<5	<5	<5	<5	<100	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1	<20	<1	<1	<1
1,1-Dichloroethene	<1	<1	<1	<1	<20	<1	<1	<1
Methylene chloride	<5	<5	<5	<5	<100	<5	<5	<5
trans-1,2-Dichloroethene	<1	<1	<1	<1	<20	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1	<20	<1	<1	<1
cis-1,2-Dichloroethene	<1	<1	<1	<1	<20	<1	<1	<1
Tetrahydrofuran*	<90	<90	<90	<90	<1,800	<90	<90	<90
Chloroform	<1	<1	<1	<1	<20	<1	<1	<1
Bromochloromethane	<1	<1	<1	<1	<20	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1	<20	<1	<1	<1
4-Methyl-2-pentanone (MIBK)	<50	<50	<50	<50	<1,000	<50	<50	<50
2-Hexanone	<50	<50	<50	<50	<1,000	<50	<50	<50
Carbon tetrachloride	<1	<1	<1	<1	<20	<1	<1	<1
Benzene	<1	<1	<1	<1	<20	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1	<20	<1	<1	<1
Trichloroethene	<1	<1	<1	<1	<20	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1	<20	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<20	<1	<1	<1
Dibromomethane	<5	<5	<5	<5	<100	<5	<5	<5
cis-1,3-Dichloropropene	<1	<1	<1	<1	<20	<1	<1	<1
Toluene	<1	<1	<1	<1	<20	<1	<1	<1
trans-1,3-Dichloropropene	<1	<1	<1	<1	<20	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1	<20	<1	<1	<1
Tetrachloroethene	<1	<1	<1	<1	<20	<1	<1	<1
trans-1,4-Dichloro-2-butene	<1	<1	<1	<1	<20	<1	<1	<1
Dibromochloromethane	<5	<5	<5	<5	<100	<5	<5	<5
1,2-Dibromoethane	<1	<1	<1	<1	<20	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<20	<1	<1	<1
1,1,1,2-Tetrachloroethane	<1	<1	<1	<1	<20	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<20	<1	<1	<1
p,m-Xylene*	<2	<2	<2	<2	<40	<2	<2	<2
o-Xylene	<1	<1	<1	<1	<20	<1	<1	<1
Styrene	<1	<1	<1	<1	<20	<1	<1	<1
Isopropylbenzene	<5	<5	<5	<5	<100	<5	<5	<5
Bromoform	<1	<1	<1	<1	<20	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1	<20	<1	<1	<1
1,2,3-Trichloropropane	<1	<1	<1	<1	<20	<1	<1	<1
n-Propylbenzene	<1	<1	<1	<1	<20	<1	<1	<1
Bromobenzene	<1	<1	<1	<1	<20	<1	<1	<1
1,3,5-Trimethylbenzene	<1	<1	<1	<1	<20	<1	<1	<1
tert-Butylbenzene	<1	<1	<1	<1	<20	<1	<1	<1
1,2,4-Trimethylbenzene	<1	<1	<1	<1	<20	<1	<1	<1
sec-Butylbenzene	<1	<1	<1	<1	<20	<1	<1	<1
p-Isopropyltoluene	<5	<5	<5	<5	<100	<5	<5	<5
1,3-Dichlorobenzene	<1	<1	<1	<1	<20	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1	<20	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1	<20	<1	<1	<1
1,2,3-Trimethylbenzene	<1	<1	<1	<1	<20	<1	<1	<1
n-Butylbenzene	<1	<1	<1	<1	<20	<1	<1	<1
Hexachloroethane	<5	<5	<5	<5	<100	<5	<5	<5
1,2-Dibromo-3-chloropropane	<5	<5	<5	<5	<100	<5	<5	<5
1,2,4-Trichlorobenzene	<5	<5	<5	<5	<100	<5	<5	<5
1,2,3-Trichlorobenzene	<5	<5	<5	<5	<100	<5	<5	<5
Naphthalene	<5	<5	<5	<5	<100	<5	<5	<5
2-Methylnaphthalene	<5	<5	<5	<5	<100	<5	<5	<5

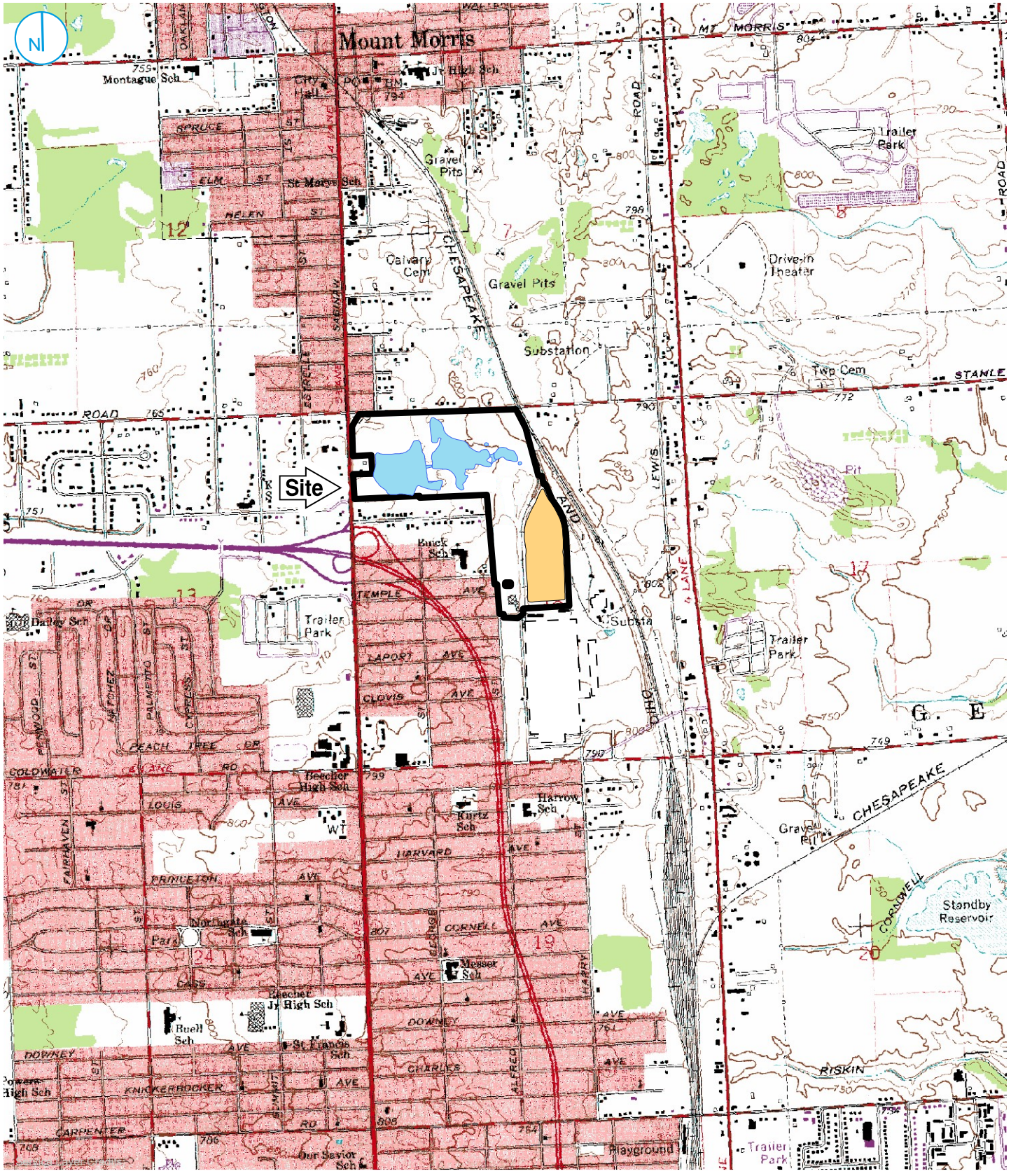
Notes: ** Elevated reporting limit due to high target concentration.
EPA Method 8260 used for analysis.
Dup- Duplicate analysis
Analysis in µg/L

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

SUMP	DEPTH TO WATER
Sump A	19.68
Sump B	13.74
Sump C	16.80
Sump D	18.95
Sump E	20.29
Sump F	19.91

Notes:
Depth to water measured in feet below top of casing.
Measurements collected on June 6, 2022 and June 7, 2022.

FIGURES



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

SITE LOCATION

RACER TRUST
Coldwater Road Landfill
Flint, Michigan

FIGURE 01

A RAMBOLL COMPANY

RAMBOLL

- LEACHATE COLLECTION SUMP
- ACCESS PORT FOR LEAK DECTION VAULT
- PROPERTY BOUNDARY

0 175 350 Feet

SITE LAYOUT

RACER TRUST
Coldwater Road Landfill
Flint, Michigan

FIGURE 02

A RAMBOLL COMPANY

RAMBOLL

I:\Racer-Trust.153881\75178.Coldwater-2020\Docs\Reports\LDS\Semi-Annual Jun 2020\Figure\002 - Site_Layout 2020 SA Rpts (LDS-Rpt) (2020-08)_08112020.mxd
PROJECT: 169000XXXX | DATED: 8/11/2020 | DESIGNER: MONETANT

APPENDIX A
SUMMARY OF VOLUMES REMOVED

Appendix A
RACER Trust - Coldwater Road
Liquid Volumes Removed from Vaults and Sumps in 2022

Date 2022	VAULT MONTHLY TOTALS	SUMP MONTHLY TOTALS
JANUARY	**2,505**	**1,256**
FEBRUARY	**1,235**	**686**
MARCH	**752**	**462**
APRIL	**2,602**	**1,077**
MAY	**1,884**	**1,529**
JUNE	**1,904**	**453**
JULY	--	--
AUGUST	--	--
SEPTEMBER	--	--
OCTOBER	--	--
NOVEMBER	--	--
DECEMBER	--	--
Total Removed Through July 31, 2022	**10,882**	**5,463**

Notes
Liquid volumes in gallons.
-- No Data

APPENDIX B
ANALYTICAL LABORATORY REPORTS

Analytical Laboratory Report

Report ID: S36853.01(01)
Generated on 06/17/2022

Report to

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

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

Addtional Contacts: Kevin Schneider

Report produced by

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

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

Contacts for report questions:
John Laverty (johnlaverty@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S36853.01-S36853.07
Project: RACER Coldwater Road
Collected Date(s): 06/06/2022 - 06/07/2022
Submitted Date/Time: 06/08/2022 15:30
Sampled by: Kevin Schneider
P.O. #: 1940004462 TASK 001

Table of Contents

Maya Murshak
Technical Director

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.
40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.
QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.
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)
PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."
Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.
Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical 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
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

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

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 2015
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
S36853.01	Vault-A	Wastewater	06/06/22 15:40
S36853.02	Vault-B	Wastewater	06/07/22 10:23
S36853.03	Vault-C	Wastewater	06/07/22 12:00
S36853.04	Vault-D	Wastewater	06/07/22 13:28
S36853.05	Vault-E	Wastewater	06/07/22 14:30
S36853.06	Vault-F	Wastewater	06/07/22 15:40
S36853.07	Vault-DUP-060722	Wastewater	06/07/22 00:01

Analytical Laboratory Report

Lab Sample ID: S36853.01
Sample Tag: Vault-A
Collected Date/Time: 06/06/2022 15:40
Matrix: Wastewater
COC Reference: 148229

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	H2SO4	Yes	3.6	IR
1	125ml Plastic	HNO3	Yes	3.6	IR
1	1L Plastic	None	Yes	3.6	IR
1	500ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	06/14/22 14:45	CCM	

Inorganics

Method: E120.1, Run Date: 06/09/22 15:49, Analyst: PJH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,280	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/10/22 16:00, Analyst: SSM

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

Method: SM5310C, Run Date: 06/16/22 18:41, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	8.1	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/14/22 16:33, 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	0.029	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	0.027	0.005		mg/L	5	7440-66-6	

Lab Sample ID: S36853.02
Sample Tag: Vault-B
Collected Date/Time: 06/07/2022 10:23
Matrix: Wastewater
COC Reference: 148229

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	H2SO4	Yes	3.6	IR
1	125ml Plastic	HNO3	Yes	3.6	IR
1	1L Plastic	None	Yes	3.6	IR
1	500ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	06/14/22 14:45	CCM	

Inorganics

Method: E120.1, Run Date: 06/09/22 15:51, Analyst: PJH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,170	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/10/22 16:00, Analyst: SSM

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

Method: SM5310C, Run Date: 06/16/22 19:00, Analyst: JKB

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

Metals

Method: E200.8, Run Date: 06/14/22 16:35, 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: S36853.03
Sample Tag: Vault-C
Collected Date/Time: 06/07/2022 12:00
Matrix: Wastewater
COC Reference: 148229

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	H2SO4	Yes	3.6	IR
1	125ml Plastic	HNO3	Yes	3.6	IR
1	1L Plastic	None	Yes	3.6	IR
1	500ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	06/14/22 14:45	CCM	

Inorganics

Method: E120.1, Run Date: 06/09/22 15:51, Analyst: PJH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,760	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/10/22 16:00, Analyst: SSM

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

Method: SM5310C, Run Date: 06/16/22 19:19, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	9.0	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/14/22 16:37, 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	0.009	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	0.005	0.005		mg/L	5	7440-66-6	

Analytical Laboratory Report

Lab Sample ID: S36853.04
Sample Tag: Vault-D
Collected Date/Time: 06/07/2022 13:28
Matrix: Wastewater
COC Reference: 148229

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	H2SO4	Yes	3.6	IR
1	125ml Plastic	HNO3	Yes	3.6	IR
1	1L Plastic	None	Yes	3.6	IR
1	500ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	06/14/22 14:45	CCM	

Inorganics

Method: E120.1, Run Date: 06/09/22 15:52, Analyst: PJH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,450	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/10/22 16:00, Analyst: SSM

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

Method: SM5310C, Run Date: 06/16/22 19:38, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	9.5	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/14/22 16:39, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	Not detected	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	Not detected	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	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: S36853.05
Sample Tag: Vault-E
Collected Date/Time: 06/07/2022 14:30
Matrix: Wastewater
COC Reference: 148229

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	H2SO4	Yes	3.6	IR
1	125ml Plastic	HNO3	Yes	3.6	IR
1	1L Plastic	None	Yes	3.6	IR
1	500ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	06/14/22 14:45	CCM	

Inorganics

Method: E120.1, Run Date: 06/09/22 15:53, Analyst: PJH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,150	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/10/22 16:00, Analyst: SSM

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

Method: SM5310C, Run Date: 06/16/22 19:57, Analyst: JKB

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

Metals

Method: E200.8, Run Date: 06/14/22 16:41, Analyst: CCM

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

Analytical Laboratory Report

Lab Sample ID: S36853.06
Sample Tag: Vault-F
Collected Date/Time: 06/07/2022 15:40
Matrix: Wastewater
COC Reference: 148229

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	H2SO4	Yes	3.6	IR
1	125ml Plastic	HNO3	Yes	3.6	IR
1	1L Plastic	None	Yes	3.6	IR
1	500ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	06/14/22 14:45	CCM	

Inorganics

Method: E120.1, Run Date: 06/09/22 15:54, Analyst: PJH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,620	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/10/22 16:00, Analyst: SSM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	3	3		mg/L	1		

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

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

Metals

Method: E200.8, Run Date: 06/14/22 16:42, 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	0.009	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: S36853.07
Sample Tag: Vault-DUP-060722
Collected Date/Time: 06/07/2022 00:01
Matrix: Wastewater
COC Reference: 148229

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	H2SO4	Yes	3.6	IR
1	125ml Plastic	HNO3	Yes	3.6	IR
1	1L Plastic	None	Yes	3.6	IR
1	500ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	06/14/22 14:45	CCM	

Inorganics

Method: E120.1, Run Date: 06/09/22 15:57, Analyst: PJH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,740	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/10/22 16:00, Analyst: SSM

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

Method: SM5310C, Run Date: 06/16/22 20:35, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	8.6	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/14/22 16:44, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	Not detected	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	Not detected	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.010	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: S36853
Client: OBG02 (Ramboll Americas)
Project: RACER Coldwater Road
Submitted: 06/08/2022 15:30 Login User: PFD

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

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

Selection				Description	Note
Sample Receiving					
01.	[X] Yes	[ ] No	[ ] N/A	Samples are received at 4C +/- 2C Thermometer #	IR 3.6
02.	[X] Yes	[ ] No	[ ] N/A	Received on ice/ cooling process begun	
03.	[ ] Yes	[X] No	[ ] N/A	Samples shipped	
04.	[ ] Yes	[X] No	[ ] N/A	Samples left in 24 hr. drop box	
05.	[ ] Yes	[ ] No	[X] N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody					
06.	[X] Yes	[ ] No	[ ] N/A	COC adequately filled out	
07.	[X] Yes	[ ] No	[ ] N/A	COC signed and relinquished to the lab	
08.	[X] Yes	[ ] No	[ ] N/A	Sample tag on bottles match COC	
09.	[ ] Yes	[X] No	[ ] N/A	Subcontracting needed? Subcontacted to:	
Preservation					
10.	[X] Yes	[ ] No	[ ] N/A	Do sample have correct chemical preservation	
11.	[X] Yes	[ ] No	[ ] N/A	Completed pH checks on preserved samples? (no VOAs)	
12.	[ ] Yes	[X] No	[ ] N/A	Did any samples need to be preserved in the lab?	
Bottle Conditions					
13.	[X] Yes	[ ] No	[ ] N/A	All bottles intact	
14.	[X] Yes	[ ] No	[ ] N/A	Appropriate analytical bottles are used	
15.	[X] Yes	[ ] No	[ ] N/A	Merit bottles used	
16.	[X] Yes	[ ] No	[ ] N/A	Sufficient sample volume received	
17.	[ ] Yes	[X] No	[ ] N/A	Samples require laboratory filtration	
18.	[X] Yes	[ ] No	[ ] N/A	Samples submitted within holding time	
19.	[ ] Yes	[ ] No	[X] 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: S36853 Submitted: 06/08/2022 15:30

Client: OBG02 (Ramboll Americas)

Project: RACER Coldwater Road

Initial Preservation Check: 06/08/2022 16:33 PFD

Preservation Recheck (E200.8): N/A

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

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

Sample ID	Bottle / Preservation	pH (Orig)	Add ml	pH (New)	Notes
S36853.01	125ml Plastic HNO3	<2			
S36853.02	125ml Plastic HNO3	<2			
S36853.03	125ml Plastic HNO3	<2			
S36853.04	125ml Plastic HNO3	<2			
S36853.05	125ml Plastic HNO3	<2			
S36853.06	125ml Plastic HNO3	<2			
S36853.07	125ml Plastic HNO3	<2			

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 148229

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Clifford Yantz / Kevin Schneider
COMPANY: Ramboll
ADDRESS: 2090 Commonwealth Blvd
CITY: Ann Arbor STATE: MI ZIP CODE: 48105
PHONE NO.: CELL NO.: 313-333-0211 P.O. NO.: 1940004462 Task 001
E-MAIL ADDRESS: Clifford.Yantz@Ramboll.com Kevin.Schneider@Ramboll.com QUOTE NO.:

INVOICE TO

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

PROJECT NO./NAME: RALER Coldwater Road
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Schneider

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

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

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

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

MERIT LAB NO. (FOR LAB USE ONLY)	COLLECTION DATE	COLLECTION TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TOC	Dissolved Metals	Specific Conductivity	TSS
36853.01	6/6/22	1540	Vault - A	WW	5	2		1	2				X	X	X	X
.02	6/7/22	1023	Vault - B	WW	5	2		1	2				X	X	X	X
.03	6/7/22	1200	Vault - C	WW	5	2		1	2				X	X	X	X
.04	6/7/22	1328	Vault - D	WW	5	2		1	2				X	X	X	X
.05	6/7/22	1430	Vault - E	WW	5	2		1	2				X	X	X	X
.06	6/7/22	1540	Vault - F	WW	5	2		1	2				X	X	X	X
.07	6/7/22	—	Vault - DUP - 060722	WW	5	2		1	2				X	X	X	X

LABS

Special Instructions: Dissolved Metals were field filtered

Metals ARE: Cu, Ls, Ni, Zn

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

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

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 3.6
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

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

Rev. 1.26.22

Quality Control Report

Report ID: QC-S36853-01
Generated on 06/17/2022

Report to

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

Phone: 313-333-0211 FAX:

Report Produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

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

Report Summary

Lab Sample ID(s): S36853.01-S36853.07
Project: RACER Coldwater Road
Submitted Date/Time: 06/08/2022 15:30
Sampled by: Kevin Schneider
P.O. #: 1940004462 TASK 001

QC Report Sections

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: S36853.01
Sample Tag: Vault-A
Collected Date/Time: 06/06/2022 15:40
Matrix: Wastewater
COC Reference: 148229

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	06/09/22 15:49	COND220609W1	COND220609W1	No	BLK/DUP
TOC	SM5310C	06/16/22 18:41	TOC220616-W1	TOC220616-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/10/22 16:00	TSS220610	TSS220610	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	06/14/22 16:33	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/14/22 16:33	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/14/22 16:33	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/14/22 16:33	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD

QC Report - Analysis Summary

Lab Sample ID: S36853.02

Sample Tag: Vault-B

Collected Date/Time: 06/07/2022 10:23

Matrix: Wastewater

COC Reference: 148229

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	06/09/22 15:51	COND220609W1	COND220609W1	No	BLK/DUP
TOC	SM5310C	06/16/22 19:00	TOC220616-W1	TOC220616-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/10/22 16:00	TSS220610	TSS220610	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	06/14/22 16:35	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/14/22 16:35	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/14/22 16:35	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/14/22 16:35	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD

QC Report - Analysis Summary

Lab Sample ID: S36853.03

Sample Tag: Vault-C

Collected Date/Time: 06/07/2022 12:00

Matrix: Wastewater

COC Reference: 148229

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	06/09/22 15:51	COND220609W1	COND220609W1	No	BLK/DUP
TOC	SM5310C	06/16/22 19:19	TOC220616-W1	TOC220616-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/10/22 16:00	TSS220610	TSS220610	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	06/14/22 16:37	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/14/22 16:37	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/14/22 16:37	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/14/22 16:37	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD

QC Report - Analysis Summary

Lab Sample ID: S36853.04

Sample Tag: Vault-D

Collected Date/Time: 06/07/2022 13:28

Matrix: Wastewater

COC Reference: 148229

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	06/09/22 15:52	COND220609W1	COND220609W1	No	BLK/DUP
TOC	SM5310C	06/16/22 19:38	TOC220616-W1	TOC220616-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/10/22 16:00	TSS220610	TSS220610	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	06/14/22 16:39	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/14/22 16:39	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/14/22 16:39	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/14/22 16:39	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD

QC Report - Analysis Summary

Lab Sample ID: S36853.05

Sample Tag: Vault-E

Collected Date/Time: 06/07/2022 14:30

Matrix: Wastewater

COC Reference: 148229

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	06/09/22 15:53	COND220609W1	COND220609W1	No	BLK/DUP
TOC	SM5310C	06/16/22 19:57	TOC220616-W1	TOC220616-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/10/22 16:00	TSS220610	TSS220610	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	06/14/22 16:41	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/14/22 16:41	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/14/22 16:41	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/14/22 16:41	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD

QC Report - Analysis Summary

Lab Sample ID: S36853.06

Sample Tag: Vault-F

Collected Date/Time: 06/07/2022 15:40

Matrix: Wastewater

COC Reference: 148229

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	06/09/22 15:54	COND220609W1	COND220609W1	No	BLK/DUP
TOC	SM5310C	06/16/22 20:16	TOC220616-W1	TOC220616-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/10/22 16:00	TSS220610	TSS220610	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	06/14/22 16:42	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/14/22 16:42	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/14/22 16:42	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/14/22 16:42	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD

QC Report - Analysis Summary

Lab Sample ID: S36853.07

Sample Tag: Vault-DUP-060722

Collected Date/Time: 06/07/2022 00:01

Matrix: Wastewater

COC Reference: 148229

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	06/09/22 15:57	COND220609W1	COND220609W1	No	BLK/DUP
TOC	SM5310C	06/16/22 20:35	TOC220616-W1	TOC220616-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/10/22 16:00	TSS220610	TSS220610	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	06/14/22 16:44	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/14/22 16:44	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/14/22 16:44	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/14/22 16:44	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD

QC Report - Prep Batch Summary

Inorganics, Prep Batch ID: COND220609W1

Surrogates: No, QC Types: BLK/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S36853.01	Conductivity	E120.1	06/09/22 15:49	COND220609W1
S36853.02	Conductivity	E120.1	06/09/22 15:51	COND220609W1
S36853.03	Conductivity	E120.1	06/09/22 15:51	COND220609W1
S36853.04	Conductivity	E120.1	06/09/22 15:52	COND220609W1
S36853.05	Conductivity	E120.1	06/09/22 15:53	COND220609W1
S36853.06	Conductivity	E120.1	06/09/22 15:54	COND220609W1
S36853.07	Conductivity	E120.1	06/09/22 15:57	COND220609W1

Inorganics, Prep Batch ID: TOC220616-W1

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S36853.01	TOC	SM5310C	06/16/22 18:41	TOC220616-W1
S36853.02	TOC	SM5310C	06/16/22 19:00	TOC220616-W1
S36853.03	TOC	SM5310C	06/16/22 19:19	TOC220616-W1
S36853.04	TOC	SM5310C	06/16/22 19:38	TOC220616-W1
S36853.05	TOC	SM5310C	06/16/22 19:57	TOC220616-W1
S36853.06	TOC	SM5310C	06/16/22 20:16	TOC220616-W1
S36853.07	TOC	SM5310C	06/16/22 20:35	TOC220616-W1

Inorganics, Prep Batch ID: TSS220610

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S36853.01	Total Suspended Solids	SM2540D	06/10/22 16:00	TSS220610
S36853.02	Total Suspended Solids	SM2540D	06/10/22 16:00	TSS220610
S36853.03	Total Suspended Solids	SM2540D	06/10/22 16:00	TSS220610
S36853.04	Total Suspended Solids	SM2540D	06/10/22 16:00	TSS220610
S36853.05	Total Suspended Solids	SM2540D	06/10/22 16:00	TSS220610
S36853.06	Total Suspended Solids	SM2540D	06/10/22 16:00	TSS220610
S36853.07	Total Suspended Solids	SM2540D	06/10/22 16:00	TSS220610

Metals, Prep Batch ID: MTD-061422-6

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S36853.01	Chromium, Dissolved	E200.8	06/14/22 16:33	MT4-22-0614B
S36853.01	Copper, Dissolved	E200.8	06/14/22 16:33	MT4-22-0614B
S36853.01	Nickel, Dissolved	E200.8	06/14/22 16:33	MT4-22-0614B
S36853.01	Zinc, Dissolved	E200.8	06/14/22 16:33	MT4-22-0614B
S36853.02	Chromium, Dissolved	E200.8	06/14/22 16:35	MT4-22-0614B
S36853.02	Copper, Dissolved	E200.8	06/14/22 16:35	MT4-22-0614B
S36853.02	Nickel, Dissolved	E200.8	06/14/22 16:35	MT4-22-0614B
S36853.02	Zinc, Dissolved	E200.8	06/14/22 16:35	MT4-22-0614B
S36853.03	Chromium, Dissolved	E200.8	06/14/22 16:37	MT4-22-0614B
S36853.03	Copper, Dissolved	E200.8	06/14/22 16:37	MT4-22-0614B
S36853.03	Nickel, Dissolved	E200.8	06/14/22 16:37	MT4-22-0614B
S36853.03	Zinc, Dissolved	E200.8	06/14/22 16:37	MT4-22-0614B
S36853.04	Chromium, Dissolved	E200.8	06/14/22 16:39	MT4-22-0614B
S36853.04	Copper, Dissolved	E200.8	06/14/22 16:39	MT4-22-0614B
S36853.04	Nickel, Dissolved	E200.8	06/14/22 16:39	MT4-22-0614B
S36853.04	Zinc, Dissolved	E200.8	06/14/22 16:39	MT4-22-0614B
S36853.05	Chromium, Dissolved	E200.8	06/14/22 16:41	MT4-22-0614B

Metals, Prep Batch ID: MTD-061422-6 (continued)

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S36853.05	Copper, Dissolved	E200.8	06/14/22 16:41	MT4-22-0614B
S36853.05	Nickel, Dissolved	E200.8	06/14/22 16:41	MT4-22-0614B
S36853.05	Zinc, Dissolved	E200.8	06/14/22 16:41	MT4-22-0614B
S36853.06	Chromium, Dissolved	E200.8	06/14/22 16:42	MT4-22-0614B
S36853.06	Copper, Dissolved	E200.8	06/14/22 16:42	MT4-22-0614B
S36853.06	Nickel, Dissolved	E200.8	06/14/22 16:42	MT4-22-0614B
S36853.06	Zinc, Dissolved	E200.8	06/14/22 16:42	MT4-22-0614B
S36853.07	Chromium, Dissolved	E200.8	06/14/22 16:44	MT4-22-0614B
S36853.07	Copper, Dissolved	E200.8	06/14/22 16:44	MT4-22-0614B
S36853.07	Nickel, Dissolved	E200.8	06/14/22 16:44	MT4-22-0614B
S36853.07	Zinc, Dissolved	E200.8	06/14/22 16:44	MT4-22-0614B

Inorganics, Prep Batch ID: COND220609W1

Surrogates: No, QC Types: BLK/DUP

Blank (BLK)

Lab Sample ID: COND220609W1.LRB1

Run in Batch: COND220609W1, Run Date: 06/09/2022 15:31, Prep Date: 06/09/2022, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Conductivity		ND	NA	mg/L

Duplicate (DUP)

Lab Sample ID: COND220609W1.DP1, Parent Sample ID: S36853.07

Run in Batch: COND220609W1, Run Date: 06/09/2022 15:56, Prep Date: 06/09/2022, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
Conductivity		0.4	15

Inorganics, Prep Batch ID: TOC220616-W1

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

Blank (BLK)

Lab Sample ID: TOC220616-W1.LRB1

Run in Batch: TOC220616-W1, Run Date: 06/16/2022 11:52, Prep Date: 06/16/2022, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
TOC		ND	1	mg/L

Laboratory Control Sample (LCS)

Lab Sample ID: TOC220616-W1.LCS1

Run in Batch: TOC220616-W1, Run Date: 06/16/2022 12:32, Prep Date: 06/16/2022, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
TOC		94	90	110

Matrix Spike (MS)

Lab Sample ID: TOC220616-W1.MS1, Parent Sample ID: S36661.17

Run in Batch: TOC220616-W1, Run Date: 06/16/2022 14:27, Prep Date: 06/16/2022, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
TOC		99	80	120

Matrix Spike Duplicate (MSD)

Lab Sample ID: TOC220616-W1.MSD1, Parent Sample ID: TOC220616-W1.MS1

Run in Batch: TOC220616-W1, Run Date: 06/16/2022 14:46, Prep Date: 06/16/2022, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
TOC		96	80	120	2	15

Duplicate (DUP)

Lab Sample ID: TOC220616-W1.DP1, Parent Sample ID: S36661.17

Run in Batch: TOC220616-W1, Run Date: 06/16/2022 14:07, Prep Date: 06/16/2022, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
TOC		9	15

Inorganics, Prep Batch ID: TSS220610

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

Blank (BLK)

Lab Sample ID: TSS220610.LRB1

Run in Batch: TSS220610, Run Date: 06/10/2022 16:00, Prep Date: 06/10/2022, Matrix: Liquid, Dilution: 1

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

Laboratory Control Sample (LCS)

Lab Sample ID: TSS220610.LCS1

Run in Batch: TSS220610, Run Date: 06/10/2022 16:00, Prep Date: 06/10/2022, Matrix: Liquid, Dilution: 10

Analyte	Flags	% Rec	LCL	UCL
Total Suspended Solids		94.30	77.6	114

Duplicate (DUP)

Lab Sample ID: TSS220610.DP1, Parent Sample ID: S36844.01

Run in Batch: TSS220610, Run Date: 06/10/2022 16:00, Prep Date: 06/10/2022, Matrix: Liquid, Dilution: 10

Analyte	Flags	RPD	RPD CL
Total Suspended Solids		0	10

Metals, Prep Batch ID: MTD-061422-6

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

Blank (BLK)

Lab Sample ID: MT4-22-0614B.213.LRB

Run in Batch: MT4-22-0614B, Run Date: 06/14/2022 16:14, Prep Date: 06/14/2022, 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: MT4-22-0614B.211.LCS

Run in Batch: MT4-22-0614B, Run Date: 06/14/2022 16:11, Prep Date: 06/14/2022, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Chromium		104	85	115
Copper		105	85	115
Nickel		103	85	115
Zinc		108	85	115

Matrix Spike (MS)

Lab Sample ID: MT4-22-0614B.228.MS, Parent Sample ID: S36841.07

Run in Batch: MT4-22-0614B, Run Date: 06/14/2022 16:28, Prep Date: 06/14/2022, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL
Chromium		99	75	125
Copper		104	75	125
Nickel		94	75	125
Zinc		102	75	125

Matrix Spike (MS)

Lab Sample ID: MT4-22-0614B.246.MS, Parent Sample ID: S36853.07

Run in Batch: MT4-22-0614B, Run Date: 06/14/2022 16:45, Prep Date: 06/14/2022, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL
Chromium		99	75	125
Copper		95	75	125
Nickel		96	75	125
Zinc		102	75	125

Matrix Spike Duplicate (MSD)

Lab Sample ID: MT4-22-0614B.229.MSD, Parent Sample ID: MT4-22-0614B.228.MS

Run in Batch: MT4-22-0614B, Run Date: 06/14/2022 16:29, Prep Date: 06/14/2022, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Chromium		99	75	125	0	20
Copper		92	75	125	2	20
Nickel		91	75	125	1	20
Zinc		99	75	125	4	20

Metals, Prep Batch ID: MTD-061422-6 (continued)

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

Matrix Spike Duplicate (MSD)

Lab Sample ID: MT4-22-0614B.247.MSD, Parent Sample ID: MT4-22-0614B.246.MS

Run in Batch: MT4-22-0614B, Run Date: 06/14/2022 16:46, Prep Date: 06/14/2022, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Chromium		100	75	125	1	20
Copper		96	75	125	1	20
Nickel		98	75	125	1	20
Zinc		102	75	125	0	20

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 148229

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Clifford Yantz / Kevin Schneider
COMPANY: Ramboll
ADDRESS: 2090 Commonwealth Blvd
CITY: Ann Arbor STATE: MI ZIP CODE: 48105
PHONE NO.: CELL NO.: 313-333-0211 P.O. NO.: 1940004462 Task 001
E-MAIL ADDRESS: Clifford.Yantz@Ramboll.com Kevin.Schneider@Ramboll.com QUOTE NO.:

INVOICE TO

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

PROJECT NO./NAME: RALER Coldwater Road
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Schneider

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

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

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

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

MERIT LAB NO. (FOR LAB USE ONLY)	COLLECTION DATE	COLLECTION TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TOC	Dissolved Metals	Specific Conductivity	TSS
36853.01	6/6/22	1540	Vault - A	WW	5	2		1	2				X	X	X	X
.02	6/7/22	1023	Vault - B	WW	5	2		1	2				X	X	X	X
.03	6/7/22	1200	Vault - C	WW	5	2		1	2				X	X	X	X
.04	6/7/22	1328	Vault - D	WW	5	2		1	2				X	X	X	X
.05	6/7/22	1430	Vault - E	WW	5	2		1	2				X	X	X	X
.06	6/7/22	1540	Vault - F	WW	5	2		1	2				X	X	X	X
.07	6/7/22	—	Vault - DUP - 060722	WW	5	2		1	2				X	X	X	X

LABS

Special Instructions: Dissolved Metals were field filtered

Metals ARE: Cu, Ls, Ni, Zn

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

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

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 3.6
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

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

Rev. 1.26.22

Analytical Laboratory Report

Revised Report

Report ID: S36841.01(02)
Generated on 06/24/2022
Replaces report S36841.01(01) generated on 06/17/2022

Report to

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

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

Addtional Contacts: Kevin Schneider

Report produced by

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

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

Contacts for report questions:
John Laverty (johnlaverty@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S36841.01-S36841.08
Project: RACER Coldwater Road
Collected Date(s): 06/06/2022 - 06/07/2022
Submitted Date/Time: 06/08/2022 15:30
Sampled by: Kevin Schneider
P.O. #: 1940004462 TASK 001

Table of Contents

Maya Murshak
Technical Director

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.
40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.
QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.
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.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)
PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."
Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.
Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

VOC pH check result corrected.

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
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

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

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 2015
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

Sample Summary (8 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S36841.01	SUMP-A	Wastewater	06/06/22 14:57
S36841.02	SUMP-B	Wastewater	06/07/22 10:00
S36841.03	SUMP-C	Wastewater	06/07/22 11:09
S36841.04	SUMP-D	Wastewater	06/07/22 12:55
S36841.05	SUMP-E	Wastewater	06/07/22 13:56
S36841.06	SUMP-F	Wastewater	06/07/22 15:08
S36841.07	SUMP-DUP-060722	Wastewater	06/07/22 00:01
S36841.08	Trip Blank-060722	Water	06/07/22 00:01

Lab Sample ID: S36841.01
Sample Tag: SUMP-A
Collected Date/Time: 06/06/2022 14:57
Matrix: Wastewater
COC Reference: 148233

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.6	IR
2	40ml Glass	H2SO4	Yes	3.6	IR
1	125ml Plastic	HNO3	Yes	3.6	IR
1	1L Plastic	None	Yes	3.6	IR
1	500ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/13/22 09:30	KAG	
Metal Digestion	Completed	SW3015A	06/14/22 14:45	CCM	

Inorganics

Method: E120.1, Run Date: 06/09/22 15:40, Analyst: PJH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,670	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/09/22 17:35, Analyst: SSM

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

Method: SM5310C, Run Date: 06/16/22 16:03, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	30.2	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/14/22 16:16, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	0.209	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	0.331	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.034	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: 06/10/22 20:52, Analyst: BML

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	

Lab Sample ID: S36841.01 (continued)
Sample Tag: SUMP-A

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/10/22 20:52, Analyst: BML (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	

Lab Sample ID: S36841.01 (continued)

Sample Tag: SUMP-A

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/10/22 20:52, Analyst: BML (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	

Lab Sample ID: S36841.02
Sample Tag: SUMP-B
Collected Date/Time: 06/07/2022 10:00
Matrix: Wastewater
COC Reference: 148233

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.6	IR
2	40ml Glass	H2SO4	Yes	3.6	IR
1	125ml Plastic	HNO3	Yes	3.6	IR
1	1L Plastic	None	Yes	3.6	IR
1	500ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/13/22 09:30	KAG	
Metal Digestion	Completed	SW3015A	06/14/22 14:45	CCM	

Inorganics

Method: E120.1, Run Date: 06/09/22 15:41, Analyst: PJH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	4,090	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/09/22 17:35, Analyst: SSM

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

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

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	71.0	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/14/22 16:18, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	0.520	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	0.445	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.049	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	0.019	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/10/22 21:16, Analyst: BML

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	

Lab Sample ID: S36841.02 (continued)
Sample Tag: SUMP-B

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/10/22 21:16, Analyst: BML (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	

Lab Sample ID: S36841.02 (continued)

Sample Tag: SUMP-B

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/10/22 21:16, Analyst: BML (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	

Lab Sample ID: S36841.03
Sample Tag: SUMP-C
Collected Date/Time: 06/07/2022 11:09
Matrix: Wastewater
COC Reference: 148233

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.6	IR
2	40ml Glass	H2SO4	Yes	3.6	IR
1	125ml Plastic	HNO3	Yes	3.6	IR
1	1L Plastic	None	Yes	3.6	IR
1	500ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/13/22 09:30	KAG	
Metal Digestion	Completed	SW3015A	06/14/22 14:45	CCM	

Inorganics

Method: E120.1, Run Date: 06/09/22 15:42, Analyst: PJH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	4,230	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/09/22 17:35, Analyst: SSM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	7	3		mg/L	1		

Method: SM5310C, Run Date: 06/16/22 16:43, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	101	3		mg/L	3		

Metals

Method: E200.8, Run Date: 06/14/22 16:20, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	0.046	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	1.65	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.349	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: 06/10/22 21:39, Analyst: BML

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	

Lab Sample ID: S36841.03 (continued)
Sample Tag: SUMP-C

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/10/22 21:39, Analyst: BML (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	

Lab Sample ID: S36841.03 (continued)

Sample Tag: SUMP-C

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/10/22 21:39, Analyst: BML (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	

Lab Sample ID: S36841.04
Sample Tag: SUMP-D
Collected Date/Time: 06/07/2022 12:55
Matrix: Wastewater
COC Reference: 148233

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.6	IR
2	40ml Glass	H2SO4	Yes	3.6	IR
1	125ml Plastic	HNO3	Yes	3.6	IR
1	1L Plastic	None	Yes	3.6	IR
1	500ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/13/22 09:30	KAG	
Metal Digestion	Completed	SW3015A	06/14/22 14:45	CCM	

Inorganics

Method: E120.1, Run Date: 06/09/22 15:43, Analyst: PJH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	4,310	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/09/22 17:35, Analyst: SSM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	6	3		mg/L	1		

Method: SM5310C, Run Date: 06/16/22 17:03, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	170	10		mg/L	10		

Metals

Method: E200.8, Run Date: 06/14/22 16:21, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	0.355	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	0.825	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.510	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: 06/13/22 18:35, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	200		ug/L	20	60-29-7	Y
Acetone	2,800	1,000		ug/L	20	67-64-1	Y
Methyl iodide	Not detected	20		ug/L	20	74-88-4	Y
Carbon disulfide	Not detected	100		ug/L	20	75-15-0	Y
tert-Methyl butyl ether (MTBE)	Not detected	100		ug/L	20	1634-04-4	Y
Acrylonitrile	Not detected	40		ug/L	20	107-13-1	Y
2-Butanone (MEK)	Not detected	500		ug/L	20	78-93-3	Y
Dichlorodifluoromethane	Not detected	100		ug/L	20	75-71-8	Y
Chloromethane	Not detected	100		ug/L	20	74-87-3	Y
Vinyl chloride	Not detected	20		ug/L	20	75-01-4	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S36841.04 (continued)
Sample Tag: SUMP-D

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/13/22 18:35, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Bromomethane	Not detected	100		ug/L	20	74-83-9	Y
Chloroethane	Not detected	100		ug/L	20	75-00-3	Y
Trichlorofluoromethane	Not detected	20		ug/L	20	75-69-4	Y
1,1-Dichloroethene	Not detected	20		ug/L	20	75-35-4	Y
Methylene chloride	Not detected	100		ug/L	20	75-09-2	Y
trans-1,2-Dichloroethene	Not detected	20		ug/L	20	156-60-5	Y
1,1-Dichloroethane	Not detected	20		ug/L	20	75-34-3	Y
cis-1,2-Dichloroethene	Not detected	20		ug/L	20	156-59-2	Y
Tetrahydrofuran*	Not detected	1,800		ug/L	20	109-99-9	Y
Chloroform	Not detected	20		ug/L	20	67-66-3	Y
Bromochloromethane	Not detected	20		ug/L	20	74-97-5	Y
1,1,1-Trichloroethane	Not detected	20		ug/L	20	71-55-6	Y
4-Methyl-2-pentanone (MIBK)	Not detected	1,000		ug/L	20	108-10-1	Y
2-Hexanone	Not detected	1,000		ug/L	20	591-78-6	Y
Carbon tetrachloride	Not detected	20		ug/L	20	56-23-5	Y
Benzene	Not detected	20		ug/L	20	71-43-2	Y
1,2-Dichloroethane	Not detected	20		ug/L	20	107-06-2	Y
Trichloroethene	Not detected	20		ug/L	20	79-01-6	Y
1,2-Dichloropropane	Not detected	20		ug/L	20	78-87-5	Y
Bromodichloromethane	Not detected	20		ug/L	20	75-27-4	Y
Dibromomethane	Not detected	100		ug/L	20	74-95-3	Y
cis-1,3-Dichloropropene	Not detected	20		ug/L	20	10061-01-5	Y
Toluene	Not detected	20		ug/L	20	108-88-3	Y
trans-1,3-Dichloropropene	Not detected	20		ug/L	20	10061-02-6	Y
1,1,2-Trichloroethane	Not detected	20		ug/L	20	79-00-5	Y
Tetrachloroethene	Not detected	20		ug/L	20	127-18-4	Y
trans-1,4-Dichloro-2-butene	Not detected	20		ug/L	20	110-57-6	Y
Dibromochloromethane	Not detected	100		ug/L	20	124-48-1	Y
1,2-Dibromoethane	Not detected	20		ug/L	20	106-93-4	Y
Chlorobenzene	Not detected	20		ug/L	20	108-90-7	Y
1,1,1,2-Tetrachloroethane	Not detected	20		ug/L	20	630-20-6	Y
Ethylbenzene	Not detected	20		ug/L	20	100-41-4	Y
p,m-Xylene*	Not detected	40		ug/L	20		Y
o-Xylene	Not detected	20		ug/L	20	95-47-6	Y
Styrene	Not detected	20		ug/L	20	100-42-5	Y
Isopropylbenzene	Not detected	100		ug/L	20	98-82-8	Y
Bromoform	Not detected	20		ug/L	20	75-25-2	Y
1,1,2,2-Tetrachloroethane	Not detected	20		ug/L	20	79-34-5	Y
1,2,3-Trichloropropane	Not detected	20		ug/L	20	96-18-4	Y
n-Propylbenzene	Not detected	20		ug/L	20	103-65-1	Y
Bromobenzene	Not detected	20		ug/L	20	108-86-1	Y
1,3,5-Trimethylbenzene	Not detected	20		ug/L	20	108-67-8	Y
tert-Butylbenzene	Not detected	20		ug/L	20	98-06-6	Y
1,2,4-Trimethylbenzene	Not detected	20		ug/L	20	95-63-6	Y
sec-Butylbenzene	Not detected	20		ug/L	20	135-98-8	Y
p-Isopropyltoluene	Not detected	100		ug/L	20	99-87-6	Y
1,3-Dichlorobenzene	Not detected	20		ug/L	20	541-73-1	Y
1,4-Dichlorobenzene	Not detected	20		ug/L	20	106-46-7	Y
1,2-Dichlorobenzene	Not detected	20		ug/L	20	95-50-1	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S36841.04 (continued)

Sample Tag: SUMP-D

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/13/22 18:35, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2,3-Trimethylbenzene	Not detected	20		ug/L	20	526-73-8	Y
n-Butylbenzene	Not detected	20		ug/L	20	104-51-8	Y
Hexachloroethane	Not detected	100		ug/L	20	67-72-1	Y
1,2-Dibromo-3-chloropropane	Not detected	100		ug/L	20	96-12-8	Y
1,2,4-Trichlorobenzene	Not detected	100		ug/L	20	120-82-1	Y
1,2,3-Trichlorobenzene	Not detected	100		ug/L	20	87-61-6	Y
Naphthalene	Not detected	100		ug/L	20	91-20-3	Y
2-Methylnaphthalene	Not detected	100		ug/L	20	91-57-6	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S36841.05
Sample Tag: SUMP-E
Collected Date/Time: 06/07/2022 13:56
Matrix: Wastewater
COC Reference: 148233

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.6	IR
2	40ml Glass	H2SO4	Yes	3.6	IR
1	125ml Plastic	HNO3	Yes	3.6	IR
1	1L Plastic	None	Yes	3.6	IR
1	500ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/13/22 09:30	KAG	
Metal Digestion	Completed	SW3015A	06/14/22 14:45	CCM	

Inorganics

Method: E120.1, Run Date: 06/09/22 15:44, Analyst: PJH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	1,590	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/09/22 17:35, Analyst: SSM

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

Method: SM5310C, Run Date: 06/16/22 17:23, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	17.7	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/14/22 16:23, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	0.018	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	0.061	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.017	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: 06/10/22 22:03, Analyst: BML

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	

Lab Sample ID: S36841.05 (continued)
Sample Tag: SUMP-E

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/10/22 22:03, Analyst: BML (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	

Lab Sample ID: S36841.05 (continued)

Sample Tag: SUMP-E

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/10/22 22:03, Analyst: BML (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	

Lab Sample ID: S36841.06
Sample Tag: SUMP-F
Collected Date/Time: 06/07/2022 15:08
Matrix: Wastewater
COC Reference: 148233

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.6	IR
2	40ml Glass	H2SO4	Yes	3.6	IR
1	125ml Plastic	HNO3	Yes	3.6	IR
1	1L Plastic	None	Yes	3.6	IR
1	500ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/13/22 09:30	KAG	
Metal Digestion	Completed	SW3015A	06/14/22 14:45	CCM	

Inorganics

Method: E120.1, Run Date: 06/09/22 15:45, Analyst: PJH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	3,680	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/09/22 17:35, Analyst: SSM

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

Method: SM5310C, Run Date: 06/16/22 17:43, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	34.0	1		mg/L	1		

Metals

Method: E200.8, Run Date: 06/14/22 16:25, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	0.011	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	0.110	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.048	0.005		mg/L	5	7440-02-0	
Zinc, Dissolved	0.013	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/10/22 22:26, Analyst: BML

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	

Lab Sample ID: S36841.06 (continued)
Sample Tag: SUMP-F

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/10/22 22:26, Analyst: BML (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	

Lab Sample ID: S36841.06 (continued)

Sample Tag: SUMP-F

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/10/22 22:26, Analyst: BML (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	

Lab Sample ID: S36841.07
Sample Tag: SUMP-DUP-060722
Collected Date/Time: 06/07/2022 00:01
Matrix: Wastewater
COC Reference: 148233

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.6	IR
2	40ml Glass	H2SO4	Yes	3.6	IR
1	125ml Plastic	HNO3	Yes	3.6	IR
1	1L Plastic	None	Yes	3.6	IR
1	500ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/13/22 09:30	KAG	
Metal Digestion	Completed	SW3015A	06/14/22 14:45	CCM	

Inorganics

Method: E120.1, Run Date: 06/09/22 15:48, Analyst: PJH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Conductivity	4,250	1		umhos/cm	1		

Method: SM2540D, Run Date: 06/09/22 17:35, Analyst: SSM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Suspended Solids	8	3		mg/L	1		

Method: SM5310C, Run Date: 06/16/22 18:03, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TOC	105	5		mg/L	5		

Metals

Method: E200.8, Run Date: 06/14/22 16:27, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium, Dissolved	0.047	0.005		mg/L	5	7440-47-3	
Copper, Dissolved	1.66	0.005		mg/L	5	7440-50-8	
Nickel, Dissolved	0.349	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: 06/13/22 18:11, Analyst: KAG

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	

Lab Sample ID: S36841.07 (continued)
Sample Tag: SUMP-DUP-060722

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/13/22 18:11, Analyst: KAG (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	

Lab Sample ID: S36841.07 (continued)

Sample Tag: SUMP-DUP-060722

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/13/22 18:11, Analyst: KAG (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	

Lab Sample ID: S36841.08
Sample Tag: Trip Blank-060722
Collected Date/Time: 06/07/2022 00:01
Matrix: Water
COC Reference: 148233

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/13/22 09:30	KAG	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/10/22 17:20, Analyst: BML

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	

Lab Sample ID: S36841.08 (continued)

Sample Tag: Trip Blank-060722

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/10/22 17:20, Analyst: BML (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: S36841
Client: OBG02 (Ramboll Americas)
Project: RACER Coldwater Road
Submitted: 06/08/2022 15:30 Login User: PFD

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

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

Selection				Description	Note
Sample Receiving					
01.	[X] Yes	[ ] No	[ ] N/A	Samples are received at 4C +/- 2C Thermometer #	IR 3.6
02.	[X] Yes	[ ] No	[ ] N/A	Received on ice/ cooling process begun	
03.	[ ] Yes	[X] No	[ ] N/A	Samples shipped	
04.	[ ] Yes	[X] No	[ ] N/A	Samples left in 24 hr. drop box	
05.	[ ] Yes	[ ] No	[X] N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody					
06.	[X] Yes	[ ] No	[ ] N/A	COC adequately filled out	
07.	[X] Yes	[ ] No	[ ] N/A	COC signed and relinquished to the lab	
08.	[X] Yes	[ ] No	[ ] N/A	Sample tag on bottles match COC	
09.	[ ] Yes	[X] No	[ ] N/A	Subcontracting needed? Subcontacted to:	
Preservation					
10.	[X] Yes	[ ] No	[ ] N/A	Do sample have correct chemical preservation	
11.	[X] Yes	[ ] No	[ ] N/A	Completed pH checks on preserved samples? (no VOAs)	
12.	[X] Yes	[ ] No	[ ] N/A	Did any samples need to be preserved in the lab?	See check list
Bottle Conditions					
13.	[X] Yes	[ ] No	[ ] N/A	All bottles intact	
14.	[X] Yes	[ ] No	[ ] N/A	Appropriate analytical bottles are used	
15.	[X] Yes	[ ] No	[ ] N/A	Merit bottles used	
16.	[X] Yes	[ ] No	[ ] N/A	Sufficient sample volume received	
17.	[ ] Yes	[X] No	[ ] N/A	Samples require laboratory filtration	
18.	[X] Yes	[ ] No	[ ] N/A	Samples submitted within holding time	
19.	[ ] Yes	[X] No	[ ] 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: S36841 Submitted: 06/08/2022 15:30

Client: OBG02 (Ramboll Americas)

Project: RACER Coldwater Road

Initial Preservation Check: 06/08/2022 16:24 PFD

Preservation Recheck (E200.8): 06/10/2022 15:49 MMC

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

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

Sample ID	Bottle / Preservation	pH (Orig)	Add ml	pH (New)	Notes
S36841.01	125ml Plastic HNO3	<2			
S36841.02	125ml Plastic HNO3	<2			
S36841.03	125ml Plastic HNO3	<2			
S36841.04	125ml Plastic HNO3	7	0.5	<2	Lot# 280251
S36841.05	125ml Plastic HNO3	<2			
S36841.06	125ml Plastic HNO3	<2			
S36841.07	125ml Plastic HNO3	<2			

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

148233

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Clifford Yuntz / Kevin Schneider
COMPANY: Ramboll
ADDRESS: 2090 Commonwealth Blvd
CITY: Ann Arbor STATE: MI ZIP CODE:
PHONE NO.: 313-333-0211 CELL NO.: P.O. NO.: 1940004462 Task 001
E-MAIL ADDRESS: Clifford.Yuntz@Ramboll.com / Kevin.Schneider@Ramboll.com QUOTE NO.:

INVOICE TO

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

PROJECT NO./NAME: RACER Coldwater Road
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Schneider

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

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

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

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

MERIT LAB NO. (FOR LAB USE ONLY)	COLLECTION DATE	COLLECTION TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	TOC	Dissolved Metals	TSS	Specific Conductivity	Special Instructions
36841.01	6/6/22	1457	Sump - A	WSW	8	2	3	1	2				X	X	X	X	X	Dissolved metals were field filtered
.02	6/7/22	1000	Sump - B	WSW	8	2	3	1	2				X	X	X	X	X	
.03	6/7/22	1109	Sump - C	WSW	8	2	3	1	2				X	X	X	X	X	
.04	6/7/22	1255	Sump - D	WSW	8	2	3	1	2				X	X	X	X	X	
.05	6/7/22	1356	Sump - E	WSW	8	2	3	1	2				X	X	X	X	X	Metals ARE:
.06	6/7/22	1508	Sump - F	WSW	8	2	3	1	2				X	X	X	X	X	Cu, Cr, Ni, Zn
.07	6/7/22	—	Sump - DUP - 060722	WSW	8	2	3	1	2				X	X	X	X	X	
.08	6/7/22	—	Trip Blank - 060722	L	1		1						X					

RELINQUISHED BY: SIGNATURE/ORGANIZATION	X Sampler	DATE	TIME	6/8/22 1800
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME	6/8/22 1200
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME	6/8/22 15:30
RECEIVED BY: SIGNATURE/ORGANIZATION	Patrick M	DATE	TIME	6/8/22 1530

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME	
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS		
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS		

NOTES: TEMP. ON ARRIVAL 3.6

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

Rev. 1.26.22

Quality Control Report

Report ID: QC-S36841-01
Generated on 06/17/2022

Report to

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

Phone: 313-333-0211 FAX:

Report Produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

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

Report Summary

Lab Sample ID(s): S36841.01-S36841.08
Project: RACER Coldwater Road
Submitted Date/Time: 06/08/2022 15:30
Sampled by: Kevin Schneider
P.O. #: 1940004462 TASK 001

QC Report Sections

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: S36841.01
Sample Tag: SUMP-A
Collected Date/Time: 06/06/2022 14:57
Matrix: Wastewater
COC Reference: 148233

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	06/09/22 15:40	COND220609W1	COND220609W1	No	BLK/DUP
TOC	SM5310C	06/16/22 16:03	TOC220616-W1	TOC220616-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/09/22 17:35	TSS220609	TSS220609	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	06/14/22 16:16	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/14/22 16:16	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/14/22 16:16	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/14/22 16:16	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Organics - Volatiles						
Volatile Organics - DEQ List	SW5030C/8260C	06/10/22 20:52	220610A3	VF220610W2	Yes	BLK/LCS/LCSD

QC Report - Analysis Summary

Lab Sample ID: S36841.02
Sample Tag: SUMP-B
Collected Date/Time: 06/07/2022 10:00
Matrix: Wastewater
COC Reference: 148233

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	06/09/22 15:41	COND220609W1	COND220609W1	No	BLK/DUP
TOC	SM5310C	06/16/22 16:23	TOC220616-W1	TOC220616-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/09/22 17:35	TSS220609	TSS220609	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	06/14/22 16:18	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/14/22 16:18	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/14/22 16:18	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/14/22 16:18	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Organics - Volatiles						
Volatile Organics - DEQ List	SW5030C/8260C	06/10/22 21:16	220610A3	VF220610W2	Yes	BLK/LCS/LCSD

Lab Sample ID: S36841.03

Sample Tag: SUMP-C

Collected Date/Time: 06/07/2022 11:09

Matrix: Wastewater

COC Reference: 148233

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	06/09/22 15:42	COND220609W1	COND220609W1	No	BLK/DUP
TOC	SM5310C	06/16/22 16:43	TOC220616-W1	TOC220616-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/09/22 17:35	TSS220609	TSS220609	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	06/14/22 16:20	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/14/22 16:20	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/14/22 16:20	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/14/22 16:20	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Organics - Volatiles						
Volatile Organics - DEQ List	SW5030C/8260C	06/10/22 21:39	220610A3	VF220610W2	Yes	BLK/LCS/LCSD

Lab Sample ID: S36841.04

Sample Tag: SUMP-D

Collected Date/Time: 06/07/2022 12:55

Matrix: Wastewater

COC Reference: 148233

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	06/09/22 15:43	COND220609W1	COND220609W1	No	BLK/DUP
TOC	SM5310C	06/16/22 17:03	TOC220616-W1	TOC220616-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/09/22 17:35	TSS220609	TSS220609	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	06/14/22 16:21	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/14/22 16:21	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/14/22 16:21	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/14/22 16:21	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Organics - Volatiles						
Volatile Organics - DEQ List	SW5030C/8260C	06/13/22 18:35	220613A3	VF220613W2	Yes	BLK/LCS/LCSD

QC Report - Analysis Summary

Lab Sample ID: S36841.05
Sample Tag: SUMP-E
Collected Date/Time: 06/07/2022 13:56
Matrix: Wastewater
COC Reference: 148233

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	06/09/22 15:44	COND220609W1	COND220609W1	No	BLK/DUP
TOC	SM5310C	06/16/22 17:23	TOC220616-W1	TOC220616-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/09/22 17:35	TSS220609	TSS220609	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	06/14/22 16:23	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/14/22 16:23	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/14/22 16:23	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/14/22 16:23	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Organics - Volatiles						
Volatile Organics - DEQ List	SW5030C/8260C	06/10/22 22:03	220610A3	VF220610W2	Yes	BLK/LCS/LCSD

QC Report - Analysis Summary

Lab Sample ID: S36841.06
Sample Tag: SUMP-F
Collected Date/Time: 06/07/2022 15:08
Matrix: Wastewater
COC Reference: 148233

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	06/09/22 15:45	COND220609W1	COND220609W1	No	BLK/DUP
TOC	SM5310C	06/16/22 17:43	TOC220616-W1	TOC220616-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/09/22 17:35	TSS220609	TSS220609	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	06/14/22 16:25	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/14/22 16:25	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/14/22 16:25	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/14/22 16:25	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Organics - Volatiles						
Volatile Organics - DEQ List	SW5030C/8260C	06/10/22 22:26	220610A3	VF220610W2	Yes	BLK/LCS/LCSD

QC Report - Analysis Summary

Lab Sample ID: S36841.07
Sample Tag: SUMP-DUP-060722
Collected Date/Time: 06/07/2022 00:01
Matrix: Wastewater
COC Reference: 148233

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Conductivity	E120.1	06/09/22 15:48	COND220609W1	COND220609W1	No	BLK/DUP
TOC	SM5310C	06/16/22 18:03	TOC220616-W1	TOC220616-W1	No	BLK/LCS/MS/MSD/DU
Total Suspended Solids	SM2540D	06/09/22 17:35	TSS220609	TSS220609	No	BLK/LCS/DUP
Metals						
Chromium, Dissolved	E200.8	06/14/22 16:27	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Copper, Dissolved	E200.8	06/14/22 16:27	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Nickel, Dissolved	E200.8	06/14/22 16:27	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Zinc, Dissolved	E200.8	06/14/22 16:27	MT4-22-0614B	MTD-061422-6	No	BLK/LCS/MS/MSD
Organics - Volatiles						
Volatile Organics - DEQ List	SW5030C/8260C	06/13/22 18:11	220613A3	VF220613W2	Yes	BLK/LCS/LCSD

Lab Sample ID: S36841.08

Sample Tag: Trip Blank-060722

Collected Date/Time: 06/07/2022 00:01

Matrix: Water

COC Reference: 148233

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Organics - Volatiles						
Volatile Organics - DEQ List	SW5030C/8260C	06/10/22 17:20	220610A3	VF220610W2	Yes	BLK/LCS/LCSD

QC Report - Prep Batch Summary

Inorganics, Prep Batch ID: COND220609W1

Surrogates: No, QC Types: BLK/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S36841.01	Conductivity	E120.1	06/09/22 15:40	COND220609W1
S36841.02	Conductivity	E120.1	06/09/22 15:41	COND220609W1
S36841.03	Conductivity	E120.1	06/09/22 15:42	COND220609W1
S36841.04	Conductivity	E120.1	06/09/22 15:43	COND220609W1
S36841.05	Conductivity	E120.1	06/09/22 15:44	COND220609W1
S36841.06	Conductivity	E120.1	06/09/22 15:45	COND220609W1
S36841.07	Conductivity	E120.1	06/09/22 15:48	COND220609W1

Inorganics, Prep Batch ID: TOC220616-W1

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S36841.01	TOC	SM5310C	06/16/22 16:03	TOC220616-W1
S36841.02	TOC	SM5310C	06/16/22 16:23	TOC220616-W1
S36841.03	TOC	SM5310C	06/16/22 16:43	TOC220616-W1
S36841.04	TOC	SM5310C	06/16/22 17:03	TOC220616-W1
S36841.05	TOC	SM5310C	06/16/22 17:23	TOC220616-W1
S36841.06	TOC	SM5310C	06/16/22 17:43	TOC220616-W1
S36841.07	TOC	SM5310C	06/16/22 18:03	TOC220616-W1

Inorganics, Prep Batch ID: TSS220609

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S36841.01	Total Suspended Solids	SM2540D	06/09/22 17:35	TSS220609
S36841.02	Total Suspended Solids	SM2540D	06/09/22 17:35	TSS220609
S36841.03	Total Suspended Solids	SM2540D	06/09/22 17:35	TSS220609
S36841.04	Total Suspended Solids	SM2540D	06/09/22 17:35	TSS220609
S36841.05	Total Suspended Solids	SM2540D	06/09/22 17:35	TSS220609
S36841.06	Total Suspended Solids	SM2540D	06/09/22 17:35	TSS220609
S36841.07	Total Suspended Solids	SM2540D	06/09/22 17:35	TSS220609

Metals, Prep Batch ID: MTD-061422-6

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S36841.01	Chromium, Dissolved	E200.8	06/14/22 16:16	MT4-22-0614B
S36841.01	Copper, Dissolved	E200.8	06/14/22 16:16	MT4-22-0614B
S36841.01	Nickel, Dissolved	E200.8	06/14/22 16:16	MT4-22-0614B
S36841.01	Zinc, Dissolved	E200.8	06/14/22 16:16	MT4-22-0614B
S36841.02	Chromium, Dissolved	E200.8	06/14/22 16:18	MT4-22-0614B
S36841.02	Copper, Dissolved	E200.8	06/14/22 16:18	MT4-22-0614B
S36841.02	Nickel, Dissolved	E200.8	06/14/22 16:18	MT4-22-0614B
S36841.02	Zinc, Dissolved	E200.8	06/14/22 16:18	MT4-22-0614B
S36841.03	Chromium, Dissolved	E200.8	06/14/22 16:20	MT4-22-0614B
S36841.03	Copper, Dissolved	E200.8	06/14/22 16:20	MT4-22-0614B
S36841.03	Nickel, Dissolved	E200.8	06/14/22 16:20	MT4-22-0614B
S36841.03	Zinc, Dissolved	E200.8	06/14/22 16:20	MT4-22-0614B
S36841.04	Chromium, Dissolved	E200.8	06/14/22 16:21	MT4-22-0614B
S36841.04	Copper, Dissolved	E200.8	06/14/22 16:21	MT4-22-0614B
S36841.04	Nickel, Dissolved	E200.8	06/14/22 16:21	MT4-22-0614B
S36841.04	Zinc, Dissolved	E200.8	06/14/22 16:21	MT4-22-0614B
S36841.05	Chromium, Dissolved	E200.8	06/14/22 16:23	MT4-22-0614B

Metals, Prep Batch ID: MTD-061422-6 (continued)

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S36841.05	Copper, Dissolved	E200.8	06/14/22 16:23	MT4-22-0614B
S36841.05	Nickel, Dissolved	E200.8	06/14/22 16:23	MT4-22-0614B
S36841.05	Zinc, Dissolved	E200.8	06/14/22 16:23	MT4-22-0614B
S36841.06	Chromium, Dissolved	E200.8	06/14/22 16:25	MT4-22-0614B
S36841.06	Copper, Dissolved	E200.8	06/14/22 16:25	MT4-22-0614B
S36841.06	Nickel, Dissolved	E200.8	06/14/22 16:25	MT4-22-0614B
S36841.06	Zinc, Dissolved	E200.8	06/14/22 16:25	MT4-22-0614B
S36841.07	Chromium, Dissolved	E200.8	06/14/22 16:27	MT4-22-0614B
S36841.07	Copper, Dissolved	E200.8	06/14/22 16:27	MT4-22-0614B
S36841.07	Nickel, Dissolved	E200.8	06/14/22 16:27	MT4-22-0614B
S36841.07	Zinc, Dissolved	E200.8	06/14/22 16:27	MT4-22-0614B

Organics - Volatiles, Prep Batch ID: VF220610W2

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S36841.01	Volatile Organics - DEQ List	SW5030C/8260C	06/10/22 20:52	220610A3
S36841.02	Volatile Organics - DEQ List	SW5030C/8260C	06/10/22 21:16	220610A3
S36841.03	Volatile Organics - DEQ List	SW5030C/8260C	06/10/22 21:39	220610A3
S36841.05	Volatile Organics - DEQ List	SW5030C/8260C	06/10/22 22:03	220610A3
S36841.06	Volatile Organics - DEQ List	SW5030C/8260C	06/10/22 22:26	220610A3
S36841.08	Volatile Organics - DEQ List	SW5030C/8260C	06/10/22 17:20	220610A3

Organics - Volatiles, Prep Batch ID: VF220613W2

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S36841.04	Volatile Organics - DEQ List	SW5030C/8260C	06/13/22 18:35	220613A3
S36841.07	Volatile Organics - DEQ List	SW5030C/8260C	06/13/22 18:11	220613A3

QC Report - Surrogates per Lab Sample

Lab Sample ID: S36841.01

Sample Tag: SUMP-A

Collected Date/Time: 06/06/2022 14:57

Matrix: Wastewater

COC Reference: 148233

Organics - Volatiles, Analysis: Volatile Organics - DEQ List

Run in Batch: 220610A3, Run Date: 06/10/2022 20:52, Matrix: WW, Dilution: 1

Surrogate	Flags	**%Rec**	LCL	UCL
4-Bromofluorobenzene		**111.8**	80.0	124.0
1,2-Dichloroethane-D4		**94.2**	72.0	125.0
Toluene-D8		**104.6**	89.0	112.0

QC Report - Surrogates per Lab Sample

Lab Sample ID: S36841.02

Sample Tag: SUMP-B

Collected Date/Time: 06/07/2022 10:00

Matrix: Wastewater

COC Reference: 148233

Organics - Volatiles, Analysis: Volatile Organics - DEQ List

Run in Batch: 220610A3, Run Date: 06/10/2022 21:16, Matrix: WW, Dilution: 1

Surrogate	Flags	**%Rec**	LCL	UCL
4-Bromofluorobenzene		**111.6**	80.0	124.0
1,2-Dichloroethane-D4		**94.8**	72.0	125.0
Toluene-D8		**104.8**	89.0	112.0

QC Report - Surrogates per Lab Sample

Lab Sample ID: S36841.03

Sample Tag: SUMP-C

Collected Date/Time: 06/07/2022 11:09

Matrix: Wastewater

COC Reference: 148233

Organics - Volatiles, Analysis: Volatile Organics - DEQ List

Run in Batch: 220610A3, Run Date: 06/10/2022 21:39, Matrix: WW, Dilution: 1

Surrogate	Flags	**%Rec**	LCL	UCL
4-Bromofluorobenzene		**111.6**	80.0	124.0
1,2-Dichloroethane-D4		**95.4**	72.0	125.0
Toluene-D8		**105.0**	89.0	112.0

QC Report - Surrogates per Lab Sample

Lab Sample ID: S36841.04

Sample Tag: SUMP-D

Collected Date/Time: 06/07/2022 12:55

Matrix: Wastewater

COC Reference: 148233

Organics - Volatiles, Analysis: Volatile Organics - DEQ List

Run in Batch: 220613A3, Run Date: 06/13/2022 18:35, Matrix: WW, Dilution: 20

Surrogate	Flags	**%Rec**	LCL	UCL
4-Bromofluorobenzene		**112.8**	80.0	124.0
1,2-Dichloroethane-D4		**99.4**	72.0	125.0
Toluene-D8		**105.4**	89.0	112.0

QC Report - Surrogates per Lab Sample

Lab Sample ID: S36841.05

Sample Tag: SUMP-E

Collected Date/Time: 06/07/2022 13:56

Matrix: Wastewater

COC Reference: 148233

Organics - Volatiles, Analysis: Volatile Organics - DEQ List

Run in Batch: 220610A3, Run Date: 06/10/2022 22:03, Matrix: WW, Dilution: 1

Surrogate	Flags	**%Rec**	LCL	UCL
4-Bromofluorobenzene		**112.4**	80.0	124.0
1,2-Dichloroethane-D4		**93.6**	72.0	125.0
Toluene-D8		**105.6**	89.0	112.0

QC Report - Surrogates per Lab Sample

Lab Sample ID: S36841.06

Sample Tag: SUMP-F

Collected Date/Time: 06/07/2022 15:08

Matrix: Wastewater

COC Reference: 148233

Organics - Volatiles, Analysis: Volatile Organics - DEQ List

Run in Batch: 220610A3, Run Date: 06/10/2022 22:26, Matrix: WW, Dilution: 1

Surrogate	Flags	**%Rec**	LCL	UCL
4-Bromofluorobenzene		**111.6**	80.0	124.0
1,2-Dichloroethane-D4		**101.0**	72.0	125.0
Toluene-D8		**103.6**	89.0	112.0

QC Report - Surrogates per Lab Sample

Lab Sample ID: S36841.07

Sample Tag: SUMP-DUP-060722

Collected Date/Time: 06/07/2022 00:01

Matrix: Wastewater

COC Reference: 148233

Organics - Volatiles, Analysis: Volatile Organics - DEQ List

Run in Batch: 220613A3, Run Date: 06/13/2022 18:11, Matrix: WW, Dilution: 1

Surrogate	Flags	**%Rec**	LCL	UCL
4-Bromofluorobenzene		**110.8**	80.0	124.0
1,2-Dichloroethane-D4		**95.4**	72.0	125.0
Toluene-D8		**106.2**	89.0	112.0

QC Report - Surrogates per Lab Sample

Lab Sample ID: S36841.08

Sample Tag: Trip Blank-060722

Collected Date/Time: 06/07/2022 00:01

Matrix: Water

COC Reference: 148233

Organics - Volatiles, Analysis: Volatile Organics - DEQ List

Run in Batch: 220610A3, Run Date: 06/10/2022 17:20, Matrix: WW, Dilution: 1

Surrogate	Flags	**%Rec**	LCL	UCL
4-Bromofluorobenzene		**112.4**	80.0	124.0
1,2-Dichloroethane-D4		**98.0**	72.0	125.0
Toluene-D8		**105.4**	89.0	112.0

QC Report - Surrogates per QC Sample

Organics - Volatiles, Prep Batch ID: VF220610W2

QC Types: BLK/LCS/LCSD

Blank (BLK)

Lab Sample ID: 220610A3.BLKW10A

Run in Batch: 220610A3, Run Date: 06/10/2022 16:25, Prep Date: 06/10/2022, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		**111.0**	80.0	124.0
1,2-Dichloroethane-D4		**92.8**	72.0	125.0
Toluene-D8		**104.0**	89.0	112.0

Laboratory Control Sample (LCS)

Lab Sample ID: 220610A3.LCSW10A

Run in Batch: 220610A3, Run Date: 06/10/2022 14:52, Prep Date: 06/10/2022, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		**116.6**	80.0	124.0
1,2-Dichloroethane-D4		**96.0**	72.0	125.0
Toluene-D8		**105.2**	89.0	112.0

Laboratory Control Sample Duplicate (LCSD)

Lab Sample ID: 220610A3.LCSDW10A, Parent Sample ID: 220610A3.LCSW10A

Run in Batch: 220610A3, Run Date: 06/10/2022 15:15, Prep Date: 06/10/2022, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		**115.4**	80.0	124.0
1,2-Dichloroethane-D4		**91.6**	72.0	125.0
Toluene-D8		**105.6**	89.0	112.0

QC Report - Surrogates per QC Sample

Organics - Volatiles, Prep Batch ID: VF220613W2

QC Types: BLK/LCS/LCSD

Blank (BLK)

Lab Sample ID: 220613A3.BLKW13A

Run in Batch: 220613A3, Run Date: 06/13/2022 11:34, Prep Date: 06/13/2022, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		**113.2**	80.0	124.0
1,2-Dichloroethane-D4		**101.2**	72.0	125.0
Toluene-D8		**105.4**	89.0	112.0

Laboratory Control Sample (LCS)

Lab Sample ID: 220613A3.LCSW13A

Run in Batch: 220613A3, Run Date: 06/13/2022 10:01, Prep Date: 06/13/2022, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		**115.4**	80.0	124.0
1,2-Dichloroethane-D4		**94.8**	72.0	125.0
Toluene-D8		**105.2**	89.0	112.0

Laboratory Control Sample Duplicate (LCSD)

Lab Sample ID: 220613A3.LCSDW13A, Parent Sample ID: 220613A3.LCSW13A

Run in Batch: 220613A3, Run Date: 06/13/2022 10:24, Prep Date: 06/13/2022, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		**115.2**	80.0	124.0
1,2-Dichloroethane-D4		**93.0**	72.0	125.0
Toluene-D8		**105.4**	89.0	112.0

Inorganics, Prep Batch ID: COND220609W1

Surrogates: No, QC Types: BLK/DUP

Blank (BLK)

Lab Sample ID: COND220609W1.LRB1

Run in Batch: COND220609W1, Run Date: 06/09/2022 15:31, Prep Date: 06/09/2022, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Conductivity		ND	NA	mg/L

Duplicate (DUP)

Lab Sample ID: COND220609W1.DP1, Parent Sample ID: S36853.07

Run in Batch: COND220609W1, Run Date: 06/09/2022 15:56, Prep Date: 06/09/2022, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
Conductivity		0.4	15

Inorganics, Prep Batch ID: TOC220616-W1

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

Blank (BLK)

Lab Sample ID: TOC220616-W1.LRB1

Run in Batch: TOC220616-W1, Run Date: 06/16/2022 11:52, Prep Date: 06/16/2022, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
TOC		ND	1	mg/L

Laboratory Control Sample (LCS)

Lab Sample ID: TOC220616-W1.LCS1

Run in Batch: TOC220616-W1, Run Date: 06/16/2022 12:32, Prep Date: 06/16/2022, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
TOC		94	90	110

Matrix Spike (MS)

Lab Sample ID: TOC220616-W1.MS1, Parent Sample ID: S36661.17

Run in Batch: TOC220616-W1, Run Date: 06/16/2022 14:27, Prep Date: 06/16/2022, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
TOC		99	80	120

Matrix Spike Duplicate (MSD)

Lab Sample ID: TOC220616-W1.MSD1, Parent Sample ID: TOC220616-W1.MS1

Run in Batch: TOC220616-W1, Run Date: 06/16/2022 14:46, Prep Date: 06/16/2022, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
TOC		96	80	120	2	15

Duplicate (DUP)

Lab Sample ID: TOC220616-W1.DP1, Parent Sample ID: S36661.17

Run in Batch: TOC220616-W1, Run Date: 06/16/2022 14:07, Prep Date: 06/16/2022, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
TOC		9	15

Inorganics, Prep Batch ID: TSS220609

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

Blank (BLK)

Lab Sample ID: TSS220609.LRB1

Run in Batch: TSS220609, Run Date: 06/09/2022 17:35, Prep Date: 06/09/2022, Matrix: Liquid, Dilution: 1

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

Laboratory Control Sample (LCS)

Lab Sample ID: TSS220609.LCS1

Run in Batch: TSS220609, Run Date: 06/09/2022 17:35, Prep Date: 06/09/2022, Matrix: Liquid, Dilution: 10

Analyte	Flags	% Rec	LCL	UCL
Total Suspended Solids		90.37	77.6	114

Duplicate (DUP)

Lab Sample ID: TSS220609.DP1, Parent Sample ID: S36780.03

Run in Batch: TSS220609, Run Date: 06/09/2022 17:35, Prep Date: 06/09/2022, Matrix: Liquid, Dilution: 8

Analyte	Flags	RPD	RPD CL
Total Suspended Solids		4.6	10

Metals, Prep Batch ID: MTD-061422-6

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

Blank (BLK)

Lab Sample ID: MT4-22-0614B.213.LRB

Run in Batch: MT4-22-0614B, Run Date: 06/14/2022 16:14, Prep Date: 06/14/2022, 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: MT4-22-0614B.211.LCS

Run in Batch: MT4-22-0614B, Run Date: 06/14/2022 16:11, Prep Date: 06/14/2022, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Chromium		104	85	115
Copper		105	85	115
Nickel		103	85	115
Zinc		108	85	115

Matrix Spike (MS)

Lab Sample ID: MT4-22-0614B.228.MS, Parent Sample ID: S36841.07

Run in Batch: MT4-22-0614B, Run Date: 06/14/2022 16:28, Prep Date: 06/14/2022, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL
Chromium		99	75	125
Copper		104	75	125
Nickel		94	75	125
Zinc		102	75	125

Matrix Spike (MS)

Lab Sample ID: MT4-22-0614B.246.MS, Parent Sample ID: S36853.07

Run in Batch: MT4-22-0614B, Run Date: 06/14/2022 16:45, Prep Date: 06/14/2022, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL
Chromium		99	75	125
Copper		95	75	125
Nickel		96	75	125
Zinc		102	75	125

Matrix Spike Duplicate (MSD)

Lab Sample ID: MT4-22-0614B.229.MSD, Parent Sample ID: MT4-22-0614B.228.MS

Run in Batch: MT4-22-0614B, Run Date: 06/14/2022 16:29, Prep Date: 06/14/2022, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Chromium		99	75	125	0	20
Copper		92	75	125	2	20
Nickel		91	75	125	1	20
Zinc		99	75	125	4	20

Metals, Prep Batch ID: MTD-061422-6 (continued)

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

Matrix Spike Duplicate (MSD)

Lab Sample ID: MT4-22-0614B.247.MSD, Parent Sample ID: MT4-22-0614B.246.MS

Run in Batch: MT4-22-0614B, Run Date: 06/14/2022 16:46, Prep Date: 06/14/2022, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Chromium		100	75	125	1	20
Copper		96	75	125	1	20
Nickel		98	75	125	1	20
Zinc		102	75	125	0	20

Organics - Volatiles, Prep Batch ID: VF220610W2

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

Blank (BLK)

Lab Sample ID: 220610A3.BLKW10A

Run in Batch: 220610A3, Run Date: 06/10/2022 16:25, Prep Date: 06/10/2022, 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	1.00	ug/l
o-Xylene		ND	1.00	ug/l
Styrene		ND	1.00	ug/l
Isopropylbenzene		ND	1.00	ug/l

Organics - Volatiles, Prep Batch ID: VF220610W2 (continued)

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

Blank (BLK) (continued)

Lab Sample ID: 220610A3.BLKW10A

Run in Batch: 220610A3, Run Date: 06/10/2022 16:25, Prep Date: 06/10/2022, 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: 220610A3.LCSW10A

Run in Batch: 220610A3, Run Date: 06/10/2022 14:52, Prep Date: 06/10/2022, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Diethyl ether		103.6	67.4	121.2
Acetone		128.8	29.9	161.5
Methyl iodide		100.0	68.8	116.4
Carbon disulfide		92.0	63.8	137.4
tert-Methyl butyl ether (MTBE)		88.5	73.2	122.4
Acrylonitrile		122.0	69.9	128.9
2-Butanone (MEK)		130.1	44.0	134.4
Dichlorodifluoromethane		65.4	10.0	222.8
Chloromethane		91.4	23.8	166.5
Vinyl chloride		81.7	43.5	149.1
Bromomethane		105.9	56.8	151.3
Chloroethane		97.3	53.4	149.4
Trichlorofluoromethane		85.7	59.7	151.8
1,1-Dichloroethene		86.0	69.6	139.4
Methylene chloride		99.7	73.3	121.1
trans-1,2-Dichloroethene		93.1	73.6	129.3
1,1-Dichloroethane		94.9	71.5	126.2
cis-1,2-Dichloroethene		100.7	76.6	122.1
Tetrahydrofuran	*	133.5	59.0	117.9
Chloroform		96.8	78.4	124.0

Organics - Volatiles, Prep Batch ID: VF220610W2 (continued)

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

Laboratory Control Sample (LCS) (continued)

Lab Sample ID: 220610A3.LCSW10A

Run in Batch: 220610A3, Run Date: 06/10/2022 14:52, Prep Date: 06/10/2022, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Bromochloromethane		105.7	78.2	120.8
1,1,1-Trichloroethane		87.7	79.4	130.9
4-Methyl-2-pentanone (MIBK)		117.9	71.6	125.2
2-Hexanone		127.8	55.4	136.9
Carbon tetrachloride		90.9	72.6	133.0
Benzene		101.0	79.9	124.9
1,2-Dichloroethane		98.9	76.0	126.3
Trichloroethene		98.7	79.7	124.2
1,2-Dichloropropane		106.1	78.6	126.4
Bromodichloromethane		104.7	80.4	128.2
Dibromomethane		115.0	76.9	122.1
cis-1,3-Dichloropropene		109.1	79.8	129.9
Toluene		98.9	79.8	124.5
trans-1,3-Dichloropropene		109.7	74.0	131.3
1,1,2-Trichloroethane		110.3	78.7	123.1
Tetrachloroethene		100.9	74.5	124.5
trans-1,4-Dichloro-2-butene		113.1	68.6	135.4
Dibromochloromethane		113.9	74.6	127.2
1,2-Dibromoethane		115.1	70.3	133.7
Chlorobenzene		111.4	79.2	122.7
1,1,1,2-Tetrachloroethane		112.7	80.3	128.2
Ethylbenzene		104.1	79.5	129.1
p,m-Xylene		106.2	79.4	132.2
o-Xylene		108.2	80.2	131.0
Styrene		114.4	69.5	126.7
Isopropylbenzene		102.0	74.4	121.5
Bromoform		122.6	69.4	128.0
1,1,2,2-Tetrachloroethane		120.5	79.8	126.3
1,2,3-Trichloropropane		122.0	78.3	138.8
n-Propylbenzene		99.3	82.0	130.7
Bromobenzene		117.1	78.7	124.6
1,3,5-Trimethylbenzene		104.7	81.3	128.9
tert-Butylbenzene		92.4	80.7	128.9
1,2,4-Trimethylbenzene		105.2	81.4	130.8
sec-Butylbenzene		81.7	77.4	129.8
p-Isopropyltoluene		87.9	79.8	137.5
1,3-Dichlorobenzene		104.5	77.0	131.3
1,4-Dichlorobenzene		105.2	20.7	137.7
1,2-Dichlorobenzene		104.8	10.0	166.2
1,2,3-Trimethylbenzene		96.3	76.3	124.2
n-Butylbenzene		81.6	80.0	133.3
Hexachloroethane		88.3	23.8	138.1
1,2-Dibromo-3-chloropropane		128.5	21.2	189.4
1,2,4-Trichlorobenzene		99.0	27.4	143.4
1,2,3-Trichlorobenzene		98.7	75.4	131.4
Naphthalene		111.1	32.9	135.8

Organics - Volatiles, Prep Batch ID: VF220610W2 (continued)

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

Laboratory Control Sample (LCS) (continued)

Lab Sample ID: 220610A3.LCSW10A

Run in Batch: 220610A3, Run Date: 06/10/2022 14:52, Prep Date: 06/10/2022, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
2-Methylnaphthalene		106.2	25.5	165.5

Laboratory Control Sample Duplicate (LCSD)

Lab Sample ID: 220610A3.LCSDW10A, Parent Sample ID: 220610A3.LCSW10A

Run in Batch: 220610A3, Run Date: 06/10/2022 15:15, Prep Date: 06/10/2022, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Diethyl ether		101.2	67.4	121.2	2.3	30.0
Acetone		120.5	29.9	161.5	6.7	30.0
Methyl iodide		97.2	68.8	116.4	2.9	30.0
Carbon disulfide		88.6	63.8	137.4	3.8	30.0
tert-Methyl butyl ether (MTBE)		86.7	73.2	122.4	2.0	30.0
Acrylonitrile		118.6	69.9	128.9	2.8	30.0
2-Butanone (MEK)		120.0	44.0	134.4	8.1	30.0
Dichlorodifluoromethane		62.2	10.0	222.8	5.1	30.0
Chloromethane		87.3	23.8	166.5	4.6	30.0
Vinyl chloride		78.6	43.5	149.1	3.8	30.0
Bromomethane		102.5	56.8	151.3	3.2	30.0
Chloroethane		94.0	53.4	149.4	3.5	30.0
Trichlorofluoromethane		81.3	59.7	151.8	5.2	30.0
1,1-Dichloroethene		82.2	69.6	139.4	4.5	30.0
Methylene chloride		96.0	73.3	121.1	3.7	30.0
trans-1,2-Dichloroethene		89.0	73.6	129.3	4.5	30.0
1,1-Dichloroethane		91.4	71.5	126.2	3.7	30.0
cis-1,2-Dichloroethene		96.3	76.6	122.1	4.4	30.0
Tetrahydrofuran	*	124.8	59.0	117.9	6.7	30.0
Chloroform		93.9	78.4	124.0	3.0	30.0
Bromochloromethane		103.3	78.2	120.8	2.3	30.0
1,1,1-Trichloroethane		85.2	79.4	130.9	2.9	30.0
4-Methyl-2-pentanone (MIBK)		111.3	71.6	125.2	5.7	30.0
2-Hexanone		119.5	55.4	136.9	6.8	30.0
Carbon tetrachloride		88.1	72.6	133.0	3.2	30.0
Benzene		97.4	79.9	124.9	3.6	30.0
1,2-Dichloroethane		96.8	76.0	126.3	2.1	30.0
Trichloroethene		95.3	79.7	124.2	3.5	30.0
1,2-Dichloropropane		103.2	78.6	126.4	2.8	30.0
Bromodichloromethane		101.5	80.4	128.2	3.1	30.0
Dibromomethane		112.4	76.9	122.1	2.3	30.0
cis-1,3-Dichloropropene		106.3	79.8	129.9	2.6	30.0
Toluene		95.3	79.8	124.5	3.8	30.0
trans-1,3-Dichloropropene		106.3	74.0	131.3	3.1	30.0
1,1,2-Trichloroethane		107.4	78.7	123.1	2.6	30.0
Tetrachloroethene		98.8	74.5	124.5	2.2	30.0
trans-1,4-Dichloro-2-butene		111.9	68.6	135.4	1.1	30.0
Dibromochloromethane		112.6	74.6	127.2	1.2	30.0
1,2-Dibromoethane		113.9	70.3	133.7	1.1	30.0
Chlorobenzene		108.7	79.2	122.7	2.5	30.0

Organics - Volatiles, Prep Batch ID: VF220610W2 (continued)

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

Laboratory Control Sample Duplicate (LCSD) (continued)

Lab Sample ID: 220610A3.LCSDW10A, Parent Sample ID: 220610A3.LCSW10A

Run in Batch: 220610A3, Run Date: 06/10/2022 15:15, Prep Date: 06/10/2022, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
1,1,1,2-Tetrachloroethane		110.5	80.3	128.2	2.0	30.0
Ethylbenzene		101.9	79.5	129.1	2.1	30.0
p,m-Xylene		104.2	79.4	132.2	1.9	30.0
o-Xylene		105.8	80.2	131.0	2.2	30.0
Styrene		112.2	69.5	126.7	2.0	30.0
Isopropylbenzene		100.7	74.4	121.5	1.3	30.0
Bromoform		120.9	69.4	128.0	1.4	30.0
1,1,2,2-Tetrachloroethane		117.5	79.8	126.3	2.5	30.0
1,2,3-Trichloropropane		119.6	78.3	138.8	2.0	30.0
n-Propylbenzene		96.8	82.0	130.7	2.5	30.0
Bromobenzene		115.3	78.7	124.6	1.5	30.0
1,3,5-Trimethylbenzene		102.0	81.3	128.9	2.6	30.0
tert-Butylbenzene		90.3	80.7	128.9	2.3	30.0
1,2,4-Trimethylbenzene		102.6	81.4	130.8	2.5	30.0
sec-Butylbenzene		81.2	77.4	129.8	0.6	30.0
p-Isopropyltoluene		85.9	79.8	137.5	2.3	30.0
1,3-Dichlorobenzene		104.0	77.0	131.3	0.6	30.0
1,4-Dichlorobenzene		104.6	20.7	137.7	0.6	30.0
1,2-Dichlorobenzene		104.5	10.0	166.2	0.2	30.0
1,2,3-Trimethylbenzene		96.7	76.3	124.2	0.3	30.0
n-Butylbenzene		80.8	80.0	133.3	1.0	30.0
Hexachloroethane		87.4	23.8	138.1	1.0	30.0
1,2-Dibromo-3-chloropropane		122.9	21.2	189.4	4.5	30.0
1,2,4-Trichlorobenzene		97.4	27.4	143.4	1.6	30.0
1,2,3-Trichlorobenzene		97.8	75.4	131.4	0.9	30.0
Naphthalene		108.1	32.9	135.8	2.7	30.0
2-Methylnaphthalene		101.8	25.5	165.5	4.3	30.0

Organics - Volatiles, Prep Batch ID: VF220613W2

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

Blank (BLK)

Lab Sample ID: 220613A3.BLKW13A

Run in Batch: 220613A3, Run Date: 06/13/2022 11:34, Prep Date: 06/13/2022, 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	1.00	ug/l
o-Xylene		ND	1.00	ug/l
Styrene		ND	1.00	ug/l
Isopropylbenzene		ND	1.00	ug/l

Organics - Volatiles, Prep Batch ID: VF220613W2 (continued)

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

Blank (BLK) (continued)

Lab Sample ID: 220613A3.BLKW13A

Run in Batch: 220613A3, Run Date: 06/13/2022 11:34, Prep Date: 06/13/2022, 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: 220613A3.LCSW13A

Run in Batch: 220613A3, Run Date: 06/13/2022 10:01, Prep Date: 06/13/2022, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Diethyl ether		111.1	67.4	121.2
Acetone		124.4	29.9	161.5
Methyl iodide		107.6	68.8	116.4
Carbon disulfide		106.4	63.8	137.4
tert-Methyl butyl ether (MTBE)		93.4	73.2	122.4
Acrylonitrile		128.2	69.9	128.9
2-Butanone (MEK)		129.9	44.0	134.4
Dichlorodifluoromethane		82.1	10.0	222.8
Chloromethane		102.0	23.8	166.5
Vinyl chloride		97.2	43.5	149.1
Bromomethane		116.5	56.8	151.3
Chloroethane		109.9	53.4	149.4
Trichlorofluoromethane		102.1	59.7	151.8
1,1-Dichloroethene		100.4	69.6	139.4
Methylene chloride		104.8	73.3	121.1
trans-1,2-Dichloroethene		103.1	73.6	129.3
1,1-Dichloroethane		103.9	71.5	126.2
cis-1,2-Dichloroethene		107.5	76.6	122.1
Tetrahydrofuran	*	133.1	59.0	117.9
Chloroform		103.6	78.4	124.0

Organics - Volatiles, Prep Batch ID: VF220613W2 (continued)

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

Laboratory Control Sample (LCS) (continued)

Lab Sample ID: 220613A3.LCSW13A

Run in Batch: 220613A3, Run Date: 06/13/2022 10:01, Prep Date: 06/13/2022, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Bromochloromethane		112.2	78.2	120.8
1,1,1-Trichloroethane		99.4	79.4	130.9
4-Methyl-2-pentanone (MIBK)		120.4	71.6	125.2
2-Hexanone		130.8	55.4	136.9
Carbon tetrachloride		103.7	72.6	133.0
Benzene		108.6	79.9	124.9
1,2-Dichloroethane		104.7	76.0	126.3
Trichloroethene		107.7	79.7	124.2
1,2-Dichloropropane		112.9	78.6	126.4
Bromodichloromethane		111.5	80.4	128.2
Dibromomethane		117.8	76.9	122.1
cis-1,3-Dichloropropene		115.3	79.8	129.9
Toluene		105.6	79.8	124.5
trans-1,3-Dichloropropene		115.5	74.0	131.3
1,1,2-Trichloroethane		115.3	78.7	123.1
Tetrachloroethene		114.0	74.5	124.5
trans-1,4-Dichloro-2-butene		129.0	68.6	135.4
Dibromochloromethane		117.9	74.6	127.2
1,2-Dibromoethane		119.0	70.3	133.7
Chlorobenzene		116.3	79.2	122.7
1,1,1,2-Tetrachloroethane		115.4	80.3	128.2
Ethylbenzene		111.6	79.5	129.1
p,m-Xylene		113.8	79.4	132.2
o-Xylene		113.7	80.2	131.0
Styrene		120.4	69.5	126.7
Isopropylbenzene		111.8	74.4	121.5
Bromoform		127.7	69.4	128.0
1,1,2,2-Tetrachloroethane		123.5	79.8	126.3
1,2,3-Trichloropropane		121.5	78.3	138.8
n-Propylbenzene		109.5	82.0	130.7
Bromobenzene		121.4	78.7	124.6
1,3,5-Trimethylbenzene		112.2	81.3	128.9
tert-Butylbenzene		101.6	80.7	128.9
1,2,4-Trimethylbenzene		112.6	81.4	130.8
sec-Butylbenzene		91.1	77.4	129.8
p-Isopropyltoluene		96.1	79.8	137.5
1,3-Dichlorobenzene		108.7	77.0	131.3
1,4-Dichlorobenzene		108.7	20.7	137.7
1,2-Dichlorobenzene		107.3	10.0	166.2
1,2,3-Trimethylbenzene		100.3	76.3	124.2
n-Butylbenzene		91.1	80.0	133.3
Hexachloroethane		97.9	23.8	138.1
1,2-Dibromo-3-chloropropane		122.5	21.2	189.4
1,2,4-Trichlorobenzene		101.4	27.4	143.4
1,2,3-Trichlorobenzene		99.0	75.4	131.4
Naphthalene		108.6	32.9	135.8

Organics - Volatiles, Prep Batch ID: VF220613W2 (continued)

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

Laboratory Control Sample (LCS) (continued)

Lab Sample ID: 220613A3.LCSW13A

Run in Batch: 220613A3, Run Date: 06/13/2022 10:01, Prep Date: 06/13/2022, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
2-Methylnaphthalene		105.0	25.5	165.5

Laboratory Control Sample Duplicate (LCSD)

Lab Sample ID: 220613A3.LCSDW13A, Parent Sample ID: 220613A3.LCSW13A

Run in Batch: 220613A3, Run Date: 06/13/2022 10:24, Prep Date: 06/13/2022, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Diethyl ether		114.2	67.4	121.2	2.7	30.0
Acetone		128.3	29.9	161.5	3.1	30.0
Methyl iodide		105.6	68.8	116.4	1.9	30.0
Carbon disulfide		102.0	63.8	137.4	4.2	30.0
tert-Methyl butyl ether (MTBE)		94.6	73.2	122.4	1.3	30.0
Acrylonitrile		127.3	69.9	128.9	0.7	30.0
2-Butanone (MEK)		133.3	44.0	134.4	2.6	30.0
Dichlorodifluoromethane		80.0	10.0	222.8	2.5	30.0
Chloromethane		98.2	23.8	166.5	3.8	30.0
Vinyl chloride		93.3	43.5	149.1	4.0	30.0
Bromomethane		111.5	56.8	151.3	4.4	30.0
Chloroethane		105.7	53.4	149.4	3.9	30.0
Trichlorofluoromethane		98.7	59.7	151.8	3.4	30.0
1,1-Dichloroethene		96.9	69.6	139.4	3.6	30.0
Methylene chloride		103.2	73.3	121.1	1.6	30.0
trans-1,2-Dichloroethene		100.1	73.6	129.3	2.9	30.0
1,1-Dichloroethane		101.4	71.5	126.2	2.5	30.0
cis-1,2-Dichloroethene		106.4	76.6	122.1	1.1	30.0
Tetrahydrofuran	*	136.5	59.0	117.9	2.5	30.0
Chloroform		102.6	78.4	124.0	1.0	30.0
Bromochloromethane		112.9	78.2	120.8	0.7	30.0
1,1,1-Trichloroethane		97.6	79.4	130.9	1.9	30.0
4-Methyl-2-pentanone (MIBK)		120.7	71.6	125.2	0.2	30.0
2-Hexanone		132.9	55.4	136.9	1.6	30.0
Carbon tetrachloride		101.4	72.6	133.0	2.2	30.0
Benzene		107.0	79.9	124.9	1.5	30.0
1,2-Dichloroethane		105.1	76.0	126.3	0.3	30.0
Trichloroethene		105.6	79.7	124.2	2.0	30.0
1,2-Dichloropropane		112.9	78.6	126.4	0.1	30.0
Bromodichloromethane		111.9	80.4	128.2	0.4	30.0
Dibromomethane		120.6	76.9	122.1	2.3	30.0
cis-1,3-Dichloropropene		116.5	79.8	129.9	1.0	30.0
Toluene		104.7	79.8	124.5	0.8	30.0
trans-1,3-Dichloropropene		117.8	74.0	131.3	2.0	30.0
1,1,2-Trichloroethane		117.9	78.7	123.1	2.2	30.0
Tetrachloroethene		112.2	74.5	124.5	1.6	30.0
trans-1,4-Dichloro-2-butene		131.2	68.6	135.4	1.7	30.0
Dibromochloromethane		120.7	74.6	127.2	2.3	30.0
1,2-Dibromoethane		121.4	70.3	133.7	2.0	30.0
Chlorobenzene		115.6	79.2	122.7	0.5	30.0

Organics - Volatiles, Prep Batch ID: VF220613W2 (continued)

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

Laboratory Control Sample Duplicate (LCSD) (continued)

Lab Sample ID: 220613A3.LCSDW13A, Parent Sample ID: 220613A3.LCSW13A

Run in Batch: 220613A3, Run Date: 06/13/2022 10:24, Prep Date: 06/13/2022, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
1,1,1,2-Tetrachloroethane		116.7	80.3	128.2	1.2	30.0
Ethylbenzene		111.6	79.5	129.1	0.0	30.0
p,m-Xylene		114.0	79.4	132.2	0.2	30.0
o-Xylene		113.1	80.2	131.0	0.5	30.0
Styrene		120.4	69.5	126.7	0.0	30.0
Isopropylbenzene		111.4	74.4	121.5	0.3	30.0
Bromoform	*	130.6	69.4	128.0	2.2	30.0
1,1,2,2-Tetrachloroethane		125.1	79.8	126.3	1.3	30.0
1,2,3-Trichloropropane		125.9	78.3	138.8	3.6	30.0
n-Propylbenzene		108.9	82.0	130.7	0.6	30.0
Bromobenzene		123.0	78.7	124.6	1.2	30.0
1,3,5-Trimethylbenzene		111.3	81.3	128.9	0.8	30.0
tert-Butylbenzene		101.5	80.7	128.9	0.1	30.0
1,2,4-Trimethylbenzene		111.3	81.4	130.8	1.2	30.0
sec-Butylbenzene		92.2	77.4	129.8	1.2	30.0
p-Isopropyltoluene		97.5	79.8	137.5	1.4	30.0
1,3-Dichlorobenzene		111.2	77.0	131.3	2.3	30.0
1,4-Dichlorobenzene		111.7	20.7	137.7	2.6	30.0
1,2-Dichlorobenzene		110.0	10.0	166.2	2.5	30.0
1,2,3-Trimethylbenzene		102.9	76.3	124.2	2.6	30.0
n-Butylbenzene		91.9	80.0	133.3	0.8	30.0
Hexachloroethane		98.3	23.8	138.1	0.4	30.0
1,2-Dibromo-3-chloropropane		131.3	21.2	189.4	6.9	30.0
1,2,4-Trichlorobenzene		104.5	27.4	143.4	3.0	30.0
1,2,3-Trichlorobenzene		103.7	75.4	131.4	4.7	30.0
Naphthalene		114.2	32.9	135.8	5.1	30.0
2-Methylnaphthalene		109.8	25.5	165.5	4.4	30.0

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

148233

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Clifford Yuntz / Kevin Schneider
COMPANY: Ramboll
ADDRESS: 2090 Commonwealth Blvd
CITY: Ann Arbor STATE: MI ZIP CODE:
PHONE NO.: 313-333-0211 CELL NO.: P.O. NO.: 1940004462 Task 001
E-MAIL ADDRESS: Clifford.Yuntz@Ramboll.com / Kevin.Schneider@Ramboll.com QUOTE NO.:

INVOICE TO

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

PROJECT NO./NAME: RACER Coldwater Road
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Schneider

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

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

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

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

MERIT LAB NO. (FOR LAB USE ONLY)	COLLECTION DATE	COLLECTION TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	TOC	Dissolved Metals	TSS	Specific Conductivity	Special Instructions
36841.01	6/6/22	1457	Sump - A	WSW	8	2	3	1	2				X	X	X	X	X	Dissolved metals were field filtered
.02	6/7/22	1000	Sump - B	WSW	8	2	3	1	2				X	X	X	X	X	
.03	6/7/22	1109	Sump - C	WSW	8	2	3	1	2				X	X	X	X	X	
.04	6/7/22	1255	Sump - D	WSW	8	2	3	1	2				X	X	X	X	X	
.05	6/7/22	1356	Sump - E	WSW	8	2	3	1	2				X	X	X	X	X	Metals ARE:
.06	6/7/22	1508	Sump - F	WSW	8	2	3	1	2				X	X	X	X	X	Cu, Cr, Ni, Zn
.07	6/7/22	—	Sump - DUP - 060722	WSW	8	2	3	1	2				X	X	X	X	X	
.08	6/7/22	—	Trip Blank - 060722	L	1		1						X					

RELINQUISHED BY: SIGNATURE/ORGANIZATION	X Sampler	DATE	TIME	6/8/22 1800
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME	6/8/22 1200
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME	6/8/22 15:30
RECEIVED BY: SIGNATURE/ORGANIZATION	Patrick M	DATE	TIME	6/8/22 1530

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME	
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS		
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS		

NOTES: TEMP. ON ARRIVAL 3.6

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

Rev. 1.26.22

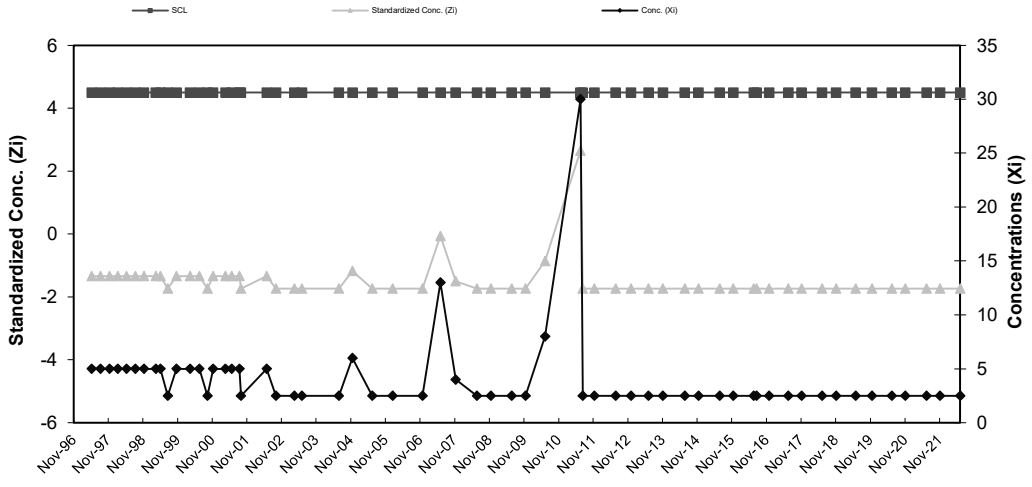
APPENDIX C
LEAK DETECTION VAULT CONTROL CHARTS

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

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	5	-1.34	46	Nov-11	4.5	2.5	-1.74
10	Aug-97	4.5	5	-1.34	47	Jun-12	4.5	2.5	-1.74
11	Nov-97	4.5	5	-1.34	48	Dec-12	4.5	2.5	-1.74
12	Feb-98	4.5	5	-1.34	49	Jun-13	4.5	2.5	-1.74
13	May-98	4.5	5	-1.34	50	Nov-13	4.5	2.5	-1.74
14	Aug-98	4.5	5	-1.34	51	Jun-14	4.5	2.5	-1.74
15	Nov-98	4.5	5	-1.34	52	Nov-14	4.5	2.5	-1.74
16	Mar-99	4.5	5	-1.34	53	Jun-15	4.5	2.5	-1.74
17	May-99	4.5	5	-1.34	54	Nov-15	4.5	2.5	-1.74
18	Jul-99	4.5	2.5	-1.74	55	Jun-16	4.5	2.5	-1.74
19	Oct-99	4.5	5	-1.34	56	Jul-16	4.5	2.5	-1.74
20	Mar-00	4.5	5	-1.34	57	Nov-16	4.5	2.5	-1.74
21	Jun-00	4.5	5	-1.34	58	Jun-17	4.5	2.5	-1.74
22	Sep-00	4.5	2.5	-1.74	59	Nov-17	4.5	2.5	-1.74
23	Nov-00	4.5	5	-1.34	60	Jun-18	4.5	2.5	-1.74
24	Mar-01	4.5	5	-1.34	61	Nov-18	4.5	2.5	-1.74
25	May-01	4.5	5	-1.34	62	May-19	4.5	2.5	-1.74
26	Aug-01	4.5	2.5	-1.74	63	Nov-19	4.5	2.5	-1.74
27	Aug-01	4.5	5	-1.34	64	Jun-20	4.5	2.5	-1.74
28	May-02	4.5	5	-1.34	65	Nov-20	4.5	2.5	-1.74
29	Sep-02	4.5	2.5	-1.74	66	Jun-21	4.5	2.5	-1.74
30	Mar-03	4.5	2.5	-1.74	67	Nov-21	4.5	2.5	-1.74
31	Jun-03	4.5	2.5	-1.74	68	Jun-22	4.5	2.5	-1.74
32	Jun-04	4.5	2.5	-1.74					
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

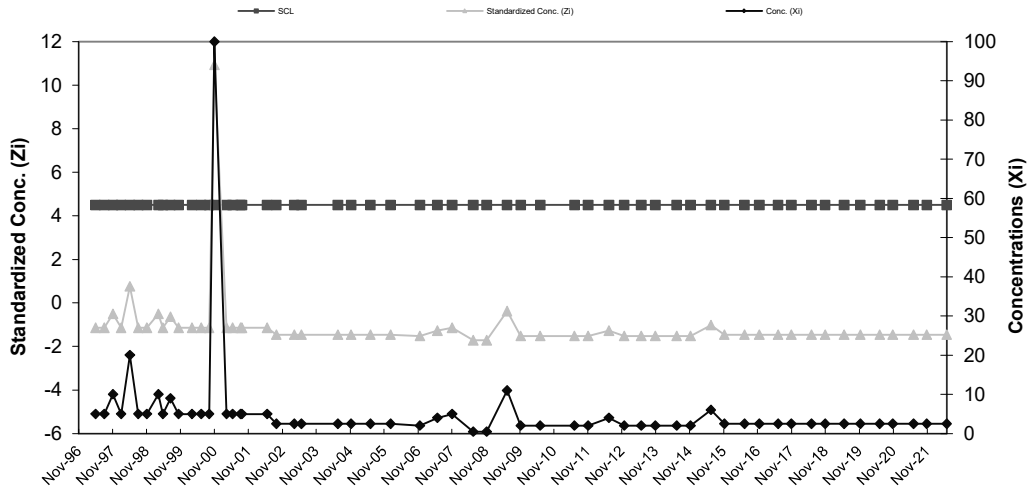


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - Copper

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	5	-1.14	45	Nov-11	4.5	2	-1.52
10	Aug-97	4.5	5	-1.14	46	Jun-12	4.5	4	-1.27
11	Nov-97	4.5	10	-0.51	47	Dec-12	4.5	2	-1.52
12	Feb-98	4.5	5	-1.14	48	Jun-13	4.5	2	-1.52
13	May-98	4.5	20	0.76	49	Nov-13	4.5	2	-1.52
14	Aug-98	4.5	5	-1.14	50	Jun-14	4.5	2	-1.52
15	Nov-98	4.5	5	-1.14	51	Nov-14	4.5	2	-1.52
16	Mar-99	4.5	10	-0.51	52	Jun-15	4.5	6	-1.02
17	May-99	4.5	5	-1.14	53	Nov-15	4.5	2.5	-1.46
18	Jul-99	4.5	9	-0.64	54	Jun-16	4.5	2.5	-1.46
19	Oct-99	4.5	5	-1.14	55	Nov-16	4.5	2.5	-1.46
20	Mar-00	4.5	5	-1.14	56	Jun-17	4.5	2.5	-1.46
21	Jun-00	4.5	5	-1.14	57	Nov-17	4.5	2.5	-1.46
22	Sep-00	4.5	5	-1.14	58	Jun-18	4.5	2.5	-1.46
23	Nov-00	4.5	100	10.92	59	Nov-18	4.5	2.5	-1.46
24	Mar-01	4.5	5	-1.14	60	May-19	4.5	2.5	-1.46
25	May-01	4.5	5	-1.14	61	Nov-19	4.5	2.5	-1.46
26	Aug-01	4.5	5	-1.14	62	Jun-20	4.5	2.5	-1.46
27	Aug-01	4.5	5	-1.14	63	Nov-20	4.5	2.5	-1.46
28	May-02	4.5	5	-1.14	64	Jun-21	4.5	2.5	-1.46
29	Sep-02	4.5	2.5	-1.46	65	Nov-21	4.5	2.5	-1.46
30	Mar-03	4.5	2.5	-1.46	66	Jun-22	4.5	2.5	-1.46
31	Jun-03	4.5	2.5	-1.46					
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

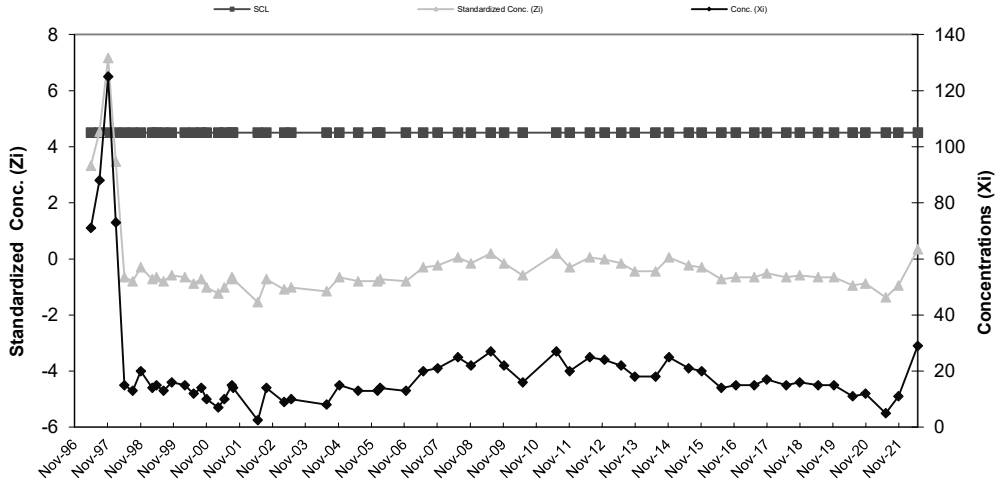


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - Nickel

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	64	Nov-20	4.5	12	-0.87
28	May-02	4.5	2.5	-1.55	65	Jun-21	4.5	5	-1.37
29	Sep-02	4.5	14	-0.73	66	Nov-21	4.5	11	-0.94
30	Mar-03	4.5	9	-1.08	67	Jun-22	4.5	29	0.34
31	Jun-03	4.5	10	-1.01					
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

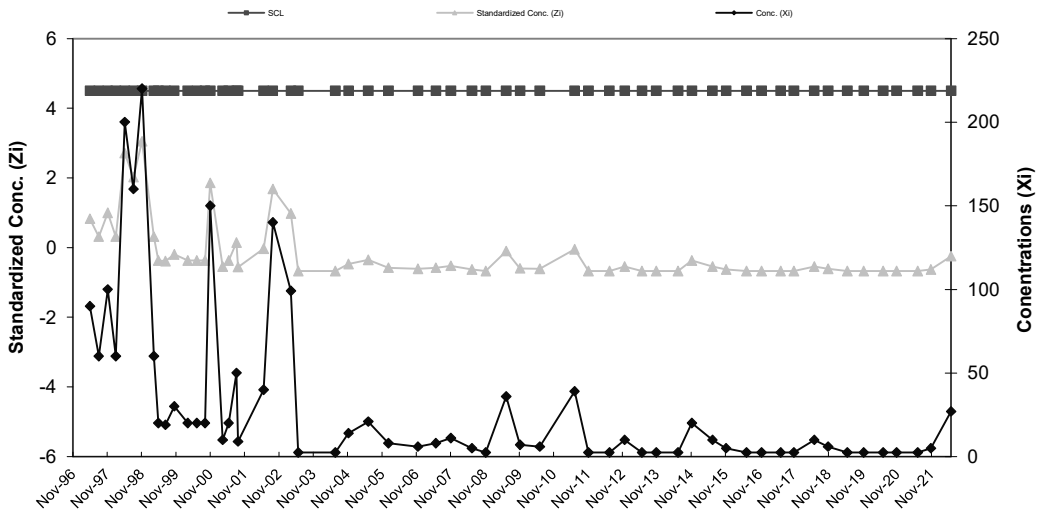


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - Zinc

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	90	0.83	45	Nov-11	4.5	2.5	-0.67
10	Aug-97	4.5	60	0.31	46	Jun-12	4.5	2.5	-0.67
11	Nov-97	4.5	100	1.00	47	Dec-12	4.5	10	-0.54
12	Feb-98	4.5	60	0.31	48	Jun-13	4.5	2.5	-0.67
13	May-98	4.5	200	2.71	49	Nov-13	4.5	2.5	-0.67
14	Aug-98	4.5	160	2.02	50	Jun-14	4.5	2.5	-0.67
15	Nov-98	4.5	220	3.05	51	Nov-14	4.5	20	-0.37
16	Mar-99	4.5	60	0.31	52	Jun-15	4.5	10	-0.54
17	May-99	4.5	20	-0.37	53	Nov-15	4.5	5	-0.63
18	Jul-99	4.5	19	-0.39	54	Jun-16	4.5	2.5	-0.67
19	Oct-99	4.5	30	-0.20	55	Nov-16	4.5	2.5	-0.67
20	Mar-00	4.5	20	-0.37	56	Jun-17	4.5	2.5	-0.67
21	Jun-00	4.5	20	-0.37	57	Nov-17	4.5	2.5	-0.67
22	Sep-00	4.5	20	-0.37	58	Jun-18	4.5	10	-0.54
23	Nov-00	4.5	150	1.85	59	Nov-18	4.5	6	-0.61
24	Mar-01	4.5	10	-0.54	60	May-19	4.5	2.5	-0.67
25	May-01	4.5	20	-0.37	61	Nov-19	4.5	2.5	-0.67
26	Aug-01	4.5	9	-0.56	62	Jun-20	4.5	2.5	-0.67
27	Aug-01	4.5	50	0.14	63	Nov-20	4.5	2.5	-0.67
28	May-02	4.5	40	-0.03	64	Jun-21	4.5	2.5	-0.67
29	Sep-02	4.5	140	1.68	65	Nov-21	4.5	5	-0.63
30	Mar-03	4.5	99	0.98	66	Jun-22	4.5	27	-0.25
31	Jun-03	4.5	2.5	-0.67					
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

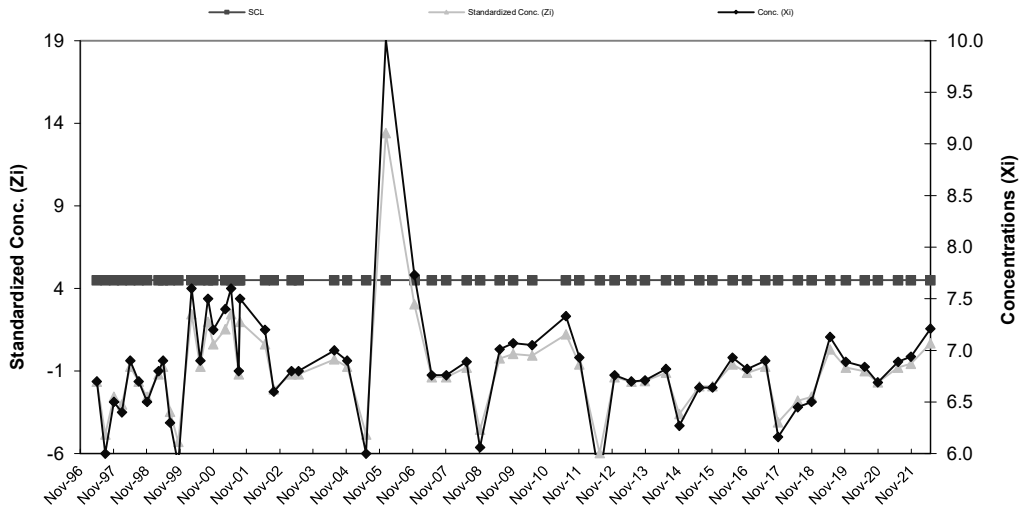


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - pH

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	6.70	-1.65	45	Nov-11	4.5	6.93	-0.60
10	Aug-97	4.5	6.00	-4.83	46	Jun-12	4.5	5.75	-5.97
11	Nov-97	4.5	6.50	-2.56	47	Dec-12	4.5	6.76	-1.38
12	Feb-98	4.5	6.40	-3.01	48	Jun-13	4.5	6.7	-1.65
13	May-98	4.5	6.90	-0.74	49	Nov-13	4.5	6.71	-1.60
14	Aug-98	4.5	6.70	-1.65	50	Jun-14	4.5	6.82	-1.10
15	Nov-98	4.5	6.50	-2.56	51	Nov-14	4.5	6.27	-3.60
16	Mar-99	4.5	6.80	-1.19	52	Jun-15	4.5	6.64	-1.92
17	May-99	4.5	6.90	-0.74	53	Nov-15	4.5	6.64	-1.92
18	Jul-99	4.5	6.30	-3.47	54	Jun-16	4.5	6.93	-0.60
19	Oct-99	4.5	5.90	-5.28	55	Nov-16	4.5	6.82	-1.10
20	Mar-00	4.5	7.60	2.44	56	Jun-17	4.5	6.9	-0.74
21	Jun-00	4.5	6.90	-0.74	57	Nov-17	4.5	6.16	-4.10
22	Sep-00	4.5	7.50	1.99	58	Jun-18	4.5	6.45	-2.78
23	Nov-00	4.5	7.20	0.63	59	Nov-18	4.5	6.5	-2.56
24	Mar-01	4.5	7.40	1.53	60	May-19	4.5	7.13	0.31
25	May-01	4.5	7.60	2.44	61	Nov-19	4.5	6.89	-0.78
26	Aug-01	4.5	7.50	1.99	62	Jun-20	4.5	6.84	-1.01
27	Aug-01	4.5	6.80	-1.19	63	Nov-20	4.5	6.69	-1.69
28	May-02	4.5	7.20	0.63	64	Jun-21	4.5	6.89	-0.78
29	Sep-02	4.5	6.60	-2.10	65	Nov-21	4.5	6.94	-0.56
30	Mar-03	4.5	6.80	-1.19	66	Jun-22	4.5	7.21	0.67
31	Jun-03	4.5	6.80	-1.19					
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

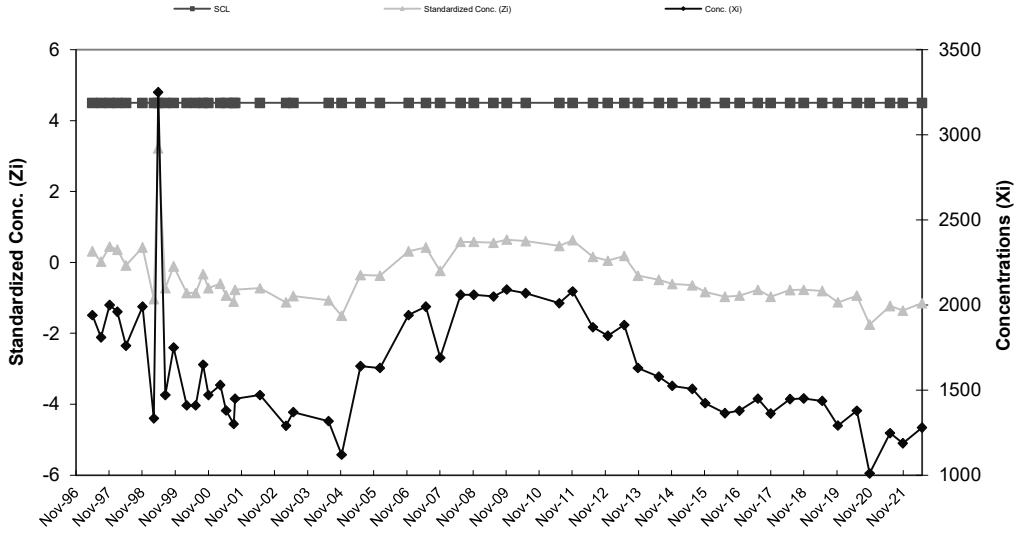


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault A - SpC

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-97	4.5	1940	0.31	43	Nov-11	4.5	2080	0.62
10	Aug-97	4.5	1810	0.02	44	Jun-12	4.5	1870	0.16
11	Nov-97	4.5	2000	0.45	45	Dec-12	4.5	1820	0.05
12	Feb-98	4.5	1960	0.36	46	Jun-13	4.5	1882	0.18
13	May-98	4.5	1760	-0.09	47	Nov-13	4.5	1630	-0.37
14	Nov-98	4.5	1990	0.42	48	Jun-14	4.5	1579	-0.49
15	Mar-99	4.5	1334	-1.03	49	Nov-14	4.5	1525	-0.61
16	May-99	4.5	3250	3.22	50	Jun-15	4.5	1507	-0.65
17	Jul-99	4.5	1470	-0.73	51	Nov-15	4.5	1423	-0.83
18	Oct-99	4.5	1750	-0.11	52	Jun-16	4.5	1364	-0.96
19	Mar-00	4.5	1410	-0.86	53	Nov-16	4.5	1378	-0.93
20	Jun-00	4.5	1410	-0.86	54	Jun-17	4.5	1450	-0.77
21	Sep-00	4.5	1650	-0.33	55	Nov-17	4.5	1363	-0.97
22	Nov-00	4.5	1470	-0.73	56	Jun-18	4.5	1447	-0.78
23	Mar-01	4.5	1530	-0.60	57	Nov-18	4.5	1451	-0.77
24	May-01	4.5	1380	-0.93	58	May-19	4.5	1436	-0.80
25	Aug-01	4.5	1450	-0.77	59	Nov-19	4.5	1291	-1.13
26	Aug-01	4.5	1300	-1.11	60	Jun-20	4.5	1378	-0.93
27	May-02	4.5	1470	-0.73	61	Nov-20	4.5	1010	-1.75
28	Mar-03	4.5	1290	-1.13	62	Jun-21	4.5	1247	-1.22
29	Jun-03	4.5	1370	-0.95	63	Nov-21	4.5	1187	-1.36
30	Jun-04	4.5	1318	-1.07	64	Jun-22	4.5	1280	-1.15
31	Nov-04	4.5	1120	-1.51					
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

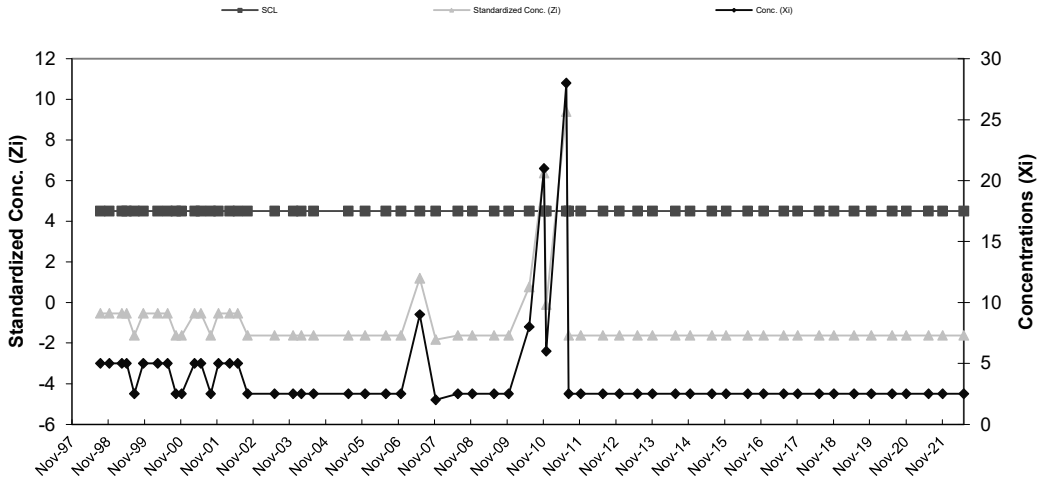


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - Chromium

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-98	4.5	5	-0.54	45	Nov-11	4.5	2.5	-1.62
10	Nov-98	4.5	5	-0.54	46	Jun-12	4.5	2.5	-1.62
11	Mar-99	4.5	5	-0.54	47	Dec-12	4.5	2.5	-1.62
12	May-99	4.5	5	-0.54	48	Jun-13	4.5	2.5	-1.62
13	Jul-99	4.5	2.5	-1.62	49	Nov-13	4.5	2.5	-1.62
14	Oct-99	4.5	5	-0.54	50	Jun-14	4.5	2.5	-1.62
15	Mar-00	4.5	5	-0.54	51	Nov-14	4.5	2.5	-1.62
16	Jun-00	4.5	5	-0.54	52	Jun-15	4.5	2.5	-1.62
17	Sep-00	4.5	2.5	-1.62	53	Nov-15	4.5	2.5	-1.62
18	Nov-00	4.5	2.5	-1.62	54	Jun-16	4.5	2.5	-1.62
19	Mar-01	4.5	5	-0.54	55	Nov-16	4.5	2.5	-1.62
20	May-01	4.5	5	-0.54	56	Jun-17	4.5	2.5	-1.62
21	Aug-01	4.5	2.5	-1.62	57	Nov-17	4.5	2.5	-1.62
22	Nov-01	4.5	5	-0.54	58	Jun-18	4.5	2.5	-1.62
23	Mar-02	4.5	5	-0.54	59	Nov-18	4.5	2.5	-1.62
24	May-02	4.5	5	-0.54	60	May-19	4.5	2.5	-1.62
25	Sep-02	4.5	2.5	-1.62	61	Nov-19	4.5	2.5	-1.62
26	Jun-03	4.5	2.5	-1.62	62	Jun-20	4.5	2.5	-1.62
27	Dec-03	4.5	2.5	-1.62	63	Nov-20	4.5	2.5	-1.62
28	Feb-04	4.5	2.5	-1.62	64	Jun-21	4.5	2.5	-1.62
29	Jun-04	4.5	2.5	-1.62	65	Nov-21	4.5	2.5	-1.62
30	Jun-05	4.5	2.5	-1.62	66	Jun-22	4.5	2.5	-1.62
31	Dec-05	4.5	2.5	-1.62					
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

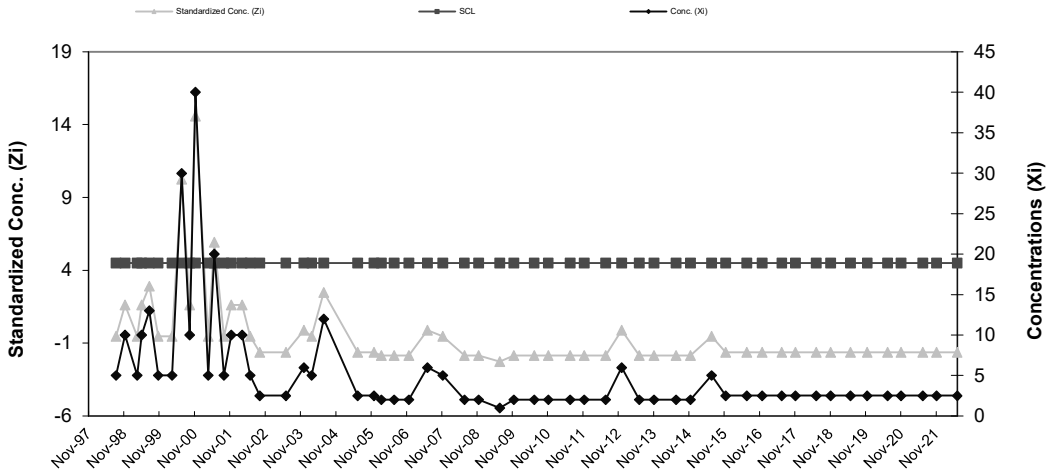


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - Copper

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

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

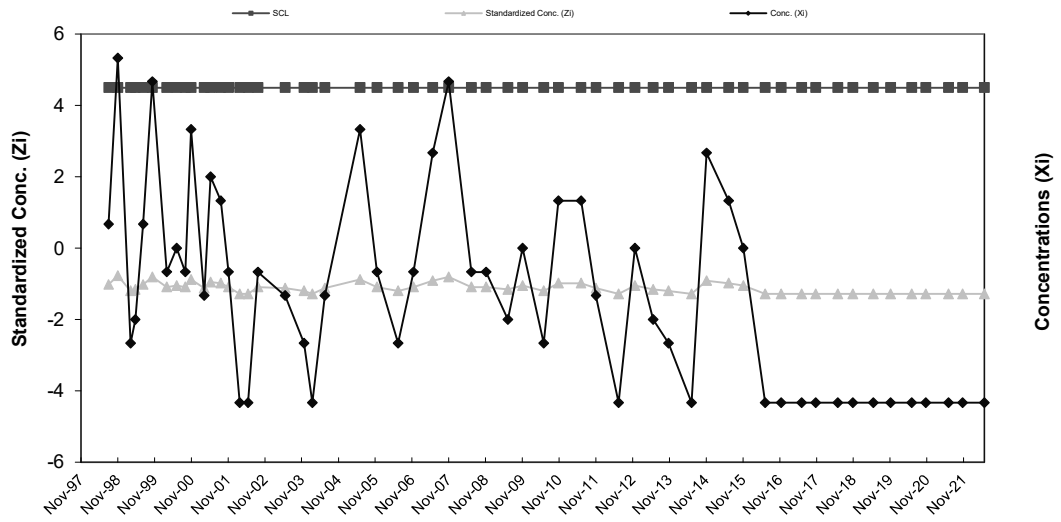


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - Nickel

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

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

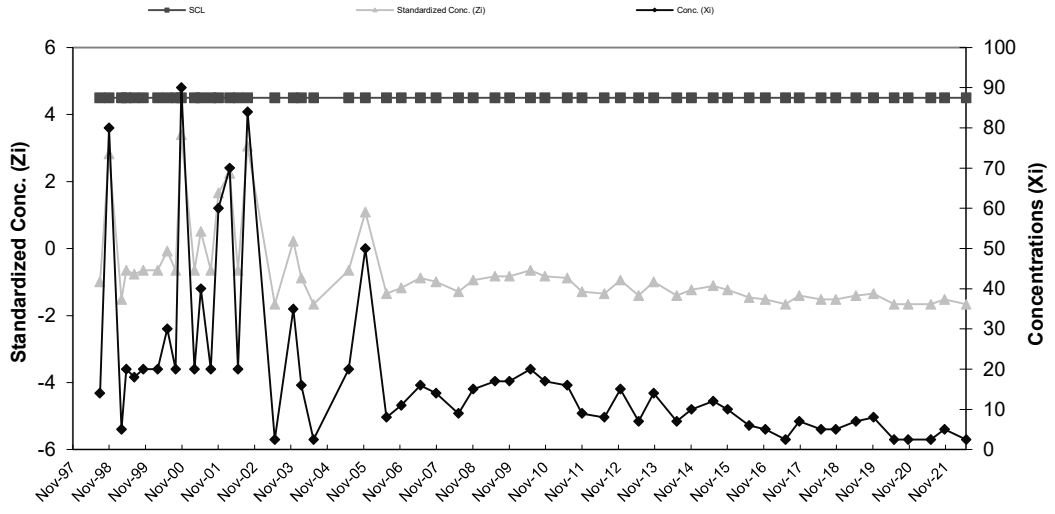


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - Zinc

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

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

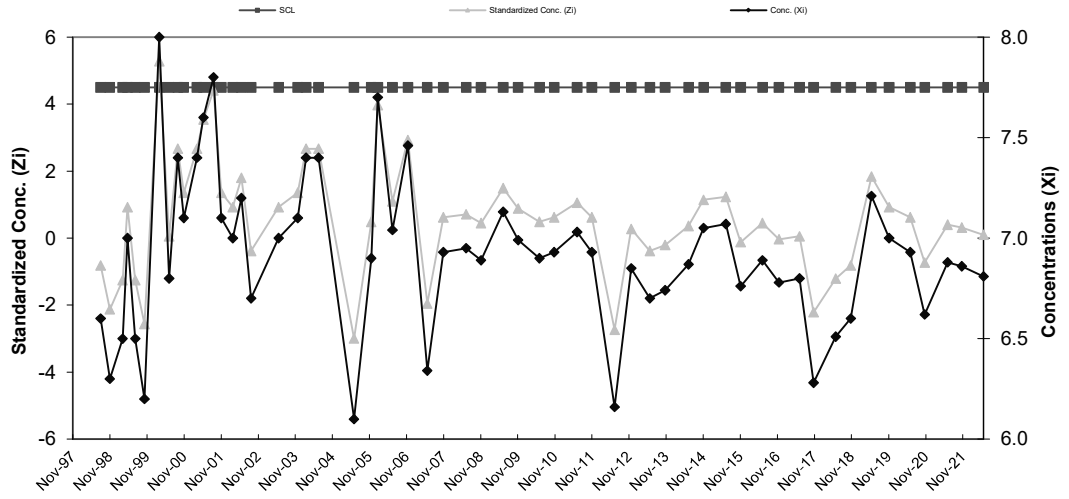


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - pH

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-98	4.5	6.60	-0.82	44	Nov-11	4.5	6.93	0.62
10	Nov-98	4.5	6.30	-2.12	45	Jun-12	4.5	6.16	-2.73
11	Mar-99	4.5	6.50	-1.25	46	Dec-12	4.5	6.85	0.27
12	May-99	4.5	7.00	0.93	47	Jun-13	4.5	6.7	-0.38
13	Jul-99	4.5	6.50	-1.25	48	Nov-13	4.5	6.74	-0.21
14	Oct-99	4.5	6.20	-2.56	49	Jun-14	4.5	6.87	0.36
15	Mar-00	4.5	8.00	5.28	50	Nov-14	4.5	7.05	1.14
16	Jun-00	4.5	6.80	0.05	51	Jun-15	4.5	7.07	1.23
17	Sep-00	4.5	7.40	2.67	52	Nov-15	4.5	6.76	-0.12
18	Nov-00	4.5	7.10	1.36	53	Jun-16	4.5	6.89	0.45
19	Mar-01	4.5	7.40	2.67	54	Nov-16	4.5	6.78	-0.03
20	May-01	4.5	7.60	3.54	55	Jun-17	4.5	6.8	0.05
21	Aug-01	4.5	7.80	4.41	56	Nov-17	4.5	6.28	-2.21
22	Nov-01	4.5	7.10	1.36	57	Jun-18	4.5	6.51	-1.21
23	Mar-02	4.5	7.00	0.93	58	Nov-18	4.5	6.6	-0.82
24	May-02	4.5	7.20	1.80	59	May-19	4.5	7.21	1.84
25	Sep-02	4.5	6.70	-0.38	60	Nov-19	4.5	7	0.93
26	Jun-03	4.5	7.00	0.93	61	Jun-20	4.5	6.93	0.62
27	Dec-03	4.5	7.10	1.36	62	Nov-20	4.5	6.62	-0.73
28	Feb-04	4.5	7.40	2.67	63	Jun-21	4.5	6.88	0.40
29	Jun-04	4.5	7.40	2.67	64	Nov-21	4.5	6.86	0.32
30	Jun-05	4.5	6.10	-3.00	65	Jun-22	4.5	6.81	0.10
31	Dec-05	4.5	6.90	0.49					
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

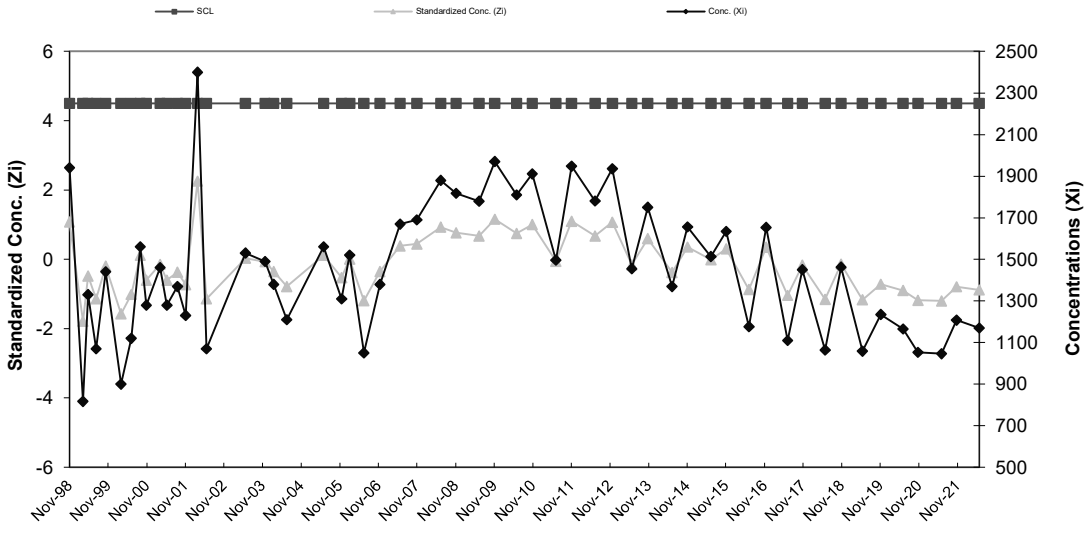


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault B - SpC

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	1940	1.08	42	Nov-11	4.5	1948	1.10
10	Mar-99	4.5	817	-1.79	43	Jun-12	4.5	1781	0.67
11	May-99	4.5	1330	-0.48	44	Dec-12	4.5	1936	1.07
12	Jul-99	4.5	1070	-1.14	45	Jun-13	4.5	1455	-0.16
13	Oct-99	4.5	1440	-0.20	46	Nov-13	4.5	1750	0.60
14	Mar-00	4.5	900	-1.57	47	Jun-14	4.5	1369	-0.38
15	Jun-00	4.5	1120	-1.01	48	Nov-14	4.5	1656	0.36
16	Sep-00	4.5	1560	0.11	49	Jun-15	4.5	1513	-0.01
17	Nov-00	4.5	1280	-0.60	50	Nov-15	4.5	1635	0.30
18	Mar-01	4.5	1460	-0.14	51	Jun-16	4.5	1176	-0.87
19	May-01	4.5	1280	-0.60	52	Nov-16	4.5	1654	0.35
20	Aug-01	4.5	1370	-0.37	53	Jun-17	4.5	1110	-1.04
21	Nov-01	4.5	1230	-0.73	54	Nov-17	4.5	1450	-0.17
22	Mar-02	4.5	2400	2.25	55	Jun-18	4.5	1064	-1.15
23	May-02	4.5	1070	-1.14	56	Nov-18	4.5	1463	-0.14
24	Jun-03	4.5	1530	0.03	57	May-19	4.5	1058	-1.17
25	Dec-03	4.5	1490	-0.07	58	Nov-19	4.5	1235	-0.72
26	Feb-04	4.5	1380	-0.35	59	Jun-20	4.5	1165	-0.90
27	Jun-04	4.5	1210	-0.78	60	Nov-20	4.5	1053	-1.18
28	Jun-05	4.5	1560	0.11	61	Jun-21	4.5	1046	-1.20
29	Dec-05	4.5	1310	-0.53	62	Nov-21	4.5	1208	-0.79
30	Feb-06	4.5	1520	0.01	63	Jun-22	4.5	1170	-0.88
31	Jun-06	4.5	1050	-1.19					
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

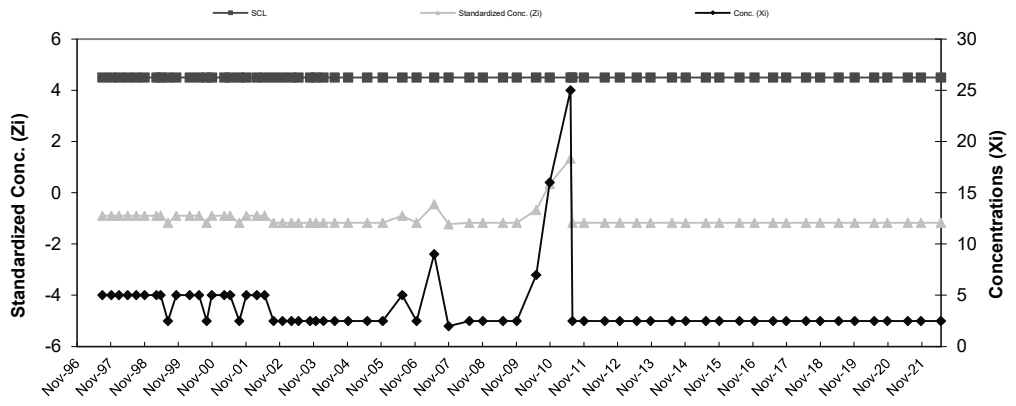


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - Chromium

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	5	-0.89	53	Nov-11	4.5	2.5	-1.17
10	Nov-97	4.5	5	-0.89	54	Jun-12	4.5	2.5	-1.17
11	Feb-98	4.5	5	-0.89	55	Dec-12	4.5	2.5	-1.17
12	May-98	4.5	5	-0.89	56	Jun-13	4.5	2.5	-1.17
14	Aug-98	4.5	5	-0.89	57	Nov-13	4.5	2.5	-1.17
15	Nov-98	4.5	5	-0.89	58	Jun-14	4.5	2.5	-1.17
16	Mar-99	4.5	5	-0.89	59	Nov-14	4.5	2.5	-1.17
17	May-99	4.5	5	-0.89	60	Jun-15	4.5	2.5	-1.17
18	Jul-99	4.5	2.5	-1.17	61	Nov-15	4.5	2.5	-1.17
19	Oct-99	4.5	5	-0.89	62	Jun-16	4.5	2.5	-1.17
20	Mar-00	4.5	5	-0.89	63	Nov-16	4.5	2.5	-1.17
21	Jun-00	4.5	5	-0.89	64	Jun-17	4.5	2.5	-1.17
22	Sep-00	4.5	2.5	-1.17	65	Nov-17	4.5	2.5	-1.17
23	Nov-00	4.5	5	-0.89	66	Jun-18	4.5	2.5	-1.17
24	Mar-01	4.5	5	-0.89	67	Nov-18	4.5	2.5	-1.17
25	May-01	4.5	5	-0.89	68	May-19	4.5	2.5	-1.17
26	Aug-01	4.5	2.5	-1.17	69	Nov-19	4.5	2.5	-1.17
27	Nov-01	4.5	5	-0.89	70	Jun-20	4.5	2.5	-1.17
28	Mar-02	4.5	5	-0.89	71	Nov-20	4.5	2.5	-1.17
29	May-02	4.5	5	-0.89	72	Jun-21	4.5	2.5	-1.17
30	Sep-02	4.5	2.5	-1.17	73	Nov-21	4.5	2.5	-1.17
31	Dec-02	4.5	2.5	-1.17	74	Jun-22	4.5	2.5	-1.17
32	Mar-03	4.5	2.5	-1.17					
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

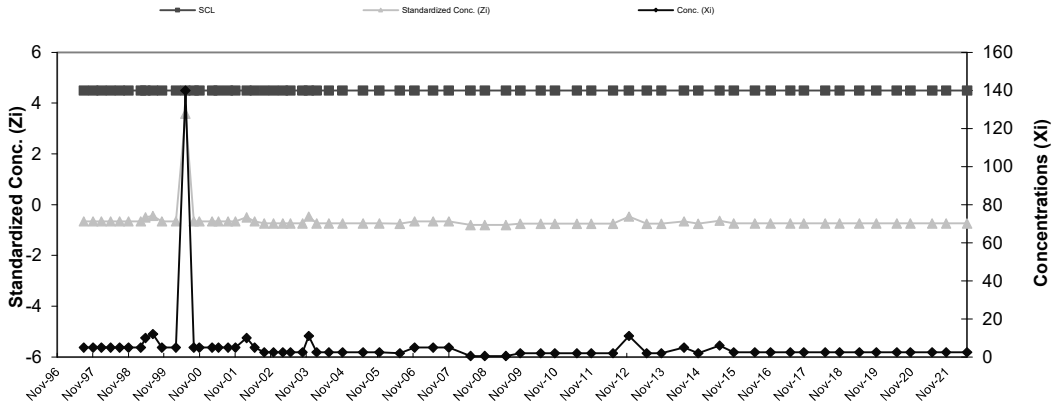


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - Copper

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	5	-0.66	52	Nov-11	4.5	2	-0.75
10	Nov-97	4.5	5	-0.66	53	Jun-12	4.5	2	-0.75
11	Feb-98	4.5	5	-0.66	54	Dec-12	4.5	11	-0.47
12	May-98	4.5	5	-0.66	55	Jun-13	4.5	2	-0.75
14	Aug-98	4.5	5	-0.66	56	Nov-13	4.5	2	-0.75
15	Nov-98	4.5	5	-0.66	57	Jun-14	4.5	5	-0.66
16	Mar-99	4.5	5	-0.66	58	Nov-14	4.5	2	-0.75
17	May-99	4.5	10	-0.50	59	Jun-15	4.5	6	-0.63
18	Jul-99	4.5	12	-0.44	60	Nov-15	4.5	2.5	-0.74
19	Oct-99	4.5	5	-0.66	61	Jun-16	4.5	2.5	-0.74
20	Mar-00	4.5	5	-0.66	62	Nov-16	4.5	2.5	-0.74
21	Jun-00	4.5	140	3.59	63	Jun-17	4.5	2.5	-0.74
22	Sep-00	4.5	5	-0.66	64	Nov-17	4.5	2.5	-0.74
23	Nov-00	4.5	5	-0.66	65	Jun-18	4.5	2.5	-0.74
24	Mar-01	4.5	5	-0.66	66	Nov-18	4.5	2.5	-0.74
25	May-01	4.5	5	-0.66	67	May-19	4.5	2.5	-0.74
26	Aug-01	4.5	5	-0.66	68	Nov-19	4.5	2.5	-0.74
27	Nov-01	4.5	5	-0.66	69	Jun-20	4.5	2.5	-0.74
28	Mar-02	4.5	10	-0.50	70	Nov-20	4.5	2.5	-0.74
29	May-02	4.5	5	-0.66	71	Jun-21	4.5	2.5	-0.74
30	Sep-02	4.5	2.5	-0.74	72	Nov-21	4.5	2.5	-0.74
31	Dec-02	4.5	2.5	-0.74	73	Jun-22	4.5	2.5	-0.74
32	Mar-03	4.5	2.5	-0.74					
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

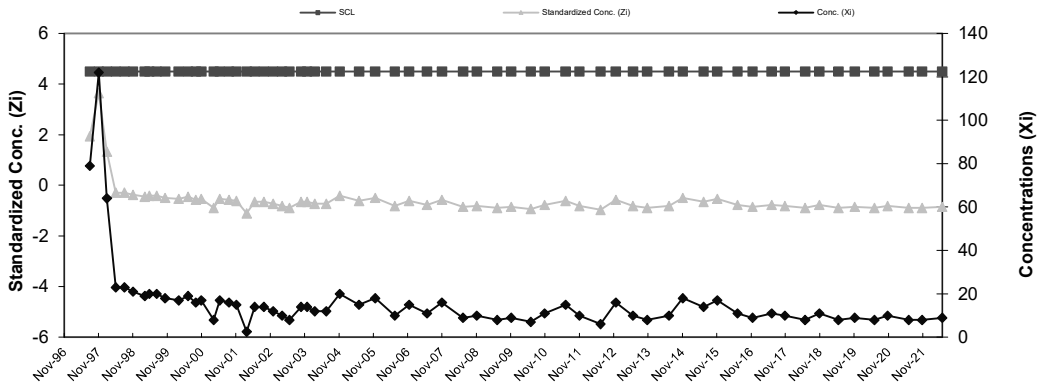


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - Nickel

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	79	1.94	52	Nov-11	4.5	10	-0.81
10	Nov-97	4.5	122	3.65	53	Jun-12	4.5	6	-0.97
11	Feb-98	4.5	64	1.34	54	Dec-12	4.5	16	-0.57
12	May-98	4.5	23	-0.29	55	Jun-13	4.5	10	-0.81
14	Aug-98	4.5	23	-0.29	56	Nov-13	4.5	8	-0.89
15	Nov-98	4.5	21	-0.37	57	Jun-14	4.5	10	-0.81
16	Mar-99	4.5	19	-0.45	58	Nov-14	4.5	18	-0.49
17	May-99	4.5	20	-0.41	59	Jun-15	4.5	14	-0.65
18	Jul-99	4.5	20	-0.41	60	Nov-15	4.5	17	-0.53
19	Oct-99	4.5	18	-0.49	61	Jun-16	4.5	11	-0.77
20	Mar-00	4.5	17	-0.53	62	Nov-16	4.5	9	-0.85
21	Jun-00	4.5	19	-0.45	63	Jun-17	4.5	11	-0.77
22	Sep-00	4.5	16	-0.57	64	Nov-17	4.5	10	-0.81
23	Nov-00	4.5	17	-0.53	65	Jun-18	4.5	8	-0.89
24	Mar-01	4.5	8	-0.89	66	Nov-18	4.5	11	-0.77
25	May-01	4.5	17	-0.53	67	May-19	4.5	8	-0.89
26	Aug-01	4.5	16	-0.57	68	Nov-19	4.5	9	-0.85
27	Nov-01	4.5	15	-0.61	69	Jun-20	4.5	8	-0.89
28	Mar-02	4.5	2.5	-1.11	70	Nov-20	4.5	10	-0.81
29	May-02	4.5	14	-0.65	71	Jun-21	4.5	8	-0.89
30	Sep-02	4.5	14	-0.65	72	Nov-21	4.5	8	-0.89
31	Dec-02	4.5	12	-0.73	73	Jun-22	4.5	9	-0.85
32	Mar-03	4.5	10	-0.81					
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

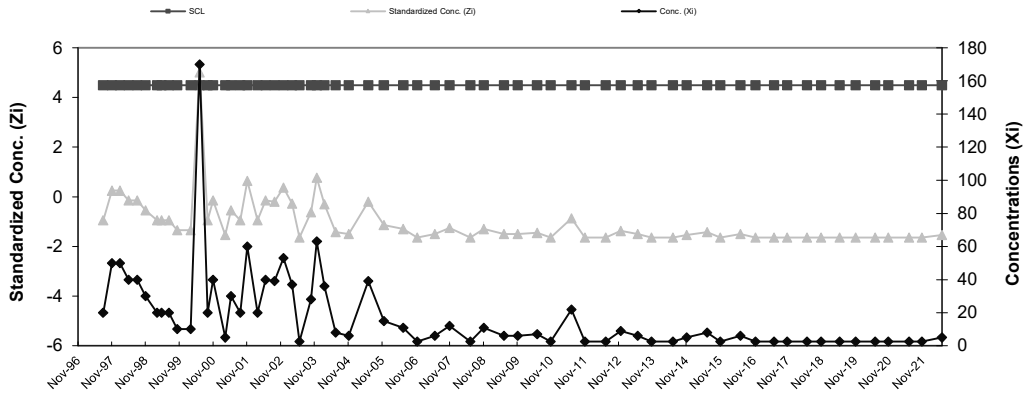


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - Zinc

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	20	-0.94	52	Nov-11	4.5	2.5	-1.63
10	Nov-97	4.5	50	0.25	53	Jun-12	4.5	2.5	-1.63
11	Feb-98	4.5	50	0.25	54	Dec-12	4.5	9	-1.38
12	May-98	4.5	40	-0.15	55	Jun-13	4.5	6	-1.50
14	Aug-98	4.5	40	-0.15	56	Nov-13	4.5	2.5	-1.63
15	Nov-98	4.5	30	-0.54	57	Jun-14	4.5	2.5	-1.63
16	Mar-99	4.5	20	-0.94	58	Nov-14	4.5	5	-1.54
17	May-99	4.5	20	-0.94	59	Jun-15	4.5	8	-1.42
18	Jul-99	4.5	20	-0.94	60	Nov-15	4.5	2.5	-1.63
19	Oct-99	4.5	10	-1.34	61	Jun-16	4.5	6	-1.50
20	Mar-00	4.5	10	-1.34	62	Nov-16	4.5	2.5	-1.63
21	Jun-00	4.5	170	5.00	63	Jun-17	4.5	2.5	-1.63
22	Sep-00	4.5	20	-0.94	64	Nov-17	4.5	2.5	-1.63
23	Nov-00	4.5	40	-0.15	65	Jun-18	4.5	2.5	-1.63
24	Mar-01	4.5	5	-1.54	66	Nov-18	4.5	2.5	-1.63
25	May-01	4.5	30	-0.54	67	May-19	4.5	2.5	-1.63
26	Aug-01	4.5	20	-0.94	68	Nov-19	4.5	2.5	-1.63
27	Nov-01	4.5	60	0.64	69	Jun-20	4.5	2.5	-1.63
28	Mar-02	4.5	20	-0.94	70	Nov-20	4.5	2.5	-1.63
29	May-02	4.5	40	-0.15	71	Jun-21	4.5	2.5	-1.63
30	Sep-02	4.5	39	-0.19	72	Nov-21	4.5	2.5	-1.63
31	Dec-02	4.5	53	0.37	73	Jun-22	4.5	5	-1.54
32	Mar-03	4.5	37	-0.27					
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

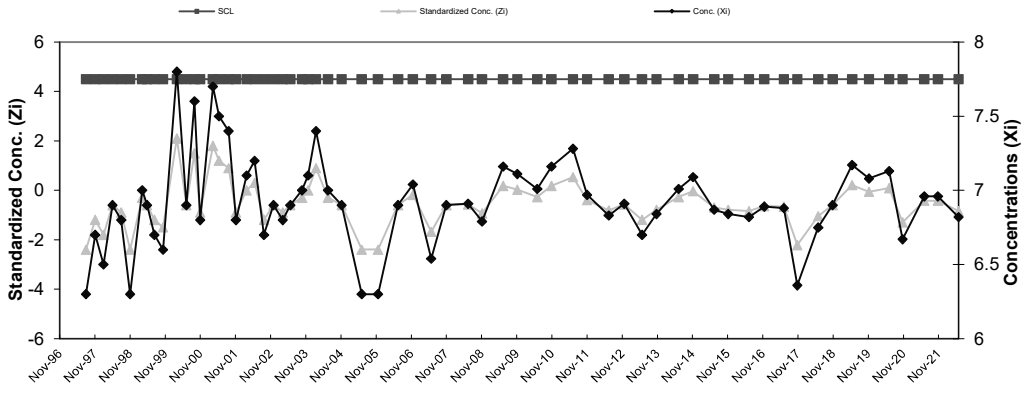


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - pH

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	6.3	-2.40	52	Nov-11	4.5	7.0	-0.39
10	Nov-97	4.5	6.7	-1.20	53	Jun-12	4.5	6.83	-0.81
11	Feb-98	4.5	6.5	-1.80	54	Dec-12	4.5	6.91	-0.57
12	May-98	4.5	6.9	-0.60	55	Jun-13	4.5	6.7	-1.20
14	Aug-98	4.5	6.8	-0.90	56	Nov-13	4.5	6.84	-0.78
15	Nov-98	4.5	6.3	-2.40	57	Jun-14	4.5	7.01	-0.27
16	Mar-99	4.5	7	-0.30	58	Nov-14	4.5	7.09	-0.03
17	May-99	4.5	6.9	-0.60	59	Jun-15	4.5	6.87	-0.69
18	Jul-99	4.5	6.7	-1.20	60	Nov-15	4.5	6.84	-0.78
19	Oct-99	4.5	6.6	-1.50	61	Jun-16	4.5	6.82	-0.84
20	Mar-00	4.5	7.8	2.10	62	Nov-16	4.5	6.89	-0.63
21	Jun-00	4.5	6.9	-0.60	63	Jun-17	4.5	6.88	-0.66
22	Sep-00	4.5	7.6	1.50	64	Nov-17	4.5	6.36	-2.22
23	Nov-00	4.5	6.8	-0.90	65	Jun-18	4.5	6.75	-1.05
24	Mar-01	4.5	7.7	1.80	66	Nov-18	4.5	6.9	-0.60
25	May-01	4.5	7.5	1.20	67	May-19	4.5	7.17	0.21
26	Aug-01	4.5	7.4	0.90	68	Nov-19	4.5	7.08	-0.06
27	Nov-01	4.5	6.8	-0.90	69	Jun-20	4.5	7.13	0.09
28	Mar-02	4.5	7.1	0.00	70	Nov-20	4.5	6.67	-1.29
29	May-02	4.5	7.2	0.30	71	Jun-21	4.5	6.96	-0.42
30	Sep-02	4.5	6.7	-1.20	72	Nov-21	4.5	6.96	-0.42
31	Dec-02	4.5	6.9	-0.60	73	Jun-22	4.5	6.82	-0.84
32	Mar-03	4.5	6.8	-0.90					
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

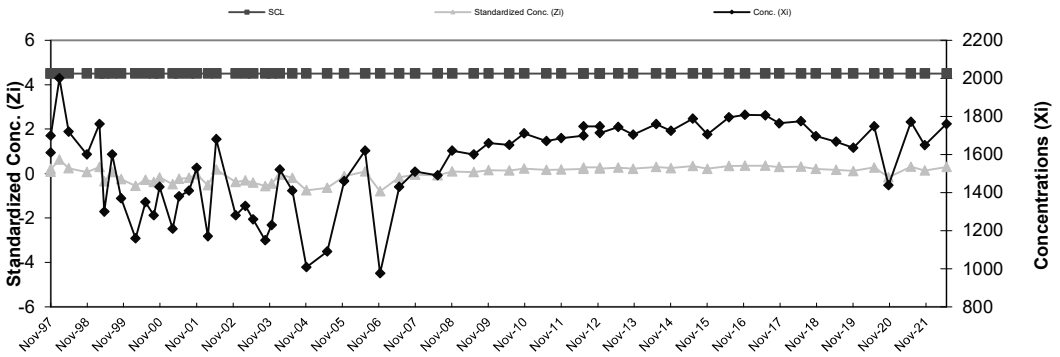


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault C - SpC

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Aug-97	4.5	1610	0.08	52	Nov-11	4.5	1699	0.21
10	Nov-97	4.5	2000	0.63	53	Jun-12	4.5	1748	0.27
11	Feb-98	4.5	1720	0.24	54	Dec-12	4.5	1713	0.23
12	May-98	4.5	1600	0.07	55	Jun-13	4.5	1744	0.27
14	Nov-98	4.5	1760	0.29	56	Nov-13	4.5	1703	0.21
15	Mar-99	4.5	1300	-0.35	57	Jun-14	4.5	1759	0.29
16	May-99	4.5	1600	0.07	58	Nov-14	4.5	1724	0.24
17	Jul-99	4.5	1370	-0.25	59	Jun-15	4.5	1788	0.33
18	Oct-99	4.5	1160	-0.55	60	Nov-15	4.5	1706	0.22
19	Mar-00	4.5	1350	-0.28	61	Jun-16	4.5	1795	0.34
20	Jun-00	4.5	1280	-0.38	62	Nov-16	4.5	1808	0.36
21	Sep-00	4.5	1430	-0.17	63	Jun-17	4.5	1805	0.35
22	Nov-00	4.5	1210	-0.48	64	Nov-17	4.5	1764	0.30
23	Mar-01	4.5	1380	-0.24	65	Jun-18	4.5	1774	0.31
24	May-01	4.5	1410	-0.20	66	Nov-18	4.5	1696	0.20
25	Aug-01	4.5	1530	-0.03	67	May-19	4.5	1668	0.16
26	Nov-01	4.5	1170	-0.53	68	Nov-19	4.5	1635	0.12
27	Mar-02	4.5	1680	0.18	69	Jun-20	4.5	1747	0.27
28	May-02	4.5	1280	-0.38	70	Nov-20	4.5	1438	-0.16
29	Dec-02	4.5	1330	-0.31	71	Jun-21	4.5	1771	0.31
30	Mar-03	4.5	1260	-0.41	72	Nov-21	4.5	1649	0.14
31	Jun-03	4.5	1150	-0.56	73	Jun-22	4.5	1760	0.29
32	Oct-03	4.5	1230	-0.45					
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

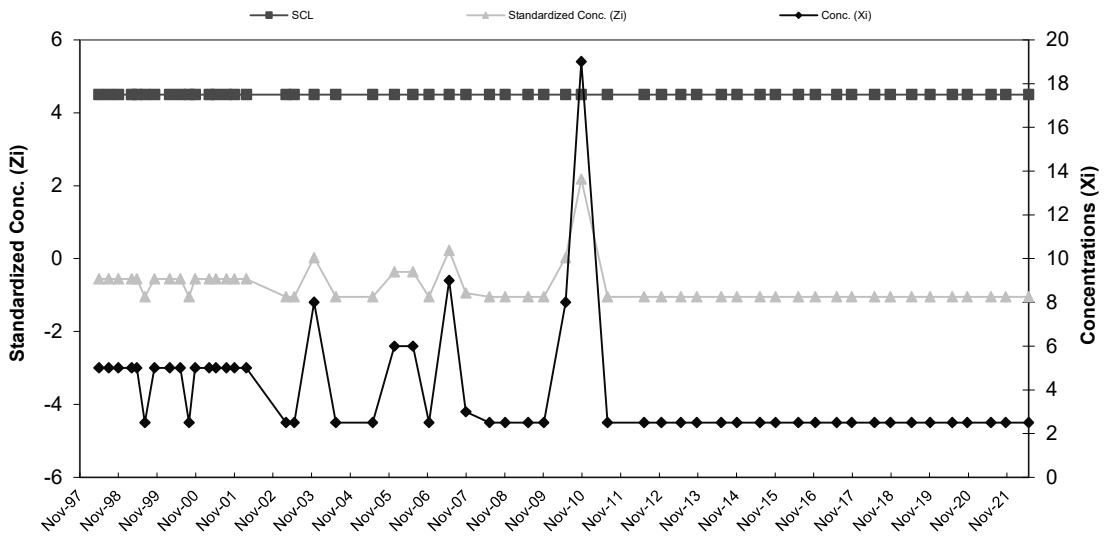


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - Chromium

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	59	Nov-20	4.5	2.5	-1.05
28	Jun-04	4.5	2.5	-1.05	60	Jun-21	4.5	2.5	-1.05
29	Jun-05	4.5	2.5	-1.05	61	Nov-21	4.5	2.5	-1.05
30	Jan-06	4.5	6	-0.36	62	Jun-22	4.5	2.5	-1.05
31	Jun-06	4.5	6	-0.36					
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

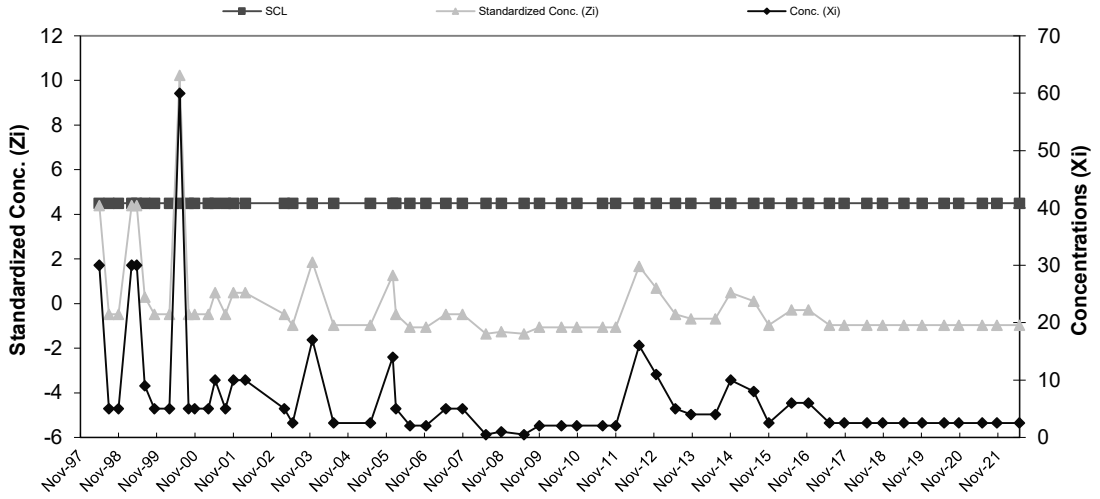


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - Copper

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-95	10		
2	Jun-96	10		
3	Aug-96	10		
4	Nov-96	10	**7.48**	**5.13**
5	May-97	5		
6	Aug-97	5		
7	Nov-97	5		
8	Feb-98	5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	30	4.39	41	Nov-10	4.5	2	-1.07
10	Aug-98	4.5	5	-0.48	42	Jul-11	4.5	2	-1.07
11	Nov-98	4.5	5	-0.48	43	Nov-11	4.5	2	-1.07
12	Mar-99	4.5	30	4.39	44	Jun-12	4.5	16	1.66
13	May-99	4.5	30	4.39	45	Dec-12	4.5	11	0.69
14	Jul-99	4.5	9	0.30	46	Jun-13	4.5	5	-0.48
15	Oct-99	4.5	5	-0.48	47	Nov-13	4.5	4	-0.68
16	Mar-00	4.5	5	-0.48	48	Jun-14	4.5	4	-0.68
17	Jun-00	4.5	60	10.24	49	Nov-14	4.5	10	0.49
18	Sep-00	4.5	5	-0.48	50	Jun-15	4.5	8	0.10
19	Nov-00	4.5	5	-0.48	51	Nov-15	4.5	2.5	-0.97
20	Mar-01	4.5	5	-0.48	52	Jun-16	4.5	6	-0.29
21	May-01	4.5	10	0.49	53	Nov-16	4.5	6	-0.29
22	Aug-01	4.5	5	-0.48	54	Jun-17	4.5	2.5	-0.97
23	Nov-01	4.5	10	0.49	55	Nov-17	4.5	2.5	-0.97
24	Mar-02	4.5	10	0.49	56	Jun-18	4.5	2.5	-0.97
25	Mar-03	4.5	5	-0.48	57	Nov-18	4.5	2.5	-0.97
26	Jun-03	4.5	2.5	-0.97	58	May-19	4.5	2.5	-0.97
27	Dec-03	4.5	17	1.86	59	Nov-19	4.5	2.5	-0.97
28	Jun-04	4.5	2.5	-0.97	60	Jun-20	4.5	2.5	-0.97
29	Jun-05	4.5	2.5	-0.97	61	Nov-20	4.5	2.5	-0.97
30	Jan-06	4.5	14	1.27	62	Jun-21	4.5	2.5	-0.97
31	Feb-06	4.5	5	-0.48	63	Nov-21	4.5	2.5	-0.97
32	Jun-06	4.5	2	-1.07	64	Jun-22	4.5	2.5	-0.97
33	Nov-06	4.5	2	-1.07					
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

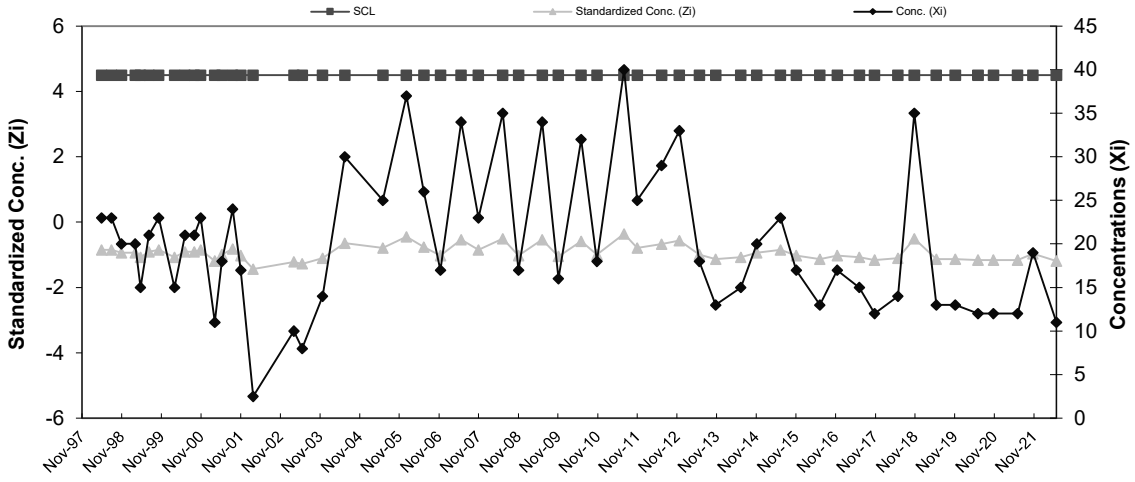


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - Nickel

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

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

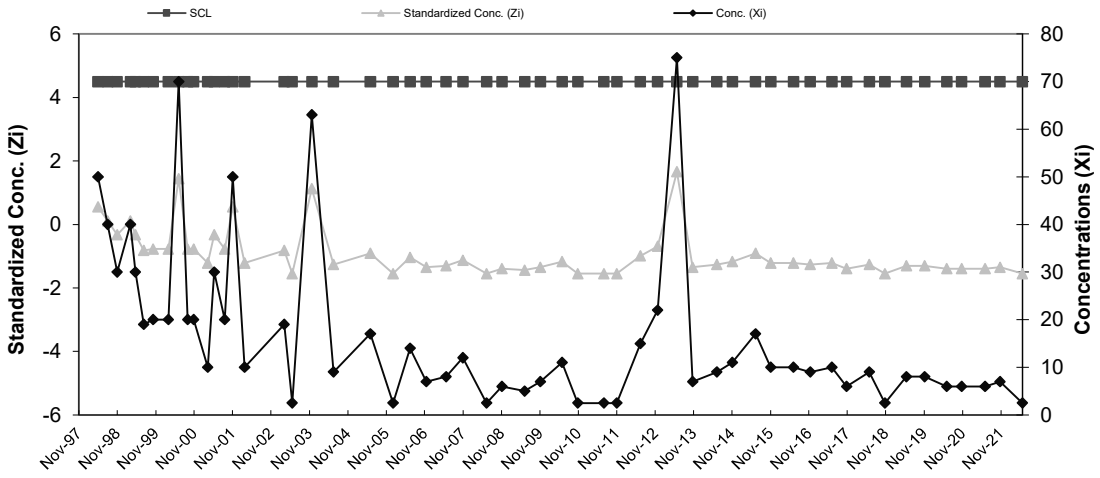


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - Zinc

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

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

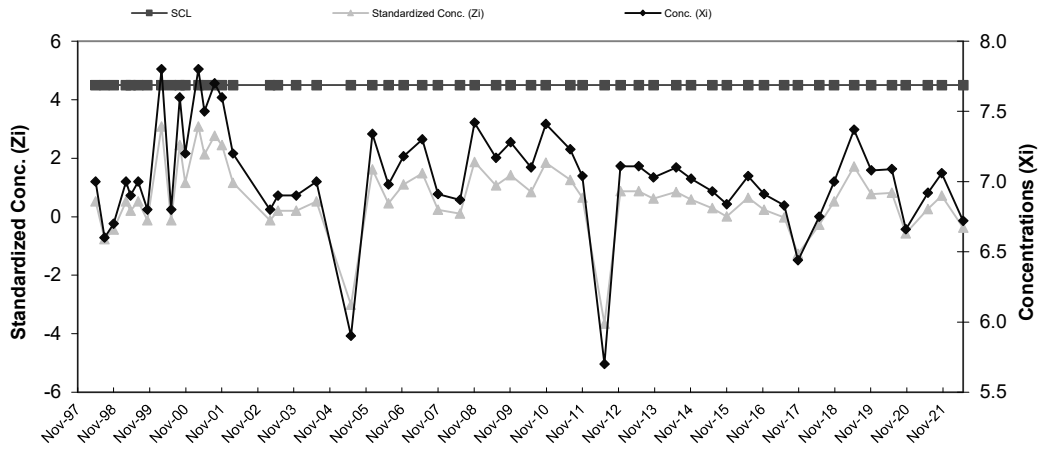


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - pH

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	7.00	0.52	42	Nov-11	4.5	7.0	0.65
10	Aug-98	4.5	6.60	-0.76	43	Jun-12	4.5	5.7	-3.65
11	Nov-98	4.5	6.70	-0.44	44	Dec-12	4.5	7.11	0.88
12	Mar-99	4.5	7.00	0.52	45	Jun-13	4.5	7.11	0.88
13	May-99	4.5	6.90	0.20	46	Nov-13	4.5	7.03	0.62
14	Jul-99	4.5	7.00	0.52	47	Jun-14	4.5	7.1	0.84
15	Oct-99	4.5	6.80	-0.12	48	Nov-14	4.5	7.02	0.59
16	Mar-00	4.5	7.80	3.09	49	Jun-15	4.5	6.93	0.30
17	Jun-00	4.5	6.80	-0.12	50	Nov-15	4.5	6.84	0.01
18	Sep-00	4.5	7.60	2.45	51	Jun-16	4.5	7.04	0.65
19	Nov-00	4.5	7.20	1.16	52	Nov-16	4.5	6.91	0.23
20	Mar-01	4.5	7.80	3.09	53	Jun-17	4.5	6.83	-0.02
21	May-01	4.5	7.50	2.13	54	Nov-17	4.5	6.44	-1.28
22	Aug-01	4.5	7.70	2.77	55	Jun-18	4.5	6.75	-0.28
23	Nov-01	4.5	7.60	2.45	56	Nov-18	4.5	7	0.52
24	Mar-02	4.5	7.20	1.16	57	May-19	4.5	7.37	1.71
25	Mar-03	4.5	6.80	-0.12	58	Nov-19	4.5	7.08	0.78
26	Jun-03	4.5	6.90	0.20	59	Jun-20	4.5	7.09	0.81
27	Dec-03	4.5	6.90	0.20	60	Nov-20	4.5	6.66	-0.57
28	Jun-04	4.5	7.00	0.52	61	Jun-21	4.5	6.92	0.26
29	Jun-05	4.5	5.90	-3.01	62	Nov-21	4.5	7.06	0.71
30	Jan-06	4.5	7.34	1.61	63	Jun-22	4.5	6.72	-0.38
31	Jun-06	4.5	6.98	0.46					
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

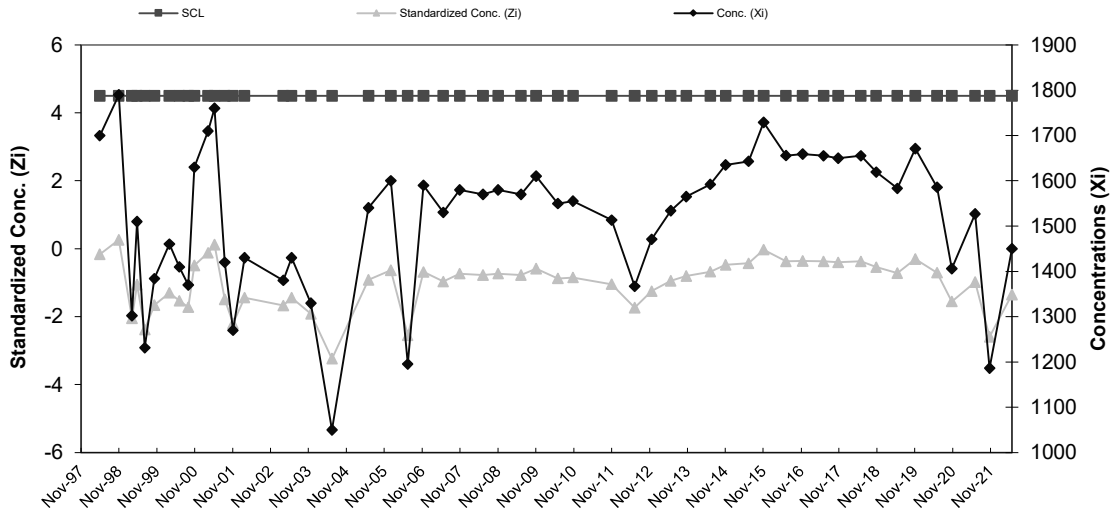


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault D - SpC

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

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

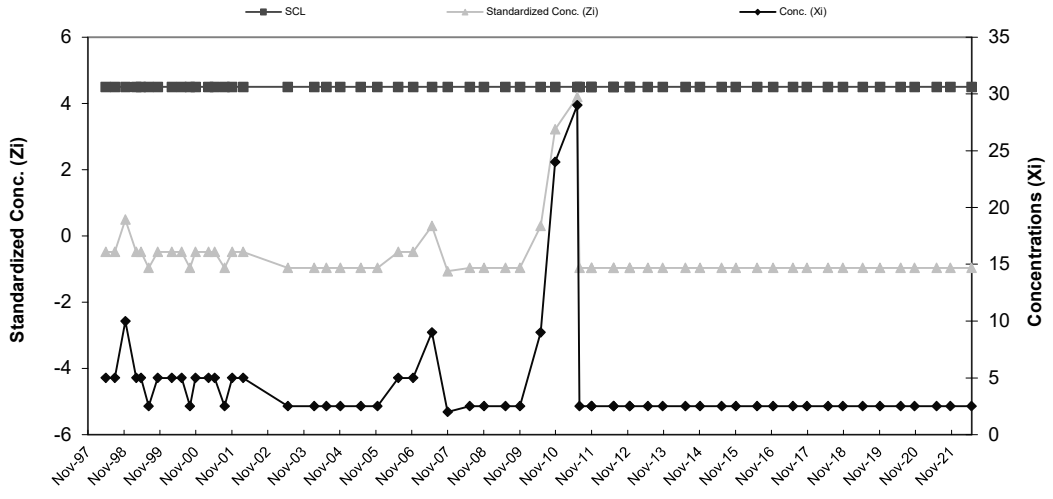


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - Chromium

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-96	10		
2	Jun-96	10		
3	Oct-96	10		
4	Nov-96	10	**7.48**	**5.13**
5	May-97	5		
6	Aug-97	5		
7	Nov-97	5		
8	Feb-98	5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.48	43	Nov-11	4.5	2.5	-0.97
10	Aug-98	4.5	5	-0.48	44	Jun-12	4.5	2.5	-0.97
11	Nov-98	4.5	10	0.49	45	Dec-12	4.5	2.5	-0.97
12	Mar-99	4.5	5	-0.48	46	Jun-13	4.5	2.5	-0.97
13	May-99	4.5	5	-0.48	47	Nov-13	4.5	2.5	-0.97
14	Jul-99	4.5	2.5	-0.97	48	Jun-14	4.5	2.5	-0.97
15	Oct-99	4.5	5	-0.48	49	Nov-14	4.5	2.5	-0.97
16	Mar-00	4.5	5	-0.48	50	Jun-15	4.5	2.5	-0.97
17	Jun-00	4.5	5	-0.48	51	Nov-15	4.5	2.5	-0.97
18	Sep-00	4.5	2.5	-0.97	52	Jun-16	4.5	2.5	-0.97
19	Nov-00	4.5	5	-0.48	53	Nov-16	4.5	2.5	-0.97
20	Mar-01	4.5	5	-0.48	54	Jun-17	4.5	2.5	-0.97
21	May-01	4.5	5	-0.48	55	Nov-17	4.5	2.5	-0.97
22	Aug-01	4.5	2.5	-0.97	56	Jun-18	4.5	2.5	-0.97
23	Nov-01	4.5	5	-0.48	57	Nov-18	4.5	2.5	-0.97
24	Mar-02	4.5	5	-0.48	58	May-19	4.5	2.5	-0.97
25	Jun-03	4.5	2.5	-0.97	59	Nov-19	4.5	2.5	-0.97
26	Feb-04	4.5	2.5	-0.97	60	Jun-20	4.5	2.5	-0.97
27	Jun-04	4.5	2.5	-0.97	61	Nov-20	4.5	2.5	-0.97
28	Nov-04	4.5	2.5	-0.97	62	Jun-21	4.5	2.5	-0.97
29	Jun-05	4.5	2.5	-0.97	63	Nov-21	4.5	2.5	-0.97
30	Dec-05	4.5	2.5	-0.97	64	Jun-22	4.5	2.5	-0.97
31	Jun-06	4.5	5	-0.48					
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

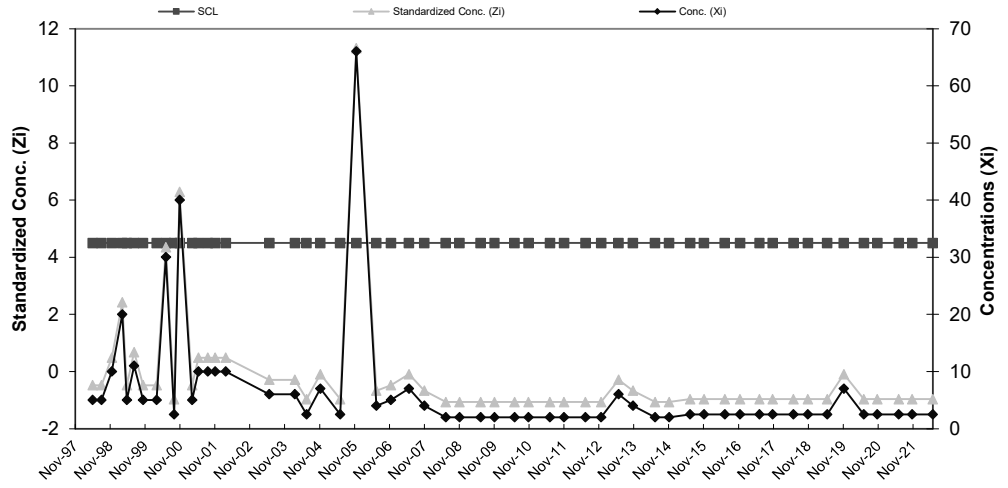


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - Copper

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Mar-96	10		
2	Jun-96	10		
3	Oct-96	10		
4	Nov-96	10	**7.50**	**5.17**
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	60	Nov-20	4.5	2.5	-0.97
28	Nov-04	4.5	7	-0.10	61	Jun-21	4.5	2.5	-0.97
29	Jun-05	4.5	2.5	-0.97	62	Nov-21	4.5	2.5	-0.97
30	Dec-05	4.5	66	11.32	63	Jun-22	4.5	2.5	-0.97
31	Jun-06	4.5	4	-0.68					
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

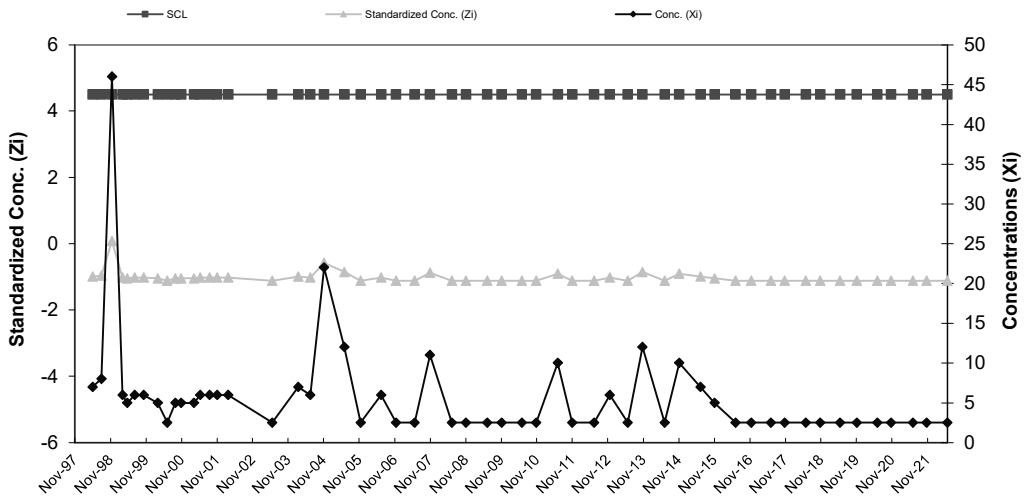


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - Nickel

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

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

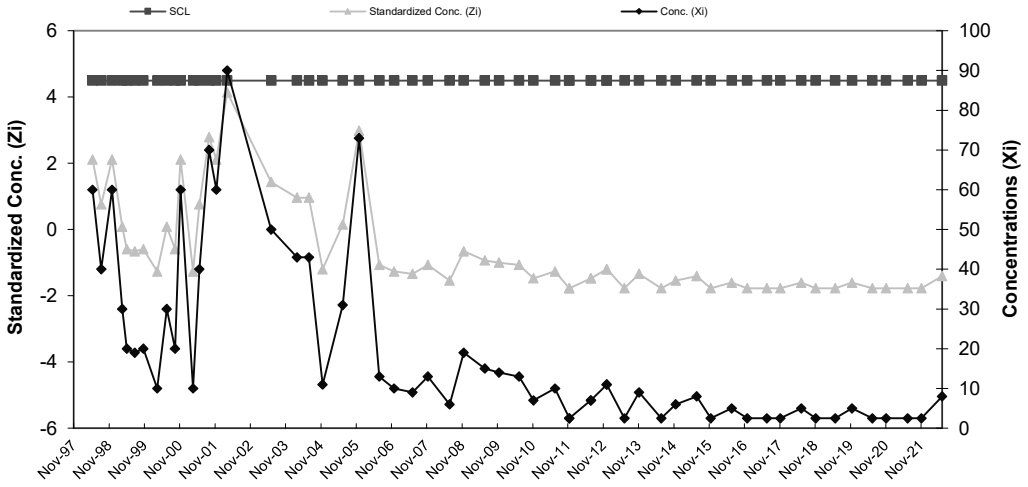


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - Zinc

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

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

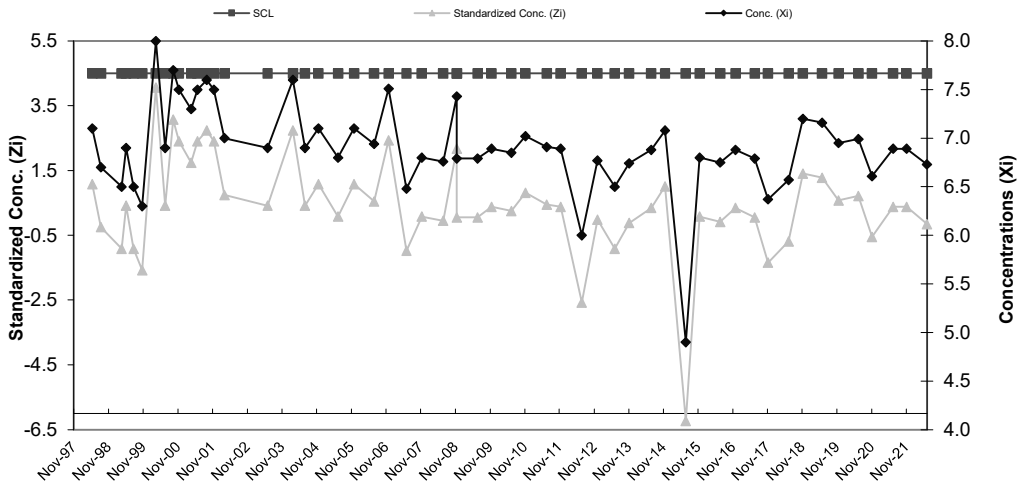


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - pH

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

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

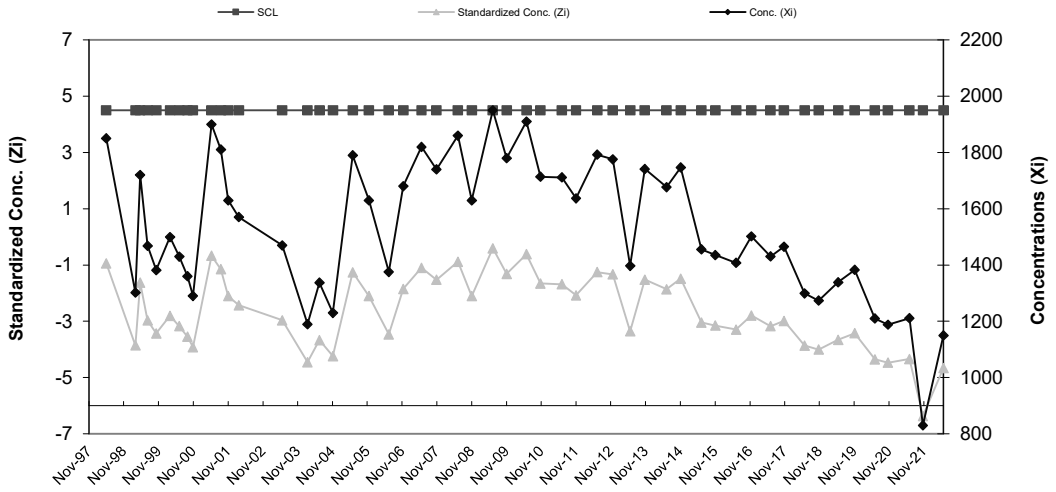


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault E - SpC

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

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

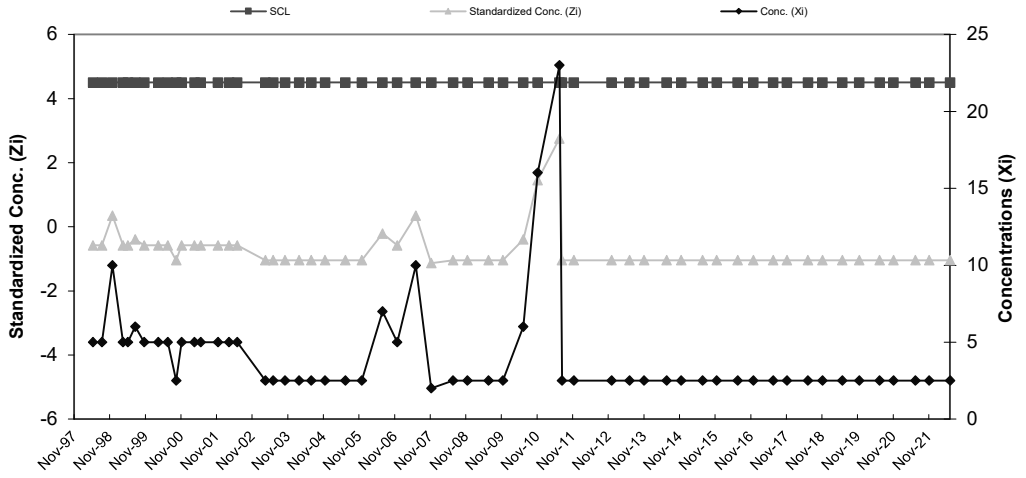


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - Chromium

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.58	44	Jul-11	4.5	2.5	-1.04
10	Aug-98	4.5	5	-0.58	45	Nov-11	4.5	2.5	-1.04
11	Nov-98	4.5	10	0.35	46	Dec-12	4.5	2.5	-1.04
12	Mar-99	4.5	5	-0.58	47	Jun-13	4.5	2.5	-1.04
13	May-99	4.5	5	-0.58	48	Nov-13	4.5	2.5	-1.04
14	Jul-99	4.5	6	-0.39	49	Jun-14	4.5	2.5	-1.04
15	Oct-99	4.5	5	-0.58	50	Nov-14	4.5	2.5	-1.04
16	Mar-00	4.5	5	-0.58	51	Jun-15	4.5	2.5	-1.04
17	Jun-00	4.5	5	-0.58	52	Nov-15	4.5	2.5	-1.04
18	Sep-00	4.5	2.5	-1.04	53	Jun-16	4.5	2.5	-1.04
19	Nov-00	4.5	5	-0.58	54	Nov-16	4.5	2.5	-1.04
20	Mar-01	4.5	5	-0.58	55	Jun-17	4.5	2.5	-1.04
21	May-01	4.5	5	-0.58	56	Nov-17	4.5	2.5	-1.04
22	Nov-01	4.5	5	-0.58	57	Jun-18	4.5	2.5	-1.04
23	Mar-02	4.5	5	-0.58	58	Nov-18	4.5	2.5	-1.04
24	May-02	4.5	5	-0.58	59	May-19	4.5	2.5	-1.04
25	Mar-03	4.5	2.5	-1.04	60	Nov-19	4.5	2.5	-1.04
26	Jun-03	4.5	2.5	-1.04	61	Jun-20	4.5	2.5	-1.04
27	Oct-03	4.5	2.5	-1.04	62	Nov-20	4.5	2.5	-1.04
28	Feb-04	4.5	2.5	-1.04	63	Jun-21	4.5	2.5	-1.04
29	Jun-04	4.5	2.5	-1.04	64	Nov-21	4.5	2.5	-1.04
30	Nov-04	4.5	2.5	-1.04	65	Jun-22	4.5	2.5	-1.04
31	Jun-05	4.5	2.5	-1.04					
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

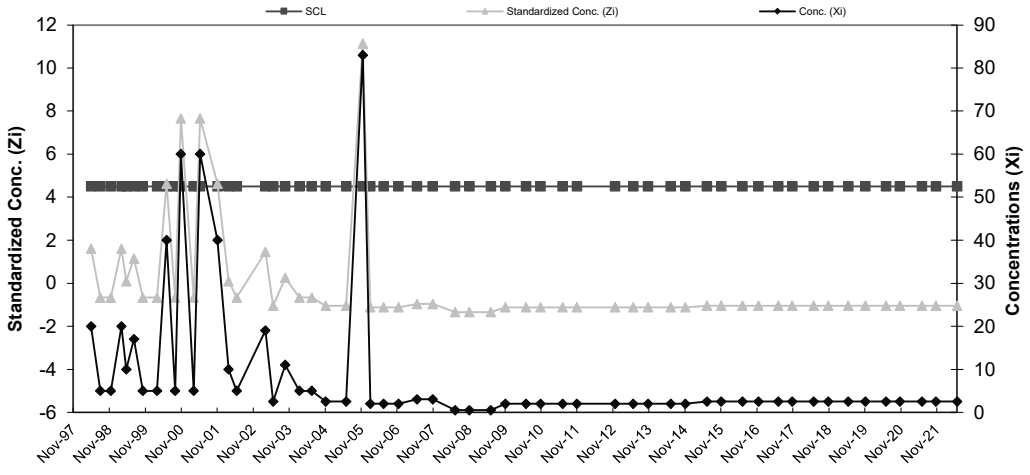


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - Copper

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	62	Nov-20	4.5	2.5	-1.04
28	Feb-04	4.5	5	-0.66	63	Jun-21	4.5	2.5	-1.04
29	Jun-04	4.5	5	-0.66	64	Nov-21	4.5	2.5	-1.04
30	Nov-04	4.5	2.5	-1.04	65	Jun-22	4.5	2.5	-1.04
31	Jun-05	4.5	2.5	-1.04					
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

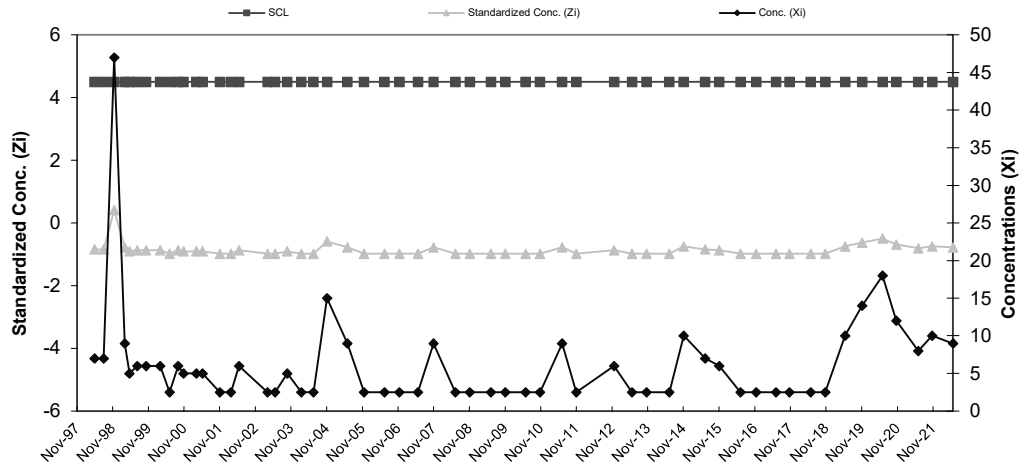


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - Nickel

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

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

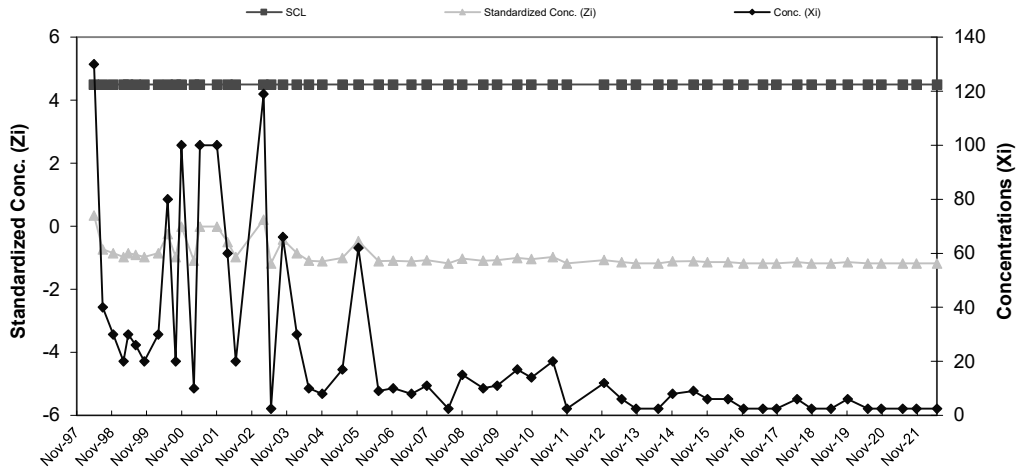


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - Zinc

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

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

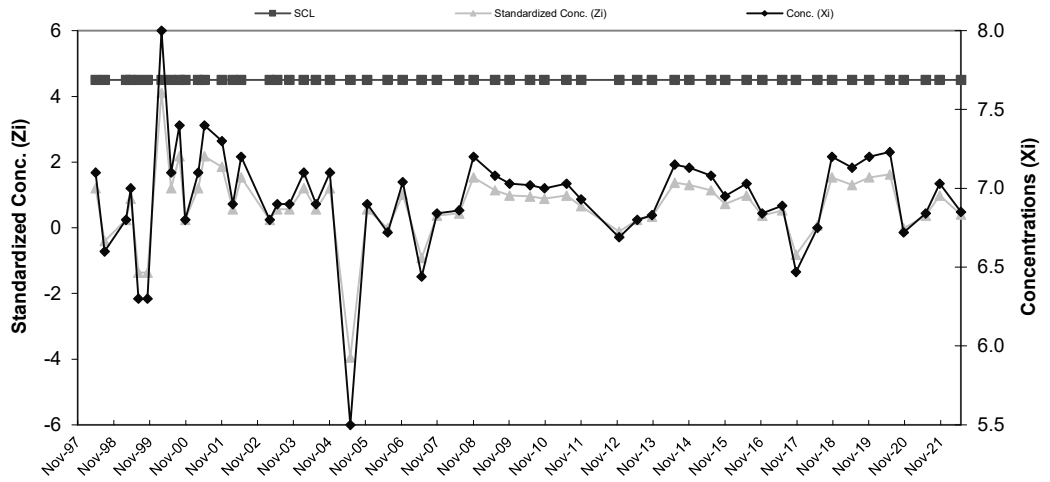


COLDWATER ROAD LANDFILL FACILITY
RCRA LANDFILL LEAK DETECTION SYSTEM
SHEWART CONTROL CHART
Vault F - pH

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

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	7.10	1.21	42	Jun-11	4.5	7.0	0.98
10	Aug-98	4.5	6.60	-0.40	43	Nov-11	4.5	6.93	0.66
11	Mar-99	4.5	6.80	0.24	44	Dec-12	4.5	6.69	-0.11
12	May-99	4.5	7.00	0.89	45	Jun-13	4.5	6.8	0.24
13	Jul-99	4.5	6.30	-1.37	46	Nov-13	4.5	6.83	0.34
14	Oct-99	4.5	6.30	-1.37	47	Jun-14	4.5	7.15	1.37
15	Mar-00	4.5	8.00	4.11	48	Nov-14	4.5	7.13	1.30
16	Jun-00	4.5	7.10	1.21	49	Jun-15	4.5	7.08	1.14
17	Sep-00	4.5	7.40	2.17	50	Nov-15	4.5	6.95	0.72
18	Nov-00	4.5	6.80	0.24	51	Jun-16	4.5	7.03	0.98
19	Mar-01	4.5	7.10	1.21	52	Nov-16	4.5	6.84	0.37
20	May-01	4.5	7.40	2.17	53	Jun-17	4.5	6.89	0.53
21	Nov-01	4.5	7.30	1.85	54	Nov-17	4.5	6.47	-0.82
22	Mar-02	4.5	6.90	0.56	55	Jun-18	4.5	6.75	0.08
23	May-02	4.5	7.20	1.53	56	Nov-18	4.5	7.2	1.53
24	Mar-03	4.5	6.80	0.24	57	May-19	4.5	7.13	1.30
25	Jun-03	4.5	6.90	0.56	58	Nov-19	4.5	7.2	1.53
26	Oct-03	4.5	6.90	0.56	59	Jun-20	4.5	7.23	1.63
27	Feb-04	4.5	7.10	1.21	60	Nov-20	4.5	6.72	-0.02
28	Jun-04	4.5	6.90	0.56	61	Jun-21	4.5	6.84	0.37
29	Nov-04	4.5	7.10	1.21	62	Nov-21	4.5	7.03	0.98
30	Jun-05	4.5	5.50	-3.94	63	Jun-22	4.5	6.85	0.40
31	Dec-05	4.5	6.90	0.56					
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		
2	Aug-95	1100		
3	Jun-96	1600		
4	Aug-96	1500	**1,535.00**	**218.31**
5	Nov-96	1600		
6	Aug-97	1530		
7	Nov-97	1800		
8	Feb-98	1750		

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