

OBG

2017 ANNUAL REPORT – FINAL REPORT

**Post-Closure Groundwater Monitoring Report
Coldwater Road Landfill
Flint, Michigan
MID 005 356 860**

**RACER TRUST
Detroit, Michigan**

February 2018

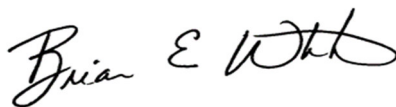


FEBRUARY 2018 | CLIENT # 15388 | PROJECT # 64737

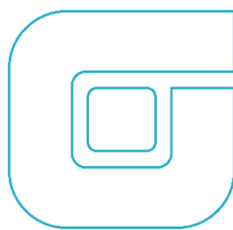
Post-Closure Groundwater Monitoring Coldwater Road Landfill MID 005 356 860

Flint, Michigan

Prepared for: RACER Trust
Detroit, Michigan



BRIAN E. WHITE, PE
SENIOR VICE PRESIDENT
O'BRIEN & GERE ENGINEERS, INC.



February 26, 2018

Mr. Richard Conforti, P.E.

Environmental Engineer

Michigan Department of Environmental Quality

Office of Waste Management and Radiological Protection

P.O. Box 30473

Lansing, Michigan 48909-7973

RE: Post-Closure Groundwater Monitoring 2017 Annual Report

Coldwater Road Landfill, Flint, Michigan

MID 005 356 860

FILE: 15388 /64737/rep

Dear **Mr. Conforti**

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, O'Brien & Gere (OBG) is pleased to present the results of the annual groundwater sampling event conducted in November 2017 for the Coldwater Road Landfill site ([Figure 1](#)). The groundwater samples were analyzed for total organic carbon (TOC, Method 415.1), total organic halogen (TOX, Method 9020A), specific conductivity (Method 120.1), and dissolved metals (chromium (Cr), copper (Cu), nickel (Ni), zinc (Zn) Method 200.8).

The event also included field measurements for pH, specific conductivity, dissolved oxygen, oxidation reduction potential, temperature, and turbidity. Groundwater samples were collected using a Whale pump (B-18A and B-19Ar) or peristaltic pump, and the wells were purged "dry" and allowed to recharge, and the samples were collected as soon as sufficient water was present to obtain the necessary sample volume. This was done in accordance with OBG procedures and the site-specific Field Method Guide ([Appendix A](#)) because low-flow sampling techniques resulted in greater than 0.3 ft of drawdown in each of the shallow wells sampled during this event. Samples to be analyzed for dissolved metals were field filtered. Groundwater sampling logs are included in [Appendix B](#).

Monitoring wells B-2D, B-7, B-19Ar, B-21D, B-22D, and B-27D were redeveloped in May 2017 per the Post Closure Care Plan (PCCP). These were monitoring wells that had final turbidity values of greater than 10 NTU after low-flow sampling for the past three sampling events. The redevelopment logs are included in [Appendix F](#).

Gauging and sampling were conducted on November 6, 2017. The results are presented in two separate tables: [Table 1](#) - Depth to Groundwater Levels in Monitoring Wells; [Table 2](#) - Post-Closure Monitoring - Historical Analytical Results (Physical Parameters, TOC, TOX, and Metals). Laboratory analytical reports are included in [Appendix C](#).

A site location map ([Figure 1](#)) and monitoring well location (*i.e.*, site layout) map ([Figure 2](#)) are also included. A groundwater elevation map was completed for the shallow wells ([Figure 3](#)) and a groundwater potentiometric surface map was completed for the deeper drift aquifer ([Figure 4](#)).

The top of casings of the groundwater monitoring wells were resurveyed on June 19, 2017. The top of casings changed by approximately 1.5 feet, which was due to a datum shift from the UTM system to the MI State Plane system. This accounted for a 1.0 feet difference in vertical datum, and an additional 0.505 feet difference was introduced from changing the datum from the 1929 vertical datum to the 1988 datum. Otherwise, the respective differences between the



surveys varied from 0.02 feet to 0.20 feet, and did not affect the overall groundwater flow directions established for the site due to the relatively steep gradient at the site. The updated survey data is included in [Appendix G](#).

Contours were not plotted for groundwater in the shallow wells because the water level elevations exhibited no pattern and groundwater is discontinuous in various perched zones.

The drift aquifer static water elevations, which were calculated from depth to water measurements collected on November 6, 2017, were consistent with historical data. Groundwater in the drift aquifer flows in a southerly direction as shown on [Figure 4](#).

For this event groundwater samples were collected from six monitoring wells screened in discontinuous perched zones. Samples from the six drift aquifer monitoring wells (B-2D, B-20D, B-21D, B-22D, B-23Dr, and B-27D) were not collected during this event per the revised PCCP approved on November 7, 2014, and will be collected on an annual basis during future late spring/early summer sampling events typically conducted in the month of June.

A review of the analytical data presented in the attached tables indicates analytical results similar to previous sampling events, a summary of the data is provided below:

- Chromium concentrations were not detected above the method detection limit of 5 µg/L, which is similar or less than the historic sample results.
- Copper concentrations were not detected above the method detection limit of 5 µg/L; except in monitoring well B-7 (5 µg/L). The results were similar or less than the historic results, which ranged from below the method detection limit to 43 µg/L at B-22D (8/31/1995).
- Nickel concentrations were not detected above the method detection limit of 5 µg/L; except in monitoring well B-9 (8 µg/L). The results were similar or less than historic results, which ranged from below the method detection limit to 370 µg/L at B-22D (6/21/1995).
- Zinc concentrations were not detected above the method detection limit of 5 µg/L; except in monitoring well B-9 (11 µg/L). The results were similar or less than historic results, which ranged from below the method detection limit to 150 µg/L at B-18A (6/21/1995).
- TOC concentrations ranged from 1.5 mg/L in monitoring well B-28 (duplicate) to 6.5 mg/L in monitoring well B-7. The results were similar or less than historic results, which ranged from below the method detection limit to 71 mg/L at B-9 (11/13/1996).
- TOX concentrations ranged from below the method detection limit of 30 µg/L in monitoring wells B-9, B-18A, B-24r, and B-28 to 120 µg/L in monitoring well B-19Ar. The results were similar or less than historic results, which ranged from below the method detection limit to 230 µg/L at B-7 (11/30/2016).
- pH concentrations ranged from 6.57 in monitoring well B-9 to 7.11 in monitoring well B-28. The results were within the range of the historic results, which ranged from 4.84 in monitoring well B-20D (12/8/2005) to 9.01 in monitoring well B-2D (6/21/1995).
- Specific conductivity ranged from 841 µs/cm in monitoring well B-7 to 2,540 µs/cm in monitoring well B-9. The results were comparable to the historic results, which ranged from 434 µs/cm in monitoring well B-2D (6/21/1995) to 3,290 µs/cm in monitoring well B-9 (11/20/2008).
- VOCs were not analyzed during this sampling event, but are analyzed during the June semi-annual sampling event each year in accordance with the approved PCCP.

A QA/QC review of the field and analytical data indicates that the data is useable for the intended purpose without deviations from quality assurance standards that would require rejection or further qualification of the data. Details of the data verification results for the groundwater monitoring data are included in [Appendix D](#).

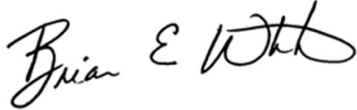
The duplicate sample results collected from monitoring well B-28 were comparable to the original sample.

There were no exceedances of the Shewart control limits (SCL) during this sampling event. No other trends or spikes were observed during this monitoring event.

The next sampling event (semi-annual event) is currently scheduled for June 2018. If you have any questions, please feel free to contact Clifford Yantz at (313) 333-0211.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.



Brian E. White, PE
Senior Vice President

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.



Clifford S. Yantz
Senior Hydrogeologist

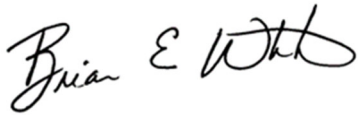
ENCLOSURES:

Table 1 – Depth to Groundwater Levels
Table 2 – Historical Analytical Results
Figure 1 – Site Location Map
Figure 2 – Site Layout
Figure 3 – Shallow Groundwater Elevation Map
Figure 4 – Drift Aquifer Groundwater Potentiometric Surface Map
Appendix A – Sampling Procedures
Appendix B – Groundwater Sampling Logs
Appendix C – Analytical Laboratory Results
Appendix D – Groundwater Sampling Program QA/QC Summary
Appendix E – Monitoring Well Control Charts
Appendix F – Well Development Logs
Appendix G – Updated Survey Data

cc: David Favero – RACER Trust
Kevin Schneider – OBG

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

On Behalf of RACER Trust



Brian E. White, PE
Senior Vice President – O'Brien & Gere Engineers, Inc.

Agent for RACER Trust

Date: February 26, 2018

cc: file



TABLES

TABLE 1
RACER Trust - Coldwater Road Landfill Facility
Depth to Groundwater Levels in Monitoring Wells
November 6, 2017

<i>Well</i>	<i>Top of Casing Elev. (ft)*</i>	<i>Depth to Water(ft)</i>	<i>Static Water Elev. (ft)</i>
B-2D	803.80	56.01	747.79
B-7	813.63	19.81	793.82
B-9	807.45	19.19	788.26
B-18A	810.85	25.81	785.04
B-19A	812.66	11.62	801.04
B-19AR	811.80	40.67	771.13
B-20D	815.14	71.44	743.70
B-21D	821.07	81.53	739.54
B-22D	822.15	85.56	736.59
B-23DR	812.12	82.05	730.07
B-24R	816.04	17.52	798.52
B-27D	812.70	76.84	735.86
B-28	816.46	6.97	809.49

Notes

Casing elevations were provided by Norwy & Hale Surveyors and are in
feet relative to National Geodetic Vertical Datum

NA - Not available

NG - No ground water detected

Top of casing elevations were resurveyed in June 2017.

R - Indicates a replacement well location.

TABLE 2
RACER Trust - Coldwater Road Landfill Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, Metals, Chloride, Cyanide, Phenols, and Sulfate

Well ID	Sample Date	Indicator Parameters						Dissolved Metals (µg/L)						Inorganics (mg/L)			
		TOC	TOX	pH	SpC	Temp	Cr	Cu	Ni	Zn	Fe	Mn	Na	Chloride	Cyanide	Phenols	Sulfate
		(mg/L)	(µg/L)				100 (A)	1,000 (E)	100 (A)	2,400							
B-2D	6/21/1995	5.3	<10	9.01	434	15.0	<20	<20	<30	<20	--	--	--	--	--	--	--
	8/31/1995	6.3	130	8.27	479	14.4	<20	<20	<40	<20	--	--	--	--	--	--	--
	2/9/1996	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/19/1996	5.2	<100	7.52	580	12.4	<20	<20	<20	<20	--	--	--	--	--	--	--
	8/21/1996	7.4	<5	7.69	641	13.9	<20	<20	<20	50	--	--	--	--	--	--	--
	11/13/1996	11.0	<5	7.26	769	7.6	<20	<20	<20	30	--	--	--	--	--	--	--
	5/6/1997	26.0	<100	6.30	1500	7.0	10	<10	28	30	--	--	--	--	--	--	--
	11/6/1997	15.0	<100	6.90	660	9.0	<10	<10	39	<10	280	577	--	12	<0.005	<0.020	79
	5/4/1998	29.0	12	6.68	549	12.4	<10	<10	<5	<10	--	--	--	--	--	--	--
	11/5/1998	52.0	18	4.70	498	8.6	<10	<10	<5	10	<10	17	33,600	--	--	--	--
	12/23/1998	--	--	--	--	--	--	--	--	--	--	--	--	13	<0.005	<0.020	40
	4/26/1999	52.0	<100	8.50	523	14.5	<10	<10	<5	<10	--	--	--	--	--	--	--
	11/5/1999	6.4	<100	7.40	405	12.8	<10	<10	<5	40	70	21	35,100	4	<0.005	<0.020	42
	4/26/2000	5.4	<100	7.96	770	17.4	<10	<10	<5	<10	--	--	--	--	--	--	--
	12/8/2000	5.5	<10	6.68	610	9.7	<10	<10	9	<10	40	--	22,900	7	<0.005	<0.020	81
Duplicate	5/15/2001	5.5	<100	7.79	890	13.2	<10	<10	<5	<10	--	--	--	--	--	--	--
	10/18/2001	4.1	<100	7.43	1830	9.4	<10	<10	<5	<10	230	--	12,900	2	<0.005	<0.020	32
	10/18/2001	3.6	<100	7.39	1780	7.8	<10	<10	<5	<10	210	--	12,700	1	<0.005	<0.020	32
	5/16/2002	4.0	<100	7.19	1000	11.6	<10	<10	<5	<10	--	--	--	--	--	--	--
	11/7/2002	2.6	<30	7.38	490	9.5	<5	<5	<5	<5	140	8	11,900	2	<0.005	<0.020	32
	11/7/2002	2.7	<30	--	--	--	<5	<5	<5	<5	140	6	11,200	2	<0.005	<0.020	30
	6/3/2003	4.4	<30	6.91	530	12.9	<5	<5	<5	<5	--	--	--	--	--	--	--
	11/13/2003	2.8	<30	7.97	630	7.7	<5	<5	<5	<5	110	7	--	2	<0.005	<0.010	31
	6/30/2004	4.2	<30	6.28	570	15.8	<5	<5	<5	7	--	--	--	--	--	--	--
	12/10/2004	2.0	<30	6.83	550	10.2	<5	<5	<5	10	760	145	10,700	2	<0.005	<0.010	35
	6/8/2005	2.0	<30	7.95	620	11.5	<5	<5	<5	<5	660	199	10,900	<5	<0.005	<0.010	34
	12/8/2005	3.0	<30	6.89	642	10.2	9	<4	<5	<10	140	120	13,300	--	--	--	--
	6/28/2006	6.3	<30	7.41	671	12.2	<5	<4	<5	8	110	70	15,000	2	<0.005	<0.010	50
	6/28/2006	5.1	<30	7.41	682	12.2	<5	<4	<5	8	120	70	15,200	3	<0.005	<0.010	50
	11/30/2006	5.1	43.3	7.21	677	8.4	<5	<4	<5	18	--	--	--	--	--	--	--
Duplicate	6/8/2007	2.4	69.1	6.78	644	14.1	8	2	1	6	110	104	14,800	4	<0.005	<0.010	44
	11/14/2007	5.2	<30	7.06	783	14.9	1	1	4	9	--	--	--	--	--	--	--
	6/25/2008	5.7	<60	6.90	920	18.4	<5	1	5	7	350	32	26,100	10	<0.005	<0.010	98
	11/20/2008	4.5	<30	6.84	806	9.1	<5	<1	<5	<5	--	--	--	--	--	--	--
	6/25/2009	5.6	<30	6.95	924	23.7	<5	203	<5	113	22	77	29,700	10	<0.005	<0.010	104
	11/16/2009	4	<30	7.17	835	10.2	<5	<4	<5	6	--	--	--	--	--	--	--
	6/16/2010	5	<30	7.09	841	13.9	<5	<4	<5	<5	40	83	19,000	7	<0.005	<0.020	75
	11/10/2010	4	<30	7.17	779	11.3	11	<4	<5	<5	--	--	--	--	--	--	--
	6/21/2011	2.9	<30	6.99	742	19.3	9	<4	<5	<5	250	55	16,900	6	<0.005	<0.010	57
	6/21/2011	--	--	--	--	--	<5	--	--	--	--	--	--	--	--	--	--
	11/15/2011	3	16	7.05	751	11.3	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/27/2012	2.2	16	7.00	714	12.7	<5	<4	<5	<5	<20	25	17,300	<5	<0.005	<0.02	43
	12/6/2012	2.6	<40	7.47	714	10.2	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/6/2013	1.6	<10	6.78	742	12.5	<5	<4	<5	26	990	31	24,400	<5	<0.005	<0.02	68
	11/6/2013	2.6	<10	7.34	726	11.8	<5	<4	<5	<5	--	--	--	--	--	--	--
Replicate	6/25/2014	2.6	<30	7.27	717	12.8	<5	<5	11	7	<20	26	7,280	<5	<0.005	<0.02	48
	6/24/2015	2.2	<30	7.12	621	12.4	<5	<5	<5	<5	<20	11	15,100	<5	<0.005	<0.02	41
	6/27/2016	2.6	55	6.42	730	17.2	<5	<5	<5	<5	40	<5	16,100	<5	<0.005	<0.02	50
	6/22/2017	2.3	<30	7.09	691	12.5	<5	<5	<5	<5	20	7	15,500	<5	<0.005	<0.02	44

See notes on page 16.



TABLE 2
RACER Trust - Coldwater Road Landfill Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, Metals, Chloride, Cyanide, Phenols, and Sulfate

Well ID	Sample Date	Indicator Parameters						Dissolved Metals (µg/L)						Inorganics (mg/L)			
		TOC	TOX	pH	SpC	Temp	Cr	Cu	Ni	Zn	Fe	Mn	Na	Chloride	Cyanide	Phenols	Sulfate
		(mg/L)	(µg/L)				100 (A)	1,000 (E)	100 (A)	2,400							
B-7	6/21/1995	8.7	23	7.48	1509	13.8	<20	<20	<30	<20	--	--	--	--	--	--	--
	8/31/1995	--	--	--	--	--	<20	<20	<40	<20	--	--	--	--	--	--	--
	2/9/1996	14.0	120	--	--	--	<20	<20	<40	22	--	--	--	--	--	--	--
	6/19/1996	20.0	<100	6.91	1,508	13.2	<20	<20	<20	20	--	--	--	--	--	--	--
	8/21/1996	55.0	26	7.59	1,567	17.1	<20	<20	<20	60	--	--	--	--	--	--	--
	11/13/1996	27.0	<5	7.95	1,960	7.2	<20	<20	<20	50	--	--	--	--	--	--	--
	5/6/1997	16.0	<100	7.20	780	11.0	<10	10	14	10	--	--	--	--	--	--	--
	11/6/1997	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/4/1998	6.0	<5	6.61	1,270	10.7	<10	<10	<5	20	--	--	--	--	--	--	--
	11/5/1998	4.0	<10	4.60	1,240	11.2	<10	<10	8	30	10	424	31,000	--	--	--	--
Duplicate	12/23/1998	--	--	--	--	--	--	--	--	--	--	--	--	58	<0.005	<0.020	161
	4/26/1999	3.9	<100	7.50	1,413	14.2	<10	<10	10	<10	--	--	--	--	--	--	--
	11/5/1999	5.1	<100	6.50	1,230	14.2	<10	<10	8	30	260	313	41,800	64	<0.005	<0.020	301
	4/26/2000	4.8	<100	7.58	1,450	10.2	<10	<10	<5	<10	--	--	--	--	--	--	--
	4/26/2000	5.9	<100	NS	NS	NS	<10	<10	6	10	--	--	--	--	--	--	--
	12/8/2000	4.2	<10	7.05	1,180	9.5	<10	<10	20	10	50	--	58,900	79	<0.005	<0.020	227
	5/16/2001	5.0	<100	7.30	1,330	13.0	<10	<10	7	<10	--	--	--	--	--	--	--
	10/18/2001	5.3	<100	7.19	1,210	12.5	<10	<10	5	<10	330	--	60,800	81	<0.005	NA	205
	5/16/2002	3.9	<100	7.19	1,850	11.9	<10	<10	<5	10	--	--	--	--	--	--	--
	11/7/2002	NR	NR	7.35	1,120	10.3	<5	<5	5	5	250	<5	65,500	NA	NA	NA	NA
Replicate	6/4/2003	3.3	<30	6.90	1,460	12.6	<5	<5	<5	<5	--	--	--	--	--	--	--
	11/13/2003	3.9	<30	6.90	1,590	9.6	<5	<5	<5	5	190	<5	--	85	<0.005	<0.010	279
	6/30/2004	4.3	43	7.13	1,353	16.0	<5	<5	9	7	--	--	--	--	--	--	--
	12/9/2004	4.0	<30	5.32	1,290	10.8	<5	<5	7	14	180	74	71,200	78	<0.005	<0.010	251
	6/8/2005	7.0	86	7.36	1,121	10.9	5	<5	9	13	170	31	81,900	80	<0.005	<0.010	254
	12/7/2005	7.5	<30	8.70	1,430	12.2	10	<4	6	20	150	50	85,300	--	--	--	--
	6/29/2006	4.3	<30	7.19	1,470	11.7	5	<4	9	18	190	150	76,900	73	<0.005	<0.010	270
	11/29/2006	4.4	<30	6.88	1,380	15.3	<5	<4	9	11	--	--	--	--	--	--	--
	6/7/2007	3.9	23.7	6.87	1,400	13.4	11	27	5	14	130	42	87,300	72	<0.005	<0.010	208
	11/14/2007	3.5	<30	6.85	1,350	13.4	14	6	16	20	--	--	--	--	--	--	--
	6/25/2008	3.8	72.9	6.90	1,410	20.7	<5	3	6	<5	350	10	94,800	68	<0.005	<0.010	222
	11/17/2008	4.6	20.5	6.80	1,258	5.5	<5	3	5	17	--	--	--	--	--	--	--
	6/24/2009	4.5	<30	6.90	1,184	20.0	<5	3	<5	14	67	36	84,500	40	<0.005	<0.010	154
	11/17/2009	8	25.3	7.31	1,090	10.3	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/17/2010	5	<30	7.04	1,290	16.3	<5	<4	<5	<5	<20	47	86,000	61	<0.005	<0.020	160
	11/8/2010	8	103	7.16	997	13.9	17	<4	<5	<5	--	--	--	--	--	--	--
	6/22/2011	4.3	25	7.25	910	13.7	10	<4	5	6	220	6	55,200	26	<0.005	<0.010	88
	6/22/2011	--	--	--	--	--	<5	--	--	--	--	--	--	--	--	--	--
	11/16/2011	5	28	7.04	974	12.8	<5	6	8	11	--	--	--	--	--	--	--
	6/27/2012	3.7	97	6.77	1,082	15.0	<5	<4	<5	<5	<20	58	64,900	40	<0.005	<0.02	134
	12/6/2012	7.9	<40	7.12	825	8.7	<5	4	<5	9	--	--	--	--	--	--	--
	6/5/2013	4.5	6	7.24	921	14.0	<5	<4	<5	24	30	13	27,500	32	<0.005	<0.02	106
	11/4/2013	8.7	16	7.10	733	11.6	14	6	<5	<5	--	--	--	--	--	--	--
	6/25/2014	--	--	7.10	--	13.3	--	--	--	--	--	--	--	--	--	--	--
	11/18/2014	6.5	28	7.31	896	4.8	<5	6	6	6	--	--	--	--	--	--	--
	6/24/2015	4.2	<30	6.98	1,019	16.3	<5	<5	<5	<5	<20	69	58,900	36	<0.005	<0.02	122
	11/18/2015	3.7	16	7.06	1,231	14.7	<5	<5	7	7	--	--	--	--	--	--	--
	6/23/2016	3.9	77	7.14	852	15.1	<5	<5	<5	<5	30	41	41,700	22	<0.005	<0.02	82
	11/30/2016	5.3	230	7.21	880	13.3	<5	<5	<5	<5	--	--	--	--	--	--	--
	6/21/2017	3.9	12	6.78	1,092	11.0	<5	<5	<5	<5	40	37	51,700	41	<0.005	<0.02	155
	11/7/2017	6.5	39	6.94	841	10.8	<5	5	<5	<5	--	--	--	--	--	--	--

See notes on page 16.



TABLE 2
RACER Trust - Coldwater Road Landfill Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, Metals, Chloride, Cyanide, Phenols, and Sulfate

Well ID	Sample Date	Indicator Parameters						Dissolved Metals (µg/L)						Inorganics (mg/L)			
		TOC	TOX	pH	SpC	Temp	Cr	Cu	Ni	Zn	Fe	Mn	Na	Chloride	Cyanide	Phenols	Sulfate
		(mg/L)	(µg/L)				100 (A)	1,000 (E)	100 (A)	2,400							
B-9	6/21/1995	3.5	34	7.68	2,400	14.6	<20	<20	<30	<20	--	--	--	--	--	--	--
	8/31/1995	3.9	<10	7.72	1,829	14.8	37	43	<40	<20	--	--	--	--	--	--	--
	2/9/1996	3.1	<10	7.34	2,860	8.0	<20	<20	<40	<20	--	--	--	--	--	--	--
	6/19/1996	2.1	<100	6.81	2,550	11.5	<20	<20	<20	<20	--	--	--	--	--	--	--
	8/21/1996	2.3	<5	8.04	2,310	16.4	<20	<20	<20	70	--	--	--	--	--	--	--
	11/13/1996	71.0	<5	6.79	3,280	9.2	<20	<20	<20	40	--	--	--	--	--	--	--
	5/6/1997	3.0	<100	6.80	2,600	10.0	<10	<10	51	20	--	--	--	--	--	--	--
	11/6/1997	2.0	<100	6.50	2,800	11.0	<10	<10	183	40	650	741	--	141	<0.005	<0.020	1,178
	5/4/1998	3.0	<5	6.58	2,400	14.5	10	10	18	40	--	--	--	--	--	--	--
	11/5/1998	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--
	12/23/1998	--	--	--	--	--	--	--	--	--	--	--	--	NS	NS	NS	NS
	4/26/1999	4.0	<100	7.69	1,860	12.2	<10	<10	19	20	--	--	--	--	--	--	--
	11/5/1999	2.5	<100	6.75	2,340	15.4	<10	<10	20	30	610	1280	47,100	128	<0.005	<0.020	1,222
	4/26/2000	5.5	<100	7.56	2,780	9.5	<10	<10	12	30	--	--	--	--	--	--	--
	12/8/2000	5.0	<10	7.56	2,400	7.8	<10	<10	46	<10	50	--	69,500	142	<0.005	<0.020	1,246
	5/16/2001	4.8	<100	7.41	1,070	12.6	<10	<10	7	10	--	--	--	--	--	--	--
	10/17/2001	4.0	<100	7.54	2,130	10.8	<10	<10	8	20	940	--	66,000	122	<0.005	NA	1,150
	5/16/2002	1.9	<100	7.19	2,470	11.6	<10	<10	7	10	--	--	--	--	--	--	--
	11/7/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/4/2003	2.2	57	6.78	2,690	10.7	<5	<5	15	13	--	--	--	--	--	--	--
	11/13/2003	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/30/2004	3.8	NS	6.91	2,379	12.7	<5	8	19	28	--	--	--	--	--	--	--
	12/9/2004	3.0	<30	5.88	2,480	11.4	<5	<5	11	19	570	248	55,900	149	<0.005	<0.010	1,350
	6/8/2005	4.0	<30	7.09	2,116	10.3	6	6	12	17	480	701	58,300	128	<0.005	<0.010	1,160
	12/7/2005	5.0	<30	8.58	2,830	11.9	11	5	12	40	320	410	58,500	--	--	--	--
	6/29/2006	1.9	<30	6.82	2,820	12.4	6	6	13	19	390	330	63,600	125	<0.005	<0.010	1,150
	11/30/2006	2.7	36.7	7.15	2,830	12.5	<5	6	<5	14	--	--	--	--	--	--	--
Duplicate	6/5/2007	2.1	<30	6.70	2,770	11.0	12	6	24	21	320	1,900	67,300	112	<0.005	<0.010	1,120
	11/16/2007	2.0	27.4	6.67	3,000	9.4	2	6	24	18	--	--	--	--	--	--	--
	7/2/2008	1.8	36.4	6.44	3,060	19.7	<5	4	13	19	780	812	64,200	133	<0.005	<0.010	1,280
	11/20/2008	2.2	15.9	6.35	3,290	8.1	<5	<1	13	<5	--	--	--	--	--	--	--
	11/20/2008	2.0	127	6.35	3,280	8.1	<5	<1	13	<5	--	--	--	--	--	--	--
	6/25/2009	1.6	<30	6.67	2,700	19.8	<5	<1	<5	<5	59	173	65,300	107	<0.005	<0.010	1,120
	11/16/2009	3	84.1	6.71	3,030	12.7	<5	<4	16	8	--	--	--	--	--	--	--
	6/15/2010	3	27.5	6.69	3,030	13.0	<5	<4	7	6	460	475	70,700	117	<0.005	<0.020	1,230
	11/11/2010	3	37.5	6.37	2,910	12.9	19	4	7	15	--	--	--	--	--	--	--
	6/22/2011	1.9	<30	6.70	2,600	14.0	17	6	21	12	780	661	63,300	99	<0.005	<0.010	972
Replicate	6/22/2011	--	--	--	--	--	<5	--	--	--	--	--	--	--	--	--	--
	11/16/2011	2	50	7.18	3,060	12.9	<5	<4	7	<5	--	--	--	--	--	--	--
	6/26/2012	2	21	6.53	2,770	14.0	<5	<4	8	<5	60	433	73,700	101	<0.005	<0.02	1,110
	12/5/2012	2.3	19	6.80	3,210	12.0	<5	8	17	23	--	--	--	--	--	--	--
	6/5/2013	2.1	15	7.07	2,660	12.5	<5	<4	6	25	40	173	66,400	106	<0.005	<0.02	1,150
	11/6/2013	2.2	NS	6.36	2,730	13.0	10	8	47	8	--	--	--	--	--	--	--
	6/25/2014	1.9	25	6.82	2,650	11.5	<5	<5	18	8	<20	159	27,100	108	<0.005	<0.02	1,070
	11/19/2014	2.1	29	6.77	2,670	8.12	<5	6	14	12	--	--	--	--	--	--	--
	6/24/2015	2.0	17	6.38	2,480	11.8	<5	<5	<5	<5	<20	89	62,400	87	<0.005	<0.02	1,040
	11/18/2015	2.0	<30	6.68	2,670	13.5	<5	<5	7	<5	--	--	--	--	--	--	--
	6/24/2016	1.9	150	6.68	2,190	12.9	<5	<5	10	<5	20	95	52,800	71	<0.005	<0.02	776
	11/29/2016	1.9	13	6.77	2,780	13.9	<5	<5	8	9	--	--	--	--	--	--	--
	6/20/2017	1.8	12	6.75	2,250	11.5	<5	<5	5	<5	17	172	54,600	74	<0.005	<0.02	770
	11/7/2017	2.1	<30	6.57	2,540	13.1	<5	<5	8	11	--	--	--	--	--	--	--

See notes on page 16.



TABLE 2
RACER Trust - Coldwater Road Landfill Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, Metals, Chloride, Cyanide, Phenols, and Sulfate

Well ID	Sample Date	Indicator Parameters						Dissolved Metals (µg/L)						Inorganics (mg/L)			
		TOC	TOX	pH	SpC	Temp	Cr	Cu	Ni	Zn	Fe	Mn	Na	Chloride	Cyanide	Phenols	Sulfate
		(mg/L)	(µg/L)				100 (A)	1,000 (E)	100 (A)	2,400							
B-14	6/21/1995	4.0	<10	--	--	--	<20	<20	<30	<20	--	--	--	--	--	--	--
	8/31/1995	--	25	--	--	--	<20	<20	<40	<20	--	--	--	--	--	--	--
	2/9/1996	3.0	<10	7.64	776	8.9	<20	<20	<40	<20	--	--	--	--	--	--	--
	6/19/1996	1.7	<100	7.26	704	13.6	<20	<20	<20	<20	--	--	--	--	--	--	--
	8/21/1996	2.6	<5	8.90	748	13.1	<20	<20	<20	60	--	--	--	--	--	--	--
	11/13/1996	76.0	<5	7.80	980	7.2	<20	<20	<20	40	--	--	--	--	--	--	--
	5/6/1997	3.0	<100	7.00	670	10.0	<10	<10	11	<10	--	--	--	--	--	--	--
	11/6/1997	2.0	<100	6.80	670	10.0	<10	<10	43	10	550	67	--	12	<0.005	<0.020	61
	5/4/1998	6.0	<5	6.68	558	13.3	<10	<10	<5	<10	--	--	--	--	--	--	--
	11/5/1998	2.0	<10	6.40	642	9.9	<10	<10	<5	10	<10	<5	13,900	--	--	--	--
	12/23/1998	--	--	--	--	--	--	--	--	--	--	--	--	8	<0.005	<0.020	47
	4/26/1999	4.5	<100	8.00	488	13.3	<10	<10	<5	30	--	--	--	--	--	--	--
	11/5/1999	NS	NS	7.29	609	14.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/26/2000	7.1	<100	7.40	510	14.7	<10	<10	<5	960	--	--	--	--	--	--	--
	12/8/2000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/15/2001	5.0	--	7.81	510	13.2	<10	<10	6	380	--	--	--	--	--	--	--
	10/18/2001	2.1	<100	7.34	750	10.7	<10	<10	8	90	260	--	21,500	6	<0.005	NA	72
	5/16/2002	2.3	NR	7.11	1,790	12.1	<10	<10	<5	60	--	--	--	--	--	--	--
	11/7/2002	NR	NR	7.53	540	9.9	<5	<5	<5	31	170	15	14,400	NA	NA	NA	NA
	6/3/2003	2.4	<30	6.93	710	12.4	<5	<5	<5	54	--	--	--	--	--	--	--
	11/13/2003	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/29/2004	2.8	<30	7.25	693	14.9	<5	<5	<5	26	--	--	--	--	--	--	--
	12/9/2004	5.0	<30	6.64	560	10.5	<5	<5	<5	1,260	160	62	4,390	5	<0.005	<0.010	84
	Re-sample 2/10/2005	--	--	--	--	--	--	--	--	160	--	--	--	--	--	--	--
	6/8/2005	4.0	<30	7.56	647	11.4	<5	<5	12	40	110	56	18,500	8	<0.005	<0.010	79
	12/8/2005	4.6	<30	6.11	818	1.6	8	<4	<5	30	210	40	16,000	--	--	--	--
	Re-sample 2/14/2006	--	--	8.09	603	9.5	--	--	--	100	--	--	--	--	--	--	--
	6/27/2006	3.5	<30	7.09	767	13.2	<5	<4	<5	1,090	160	90	14,600	6	<0.005	<0.010	93
	Re-sample 8/3/2006	--	--	7.46	840	12.4	--	--	--	203	--	--	--	--	--	--	--
	12/1/2006	3.2	<30	7.41	873	12.3	<5	<5	<5	1,440	--	--	--	--	--	--	--
	Re-sample 1/30/2007	--	--	8.29	607	10.1	--	--	--	1,850	--	--	--	--	--	--	--
	6/5/2007	1.6	26.1	6.97	849	11.0	9	3	1	355	520	245	15,200	10	<0.005	<0.010	82
	11/15/2007	1.2	16.1	7.06	803	7.8	2	1	4	134	--	--	--	--	--	--	--

See notes on page 16.



TABLE 2
RACER Trust - Coldwater Road Landfill Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, Metals, Chloride, Cyanide, Phenols, and Sulfate

Well ID	Sample Date	Indicator Parameters						Dissolved Metals (µg/L)						Inorganics (mg/L)			
		TOC	TOX	pH	SpC	Temp	Cr	Cu	Ni	Zn	Fe	Mn	Na	Chloride	Cyanide	Phenols	Sulfate
		(mg/L)	(µg/L)				100 (A)	1,000 (E)	100 (A)	2,400							
B-18A	6/21/1995	2.7	<10	7.54	1,048	13.3	<20	<20	<30	150	--	--	--	--	--	--	--
	8/31/1995	3.0	<10	7.91	989	13.2	<20	<20	<40	<20	--	--	--	--	--	--	--
	2/9/1996	2.3	<10	7.42	1,021	9.3	<20	<20	<40	<20	--	--	--	--	--	--	--
	6/19/1996	1.4	<100	7.04	944	13.2	<20	<20	<20	<20	--	--	--	--	--	--	--
	8/21/1996	2.4	<5	7.49	1,041	12.8	<20	<20	<20	60	--	--	--	--	--	--	--
	11/13/1996	19.0	<5	7.22	1,331	6.4	<20	<20	<20	70	--	--	--	--	--	--	--
	5/6/1997	2.0	<100	6.50	900	10.0	<10	<10	13	10	--	--	--	--	--	--	--
	11/6/1997	4.0	<100	6.40	1,100	10.0	<10	<10	62	10	380	62	--	12	<0.005	<0.020	130
	5/4/1998	2.0	<5	6.72	862	11.8	<10	<10	<5	20	--	--	--	--	--	--	--
	11/5/1998	1.0	<10	6.00	1,090	11.8	<10	<10	<5	10	240	128	46,000	--	--	--	--
	12/23/1998	--	--	--	--	--	--	--	--	--	--	--	--	10	<0.005	<0.020	133
	4/26/1999	2.1	<100	8.10	921	14.0	<10	<10	<5	20	--	--	--	--	--	--	--
Duplicate	11/5/1999	4.3	<100	7.10	832	14.0	<10	<10	<5	60	180	155	39,200	8	<0.005	<0.020	130
	4/26/2000	2.4	<100	7.50	980	10.4	<10	<10	<5	30	--	--	--	--	--	--	--
	12/8/2000	2.6	<10	6.96	990	9.9	<10	<10	15	<10	<10	--	34,500	7	<0.005	<0.020	126
	12/8/2000	2.6	<10	--	--	--	<10	<10	13	<10	40	--	35,100	7	<0.005	<0.020	112
	5/16/2001	2.4	<100	7.91	1,160	12.9	<10	<10	<5	10	--	--	--	--	--	--	--
	10/17/2001	2.2	<100	7.09	1,020	12.2	<10	<10	<5	<10	350	--	35,400	7	<0.005	<0.020	132
	5/16/2002	1.5	<100	7.19	2,080	12.2	<10	<10	<5	10	--	--	--	--	--	--	--
	11/7/2002	1.9	<30	7.16	820	10.1	<5	<5	<5	<5	190	26	40,800	10	<0.005	<0.020	134
	6/4/2003	1.6	<30	6.92	790	13.1	<5	<5	<5	5	--	--	--	--	--	--	--
	11/13/2003	1	<30	7.68	1,180	7.1	<5	<5	<5	<5	160	<5	--	10	<0.005	<0.010	129
	11/13/2003	--	--	--	--	--	--	--	--	--	--	--	--	11	<0.005	<0.010	130
	6/29/2004	1.2	<30	7.19	863	12.0	<5	<5	7	10	--	--	--	--	--	--	--
Duplicate	12/9/2004	3	<30	6.19	960	10.5	<5	<5	9	12	900	363	37,900	14	<0.005	<0.010	127
	6/8/2005	2	<30	7.38	819	10.9	<5	<5	6	16	170	80	40,000	11	<0.005	<0.010	120
	12/8/2005	2.6	<30	9.73	1,120	10.1	11	<4	<5	10	390	170	47,000	--	--	--	--
	6/27/2006	1.2	<30	7.09	1,110	13.2	5	4	<5	46	170	50	48,200	13	<0.005	<0.010	125
	11/30/2006	1.4	119	7.18	1,100	11.5	5	<4	<5	9	--	--	--	--	--	--	--
	6/4/2007	1	19.9	7.01	1,070	13.2	9	3	3	14	110	22	51,800	15	<0.005	<0.010	114
	11/14/2007	<1	19	6.91	1,090	13.7	1	2	6	11	--	--	--	--	--	--	--
	6/25/2008	12	34.1	7.10	1,060	20.4	<5	2	<5	11	310	<5	54,800	15	<0.005	<0.010	110
	11/18/2008	<1	<30	6.58	1,088	2.9	<5	<1	<5	<5	--	--	--	--	--	--	--
	6/24/2009	<1	<30	7.25	1,060	26.2	<5	1	<5	15	<20	<5	53,100	16	<0.005	<0.010	111
	11/18/2009	2	<30	6.89	1,070	11.7	<5	<4	<5	45	--	--	--	--	--	--	--
	6/17/2010	1	<30	7.19	1,080	17.5	<5	<4	<5	8	<20	<5	45,500	15	<0.005	<0.020	109
Replicate	11/10/2010	2	28	6.91	1,065	9.5	12	<4	<5	<5	--	--	--	--	--	--	--
	6/21/2011	1.2	<30	7.16	1,031	18.8	10	<4	5	12	240	<5	46,100	17	<0.005	<0.010	103
	6/21/2011	--	--	--	--	--	<5	--	--	--	--	--	--	--	--	--	--
	11/15/2011	1	28	7.01	1,063	12.0	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/27/2012	1.2	<40	6.99	1,057	14.4	<5	<4	<5	<5	30	26	50,000	18	<0.005	<0.02	103
	6/27/2012	1.2	<40	6.99	1,054	14.4	<5	<4	<5	5	40	27	46,500	18	<0.005	<0.02	101
	12/6/2012	1.5	<40	7.03	1,071	9.3	<5	<4	5	9	--	--	--	--	--	--	--
	6/5/2013	1.5	4.7	7.17	1,040	14.6	<5	<4	<5	31	20	12	43,900	19	<0.005	<0.02	110
	11/5/2013	1.4	<10	7.15	1,063	12.1	<5	<4	<5	11	--	--	--	--	--	--	--
	6/24/2014	1.5	<30	7.03	1,048	12.8	<5	<5	6	7	<20	20	20,500	18	<0.005	<0.02	107
	11/19/2014	1.4	16	7.10	1,073	6.27	<5	<4	5	7	--	--	--	--	--	--	--
	11/19/2014	1.5	<60	7.10	1,072	6.27	<5	<4	5	7	--	--	--	--	--	--	--
Duplicate	6/23/2015	1.3	<30	6.95	1,060	15.5	<5	<5	<5	<5	30	10	43,600	18	<0.005	<0.02	110
	11/18/2015	1.4	<30	7.03	1,065	12.2	<5	<5	<5	5	--	--	--	--	--	--	--
	6/23/2016	1.4	55	7.08	1,063	13.8	<5	<5	<5	<5	30	7	42,400	19	<0.005	<0.02	108
	11/30/2016	1.2	<30	7.10	1,059	11.4	<5	<5	<5	7	--	--	--	--	--	--	--
	6/20/2017	1.5	<30	6.97	1,075	12.7	<5	<5	<5	8	<20	27	36,300	18	<0.005	<0.02	118
	11/7/2017	1.2	<30	6.96	1,092	11.6	<5	<5	<5	<5	--	--	--	--	--	--	--

See notes on page 16.



TABLE 2
RACER Trust - Coldwater Road Landfill Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, Metals, Chloride, Cyanide, Phenols, and Sulfate

Well ID	Sample Date	Indicator Parameters						Dissolved Metals (µg/L)						Inorganics (mg/L)			
		TOC (mg/L)	TOX (µg/L)	pH	SpC	Temp	Cr	Cu	Ni	Zn	Fe	Mn	Na	Chloride	Cyanide	Phenols	Sulfate
		MDEQ Residential Drinking Water Criteria & RBSLs					100 (A)	1,000 (E)	100 (A)	2,400							
B-19A	6/21/1995	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--
	8/31/1995	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--
	2/9/1996	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--
	6/19/1996	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--
	8/21/1996	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--
	11/13/1996	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--
	5/6/1997	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--
	11/6/1997	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	WD	WD	WD	WD
	5/4/1998	3.0	<5	6.84	1,480	10.1	<10	<10	<5	30	--	--	--	--	--	--	--
	11/5/1998	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--
	12/23/1998	--	--	--	--	--	--	--	--	--	--	--	--	NS	NS	NS	NS
	4/26/1999	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--
	11/5/1999	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/26/2000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--
	12/8/2000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/16/2001	4.0	<100	7.14	1,050	11.8	<10	<10	<5	<10	--	--	--	--	--	--	--
	10/17/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/16/2002	6.0	<100	7.19	1,740	10.6	<10	<10	<5	10	--	--	--	--	--	--	--
	11/7/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/4/2003	5.8	<30	6.92	1,350	12.9	<5	<5	<5	<5	--	--	--	--	--	--	--
Duplicate B-19AR	11/13/2003	3.4	<30	7.59	1,620	10.2	<5	<5	<5	<5	20	<5	--	148	<0.005	<0.010	229
	6/29/2004	3.9	<30	7.17	1,316	14.7	<5	<5	<5	8	--	--	--	--	--	--	--
Duplicate	12/9/2004	5.0	33	6.24	1,340	9.9	<5	<5	<5	9	240	11	111,000	116	<0.005	<0.010	233
	12/9/2004	5.0	<30	--	--	--	<5	<5	<5	7	170	<5	114,000	116	<0.005	<0.010	233
Re-sample	6/7/2005	3.0	<30	7.09	829	12.2	<5	<5	7	<5	1,320	228	15,700	52	<0.005	<0.010	130
	12/8/2005	5.5	<30	--	1,390	--	10	<4	<5	20	160	<20	81,400	--	--	--	--
Re-sample	12/8/2005	5.3	<30	7.13	1,390	12.3	10	<4	<5	<10	150	<20	74,800	--	--	--	--
	2/14/2006	--	--	7.95	840	5.9	<5	--	--	--	--	--	--	--	--	--	--
Re-sample	6/29/2006	2.7	<30	7.58	860	12.0	<5	<4	12	21	240	210	22,400	51	<0.005	<0.010	153
	11/30/2006	6.2	33.7	7.18	1,300	11.4	5	<4	<5	<5	--	--	--	--	--	--	--
Re-sample	6/7/2007	2	<30	6.97	899	11.4	6	4	4	9	70	21	19,700	58	<0.005	<0.010	136
	11/13/2007	1.5	<30	7.27	1,070	12.1	3	7	26	11	--	--	--	--	--	--	--
Re-sample	6/25/2008	2.4	38.8	7.13	1,060	17.4	<5	3	<5	16	380	9	18,500	58	<0.005	<0.010	148
	11/18/2008	1.3	<30	7.00	1,052	8.0	<5	1	<5	14	--	--	--	--	--	--	--
Re-sample	6/24/2009	1.0	<30	7.74	911	17.3	<5	2	<5	<5	36	<5	21,200	60	<0.005	<0.010	147
	11/19/2009	2	<30	7.41	994	10.4	<5	<4	<5	7	--	--	--	--	--	--	--
Re-sample	6/15/2010	2	<30	7.57	992	16.1	<5	<4	<5	<5	<20	<5	19,800	59	<0.005	<0.020	154
	11/10/2010	2	<30	6.91	1,128	8.7	12	<4	<5	<5	--	--	--	--	--	--	--
Replicate	6/22/2011	1.5	<30	7.35	902	17.2	5	<4	5	<5	240	<5	22,400	64	<0.005	<0.010	140
	6/22/2011	--	--	--	--	--	<5	--	--	--	--	--	--	--	--	--	--
Replicate	11/16/2011	2	26	7.06	1,091	8.4	<5	<4	<5	5	--	--	--	--	--	--	--
	6/27/2012	1.5	<40	7.78	1,005	13.3	<5	<4	<5	<5	<20	<5	23,200	62	<0.005	<0.02	145
Replicate	12/6/2012	1.8	<40	7.36	1,129	10.2	<5	<4	5	6	--	--	--	--	--	--	--
	6/5/2013	1.5	39	8.16	777	13.0	<5	<4	<5	25	40	<5	27,700	72	<0.005	<0.02	136
Replicate	11/6/2013	1.6	3.6	7.33	1,104	11.6	<5	<4	10	<5	--	--	--	--	--	--	--
	6/23/2014	2.0	23	8.40	817	17.3	<5	<5	5	<5	<20	<5	11,900	74	<0.005	<0.02	136
Replicate	11/20/2014	2.1	190	7.37	1,038	6.16	<5	6	6	10	--	--	--	--	--	--	--
	6/23/2015	1.5	<30	6.77	1,165	20.2	<5	6	<5	26	30	50	28,700	72	<0.005	<0.02	132
Replicate	11/19/2015	1.4	17	6.90	1,170	10.6	<5	<5	7	7	--	--	--	--	--	--	--
	6/27/2016	1.5	71	8.13	712	18.8	<5	<5	<5	<5	40	<5	26,700	70	<0.005	<0.02	128
Re-sample	11/30/2016	1.8	12	7.39	1,104	11.2	14	14	20	39	--	--	--	--	--	--	--
	1/12/2017	--	--	7.34	--	11.1	<5	<5	6	11	--	--	--	--	--	--	--
Re-sample	6/21/2017	2.0	30	7.29	1,064	12.1	<5	<5	<5	<5	<20	13	28,200	75	<0.005	<0.02	131
	11/7/2017	2.6	120	7.05	1,134	12.0	<5	<5	<5	<5	--	--	--	--	--	--	--

See notes on page 16.



TABLE 2
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Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, Metals, Chloride, Cyanide, Phenols, and Sulfate

Well ID	Sample Date	Indicator Parameters						Dissolved Metals (µg/L)						Inorganics (mg/L)			
		TOC (mg/L)	TOX (µg/L)	pH	SpC	Temp	Cr	Cu	Ni	Zn	Fe	Mn	Na	Chloride	Cyanide	Phenols	Sulfate
		MDEQ Residential Drinking Water Criteria & RBSLs						100 (A)	1,000 (E)	100 (A)	2,400						
B-20D	6/21/1995	2.8	<10	8.27	771	15.1	<20	<20	<30	<20	--	--	--	--	--	--	--
	8/31/1995	4.7	47	8.10	1,204	14.6	<20	20	<40	<20	--	--	--	--	--	--	--
	2/9/1996	21.0	38	7.12	801	9.1	32	28	54	120	--	--	--	--	--	--	--
	6/19/1996	2.4	<100	7.92	745	11.9	<20	<20	<20	<20	--	--	--	--	--	--	--
	8/21/1996	3.0	<5	7.97	750	13.1	<20	<20	<20	40	--	--	--	--	--	--	--
	11/13/1996	16.0	<5	7.69	1,075	6.7	<20	<20	<20	40	--	--	--	--	--	--	--
	5/6/1997	3.0	<100	6.80	640	10.0	<10	<10	15	10	--	--	--	--	--	--	--
	11/6/1997	5.0	<100	6.70	700	10.0	<10	20	41	<10	260	35	--	5	<0.005	<0.020	101
	5/4/1998	4.0	<5	6.77	579	12.2	<10	<10	<5	<10	--	--	--	--	--	--	--
	11/5/1998	3.0	11	6.47	667	13.5	<10	<10	<5	10	<10	18	31,000	--	--	--	--
Duplicate	11/5/1998	5.0	16	6.48	677	13.6	<10	<10	<5	10	170	8	30,300	--	--	--	--
Duplicate	12/23/1998	--	--	--	--	--	--	--	--	--	--	--	--	3	<0.005	<0.020	92
	12/23/1998	--	--	--	--	--	--	--	--	--	--	--	--	3	<0.005	<0.020	89
	4/26/1999	3.2	<100	8.40	506	13.0	<10	<10	<5	10	--	--	--	--	--	--	--
	11/5/1999	5.3	<100	7.45	677	12.5	<10	<10	<5	60	130	60	31,400	33	<0.005	<0.020	105
	4/26/2000	3.2	<100	7.40	760	14.9	<10	<10	<5	<10	--	--	--	--	--	--	--
	12/8/2000	3.2	<10	7.45	780	4.7	<10	<10	15	<10	20	--	19,700	2	<0.005	<0.020	113
	5/15/2001	2.7	<100	6.99	590	13.0	<10	<10	<5	<10	--	--	--	--	--	--	--
	10/18/2001	2.5	<100	7.85	930	10.4	<10	<10	<5	<10	300	--	20,600	2	<0.005	<0.020	105
	5/16/2002	3.2	<100	7.21	780	11.9	<10	<10	<5	10	--	--	--	--	--	--	--
	11/7/2002	1.8	<30	7.59	610	8.7	<5	<5	<5	<5	250	74	20,900	3	<0.005	<0.020	115
Duplicate	6/3/2003	2.5	<30	7.36	620	12.8	<5	<5	<5	<5	--	--	--	--	--	--	--
	11/13/2003	1.3	<30	7.97	630	7.7	<5	<5	5	<5	200	15	--	5	<0.005	<0.010	127
	6/29/2004	9.4	<30	7.48	666	13.1	<5	<5	11	<5	--	--	--	--	--	--	--
	12/10/2004	2.0	<30	6.59	830	10.8	<5	<5	11	10	2,110	92	16,800	3	<0.005	<0.010	148
	6/7/2005	4.0	<30	7.30	707	11.9	7	<5	5	<5	2,140	66	16,500	<5	<0.005	<0.010	155
	12/8/2005	4.1	<30	4.84	957	11.1	11	<4	26	<10	120	120	20,600	--	--	--	--
	6/28/2006	1.7	<30	7.36	979	12.5	7	<4	<5	5	2,120	60	17,600	2	<0.005	<0.010	169
	11/30/2006	3.4	<30	7.49	980	12.5	6	<4	6	<5	--	--	--	--	--	--	--
	6/8/2007	3.4	30.9	6.72	929	13.4	10	22	19	124	610	160	25,500	4	<0.005	0.074	144
	11/13/2007	2.1	<30	7.19	932	13.5	3	1	13	9	--	--	--	--	--	--	--
Duplicate	6/25/2008	<1	<60	7.01	946	15.5	<5	2	<5	7	2,400	55	19,500	4	<0.005	<0.010	164
	11/18/2008	1	36.1	6.89	1,006	12.6	<5	4	6	22	--	--	--	--	--	--	--
	6/24/2009	1.1	<30	7.17	1,000	19.4	<5	<1	<5	<5	1,720	56	21,000	3	<0.005	<0.010	180
	6/24/2009	<1	<30	7.17	1,010	19.4	<5	<1	<5	<5	1,640	56	20,800	3	<0.005	<0.010	183
	11/18/2009	2	<30	7.02	1,030	12.1	<5	<4	<5	5	--	--	--	--	--	--	--
	6/16/2010	2	<30	7.30	1,020	15.1	<5	<4	<5	<5	1,930	49	19,000	2	<0.005	<0.020	177
	11/9/2010	3	<30	7.02	998	11.7	11	<4	<5	<5	--	--	--	--	--	--	--
	6/22/2011	1.6	<30	7.23	967	15.5	9	<4	<5	13	2,550	54	18,600	<5	<0.005	<0.010	164
	6/22/2011	--	--	--	--	--	<5	--	--	--	--	--	--	--	--	--	--
	11/16/2011	2	50	7.02	1,006	9.8	<5	<4	<5	5	--	--	--	--	--	--	--
Duplicate	11/16/2011	2	26	7.02	1,002	9.8	<5	<4	<5	6	--	--	--	--	--	--	--
	6/25/2012	2	15	6.79	1,003	12.8	<5	<4	<5	<5	1,700	53	21,400	<5	<0.005	<0.02	183
	12/6/2012	1.8	<40	7.54	1,008	9.8	<5	<4	<5	7	--	--	--	--	--	--	--
	6/5/2013	1.7	<10	7.00	1,000	11.5	<5	<4	<5	11	1,840	48	19,500	<5	<0.005	<0.02	201
	6/5/2013	1.9	<10	7.00	1,000	11.5	<5	<4	<5	<5	1,780	47	17,100	<5	<0.005	<0.02	200
	11/5/2013	1.7	NS	7.22	992	11.8	<5	<4	<5	39	--	--	--	--	--	--	--
	6/23/2014	1.9	<30	7.01	972	13.8	<5	<5	5	<5	1,360	47	8,620	<5	<0.005	<0.02	192
	6/24/2015	1.8	<30	7.13	959	13.7	<5	<5	<5	<5	1,960	48	18,500	<10	<0.005	<0.02	178
	6/24/2015	1.7	<30	7.13	958	13.7	<5	<5	<5	<5	1,970	50	18,600	<10	<0.005	<0.02	178
	6/23/2016	1.7	68	7.01	945	17.4	<5	<5	<5	<5	1,880	65	18,500	<5	<0.005	<0.02	161
Duplicate	6/22/2017	1.6	<30	7.11	926	12.4	<5	<5	<5	<5	2,080	48	18,700	<5	<0.005	<0.02	144
	6/22/2017	1.6	<30	7.11	926	12.4	<5	<5	<5	<5	2,140	49	18,300	<5	<0.005	<0.02	146

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RACER Trust - Coldwater Road Landfill Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, Metals, Chloride, Cyanide, Phenols, and Sulfate

Well ID	Sample Date	Indicator Parameters					Dissolved Metals (µg/L)					Inorganics (mg/L)					
		TOC	TOX	pH	SpC	Temp	Cr	Cu	Ni	Zn	Fe	Mn	Na	Chloride	Cyanide	Phenols	Sulfate
		(mg/L)	(µg/L)				100 (A)	1,000 (E)	100 (A)	2,400							
B-21D	6/21/1995	4.2	<10	8.27	870	14.5	<20	<20	<30	61	--	--	--	--	--	--	--
	8/31/1995	3.3	19	8.09	684	14.2	<20	21	<40	<20	--	--	--	--	--	--	--
	2/9/1996	4.1	<10	7.70	646	8.6	<20	<20	<40	<20	--	--	--	--	--	--	--
	6/19/1996	5.3	<100	7.58	577	14.1	<20	<20	<20	<20	--	--	--	--	--	--	--
	8/21/1996	2.5	<5	7.93	576	13.8	<20	<20	<20	50	--	--	--	--	--	--	--
	11/13/1996	17.0	<5	7.28	810	8.8	<20	<20	<20	40	--	--	--	--	--	--	--
	5/6/1997	2.0	<100	6.82	530	10.2	<10	<10	8	<10	--	--	--	--	--	--	--
	11/6/1997	3.0	<100	6.70	540	10.0	<10	<10	30	<10	240	27	--	2	<0.005	<0.020	33
	5/4/1998	16.0	<5	6.90	480	11.5	<10	<10	<5	20	--	--	--	--	--	--	--
	11/5/1998	5.0	<10	7.24	565	7.8	<10	<10	<5	10	240	43	26,700	--	--	--	--
	12/23/1998	--	--	--	--	--	--	--	--	--	--	--	--	2	<0.005	<0.020	15
	4/26/1999	11.0	<100	8.24	506	13.0	<10	<10	<5	10	--	--	--	--	--	--	--
	11/5/1999	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/26/2000	2.5	<100	8.20	660	14.1	<10	<10	<5	<10	--	--	--	--	--	--	--
	12/8/2000	4.2	<10	8.44	680	7.1	<10	<10	11	<10	<10	--	29,600	2	<0.005	<0.020	36
Duplicate	5/15/2001	1.9	<100	7.94	570	13.0	<10	<10	<5	10	--	--	--	--	--	--	--
	5/15/2001	1.9	<100	8.32	560	13.0	<10	<10	<5	10	--	--	--	--	--	--	--
	10/18/2001	3.4	<100	7.61	570	13.7	<10	<10	<5	<10	200	--	22,200	1	<0.005	<0.020	41
	5/16/2002	6.1	<100	7.19	630	11.7	<10	<10	<5	<10	--	--	--	--	--	--	--
	11/7/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/3/2003	5.8	<30	7.27	510	13.0	<5	<5	<5	6	--	--	--	--	--	--	--
	11/13/2003	1.0	<30	7.81	710	8.7	<5	<5	<5	9	100	<5	--	4	<0.005	<0.010	48
	6/30/2004	4.0	<30	6.77	570	14.8	<5	<5	<5	7	--	--	--	--	--	--	--
	12/10/2004	2.0	<30	6.40	600	9.9	<5	<5	<5	7	1,330	44	20,100	2	<0.005	<0.010	50
	6/8/2005	3.0	<30	7.70	560	14.2	<5	<5	12	6	1,350	72	21,000	<5	<0.005	<0.010	44
	12/8/2005	4.4	<30	5.49	741	11.4	8	<4	8	<10	1,070	60	21,500	--	--	--	--
	6/28/2006	1.5	<30	7.44	718	12.8	<5	6	5	13	430	60	23,500	2	<0.005	<0.010	53
	11/30/2006	1.8	49.1	7.59	693	11.5	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/8/2007	1.2	<30	6.30	709	13.2	10	2	5	7	1,200	49	21,500	4	<0.005	<0.010	60
	11/14/2007	<1	<30	7.26	738	14.5	2	1	5	8	--	--	--	--	--	--	--
Duplicate	6/26/2008	1.8	16.8	7.07	738	16.9	<5	1	<5	<5	1,390	40	22,700	3	<0.005	<0.010	60
	11/19/2008	1.1	<30	6.93	739	11.0	<5	<1	5	<5	--	--	--	--	--	--	--
	6/25/2009	<1	<30	6.69	743	16.1	<5	<1	<5	<5	1,210	34	25,100	3	<0.005	<0.010	64
	11/19/2009	2	41.2	7.17	745	10.2	<5	<4	<5	6	--	--	--	--	--	--	--
	11/19/2009	2	<30	7.17	739	10.2	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/17/2010	2	<30	7.40	736	13.2	<5	<4	<5	<5	980	34	23,700	3	<0.005	<0.020	58
	11/10/2010	1	<30	7.28	739	11.0	11	<4	<5	<5	--	--	--	--	--	--	--
	6/22/2011	1.4	<30	7.41	718	19.5	10	<4	<5	<5	1,540	33	23,300	<5	<0.005	<0.010	61
	6/22/2011	--	--	--	--	--	7	--	--	--	--	--	--	--	--	--	--
	11/16/2011	1	7.9	7.16	753	10.6	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/26/2012	1.3	<40	7.26	745	19.5	<5	<4	<5	<5	640	42	25,800	<5	<0.005	<0.02	66
	12/6/2012	1.6	<40	7.57	754	9.1	<5	<4	<5	8	--	--	--	--	--	--	--
	6/5/2013	1.6	<10	7.16	742	13.5	<5	<4	<5	26	990	31	24,400	<5	<0.005	<0.02	68
	11/6/2013	1.5	<10	7.49	760	12.1	<5	<4	<5	14	--	--	--	--	--	--	--
Replicate	6/24/2014	1.5	<30	7.43	754	16.5	<5	<5	<5	<5	850	28	11,200	<5	<0.005	<0.02	77
	6/24/2015	1.4	<30	7.19	683	15.2	<5	<5	<5	<5	710	37	24,700	<10	<0.005	<0.02	81
	6/24/2016	1.4	59	6.94	790	15.2	<5	<5	<5	<5	1,290	35	22,600	<5	<0.005	<0.02	91
	6/21/2017	1.4	<30	7.21	790	13.0	<5	<5	<5	<5	1,210	36	25,000	<5	<0.005	<0.02	90

See notes on page 16.



TABLE 2
RACER Trust - Coldwater Road Landfill Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, Metals, Chloride, Cyanide, Phenols, and Sulfate

Well ID	Sample Date	Indicator Parameters					Dissolved Metals (µg/L)					Inorganics (mg/L)					
		TOC (mg/L)	TOX (µg/L)	pH	SpC	Temp	Cr	Cu	Ni	Zn	Fe	Mn	Na	Chloride	Cyanide	Phenols	Sulfate
		MDEQ Residential Drinking Water Criteria & RBSLs					100 (A)	1,000 (E)	100 (A)	2,400							
B-22D	6/21/1995	2.6	<10	7.71	573	15.5	<20	<20	370	<20	--	--	--	--	--	--	--
	8/31/1995	4.5	47	8.25	739	14.3	<20	<20	<40	47	--	--	--	--	--	--	--
	2/9/1996	6.9	<10	NS	NS	NS	<20	<20	<40	80	--	--	--	--	--	--	--
	6/19/1996	1.8	<100	7.51	600	13.4	<20	<20	<20	20	--	--	--	--	--	--	--
	8/21/1996	1.7	<5	8.08	608	14.2	<20	<20	<20	50	--	--	--	--	--	--	--
	11/13/1996	10.0	<5	7.22	817	7.7	<20	<20	<20	50	--	--	--	--	--	--	--
	5/6/1997	2.0	<100	6.67	550	10.1	<10	<10	<5	<10	--	--	--	--	--	--	--
	11/6/1997	7.0	<100	6.90	550	10.0	<10	<10	29	10	1,360	55	--	2	<0.005	<0.020	32
	5/4/1998	5.0	<5	7.07	501	11.7	<10	<10	<5	<10	--	--	--	--	--	--	--
	11/5/1998	6.0	<10	6.60	559	9.8	<10	<10	<5	10	1,180	47	23,800	--	--	--	--
	12/23/1998	--	--	--	--	--	--	--	--	--	--	--	--	2	<0.005	<0.020	28
	4/26/1999	18.0	<100	8.20	485	13.2	<10	<10	<5	10	--	--	--	--	--	--	--
	11/5/1999	2.6	<100	7.30	474	13.6	<10	<10	<5	20	90	31	27,900	2	<0.005	<0.020	29
	4/26/2000	2.5	<100	8.20	670	14.2	<10	<10	<5	<10	--	--	--	--	--	--	--
	12/8/2000	2.5	<10	7.49	510	5.4	<10	<10	8	<10	<10	--	26,500	2	<0.005	<0.020	31
	5/15/2001	6.7	<100	8.01	690	13.7	<10	<10	6	30	--	--	--	--	--	--	--
	10/18/2001	1.7	<100	7.59	2,610	10.2	<10	<10	<5	<10	200	--	27,800	1	<0.005	<0.020	33
	5/16/2002	3.2	<100	7.06	630	12.1	<10	<10	<5	<10	--	--	--	--	--	--	--
	11/7/2002	1.5	<30	7.39	480	8.8	<5	<5	<5	<5	120	11	25,200	2	<0.005	<0.020	35
	6/3/2003	2.3	<30	6.78	570	13.1	<5	<5	<5	<5	--	--	--	--	--	--	--
Duplicate	11/14/2003	1.6	<30	8.05	660	9.8	<5	<5	<5	9	6	<5	--	3	<0.005	<0.010	37
	6/30/2004	1.7	<30	6.27	610	15.5	<5	<5	<5	6	--	--	--	--	--	--	--
	12/10/2004	2.0	<30	6.95	600	10.3	<5	<5	<5	6	1,280	37	25,100	2	<0.005	<0.010	42
	6/8/2005	2.0	<30	7.67	531	13.2	6	<5	<5	<5	1,370	38	23,700	<5	<0.005	<0.010	40
	12/8/2005	2.7	<30	5.75	702	11.7	10	<4	46	<10	2,200	250	25,400	--	--	--	--
	6/28/2006	<1	<30	7.48	682	13.0	<5	<4	<5	<5	1,290	30	25,800	2	<0.005	<0.010	42
	11/30/2006	2.2	<30	7.53	684	13.3	<5	<4	<5	7	--	--	--	--	--	--	--
	11/30/2006	5.3	<30	7.53	676	13.3	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/8/2007	3.8	<30	6.59	680	14.3	7	2	1	5	1,180	32	28,100	3	<0.005	<0.010	46
	6/8/2007	3.1	21.1	6.59	669	14.3	9	2	1	4	1,210	31	28,400	4	<0.005	<0.010	47
	11/14/2007	1.1	<30	7.30	710	14.2	2	2	3	6	--	--	--	--	--	--	--
	6/26/2008	1.7	22.6	7.09	694	19.3	<5	<1	<5	5	1,100	33	25,900	3	<0.005	<0.010	46
	6/26/2008	2.6	<30	7.09	710	19.3	<5	<1	<5	7	1,150	34	26,400	3	<0.005	<0.010	46
	11/19/2008	8.9	<30	6.93	699	8.2	<5	<1	8	8	--	--	--	--	--	--	--
	6/25/2009	1.1	<30	6.74	705	16.6	<5	<1	<5	<5	1,340	30	28,500	2	<0.005	<0.010	54
	11/18/2009	2	<30	7.15	710	11.4	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/16/2010	2	<30	7.43	715	15.7	<5	<4	<5	<5	1,100	28	26,000	2	<0.005	<0.020	51
	11/11/2010	2	<30	7.31	704	10.3	11	<4	<5	<5	--	--	--	--	--	--	--
Replicate	6/21/2011	1.3	<30	7.35	705	17.0	9	<4	<5	<5	1,460	30	27,300	<5	<0.005	<0.010	50
	6/21/2011	--	--	--	--	--	<5	--	--	--	--	--	--	--	--	--	--
	11/14/2011	2	76	7.39	714	10.1	<5	<4	<5	12	--	--	--	--	--	--	--
	6/25/2012	2	<40	6.45	714	12.7	<5	<4	<5	8	1,830	42	30,000	<5	<0.005	<0.02	51
	12/6/2012	1.6	<40	7.58	716	10.1	<5	<4	<5	9	--	--	--	--	--	--	--
	6/3/2013	1.6	46	6.81	701	15.6	<5	<4	<5	<5	1,000	27	28,100	<5	<0.005	<0.02	53
	11/6/2013	1.5	<10	7.52	713	11.4	<5	<4	<5	12	--	--	--	--	--	--	--
	6/24/2014	1.5	<30	7.46	707	14.7	<5	<5	<5	<5	850	26	12,700	<5	<0.005	<0.02	53
	6/23/2015	1.8	<30	7.46	710		<5	<5	<5	8	1,030	27	28,300	<10	<0.005	<0.02	55
	6/22/2016	2.4	100	7.19	716	13.0	<5	<5	<5	<5	920	27	27,100	<5	<0.005	<0.02	54
	6/22/2016	2.4	29	7.19	716	13.0	<5	<5	<5	<5	950	28	27,300	<5	<0.005	<0.02	54
	6/21/2017	1.5	<30	7.21	718	13.4	<5	<5	<5	<5	970	30	29,000	<5	<0.005	<0.02	54

See notes on page 16.



TABLE 2
RACER Trust - Coldwater Road Landfill Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, Metals, Chloride, Cyanide, Phenols, and Sulfate

Well ID	Sample Date	Indicator Parameters						Dissolved Metals (µg/L)						Inorganics (mg/L)			
		TOC	TOX	pH	SpC	Temp	Cr	Cu	Ni	Zn	Fe	Mn	Na	Chloride	Cyanide	Phenols	Sulfate
		(mg/L)	(µg/L)				100 (A)	1,000 (E)	100 (A)	2,400							
B-23D	6/21/1995	3.4	<10	7.27	680	15.1	<20	<20	<30	<20	--	--	--	--	--	--	--
	8/31/1995	3.9	96	8.24	845	15.4	<20	<20	<40	<20	--	--	--	--	--	--	--
	2/9/1996	3.8	34	7.54	751	11.3	<20	<20	<40	<20	--	--	--	--	--	--	--
	6/19/1996	2.2	<100	8.25	632	14.2	<20	<20	<20	<20	--	--	--	--	--	--	--
	8/21/1996	1.7	<5	8.94	691	14.6	<20	<20	<20	50	--	--	--	--	--	--	--
	11/13/1996	40.0	<5	7.66	977	7.6	<20	<20	<20	40	--	--	--	--	--	--	--
	5/6/1997	2.0	<100	6.80	610	11.0	<10	<10	9	<10	--	--	--	--	--	--	--
	11/6/1997	3.0	<100	6.00	620	10.0	<10	<10	31	<10	160	15	--	2	<0.005	<0.020	25
	5/4/1998	2.0	<5	6.38	558	12.2	<10	<10	<5	<10	--	--	--	--	--	--	--
	11/5/1998	5.0	<10	6.50	639	9.8	<10	<10	<5	70	<10	<5	29,700	--	--	--	--
	12/23/1998	--	--	--	--	--	--	--	--	--	--	--	--	2	<0.005	<0.020	21
	4/26/1999	3.6	<100	8.10	552	13.3	<10	<10	<5	<10	--	--	--	--	--	--	--
Duplicate	4/26/1999	3.0	<100	NS	NS	NS	<10	<10	<5	<10	--	--	--	--	--	--	--
Duplicate	11/5/1999	3.4	<100	7.40	546	13.3	<10	<10	<5	<10	80	14	34,700	3	<0.005	<0.020	26
	11/5/1999	3.1	<100	NS	NS	NS	<10	<10	<5	<10	90	15	33,300	3	<0.005	<0.020	25
Duplicate	4/26/2000	3.2	<100	7.90	800	13.7	<10	<10	<5	<10	--	--	--	--	--	--	--
	12/8/2000	2.0	<10	6.99	570	7.0	<10	<10	7	<10	60	--	35,400	2	<0.005	<0.020	22
Duplicate	5/15/2001	3.2	<100	7.88	790	13.1	<10	<10	<5	10	--	--	--	--	--	--	--
	10/17/2001	1.8	<100	7.46	600	11.3	<10	<10	<5	<10	170	--	32,800	2	<0.005	<0.020	23
	5/16/2002	5.4	<100	7.19	1200	11.2	<10	<10	<5	10	--	--	--	--	--	--	--
	11/7/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/3/2003	3.9	<30	6.86	640	12.9	<5	<5	<5	<5	--	--	--	--	--	--	--
	6/3/2003	3.7	<30	--	--	--	<5	<5	<5	<5	--	--	--	--	--	--	--
	11/13/2003	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/30/2004	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--	--	--	--
	12/10/2004	2.0	<30	6.66	640.0	11.3	<5	<5	11	10	500	65	30,500	2	<0.005	<0.010	25
	6/7/2005	2.0	<30	7.34	594.0	12.2	<5	<5	<5	<5	2,520	49	20,600	25	<0.005	<0.010	60
	6/7/2005	2.0	<30	--	--	--	<5	<5	<5	<5	2,580	48	20,600	25	<0.005	<0.010	59
	12/8/2005	3.8	<30	6.22	700.0	6.1	7	<4	<5	<10	370	60	39,200	--	--	--	--
	6/27/2006	1.2	<30	7.12	760.0	13.4	5	<4	<5	5	2,280	50	20,500	26	<0.005	0.010	67
Duplicate	11/30/2006	2.2	<30	7.56	568.0	11.8	<5	<4	<5	6	--	--	--	--	--	--	--
	6/8/2007	1.1	33.7	6.49	736	13.1	7	1	1	5	1,100	43	23,800	28	<0.005	<0.010	62
	11/16/2007	<1	<30	7.28	780	21.4	2	1	3	8	--	--	--	--	--	--	--
	6/26/2008	2.0	27.2	7.00	753	18.2	<5	1	<5	<5	1,850	44	23,700	22	<0.005	<0.010	54
	11/21/2008	<1	<30	6.74	763	6.0	<5	<1	<5	19	--	--	--	--	--	--	--
	6/25/2009	<1	<30	6.73	776	18.9	<5	<1	<5	<5	1,500	43	23,900	29	<0.005	<0.010	63
	11/18/2009	2	<30	7.22	756	11.9	<5	<4	<5	10	--	--	--	--	--	--	--
	6/16/2010	2	<30	7.36	747	18.2	<5	<4	<5	<5	950	35	23,200	20	<0.005	<0.020	45
	11/11/2010	2	21.5	7.28	743	12.8	11	<4	<5	<5	--	--	--	--	--	--	--
	11/11/2010	2	<30	7.28	742	12.8	11	<4	<5	<5	--	--	--	--	--	--	--
	6/21/2011	1.2	<30	7.33	721	18.0	8	<4	<5	<5	1,520	37	22,400	22	<0.005	<0.010	48
	6/21/2011	--	--	--	--	--	<5	--	--	--	--	--	--	--	--	--	--
Replicate	11/15/2011	1	49	7.19	721	13.1	<5	<4	<5	8	--	--	--	--	--	--	--
	6/26/2012	1	<40	6.78	748	12.7	<5	<4	<5	<5	1,810	42	25,100	25	<0.005	<0.02	50
	12/5/2012	1.6	<40	6.63	755	9.6	<5	<4	<5	7	--	--	--	--	--	--	--
	6/3/2013	1.4	14	7.06	720	15.4	<5	<4	<5	<5	980	32	23,500	20	<0.005	<0.02	44
	11/5/2013	1.4	4	7.32	746	12.6	<5	<4	<5	28	--	--	--	--	--	--	--
	6/25/2014	3.0	<30	7.31	746	13.9	<5	<5	6	5	970	36	10,900	26	<0.005	0.025	51
	6/24/2015	1.9	<30	7.16	747	14.9	<5	<5	<5	<5	1,370	39	24,300	22	<0.005	<0.02	47
	6/22/2016	1.5	60	7.10	788	14.6	<5	<5	<5	<5	1,600	38	23,500	30	<0.005	<0.02	54
	6/21/2017	1.5	<30	7.41	844	12.8	<5	<5	<5	<5	400	45	27,300	38	<0.005	<0.02	64

See notes on page 16.



TABLE 2
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Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, Metals, Chloride, Cyanide, Phenols, and Sulfate

Well ID	Sample Date	Indicator Parameters						Dissolved Metals (µg/L)						Inorganics (mg/L)			
		TOC	TOX	pH	SpC	Temp	Cr	Cu	Ni	Zn	Fe	Mn	Na	Chloride	Cyanide	Phenols	Sulfate
		(mg/L)	(µg/L)				100 (A)	1,000 (E)	100 (A)	2,400							
B-24	6/21/1995	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/31/1995	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/9/1996	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/19/1996	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/21/1996	5.6	<5	7.80	1,502	12.7	<20	<20	<20	90	--	--	--	--	--	--	--
	11/13/1996	20.0	<5	7.09	2,030	7.8	<20	<20	<20	50	--	--	--	--	--	--	--
	5/6/1997	5.0	<100	6.40	1,700	10.0	<10	<10	31	10	--	--	--	--	--	--	--
	11/6/1997	--	--	--	--	--	--	--	--	--	--	--	--	NS	NS	NS	NS
	5/4/1998	4.0	<5	6.52	1,410	11.6	<10	<10	8	20	--	--	--	--	--	--	--
	11/5/1998	4.0	23	5.50	1,595	10.4	<10	<10	9	20	60	120	27,700	--	--	--	--
	12/23/1998	--	--	--	--	--	--	--	--	--	--	--	--	163	<0.005	<0.020	205
	4/26/1999	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--
	11/5/1999	NS	NS	7.20	1,152	13.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/26/2000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--
	12/8/2000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/15/2001	NS	NS	6.40	1,450	12.9	NS	NS	NS	NS	NS	NS	NS	--	--	--	--
	10/17/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/16/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--
	11/7/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/3/2003	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--
B-24R	11/13/2003	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/30/2004	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--
	12/9/2004	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/7/2005	8.0	<30	7.27	857	10.6	8	<5	<5	<5	10,600	448	27,100	49	<0.005	<0.010	206
	12/8/2005	6.6	<30	5.16	1,120	11.9	11	<4	<5	10	3,180	210	28,700	--	--	--	--
	6/28/2006	4.7	<30	7.31	1,080	11.9	6	<4	<5	<5	3,760	210	27,700	48	<0.005	<0.010	182
	11/30/2006	4.8	30	7.31	1,100	11.7	6	<4	<5	<5	--	--	--	--	--	--	--
	6/4/2007	4.5	110	7.19	1,080	11.0	9	2	2	19	2,400	194	27,900	47	<0.005	<0.010	184
	11/13/2007	4.1	30.1	7.13	1,130	14.0	3	1	5	7	--	--	--	--	--	--	--
	6/26/2008	4.3	<30	6.99	1,130	19.0	<5	1	<5	8	3,490	175	39,600	46	<0.005	<0.010	189
	11/18/2008	3.8	<30	6.76	1,125	5.3	<5	<1	<5	<5	--	--	--	--	--	--	--
	6/24/2009	5.2	<30	6.62	1,120	17.4	<5	<1	<5	<5	4,000	155	38,400	48	<0.005	<0.010	201
	11/18/2009	5	86.4	7.08	1,140	12.9	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/16/2010	4	22.7	7.02	1,150	16.3	<5	<4	<5	<5	1,880	222	39,500	46	<0.005	<0.020	196
	11/9/2010	5	26.8	6.90	1,136	13.5	11	<4	<5	<5	--	--	--	--	--	--	--
	6/21/2011	3.7	<30	7.11	1,136	17.5	10	<4	6	<5	1,130	255	51,700	45	<0.005	<0.010	206
	6/21/2011	3.7	<30	7.11	1,137	17.5	8	<4	6	<5	1,070	255	52,000	45	<0.005	<0.010	206
	6/21/2011	--	--	--	--	--	<5	--	--	--	--	--	--	--	--	--	--
	6/21/2011	--	--	--	--	--	<5	--	--	--	--	--	--	--	--	--	--
	11/16/2011	4	24	7.69	1,141	11.1	<5	<4	<5	<5	--	--	--	--	--	--	--
B-24R	6/26/2012	3.5	16	6.80	1,219	13.7	<5	<4	<5	<5	1,200	242	72,000	45	<0.005	<0.02	219
	12/6/2012	4.2	48	6.98	1,204	10.2	<5	<4	<5	6	--	--	--	--	--	--	--
	6/3/2013	4	4.8	7.19	1,127	11.4	<5	<4	<5	<5	110	130	38,600	45	<0.005	<0.02	227
	11/5/2013	4	5.5	7.16	1,203	12.6	<5	<4	<5	<5	--	--	--	--	--	--	--
	11/5/2013	4	<10	7.16	1,203	12.6	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/24/2014	3.7	16	7.10	1,202	13.9	<5	8	8	9	60	238	24,300	45	<0.005	<0.02	243
	6/24/2014	3.7	16	7.10	1,201	13.9	<5	<5	7	<5	8	231	25,000	46	<0.005	<0.02	240
	11/19/2014	3.9	21	6.98	1,290	5.44	<5	<4	11	<5	--	--	--	--	--	--	--
	6/24/2015	3.5	<30	7.03	1,235	15.4	<5	<5	7	<5	<20	240	59,600	44	<0.005	<0.02	261
	11/18/2015	3.6	19	7.03	1,234	12.9	<5	<5	5	<5	--	--	--	--	--	--	--
	11/18/2015	3.5	18	7.03	1,233	12.9	<5	<5	6	7	--	--	--	--	--	--	--
	6/23/2016	3.2	110	6.88	1,275	15.0	<5	<5	<5	<5	320	210	67,800	45	<0.005	<0.02	245
	11/29/2016	3.4	12	7.19	1,220	10.7	<5	<5	<5	<5	--	--	--	--	--	--	--
	6/20/2017	3.1	14	7.10	1,307	11.4	<5	<5	<5	<5	<20	74	74,400	48	<0.005	<0.02	246
	11/7/2017	3.4	<30	7.09	1,231	11.3	<5	<5	<5	<5	--	--	--	--	--	--	--

See notes on page 16.



TABLE 2
RACER Trust - Coldwater Road Landfill Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, Metals, Chloride, Cyanide, Phenols, and Sulfate

Well ID	Sample Date	Indicator Parameters						Dissolved Metals (µg/L)					Inorganics (mg/L)				
		TOC	TOX	pH	SpC	Temp	Cr	Cu	Ni	Zn	Fe	Mn	Na	Chloride	Cyanide	Phenols	Sulfate
		(mg/L)	(µg/L)				100 (A)	1,000 (E)	100 (A)	2,400							
B-27D	12/8/2005	3.7	<30	5.14	714	4.8	9	<4	6	<10	240	140	34,200	--	--	--	--
	6/27/2006	1.3	<30	7.11	644	13.5	6	<4	7	6	1,050	110	32,300	--	--	--	--
	11/30/2006	<1	<30	7.49	540	11.7	<5	<4	<5	6	--	--	--	--	--	--	--
	6/8/2007	4	25.7	6.58	628	14.6	9	2	3	36	1,520	58	36,300	4	<0.005	<0.010	23
	11/15/2007	1.9	<30	7.33	649	11.6	2	1	5	32	--	--	--	--	--	--	--
	6/26/2008	1.7	<30	7.05	659	16.3	<5	<1	<5	<5	300	59	33,900	2	<0.005	<0.010	23
	11/21/2008	1.3	<30	6.81	667	6.6	<5	<1	<5	<5	--	--	--	--	--	--	--
	6/25/2009	<1	<30	6.79	651	16.5	<5	1	<5	<5	2,030	52	37,200	2	<0.005	<0.010	20
	11/18/2009	2	<30	7.29	653	11.2	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/15/2010	2	<30	7.41	646	15.7	<5	<4	<5	<5	1,250	36	32,200	2	<0.005	<0.020	19
	Duplicate 6/15/2010	2	31.2	7.41	652	15.7	<5	<4	<5	<5	1,220	35	31,700	2	<0.005	<0.020	20
	11/9/2010	2	<30	7.18	651	13.3	10	<4	<5	<5	--	--	--	--	--	--	--
	6/21/2011	1.5	<30	7.47	640	15.6	9	<4	<5	<5	1,370	29	34,600	<5	<0.005	<0.010	19
	Replicate 6/21/2011	--	--	--	--	--	<5	--	--	--	--	--	--	--	--	--	--
	11/15/2011	1	34	7.22	652	12.1	<5	<4	6	8	--	--	--	--	--	--	--
	6/26/2012	1.5	<40	7.17	653	13.0	<5	<4	<5	<5	1,450	28	34,200	<5	<0.005	<0.02	20
	12/5/2012	1.7	<40	6.79	654	11.0	<5	<4	<5	10	--	--	--	--	--	--	--
	6/3/2013	1.5	4.3	8.34	645	12.1	<5	<4	<5	<5	1,670	29	32,500	<5	<0.005	<0.02	21
	11/5/2013	1.8	<10	7.37	640	12.0	<5	<4	<5	28	--	--	--	--	--	--	--
	6/24/2014	1.9	<30	7.40	637	16.0	<5	<5	<5	<5	680	34	15,800	<5	<0.005	<0.02	18
	6/22/2015	1.8	<30	7.20	635	14.2	<5	<5	<5	<5	710	27	34,100	<5	<0.005	<0.02	18
	6/22/2016	1.6	30	7.20	640	14.1	<5	<5	<5	<5	930	20	33,200	<5	<0.005	<0.02	15
	6/20/2017	1.4	<30	7.40	642	14.7	<5	<5	<5	<5	1,220	43	35,600	<5	<0.005	<0.02	17

See notes on page 16.



TABLE 2

RACER Trust - Coldwater Road Landfill Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, Metals, Chloride, Cyanide, Phenols, and Sulfate

Well ID	Sample Date	Indicator Parameters						Dissolved Metals (µg/L)				Inorganics (mg/L)					
		TOC	TOX	pH	SpC	Temp	Cr	Cu	Ni	Zn	Fe	Mn	Na	Chloride	Cyanide	Phenols	Sulfate
		(mg/L)	(µg/L)				100 (A)	1,000 (E)	100 (A)	2,400							
B-28	11/21/2005	--	--	6.21	994	12.3	--	--	--	<5	--	--	--	--	--	--	--
Duplicate	11/21/2005	--	--	6.21	--	12.3	--	--	--	7	--	--	--	--	--	--	--
	6/27/2006	3	<30	7.12	828	13.2	5	<4	<5	18	2,380	210	17,000	--	--	--	--
	12/1/2006	2.4	<30	7.48	812	12.3	<5	<4	<5	5	--	--	--	--	--	--	--
Duplicate	12/1/2006	3.3	<30	7.48	810	12.3	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/5/2007	2.1	<30	6.84	845	10.6	9	2	3	6	1,690	160	25,100	12	<0.005	<0.010	87
	11/15/2007	2.5	15	6.81	816	9.1	3	2	5	11	--	--	--	--	--	--	--
	6/27/2008	1.8	<30	6.87	840	17.6	<5	1	<5	5	370	84	16,300	10	<0.005	<0.010	88
	11/19/2008	1.1	<30	6.75	804	7.0	<5	<1	<5	<5	--	--	--	--	--	--	--
	6/24/2009	1.1	<30	6.96	822	19.5	<5	<1	<5	<5	204	132	14,600	10	<0.005	<0.010	84
	11/18/2009	2	<30	6.94	814	11.6	<5	<4	<5	20	--	--	--	--	--	--	--
	6/16/2010	2	<30	7.02	841	17.6	<5	<4	<5	<5	790	173	19,100	12	<0.005	<0.020	78
	11/10/2010	3	<30	7.05	813	13.3	18	<4	<5	<5	--	--	--	--	--	--	--
	6/21/2011	1.5	<30	7.23	837	14.1	9	<4	5	<5	1,380	130	23,400	12	<0.005	<0.010	80
Replicate	6/21/2011	--	--	--	--	--	<5	--	--	--	--	--	--	--	--	--	--
	11/15/2011	2	160	7.17	823	12.5	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/26/2012	2	<40	6.45	849	13.0	<5	<4	<5	<5	1,960	84	29,800	12	<0.005	<0.02	80
Duplicate	12/6/2012	1.6	<40	7.25	823	11.4	<5	<4	<5	<5	--	--	--	--	--	--	--
	12/6/2012	1.7	<40	7.25	823	11.4	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/3/2013	1.5	10	6.88	834	13.1	<5	<4	5	<5	1,310	111	26,000	12	<0.005	<0.02	87
	11/5/2013	1.6	<10	7.26	842	12.9	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/24/2014	1.5	<30	7.03	852	12.2	<5	9	<5	<5	1,490	53	15,400	12	<0.005	<0.02	89
Replicate	7/28/2014	--	--	--	--	--	--	<5	--	--	--	--	--	--	--	--	--
	11/19/2014	1.6	<60	7.05	844	7.48	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/22/2015	1.5	<30	7.04	860	13.4	<5	<5	<5	<5	3,330	53	37,100	11	<0.005	<0.02	92
	11/18/2015	1.6	<30	7.13	849	13.8	<5	<5	<5	6	--	--	--	--	--	--	--
	6/24/2016	1.6	49	7.18	866	15.0	<5	<5	<5	<5	4,960	53	45,800	11	<0.005	<0.02	92
	11/29/2016	1.5	<30	7.27	853	12.6	<5	<5	<5	<5	--	--	--	--	--	--	--
Duplicate	11/29/2016	1.5	16	7.27	860	12.6	<5	<5	<5	<5	--	--	--	--	--	--	--
	6/20/2017	1.6	18	7.05	863	11.4	<5	<5	<5	<5	80	35	30,000	13	<0.005	<0.02	106
	11/7/2017	1.6	<30	7.11	859	12.5	<5	<5	<5	<5	--	--	--	--	--	--	--
Duplicate	11/7/2017	1.5	<30	7.11	867	12.5	<5	<5	<5	<5	--	--	--	--	--	--	--

See notes on page 16.



TABLE 2 RACER Trust - Coldwater Road Landfill Facility Post-Closure Monitoring - Historical Analytical Results Physical Parameters, TOC, TOX, Metals, Chloride, Cyanide, Phenols, and Sulfate																	
Well ID	Sample Date	Indicator Parameters						Dissolved Metals (µg/L)				Inorganics (mg/L)					
		TOC	TOX	pH	SpC	Temp	Cr	Cu	Ni	Zn	Fe	Mn	Na	Chloride	Cyanide	Phenols	Sulfate
		(mg/L)	(µg/L)				100 (A)	1,000 (E)	100 (A)	2,400							
B-29	11/21/2005	--	--	6.79	1,870	11.7	--	--	--	11	--	--	--	--	--	--	--
	6/27/2006	--	--	7.14	1,480	12.3	6	<4	<5	28	1,480	140	47,300	--	--	--	--
	12/1/2006	--	--	7.31	--	11.4	8	<4	5	9	--	--	--	--	--	--	--
	6/5/2007	2.4	31.1	6.91	1,402	10.3	11	3	3	8	800	118	46,300	70	<0.005	<0.010	218
	11/15/2007	3.2	17.3	6.89	1,370	12.2	4	2	7	14	--	--	--	--	--	--	--
Duplicate	11/15/2007	2.7	16.5	6.89	1,380	12.2	3	2	7	10	--	--	--	--	--	--	--

See notes on page 16.



TABLE 2 RACER Trust - Coldwater Road Landfill Facility Post-Closure Monitoring - Historical Analytical Results Physical Parameters, TOC, TOX, Metals, Chloride, Cyanide, Phenols, and Sulfate																	
		Indicator Parameters						Dissolved Metals (µg/L)					Inorganics (mg/L)				
Well ID	Sample Date	TOC (mg/L)	TOX (µg/L)	pH	SpC	Temp	Cr	Cu	Ni	Zn	Fe	Mn	Na	Chloride	Cyanide	Phenols	Sulfate
		MDEQ Residential Drinking Water Criteria & RBSLs					100 (A)	1,000 (E)	100 (A)	2,400							
B-30	11/21/2005	--	--	6.78	1,450	12.1	--	--	--	212	--	--	--	--	--	--	--
	6/27/2006	--	--	7.10	1,330	12.3	6	<4	<5	16	2,690	100	21,300	--	--	--	--
	12/1/2006	--	--	7.27	--	10.6	6	<4	<5	8	--	--	--	--	--	--	--
	6/5/2007	2.7	<30	6.98	1,542	10.9	11	4	4	17	1,260	171	25,000	35	<0.005	<0.010	452
	11/15/2007	2.4	17.4	6.97	1,510	9.3	4	3	7	14	--	--	--	--	--	--	--

See notes on page 16.



TABLE 2
RACER Trust - Coldwater Road Landfill Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, Metals, Chloride, Cyanide, Phenols, and Sulfate

Well ID	Sample Date	Indicator Parameters						Dissolved Metals (µg/L)						Inorganics (mg/L)			
		TOC	TOX	pH	SpC	Temp	Cr	Cu	Ni	Zn	Fe	Mn	Na	Chloride	Cyanide	Phenols	Sulfate
		(mg/L)	(µg/L)				100 (A)	1,000 (E)	100 (A)	2,400							
Equipment Blank	12/10/2004	<1	<30	--	--	--	<5	<5	<5	11	<20	13	810	<2	<0.005	<0.010	<2
	6/8/2005	<1	<30	--	--	--	<5	<5	<5	<5	<20	<5	120	<5	<0.005	<0.010	<5
	12/8/2005	<1	<30	--	5	--	<5	<4	<5	<10	<100	<20	<1000	--	--	--	--
	6/28/2006	<1	<30	--	12	--	<5	<4	<5	<5	<100	<20	<1000	<1	<0.005	<0.010	<1
	12/1/2006	<1	<30	--	26	--	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/8/2007	<1	26	--	13	--	<5	1	1	13	<20	11	340	<2	<0.005	<0.010	<2
	11/15/2007	<1	<30	--	4	--	<5	1	1	9	--	--	--	--	--	--	--
	6/26/2008	<1	<30	--	3	--	<5	1	<5	<5	100	7	420	<2	<0.005	<0.010	<2
	11/19/2008	<1	<30	--	6	--	<5	1	<5	<5	--	--	--	--	--	--	--
	6/25/2009	<1	<30	--	24	--	<5	<1	<5	<5	110	<5	200	<2	<0.005	<0.010	<2
	11/19/2009	0.7	<30	--	5	--	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/17/2010	0.4	<30	--	4	--	<5	<4	<5	<5	<20	<5	<200	<2	<0.005	<0.020	<2
	11/11/2010	1	<30	--	1.2	--	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/22/2011	0.88	<30	--	3	--	<5	<4	<5	<5	<20	<5	460	<2	<0.005	<0.010	<2
	11/16/2011	<1	4.9	--	1,330	--	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/27/2012	<1	<20	--	3	--	<5	<4	<5	13	50	<5	6350	<2	<0.005	<0.02	<2
	12/6/2012	<1	<40	--	17.0	--	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/6/2013	<1	<10	--	1,370	--	<5	<4	<5	<5	<20	<5	<500	<2	<0.005	<0.02	<2
	11/6/2013	<1	<10	--	2,350	--	<5	<4	<5	<5	--	--	--	--	--	--	--
	6/24/2014	<1	<30	--	1,930	--	<5	<5	<5	<5	<20	<5	<1000	<2.5	<0.005	<0.02	<2.5
	6/24/2015	<1	<30	--	4.09	--	<5	<5	<5	<5	<20	<5	140	<2	<0.005	<0.02	<2
	6/24/2016	<1	6.2	--	2,220	--	<5	<5	<5	<5	<20	<5	<500	<2.5	<0.005	<0.02	<2
	6/22/2017	<1	<30	--	5,780	--	<5	<5	<5	<5	<20	<5	<200	<5	<0.005	<0.02	<5
	11/7/2017	<1	<30	--	7.07	--	<5	<5	<5	<5	--	--	--	--	--	--	--

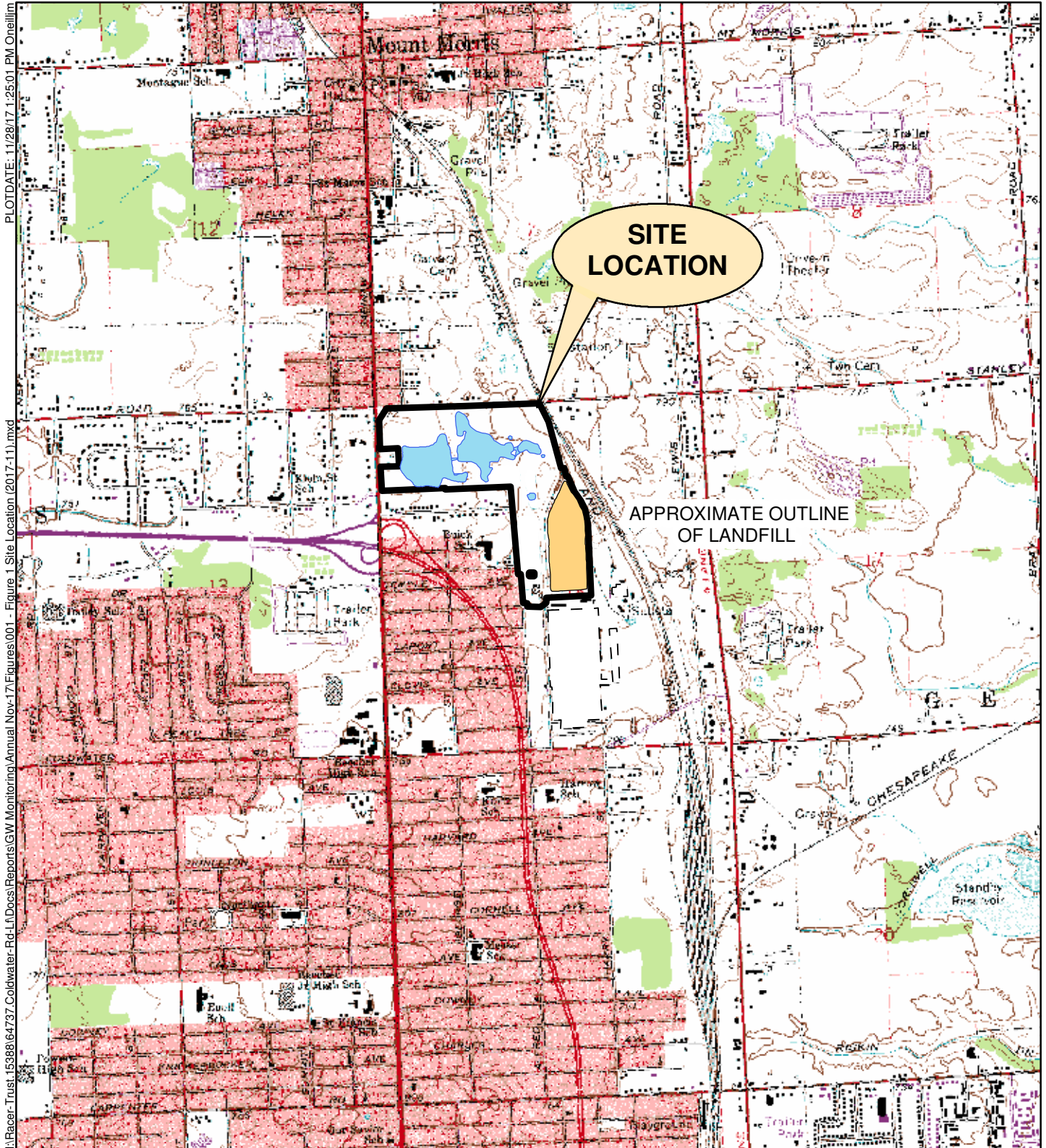
Notes

- 1) < = Not detected.
- 2) NS = Not sampled, insufficient liquid encountered.
- 3) NR = No Result, insufficient sample volume.
- 4) T = Temperature in degrees Celsius.
- 5) -- = Not analyzed.
- 6) Dup = Duplicate sample.
- Exceeds MDEQ Residential Drinking Water Criteria
- 7) A = Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005.
- 8) E = Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA)





FIGURES



TOPOGRAPHIC MAP PROVIDED BY ESRI



RACER TRUST COLDWATER ROAD LANDFILL FACILITY FLINT, MICHIGAN

SITE LOCATION MAP



PLOTDATE: 11/28/17 1:32:53 PM Oneiljm

I:\RacerTrust\15388\64737 Coldwater Rd\1 Docs\Reports\Annual Nov\17\Figures\002 - Figure 2 - GW Report Site Layout (2017-11).mxd

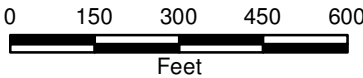


LEGEND

- LEACHATE COLLECTION SUMP
- ACCESS PORT FOR LEAK DETECTION VAULT
- MONITORING WELL
- ABANDONED WELL

RACER TRUST
COLDWATER ROAD
LANDFILL FACILITY
FLINT, MICHIGAN

SITE LAYOUT



NOVEMBER 2017
15388/64737/002



O'BRIEN & GERE ENGINEERS, INC.

PLOTDATE: 11/28/17 10:54:18 AM Oneiljm

I:\Racer-Trust-15388\64737 Coldwater-Rd-Lt\Docs\Reports\GW Monitoring\Annual Nov-17\Figures\003- Figure 3- GW Elevations_Perched (2017-11).mxd

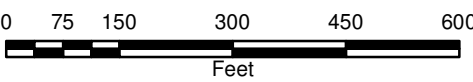


LEGEND

- MONITORING WELL
- GROUNDWATER ELEVATION (798.52)
- ABANDONED WELL

RACER TRUST
COLDWATER ROAD
LANDFILL FACILITY
FLINT, MICHIGAN

**SHALLOW
GROUNDWATER
ELEVATION MAP
NOVEMBER 6, 2017**



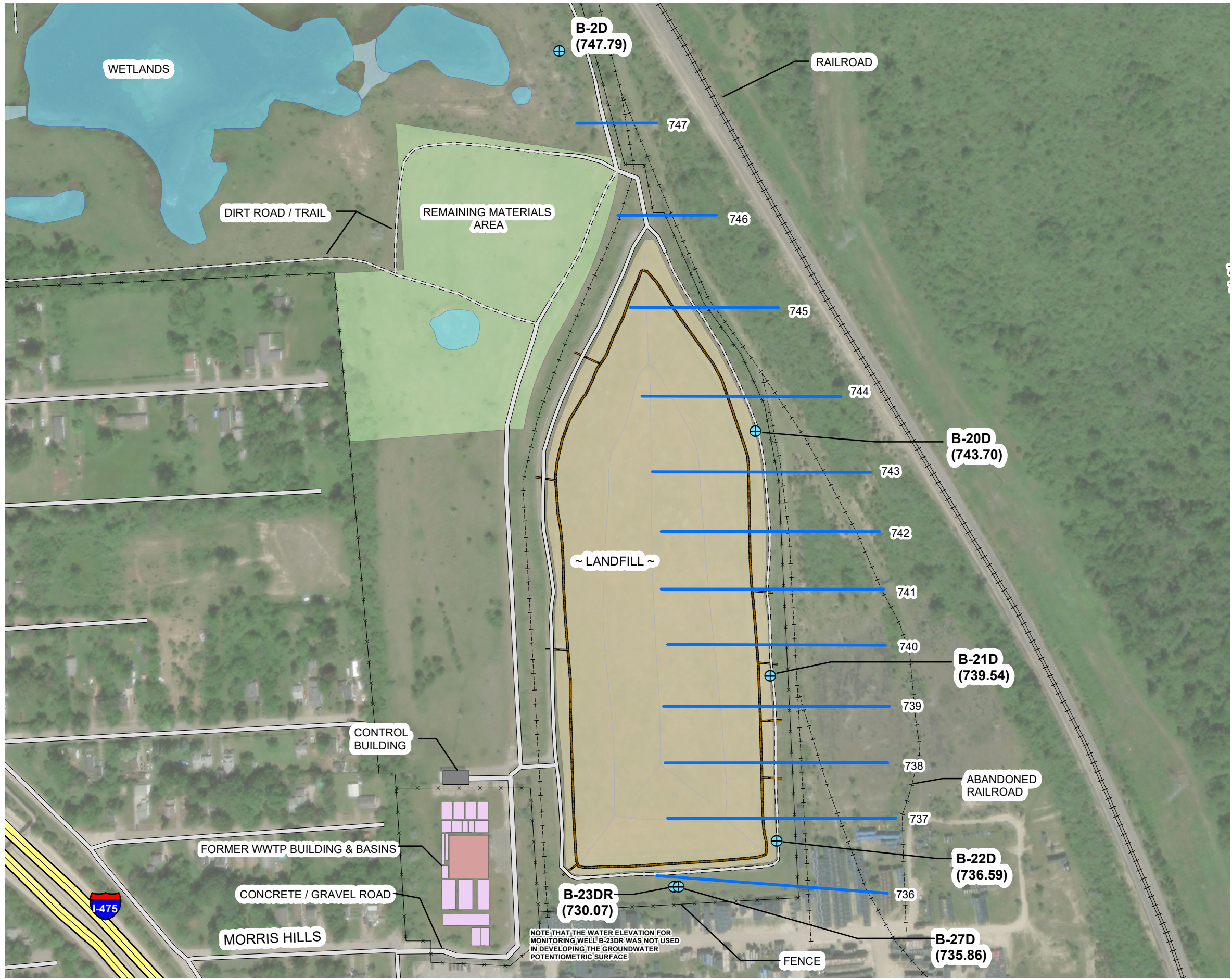
DECEMBER 2017
15388/64737-003



O'BRIEN & GERE ENGINEERS, INC.

PLOTDATE: 07/18/17 1:41:28 PM ONeilJUM

I:\Racer-Trust_15388\64737 Coldwater-Rd-LI\Docs\Reports\GW Monitoring\Annual Nov-17\Figures\004 - Figure 4 - GW Contours Deep (2017-11).mxd



AERIAL PHOTO PROVIDED BY ESRI

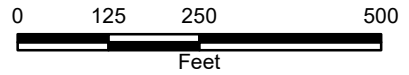


LEGEND

- MONITORING WELL
- GROUNDWATER ELEVATION
- GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION

RACER TRUST
COLDWATER ROAD
LANDFILL FACILITY
FLINT, MICHIGAN

**DRIFT AQUIFER
GROUNDWATER
POTENTIOMETRIC
SURFACE MAP
NOVEMBER 6, 2017**



NOVEMBER 2017
15388/64737-004



O'BRIEN & GERE ENGINEERS, INC.

APPENDIX A
Sampling Procedures

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1 INTRODUCTION

This procedure is for the collection of groundwater samples for laboratory analysis.

The objective of most groundwater quality monitoring programs is to obtain samples that are representative of existing groundwater conditions, or samples that retain the physical and chemical properties of the groundwater within an aquifer.

One of the most important aspects of groundwater sampling is acquiring samples that are free of suspended silt, sediment, or other fine grained particulates. Fine grain materials may often have a variety of chemical components sorbed to the particle or have the ability to sorb chemicals from the aqueous phase to the particle, which will bias the subsequent analytical results.

Constituents known to have an affinity for fine-grained particulates are: polychlorinated biphenyls (PCBs), semi-volatile organic compounds (SVOCs), and inorganics. Monitoring programs where these constituents are suspected or known to be prevalent must employ sampling methods that minimize particulate presence.

The “Low Stress/Low Flow” purging and sampling method will be utilized to purge the well to allow representative water from the formation to replace the standing water within the sampling zone of the well. Experience has shown that the low stress/low flow technique typically achieves representative groundwater samples with minimal particulate interference.

Lastly, in extreme cases “ultra-low flow” techniques have been employed at select sites where low stress/low flow methods were used, yet particulate-sensitive constituents continue to bias the analytical results, or excessive drawdown is produced using standard low stress/low flow methods due to the presence of low permeability materials within a well’s screened zone. Ultra-low flow techniques are conducted at purging rates below 100 ml per minute, and should only be utilized after low stress/low flow methods have been attempted (see Section 2.2 for further discussion on the purging of wells prior to sample collection).



2 PROCEDURAL GUIDELINES

The following describes techniques for groundwater sampling: Low Stress/Low Flow Methods.

Low stress/low flow methods will be employed when it is critical to collect groundwater samples truly representative of the groundwater present, and to minimize the impact of sediment/colloid presence.

2.1 PREPARATORY REQUIREMENTS

Prior to groundwater sampling, an inspection will be performed on each well. The inspection will include:

- Inspecting the concrete pad for cracks
- Inspecting the protective steel cover
- Inspecting the integrity of the PVC well casing (to the extent possible)
- Inspecting the well caps
- Inspecting the well identification markings to confirm they are legible (if illegible, re-mark)
- Inspecting the locks to assess whether they are in good working condition.

Results of the well inspection will be documented on the Groundwater Sampling Log for each well. If the inspection indicates repairs are required, these will be performed prior to the next sampling event. Corrective actions implemented to repair well(s) will also be documented on the Groundwater Sampling Log and/or the field notebook for the facility.

Groundwater purging and sampling data will be recorded on the Groundwater Sampling Log.

2.2 WELL PURGING AND STABILIZATION MONITORING (LOW STRESS/LOW FLOW METHOD)

The procedure for sampling the monitoring wells is as follows:

- 1) Sampling equipment will first be decontaminated prior to each use by the following protocol:
 - Scrub equipment thoroughly in a low-sudsing detergent solution (*e.g.*, Alconox). Pump low-sudsing detergent solution through submersible pump for approximately 5 minutes, if utilized
 - Rinse equipment thoroughly with distilled water, and pump distilled water through submersible pump, if utilized
 - Wrap equipment in plastic for handling and/or storage until next use
 - Decontamination of disposable tubing, if used, will not be necessary
- 2) Calibrate field instrument and document calibration activity. Calibration shall be performed in accordance with manufacturer's recommendations, and noted on the Groundwater Sampling Log
- 3) An electric water level probe will be used to measure the depth from the top of the casing to the top of water to the nearest 0.01-ft. The measurement will be recorded in a dedicated field notebook and Groundwater Sampling Log
- 4) Measure the depth from the top of casing to the bottom of the well for the initial sampling event
- 5) Slowly lower the pump and/or tubing into the well positioning the pump intake at the mid-point of the well screen taking care to minimize disturbing the well
- 6) During the purging of the well, monitor and record the field indicator parameters (pH, temperature, conductivity, oxidation-reduction (redox) reaction potential (ORP), dissolved oxygen (DO), and turbidity)

approximately every 5 minutes. Stabilization is considered achieved when the final groundwater flow rate is achieved, and three consecutive readings for each parameter are within the following limits:

pH	±0.1 pH units for three consecutive readings;
temperature	±3 percent for three consecutive readings;
conductivity	±3 percent for three consecutive readings;
ORP	±10 millivolts (mV) for three consecutive readings;
DO	±10 percent for three consecutive readings; and
Turbidity	±10 percent for three consecutive readings or a final value of less than 5 nephelometric turbidity units (NTU).

- 7) Verify that drawdowns of 0.3 ft or less are maintained and make adjustments as necessary. Record drawdown measurements and note adjustments in pumping rates as necessary on the Groundwater Sampling Log. If drawdowns of 0.3 ft or less cannot be maintained utilize ultra-low flow purge techniques. However, if ultra-low flow purging still results in excessive drawdown, the well will be purged “dry” and allowed to recharge, and the sample will be collected as soon as sufficient water is present to obtain the necessary sample volume
- 8) Obtain a sample for chemical analyses immediately upon stabilization of field parameter measurements. Field filter the sample for dissolved metals using a 0.45-micron filter prior to preserving with acid. Samples are to be collected in the order of volatility as follows: TOC/TOX (or VOCs) and dissolved metals.

If after 2 hours of purging the indicator parameters have not stabilized, as recommended in the USEPA guidance, the purging will be discontinued and the sample will be collected with an explanation of attempts to achieve stabilization.

Either a decontaminated submersible pump or peristaltic pump (for shallow wells only) may be utilized to purge each well. If a submersible pump is utilized in the purging process, then it will be decontaminated prior to and after sampling each well. Sampling equipment must be protected from the ground surface by a clean plastic sheet laid around the work area. Water from purging will not be containerized.

2.3 SAMPLE PRESERVATION

Sample bottles will be labeled with sample identification, collection date and time, filtration/preservative status. Sample bottles will be filled and capped securely and immediately preserved (if required) and stored at 4 degrees Celsius in a cooler.

The cooler and samples will be prepared for shipment or transport by the following procedure:

- 1) Prepare cooler(s) for shipment.
 - Tape drain(s) of cooler shut
 - Place mailing label with laboratory address on top of cooler(s).
- 2) Arrange sample containers in a manner to prevent potential sample container breakage.
- 3) Confirm the bottle labels are completed correctly. Place clear tape over bottle labels to prevent moisture accumulation from causing the label to peel off.
- 4) Seal sample containers within plastic zip-lock bags to prevent packing material from contacting samples.
- 5) Place packing material at the bottom of the cooler to act as a cushion for the sample containers.
- 6) Fill remaining spaces with packing material.



- 7) Confirm containers are firmly packed in cooler.
- 8) If ice is required to preserve the samples, cubes should be repackaged in double zip-lock bags, and placed on top of the packing material.
- 9) Sign COC form (or obtain signature) and indicate the time and date it was relinquished to Federal Express or other carrier, as appropriate.
- 10) Separate copies of COC forms. Seal proper copies within a large zip-lock bag and tape to inside lid of cooler. Retain copies of forms in-house.
- 11) Close lid and latch.
- 12) Tape cooler shut on both ends, making several complete revolutions with strapping tape.
- 13) Relinquish to Federal Express or other courier service. Retain airbill receipt for project records (Note: Samples will be shipped for "NEXT DAY" delivery).

If samples are delivered directly to the laboratory, or the laboratories in-house courier, by the sampling team, the packaging/shipping requirements may be omitted. COC procedures; however, must be strictly maintained.

2.4 SAMPLE MANAGEMENT AND CHAIN-OF-CUSTODY

COC procedures document the history of sample containers and samples from the time of preparation of sample containers through sample collection, shipment, and analysis. A sample is considered in custody if:

- The sample is in the sampler's physical possession
- The sample is secured by the sampler to prevent tampering
- The sample is secured by the sampler employee in an area that is restricted to authorized personnel.

To maintain a record of sample collection, transfer between personnel, shipment, and receipt by the laboratory, a COC record will be completed for each sample at each sampling location. Each time the samples are transferred, signatures of the person relinquishing and receiving the samples, as well as the date and time, will be documented.

Parallel field notebook/Groundwater Sampling Log and COC records will be maintained. Recorded information will include:

- Sampling Location
- Time and Date
- Sampling Method
- Method of Preservation.

Additionally, the field notebook will also include information on weather conditions, depth to water, total depth of the well, field parameter and instrument calibration records and other useful or pertinent information. The notebook will be kept at the facility or with their designated contractor.

2.5 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) MEASURES

Field QA/QC procedures will consist of collecting one equipment blank (if reusable equipment is used) and one duplicate sample (one additional sample from one of the wells) for each sampling event. The duplicate sample will be assigned a separate sample identification and submitted to the laboratory "blind".



The procedure for collecting an equipment blank will be to pass distilled water through the decontaminated sampling device into a laboratory-supplied sample bottles. An equipment blank sample will not be required if disposable sampling equipment is used.



3 REFERENCES

USEPA Low-Flow (Minimal Drawdown) Groundwater Sampling Procedures (EPA/540/S -95/504).

USEPA (Region 1) Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells (EQASOP-GW 001), January 19, 2010.

USEPA RCRA Groundwater Monitoring: Draft Technical Guidance (EPA/530-R-93-001).

MDEQ RRD Operational Memorandum No. 2: Sampling and Analysis.



APPENDIX B
*Groundwater Sampling
Logs*

Standard Groundwater Sampling Log

Weather Mostly Sunny, cool (64°F), light wind (S-Sw) 10-15 mph
Well # B-7
Evacuation Method Whale Pump - white humid
Sampling Method _____

Depth of Well *	27.19	ft.
Depth to Water 09:32	19.81	ft.
Length of Water Column	9.38	ft.
Volume of Water in Well	1.52	gal. (s)
3X Volume of Water in Well	4.56	gal. (s)

Water Volume /ft. for:	
X	2" Diameter Well = 0.163 X LWC
	4" Diameter Well = 0.653 X LWC
	6" Diameter Well = 1.469 X LWC

Volume removed before sampling 5.5 gal.(s)
Did well go dry?

* Measurements taken from Well Casing Protective Casing

Calibrated within range

pH	Yes ↓
ORP	
Conductivity	
DQ	

Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
9:45	12.5	0.76	6.93	7.33	91.7	1100
9:50	12.8	0.70	6.47	7.34	81.1	328
9:55	13.2	0.70	6.39	7.31	76.2	230
10:00	13.2	0.70	4.02	7.16	75.3	1100
10:05	12.9	0.77	1.65	7.12	73.1	296
10:10	12.9	0.77	1.49	7.12	72.2	1100
10:13	10.13					
10:17						
10:18	10.8	0.79	3.29	6.94	128.5	86
10:21						
10:24						
10:27						
10:30						
10:33						
10:36						
10:39						
10:42						
10:45						
10:48						
10:51						
10:54						
10:57						
11:00						
11:03						
11:06						
11:09						
11:12						
11:15						
11:18						
11:21						
11:24						
11:27						
11:30						
11:33						
11:36						
11:39						
11:42						
11:45						
11:48						
11:51						
11:54						
11:57						
12:00						

Time Collected 09:45

Physical Appearance at Start

Physical Appearance at Sampling

Color Slightly cloudy
 Odor None
 Turbidity (> 100 NTU) 86 Slightly cloudy
 Sheen/Free Product None

Color Slightly cloudy
 Odor None
 Turbidity (> 100 NTU) None
 Sheen/Free Product None

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered
TOC	2	950 ml	H ₂ SO ₄	-
TDX	1	250 ml	H ₂ SO ₄	-
Can ^d	1	250 ml	-	-
Dissolved metals	1	125 ml	HNO ₃	Yes

Notes:

O'Brien & Gere Engineers, Inc.

Standard Groundwater Sampling Log

Date 11/6/17 - 11/7/17
 Site Name Colonywater rd LF
 Location Flint, MI
 Project No. 64737
 Personnel CSY/KBS

Weather Mostly sunny 40's
 Well # B-9
 Evacuation Method Whale pump
 Sampling Method Purge and

Well Information:

Depth of Well * 25.35 ft.
 Depth to Water * 19.19 ft.
 Length of Water Column 6.16 ft.
 Volume of Water in Well 1.0 gal.(s)
 3X Volume of Water in Well 3.0 gal.(s)

Water Volume /ft. for:
 X 2" Diameter Well = 0.163 X LWC
 4" Diameter Well = 0.653 X LWC
 6" Diameter Well = 1.469 X LWC

Volume removed before sampling 2.1 gal.(s)
 Did well go dry? Yes

* Measurements taken from ☒ Well Casing ☐ Protective Casing ☐ (Other, Specify)

Instrument Calibration:

Calibrated within range

pH Yes
 ORP Yes
 Conductivity Yes
 DO Yes

Water parameters:

	Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
initial	<u>19.19</u>	initial <u>12.8</u>	initial <u>2.27</u>	initial <u>11.14</u>	initial <u>6.53</u>	initial <u>59.1</u>	initial
5 min		<u>13.5</u>	<u>2.29</u>	<u>1.57</u>	<u>6.36</u>	<u>55.8</u>	
10 min		<u>DRY</u>					
15 min	<u>11/7/17</u>						
20 min	<u>20.67</u>	<u>13.1</u>	<u>2.23</u>	<u>1.70</u>	<u>6.57</u>	<u>80.0</u>	<u>5</u>
25 min	<u>Final 23.10</u>						
30 min							
35 min							
40 min							
45 min							
50 min							
55 min							
60 min							

Water Sample:

Time Collected 1325

Physical Appearance at Start

Color cloudy
 Odor None
 Turbidity (> 100 NTU) -
 Sheen/Free Product None

Physical Appearance at Sampling

Color clear
 Odor None
 Turbidity (> 100 NTU) 5
 Sheen/Free Product None

Samples collected:

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered
<u>DO</u>	<u>1</u>	<u>250 ml</u>	<u>H2SO4</u>	<u>-</u>
<u>TOC</u>	<u>2</u>	<u>40 ml</u>	<u>H2SO4</u>	<u>-</u>
<u>and</u>	<u>1</u>	<u>250 ml</u>	<u>-</u>	<u>-</u>
<u>Metals</u>	<u>1</u>	<u>125 ml</u>	<u>H2SO4</u>	<u>Yes</u>

Notes:

O'Brien & Gere Engineers, Inc.

Standard Groundwater Sampling Log

Date 11/6/17
 Site Name Coldwater Rd LE
 Location Mt. Morris, MI
 Project No. 64737
 Personnel CSY/KBS

Weather Partly Sunny, cool (~40°F), light wind
 Well # B-18A
 Evacuation Method Whale pump - red
 Sampling Method _____

Well Information:

Depth of Well * 43.55 ft.
 Depth to Water * 10.48 25.81 ft.
 Length of Water Column 17.74 ft.
 Volume of Water in Well 2.89 gal.(s)
 3X Volume of Water in Well 8.67 gal.(s)

Water Volume /ft. for:

X 2" Diameter Well = 0.163 X LWC

4" Diameter Well = 0.653 X LWC

6" Diameter Well = 1.469 X LWC

Volume removed before sampling

Did well go dry?

9.3 gal.(s)

(Other, Specify)

* Measurements taken from

☒

Well Casing

☐

Protective Casing

Instrument Calibration:

Calibrated within range

pH

ORP

Conductivity

DO

Yes

Water parameters:

Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
initial <u>10:50</u>	initial <u>11.3</u>	initial <u>1.01</u>	initial <u>2.51</u>	initial <u>7.12</u>	initial <u>76.5</u>	initial <u>80</u>
5 min <u>10:55</u>	<u>11.4</u>	<u>1.01</u>	<u>0.75</u>	<u>7.15</u>	<u>72.6</u>	<u>21</u>
10 min <u>11:00</u>	<u>11.7</u>	<u>1.01</u>	<u>0.33</u>	<u>7.17</u>	<u>69.5</u>	<u>19</u>
15 min <u>11:05</u>	<u>11.7</u>	<u>1.02</u>	<u>0.09</u>	<u>7.14</u>	<u>66.5</u>	<u>95</u>
20 min <u>11:10</u>	<u>11.6</u>	<u>1.02</u>	<u>0.06</u>	<u>7.16</u>	<u>59.6</u>	<u>33</u>
25 min <u>11:15</u>	<u>11.8</u>	<u>1.02</u>	<u>0.08</u>	<u>7.17</u>	<u>60.8</u>	<u>29</u>
30 min <u>11:20</u>	<u>11.6</u>	<u>1.02</u>	<u>0.86</u>	<u>7.22</u>	<u>60.0</u>	<u>66</u>
35 min <u>11:25</u>	<u>11.7</u>	<u>0.98</u>	<u>2.94</u>	<u>7.18</u>	<u>60.0</u>	<u>110</u>
40 min <u>11:29</u>	<u>Dry</u>					
45 min						
50 min						
55 min <u>11:29/17</u>	<u>0:50 11.0</u>	<u>0.99</u>	<u>1.40</u>	<u>6.96</u>	<u>69.1</u>	<u>123</u>
60 min <u>DTW</u>						

Water Sample:

Time Collected

13:55DTW end 40.41

Physical Appearance at Start

Physical Appearance at Sampling

Color _____
 Odor _____
 Turbidity (> 100 NTU) _____
 Sheen/Free Product _____

Color _____
 Odor _____
 Turbidity (> 100 NTU) _____
 Sheen/Free Product _____

Samples collected:

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered

Notes:

O'Brien & Gere Engineers, Inc.

Standard Groundwater Sampling Log

Date 11/10/17
 Site Name Coldwater Rd. LF
 Location Mt. Morris, MI
 Project No. 04737
 Personnel CS4/KBS

Weather

Well #

Evacuation Method

Sampling Method

Mostly Sunny, Cool (~42°F), light
B-19AR
winds - S

Well Information:

Depth of Well * 47.15 ft.
 Depth to Water * 12:58 40.67 ft.
 Length of Water Column 6.48 ft.
 Volume of Water in Well 1.06 gal.(s)
 3X Volume of Water in Well 3.17 gal.(s)

Water Volume /ft. for:

X 2" Diameter Well = 0.163 X LWC

4" Diameter Well = 0.653 X LWC

6" Diameter Well = 1.469 X LWC

Volume removed before sampling

Did well go dry?

3.0 gal.(s)

(Other, Specify)

* Measurements taken from

☒

Well Casing

☐

Protective Casing

Instrument Calibration:

Calibrated within range

pH

ORP

Conductivity

DO

Water parameters:

Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
initial <u>13:03</u>	initial <u>11.5</u>	initial <u>1.09</u>	initial <u>1.36</u>	initial <u>6.87</u>	initial <u>47.0</u>	initial <u>540</u>
5 min <u>13:08</u>	<u>11.3</u>	<u>1.08</u>	<u>0.30</u>	<u>6.95</u>	<u>46.4</u>	<u>172</u>
10 min <u>13:13</u>	<u>11.6</u>	<u>1.07</u>	<u>0.17</u>	<u>7.13</u>	<u>45.7</u>	<u>368</u>
15 min <u>13:18</u>	<u>11.7</u>	<u>1.07</u>	<u>0.07</u>	<u>7.28</u>	<u>45.8</u>	<u>339</u>
20 min <u>13:20</u>	<u>Dry</u>					
25 min						
30 min						
35 min <u>11:17</u>						
40 min <u>11:17</u>	<u>12.0</u>	<u>1.00</u>	<u>2.12</u>	<u>7.05</u>	<u>68.4</u>	<u>528</u>
45 min <u>DTW</u>	<u>- Dry ~ 46.57</u>					
50 min <u>DTW</u>						
55 min <u>45.38</u>						
60 min <u>@ 14:13</u>						

Water Sample:

Time Collected

Physical Appearance at Start

Physical Appearance at Sampling

Color

Odor

Turbidity (> 100 NTU)

Sheen/Free Product

Color

Odor

Turbidity (> 100 NTU)

Sheen/Free Product

Samples collected:

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered

Notes:

O'Brien & Gere Engineers, Inc.

Standard Groundwater Sampling Log

Date 11/6/17
 Site Name Coldwater R&LE
 Location mt. Morris, ME
 Project No. 64737
 Personnel CSK/KBS

Weather Partly Sunny, Cool (~42°F), light wind
 Well # B-24R
 Evacuation Method _____
 Sampling Method _____

S. Singh
Gust 27 to 12 mph

Well Information:

Depth of Well * 30.41 ft.
 Depth to Water * 13.41 17.52 ft.
 Length of Water Column 12.89 ft.
 Volume of Water in Well 2.1 gal.(s)
 3X Volume of Water in Well 6.3 gal.(s)

Water Volume /ft. for:

X 2" Diameter Well = 0.163 X LWC
 4" Diameter Well = 0.653 X LWC
 6" Diameter Well = 1.469 X LWC

Volume removed before sampling 6.0 gal.(s)
 Did well go dry? _____

DTW
 B-20D
 71.44
 @ 14:15

* Measurements taken from

☒ X

Well Casing

☐

Protective Casing

☐ (Other, Specify)

Instrument Calibration:

Calibrated within range

pH Yes
 ORP _____
 Conductivity _____
 DO _____

Water parameters:

	Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
initial	<u>13:50</u>	initial <u>12.1</u>	initial <u>1.17</u>	initial <u>0.60</u>	initial <u>7.06</u>	initial <u>54.7</u>	initial <u>373</u>
5 min	<u>13:55</u>	<u>13.2</u>	<u>1.14</u>	<u>0.95</u>	<u>7.13</u>	<u>53.2</u>	<u>104</u>
10 min	<u>14:00</u>	<u>13.0</u>	<u>1.13</u>	<u>0.16</u>	<u>7.11</u>	<u>49.2</u>	<u>156</u>
15 min	<u>14:05</u>	<u>12.3</u>	<u>1.19</u>	<u>0.07</u>	<u>7.14</u>	<u>29.3</u>	<u>1068</u>
20 min	<u>14:07</u>	<u>Dry</u>					
25 min	<u>14:17</u>						
30 min	<u>17.41</u>	<u>11.4</u>	<u>1.02</u>	<u>5.54</u>	<u>7.09</u>	<u>78.1</u>	<u>282</u>
35 min	<u>18.35</u>	<u>11.3</u>	<u>1.09</u>	<u>5.89</u>	<u>7.09</u>	<u>73.5</u>	<u>50</u>
40 min							
45 min							
50 min							
55 min							
60 min							

Water Sample:

Time Collected

1130

Physical Appearance at Start

Color Clear to slightly cloudy
 Odor Pump
 Turbidity (> 100 NTU) 202
 Sheen/Free Product None

Physical Appearance at Sampling

Color _____
 Odor _____
 Turbidity (> 100 NTU) _____
 Sheen/Free Product _____

Samples collected:

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered

Notes:

O'Brien & Gere Engineers, Inc.

Standard Groundwater Sampling Log

Date 11/6/17
 Site Name Coldwater Rd. LF.
 Location Mt. Morris, MI
 Project No. 64737
 Personnel CSX/KBS

Weather Partly Sunny, cool (~42°F), light wind (8-10 mph)
 Well # B-28
 Evacuation Method Whole - red
 Sampling Method _____

Well Information:

Depth of Well * 32.95 ft.
 Depth to Water * 6.97 ft.
 Length of Water Column 25.98 ft.
 Volume of Water in Well 4.23 gal.(s)
 3X Volume of Water in Well 12.70 gal.(s)

Water Volume /ft. for:

X 2" Diameter Well = 0.163 X LWC

4" Diameter Well = 0.653 X LWC

6" Diameter Well = 1.469 X LWC

Volume removed before sampling

Did well go dry?

8.0 gal.(s)

(Other, Specify)

* Measurements taken from

☒

Well Casing

☐

Protective Casing

Instrument Calibration:

Calibrated within range

pH

ORP

Conductivity

DO

Yes

Water parameters:

Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
initial <u>15:00</u>	initial <u>12.3</u>	initial <u>0.80</u>	initial <u>0.83</u>	initial <u>7.15</u>	initial <u>5.3</u>	initial <u>493</u>
5 min <u>15:05</u>	<u>13.5</u>	<u>0.80</u>	<u>0.16</u>	<u>7.23</u>	<u>-10.7</u>	<u>27</u>
10 min <u>15:10</u>	<u>13.8</u>	<u>0.80</u>	<u>0.73</u>	<u>7.28</u>	<u>-12.2</u>	<u>22</u>
15 min <u>15:15</u>	<u>13.4</u>	<u>0.80</u>	<u>0.45</u>	<u>7.24</u>	<u>-25.9</u>	<u>35</u>
20 min <u>15:20</u>	<u>12.8</u>	<u>0.77</u>	<u>0.32</u>	<u>7.22</u>	<u>-34.4</u>	<u>47</u>
25 min <u>15:25</u>	<u>Dry</u>					
30 min						
35 min						
40 min <u>11/7/17</u>	<u>12.2 @ 10:25</u>	<u>0.76</u>	<u>2.02</u>	<u>7.13</u>	<u>83.3</u>	<u>38</u>
45 min <u>11/7/17</u>	<u>12.3 @ 10:30</u>	<u>0.76</u>	<u>1.72</u>	<u>7.11</u>	<u>74.0</u>	<u>32</u>
50 min <u>DTW</u>						
55 min <u>7.18</u>						
60 min <u>end DTW</u>						
		<u>12.41 @ 11:10</u>				

Water Sample:

Time Collected

10:30

Physical Appearance at Start

Color Clear
 Odor None
 Turbidity (> 100 NTU) 32
 Sheen/Free Product None

Physical Appearance at Sampling

Color Clear
 Odor None
 Turbidity (> 100 NTU) ~ Same
 Sheen/Free Product None

Samples collected:

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered
<u>Tox</u>	<u>1</u>	<u>250 ml</u>	<u>H₂SO₄</u>	<u>-</u>
<u>DOC</u>	<u>2</u>	<u>40 ml</u>	<u>H₂SO₄</u>	<u>-</u>
<u>Cond.</u>	<u>1</u>	<u>250 ml</u>	<u>HNO₃</u>	<u>yes</u>
<u>Dissolved metals</u>	<u>1</u>	<u>125 ml</u>	<u>HNO₃</u>	<u>yes</u>

Notes:

DUP-2 collected

APPENDIX C
Analytical Results



Analytical Laboratory Report

Report ID: S85061.01(01)
Generated on 12/13/2017

Report to

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

Phone: 248-477-5701 FAX:
Email: Clifford.Yantz@obg.com

Report produced by

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

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

Contacts for report questions:

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

Report Summary

Lab Sample ID(s): S85061.01-S85061.08
Project: RACER Coldwater Rd Landfill Annual Sampling
Collected Date: 11/07/2017
Submitted Date/Time: 11/08/2017 16:15
Sampled by: Kevin Schneider
P.O. #: 11700139

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A handwritten signature in black ink, reading "Maya Murshak".

Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.
QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.
Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.
Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

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

Qualifier Descriptions

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

Glossary of Abbreviations

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



Analytical Laboratory Report

Method Summary

Method	Version
E120.1	EPA Method 120.1 Revision 1982
E200.8	EPA Method 200.8 Revision 5.4
SM5310C	Standard Method 5310C 20th Edition
SW3015A	SW 846 Method 3015A Revision 1 February 2007
SW9020B	SW 846 Method 9020B Revision 2 September 1994



Analytical Laboratory Report

Sample Summary (8 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S85061.01	B-7	Groundwater	11/07/17 09:45
S85061.02	B-28	Groundwater	11/07/17 10:30
S85061.03	B-24r	Groundwater	11/07/17 11:30
S85061.04	B-9	Groundwater	11/07/17 13:25
S85061.05	B-18A	Groundwater	11/07/17 13:55
S85061.06	B-19Ar	Groundwater	11/07/17 14:15
S85061.07	Dup-2	Groundwater	11/07/17 00:01
S85061.08	EB-1	Liquid	11/07/17 14:40



Analytical Laboratory Report

Lab Sample ID: S85061.01

Sample Tag: B-7

Collected Date/Time: 11/07/2017 09:45

Matrix: Groundwater

COC Reference: 108778

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.1	IR
2	40ml Glass	H2SO4	Yes	5.1	IR
1	250ml Amber	H2SO4	Yes	5.1	IR
1	125ml Plastic	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	11/10/17 11:45	CCM		
Inorganics								
Conductivity	841	umhos/cm		E120.1	11/08/17 16:34	JKB		
TOC	6.5	mg/L	1	SM5310C	11/09/17 17:39	JKB		
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:27	CCM	7440-47-3	
Copper, Dissolved	0.005	mg/L	0.005	E200.8	11/10/17 13:27	CCM	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:27	CCM	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:27	CCM	7440-66-6	
Organics								
TOX*	Completed	ug/L	30.0	SW9020B	12/04/17 07:35	TA		O

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



Analytical Laboratory Report

Lab Sample ID: S85061.02

Sample Tag: B-28

Collected Date/Time: 11/07/2017 10:30

Matrix: Groundwater

COC Reference: 108778

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.1	IR
2	40ml Glass	H2SO4	Yes	5.1	IR
1	250ml Amber	H2SO4	Yes	5.1	IR
1	125ml Plastic	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	11/10/17 11:45	CCM		
Inorganics								
Conductivity	859	umhos/cm		E120.1	11/08/17 16:36	JKB		
TOC	1.6	mg/L	1	SM5310C	11/09/17 18:03	JKB		
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:28	CCM	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:28	CCM	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:28	CCM	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:28	CCM	7440-66-6	
Organics								
TOX*	Completed	ug/L	30.0	SW9020B	12/04/17 04:07	TA		O

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



Analytical Laboratory Report

Lab Sample ID: S85061.03

Sample Tag: B-24r

Collected Date/Time: 11/07/2017 11:30

Matrix: Groundwater

COC Reference: 108778

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.1	IR
2	40ml Glass	H2SO4	Yes	5.1	IR
1	250ml Amber	H2SO4	Yes	5.1	IR
1	125ml Plastic	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	11/10/17 11:45	CCM		
Inorganics								
Conductivity	1,231	umhos/cm		E120.1	11/08/17 16:38	JKB		
TOC	3.4	mg/L	1	SM5310C	11/09/17 18:26	JKB		
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:30	CCM	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:30	CCM	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:30	CCM	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:30	CCM	7440-66-6	
Organics								
TOX*	Completed	ug/L	30.0	SW9020B	12/04/17 07:35	TA		O

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



Analytical Laboratory Report

Lab Sample ID: S85061.04

Sample Tag: B-9

Collected Date/Time: 11/07/2017 13:25

Matrix: Groundwater

COC Reference: 108778

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.1	IR
2	40ml Glass	H2SO4	Yes	5.1	IR
1	250ml Amber	H2SO4	Yes	5.1	IR
1	125ml Plastic	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	11/10/17 11:45	CCM		
Inorganics								
Conductivity	2,540	umhos/cm		E120.1	11/08/17 16:40	JKB		
TOC	2.1	mg/L	1	SM5310C	11/09/17 19:12	JKB		
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:31	CCM	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:31	CCM	7440-50-8	
Nickel, Dissolved	0.008	mg/L	0.005	E200.8	11/10/17 13:31	CCM	7440-02-0	
Zinc, Dissolved	0.011	mg/L	0.005	E200.8	11/10/17 13:31	CCM	7440-66-6	
Organics								
TOX*	Completed	ug/L	30.0	SW9020B	12/04/17 07:35	TA		O

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



Analytical Laboratory Report

Lab Sample ID: S85061.05

Sample Tag: B-18A

Collected Date/Time: 11/07/2017 13:55

Matrix: Groundwater

COC Reference: 108778

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.1	IR
2	40ml Glass	H2SO4	Yes	5.1	IR
1	250ml Amber	H2SO4	Yes	5.1	IR
1	125ml Plastic	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	11/10/17 11:45	CCM		
Inorganics								
Conductivity	1,092	umhos/cm		E120.1	11/08/17 16:42	JKB		
TOC	1.2	mg/L	1	SM5310C	11/09/17 19:36	JKB		
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:32	CCM	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:32	CCM	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:32	CCM	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:32	CCM	7440-66-6	
Organics								
TOX*	Completed	ug/L	30.0	SW9020B	12/04/17 07:35	TA		O

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



Analytical Laboratory Report

Lab Sample ID: S85061.06

Sample Tag: B-19Ar

Collected Date/Time: 11/07/2017 14:15

Matrix: Groundwater

COC Reference: 108778

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.1	IR
2	40ml Glass	H2SO4	Yes	5.1	IR
1	250ml Amber	H2SO4	Yes	5.1	IR
1	125ml Plastic	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	11/10/17 11:45	CCM		
Inorganics								
Conductivity	1,134	umhos/cm		E120.1	11/08/17 16:44	JKB		
TOC	2.6	mg/L	1	SM5310C	11/09/17 19:59	JKB		
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:34	CCM	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:34	CCM	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:34	CCM	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:34	CCM	7440-66-6	
Organics								
TOX*	Completed	ug/L	30.0	SW9020B	12/04/17 07:35	TA		O

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



Analytical Laboratory Report

Lab Sample ID: S85061.07

Sample Tag: Dup-2

Collected Date/Time: 11/07/2017 00:01

Matrix: Groundwater

COC Reference: 108778

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.1	IR
2	40ml Glass	H2SO4	Yes	5.1	IR
1	250ml Amber	H2SO4	Yes	5.1	IR
1	125ml Plastic	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	11/10/17 11:45	CCM		
Inorganics								
Conductivity	867	umhos/cm		E120.1	11/08/17 16:46	JKB		
TOC	1.5	mg/L	1	SM5310C	11/09/17 20:22	JKB		
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:35	CCM	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:35	CCM	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:35	CCM	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:35	CCM	7440-66-6	
Organics								
TOX*	Completed	ug/L	30.0	SW9020B	12/04/17 07:35	TA		O

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



Analytical Laboratory Report

Lab Sample ID: S85061.08

Sample Tag: EB-1

Collected Date/Time: 11/07/2017 14:40

Matrix: Liquid

COC Reference: 108778

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.1	IR
2	40ml Glass	H2SO4	Yes	5.1	IR
1	250ml Amber	H2SO4	Yes	5.1	IR
1	125ml Plastic	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	11/10/17 11:45	CCM		
Inorganics								
Conductivity	7.07	umhos/cm		E120.1	11/08/17 16:48	JKB		
TOC	Not detected	mg/L	1	SM5310C	11/09/17 20:45	JKB		
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:48	CCM	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:48	CCM	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:48	CCM	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	E200.8	11/10/17 13:48	CCM	7440-66-6	
Organics								
TOX*	Completed	ug/L	30.0	SW9020B	12/05/17 08:10	TA		O

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



C.O.C. PAGE # 1 OF 1

108778

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

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

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications

☐ OHIO VAP ☐ Drinking Water

☐ DoD ☐ NPDES

Project Locations

☐ Detroit ☐ New York

☐ Other _____

Special Instructions

Containers & Preservatives[illegible]

RELINQUISHED BY:		11/8/17		DATE	TIME
SIGNATURE/ORGANIZATION					
RECEIVED BY:		11/8/17		DATE	TIME
SIGNATURE/ORGANIZATION					1645
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP ON ARRIVAL _____ 5.1		
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS			

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Michigan

10448 Citation Drive

Suite 200

Brighton, MI 48116

Tel: (810)229-2763

TestAmerica Job ID: 190-14874-1

Client Project/Site: S85061

For:

Merit Laboratories

2680 E Lansing Drive

East Lansing, Michigan 48823

Attn: John Lavery

Sue Schafer

Authorized for release by:

12/13/2017 10:03:40 AM

Sue Schafer, Project Manager II

(810)229-2763

sue.schafer@testamericainc.com

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Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Merit Laboratories
Project/Site: S85061

TestAmerica Job ID: 190-14874-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-14874-1	85061.01	Water	11/07/17 09:45	11/10/17 14:06
190-14874-2	85061.02	Water	11/07/17 10:30	11/10/17 14:06
190-14874-3	85061.03	Water	11/07/17 11:30	11/10/17 14:06
190-14874-4	85061.04	Water	11/07/17 13:25	11/10/17 14:06
190-14874-5	85061.05	Water	11/07/17 13:55	11/10/17 14:06
190-14874-6	85061.06	Water	11/07/17 14:15	11/10/17 14:06
190-14874-7	85061.07	Water	11/07/17 00:01	11/10/17 14:06
190-14874-8	85061.08	Water	11/07/17 14:40	11/10/17 14:06

Case Narrative

Client: Merit Laboratories
Project/Site: S85061

TestAmerica Job ID: 190-14874-1

Job ID: 190-14874-1

Laboratory: TestAmerica Michigan

Narrative

Job Narrative 190-14874-1

Comments

No additional comments.

Receipt

The samples were received on 11/10/2017 2:06 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.0° C.

General Chemistry

Method(s) 9020B: Breakthrough exceeded 10% for the following sample:85061.01 (190-14874-1) and 85061.06 (190-14874-6). Sample duplicate results are outside 20% RPD requirement. Insufficient sample volume remaining to perform additional replicates. The data has been reported.

Method(s) 9020B: Insufficient sample volume was available to perform a matrix spike (MS) associated with analytical batch 490-481762, 490-482659, 482666, 490-482700

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

Client Sample Results

Client: Merit Laboratories
Project/Site: S85061

TestAmerica Job ID: 190-14874-1

Client Sample ID: 85061.01

Date Collected: 11/07/17 09:45

Date Received: 11/10/17 14:06

Lab Sample ID: 190-14874-1

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	0.039		0.030	mg/L			12/04/17 07:35	1
TOX Result 1	<0.030		0.030	mg/L			12/04/17 07:35	1
TOX Result 2	0.039		0.030	mg/L			12/04/17 07:35	1

Client Sample ID: 85061.02

Date Collected: 11/07/17 10:30

Date Received: 11/10/17 14:06

Lab Sample ID: 190-14874-2

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	<0.030		0.030	mg/L			12/04/17 04:07	1
TOX Result 1	<0.030		0.030	mg/L			12/04/17 04:07	1
TOX Result 2	<0.030		0.030	mg/L			12/04/17 04:07	1

Client Sample ID: 85061.03

Date Collected: 11/07/17 11:30

Date Received: 11/10/17 14:06

Lab Sample ID: 190-14874-3

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	<0.030		0.030	mg/L			12/04/17 07:35	1
TOX Result 1	<0.030		0.030	mg/L			12/04/17 07:35	1
TOX Result 2	<0.030		0.030	mg/L			12/04/17 07:35	1

Client Sample ID: 85061.04

Date Collected: 11/07/17 13:25

Date Received: 11/10/17 14:06

Lab Sample ID: 190-14874-4

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	<0.030		0.030	mg/L			12/04/17 07:35	1
TOX Result 1	<0.030		0.030	mg/L			12/04/17 07:35	1
TOX Result 2	<0.030		0.030	mg/L			12/04/17 07:35	1

Client Sample ID: 85061.05

Date Collected: 11/07/17 13:55

Date Received: 11/10/17 14:06

Lab Sample ID: 190-14874-5

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	<0.030		0.030	mg/L			12/04/17 07:35	1
TOX Result 1	<0.030		0.030	mg/L			12/04/17 07:35	1
TOX Result 2	<0.030		0.030	mg/L			12/04/17 07:35	1

TestAmerica Michigan

Client Sample Results

Client: Merit Laboratories
Project/Site: S85061

TestAmerica Job ID: 190-14874-1

Client Sample ID: 85061.06

Date Collected: 11/07/17 14:15

Date Received: 11/10/17 14:06

Lab Sample ID: 190-14874-6

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	0.12		0.030	mg/L			12/04/17 07:35	1
TOX Result 1	<0.030		0.030	mg/L			12/04/17 07:35	1
TOX Result 2	0.12		0.030	mg/L			12/04/17 07:35	1

Client Sample ID: 85061.07

Date Collected: 11/07/17 00:01

Date Received: 11/10/17 14:06

Lab Sample ID: 190-14874-7

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	<0.030		0.030	mg/L			12/04/17 07:35	1
TOX Result 1	<0.030		0.030	mg/L			12/04/17 07:35	1
TOX Result 2	<0.030		0.030	mg/L			12/04/17 07:35	1

Client Sample ID: 85061.08

Date Collected: 11/07/17 14:40

Date Received: 11/10/17 14:06

Lab Sample ID: 190-14874-8

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	<0.030		0.030	mg/L			12/05/17 08:10	1
TOX Result 1	<0.030		0.030	mg/L			12/05/17 08:10	1
TOX Result 2	<0.030		0.030	mg/L			12/05/17 08:10	1

QC Sample Results

Client: Merit Laboratories
Project/Site: S85061

TestAmerica Job ID: 190-14874-1

Method: 9020B - Organic Halides, Total (TOX)

Lab Sample ID: MB 490-481762/3

Matrix: Water

Analysis Batch: 481762

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	<0.030		0.030	mg/L			12/04/17 10:20	1
TOX Result 1	<0.030		0.030	mg/L			12/04/17 10:20	1
TOX Result 2	<0.030		0.030	mg/L			12/04/17 10:20	1

Lab Sample ID: LCS 490-481762/4

Matrix: Water

Analysis Batch: 481762

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Halogens, Total Organic	0.250	0.229		mg/L		92	90 - 110
TOX Result 1	0.250	0.231		mg/L		93	90 - 110
TOX Result 2	0.250	0.227		mg/L		91	90 - 110

Lab Sample ID: LCSD 490-481762/16

Matrix: Water

Analysis Batch: 481762

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Halogens, Total Organic	0.250	0.259		mg/L		103	90 - 110	12	20
TOX Result 1	0.250	0.243		mg/L		97	90 - 110	5	20
TOX Result 2	0.250	0.274		mg/L		110	90 - 110	19	20

Lab Sample ID: MB 490-482659/3

Matrix: Water

Analysis Batch: 482659

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	<0.030		0.030	mg/L			12/08/17 12:36	1
TOX Result 1	<0.030		0.030	mg/L			12/08/17 12:36	1
TOX Result 2	<0.030		0.030	mg/L			12/08/17 12:36	1

Lab Sample ID: LCS 490-482659/4

Matrix: Water

Analysis Batch: 482659

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Halogens, Total Organic	0.250	0.228		mg/L		91	90 - 110
TOX Result 1	0.250	0.227		mg/L		91	90 - 110
TOX Result 2	0.250	0.228		mg/L		91	90 - 110

Lab Sample ID: LCSD 490-482659/8

Matrix: Water

Analysis Batch: 482659

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Halogens, Total Organic	0.250	0.231		mg/L		92	90 - 110	1	20
TOX Result 1	0.250	0.233		mg/L		93	90 - 110	2	20
TOX Result 2	0.250	0.228		mg/L		91	90 - 110	0	20

TestAmerica Michigan

QC Sample Results

Client: Merit Laboratories
Project/Site: S85061

TestAmerica Job ID: 190-14874-1

Method: 9020B - Organic Halides, Total (TOX) (Continued)

Lab Sample ID: MB 490-482666/3

Matrix: Water

Analysis Batch: 482666

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	<0.030		0.030	mg/L			12/08/17 14:10	1
TOX Result 1	<0.030		0.030	mg/L			12/08/17 14:10	1
TOX Result 2	<0.030		0.030	mg/L			12/08/17 14:10	1

Lab Sample ID: LCS 490-482666/4

Matrix: Water

Analysis Batch: 482666

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Halogens, Total Organic	0.250	0.236		mg/L		94	90 - 110
TOX Result 1	0.250	0.242		mg/L		97	90 - 110
TOX Result 2	0.250	0.229		mg/L		92	90 - 110

Lab Sample ID: MB 490-482700/3

Matrix: Water

Analysis Batch: 482700

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	<0.030		0.030	mg/L			12/08/17 14:20	1
TOX Result 1	<0.030		0.030	mg/L			12/08/17 14:20	1
TOX Result 2	<0.030		0.030	mg/L			12/08/17 14:20	1

Lab Sample ID: LCS 490-482700/4

Matrix: Water

Analysis Batch: 482700

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Halogens, Total Organic	0.250	0.241		mg/L		96	90 - 110
TOX Result 1	0.250	0.233		mg/L		93	90 - 110
TOX Result 2	0.250	0.249		mg/L		99	90 - 110

Lab Sample ID: LCSD 490-482700/8

Matrix: Water

Analysis Batch: 482700

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Halogens, Total Organic	0.250	0.231		mg/L		92	90 - 110	4	20
TOX Result 1	0.250	0.226		mg/L		90	90 - 110	3	20
TOX Result 2	0.250	0.235		mg/L		94	90 - 110	6	20

TestAmerica Michigan

Definitions/Glossary

Client: Merit Laboratories
Project/Site: S85061

TestAmerica Job ID: 190-14874-1

Glossary

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

QC Association Summary

Client: Merit Laboratories
Project/Site: S85061

TestAmerica Job ID: 190-14874-1

General Chemistry

Analysis Batch: 481762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-14874-1	85061.01	Total/NA	Water	9020B	
190-14874-2	85061.02	Total/NA	Water	9020B	
190-14874-3	85061.03	Total/NA	Water	9020B	
190-14874-4	85061.04	Total/NA	Water	9020B	
MB 490-481762/3	Method Blank	Total/NA	Water	9020B	
LCS 490-481762/4	Lab Control Sample	Total/NA	Water	9020B	
LCSD 490-481762/16	Lab Control Sample Dup	Total/NA	Water	9020B	

Analysis Batch: 482659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-14874-7	85061.07	Total/NA	Water	9020B	
MB 490-482659/3	Method Blank	Total/NA	Water	9020B	
LCS 490-482659/4	Lab Control Sample	Total/NA	Water	9020B	
LCSD 490-482659/8	Lab Control Sample Dup	Total/NA	Water	9020B	

Analysis Batch: 482666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-14874-5	85061.05	Total/NA	Water	9020B	
MB 490-482666/3	Method Blank	Total/NA	Water	9020B	
LCS 490-482666/4	Lab Control Sample	Total/NA	Water	9020B	

Analysis Batch: 482700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-14874-6	85061.06	Total/NA	Water	9020B	
190-14874-8	85061.08	Total/NA	Water	9020B	
MB 490-482700/3	Method Blank	Total/NA	Water	9020B	
LCS 490-482700/4	Lab Control Sample	Total/NA	Water	9020B	
LCSD 490-482700/8	Lab Control Sample Dup	Total/NA	Water	9020B	

Lab Chronicle

Client: Merit Laboratories
Project/Site: S85061

TestAmerica Job ID: 190-14874-1

Client Sample ID: 85061.01

Date Collected: 11/07/17 09:45

Date Received: 11/10/17 14:06

Lab Sample ID: 190-14874-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9020B		1	481762	12/04/17 07:35	RN	TAL NSH

Client Sample ID: 85061.02

Date Collected: 11/07/17 10:30

Date Received: 11/10/17 14:06

Lab Sample ID: 190-14874-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9020B		1	481762	12/04/17 04:07	RN	TAL NSH

Client Sample ID: 85061.03

Date Collected: 11/07/17 11:30

Date Received: 11/10/17 14:06

Lab Sample ID: 190-14874-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9020B		1	481762	12/04/17 07:35	RN	TAL NSH

Client Sample ID: 85061.04

Date Collected: 11/07/17 13:25

Date Received: 11/10/17 14:06

Lab Sample ID: 190-14874-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9020B		1	481762	12/04/17 07:35	RN	TAL NSH

Client Sample ID: 85061.05

Date Collected: 11/07/17 13:55

Date Received: 11/10/17 14:06

Lab Sample ID: 190-14874-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9020B		1	482666	12/04/17 07:35	RN	TAL NSH

Client Sample ID: 85061.06

Date Collected: 11/07/17 14:15

Date Received: 11/10/17 14:06

Lab Sample ID: 190-14874-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9020B		1	482700	12/04/17 07:35	RN	TAL NSH

TestAmerica Michigan

Lab Chronicle

Client: Merit Laboratories
Project/Site: S85061

TestAmerica Job ID: 190-14874-1

Client Sample ID: 85061.07

Date Collected: 11/07/17 00:01

Date Received: 11/10/17 14:06

Lab Sample ID: 190-14874-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9020B		1	482659	12/04/17 07:35	RN	TAL NSH

Client Sample ID: 85061.08

Date Collected: 11/07/17 14:40

Date Received: 11/10/17 14:06

Lab Sample ID: 190-14874-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9020B		1	482700	12/05/17 08:10	RN	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Analyst References:

Lab: TAL NSH

Batch Type: Analysis

RN = Ryan Nowak

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S85061

TestAmerica Job ID: 190-14874-1

Laboratory: TestAmerica Michigan

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Michigan	State Program	5	57	05-05-20

Laboratory: TestAmerica Nashville

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

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	A2LA		NA: NELAP & A2LA	12-31-17 *
A2LA	ISO/IEC 17025		0453.07	12-31-17 *
Alaska (UST)	State Program	10	UST-087	01-01-18 *
Arizona	State Program	9	AZ0473	05-05-18
Arkansas DEQ	State Program	6	88-0737	04-25-18
California	State Program	9	2938	10-31-18
Connecticut	State Program	1	PH-0220	12-31-17 *
Florida	NELAP	4	E87358	06-30-18
Georgia	State Program	4	E87358(FL)/453.07(A2L A)	06-30-18
Illinois	NELAP	5	200010	12-09-18
Iowa	State Program	7	131	04-01-18
Kansas	NELAP	7	E-10229	12-31-17 *
Kentucky (UST)	State Program	4	19	06-30-18
Kentucky (WW)	State Program	4	90038	12-31-17 *
Louisiana	NELAP	6	30613	06-30-18
Maine	State Program	1	TN00032	11-03-19
Maryland	State Program	3	316	03-31-18
Massachusetts	State Program	1	M-TN032	06-30-18
Minnesota	NELAP	5	047-999-345	12-31-17 *
Mississippi	State Program	4	N/A	06-30-18
Montana (UST)	State Program	8	NA	02-24-20
Nevada	State Program	9	TN00032	07-31-18
New Hampshire	NELAP	1	2963	10-09-18
New Jersey	NELAP	2	TN965	06-30-18
New York	NELAP	2	11342	03-31-18
North Carolina (WW/SW)	State Program	4	387	12-31-17 *
North Dakota	State Program	8	R-146	06-30-18
Ohio VAP	State Program	5	CL0033	07-06-19
Oklahoma	State Program	6	9412	08-31-18
Oregon	NELAP	10	TN200001	04-27-18
Pennsylvania	NELAP	3	68-00585	06-30-18
Rhode Island	State Program	1	LAO00268	12-30-17 *
South Carolina	State Program	4	84009 (001)	02-28-18
South Carolina (Do Not Use - DW)	State Program	4	84009 (002)	12-16-17
Tennessee	State Program	4	2008	02-23-20
Texas	NELAP	6	T104704077	08-31-18
USDA	Federal		P330-13-00306	12-01-19
Utah	NELAP	8	TN00032	07-31-18
Virginia	NELAP	3	460152	06-14-18
Washington	State Program	10	C789	07-19-18
West Virginia DEP	State Program	3	219	02-28-18
Wisconsin	State Program	5	998020430	08-31-18
Wyoming (UST)	A2LA	8	453.07	12-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Michigan

Method Summary

Client: Merit Laboratories
Project/Site: S85061

TestAmerica Job ID: 190-14874-1

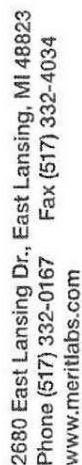
Method	Method Description	Protocol	Laboratory
9020B	Organic Halides, Total (TOX)	SW846	TAL NSH

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177



C.O.C. PAGE # _____ OF _____

CHAIN OF CUSTODY RECORD

CONTACT NAME		John Laverty	
COMPANY		Merit Laboratories	
ADDRESS		2680 East Lansing Drive	
CITY	STATE	ZIP CODE	
East Lansing	MI	48823	
PHONE NO.		FAX NO.	
517-332-0167		517-332-4034	

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME		SAMPLER(S) - PLEASE PRINT/SIGN NAME										
S85061												
TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☒ 3 DAYS ☐ STANDARD ☐ OTHER												
DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER												
MATRIX CODE	GW=GROUNDWATER SL=SLUDGE	WW=WASTEWATER DW=DRINKING WATER	S=SOIL O=OIL	L=LIQUID WP=WIPE	SD=SOLID A=AIR	W=WASTE						
MERIT LAB NO. FOR LAB USE ONLY	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION									
	DATE	TIME	MATRIX	# OF BOTTLES	# Containers & Preservatives							
	11/7/17	0945	GW	1	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	TOX ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒
	11/7/17	1030	GW	1				X				
	11/7/17	1130	GW	1				X				
	11/7/17	1325	GW	1				X				
	11/7/17	1355	GW	1				X				
	11/7/17	1415	GW	1				X				
	11/7/17	0001	GW	1				X				
	11/7/17	1440	GW	1				X				
190-14874 Chain of Custody												
Subcontracted to Test America												

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Sanger for UPS	☐ Sampler	DATE 11/9/17	TIME 1048
RECEIVED BY: SIGNATURE/ORGANIZATION			DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	ups		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Cand M yuy	the ml	DATE 11/10/17	TIME 1406

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

2002-6-18-12

Cooler/Sample Receipt

(AFTER HOURS receipt, complete gray areas)
Place cooler in walk-in place this form in Receiving in box Date Time rec'd Initials

☐ MSDS or Known Hazard Information Supplied by Client
☐ Bottle stickers applied ☐ ELEMENT comment entered ☐ MSDS COC scanned emailed to EMS
☐ Discrepancies Client ID Merit Laboratories
☐ Short Hold Work Order # 146-14874
☐ Rush ☐ 24hr ☐ 2day ☐ 3day ☐ 5day ☐ Other
 Receipt evaluation performed by - Initials AmY Date 11/10/17 Time 14:06

Method of Shipment:

☐ Walk-In Client ☐ TestAmerica Field/Courier
☐ Other Client/3rd Party Courier
☐ Fed Ex Tracking #
☒ UPS Tracking # 1Z 466 471 03 6055 0422
☐ Other Ground

Shipping Container Type:

☒ Cooler ☐ Box
☐ None ☐ Other

Packing Materials:

☐ Plastic Bags ☐ Foam
☒ Bubble Wrap ☐ Paper
☐ Packing Peanuts ☐ None
☐ Other

Custody Seals Intact:

☐ Yes ☐ No
☐ N/A (not used or required)

Cooling Materials:

☒ Ice (solid) ☐ Ice (Melted)
☐ Blue Ice ☐ None
☐ Other

Biological: Temp (°C) Corrected
 Samples

Frozen
 yes no

Received within 2 hours
 yes no

Sample Flagged
 yes no

Receipt Temperatures

Thermometer ID	Observed (°C)	Corrected (°C)	Blank	Temp	Received on same day sampled?	Acceptable?	Cooler ID	Note Affected Samples if temperature not acceptable
140252483			☐	☐	☐ Yes ☐ No	☐ Yes ☐ No		
140252476	1.0	1.0	☐	☒	☐ Yes ☐ No	☒ Yes ☐ No		
			☐	☐	☐ Yes ☐ No	☐ Yes ☐ No		

* Receipt temperatures are considered acceptable if the samples are received on the same day they were collected & show signs that the cooling process has started. Temperature acceptance for most tests is ≤6.0°C, but not frozen. For additional information, please refer to SOP DT-SCA-004 Sample Receipt and Login, Attachment 2 - Holding Times, Preservation and Container Requirements

Receipt Questions**

	Y	N	n/a	"No" answers require additional comment
COC present & TA receipt signature, date, & time properly documented?	☒			
Containers & labels in good condition? (unbroken, not leaking, appropriately filled, labels legible & attached)	☒			
Appropriate containers used & adequate volume provided?	☒			Preserved Bottles Checked with pH Strips* <u>Yes</u>
Number of sample containers match COC?	☒			
Samples received within hold time?	☒			
Samples submitted for GRO and Volatiles analyses (8250, 624, 524) received without headspace?			☒	
Was a Trip Blank received with VOA samples?			☒	
Were the samples free of any questionable physical conformities? For example, field duplicates or multiple bottles of the same sample do not significantly vary in appearance (color, proportion of solids, etc.)	☒			
Were the COC, bottle labels, and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?	☒			

** May not be applicable if samples are not for compliance testing

* Excludes FOG, Volatiles, TOC Vials

Client Contact Record

Contact via: ☐ Phone ☐ Email ☐ Other Person Contacted: Date/Time:
☐ Discrepancy allowance agreement is on record in the client project file
 Discussion/Resolution:

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

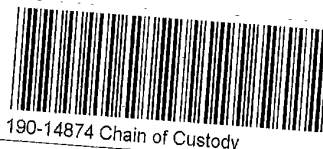
Reviewed by PM Signature

Date

WI Page 1 of 1

WI No DT-SCA-WI-001 TO effective 06/11/12

COOLER RECEIPT FORM



Cooler Received/Opened On 11/11/2017 @ 1005

Time Samples Removed From Cooler _____ Time Samples Placed In Storage _____ (2 Hour Window)

1. Tracking # 1988 (last 4 digits, FedEx) Courier: FedEx
IR Gun ID 17960353 pH Strip Lot _____ Chlorine Strip Lot _____

2. Temperature of rep. sample or temp blank when opened: 2.2 Degrees Celsius

3. If item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES NO...NA

If yes, how many and where: 1 front

5. Were the seals intact, signed, and dated correctly? YES NO...NA

6. Were custody papers inside cooler? YES NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) es

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES NO...NA

12. Did all container labels and tags agree with custody papers? YES NO...NA

13a. Were VOA vials received? YES NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO NA



14. Was there a Trip Blank in this cooler? YES...NO NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (initial) es

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO NA

b. Did the bottle labels indicate that the correct preservatives were used YES NO...NA

16. Was residual chlorine present? YES...NO NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) es

17. Were custody papers properly filled out (ink, signed, etc)? YES NO...NA

18. Did you sign the custody papers in the appropriate place? YES NO...NA

19. Were correct containers used for the analysis requested? YES NO...NA

20. Was sufficient amount of sample sent in each container? YES NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) es

I certify that I attached a label with the unique LIMS number to each container (initial) es

21. Were there Non-Conformance issues at login? YES NO Was a NCM generated? YES NO # es



APPENDIX D

Groundwater Sampling Program QA/QC Summary

APPENDIX D

QUALITY ASSURANCE/QUALITY CONTROL SUMMARY

Data verification was independently performed by O'Brien & Gere Engineers, Inc. to assess the groundwater monitoring data quality for samples collected during the 2017 annual groundwater sampling event conducted in November 2017. Data verification was utilized to confirm the quality of the field and laboratory (Merit Laboratories, Inc. (Merit) of East Lansing, Michigan) data. The data verification included review of: (1) laboratory documentation, (2) chain-of-custody (COC) documentation, (3) target analyte results, (4) laboratory data qualifiers, if any, (5) laboratory reporting (quantitation) limits, (6) laboratory blank analysis, and (7) quality control samples, including duplicate samples.

The results of the data verification indicated the following:

- Laboratory documentation was complete.
- Chain-of-custody (COC) documentation was complete.
- Target analyte results were reported in accordance with the project requirements.
- Laboratory blank analysis did not indicate evidence of artifacts from the sampling or analytical process (above reporting limit [RL]).
- Laboratory quantitation (or reporting) limits (RLs) were within the project required limits for undiluted samples.
- No elevated RLs were reported due to matrix interference or sample dilution.
- Breakthroughs exceeding 10% for TOX samples were reported in samples B-7 and B-19Ar. Sample duplicate results were outside the 20% relative percent difference and insufficient sample volume remained to perform additional replicates; therefore, the data was reported, but should be considered an estimated (J) value due to the QC excursion.
- The relative percent difference (RPD) for the duplicate sample results for B-28 and Dup-2 (B-28) were within acceptable limits.

Furthermore, the instrument utilized for measurement of field parameters calibrated within range (deviation from standard of less than 3 percent) for pH, oxidation reduction potential (ORP), specific conductivity (conductivity), and dissolved oxygen (DO); therefore, operated within manufacturers specifications during sample collection.

The data verification indicates that the overall usability of the groundwater monitoring data is acceptable for the intended use without further qualification or rejection of the data.



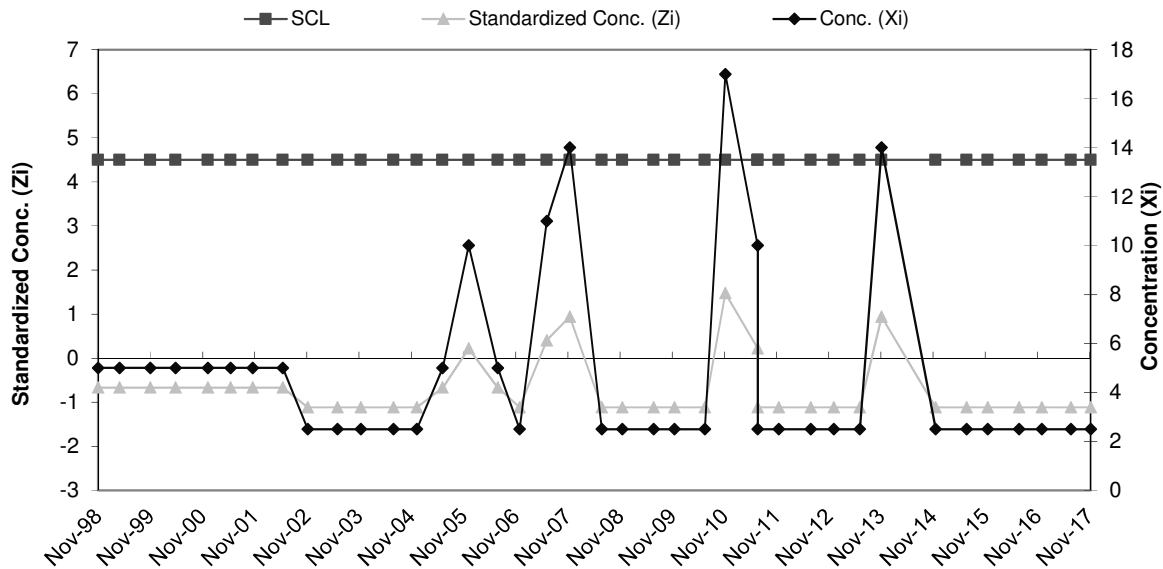
APPENDIX E
*Monitoring Well Control
Charts*

COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-7 Cr

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10	8.75	5.60
2	Aug-95	10		
3	Feb-96	10		
4	Jun-96	10		
5	Aug-96	10		
6	Nov-96	10		
7	May-97	5		
8	May-98	5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	5	-0.67	36	Nov-11	4.5	2.5	-1.12
10	Apr-99	4.5	5	-0.67	37	Jun-12	4.5	2.5	-1.12
11	Nov-99	4.5	5	-0.67	38	Dec-12	4.5	2.5	-1.12
12	Apr-00	4.5	5	-0.67	39	Jun-13	4.5	2.5	-1.12
13	Dec-00	4.5	5	-0.67	40	Nov-13	4.5	14	0.94
14	May-01	4.5	5	-0.67	41	Nov-14	4.5	2.5	-1.12
15	Oct-01	4.5	5	-0.67	42	Jun-15	4.5	2.5	-1.12
16	May-02	4.5	5	-0.67	43	Nov-15	4.5	2.5	-1.12
17	Nov-02	4.5	2.5	-1.12	44	Jun-16	4.5	2.5	-1.12
18	Jun-03	4.5	2.5	-1.12	45	Nov-16	4.5	2.5	-1.12
19	Nov-03	4.5	2.5	-1.12	46	Jun-17	4.5	2.5	-1.12
20	Jun-04	4.5	2.5	-1.12	47	Nov-17	4.5	2.5	-1.12
21	Dec-04	4.5	2.5	-1.12					
22	Jun-05	4.5	5	-0.67					
23	Dec-05	4.5	10	0.22					
24	Jun-06	4.5	5	-0.67					
25	Nov-06	4.5	2.5	-1.12					
26	Jun-07	4.5	11	0.40					
27	Nov-07	4.5	14	0.94					
28	Jun-08	4.5	2.5	-1.12					
29	Nov-08	4.5	2.5	-1.12					
30	Jun-09	4.5	2.5	-1.12					
31	Nov-09	4.5	2.5	-1.12					
32	Jun-10	4.5	2.5	-1.12					
33	Nov-10	4.5	17	1.47					
34	Jun-11	4.5	10	0.22					
35	Jun-11	4.5	2.5	-1.12					

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

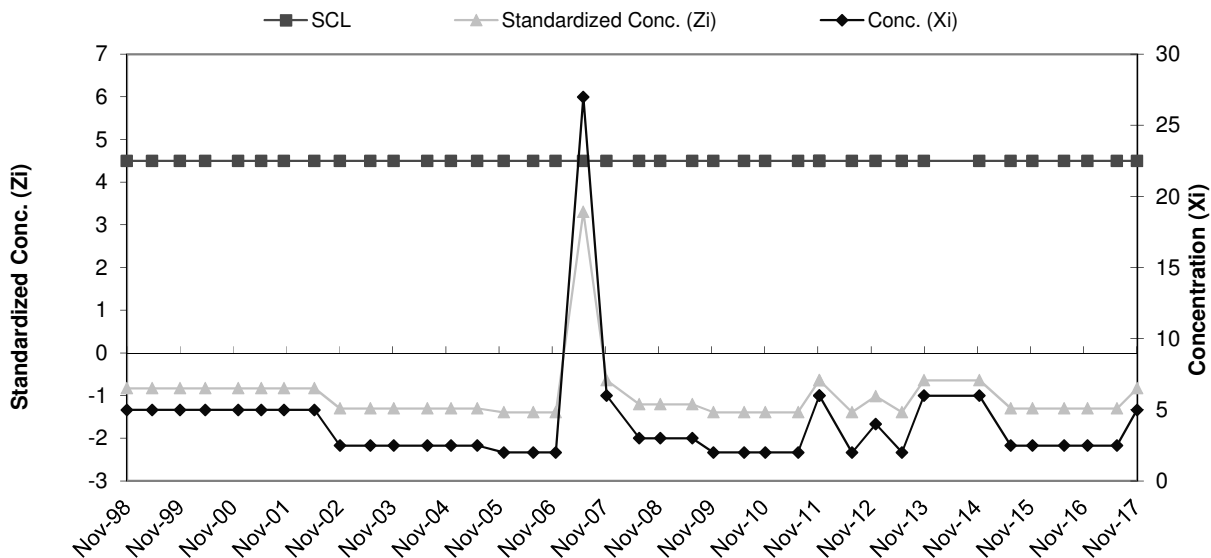


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-7 Cu

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10	9.40	5.32
2	Aug-95	10		
3	Feb-96	10		
4	Jun-96	10		
5	Aug-96	10		
6	Nov-96	10		
7	May-97	10		
8	May-98	5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	5	-0.83	35	Nov-11	4.5	6	-0.64
10	Apr-99	4.5	5	-0.83	36	Jun-12	4.5	2	-1.39
11	Nov-99	4.5	5	-0.83	37	Dec-12	4.5	4	-1.02
12	Apr-00	4.5	5	-0.83	38	Jun-13	4.5	2	-1.39
13	Dec-00	4.5	5	-0.83	39	Nov-13	4.5	6	-0.64
14	May-01	4.5	5	-0.83	40	Nov-14	4.5	6	-0.64
15	Oct-01	4.5	5	-0.83	41	Jun-15	4.5	2.5	-1.30
16	May-02	4.5	5	-0.83	42	Nov-15	4.5	2.5	-1.30
17	Nov-02	4.5	2.5	-1.30	43	Jun-16	4.5	2.5	-1.30
18	Jun-03	4.5	2.5	-1.30	44	Nov-16	4.5	2.5	-1.30
19	Nov-03	4.5	2.5	-1.30	45	Jun-17	4.5	2.5	-1.30
20	Jun-04	4.5	2.5	-1.30	46	Nov-17	4.5	5	-0.83
21	Dec-04	4.5	2.5	-1.30					
22	Jun-05	4.5	2.5	-1.30					
23	Dec-05	4.5	2	-1.39					
24	Jun-06	4.5	2	-1.39					
25	Nov-06	4.5	2	-1.39					
26	Jun-07	4.5	27	3.31					
27	Nov-07	4.5	6	-0.64					
28	Jun-08	4.5	3	-1.20					
29	Nov-08	4.5	3	-1.20					
30	Jun-09	4.5	3	-1.20					
31	Nov-09	4.5	2	-1.39					
32	Jun-10	4.5	2	-1.39					
33	Nov-10	4.5	2	-1.39					
34	Jun-11	4.5	2	-1.39					
35	Nov-11	4.5	6	-0.64					

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

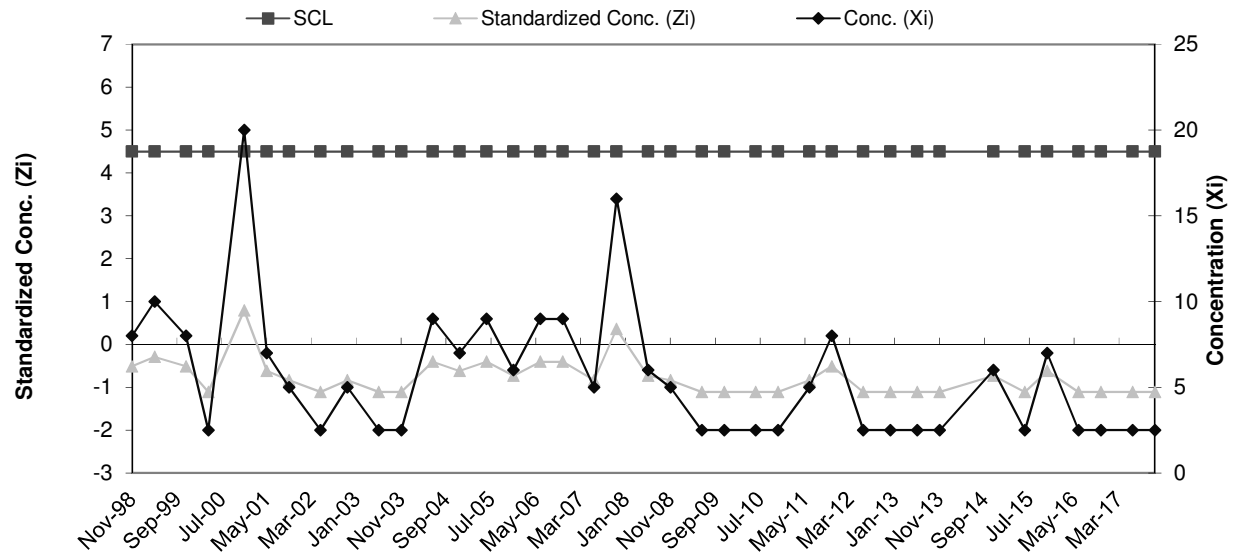


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-7 Ni

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	15	12.70	9.19
2	Aug-95	20		
3	Feb-96	20		
4	Jun-96	10		
5	Aug-96	10		
6	Nov-96	20		
7	May-97	14		
8	May-98	2.5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	8	-0.51	35	Nov-11	4.5	8	-0.51
10	Apr-99	4.5	10	-0.29	36	Jun-12	4.5	2.5	-1.11
11	Nov-99	4.5	8	-0.51	37	Dec-12	4.5	2.5	-1.11
12	Apr-00	4.5	2.5	-1.11	38	Jun-13	4.5	2.5	-1.11
13	Dec-00	4.5	20	0.79	39	Nov-13	4.5	2.5	-1.11
14	May-01	4.5	7	-0.62	40	Nov-14	4.5	6	-0.73
15	Oct-01	4.5	5	-0.84	41	Jun-15	4.5	2.5	-1.11
16	May-02	4.5	2.5	-1.11	42	Nov-15	4.5	7	-0.62
17	Nov-02	4.5	5	-0.84	43	Jun-16	4.5	2.5	-1.11
18	Jun-03	4.5	2.5	-1.11	44	Nov-16	4.5	2.5	-1.11
19	Nov-03	4.5	2.5	-1.11	45	Jun-17	4.5	2.5	-1.11
20	Jun-04	4.5	9	-0.40	46	Nov-17	4.5	2.5	-1.11
21	Dec-04	4.5	7	-0.62					
22	Jun-05	4.5	9	-0.40					
23	Dec-05	4.5	6	-0.73					
24	Jun-06	4.5	9	-0.40					
25	Nov-06	4.5	9	-0.40					
26	Jun-07	4.5	5	-0.84					
27	Nov-07	4.5	16	0.36					
28	Jun-08	4.5	6	-0.73					
29	Nov-08	4.5	5	-0.84					
30	Jun-09	4.5	2.5	-1.11					
31	Nov-09	4.5	2.5	-1.11					
32	Jun-10	4.5	2.5	-1.11					
33	Nov-10	4.5	2.5	-1.11					
34	Jun-11	4.5	5	-0.84					

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

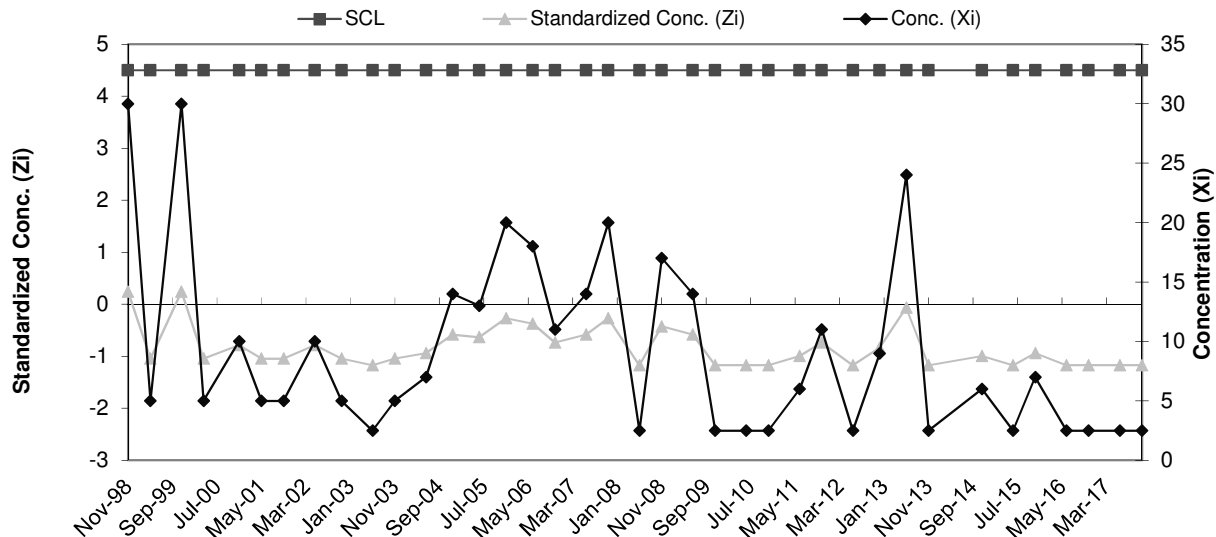


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-7 Zn

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10	25.25	19.40
2	Aug-95	10		
3	Feb-96	22		
4	Jun-96	20		
5	Aug-96	60		
6	Nov-96	50		
7	May-97	10		
8	May-98	20		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	30	0.24	35	Nov-11	4.5	11	-0.73
10	Apr-99	4.5	5	-1.04	36	Jun-12	4.5	2.5	-1.17
11	Nov-99	4.5	30	0.24	37	Dec-12	4.5	9	-0.84
12	Apr-00	4.5	5	-1.04	38	Jun-13	4.5	24	-0.06
13	Dec-00	4.5	10	-0.79	39	Nov-13	4.5	2.5	-1.17
14	May-01	4.5	5	-1.04	40	Nov-14	4.5	6	-0.99
15	Oct-01	4.5	5	-1.04	41	Jun-15	4.5	2.5	-1.17
16	May-02	4.5	10	-0.79	42	Nov-15	4.5	7	-0.94
17	Nov-02	4.5	5	-1.04	43	Jun-16	4.5	2.5	-1.17
18	Jun-03	4.5	2.5	-1.17	44	Nov-16	4.5	2.5	-1.17
19	Nov-03	4.5	5	-1.04	45	Jun-17	4.5	2.5	-1.17
20	Jun-04	4.5	7	-0.94	46	Nov-17	4.5	2.5	-1.17
21	Dec-04	4.5	14	-0.58			4.5		
22	Jun-05	4.5	13	-0.63					
23	Dec-05	4.5	20	-0.27					
24	Jun-06	4.5	18	-0.37					
25	Nov-06	4.5	11	-0.73					
26	Jun-07	4.5	14	-0.58					
27	Nov-07	4.5	20	-0.27					
28	Jun-08	4.5	2.5	-1.17					
29	Nov-08	4.5	17	-0.43					
30	Jun-09	4.5	14	-0.58					
31	Nov-09	4.5	2.5	-1.17					
32	Jun-10	4.5	2.5	-1.17					
33	Nov-10	4.5	2.5	-1.17					
34	Jun-11	4.5	6	-0.99					

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

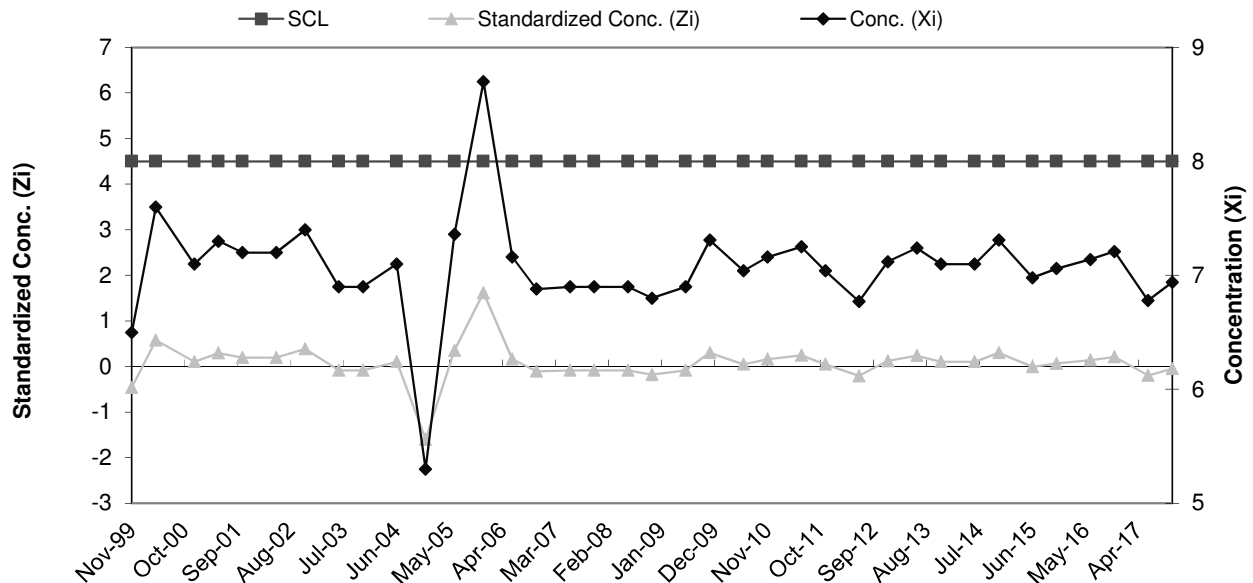


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-7 pH

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	7.5	6.99	1.06
2	Jun-96	6.9		
3	Aug-96	7.6		
4	Nov-96	8.0		
5	May-97	7.2		
6	May-98	6.6		
7	Nov-98	4.6		
8	Apr-99	7.5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-99	4.5	6.5	-0.46	33	Nov-11	4.5	7.0	0.05
10	Apr-00	4.5	7.6	0.58	34	Jun-12	4.5	6.8	-0.21
11	Dec-00	4.5	7.1	0.11	35	Dec-12	4.5	7.1	0.13
12	May-01	4.5	7.3	0.30	36	Jun-13	4.5	7.2	0.24
13	Oct-01	4.5	7.2	0.20	37	Nov-13	4.5	7.1	0.11
14	May-02	4.5	7.2	0.20	38	Jun-14	4.5	7.1	0.11
15	Nov-02	4.5	7.4	0.39	39	Nov-14	4.5	7.3	0.30
16	Jun-03	4.5	6.9	-0.08	40	Jun-15	4.5	7.0	-0.01
17	Nov-03	4.5	6.9	-0.08	41	Nov-15	4.5	7.1	0.07
18	Jun-04	4.5	7.1	0.11	42	Jun-16	4.5	7.1	0.14
19	Dec-04	4.5	5.3	-1.60	43	Nov-16	4.5	7.2	0.21
20	Jun-05	4.5	7.4	0.35	44	Jun-17	4.5	6.8	-0.20
21	Dec-05	4.5	8.7	1.62	45	Nov-17	4.5	6.9	-0.04
22	Jun-06	4.5	7.2	0.16					
23	Nov-06	4.5	6.9	-0.10					
24	Jun-07	4.5	6.9	-0.08					
25	Nov-07	4.5	6.9	-0.08					
26	Jun-08	4.5	6.9	-0.08					
27	Nov-08	4.5	6.8	-0.18					
28	Jun-09	4.5	6.9	-0.08					
29	Nov-09	4.5	7.3	0.30					
30	Jun-10	4.5	7.0	0.05					
31	Nov-10	4.5	7.2	0.16					
32	Jun-11	4.5	7.3	0.25					

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

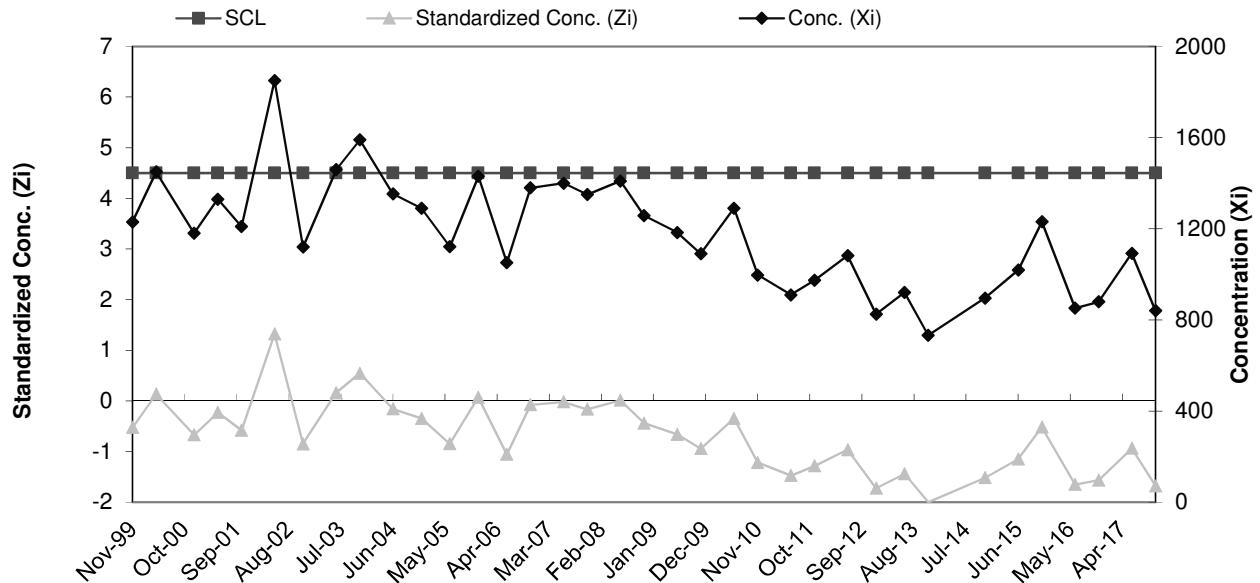


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-7 SpC

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	1509.0	1,405.88	336.33
2	Jun-96	1508.0		
3	Aug-96	1567.0		
4	Nov-96	1960.0		
5	May-97	780.0		
6	May-98	1270.0		
7	Nov-98	1240.0		
8	Apr-99	1413.0		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-99	4.5	1230.0	-0.52	33	Nov-11	4.5	974.0	-1.28
10	Apr-00	4.5	1450.0	0.13	34	Jun-12	4.5	1082.0	-0.96
11	Dec-00	4.5	1180.0	-0.67	35	Dec-12	4.5	825.0	-1.73
12	May-01	4.5	1330.0	-0.23	36	Jun-13	4.5	921.0	-1.44
13	Oct-01	4.5	1210.0	-0.58	37	Nov-13	4.5	733.0	-2.00
14	May-02	4.5	1850.0	1.32	38	Nov-14	4.5	896.0	-1.52
15	Nov-02	4.5	1120.0	-0.85	39	Jun-15	4.5	1019.0	-1.15
16	Jun-03	4.5	1460.0	0.16	40	Nov-15	4.5	1231.0	-0.52
17	Nov-03	4.5	1590.0	0.55	41	Jun-16	4.5	852.0	-1.65
18	Jun-04	4.5	1353.0	-0.16	42	Nov-16	4.5	880.0	-1.56
19	Dec-04	4.5	1290.0	-0.34	43	Jun-17	4.5	1092.0	-0.93
20	Jun-05	4.5	1121.0	-0.85	44	Nov-17	4.5	841.0	-1.68
21	Dec-05	4.5	1430.0	0.07			4.5		
22	Jun-06	4.5	1051.0	-1.06					
23	Nov-06	4.5	1380.0	-0.08					
24	Jun-07	4.5	1400.0	-0.02					
25	Nov-07	4.5	1350.0	-0.17					
26	Jun-08	4.5	1410.0	0.01					
27	Nov-08	4.5	1258.0	-0.44					
28	Jun-09	4.5	1184.0	-0.66					
29	Nov-09	4.5	1090.0	-0.94					
30	Jun-10	4.5	1290.0	-0.34					
31	Nov-10	4.5	997.0	-1.22					
32	Jun-11	4.5	910.0	-1.47					

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

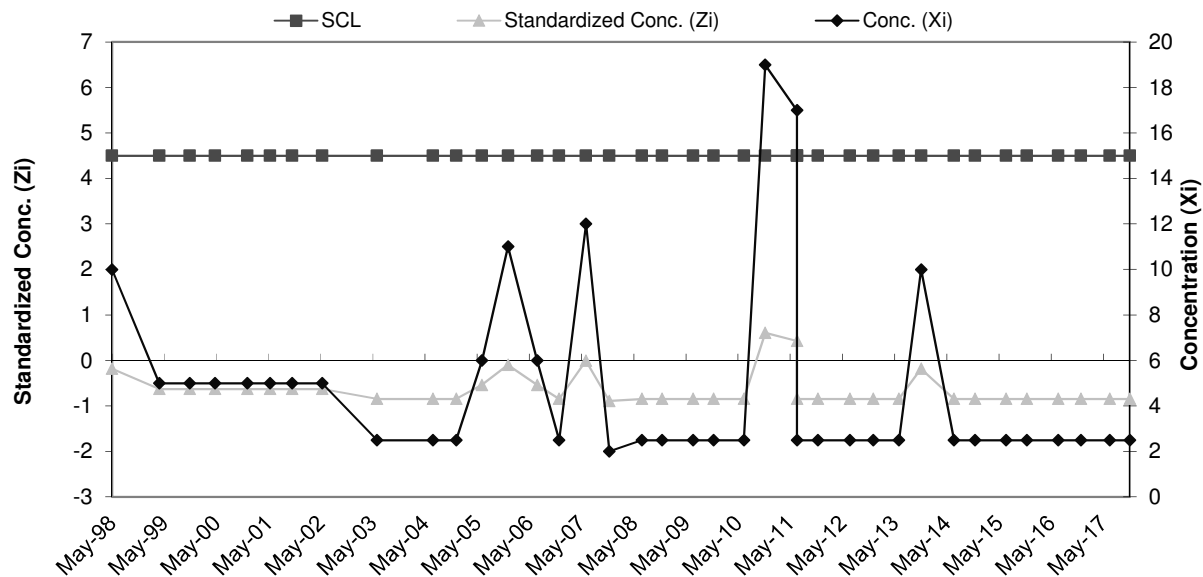


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-9 Cr

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10	12.12	11.34
2	Aug-95	37		
3	Feb-96	10		
4	Jun-96	10		
5	Aug-96	10		
6	Nov-96	10		
7	May-97	5		
8	Nov-97	5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	10	-0.19	34	Nov-11	4.5	2.5	-0.85
10	Apr-99	4.5	5	-0.63	35	Jun-12	4.5	2.5	-0.85
11	Nov-99	4.5	5	-0.63	36	Dec-12	4.5	2.5	-0.85
12	Apr-00	4.5	5	-0.63	37	Jun-13	4.5	2.5	-0.85
13	Dec-00	4.5	5	-0.63	38	Nov-13	4.5	10	-0.19
14	May-01	4.5	5	-0.63	39	Jun-14	4.5	2.5	-0.85
15	Oct-01	4.5	5	-0.63	40	Nov-14	4.5	2.5	-0.85
16	May-02	4.5	5	-0.63	41	Jun-15	4.5	2.5	-0.85
17	Jun-03	4.5	2.5	-0.85	42	Nov-15	4.5	2.5	-0.85
18	Jun-04	4.5	2.5	-0.85	43	Jun-16	4.5	2.5	-0.85
19	Dec-04	4.5	2.5	-0.85	44	Nov-16	4.5	2.5	-0.85
20	Jun-05	4.5	6	-0.54	45	Jun-17	4.5	2.5	-0.85
21	Dec-05	4.5	11	-0.10	46	Nov-17	4.5	2.5	-0.85
22	Jun-06	4.5	6	-0.54					
23	Nov-06	4.5	2.5	-0.85					
24	Jun-07	4.5	12	-0.01					
25	Nov-07	4.5	2	-0.89					
26	Jul-08	4.5	2.5	-0.85					
27	Nov-08	4.5	2.5	-0.85					
28	Jun-09	4.5	2.5	-0.85					
29	Nov-09	4.5	2.5	-0.85					
30	Jun-10	4.5	2.5	-0.85					
31	Nov-10	4.5	19	0.61					
32	Jun-11	4.5	17	0.43					
33	Jun-11	4.5	2.5	-0.85					

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

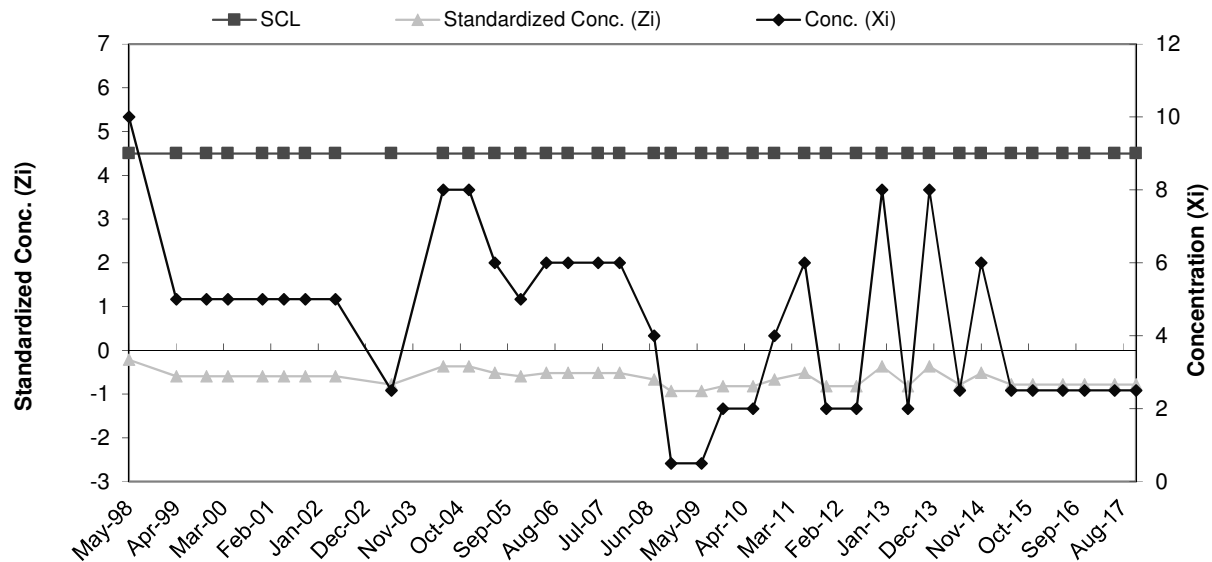


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-9 Cu

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10	12.87	13.26
2	Aug-95	43		
3	Feb-96	10		
4	Jun-96	10		
5	Aug-96	10		
6	Nov-96	10		
7	May-97	5		
8	Nov-97	5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	10	-0.22	33	Nov-11	4.5	2	-0.82
10	Apr-99	4.5	5	-0.59	34	Jun-12	4.5	2	-0.82
11	Nov-99	4.5	5	-0.59	35	Dec-12	4.5	8	-0.37
12	Apr-00	4.5	5	-0.59	36	Jun-13	4.5	2	-0.82
13	Dec-00	4.5	5	-0.59	37	Nov-13	4.5	8	-0.37
14	May-01	4.5	5	-0.59	38	Jun-14	4.5	2.5	-0.78
15	Oct-01	4.5	5	-0.59	39	Nov-14	4.5	6	-0.52
16	May-02	4.5	5	-0.59	40	Jun-15	4.5	2.5	-0.78
17	Jun-03	4.5	2.5	-0.78	41	Nov-15	4.5	2.5	-0.78
18	Jun-04	4.5	8	-0.37	42	Jun-16	4.5	2.5	-0.78
19	Dec-04	4.5	8	-0.37	43	Nov-16	4.5	2.5	-0.78
20	Jun-05	4.5	6	-0.52	44	Jun-17	4.5	2.5	-0.78
21	Dec-05	4.5	5	-0.59	45	Nov-17	4.5	2.5	-0.78
22	Jun-06	4.5	6	-0.52					
23	Nov-06	4.5	6	-0.52					
24	Jun-07	4.5	6	-0.52					
25	Nov-07	4.5	6	-0.52					
26	Jul-08	4.5	4	-0.67					
27	Nov-08	4.5	0.5	-0.93					
28	Jun-09	4.5	0.5	-0.93					
29	Nov-09	4.5	2	-0.82					
30	Jun-10	4.5	2	-0.82					
31	Nov-10	4.5	4	-0.67					
32	Jun-11	4.5	6	-0.52					

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

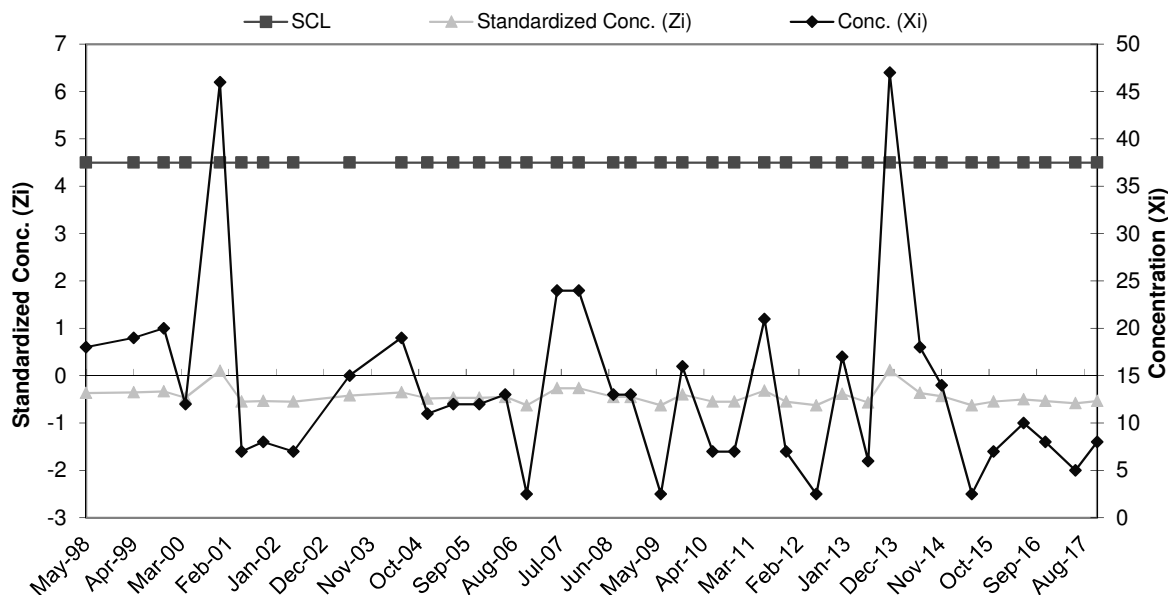


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-9 Ni

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	15	39.83	59.86
2	Aug-95	20		
3	Feb-96	20		
4	Jun-96	10		
5	Aug-96	10		
6	Nov-96	10		
7	May-97	51		
8	Nov-97	183		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	18	-0.36	33	Nov-11	4.5	7	-0.55
10	Apr-99	4.5	19	-0.35	34	Jun-12	4.5	2.5	-0.62
11	Nov-99	4.5	20	-0.33	35	Dec-12	4.5	17	-0.38
12	Apr-00	4.5	12	-0.46	36	Jun-13	4.5	6	-0.57
13	Dec-00	4.5	46	0.10	37	Nov-13	4.5	47	0.12
14	May-01	4.5	7	-0.55	38	Jun-14	4.5	18	-0.36
15	Oct-01	4.5	8	-0.53	39	Nov-14	4.5	14	-0.43
16	May-02	4.5	7	-0.55	40	Jun-15	4.5	2.5	-0.62
17	Jun-03	4.5	15	-0.41	41	Nov-15	4.5	7	-0.55
18	Jun-04	4.5	19	-0.35	42	Jun-16	4.5	10	-0.50
19	Dec-04	4.5	11	-0.48	43	Nov-16	4.5	8	-0.53
20	Jun-05	4.5	12	-0.46	44	Jun-17	4.5	5	-0.58
21	Dec-05	4.5	12	-0.46	45	Nov-17	4.5	8	-0.53
22	Jun-06	4.5	13	-0.45					
23	Nov-06	4.5	2.5	-0.62					
24	Jun-07	4.5	24	-0.26					
25	Nov-07	4.5	24	-0.26					
26	Jul-08	4.5	13	-0.45					
27	Nov-08	4.5	13	-0.45					
28	Jun-09	4.5	2.5	-0.62					
29	Nov-09	4.5	16	-0.40					
30	Jun-10	4.5	7	-0.55					
31	Nov-10	4.5	7	-0.55					
32	Jun-11	4.5	21	-0.31					

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

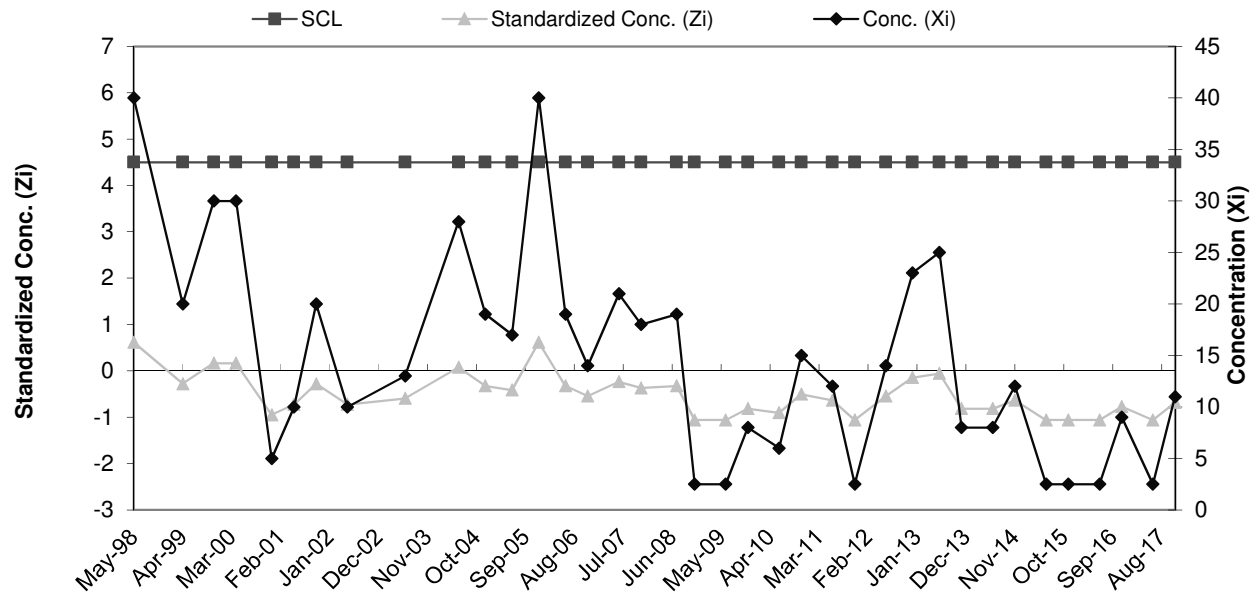


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-9 Zn

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10	26.23	22.36
2	Aug-95	10		
3	Feb-96	10		
4	Jun-96	10		
5	Aug-96	70		
6	Nov-96	40		
7	May-97	20		
8	Nov-97	40		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	40	0.62	33	Nov-11	4.5	2.5	-1.06
10	Apr-99	4.5	20	-0.28	34	Jun-12	4.5	14	-0.55
11	Nov-99	4.5	30	0.17	35	Dec-12	4.5	23	-0.14
12	Apr-00	4.5	30	0.17	36	Jun-13	4.5	25	-0.06
13	Dec-00	4.5	5	-0.95	37	Nov-13	4.5	8	-0.82
14	May-01	4.5	10	-0.73	38	Jun-14	4.5	8	-0.82
15	Oct-01	4.5	20	-0.28	39	Nov-14	4.5	12	-0.64
16	May-02	4.5	10	-0.73	40	Jun-15	4.5	2.5	-1.06
17	Jun-03	4.5	13	-0.59	41	Nov-15	4.5	2.5	-1.06
18	Jun-04	4.5	28	0.08	42	Jun-16	4.5	2.5	-1.06
19	Dec-04	4.5	19	-0.32	43	Nov-16	4.5	9	-0.77
20	Jun-05	4.5	17	-0.41	44	Jun-17	4.5	2.5	-1.06
21	Dec-05	4.5	40	0.62	45	Nov-17	4.5	11	-0.68
22	Jun-06	4.5	19	-0.32					
23	Nov-06	4.5	14	-0.55					
24	Jun-07	4.5	21	-0.23					
25	Nov-07	4.5	18	-0.37					
26	Jul-08	4.5	19	-0.32					
27	Nov-08	4.5	2.5	-1.06					
28	Jun-09	4.5	2.5	-1.06					
29	Nov-09	4.5	8	-0.82					
30	Jun-10	4.5	6	-0.90					
31	Nov-10	4.5	15	-0.50					
32	Jun-11	4.5	12	-0.64					

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

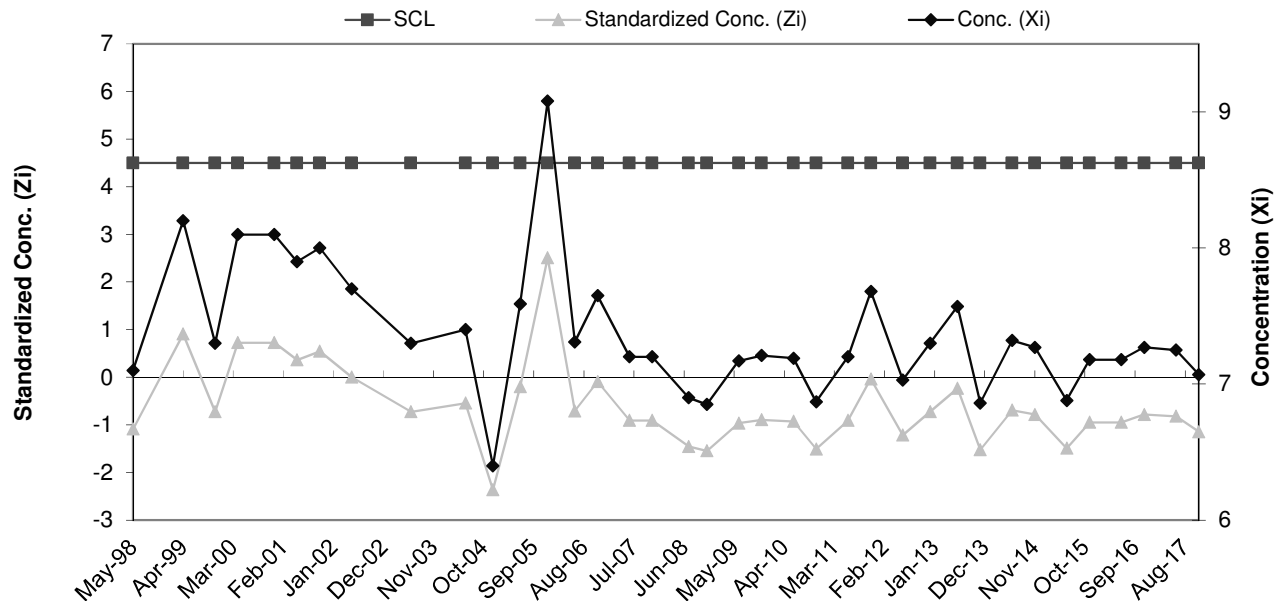


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-9 pH

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	7.7	7.20	0.55
2	Aug-95	7.7		
3	Feb-96	7.3		
4	Jun-96	6.8		
5	Aug-96	8.0		
6	Nov-96	6.8		
7	May-97	6.8		
8	Nov-97	6.5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	6.6	-1.09	33	Nov-11	4.5	7.2	-0.04
10	Apr-99	4.5	7.7	0.91	34	Jun-12	4.5	6.5	-1.22
11	Nov-99	4.5	6.8	-0.73	35	Dec-12	4.5	6.8	-0.73
12	Apr-00	4.5	7.6	0.73	36	Jun-13	4.5	7.1	-0.24
13	Dec-00	4.5	7.6	0.73	37	Nov-13	4.5	6.4	-1.53
14	May-01	4.5	7.4	0.36	38	Jun-14	4.5	6.8	-0.69
15	Oct-01	4.5	7.5	0.55	39	Nov-14	4.5	6.8	-0.78
16	May-02	4.5	7.2	0.00	40	Jun-15	4.5	6.4	-1.49
17	Jun-03	4.5	6.8	-0.73	41	Nov-15	4.5	6.7	-0.94
18	Jun-04	4.5	6.9	-0.55	42	Jun-16	4.5	6.7	-0.94
19	Dec-04	4.5	5.9	-2.36	43	Nov-16	4.5	6.8	-0.78
20	Jun-05	4.5	7.1	-0.20	44	Jun-17	4.5	6.8	-0.82
21	Dec-05	4.5	8.6	2.51	45	Nov-17	4.5	6.6	-1.14
22	Jun-06	4.5	6.8	-0.71					
23	Nov-06	4.5	7.2	-0.09					
24	Jun-07	4.5	6.7	-0.91					
25	Nov-07	4.5	6.7	-0.91					
26	Jul-08	4.5	6.4	-1.45					
27	Nov-08	4.5	6.4	-1.54					
28	Jun-09	4.5	6.7	-0.96					
29	Nov-09	4.5	6.7	-0.89					
30	Jun-10	4.5	6.7	-0.93					
31	Nov-10	4.5	6.4	-1.51					
32	Jun-11	4.5	6.7	-0.91					

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

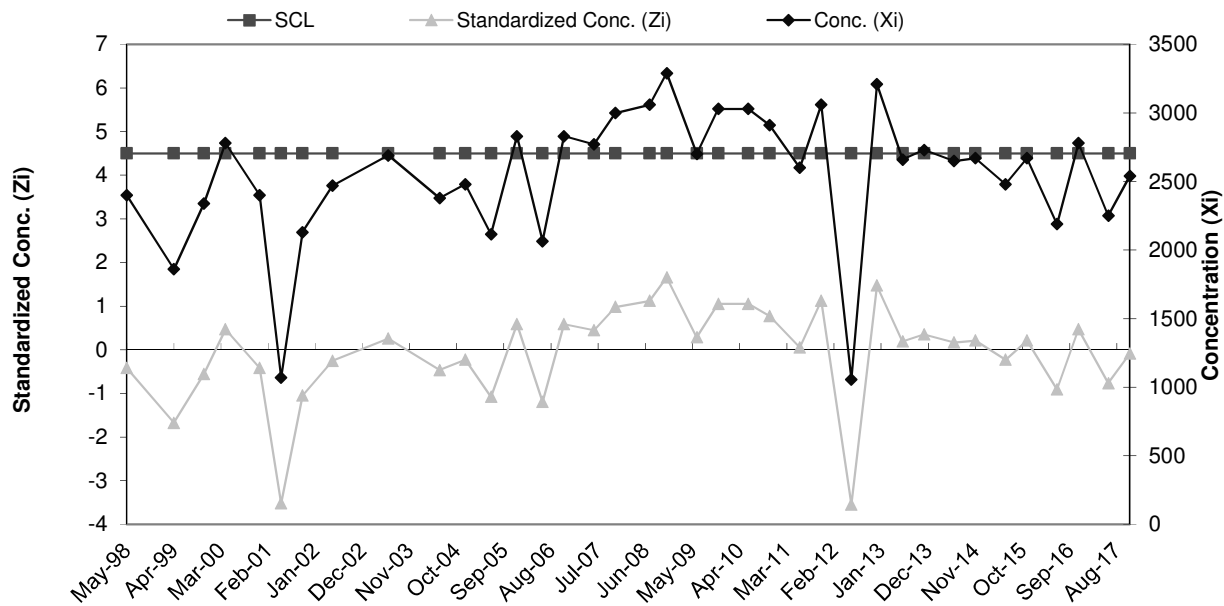


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-9 SpC

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	2400	2,578.63	428.85
2	Aug-95	1829		
3	Feb-96	2860		
4	Jun-96	2550		
5	Aug-96	2310		
6	Nov-96	3280		
7	May-97	2600		
8	Nov-97	2800		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	2400	-0.42	33	Nov-11	4.5	3060	1.12
10	Apr-99	4.5	1860	-1.68	34	Jun-12	4.5	1057	-3.55
11	Nov-99	4.5	2340	-0.56	35	Dec-12	4.5	3210	1.47
12	Apr-00	4.5	2780	0.47	36	Jun-13	4.5	2660	0.19
13	Dec-00	4.5	2400	-0.42	37	Nov-13	4.5	2730	0.35
14	May-01	4.5	1070	-3.52	38	Jun-14	4.5	2650	0.17
15	Oct-01	4.5	2130	-1.05	39	Nov-14	4.5	2670	0.21
16	May-02	4.5	2470	-0.25	40	Jun-15	4.5	2480	-0.23
17	Jun-03	4.5	2690	0.26	41	Nov-15	4.5	2670	0.21
18	Jun-04	4.5	2379	-0.47	42	Jun-16	4.5	2190	-0.91
19	Dec-04	4.5	2480	-0.23	43	Nov-16	4.5	2780	0.47
20	Jun-05	4.5	2116	-1.08	44	Jun-17	4.5	2250	-0.77
21	Dec-05	4.5	2830	0.59	45	Nov-17	4.5	2540	-0.09
22	Jun-06	4.5	2065	-1.20					
23	Nov-06	4.5	2830	0.59					
24	Jun-07	4.5	2770	0.45					
25	Nov-07	4.5	3000	0.98					
26	Jul-08	4.5	3060	1.12					
27	Nov-08	4.5	3290	1.66					
28	Jun-09	4.5	2700	0.28					
29	Nov-09	4.5	3030	1.05					
30	Jun-10	4.5	3030	1.05					
31	Nov-10	4.5	2910	0.77					
32	Jun-11	4.5	2600	0.05					

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

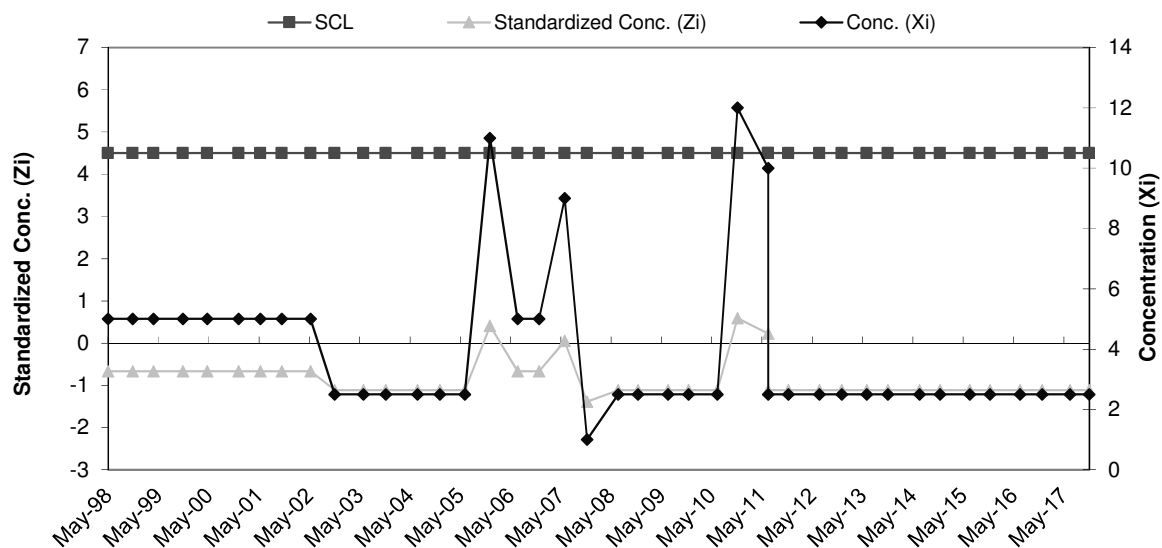


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-18a Cr

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10	8.74	5.57
2	Aug-95	10		
3	Feb-96	10		
4	Jun-96	10		
5	Aug-96	10		
6	Nov-96	10		
7	May-97	5		
8	Nov-97	5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.67	37	Nov-11	4.5	2.5	-1.12
10	Nov-98	4.5	5	-0.67	38	Jun-12	4.5	2.5	-1.12
11	Apr-99	4.5	5	-0.67	39	Dec-12	4.5	2.5	-1.12
12	Nov-99	4.5	5	-0.67	40	Jun-13	4.5	2.5	-1.12
13	Apr-00	4.5	5	-0.67	41	Nov-13	4.5	2.5	-1.12
14	Dec-00	4.5	5	-0.67	42	Jun-14	4.5	2.5	-1.12
15	May-01	4.5	5	-0.67	43	Nov-14	4.5	2.5	-1.12
16	Oct-01	4.5	5	-0.67	44	Jun-15	4.5	2.5	-1.12
17	May-02	4.5	5	-0.67	45	Nov-15	4.5	2.5	-1.12
18	Nov-02	4.5	2.5	-1.12	46	Jun-16	4.5	2.5	-1.12
19	Jun-03	4.5	2.5	-1.12	47	Nov-16	4.5	2.5	-1.12
20	Nov-03	4.5	2.5	-1.12	48	Jun-17	4.5	2.5	-1.12
21	Jun-04	4.5	2.5	-1.12	49	Nov-17	4.5	2.5	-1.12
22	Dec-04	4.5	2.5	-1.12					
23	Jun-05	4.5	2.5	-1.12					
24	Dec-05	4.5	11	0.41					
25	Jun-06	4.5	5	-0.67					
26	Nov-06	4.5	5	-0.67					
27	Jun-07	4.5	9	0.05					
28	Nov-07	4.5	1	-1.39					
29	Jun-08	4.5	2.5	-1.12					
30	Nov-08	4.5	2.5	-1.12					
31	Jun-09	4.5	2.5	-1.12					
32	Nov-09	4.5	2.5	-1.12					
33	Jun-10	4.5	2.5	-1.12					
34	Nov-10	4.5	12	0.59					
35	Jun-11	4.5	10	0.23					
36	Jun-11	4.5	2.5	-1.12					

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

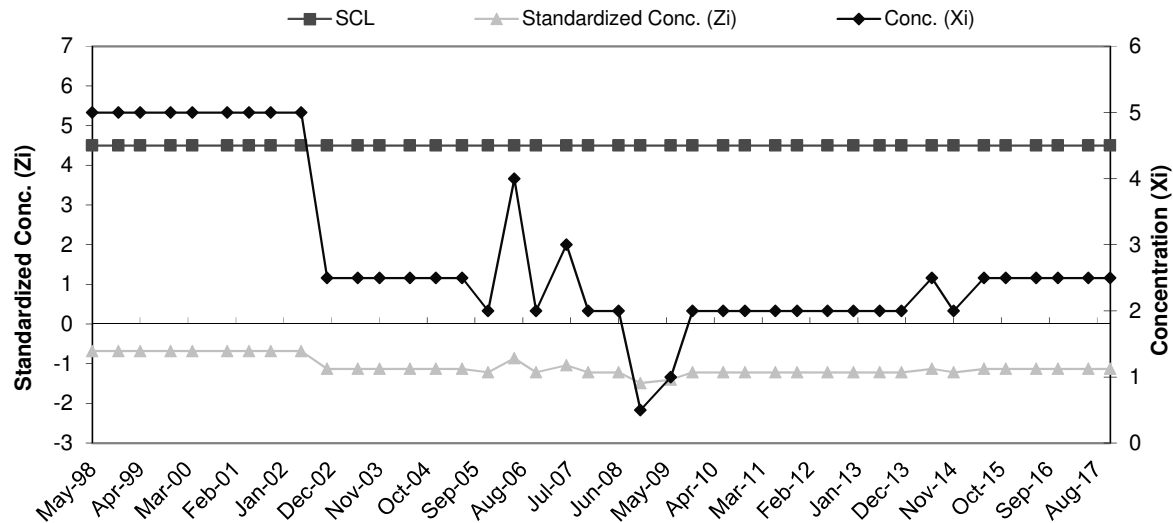


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-18a Cu

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10	8.78	5.56
2	Aug-95	10		
3	Feb-96	10		
4	Jun-96	10		
5	Aug-96	10		
6	Nov-96	10		
7	May-97	5		
8	Nov-97	5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.68	36	Nov-11	4.5	2	-1.22
10	Nov-98	4.5	5	-0.68	37	Jun-12	4.5	2	-1.22
11	Apr-99	4.5	5	-0.68	38	Dec-12	4.5	2	-1.22
12	Nov-99	4.5	5	-0.68	39	Jun-13	4.5	2	-1.22
13	Apr-00	4.5	5	-0.68	40	Nov-13	4.5	2	-1.22
14	Dec-00	4.5	5	-0.68	41	Jun-14	4.5	2.5	-1.13
15	May-01	4.5	5	-0.68	42	Nov-14	4.5	2	-1.22
16	Oct-01	4.5	5	-0.68	43	Jun-15	4.5	2.5	-1.13
17	May-02	4.5	5	-0.68	44	Nov-15	4.5	2.5	-1.13
18	Nov-02	4.5	2.5	-1.13	45	Jun-16	4.5	2.5	-1.13
19	Jun-03	4.5	2.5	-1.13	46	Nov-16	4.5	2.5	-1.13
20	Nov-03	4.5	2.5	-1.13	47	Jun-17	4.5	2.5	-1.13
21	Jun-04	4.5	2.5	-1.13	48	Nov-17	4.5	2.5	-1.13
22	Dec-04	4.5	2.5	-1.13					
23	Jun-05	4.5	2.5	-1.13					
24	Dec-05	4.5	2	-1.22					
25	Jun-06	4.5	4	-0.86					
26	Nov-06	4.5	2	-1.22					
27	Jun-07	4.5	3	-1.04					
28	Nov-07	4.5	2	-1.22					
29	Jun-08	4.5	2	-1.22					
30	Nov-08	4.5	0.5	-1.49					
31	Jun-09	4.5	1	-1.40					
32	Nov-09	4.5	2	-1.22					
33	Jun-10	4.5	2	-1.22					
34	Nov-10	4.5	2	-1.22					
35	Jun-11	4.5	2	-1.22					

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

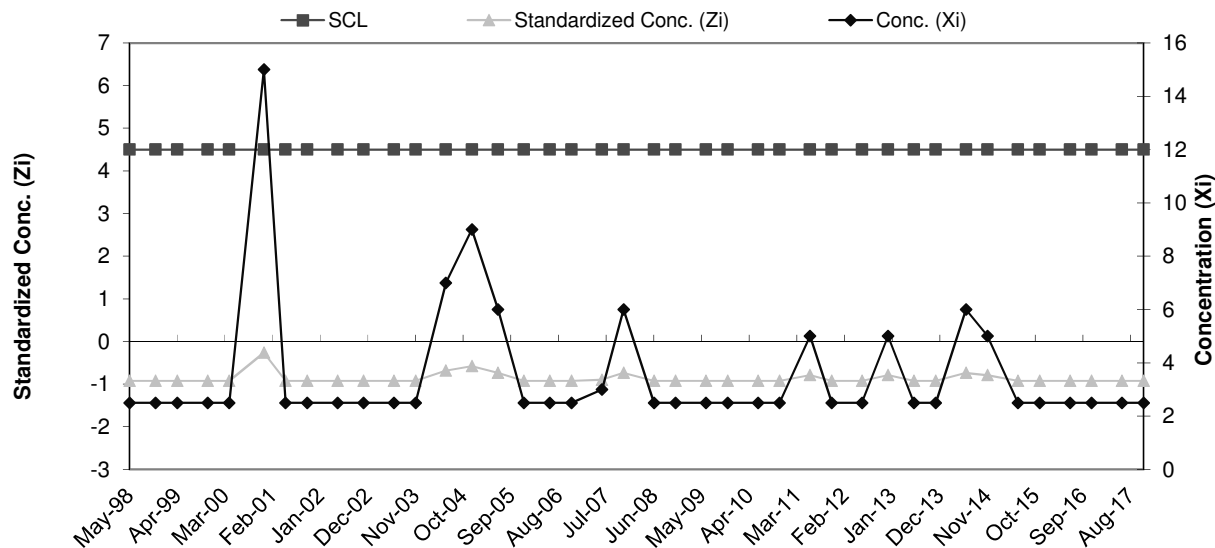


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-18a Ni

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	15	20.01	18.96
2	Aug-95	20		
3	Feb-96	20		
4	Jun-96	10		
5	Aug-96	10		
6	Nov-96	10		
7	May-97	13		
8	Nov-97	62		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	2.5	-0.92	36	Nov-11	4.5	2.5	-0.92
10	Nov-98	4.5	2.5	-0.92	37	Jun-12	4.5	2.5	-0.92
11	Apr-99	4.5	2.5	-0.92	38	Dec-12	4.5	5	-0.79
12	Nov-99	4.5	2.5	-0.92	39	Jun-13	4.5	2.5	-0.92
13	Apr-00	4.5	2.5	-0.92	40	Nov-13	4.5	2.5	-0.92
14	Dec-00	4.5	15	-0.26	41	Jun-14	4.5	6	-0.74
15	May-01	4.5	2.5	-0.92	42	Nov-14	4.5	5	-0.79
16	Oct-01	4.5	2.5	-0.92	43	Jun-15	4.5	2.5	-0.92
17	May-02	4.5	2.5	-0.92	44	Nov-15	4.5	2.5	-0.92
18	Nov-02	4.5	2.5	-0.92	45	Jun-16	4.5	2.5	-0.92
19	Jun-03	4.5	2.5	-0.92	46	Nov-16	4.5	2.5	-0.92
20	Nov-03	4.5	2.5	-0.92	47	Jun-17	4.5	2.5	-0.92
21	Jun-04	4.5	7	-0.69	48	Nov-17	4.5	2.5	-0.92
22	Dec-04	4.5	9	-0.58					
23	Jun-05	4.5	6	-0.74					
24	Dec-05	4.5	2.5	-0.92					
25	Jun-06	4.5	2.5	-0.92					
26	Nov-06	4.5	2.5	-0.92					
27	Jun-07	4.5	3	-0.90					
28	Nov-07	4.5	6	-0.74					
29	Jun-08	4.5	2.5	-0.92					
30	Nov-08	4.5	2.5	-0.92					
31	Jun-09	4.5	2.5	-0.92					
32	Nov-09	4.5	2.5	-0.92					
33	Jun-10	4.5	2.5	-0.92					
34	Nov-10	4.5	2.5	-0.92					
35	Jun-11	4.5	5	-0.79					

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

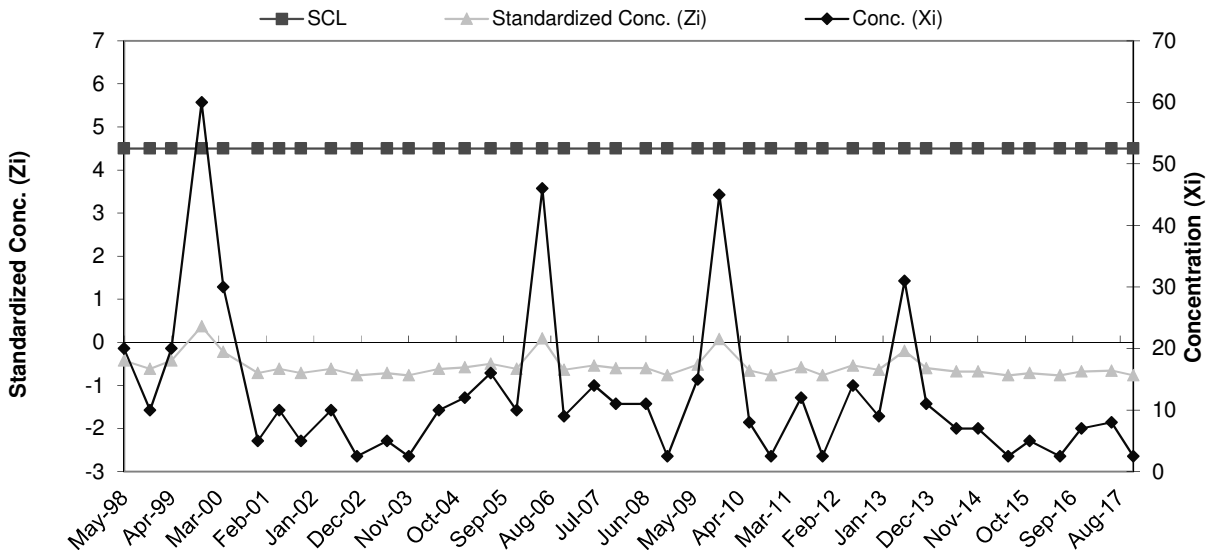


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-18a Zn

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	150	41.25	50.67
2	Aug-95	10		
3	Feb-96	10		
4	Jun-96	10		
5	Aug-96	60		
6	Nov-96	70		
7	May-97	10		
8	Nov-97	10		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	20	-0.42	36	Nov-11	4.5	2.5	-0.76
10	Nov-98	4.5	10	-0.62	37	Jun-12	4.5	14	-0.54
11	Apr-99	4.5	20	-0.42	38	Dec-12	4.5	9	-0.64
12	Nov-99	4.5	60	0.37	39	Jun-13	4.5	31	-0.20
13	Apr-00	4.5	30	-0.22	40	Nov-13	4.5	11	-0.60
14	Dec-00	4.5	5	-0.72	41	Jun-14	4.5	7	-0.68
15	May-01	4.5	10	-0.62	42	Nov-14	4.5	7	-0.68
16	Oct-01	4.5	5	-0.72	43	Jun-15	4.5	2.5	-0.76
17	May-02	4.5	10	-0.62	44	Nov-15	4.5	5	-0.72
18	Nov-02	4.5	2.5	-0.76	45	Jun-16	4.5	2.5	-0.76
19	Jun-03	4.5	5	-0.72	46	Nov-16	4.5	7	-0.68
20	Nov-03	4.5	2.5	-0.76	47	Jun-17	4.5	8	-0.66
21	Jun-04	4.5	10	-0.62	48	Nov-17	4.5	2.5	-0.76
22	Dec-04	4.5	12	-0.58					
23	Jun-05	4.5	16	-0.50					
24	Dec-05	4.5	10	-0.62					
25	Jun-06	4.5	46	0.09					
26	Nov-06	4.5	9	-0.64					
27	Jun-07	4.5	14	-0.54					
28	Nov-07	4.5	11	-0.60					
29	Jun-08	4.5	11	-0.60					
30	Nov-08	4.5	2.5	-0.76					
31	Jun-09	4.5	15	-0.52					
32	Nov-09	4.5	45	0.07					
33	Jun-10	4.5	8	-0.66					
34	Nov-10	4.5	2.5	-0.76					
35	Jun-11	4.5	12	-0.58					

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

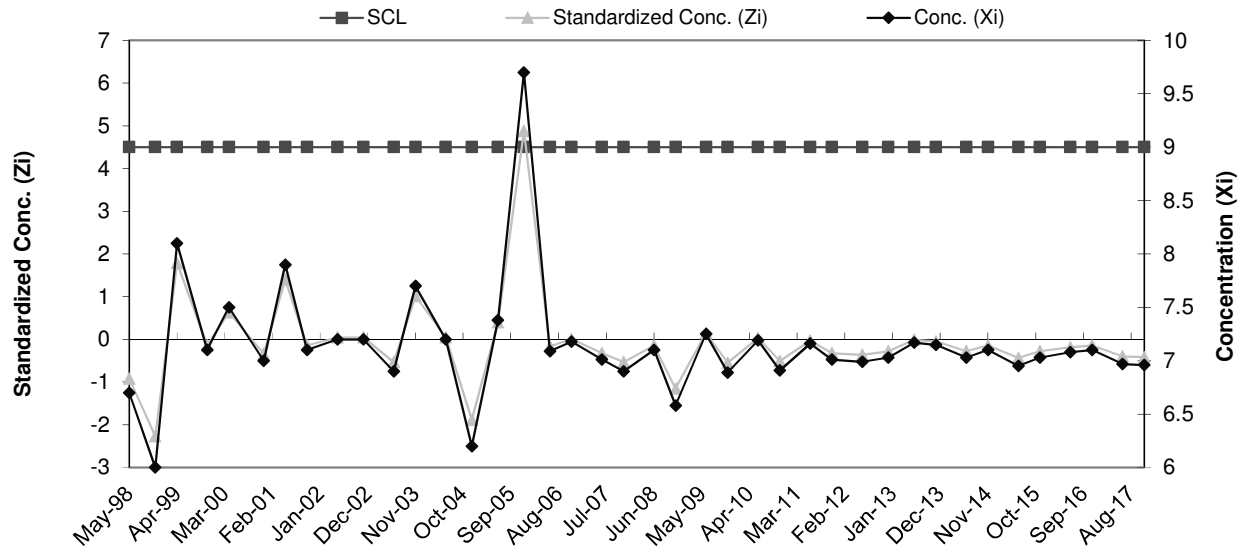


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-18a pH

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	7.5	7.18	0.52
2	Aug-95	7.9		
3	Feb-96	7.4		
4	Jun-96	7.0		
5	Aug-96	7.5		
6	Nov-96	7.2		
7	May-97	6.5		
8	Nov-97	6.4		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	6.7	-0.92	36	Nov-11	4.5	7.0	-0.32
10	Nov-98	4.5	6.0	-2.27	37	Jun-12	4.5	7.0	-0.36
11	Apr-99	4.5	8.1	1.79	38	Dec-12	4.5	7.0	-0.28
12	Nov-99	4.5	7.1	-0.14	39	Jun-13	4.5	7.2	-0.01
13	Apr-00	4.5	7.5	0.63	40	Nov-13	4.5	7.2	-0.05
14	Dec-00	4.5	7.0	-0.34	41	Jun-14	4.5	7.0	-0.28
15	May-01	4.5	7.9	1.40	42	Nov-14	4.5	7.1	-0.14
16	Oct-01	4.5	7.1	-0.14	43	Jun-15	4.5	7.0	-0.43
17	May-02	4.5	7.2	0.05	44	Nov-15	4.5	7.0	-0.28
18	Nov-02	4.5	7.2	0.05	45	Jun-16	4.5	7.1	-0.18
19	Jun-03	4.5	6.9	-0.53	46	Nov-16	4.5	7.1	-0.14
20	Nov-03	4.5	7.7	1.01	47	Jun-17	4.5	7.0	-0.40
21	Jun-04	4.5	7.2	0.05	48	Nov-17	4.5	7.0	-0.42
22	Dec-04	4.5	6.2	-1.88					
23	Jun-05	4.5	7.4	0.40					
24	Dec-05	4.5	9.7	4.88					
25	Jun-06	4.5	7.1	-0.16					
26	Nov-06	4.5	7.2	0.01					
27	Jun-07	4.5	7.0	-0.32					
28	Nov-07	4.5	6.9	-0.53					
29	Jun-08	4.5	7.1	-0.14					
30	Nov-08	4.5	6.6	-1.15					
31	Jun-09	4.5	7.3	0.14					
32	Nov-09	4.5	6.9	-0.55					
33	Jun-10	4.5	7.2	0.03					
34	Nov-10	4.5	6.9	-0.51					
35	Jun-11	4.5	7.2	-0.03					

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

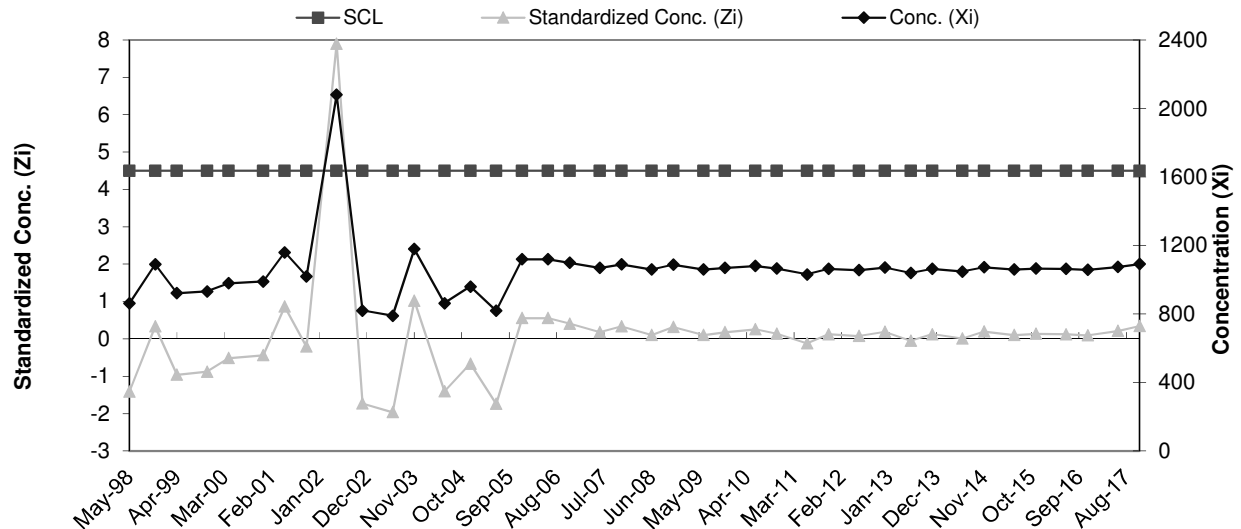


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-18a SpC

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	1048	1,046.75	130.80
2	Aug-95	989		
3	Feb-96	1021		
4	Jun-96	944.0		
5	Aug-96	1041		
6	Nov-96	1331		
7	May-97	900		
8	Nov-97	1100		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)	Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	862	-1.41	36	Nov-11	4.5	1063	0.12
10	Nov-98	4.5	1090.0	0.33	37	Jun-12	4.5	1057	0.08
11	Apr-99	4.5	921	-0.96	38	Dec-12	4.5	1071	0.19
12	Nov-99	4.5	932	-0.88	39	Jun-13	4.5	1040	-0.05
13	Apr-00	4.5	980	-0.51	40	Nov-13	4.5	1063	0.12
14	Dec-00	4.5	990.0	-0.43	41	Jun-14	4.5	1048	0.01
15	May-01	4.5	1160	0.87	42	Nov-14	4.5	1073	0.20
16	Oct-01	4.5	1020	-0.20	43	Jun-15	4.5	1060	0.10
17	May-02	4.5	2080	7.90	44	Nov-15	4.5	1065	0.14
18	Nov-02	4.5	820	-1.73	45	Jun-16	4.5	1063	0.12
19	Jun-03	4.5	790	-1.96	46	Nov-16	4.5	1059	0.09
20	Nov-03	4.5	1180	1.02	47	Jun-17	4.5	1075	0.22
21	Jun-04	4.5	863	-1.40	48	Nov-17	4.5	1092	0.35
22	Dec-04	4.5	960	-0.66					
23	Jun-05	4.5	819	-1.74					
24	Dec-05	4.5	1120	0.56					
25	Jun-06	4.5	1120	0.56					
26	Nov-06	4.5	1100	0.41					
27	Jun-07	4.5	1070	0.18					
28	Nov-07	4.5	1090	0.33					
29	Jun-08	4.5	1060	0.10					
30	Nov-08	4.5	1088	0.32					
31	Jun-09	4.5	1060	0.10					
32	Nov-09	4.5	1070	0.18					
33	Jun-10	4.5	1080	0.25					
34	Nov-10	4.5	1065	0.14					
35	Jun-11	4.5	1031	-0.12					

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

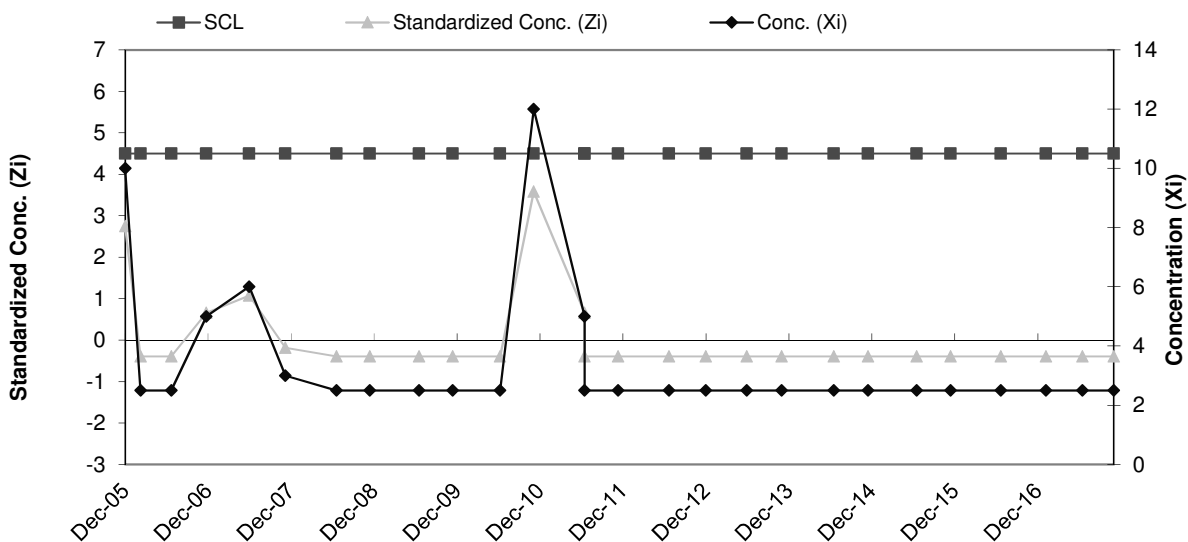


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-19a Cr

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	May-98	5	3.44	2.39
2	May-01	5		
3	May-02	5		
4	Jun-03	2.5		
5	Nov-03	2.5		
6	Jun-04	2.5		
7	Dec-04	2.5		
8	Jun-05	2.5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Dec-05	4.5	10	2.74
10	Feb-06	4.5	2.5	-0.39
11	Jun-06	4.5	2.5	-0.39
12	Nov-06	4.5	5	0.65
13	Jun-07	4.5	6	1.07
14	Nov-07	4.5	3	-0.18
15	Jun-08	4.5	2.5	-0.39
16	Nov-08	4.5	2.5	-0.39
17	Jun-09	4.5	2.5	-0.39
18	Nov-09	4.5	2.5	-0.39
19	Jun-10	4.5	2.5	-0.39
20	Nov-10	4.5	12	3.58
21	Jun-11	4.5	5	0.65
22	Jun-11	4.5	2.5	-0.39
23	Nov-11	4.5	2.5	-0.39
24	Jun-12	4.5	2.5	-0.39
25	Dec-12	4.5	2.5	-0.39
26	Jun-13	4.5	2.5	-0.39
27	Nov-13	4.5	2.5	-0.39
28	Jun-14	4.5	2.5	-0.39
29	Nov-14	4.5	2.5	-0.39
30	Jun-15	4.5	2.5	-0.39
31	Nov-15	4.5	2.5	-0.39
32	Jun-16	4.5	2.5	-0.39
33	Jan-17	4.5	2.5	-0.39
34	Jun-17	4.5	2.5	-0.39
35	Nov-17	4.5	2.5	-0.39

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

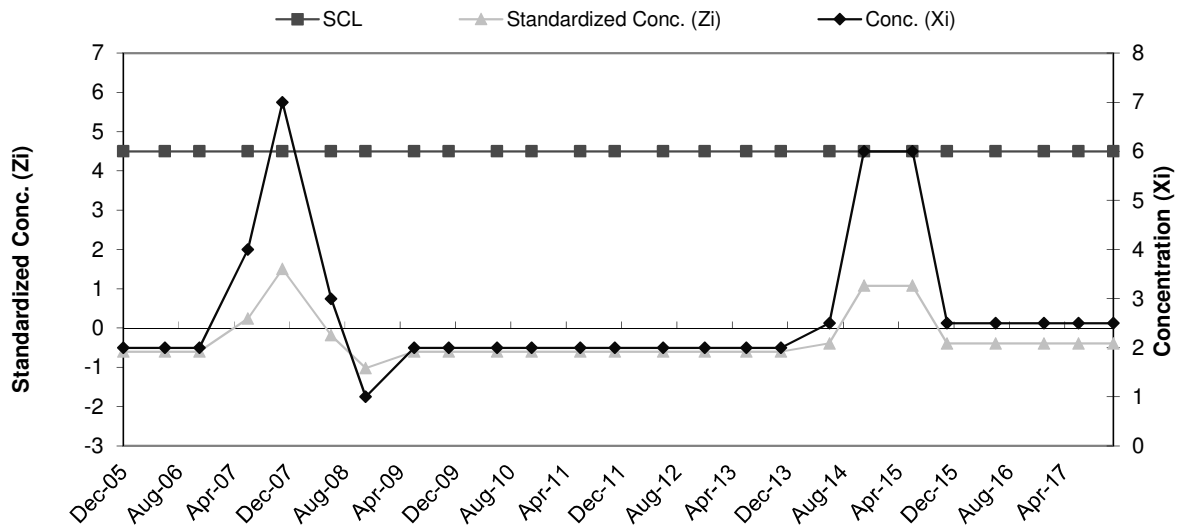


**COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-19a Cu**

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	May-98	5	3.43	2.38
2	May-01	5		
3	May-02	5		
4	Jun-03	2.5		
5	Nov-03	2.5		
6	Jun-04	2.5		
7	Dec-04	2.5		
8	Jun-05	2.5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Dec-05	4.5	2	-0.60
10	Jun-06	4.5	2	-0.60
11	Nov-06	4.5	2	-0.60
12	Jun-07	4.5	4	0.24
13	Nov-07	4.5	7	1.50
14	Jun-08	4.5	3	-0.18
15	Nov-08	4.5	1	-1.02
16	Jun-09	4.5	2	-0.60
17	Nov-09	4.5	2	-0.60
18	Jun-10	4.5	2	-0.60
19	Nov-10	4.5	2	-0.60
20	Jun-11	4.5	2	-0.60
21	Nov-11	4.5	2	-0.60
22	Jun-12	4.5	2	-0.60
23	Dec-12	4.5	2	-0.60
24	Jun-13	4.5	2	-0.60
25	Nov-13	4.5	2	-0.60
26	Jun-14	4.5	2.5	-0.39
27	Nov-14	4.5	6	1.08
28	Jun-15	4.5	6	1.08
29	Nov-15	4.5	2.5	-0.39
30	Jun-16	4.5	2.5	-0.39
31	Jan-17	4.5	2.5	-0.39
32	Jun-17	4.5	2.5	-0.39
33	Nov-17	4.5	2.5	-0.39

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

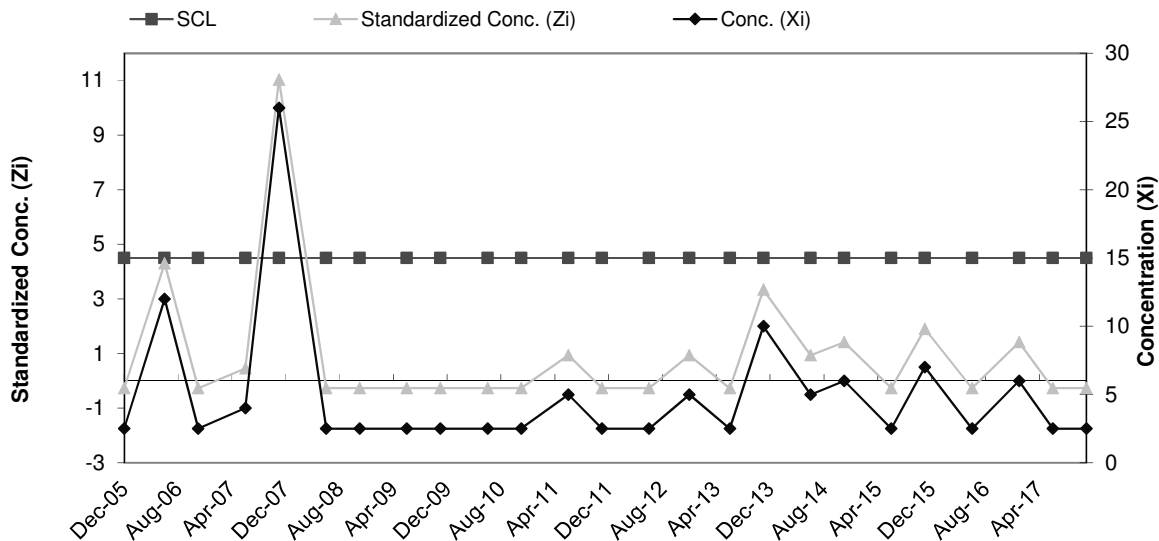


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-19a Ni

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	May-98	2.5	3.06	2.08
2	May-01	2.5		
3	May-02	2.5		
4	Jun-03	2.5		
5	Nov-03	2.5		
6	Jun-04	2.5		
7	Dec-04	2.5		
8	Jun-05	7		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Dec-05	4.5	2.5	-0.27
10	Jun-06	4.5	12	4.30
11	Nov-06	4.5	2.5	-0.27
12	Jun-07	4.5	4	0.45
13	Nov-07	4.5	26	11.03
14	Jun-08	4.5	2.5	-0.27
15	Nov-08	4.5	2.5	-0.27
16	Jun-09	4.5	2.5	-0.27
17	Nov-09	4.5	2.5	-0.27
19	Jun-10	4.5	2.5	-0.27
20	Nov-10	4.5	2.5	-0.27
21	Jun-11	4.5	5	0.93
22	Nov-11	4.5	2.5	-0.27
23	Jun-12	4.5	2.5	-0.27
24	Dec-12	4.5	5	0.93
25	Jun-13	4.5	2.5	-0.27
26	Nov-13	4.5	10	3.34
27	Jun-14	4.5	5	0.93
28	Nov-14	4.5	6	1.41
29	Jun-15	4.5	2.5	-0.27
30	Nov-15	4.5	7	1.89
31	Jun-16	4.5	2.5	-0.27
32	Jan-17	4.5	6	1.41
33	Jun-17	4.5	2.5	-0.27
34	Nov-17	4.5	2.5	-0.27

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

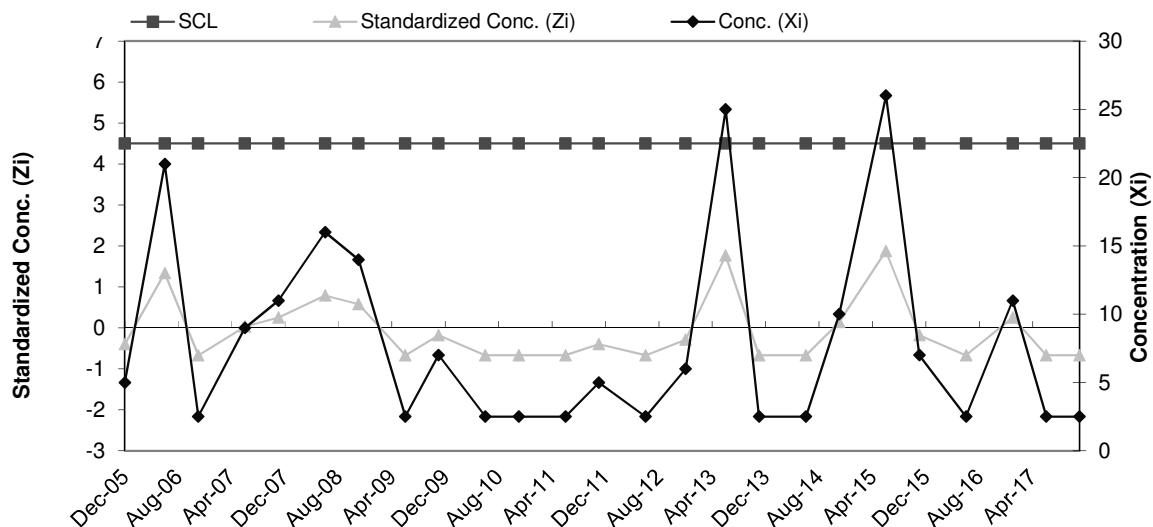


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-19a Zn

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	May-98	30	8.69	9.24
2	May-01	5		
3	May-02	10		
4	Jun-03	2.5		
5	Nov-03	2.5		
6	Jun-04	8		
7	Dec-04	9		
8	Jun-05	2.5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Dec-05	4.5	5	-0.40
10	Jun-06	4.5	21	1.33
11	Nov-06	4.5	2.5	-0.67
12	Jun-07	4.5	9	0.03
13	Nov-07	4.5	11	0.25
14	Jun-08	4.5	16	0.79
15	Nov-08	4.5	14	0.57
16	Jun-09	4.5	2.5	-0.67
17	Nov-09	4.5	7	-0.18
18	Jun-10	4.5	2.5	-0.67
19	Nov-10	4.5	2.5	-0.67
20	Jun-11	4.5	2.5	-0.67
21	Nov-11	4.5	5	-0.40
22	Jun-12	4.5	2.5	-0.67
23	Dec-12	4.5	6	-0.29
24	Jun-13	4.5	25	1.77
25	Nov-13	4.5	2.5	-0.67
26	Jun-14	4.5	2.5	-0.67
27	Nov-14	4.5	10	0.14
28	Jun-15	4.5	26	1.87
29	Nov-15	4.5	7	-0.18
30	Jun-16	4.5	2.5	-0.67
31	Jan-17	4.5	11	0.25
32	Jun-17	4.5	2.5	-0.67
33	Nov-17	4.5	2.5	-0.67

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

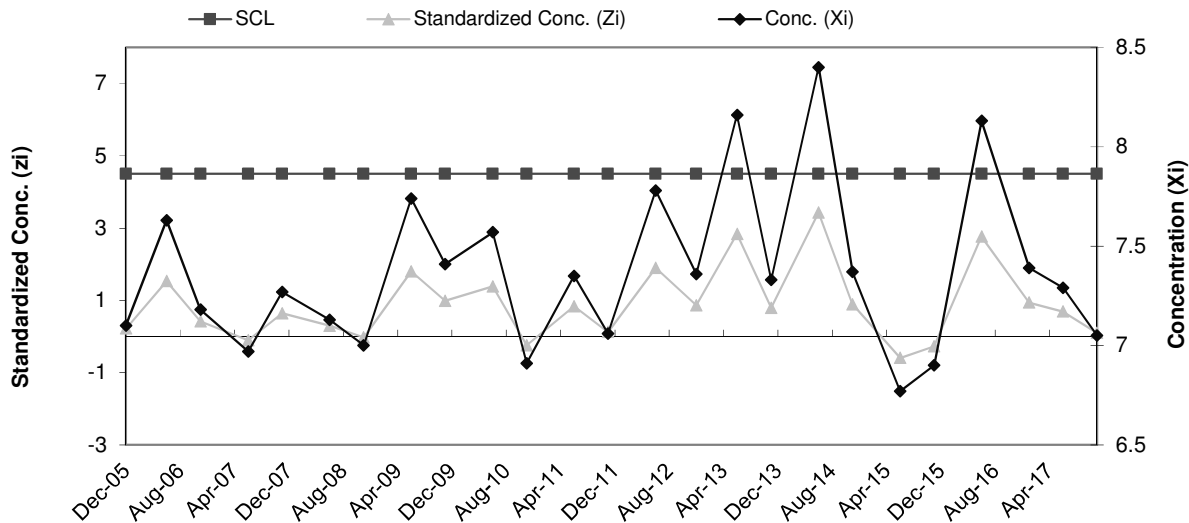


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-19a pH

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	May-98	6.8	7.01	0.40
2	May-01	7.1		
3	May-02	7.2		
4	Jun-03	6.9		
5	Nov-03	7.6		
6	Jun-04	7.2		
7	Dec-04	6.2		
8	Jun-05	7.1		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Dec-05	4.5	7.1	0.22
10	Jun-06	4.5	7.6	1.53
11	Nov-06	4.5	7.2	0.42
12	Jun-07	4.5	7.0	-0.10
13	Nov-07	4.5	7.3	0.64
14	Jun-08	4.5	7.1	0.29
15	Nov-08	4.5	7.0	-0.03
16	Jun-09	4.5	7.7	1.80
17	Nov-09	4.5	7.4	0.99
18	Jun-10	4.5	7.6	1.38
19	Nov-10	4.5	6.9	-0.25
20	Jun-11	4.5	7.4	0.84
21	Nov-11	4.5	7.1	0.12
22	Jun-12	4.5	7.8	1.90
23	Dec-12	4.5	7.4	0.86
24	Jun-13	4.5	8.2	2.84
25	Nov-13	4.5	7.3	0.79
26	Jun-14	4.5	8.4	3.43
27	Nov-14	4.5	7.4	0.89
28	Jun-15	4.5	6.8	-0.60
29	Nov-15	4.5	6.9	-0.27
30	Jun-16	4.5	8.1	2.76
31	Jan-17	4.5	7.4	0.94
32	Jun-17	4.5	7.3	0.69
33	Nov-17	4.5	7.1	0.10

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

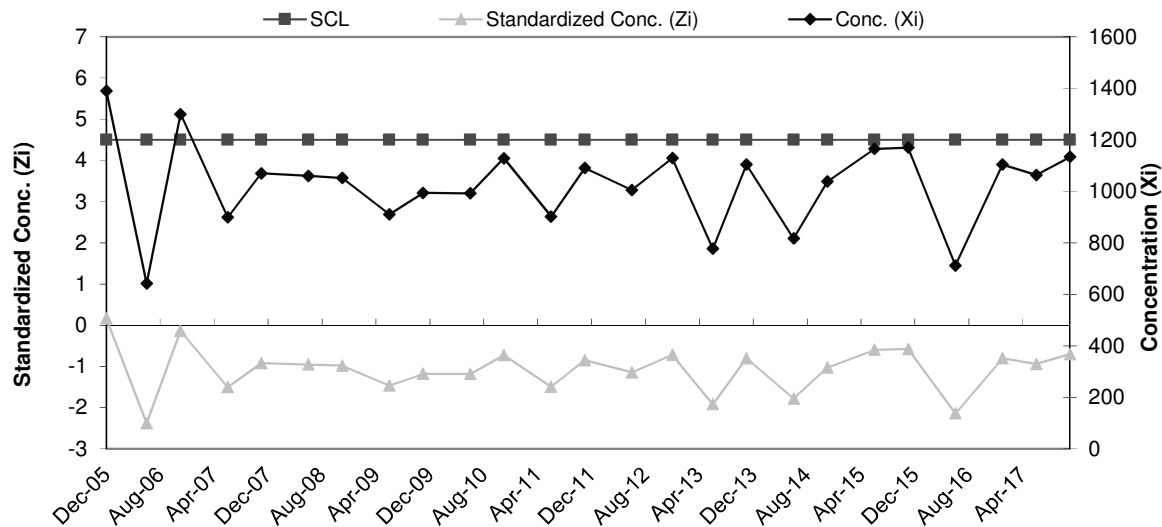


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-19a SpC

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	May-98	1480	1,340.63	293.72
2	May-01	1050		
3	May-02	1740		
4	Jun-03	1350		
5	Nov-03	1620		
6	Jun-04	1316		
7	Dec-04	1340		
8	Jun-05	829		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Dec-05	4.5	1390	0.17
10	Jun-06	4.5	642	-2.38
11	Nov-06	4.5	1300	-0.14
12	Jun-07	4.5	899	-1.50
13	Nov-07	4.5	1070	-0.92
14	Jun-08	4.5	1060	-0.96
15	Nov-08	4.5	1052	-0.98
16	Jun-09	4.5	911	-1.46
17	Nov-09	4.5	994	-1.18
18	Jun-10	4.5	992	-1.19
19	Nov-10	4.5	1128	-0.72
20	Jun-11	4.5	902	-1.49
21	Nov-11	4.5	1091	-0.85
22	Jun-12	4.5	1005	-1.14
23	Dec-12	4.5	1129	-0.72
24	Jun-13	4.5	777	-1.92
25	Nov-13	4.5	1104	-0.81
26	Jun-14	4.5	817	-1.78
27	Nov-14	4.5	1038	-1.03
28	Jun-15	4.5	1165	-0.60
29	Nov-15	4.5	1170	-0.58
30	Jun-16	4.5	712	-2.14
31	Jan-17	4.5	1104	-0.81
32	Jun-17	4.5	1064	-0.94
33	Nov-17	4.5	1134	-0.70

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

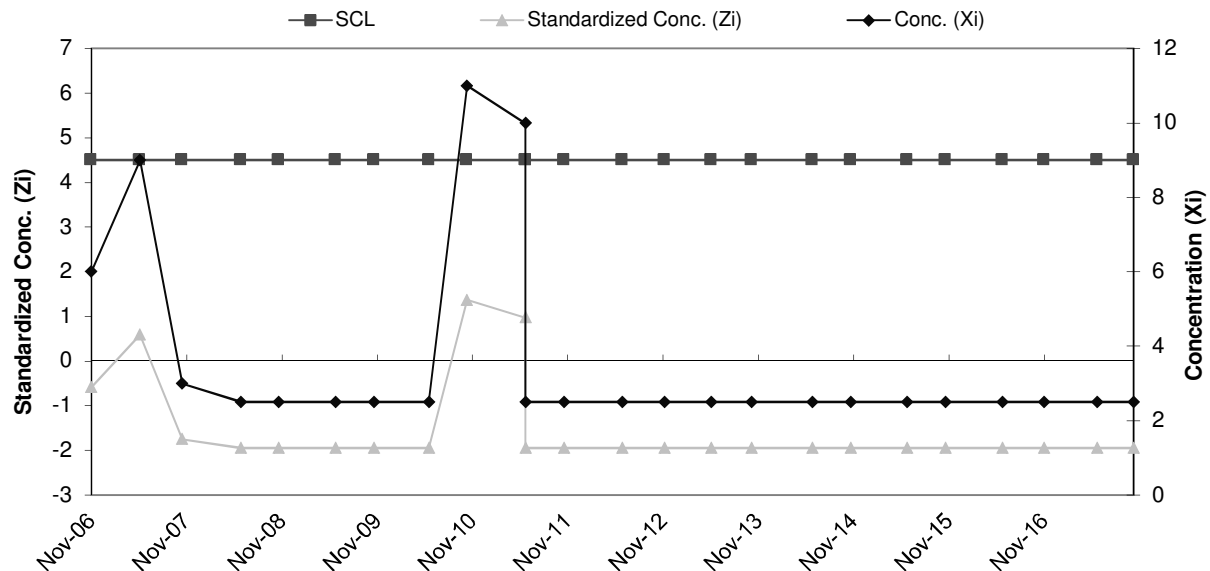


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-24 Cr

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Aug-96	10	7.50	2.56
2	Nov-96	10		
3	May-97	5		
4	May-98	5		
5	Nov-03	5		
6	Jun-05	8		
7	Dec-05	11		
8	Jun-06	6		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-06	4.5	6	-0.59
10	Jun-07	4.5	9	0.59
11	Nov-07	4.5	3	-1.76
12	Jun-08	4.5	2.5	-1.95
13	Nov-08	4.5	2.5	-1.95
14	Jun-09	4.5	2.5	-1.95
15	Nov-09	4.5	2.5	-1.95
16	Jun-10	4.5	2.5	-1.95
17	Nov-10	4.5	11	1.37
18	Jun-11	4.5	10	0.98
19	Jun-11	4.5	2.5	-1.95
20	Nov-11	4.5	2.5	-1.95
21	Jun-12	4.5	2.5	-1.95
22	Dec-12	4.5	2.5	-1.95
23	Jun-13	4.5	2.5	-1.95
24	Nov-13	4.5	2.5	-1.95
25	Jun-14	4.5	2.5	-1.95
26	Nov-14	4.5	2.5	-1.95
27	Jun-15	4.5	2.5	-1.95
28	Nov-15	4.5	2.5	-1.95
29	Jun-16	4.5	2.5	-1.95
30	Nov-16	4.5	2.5	-1.95
31	Jun-17	4.5	2.5	-1.95
32	Nov-17	4.5	2.5	-1.95

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

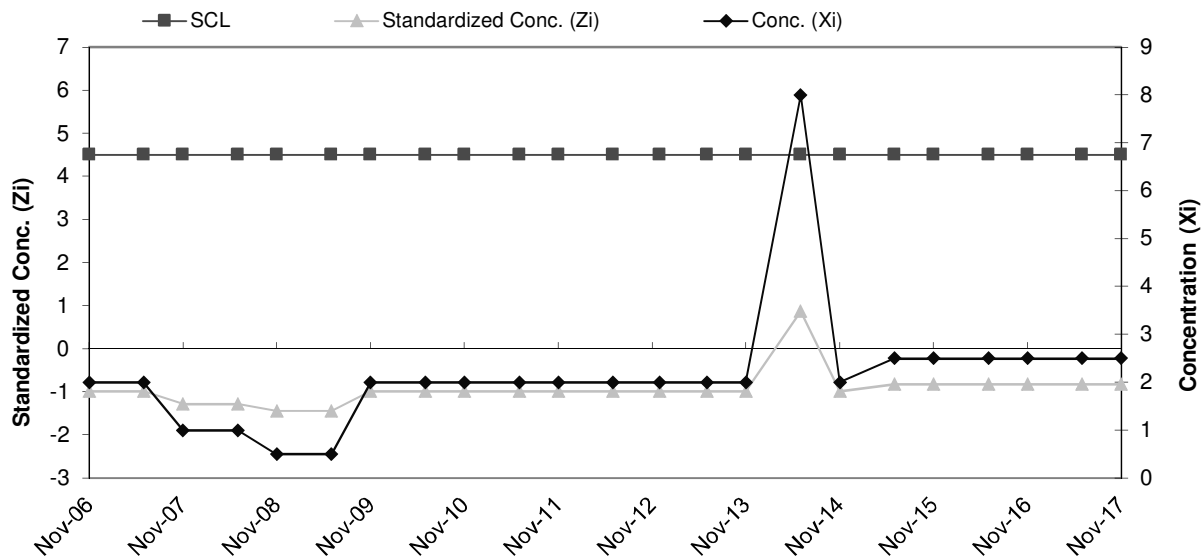


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-24 Cu

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Aug-96	10	5.19	3.25
2	Nov-96	10		
3	May-97	5		
4	May-98	5		
5	Nov-03	5		
6	Jun-05	2.5		
7	Dec-05	2		
8	Jun-06	2		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-06	4.5	2	-0.98
10	Jun-07	4.5	2	-0.98
11	Nov-07	4.5	1	-1.29
12	Jun-08	4.5	1	-1.29
13	Nov-08	4.5	0.5	-1.44
14	Jun-09	4.5	0.5	-1.44
15	Nov-09	4.5	2	-0.98
16	Jun-10	4.5	2	-0.98
17	Nov-10	4.5	2	-0.98
18	Jun-11	4.5	2	-0.98
19	Nov-11	4.5	2	-0.98
20	Jun-12	4.5	2	-0.98
21	Dec-12	4.5	2	-0.98
22	Jun-13	4.5	2	-0.98
23	Nov-13	4.5	2	-0.98
24	Jun-14	4.5	8	0.87
25	Nov-14	4.5	2	-0.98
26	Jun-15	4.5	2.5	-0.83
27	Nov-15	4.5	2.5	-0.83
28	Jun-16	4.5	2.5	-0.83
29	Nov-16	4.5	2.5	-0.83
30	Jun-17	4.5	2.5	-0.83
31	Nov-17	4.5	2.5	-0.83

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

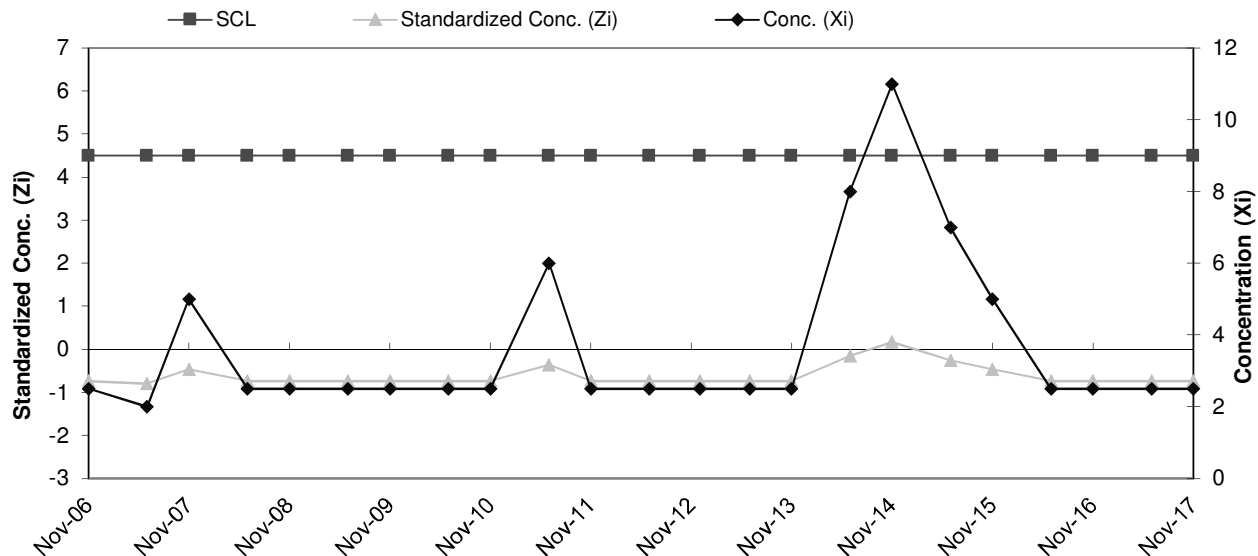


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-24 Ni

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Aug-96	10	9.44	9.35
2	Nov-96	10		
3	May-97	31		
4	May-98	8		
5	Nov-03	9		
6	Jun-05	2.5		
7	Dec-05	2.5		
8	Jun-06	2.5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-06	4.5	2.5	-0.74
10	Jun-07	4.5	2	-0.80
11	Nov-07	4.5	5	-0.47
12	Jun-08	4.5	2.5	-0.74
13	Nov-08	4.5	2.5	-0.74
14	Jun-09	4.5	2.5	-0.74
15	Nov-09	4.5	2.5	-0.74
16	Jun-10	4.5	2.5	-0.74
17	Nov-10	4.5	2.5	-0.74
18	Jun-11	4.5	6	-0.37
19	Nov-11	4.5	2.5	-0.74
20	Jun-12	4.5	2.5	-0.74
21	Dec-12	4.5	2.5	-0.74
22	Jun-13	4.5	2.5	-0.74
23	Nov-13	4.5	2.5	-0.74
24	Jun-14	4.5	8	-0.15
25	Nov-14	4.5	11	0.17
26	Jun-15	4.5	7	-0.26
27	Nov-15	4.5	5	-0.47
28	Jun-16	4.5	2.5	-0.74
29	Nov-16	4.5	2.5	-0.74
30	Jun-17	4.5	2.5	-0.74
31	Nov-17	4.5	2.5	-0.74

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

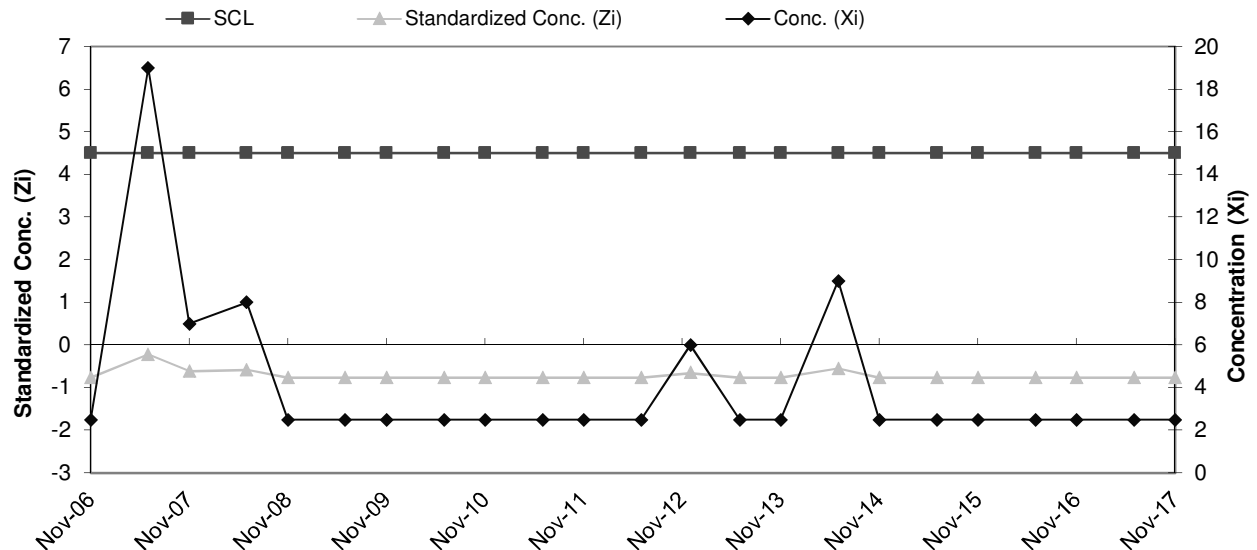


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-24 Zn

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Aug-96	90	25.63	30.14
2	Nov-96	50		
3	May-97	10		
4	May-98	20		
5	Nov-03	20		
6	Jun-05	2.5		
7	Dec-05	10		
8	Jun-06	2.5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-06	4.5	2.5	-0.77
10	Jun-07	4.5	19	-0.22
11	Nov-07	4.5	7	-0.62
12	Jun-08	4.5	8	-0.58
13	Nov-08	4.5	2.5	-0.77
14	Jun-09	4.5	2.5	-0.77
15	Nov-09	4.5	2.5	-0.77
16	Jun-10	4.5	2.5	-0.77
17	Nov-10	4.5	2.5	-0.77
18	Jun-11	4.5	2.5	-0.77
19	Nov-11	4.5	2.5	-0.77
20	Jun-12	4.5	2.5	-0.77
21	Dec-12	4.5	6	-0.65
22	Jun-13	4.5	2.5	-0.77
23	Nov-13	4.5	2.5	-0.77
24	Jun-14	4.5	9	-0.55
25	Nov-14	4.5	2.5	-0.77
26	Jun-15	4.5	2.5	-0.77
27	Nov-15	4.5	2.5	-0.77
28	Jun-16	4.5	2.5	-0.77
29	Nov-16	4.5	2.5	-0.77
30	Jun-17	4.5	2.5	-0.77
31	Nov-17	4.5	2.5	-0.77

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

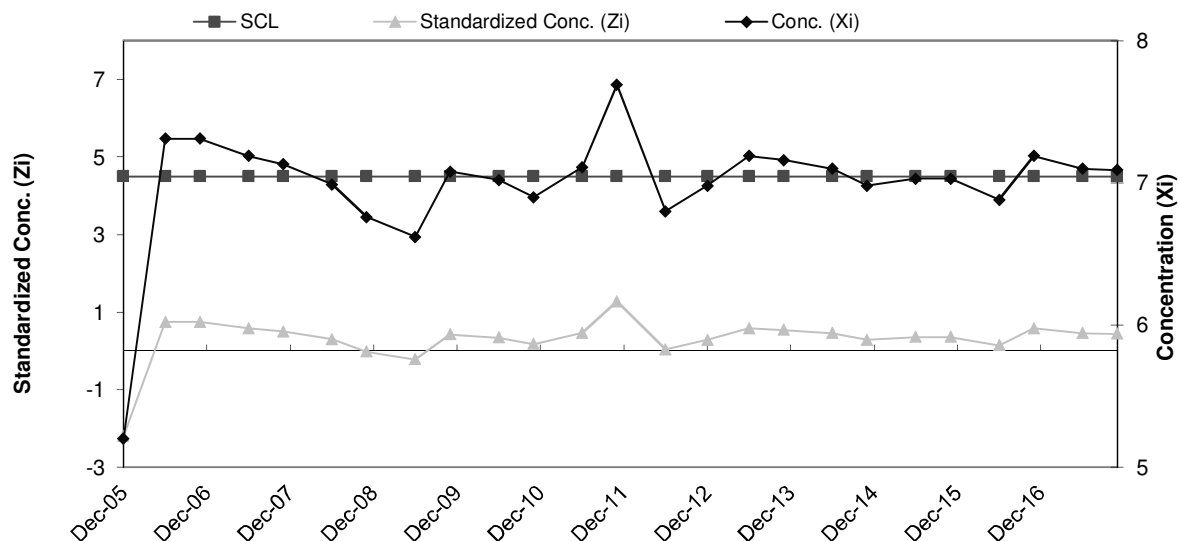


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-24 pH

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Aug-96	7.8	6.78	0.72
2	Nov-96	7.1		
3	May-97	6.4		
4	May-98	7		
5	Nov-98	6		
6	Nov-99	7		
7	May-01	6.4		
8	Jun-05	7.3		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Dec-05	4.5	5.2	-2.20
10	Jun-06	4.5	7.3	0.75
11	Nov-06	4.5	7.3	0.75
12	Jun-07	4.5	7.2	0.58
13	Nov-07	4.5	7.1	0.50
14	Jun-08	4.5	7.0	0.30
15	Nov-08	4.5	6.8	-0.02
14	Jun-09	4.5	6.6	-0.22
15	Nov-09	4.5	7.1	0.43
16	Jun-10	4.5	7.0	0.34
17	Nov-10	4.5	6.9	0.17
18	Jun-11	4.5	7.1	0.47
19	Nov-11	4.5	7.7	1.28
20	Jun-12	4.5	6.8	0.03
21	Dec-12	4.5	7.0	0.29
22	Jun-13	4.5	7.2	0.58
23	Nov-13	4.5	7.2	0.54
24	Jun-14	4.5	7.1	0.45
25	Nov-14	4.5	7.0	0.29
26	Jun-15	4.5	7.0	0.36
27	Nov-15	4.5	7.0	0.36
28	Jun-16	4.5	6.9	0.15
29	Nov-16	4.5	7.2	0.58
30	Jun-17	4.5	7.1	0.45
31	Nov-17	4.5	7.1	0.44

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

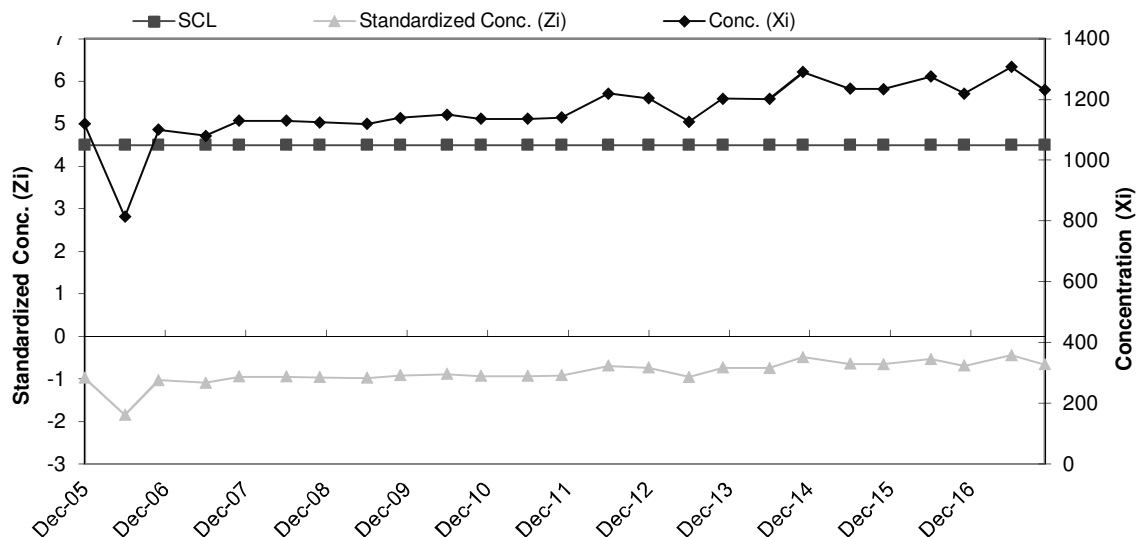


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-24 SpC

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Aug-96	1502	1,462.00	351.23
2	Nov-96	2030		
3	May-97	1700		
4	May-98	1410		
5	Nov-98	1595		
6	Nov-99	1152		
7	May-01	1450		
8	Jun-05	857		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Dec-05	4.5	1120	-0.97
10	Jun-06	4.5	814	-1.84
11	Nov-06	4.5	1100	-1.03
12	Jun-07	4.5	1080	-1.09
13	Nov-07	4.5	1130	-0.95
14	Jun-08	4.5	1130	-0.95
15	Nov-08	4.5	1125	-0.96
16	Jun-09	4.5	1120	-0.97
17	Nov-09	4.5	1140	-0.92
18	Jun-10	4.5	1150	-0.89
19	Nov-10	4.5	1136	-0.93
20	Jun-11	4.5	1136	-0.93
21	Nov-11	4.5	1141	-0.91
22	Jun-12	4.5	1219	-0.69
23	Dec-12	4.5	1204	-0.73
24	Jun-13	4.5	1127	-0.95
25	Nov-13	4.5	1203	-0.74
26	Jun-14	4.5	1202	-0.74
27	Nov-14	4.5	1290	-0.49
28	Jun-15	4.5	1235	-0.65
29	Nov-15	4.5	1234	-0.65
30	Jun-16	4.5	1275	-0.53
31	Nov-16	4.5	1220	-0.69
32	Jun-17	4.5	1307	-0.44
33	Nov-17	4.5	1231	-0.66

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

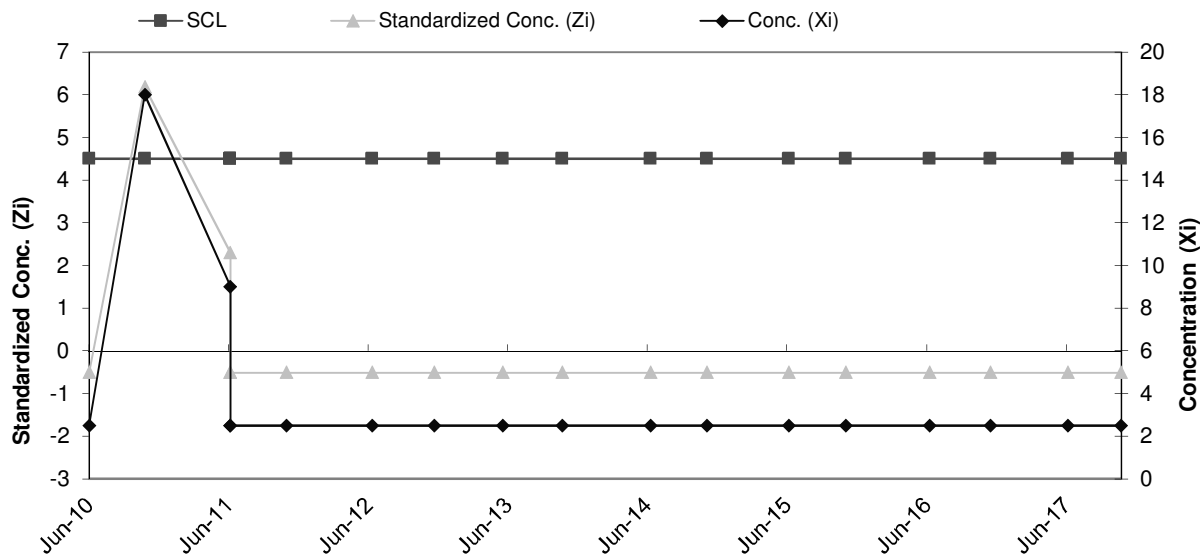


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-28 Cr

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-06	5	3.69	2.31
2	Dec-06	2.5		
3	Jun-07	9		
4	Nov-07	3		
5	Jun-08	2.5		
6	Nov-08	2.5		
7	Jun-09	2.5		
8	Nov-09	2.5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Jun-10	4.5	2.5	-0.51
10	Nov-10	4.5	18	6.19
11	Jun-11	4.5	9	2.30
12	Jun-11	4.5	2.5	-0.51
13	Jun-11	4.5	2.5	-0.51
14	Nov-11	4.5	2.5	-0.51
15	Jun-12	4.5	2.5	-0.51
16	Dec-12	4.5	2.5	-0.51
17	Jun-13	4.5	2.5	-0.51
18	Nov-13	4.5	2.5	-0.51
19	Jun-14	4.5	2.5	-0.51
20	Nov-14	4.5	2.5	-0.51
21	Jun-15	4.5	2.5	-0.51
22	Nov-15	4.5	2.5	-0.51
23	Jun-16	4.5	2.5	-0.51
24	Nov-16	4.5	2.5	-0.51
25	Jun-17	4.5	2.5	-0.51
26	Nov-17	4.5	2.5	-0.51

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

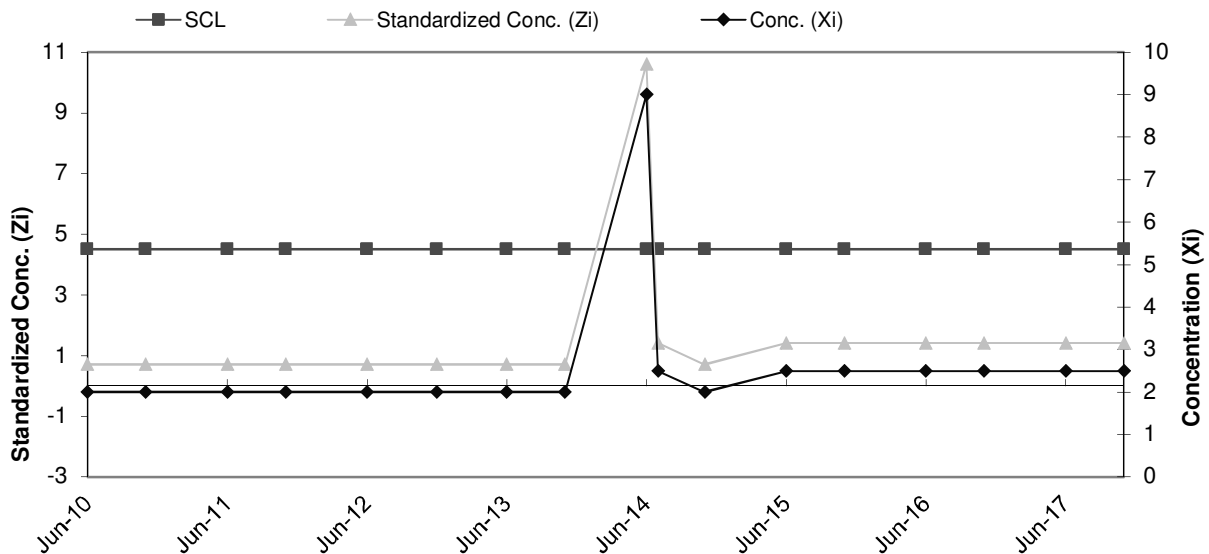


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-28 Cu

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-06	2	1.50	0.71
2	Dec-06	2		
3	Jun-07	2		
4	Nov-07	2		
5	Jun-08	1		
6	Nov-08	0.5		
7	Jun-09	0.5		
8	Nov-09	2		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Jun-10	4.5	2	0.71
10	Nov-10	4.5	2	0.71
11	Jun-11	4.5	2	0.71
12	Nov-11	4.5	2	0.71
13	Jun-12	4.5	2	0.71
14	Dec-12	4.5	2	0.71
15	Jun-13	4.5	2	0.71
16	Nov-13	4.5	2	0.71
17	Jun-14	4.5	9	10.61
18	Jul-14	4.5	2.5	1.41
19	Nov-14	4.5	2	0.71
20	Jun-15	4.5	2.5	1.41
21	Nov-15	4.5	2.5	1.41
22	Jun-16	4.5	2.5	1.41
23	Nov-16	4.5	2.5	1.41
24	Jun-17	4.5	2.5	1.41
25	Nov-17	4.5	2.5	1.41

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

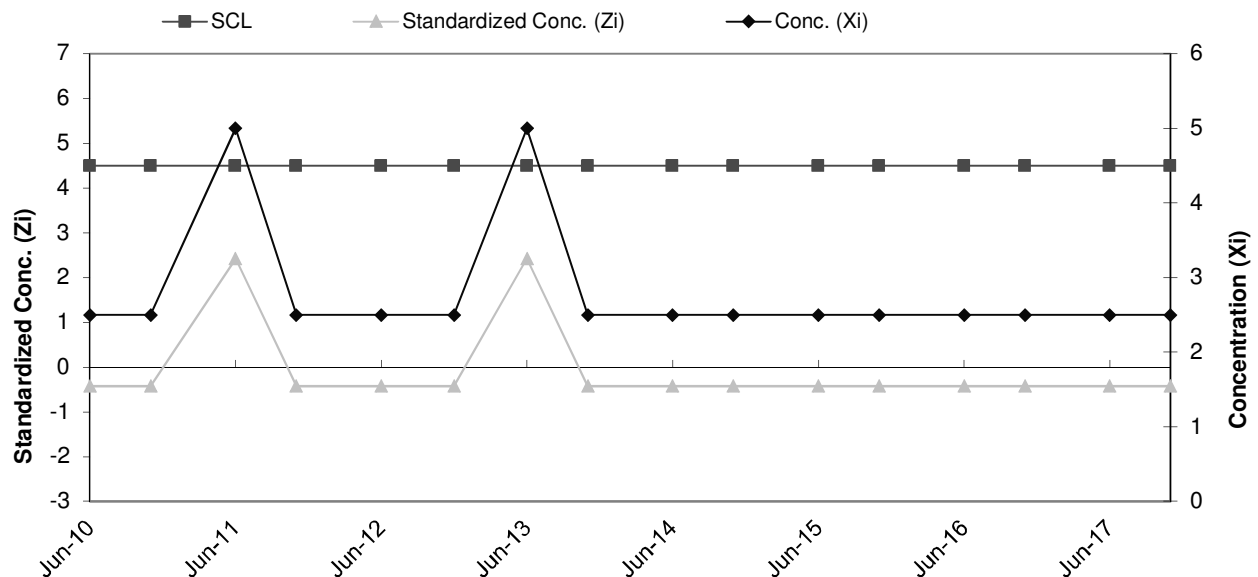


B-28 Ni

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-06	2.5	2.88	0.88
2	Dec-06	2.5		
3	Jun-07	3		
4	Nov-07	5		
5	Jun-08	2.5		
6	Nov-08	2.5		
7	Jun-09	2.5		
8	Nov-09	2.5		

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

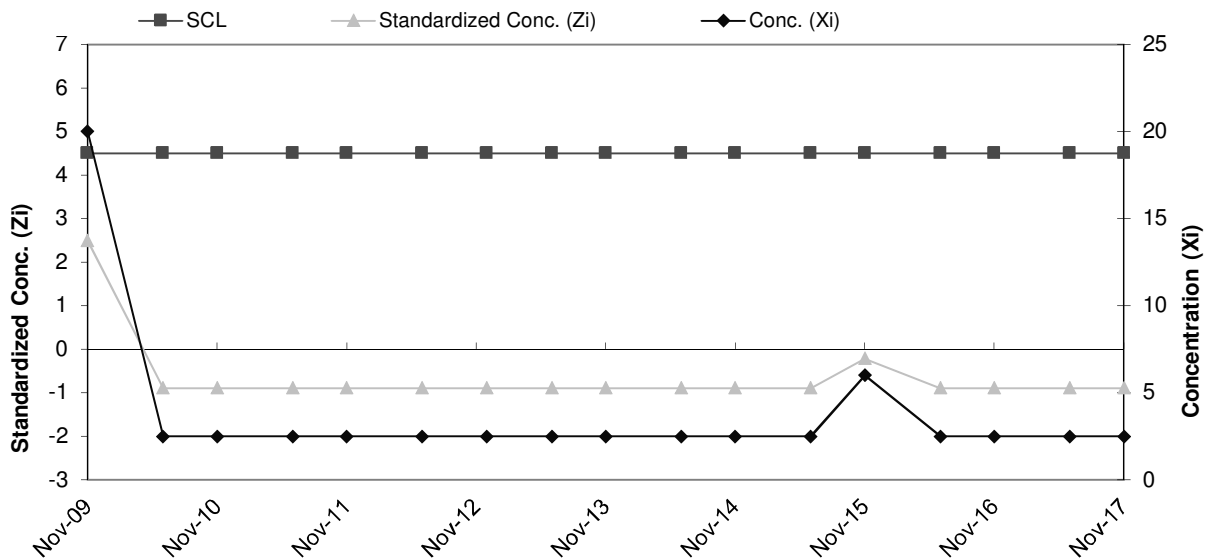


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-28 Zn

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Nov-05	7	7.13	5.16
2	Jun-06	18		
3	Dec-06	5		
4	Jun-07	6		
5	Nov-07	11		
6	Jun-08	5		
7	Nov-08	2.5		
8	Jun-09	2.5		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-09	4.5	20	2.50
10	Jun-10	4.5	2.5	-0.90
11	Nov-10	4.5	2.5	-0.90
12	Jun-11	4.5	2.5	-0.90
13	Nov-11	4.5	2.5	-0.90
14	Jun-12	4.5	2.5	-0.90
15	Dec-12	4.5	2.5	-0.90
16	Jun-13	4.5	2.5	-0.90
17	Nov-13	4.5	2.5	-0.90
18	Jun-14	4.5	2.5	-0.90
19	Nov-14	4.5	2.5	-0.90
20	Jun-15	4.5	2.5	-0.90
21	Nov-15	4.5	6	-0.22
22	Jun-16	4.5	2.5	-0.90
23	Nov-16	4.5	2.5	-0.90
24	Jun-17	4.5	2.5	-0.90
25	Nov-17	4.5	2.5	-0.90

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

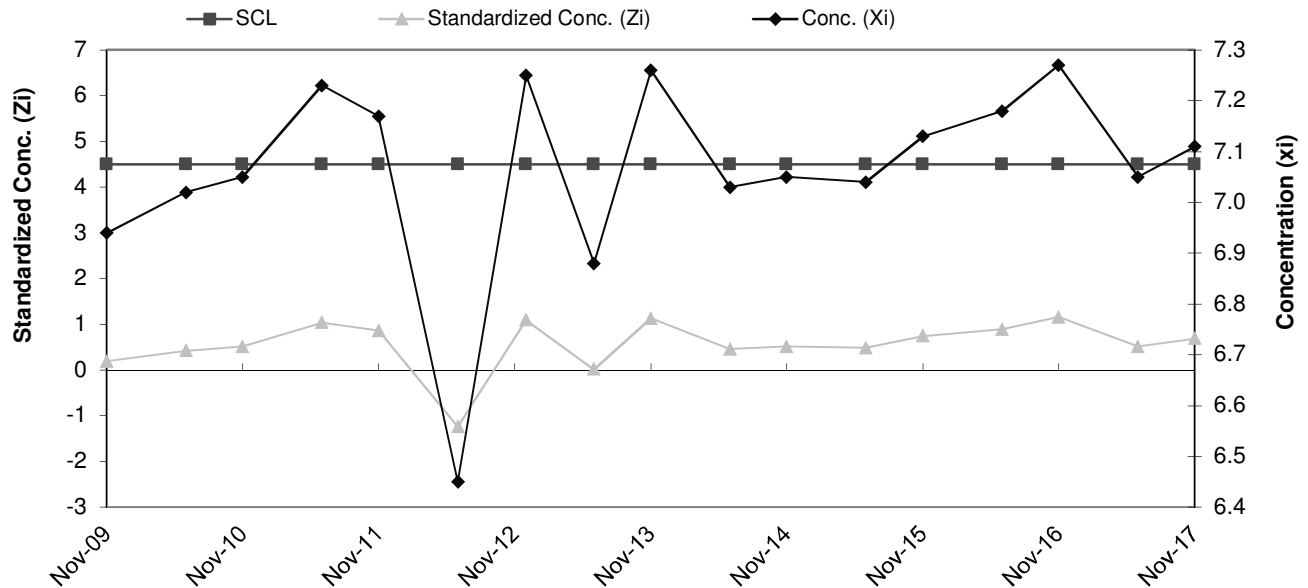


B-28 pH

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Nov-05	6.2	6.87	0.34
2	Jun-06	7.1		
3	Dec-06	7.4		
4	Jun-07	6.8		
5	Nov-07	6.8		
6	Jun-08	6.9		
7	Nov-08	6.8		
8	Jun-09	7.0		

[illegible]

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

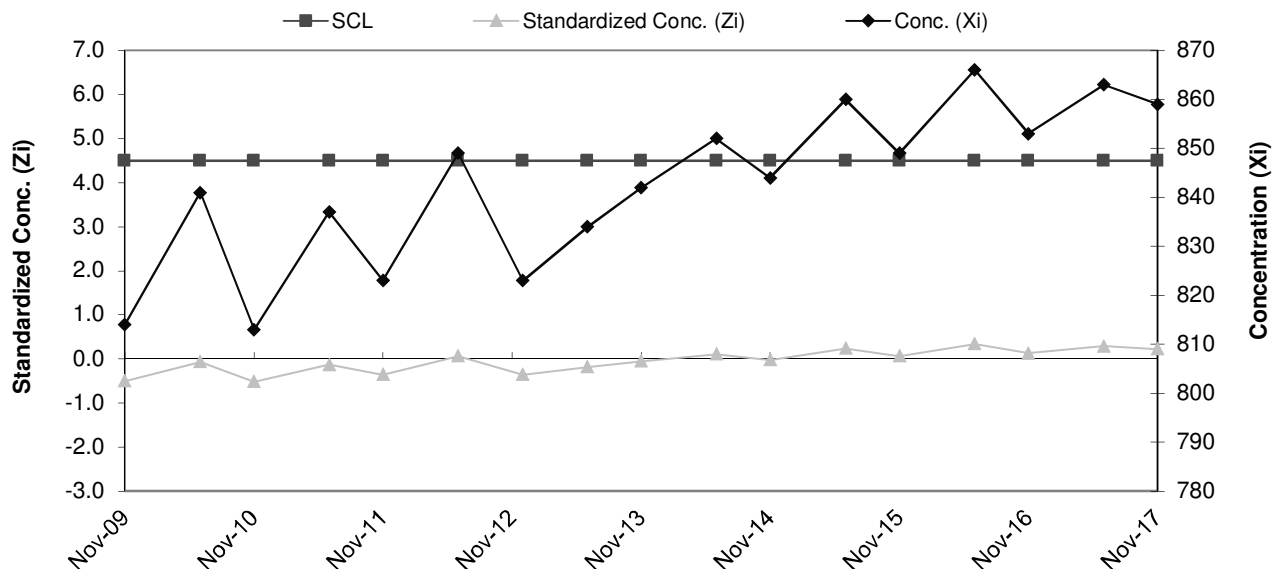


COLDWATER ROAD LANDFILL FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-28 SpC

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Nov-05	994	845.13	61.71
2	Jun-06	828		
3	Dec-06	812		
4	Jun-07	845		
5	Nov-07	816		
6	Jun-08	840		
7	Nov-08	804		
8	Jun-09	822		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-09	4.5	814	-0.50
10	Jun-10	4.5	841	-0.07
11	Nov-10	4.5	813	-0.52
12	Jun-11	4.5	837	-0.13
13	Nov-11	4.5	823	-0.36
14	Jun-12	4.5	849	0.06
15	Dec-12	4.5	823	-0.36
16	Jun-13	4.5	834	-0.18
17	Nov-13	4.5	842	-0.05
18	Jun-14	4.5	852	0.11
19	Nov-14	4.5	844	-0.02
20	Jun-15	4.5	860	0.24
21	Nov-15	4.5	849	0.06
22	Jun-16	4.5	866	0.34
23	Nov-16	4.5	853	0.13
24	Jun-17	4.5	863	0.29
25	Nov-17	4.5	859	0.22

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



APPENDIX F
Well Development Logs

WELL DEVELOPMENT LOG

Well ID: B-27D

Date 5/9/17 Field Personnel KBS/CSV Weather Sunny 50's
 Site Name Colony Contractor — Project No. 64737
 Site Location Flint Evacuation Method SUB Pump/Bailer

Well information:

Depth to Bottom (Initial)* 87.29 ft. Date(s) Installed — Date(s) Developed 5/9/17
 Depth to Bottom (Final)* 88.25 ft. Driller — Development Time Start: 937
 Depth to Water (Initial)* 75.70 ft. Well Diameter 2 in. Stop:
 Depth to Water (Final)* 77.50 ft. Casing Volume — gal. Total:
 * Measuring point TOC Pump setting* — ft.
 (intake)

Elapsed Time	Volume of Water Removed (Gallons)	Temperature °C	pH s.u	Conductivity mS/cm	Turbidity (NTU)	Approximate Flow Rate (gal/min)	Depth to Water (ft.)	Appearance of Water
10 min	Surged							
	start of pumping	12.4	7.34	0.570	1100	0.5	76.28	Gray
	end of pumping	12.2	7.47	0.300	1100	0.5	79.10	Gray
	Surged							
	start	12.7		0.539	1100	0.5	72.95	Gray
	end	13.2	7.67	0.441	1100	0.5	78.	Gray
	Surged							
	start	12.8	7.33	0.571	1100	0.5	75.	Gray
	end	12.4	7.52	0.547	1100	0.5	80.39	Gray
	Surged							
	start	13.3	7.63	0.279	1100	0.5	74.10	Gray
	end	12.8	7.55	0.336	1100	0.5	80.50	Gray
5/10 <	Surged w/ Bailer							
	Surged w/ Bailer							
5/11 <	Surged w/ Bailer							
	Surged w/ Bailer							
	Surged w/ Bailer							

Note: Following development use the extra rows in the table above to monitor the ground water recovery, if possible to within 10% of initial DTW

Development Water Characteristics:

Total volume of Development water removed: 34 gallons
 Physical appearance at start
 Color Gray
 Odor NONE
 Sheen/Free Product NONE
 Physical appearance at end
 Color Gray
 Odor NONE
 Sheen/Free Product NONE

NOTES:

Surged 10 min / purged 10 min
Surged and purged w/ stainless steel bailer on 5/10/17 and 5/11/17

Geologist Signature:

Gallons 5/9/13/17/22/24/26/29/34

WELL DEVELOPMENT LOG

 Well ID: B-22D

 Date 5/10/17
 Site Name Coldwater Rd
 Site Location Flint, MI

 Field Personnel KBS/CSY
 Contractor Sub Pump
 Evacuation Method Sub Pump

 Weather mostly cloudy 50's
 Project No. 64737

Well information:

Depth to Bottom (Initial) *	<u>99.30</u>	ft.	Date(s) Installed	<u> </u>	Date(s) Developed	<u>5/10/17</u>
Depth to Bottom (Final) *	<u>99.30</u>	ft.	Driller	<u> </u>	Development Time	Start: <u>9:10</u>
Depth to Water (Initial) *	<u>84.27</u>	ft.	Well Diameter	<u>2</u>		Stop: <u>12:15</u>
Depth to Water (Final) *	<u>86.05</u>	ft.	Casing Volume	<u> </u>		Total: <u> </u>

* Measuring point Toc Pump setting* ft.
 (intake)

Elapsed Time	Volume of Water Removed (Gallons)	Temperature °C	pH s.u	Conductivity mS/cm	Turbidity (NTU)	Approximate Flow Rate (gal/min)	Depth to Water (ft.)	Appearance of Water
	Surged							
	start	12.1	7.38	0.680	1100	0.5	84.45	Gray
	end	12.3	7.51	0.680	669	0.5	87.29	lt Gray
	Surged							
	start	12.6	7.57	0.633	1100	0.5	84.68	Gray
	end	13.9	7.50	0.534	491	0.5	86.75	lt Gray
	Surged							
	start	12.3	7.54	0.570	1100	0.5	87.60	Gray
	end	12.14	7.45	0.485	251	0.5	89.59	lt Gray
	Surged							
	start	13.0	7.51	0.500	1100	0.5	84.75	Gray
	end	13.0	7.46	0.461	326	0.5	88.70	lt Gray
	Surged							
	start	12.9	7.47	0.448	861	0.5	84.90	Gray
	end	12.9	7.48	0.448	190	0.5	89.56	lt Gray
	Surged						84.81	
	start	13.3	7.53	0.650	935	0.5	84.81	Gray
	end	12.5	7.37	0.607	1100	0.5	89.90	lt Gray

Note: Following development use the extra rows in the table above to monitor the ground water recovery, if possible to within 10% of initial DTW

Development Water Characteristics:

 Total volume of Development water removed: 48 gallons

Physical appearance at start

 Color Gray

 Odor NONE

 Sheen/Free Product NONE

Physical appearance at end

 Color light Gray

 Odor NONE

 Sheen/Free Product NONE

NOTES:

Surged 10 min / Pumped 10 min

Geologist Signature:

Gallons : 5/8/14/23/32/37/41/45/48

WELL DEVELOPMENT LOG

Well ID: B-21D

Date 5/11/17
Site Name Coldwater Rd
Site Location Flint, MI

Field Personnel KBS/CSV
Contractor —
Evacuation Method Sub Pump

Weather Cloudy 50's
Project No. 64737
Well information:

Depth to Bottom (Initial)* 97.75 ft. Date(s) Installed — Date(s) Developed 5/11/17
Depth to Bottom (Final)* 98.80 ft. Driller — Development Time Start: 925
Depth to Water (Initial)* 79.95 ft. Well Diameter 2 in. Stop: 1225
Depth to Water (Final)* 88.40 ft. Casing Volume — gal. Total: —

* Measuring point TOC Pump setting* — ft.
(intake)

Elapsed Time	Volume of Water Removed (Gallons)	Temperature °C	pH s.u	Conductivity mS/cm	Turbidity (NTU)	Approximate Flow Rate (gal/min)	Depth to Water (ft.)	Appearance of Water
	Surged							
	start	11.4	7.22	0.507	1100	0.25	83.45	Gray
	end	14.1	7.37	0.395	1100	0.25	84.91	Gray
	Surged							
	start	14.1	7.47	0.304	1100	0.5	83.11	Gray
	end	12.7	7.25	0.306	1100	0.5	91.10	Gray
	Surged							
	start	12.5	7.47	0.341	1100	0.5	81.0	Gray
	end	12.2	7.23	0.354	1100	0.5	—	Gray
	Surged							
	start	13.0	7.48	0.354	1100	0.5	81.80	Gray
	end	12.4	7.34	0.357	1100	0.5	91.91	Gray
	Surged							
	start	12.5	7.22	0.308	1100	0.5	82.35	Gray
	end	12.0	7.20	0.371	1100	0.5	92.40	Gray
	Surged							
	start	11.7	7.29	0.387	1100	0.5	—	Gray
	end	12.2	7.19	0.371	1100	0.5	93.46	Gray

Note: Following development use the extra rows in the table above to monitor the ground water recovery, if possible to within 10% of initial DTW

Development Water Characteristics:

Total volume of Development water removed: 38 gallons

Physical appearance at start

Color Gray

Odor NONE

Sheen/Free Product NONE

Physical appearance at end

Color Gray

Odor NONE

Sheen/Free Product NONE
NOTES:
Surged 10 min / purged 10 min

Geologist Signature:

Gallons 3/5/9/14/18/23/27/32/38

WELL DEVELOPMENT LOG

Well ID: B-19c

Date 5/11/17
Site Name Coldwater
Site Location Flint

Field Personnel KBS/CSV W
Contractor - Pr
Evacuation Method Sub Pump/Boiler

Weather mostly sunny 60's
Project No. 64737

Well information:

Depth to Bottom (Initial) *	<u>46.72</u>	ft.	Date(s) Installed	<u></u>	Date(s) Developed	<u>5/11/17</u>
Depth to Bottom (Final)*	<u></u>	ft.	Driller	<u></u>	Development Time	Start: <u>1415</u>
Depth to Water (Initial)*	<u>38.20</u>	ft.	Well Diameter	<u>2</u>		Stop: <u>1515</u>
Depth to Water (Final)*	<u></u>	ft.	Casing Volume	<u></u>	gal.	Total: <u></u>
* Measuring point	<u>Toc</u>		Pump setting*	<u></u>	ft.	

* Measuring point

Pump setting* _____ ft.
(intake)

[illegible]

Note: Following development use the extra rows in the table above to monitor the ground water recovery, if possible to within 10% of initial DTW

Development Water Characteristics:

Total volume of Development water removed: 382 gallons

Physical appearance at start

Color Brown

Odor none

Sheen/Free Product NONE

Physical appearance at end

Color brown

Odor None

Sheen/Free Product name

NOTES:

Pumped in 3 1/2 gallons

Geologist Signature:

Gallons $3\frac{1}{2}$



Well ID: B-7

Date 5/11/17
Site Name Coldwater
Site Location Forest

Field Personnel KBS/CSY

Contractor -

Evacuation Method SUB PUMP/bailer

Weather Sunny 60's
Project No. 64737

Well information:

Depth to Bottom (Initial) *	29.60	ft.	Date(s) Installed		Date(s) Developed	3/11/17
Depth to Bottom (Final)*		ft.	Driller		Development Time	Start: 1525
Depth to Water (Initial)*	21.25	ft.	Well Diameter			Stop:
Depth to Water (Final)*		ft.	Casing Volume			Total:

* Measuring point

Pump setting* _____ ft.
(intake)

[illegible]

Note: Following development use the extra rows in the table above to monitor the ground water recovery, if possible to within 10% of initial DTW

Development Water Characteristics:

Total volume of Development water removed: 3 rd gallons

Physical appearance at start

Color	Brown
Odor	NONE

Sheen/Free Product NINE

Physical appearance at end

Color	Brown
Odor	NONE
Product	NONE

Sheen/Free Product NONE

NOTES:

Geologist Signature:

APPENDIX G
Updated Survey Data

NOWRY & HALE LAND SURVEYING, LLC

192 N. MAIN, PLYMOUTH, MI 48170

734-446-5501

nowryhale1@yahoo.com

SITE: RACER TRUST COLDWATER ROAD LANDFILL FACILITY FLINT, MI

Elevations are at NAVD88 Datum

WELL LOCATION SURVEY 06-19-2017

SPC 83 - MI SOUTH - INTERNATIONAL FT.

	NORTHING	EASTING		GROUND	TOC
1	582987.72	13305384.14	TP Nailgps	810.51	
2	583232.29	13305426.08	B7	810.54	813.63
3	583744.43	13305411.69	B-18A	808.17	810.85
4	584278.28	13305537.22	B-19AR	809.31	811.80
5	584252.25	13305571.23	B-19A	810.25	812.66
6	584881.83	13305595.44	B-2D	800.66	803.80
7	583807.51	13306066.89	B-20D	811.97	815.14
8	583722.49	13306077.02	B-24R	813.53	816.04
9	583368.82	13306078.91	B-21D	818.62	821.07
10	582891.29	13306092.73	B-22D	819.67	822.15
11	582683.95	13305890.33	B-28	813.87	816.46
12	582648.33	13305875.65	B-27D	810.14	812.70
13	582647.93	13305867.09	B-23DR	809.89	812.12
14	582920.40	13306307.86	B-9	806.52	807.45
15	579936.93	13295219.24	cbm pid dl4948	757.55	
16	585571.23	13302903.29	NW Cor	771.97	
18	580303.43	13305159.03	809.113 S 1/4	809.18	
19	582952.62	13305353.90	809.051 cbm nrim cb	809.12	

NO.15 IS NGS CONTROL POINT PID NO. DL4948 ELEV = 757.55 NAVD88

SITE BM IS NORTH RIM OF CASTING FOR CATCH BASIN LOCATED 61 FT
EAST OF ON-SITE STORAGE BUILDING. ELEV: 809.12 NAVD88

OBG

THERE'S A WAY

