ANNUAL REPORT

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

Motors Liquidation Company
Detroit, Michigan

February 2010

Job No. 4966 / 39196

ANNUAL REPORT

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Motors Liquidation Company
Detroit, Michigan

Scott L. Cormier, P.E.
Vice President

February 2010

O'BRIEN & GERE

February 26, 2010

Mr. Richard Conforti, P.E.
Environmental Engineer
Michigan Department of Natural Resources and Environment
Waste and Hazardous Material Division
P.O. Box 30241
Lansing, Michigan 48909-7741

Re: 2009 Annual Report,
Coldwater Road Landfill
Post-Closure Groundwater Detection Monitoring Results - Flint, Michigan

File: 14774 / 45042 #5

Dear Mr. Conforti:

On behalf of Remediaiton and liability Mangement Company, Inc., a subsidiary of Motors Liquidation Company (formerly known as General Motors Corporation), O'Brien & Gere Engineers, Inc. (O'Brien & Gere) is pleased to present the results of the annual groundwater sampling event conducted in November 2009 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), and zinc (Zn). The event also included field measurements for dissolved oxygen, oxidation-reduction potential, pH, specific conductivity, temperature, and turbidity. Groundwater samples were collected using a bladder or peristaltic pump, and low-flow sampling techniques in accordance with O'Brien & Gere procedures and General Motors Field Method Guides (Appendix A). Samples to be analyzed for dissolved metals were field filtered. Groundwater sampling logs are included as Appendix B.

Gauging and sampling were conducted on November 16, 2009 through November 18, 2009. 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 map (Figure 2) are also included. A groundwater elevation map was completed for the shallow perched water zone (Figure 3) and a groundwater potentiometric surface map was completed for the deeper drift aquifer (Figure 4).

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...with offices in 25 major metropolitan areas and growing.

Contours were not plotted for groundwater in the shallow perched zone because the shallow wells monitor distinct, isolated units and water level elevations exhibited no consistent flow direction.

The drift aquifer static water elevations, which were calculated from depth to water measurements collected on November 16, 2009, were consistent with historical values. Groundwater in the drift aquifer flows in a southerly direction as shown on Figure 4.

Groundwater samples were collected from six monitoring wells screened in the perched zone and six monitoring wells screened in the drift aquifer during this sampling event.

A review of the analytical data presented in the attached tables indicates analytical results similar to previous sampling events with the following exceptions:

- Chromium and copper were not detected
- Nickel was not detected, except at B-9
- Zinc concentrations were similar or decreased, except at B-18A and B-28 where concentrations increased
- TOC concentrations were similar, except at B-7 where the concentration increased
- TOX concentrations were similar or not detected, except at B-24R where the concentration increased
- Specific conductivity values were similar, except at B-20D and B-21D where values increased
- pH values were similar.

The duplicate sample results collected from monitoring well B-21D were comparable to the original sample.

No exceedences of the Shewart control limits were observed from the results of this monitoring event. The Shewart control charts are included in Appendix D. There was an increasing trend for specific conductivity at monitoring wells B-21D and B-22D based on the results from the last four sampling events. At B-21D specific conductivity increased from 738 to 745, and at B-22D specific conductivity increased from 694 to 710. The increasing specific conductivity trends in B-21D and B-22D do not confirm a release from the landfill as the metals concentrations in B-21D and B-22D were not detected during this sampling round, with the exception of a low detection of zinc in B-21D. These trends will continue to be monitored during future sampling events, and do not suggest a release from the landfill. There was a decreasing trend (for last four sampling events) for specific conductivity at monitoring well B-7. The decrease in specific conductivity ranged from 1410 to 1090, and does not suggest a release from the landfill. No other trends or spikes were observed during this monitoring event.

The copper and zinc concentrations in B-2D spiked during the June 2009 semi-annual sampling event; however, the recent annual sampling event results failed to confirm these spikes. The concentration of copper went from 203 ug/l to non-detect and the concentration of zinc went from 113 ug/l to 6 ug/l. The recent concentrations are similar to the historic concentrations. It is possible that the 12 volt electric

pump dedicated to B-2D, which burned out in June 2009, and was replaced with a small diameter, 18-inch long bladder pump somehow impacted the well.

The next sampling event (semiannual event) is currently scheduled for June 2010. If you have any questions, please feel free to contact me at (248) 477-5701.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

Clifford Scott Yantz

Clifford S. Yantz, P.G.
Technical Associate

Enclosure

cc: David Favero – Motors Liquidation Company
Marianne Secrest – O'Brien & Gere

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

On Behalf of Remediation and Liability Management Company, Inc.

Clifford Scott Yantz

Clifford S. Yantz.
Agent for Motors Liquidation Company

Technical Associate–O'Brien & Gere Engineers, Inc.
Title

2/26/10
Date

cc: file

Tables

Table 1
REALM - Coldwater Road Facility
Depth to Ground Water Levels in Monitoring Wells
November 16, 2009

Well	Top Of Casing Elev. (ft) *	Depth To Water (ft)	Static Water Elev. (ft)
B-2D	805.18	55.91	749.27
B-7	815.20	23.39	791.81
B-9	809.16	4.88	804.28
B-18A	812.25	24.36	787.89
B-19A	813.89	9.05	804.84
B-19AR	813.15	38.79	774.36
B-20D	816.61	71.99	744.62
B-21D	822.60	82.73	739.87
B-22D	823.73	87.17	736.56
B-23DR	813.72	84.32	729.40
B-24R	817.37	12.91	804.46
B-27D**	814.36	78.71	735.65
B-28	818.07	8.27	809.80

Notes

Casing elevations were provided by Bartow & King Engineers and are in feet relative to National Geodetic Vertical Datum

* - Top of casing elevations were resurveyed in May 2005 after the installation of the replacement wells.

R - Indicates a replacement well location.

** - Top of casing elevation was surveyed in December 2005 after the installation of the new well.

Table 2
REALM-Coldwater Road Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, and Metals

		Indicator Parameters					Dissolved Metals (ug/L)						
Well ID	Sample Date	TOC (mg/L)	TOX (ug/L)	pH	SpC	T	Cr	Cu	Ni	Zn	Fe	Mn	Na
	6/21/1995	5.3	<10	9.0	434	15.0	<20	<20	<30	<20	--	--	--
	8/31/1995	6.3	130	8.3	479	14.4	<20	<20	<40	<20	--	--	--
	2/9/1996	--	--	--	--	--	--	--	--	--	--	--	--
	6/19/1996	5.2	<100	7.5	580	12.4	<20	<20	<20	<20	--	--	--
B-2D	8/21/1996	7.4	<5	7.7	641	13.9	<20	<20	<20	50	--	--	--
	11/13/1996	11.0	<5	7.3	769	7.6	<20	<20	<20	30	--	--	--
	5/6/1997	26.0	<100	6.3	1500	7.0	10	<10	28	30	--	--	--
	11/6/1997	15.0	<100	6.9	660	9.0	<10	<10	39	<10	280	577	--
	5/4/1998	29.0	12	6.7	549	12.4	<10	<10	<5	<10	--	--	--
	11/5/1998	52.0	18	4.7	498	8.6	<10	<10	<5	10	<10	17	33,600
	4/26/1999	52.0	<100	8.5	523	14.5	<10	<10	<5	<10	--	--	--
	11/5/1999	6.4	<100	7.4	405	12.8	<10	<10	<5	40	70	21	35,100
	4/26/2000	5.4	<100	8.0	770	17.4	<10	<10	<5	<10	--	--	--
	12/8/2000	5.5	<10	6.7	610	9.7	<10	<10	9	<10	40	--	22,900
	5/15/2001	5.5	<100	7.8	890	13.2	<10	<10	<5	<10	--	--	--
	10/18/2001	4.1	<100	7.4	1830	9.4	<10	<10	<5	<10	230	--	12,900
Dup.	10/18/2001	3.6	<100	7.4	1780	7.8	<10	<10	<5	<10	210	--	12,700
	5/16/2002	4.0	<100	7.2	1000	11.6	<10	<10	<5	<10	--	--	--
	11/7/2002	2.6	<30	7.4	490	9.5	<5	<5	<5	<5	140	8	11,900
Dup.	11/7/2002	2.7	<30	--	--	--	<5	<5	<5	<5	140	6	11,200
	6/3/2003	4.4	<30	6.9	530	12.9	<5	<5	<5	<5	--	--	--
	11/13/2003	2.8	<30	8.0	630	7.7	<5	<5	<5	<5	110	7	--
	6/30/2004	4.2	<30	6.3	570	15.8	<5	<5	<5	7	--	--	--
	12/10/2004	2.0	<30	6.8	550	10.2	<5	<5	<5	10	760	145	10,700
	6/8/2005	2.0	<30	8.0	620	11.5	<5	<5	<5	<5	660	199	10,900
	12/8/2005	3.0	<30	6.9	642	10.2	9	<4	<5	<10	140	120	13,300
	6/28/2006	6.3	<30	7.4	671	12.2	<5	<4	<5	8	110	70	15,000
Dup.	6/28/2006	5.1	<30	7.4	682	12.2	<5	<4	<5	8	120	70	15,200
	11/30/2006	5.1	43.3	7.2	677	8.4	<5	<4	<5	18	--	--	--
	6/8/2007	2.4	69.1	6.8	644	14.1	8	2	1	6	110	104	14,800
	11/14/2007	5.2	<30	7.1	783	14.9	1	1	4	9	--	--	--
	6/25/2008	5.7	<60	6.9	920	18.4	<5	1	5	7	350	32	26,100
	11/20/2008	4.5	<30	6.8	806	9.1	<5	<1	<5	<5	--	--	--
	6/25/2009	5.6	<30	7.0	924	23.7	<5	203	<5	113	22	77	29,700
	11/16/2009	**4**	**<30**	**7.2**	**835**	**10.2**	**<5**	**<4**	**<5**	**6**	**--**	**--**	**--**

See notes on page 16.

Table 2
REALM-Coldwater Road Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, and Metals

		Indicator Parameters					Dissolved Metals (ug/L)						
Well ID	Sample Date	TOC (mg/L)	TOX (ug/L)	pH	SpC	T	Cr	Cu	Ni	Zn	Fe	Mn	Na
	6/21/1995	8.7	23	7.5	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	6.9	1508	13.2	<20	<20	<20	20	--	--	--
B-7	8/21/1996	55.0	26	7.6	1567	17.1	<20	<20	<20	60	--	--	--
	11/13/1996	27.0	<5	8.0	1960	7.2	<20	<20	<20	50	--	--	--
	5/6/1997	16.0	<100	7.2	780	11.0	<10	10	14	10	--	--	--
	11/6/1997	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/4/1998	6.0	<5	6.6	1270	10.7	<10	<10	<5	20	--	--	--
	11/5/1998	4.0	<10	4.6	1240	11.2	<10	<10	8	30	10	424	31,000
	4/26/1999	3.9	<100	7.5	1413	14.2	<10	<10	10	<10	--	--	--
	11/5/1999	5.1	<100	6.5	1230	14.2	<10	<10	8	30	260	313	41,800
	4/26/2000	4.8	<100	7.6	1450	10.2	<10	<10	<5	<10	--	--	--
Dup.	4/26/2000	5.9	<100	NS	NS	NS	<10	<10	6	10	--	--	--
	12/8/2000	4.2	<10	7.1	1180	9.5	<10	<10	20	10	50	--	58,900
	5/16/2001	5.0	<100	7.3	1330	13.0	<10	<10	7	<10	--	--	--
	10/18/2001	5.3	<100	7.2	1210	12.5	<10	<10	5	<10	330	--	60,800
	5/16/2002	3.9	<100	7.2	1850	11.9	<10	<10	<5	10	--	--	--
	11/7/2002	NR	NR	7.4	1120	10.3	<5	<5	5	5	250	<5	65,500
	6/4/2003	3.3	<30	6.9	1460	12.6	<5	<5	<5	<5	--	--	--
	11/13/203	3.9	<30	6.9	1590	9.6	<5	<5	<5	5	190	<5	--
	6/30/2004	4.3	43	7.1	1353	16.0	<5	<5	9	7	--	--	--
	12/9/2004	4.0	<30	5.3	1290	10.8	<5	<5	7	14	180	74	71,200
	6/8/2005	7.0	86	7.4	1121	10.9	5	<5	9	13	170	31	81,900
	12/7/2005	7.5	<30	8.7	1430	12.2	10	<4	6	20	150	50	85,300
	6/29/2006	4.3	<30	7.2	1470	11.7	5	<4	9	18	190	150	76,900
	11/29/2006	4.4	<30	6.9	1380	15.3	<5	<4	9	11	--	--	--
	6/7/2007	3.9	23.7	6.9	1400	13.4	11	27	5	14	130	42	87,300
	11/14/2007	3.5	<30	6.9	1350	13.4	14	6	16	20	--	--	--
	6/25/2008	3.8	72.9	6.9	1410	20.7	<5	3	6	<5	350	10	94,800
	11/17/2008	4.6	20.5	6.8	1258	5.5	<5	3	5	17	--	--	--
	6/24/2009	4.5	<30	6.9	1184	20.0	<5	3	<5	14	67	36	84,500
	11/17/2009	**8**	**25.3**	**7.3**	**1090**	**10.3**	**<5**	**<4**	**<5**	**<5**	**--**	**--**	**--**

See notes on page 16.

Table 2
REALM-Coldwater Road Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, and Metals

		Indicator Parameters					Dissolved Metals (ug/L)						
Well ID	Sample Date	TOC (mg/L)	TOX (ug/L)	pH	SpC	T	Cr	Cu	Ni	Zn	Fe	Mn	Na
	6/21/1995	3.5	34	7.7	2400	14.6	<20	<20	<30	<20	--	--	--
	8/31/1995	3.9	<10	7.7	1829	14.8	37	43	<40	<20	--	--	--
	2/9/1996	3.1	<10	7.3	2860	8.0	<20	<20	<40	<20	--	--	--
	6/19/1996	2.1	<100	6.8	2550	11.5	<20	<20	<20	<20	--	--	--
B-9	8/21/1996	2.3	<5	8.0	2310	16.4	<20	<20	<20	70	--	--	--
	11/13/1996	71.0	<5	6.8	3280	9.2	<20	<20	<20	40	--	--	--
	5/6/1997	3.0	<100	6.8	2600	10.0	<10	<10	51	20	--	--	--
	11/6/1997	2.0	<100	6.5	2800	11.0	<10	<10	183	40	650	741	--
	5/4/1998	3.0	<5	6.6	2400	14.5	10	10	18	40	--	--	--
	11/5/1998	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/26/1999	4.0	<100	7.7	1860	12.2	<10	<10	19	20	--	--	--
	11/5/1999	2.5	<100	6.8	2340	15.4	<10	<10	20	30	610	1280	47,100
	4/26/2000	5.5	<100	7.6	2780	9.5	<10	<10	12	30	--	--	--
	12/8/2000	5.0	<10	7.6	2400	7.8	<10	<10	46	<10	50	--	69,500
	5/16/2001	4.8	<100	7.4	1070	12.6	<10	<10	7	10	--	--	--
	10/17/2001	4.0	<100	7.5	2130	10.8	<10	<10	8	20	940	--	66,000
	5/16/2002	1.9	<100	7.2	2470	11.6	<10	<10	7	10	--	--	--
	11/7/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/4/2003	2.2	57	6.8	2690	10.7	<5	<5	15	13	--	--	--
	11/13/2003	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/30/2004	3.8	NS	6.9	2379	12.7	<5	8	19	28	--	--	--
	12/9/2004	3.0	<30	5.9	2480	11.4	<5	<5	11	19	570	248	55,900
	6/8/2005	4.0	<30	7.1	2116	10.3	6	6	12	17	480	701	58,300
	12/7/2005	5.0	<30	8.6	2830	11.9	11	5	12	40	320	410	58,500
	6/29/2006	1.9	<30	6.8	2820	12.4	6	6	13	19	390	330	63,600
	11/30/2006	2.7	36.7	7.2	2830	12.5	<5	6	<5	14	--	--	--
	6/5/2007	2.1	<30	6.7	2770	11.0	12	6	24	21	320	1,900	67,300
	11/16/2007	2.0	27.4	6.7	3000	9.4	2	6	24	18	--	--	--
	7/2/2008	1.8	36.4	6.4	3060	19.7	<5	4	13	19	780	812	64,200
	11/20/2008	2.2	15.9	6.4	3290	8.1	<5	<1	13	<5	--	--	--
Dup.	11/20/2008	2.0	127	6.4	3280	8.1	<5	<1	13	<5	--	--	--
	6/25/2009	1.6	<30	6.7	2700	19.8	<5	<1	<5	<5	59	173	65,300
	11/16/2009	**3**	**84.1**	**6.7**	**3030**	**12.7**	**<5**	**<4**	**16**	**8**	**--**	**--**	**--**

See notes on page 16.

Table 2
REALM-Coldwater Road Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, and Metals

		Indicator Parameters					Dissolved Metals (ug/L)						
Well ID	Sample Date	TOC (mg/L)	TOX (ug/L)	pH	SpC	T	Cr	Cu	Ni	Zn	Fe	Mn	Na
	6/21/1995	4.0	<10	--	--	--	<20	<20	<30	<20	--	--	--
	8/31/1995	--	25	--	--	--	<20	<20	<40	<20	--	--	--
	2/9/1996	3.0	<10	7.6	776	8.9	<20	<20	<40	<20	--	--	--
B-14	6/19/1996	1.7	<100	7.3	704	13.6	<20	<20	<20	<20	--	--	--
	8/21/1996	2.6	<5	8.9	748	13.1	<20	<20	<20	60	--	--	--
	11/13/1996	76.0	<5	7.8	980	7.2	<20	<20	<20	40	--	--	--
	5/6/1997	3.0	<100	7.0	670	10.0	<10	<10	11	<10	--	--	--
	11/6/1997	2.0	<100	6.8	670	10.0	<10	<10	43	10	550	67	--
	5/4/1998	6.0	<5	6.7	558	13.3	<10	<10	<5	<10	--	--	--
	11/5/1998	2.0	<10	6.4	642	9.9	<10	<10	<5	10	<10	<5	13,900
	4/26/1999	4.5	<100	8.0	488	13.3	<10	<10	<5	30	--	--	--
	11/5/1999	NS	NS	7.3	609	14.2	NS	NS	NS	NS	NS	NS	NS
	4/26/2000	7.1	<100	7.4	510	14.7	<10	<10	<5	960	--	--	--
	12/8/2000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/15/2001	5.0	--	7.8	510	13.2	<10	<10	6	380	--	--	--
	10/18/2001	2.1	<100	7.3	750	10.7	<10	<10	8	90	260	--	21,500
	5/16/2002	2.3	NR	7.1	1790	12.1	<10	<10	<5	60	--	--	--
	11/7/2002	NR	NR	7.5	540	9.9	<5	<5	<5	31	170	15	14,400
	6/3/2003	2.4	<30	6.9	710	12.4	<5	<5	<5	54	--	--	--
	11/13/2003	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/29/2004	2.8	<30	7.3	693	14.9	<5	<5	<5	26	--	--	--
	12/9/2004	5.0	<30	6.6	560	10.5	<5	<5	<5	1260	160	62	4,390
Re-sample	2/10/2005	--	--	--	--	--	--	--	--	160	--	--	--
	6/8/2005	4.0	<30	7.6	647	11.4	<5	<5	12	40	110	56	18,500
	12/8/2005	4.6	<30	6.1	818	1.6	8	<4	<5	30	210	40	16,000
Re-sample	2/14/2006	--	--	8.1	603	9.5	--	--	--	100	--	--	--
	6/27/2006	3.5	<30	7.1	767	13.2	<5	<4	<5	1090	160	90	14,600
Re-sample	8/3/2006	--	--	7.5	840	12.4	--	--	--	203	--	--	--
	12/1/2006	3.2	<30	7.4	873	12.3	<5	<5	<5	1440	--	--	--
Re-sample	1/30/2007	--	--	8	607	10.1	--	--	--	1850	--	--	--
	6/5/2007	1.6	26.1	7.0	849	11.0	9	3	1	355	520	245	15,200
	11/15/2007	1.2	16.1	7.1	803	7.8	2	1	4	134	--	--	--

See notes on page 16.

Table 2
REALM-Coldwater Road Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, and Metals

Well ID	Sample Date	Indicator Parameters					Dissolved Metals (ug/L)						
		TOC (mg/L)	TOX (ug/L)	pH	SpC	T	Cr	Cu	Ni	Zn	Fe	Mn	Na
B-18A	6/21/1995	2.7	<10	7.5	1048	13.3	<20	<20	<30	150	--	--	--
	8/31/1995	3.0	<10	7.9	989	13.2	<20	<20	<40	<20	--	--	--
	2/9/1996	2.3	<10	7.4	1021	9.3	<20	<20	<40	<20	--	--	--
	6/19/1996	1.4	<100	7.0	944	13.2	<20	<20	<20	<20	--	--	--
	8/21/1996	2.4	<5	7.5	1041	12.8	<20	<20	<20	60	--	--	--
	11/13/1996	19.0	<5	7.2	1331	6.4	<20	<20	<20	70	--	--	--
	5/6/1997	2.0	<100	6.5	900	10.0	<10	<10	13	10	--	--	--
	11/6/1997	4.0	<100	6.4	1100	10.0	<10	<10	62	10	380	62	--
	5/4/1998	2.0	<5	6.7	862	11.8	<10	<10	<5	20	--	--	--
	11/5/1998	1.0	<10	6.0	1090	11.8	<10	<10	<5	10	240	128	46,000
	4/26/1999	2.1	<100	8.1	921	14.0	<10	<10	<5	20	--	--	--
	11/5/1999	4.3	<100	7.1	832	14.0	<10	<10	<5	60	180	155	39,200
	4/26/2000	2.4	<100	7.5	980	10.4	<10	<10	<5	30	--	--	--
	12/8/2000	2.6	<10	7.0	990	9.9	<10	<10	15	<10	<10	--	34,500
Dup.	12/8/2000	2.6	<10	--	--	--	<10	<10	13	<10	40	--	35,100
	5/16/2001	2.4	<100	7.9	1160	12.9	<10	<10	<5	10	--	--	--
	10/17/2001	2.2	<100	7.1	1020	12.2	<10	<10	<5	<10	350	--	35,400
	5/16/2002	1.5	<100	7.2	2080	12.2	<10	<10	<5	10	--	--	--
	11/7/2002	1.9	<30	7.2	820	10.1	<5	<5	<5	<5	190	26	40,800
	6/4/2003	1.6	<30	6.9	790	13.1	<5	<5	<5	5	--	--	--
	11/13/2003	1	<30	7.7	1180	7.1	<5	<5	<5	<5	160	<5	--
	6/29/2004	1.2	<30	7.2	863	12.0	<5	<5	7	10	--	--	--
	12/9/2004	3	<30	6.2	960	10.5	<5	<5	9	12	900	363	37,900
	6/8/2005	2	<30	7.4	819	10.9	<5	<5	6	16	170	80	40,000
	12/8/2005	2.6	<30	9.7	1120	10.1	11	<4	<5	10	390	170	47,000
	6/27/2006	1.2	<30	7.1	1110	13.2	5	4	<5	46	170	50	48,200
	11/30/2006	1.4	119	7.2	1100	11.5	5	<4	<5	9	--	--	--
	6/4/2007	1	19.9	7.0	1070	13.2	9	3	3	14	110	22	51,800
	11/14/2007	<1	19	6.9	1090	13.7	1	2	6	11	--	--	--
	6/25/2008	12	34.1	7.1	1060	20.4	<5	2	<5	11	310	<5	54,800
	11/18/2008	<1	<30	6.6	1088	2.9	<5	<1	<5	<5	--	--	--
	6/24/2009	<1	<30	7.3	1060	26.2	<5	1	<5	15	<20	<5	53,100
	11/18/2009	**2**	**<30**	**6.9**	**1070**	**11.7**	**<5**	**<4**	**<5**	**45**	**--**	**--**	**--**

See notes on page 16.

Table 2
REALM-Coldwater Road Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, and Metals

Well ID	Sample Date	Indicator Parameters					Dissolved Metals (ug/L)						
		TOC (mg/L)	TOX (ug/L)	pH	SpC	T	Cr	Cu	Ni	Zn	Fe	Mn	Na
	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
B-19A	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
	5/4/1998	3.0	<5	6.8	1480	10.1	<10	<10	<5	30	--	--	--
	11/5/1998	NS	NS	NS	NS	NS	NS	NS	NS	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
	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
	5/16/2001	4.0	<100	7.1	1050	11.8	<10	<10	<5	<10	--	--	--
	10/17/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/16/2002	6.0	<100	7.2	1740	10.6	<10	<10	<5	10	--	--	--
	11/7/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/4/2003	5.8	<30	6.9	1350	12.9	<5	<5	<5	<5	--	--	--
	11/13/2003	3.4	<30	7.6	1620	10.2	<5	<5	<5	<5	20	<5	--
	6/29/2004	3.9	<30	7.2	1316	14.7	<5	<5	<5	8	--	--	--
	12/9/2004	5.0	33	6.2	1340	9.9	<5	<5	<5	9	240	11	111,000
Dup	12/9/2004	5.0	<30	--	--	--	<5	<5	<5	7	170	<5	114,000
B-19AR	6/7/2005	3.0	<30	7.1	829	12.2	<5	<5	7	<5	1,320	228	15,700
Dup	12/8/2005	5.5	<30	--	1390	--	10	<4	<5	20	160	<20	81,400
	12/8/2005	5.3	<30	7.1	1390	12.3	10	<4	<5	<10	150	<20	74,800
Re-sample	2/14/2006	--	--	8.0	840	5.9	<5	--	--	--	--	--	--
	6/29/2006	2.7	<30	7.6	860	12.0	<5	<4	12	21	240	210	22,400
	11/30/2006	6.2	33.7	7.2	1300	11.4	5	<4	<5	<5	--	--	--
	6/7/2007	2	<30	7.0	899	11.4	6	4	4	9	70	21	19,700
	11/13/2007	1.5	<30	7.3	1070	12.1	3	7	26	11	--	--	--
	6/25/2008	2.4	38.8	7.1	1060	17.4	<5	3	<5	16	380	9	18,500
	11/18/2008	1.3	<30	7.0	1052	8.0	<5	1	<5	14	--	--	--
	6/24/2009	1.0	<30	7.7	911	17.3	<5	2	<5	<5	36	<5	21,200
	11/19/2009	**2**	**<30**	**7.4**	**994**	**10.4**	**<5**	**<4**	**<5**	**7**	**--**	**--**	**--**

See notes on page 16.

Table 2
REALM-Coldwater Road Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, and Metals

		Indicator Parameters					Dissolved Metals (ug/L)						
Well ID	Sample Date	TOC (mg/L)	TOX (ug/L)	pH	SpC	T	Cr	Cu	Ni	Zn	Fe	Mn	Na
	6/21/1995	2.8	<10	8.3	771	15.1	<20	<20	<30	<20	--	--	--
	8/31/1995	4.7	47	8.1	1204	14.6	<20	20	<40	<20	--	--	--
	2/9/1996	21.0	38	7.1	801	9.1	32	28	54	120	--	--	--
	6/19/1996	2.4	<100	7.9	745	11.9	<20	<20	<20	<20	--	--	--
B-20D	8/21/1996	3.0	<5	8.0	750	13.1	<20	<20	<20	40	--	--	--
	11/13/1996	16.0	<5	7.7	1075	6.7	<20	<20	<20	40	--	--	--
	5/6/1997	3.0	<100	6.8	640	10.0	<10	<10	15	10	--	--	--
	11/6/1997	5.0	<100	6.7	700	10.0	<10	20	41	<10	260	35	--
	5/4/1998	4.0	<5	6.8	579	12.2	<10	<10	<5	<10	--	--	--
	11/5/1998	3.0	11	6.5	667	13.5	<10	<10	<5	10	<10	18	31,000
Dup.	11/5/1998	5.0	16	6.5	677	13.6	<10	<10	<5	10	170	8	30,300
	4/26/1999	3.2	<100	8.4	506	13.0	<10	<10	<5	10	--	--	--
	11/5/1999	5.3	<100	7.5	677	12.5	<10	<10	<5	60	130	60	31,400
	4/26/2000	3.2	<100	7.4	760	14.9	<10	<10	<5	<10	--	--	--
	12/8/2000	3.2	<10	7.5	780	4.7	<10	<10	15	<10	20	--	19,700
	5/15/2001	2.7	<100	7.0	590	13.0	<10	<10	<5	<10	--	--	--
	10/18/2001	2.5	<100	7.9	930	10.4	<10	<10	<5	<10	300	--	20,600
	5/16/2002	3.2	<100	7.2	780	11.9	<10	<10	<5	10	--	--	--
	11/7/2002	1.8	<30	7.6	610	8.7	<5	<5	<5	<5	250	74	20,900
	6/3/2003	2.5	<30	7.4	620	12.8	<5	<5	<5	<5	--	--	--
	11/13/2003	1.3	<30	8.0	630	7.7	<5	<5	5	<5	200	15	--
	6/29/2004	9.4	<30	7.5	666	13.1	<5	<5	11	<5	--	--	--
	12/10/2004	2.0	<30	6.6	830	10.8	<5	<5	11	10	2,110	92	16,800
	6/7/2005	4.0	<30	7.3	707	11.9	7	<5	5	<5	2,140	66	16,500
	12/8/2005	4.1	<30	4.8	957	11.1	11	<4	26	<10	120	120	20,600
	6/28/2006	1.7	<30	7.4	979	12.5	7	<4	<5	5	2,120	60	17,600
	11/30/2006	3.4	<30	7.5	980	12.5	6	<4	6	<5	--	--	--
	6/8/2007	3.4	30.9	6.7	929	13.4	10	22	19	124	610	160	25,500
	11/13/2007	2.1	<30	7.2	932	13.5	3	1	13	9	--	--	--
	6/25/2008	<1	<60	7.0	946	15.5	<5	2	<5	7	2,400	55	19,500
	11/18/2008	1	36.1	6.9	1006	12.6	<5	4	6	22	--	--	--
	6/24/2009	1.1	<30	7.2	1000	19.4	<5	<1	<5	<5	1,720	56	21,000
Dup.	6/24/2009	<1	<30	7.2	1010	19.4	<5	<1	<5	<5	1,640	56	20,800
	11/18/2009	**2**	**<30**	**7.0**	**1030**	**12.1**	**<5**	**<4**	**<5**	**5**	**--**	**--**	**--**

See notes on page 16.

Table 2
REALM-Coldwater Road Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, and Metals

		Indicator Parameters					Dissolved Metals (ug/L)						
Well ID	Sample Date	TOC (mg/L)	TOX (ug/L)	pH	SpC	T	Cr	Cu	Ni	Zn	Fe	Mn	Na
	6/21/1995	4.2	<10	8.3	870	14.5	<20	<20	<30	61	--	--	--
	8/31/1995	3.3	19	8.1	684	14.2	<20	21	<40	<20	--	--	--
	2/9/1996	4.1	<10	7.7	646	8.6	<20	<20	<40	<20	--	--	--
	6/19/1996	5.3	<100	7.6	577	14.1	<20	<20	<20	<20	--	--	--
B-21D	8/21/1996	2.5	<5	7.9	576	13.8	<20	<20	<20	50	--	--	--
	11/13/1996	17.0	<5	7.3	810	8.8	<20	<20	<20	40	--	--	--
	5/6/1997	2.0	<100	6.8	530	10.2	<10	<10	8	<10	--	--	--
	11/6/1997	3.0	<100	6.7	540	10.0	<10	<10	30	<10	240	27	--
	5/4/1998	16.0	<5	6.9	480	11.5	<10	<10	<5	20	--	--	--
	11/5/1998	5.0	<10	7.2	565	7.8	<10	<10	<5	10	240	43	26,700
	4/26/1999	11.0	<100	8.2	506	13.0	<10	<10	<5	10	--	--	--
	11/5/1999	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/26/2000	2.5	<100	8.2	660	14.1	<10	<10	<5	<10	--	--	--
	12/8/2000	4.2	<10	8.4	680	7.1	<10	<10	11	<10	<10	--	29,600
	5/15/2001	1.9	<100	7.9	570	13.0	<10	<10	<5	10	--	--	--
Dup	5/15/2001	1.9	<100	8.3	560	13.0	<10	<10	<5	10	--	--	--
	10/18/2001	3.4	<100	7.6	570	13.7	<10	<10	<5	<10	200	--	22,200
	5/16/2002	6.1	<100	7.2	630	11.7	<10	<10	<5	<10	--	--	--
	11/7/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/3/2003	5.8	<30	7.3	510	13.0	<5	<5	<5	6	--	--	--
	11/13/2003	1.0	<30	7.8	710	8.7	<5	<5	<5	9	100	<5	--
	6/30/2004	4.0	<30	6.8	570	14.8	<5	<5	<5	7	--	--	--
	12/10/2004	2.0	<30	6.4	600	9.9	<5	<5	<5	7	1,330	44	20,100
	6/8/2005	3.0	<30	7.7	560	14.2	<5	<5	12	6	1,350	72	21,000
	12/8/2005	4.4	<30	5.5	741	11.4	8	<4	8	<10	1,070	60	21,500
	6/28/2006	1.5	<30	7.4	718	12.8	<5	6	5	13	430	60	23,500
	11/30/2006	1.8	49.1	7.6	693	11.5	<5	<4	<5	<5	--	--	--
	6/8/2007	1.2	<30	6.3	709	13.2	10	2	5	7	1,200	49	21,500
	11/14/2007	<1	<30	7.3	738	14.5	2	1	5	8	--	--	--
	6/26/2008	1.8	16.8	7.1	738	16.9	<5	1	<5	<5	1,390	40	22,700
	11/19/2008	1.1	<30	6.9	739	11.0	<5	<1	5	<5	--	--	--
	6/25/2009	<1	<30	6.7	743	16.1	<5	<1	<5	<5	1,210	34	25,100
	11/19/2009	**2**	**41.2**	**7.2**	**745**	**10.2**	**<5**	**<4**	**<5**	**6**	**--**	**--**	**--**
Dup	**11/19/2009**	**2**	**<30**	**7.2**	**739**	**10.2**	**<5**	**<4**	**<5**	**<5**	**--**	**--**	**--**

See notes on page 16.

Table 2
REALM-Coldwater Road Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, and Metals

		Indicator Parameters					Dissolved Metals (ug/L)						
Well ID	Sample Date	TOC (mg/L)	TOX (ug/L)	pH	SpC	T	Cr	Cu	Ni	Zn	Fe	Mn	Na
	6/21/1995	2.6	<10	7.7	573	15.5	<20	<20	370	<20	--	--	--
	8/31/1995	4.5	47	8.3	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	7.5	600	13.4	<20	<20	<20	20	--	--	--
B-22D	8/21/1996	1.7	<5	8.1	608	14.2	<20	<20	<20	50	--	--	--
	11/13/1996	10.0	<5	7.2	817	7.7	<20	<20	<20	50	--	--	--
	5/6/1997	2.0	<100	6.7	550	10.1	<10	<10	<5	<10	--	--	--
	11/6/1997	7.0	<100	6.9	550	10.0	<10	<10	29	10	1,360	55	--
	5/4/1998	5.0	<5	7.1	501	11.7	<10	<10	<5	<10	--	--	--
	11/5/1998	6.0	<10	6.6	559	9.8	<10	<10	<5	10	1,180	47	23,800
	4/26/1999	18.0	<100	8.2	485	13.2	<10	<10	<5	10	--	--	--
	11/5/1999	2.6	<100	7.3	474	13.6	<10	<10	<5	20	90	31	27,900
	4/26/2000	2.5	<100	8.2	670	14.2	<10	<10	<5	<10	--	--	--
	12/8/2000	2.5	<10	7.5	510	5.4	<10	<10	8	<10	<10	--	26,500
	5/15/2001	6.7	<100	8.0	690	13.7	<10	<10	6	30	--	--	--
	10/18/2001	1.7	<100	7.6	2610	10.2	<10	<10	<5	<10	200	--	27,800
	5/16/2002	3.2	<100	7.1	630	12.1	<10	<10	<5	<10	--	--	--
	11/7/2002	1.5	<30	7.4	480	8.8	<5	<5	<5	<5	120	11	25,200
	6/3/2003	2.3	<30	6.8	570	13.1	<5	<5	<5	<5	--	--	--
	11/14/2003	1.6	<30	8.1	660	9.8	<5	<5	<5	9	6	<5	--
	6/30/2004	1.7	<30	6.3	610	15.5	<5	<5	<5	6	--	--	--
	12/10/2004	2.0	<30	7.0	600	10.3	<5	<5	<5	6	1,280	37	25,100
	6/8/2005	2.0	<30	7.7	531	13.2	6	<5	<5	<5	1,370	38	23,700
	12/8/2005	2.7	<30	5.8	702	11.7	10	<4	46	<10	2,200	250	25,400
	6/28/2006	<1	<30	7.5	682	13.0	<5	<4	<5	<5	1,290	30	25,800
	11/30/2006	2.2	<30	7.5	684	13.3	<5	<4	<5	7	--	--	--
Dup.	11/30/2006	5.3	<30	7.5	676	13.3	<5	<4	<5	<5	--	--	--
	6/8/2007	3.8	<30	6.6	680	14.3	7	2	1	5	1,180	32	28,100
Dup.	6/8/2007	3.1	21.1	6.6	669	14.3	9	2	1	4	1,210	31	28,400
	11/14/2007	1.1	<30	7.3	710	14.2	2	2	3	6	--	--	--
	6/26/2008	1.7	22.6	7.1	694	19.3	<5	<1	<5	5	1,100	33	25,900
Dup.	6/26/2008	2.6	<30	7.1	710	19.3	<5	<1	<5	7	1,150	34	26,400
	11/19/2008	8.9	<30	6.9	699	8.2	<5	<1	8	8	--	--	--
	6/25/2009	1.1	<30	6.7	705	16.6	<5	<1	<5	<5	1,340	30	28,500
	11/18/2009	**2**	**<30**	**7.2**	**710**	**11.4**	**<5**	**<4**	**<5**	**<5**	**--**	**--**	**--**

See notes on page 16.

Table 2
REALM-Coldwater Road Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, and Metals

		Indicator Parameters					Dissolved Metals (ug/L)						
Well ID	Sample Date	TOC (mg/L)	TOX (ug/L)	pH	SpC	T	Cr	Cu	Ni	Zn	Fe	Mn	Na
	6/21/1995	3.4	<10	7.3	680	15.1	<20	<20	<30	<20	--	--	--
	8/31/1995	3.9	96	8.2	845	15.4	<20	<20	<40	<20	--	--	--
	2/9/1996	3.8	34	7.5	751	11.3	<20	<20	<40	<20	--	--	--
	6/19/1996	2.2	<100	8.3	632	14.2	<20	<20	<20	<20	--	--	--
B-23D	8/21/1996	1.7	<5	8.9	691	14.6	<20	<20	<20	50	--	--	--
	11/13/1996	40.0	<5	7.7	977	7.6	<20	<20	<20	40	--	--	--
	5/6/1997	2.0	<100	6.8	610	11.0	<10	<10	9	<10	--	--	--
	11/6/1997	3.0	<100	6.0	620	10.0	<10	<10	31	<10	160	15	--
	5/4/1998	2.0	<5	6.4	558	12.2	<10	<10	<5	<10	--	--	--
	11/5/1998	5.0	<10	6.5	639	9.8	<10	<10	<5	70	<10	<5	29,700
	4/26/1999	3.6	<100	8.1	552	13.3	<10	<10	<5	<10	--	--	--
Dup	4/26/1999	3.0	<100	NS	NS	NS	<10	<10	<5	<10	--	--	--
	11/5/1999	3.4	<100	7.4	546	13.3	<10	<10	<5	<10	80	14	34,700
Dup	11/5/1999	3.1	<100	NS	NS	NS	<10	<10	<5	<10	90	15	33,300
	4/26/2000	3.2	<100	7.9	800	13.7	<10	<10	<5	<10	--	--	--
	12/8/2000	2.0	<10	7.0	570	7.0	<10	<10	7	<10	60	--	35,400
	5/15/2001	3.2	<100	7.9	790	13.1	<10	<10	<5	10	--	--	--
	10/17/2001	1.8	<100	7.5	600	11.3	<10	<10	<5	<10	170	--	32,800
	5/16/2002	5.4	<100	7.2	1200	11.2	<10	<10	<5	10	--	--	--
	11/7/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/3/2003	3.9	<30	6.9	640	12.9	<5	<5	<5	<5	--	--	--
Dup	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
	6/30/2004	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--
	12/10/2004	2.0	<30	6.7	640.0	11.3	<5	<5	11	10	500	65	30,500
B-23DR	6/7/2005	2.0	<30	7.3	594.0	12.2	<5	<5	<5	<5	2,520	49	20,600
Dup	6/7/2005	2.0	<30	--	--	--	<5	<5	<5	<5	2,580	48	20,600
B-23DR	12/8/2005	3.8	<30	6.2	700.0	6.1	7	<4	<5	<10	370	60	39,200
	6/27/2006	1.2	<30	7.1	760.0	13.4	5	<4	<5	5	2,280	50	20,500
	11/30/2006	2.2	<30	7.6	568.0	11.8	<5	<4	<5	6	--	--	--
	6/8/2007	1.1	33.7	6.5	736	13.1	7	1	1	5	1,100	43	23,800
	11/16/2007	<1	<30	7.3	780	21.4	2	1	3	8	--	--	--
	6/26/2008	2.0	27.2	7.0	753	18.2	<5	1	<5	<5	1,850	44	23,700
	11/21/2008	<1	<30	6.7	763	6.0	<5	<1	<5	19	--	--	--
	6/25/2009	<1	<30	6.7	776	18.9	<5	<1	<5	<5	1,500	43	23,900
	11/18/2009	**2**	**<30**	**7.2**	**756**	**11.9**	**<5**	**<4**	**<5**	**10**	**--**	**--**	**--**

See notes on page 16.

Table 2
REALM-Coldwater Road Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, and Metals

		Indicator Parameters					Dissolved Metals (ug/L)						
Well ID	Sample Date	TOC (mg/L)	TOX (ug/L)	pH	SpC	T	Cr	Cu	Ni	Zn	Fe	Mn	Na
	6/21/1995	--	--	--	--	--	--	--	--	--	--	--	--
	8/31/1995	--	--	--	--	--	--	--	--	--	--	--	--
	2/9/1996	--	--	--	--	--	--	--	--	--	--	--	--
	6/19/1996	--	--	--	--	--	--	--	--	--	--	--	--
B-24	8/21/1996	5.6	<5	7.8	1502	12.7	<20	<20	<20	90	--	--	--
	11/13/1996	20.0	<5	7.1	2030	7.8	<20	<20	<20	50	--	--	--
	5/6/1997	5.0	<100	6.4	1700	10.0	<10	<10	31	10	--	--	--
	11/6/1997	--	--	--	--	--	--	--	--	--	--	--	--
	5/4/1998	4.0	<5	6.5	1410	11.6	<10	<10	8	20	--	--	--
	11/5/1998	4.0	23	5.5	1595	10.4	<10	<10	9	20	60	120	27,700
	4/26/1999	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/5/1999	NS	NS	7.2	1152	13.8	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
	5/15/2001	NS	NS	6.4	1450	12.9	NS	NS	NS	NS	NS	NS	NS
	10/17/2001	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
	6/3/2003	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/13/2003	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
B-24R	6/7/2005	8.0	<30	7.3	857	10.6	8	<5	<5	<5	10,600	448	27,100
B-24R	12/8/2005	6.6	<30	5.2	1120	11.9	11	<4	<5	10	3,180	210	28,700
	6/28/2006	4.7	<30	7.3	1080	11.9	6	<4	<5	<5	3,760	210	27,700
	11/30/2006	4.8	30	7.3	1100	11.7	6	<4	<5	<5	--	--	--
	6/4/2007	4.5	110	7.2	1080	11.0	9	2	2	19	2,400	194	27,900
	11/13/2007	4.1	30.1	7.1	1130	14.0	3	1	5	7	--	--	--
	6/26/2008	4.3	<30	7.0	1130	19.0	<5	1	<5	8	3,490	175	39,600
	11/18/2008	3.8	<30	6.8	1125	5.3	<5	<1	<5	<5	--	--	--
	6/24/2009	5.2	<30	6.6	1120	17.4	<5	<1	<5	<5	4,000	155	38,400
	11/18/2009	**5**	**86.4**	**7.1**	**1140**	**12.9**	**<5**	**<4**	**<5**	**<5**	**--**	**--**	**--**

See notes on page 16.

Table 2
REALM-Coldwater Road Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, and Metals

		Indicator Parameters					Dissolved Metals (ug/L)						
Well ID	Sample Date	TOC (mg/L)	TOX (ug/L)	pH	SpC	T	Cr	Cu	Ni	Zn	Fe	Mn	Na
B-27D	12/8/2005	3.7	<30	5	714	4.8	9	<4	6	<10	240	140	34,200
	6/27/2006	1.3	<30	7.1	644	13.5	6	<4	7	6	1,050	110	32,300
	11/30/2006	<1	<30	7.5	540	11.7	<5	<4	<5	6	--	--	--
	6/8/2007	4	25.7	6.6	628	14.6	9	2	3	36	1,520	58	36,300
	11/15/2007	1.9	<30	7.3	649	11.6	2	1	5	32	--	--	--
	6/26/2008	1.7	<30	7.1	659	16.3	<5	<1	<5	<5	300	59	33,900
	11/21/2008	1.3	<30	6.8	667	6.6	<5	<1	<5	<5	--	--	--
	6/25/2009	<1	<30	6.8	651	16.5	<5	1	<5	<5	2,030	52	37,200
	11/18/2009	**2**	**<30**	**7.3**	**653**	**11.2**	**<5**	**<4**	**<5**	**<5**	**--**	**--**	**--**

See notes on page 16.

Table 2
REALM-Coldwater Road Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, and Metals

		Indicator Parameters					Dissolved Metals (ug/L)						
Well ID	Sample Date	TOC (mg/L)	TOX (ug/L)	pH	SpC	T	Cr	Cu	Ni	Zn	Fe	Mn	Na
B-28	11/21/2005	--	--	6.2	994	12.3	--	--	--	<5	--	--	--
Dup.	11/21/2005	--	--	6.2	--	12.3	--	--	--	7	--	--	--
	6/27/2006	3	<30	7.1	828	13.2	5	<4	<5	18	2,380	210	17,000
	12/1/2006	2.4	<30	7.5	812	12.3	<5	<4	<5	5	--	--	--
Dup.	12/1/2006	3.3	<30	7.5	810	12.3	<5	<4	<5	<5	--	--	--
	6/5/2007	2.1	<30	6.8	845	10.6	9	2	3	6	1,690	160	25,100
	11/15/2007	2.5	15	6.8	816	9.1	3	2	5	11	--	--	--
	6/27/2008	1.8	<30	6.9	840	17.6	<5	1	<5	5	370	84	16,300
	11/19/2008	1.1	<30	6.8	804	7.0	<5	<1	<5	<5	--	--	--
	6/24/2009	1.1	<30	7.0	822	19.5	<5	<1	<5	<5	204	132	14,600
	11/18/2009	**2**	**<30**	**6.9**	**814**	**11.6**	**<5**	**<4**	**<5**	**20**	**--**	**--**	**--**

See notes on page 16.

Table 2
REALM-Coldwater Road Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, and Metals

		Indicator Parameters					Dissolved Metals (ug/L)						
Well ID	Sample Date	TOC (mg/L)	TOX (ug/L)	pH	SpC	T	Cr	Cu	Ni	Zn	Fe	Mn	Na
B-29	11/21/2005	--	--	6.8	1870	11.7	--	--	--	11	--	--	--
	6/27/2006	--	--	7.1	1480	12.3	6	<4	<5	28	1,480	140	47,300
	12/1/2006	--	--	7.3	--	11.4	8	<4	5	9	--	--	--
	6/5/2007	2.4	31.1	6.9	1,402	10.3	11	3	3	8	800	118	46,300
	11/15/2007	3.2	17.3	6.9	1,370	12.2	4	2	7	14	--	--	--
Dup.	11/15/2007	2.7	16.5	6.9	1,380	12.2	3	2	7	10	--	--	--

See notes on page 16.

Table 2
REALM-Coldwater Road Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, and Metals

		Indicator Parameters					Dissolved Metals (ug/L)						
Well ID	Sample Date	TOC (mg/L)	TOX (ug/L)	pH	SpC	T	Cr	Cu	Ni	Zn	Fe	Mn	Na
B-30	11/21/2005	--	--	6.8	1450	12.1	--	--	--	212	--	--	--
	6/27/2006	--	--	7.1	1330	12.3	6	<4	<5	16	2,690	100	21,300
	12/1/2006	--	--	7.3	--	10.6	6	<4	<5	8	--	--	--
	6/5/2007	2.7	<30	7.0	1542	10.9	11	4	4	17	1,260	171	25,000
	11/15/2007	2.4	17.4	7.0	1510	9.3	4	3	7	14	--	--	--

See notes on page 16.

Table 2
REALM-Coldwater Road Facility
Post-Closure Monitoring - Historical Analytical Results
Physical Parameters, TOC, TOX, and Metals

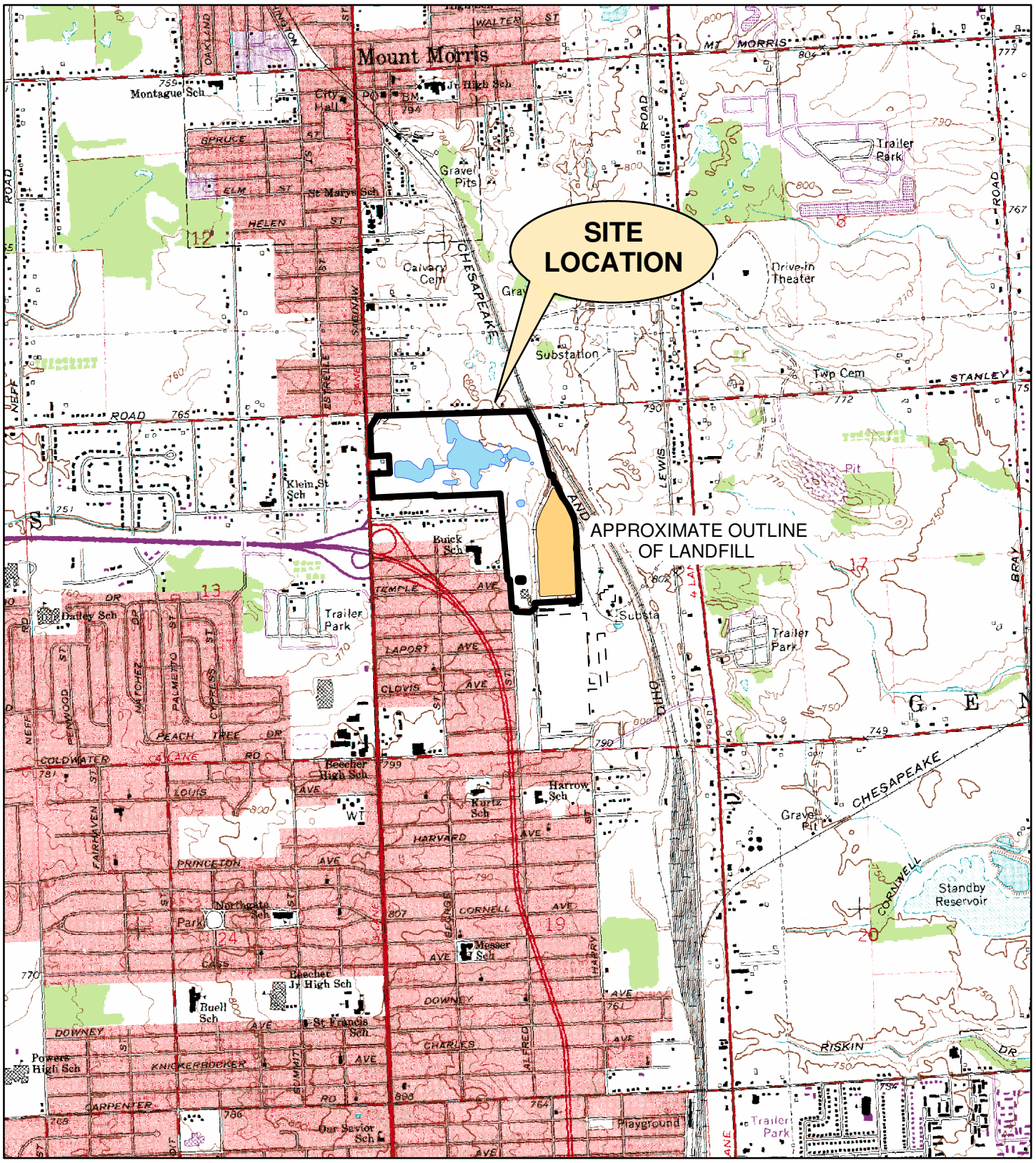
Well ID	Sample Date	Indicator Parameters					Dissolved Metals (ug/L)						
		TOC (mg/L)	TOX (ug/L)	pH	SpC	T	Cr	Cu	Ni	Zn	Fe	Mn	Na
Equipment Blank	12/10/2004	<1	<30	--	--	--	<5	<5	<5	11	<20	13	810
	6/8/2005	<1	<30	--	--	--	<5	<5	<5	<5	<20	<5	120
	12/8/2005	<1	<30	--	5	--	<5	<4	<5	<10	<100	<20	<1000
	6/28/2006	<1	<30	--	12	--	<5	<4	<5	<5	<100	<20	<1000
	12/1/2006	<1	<30	--	26	--	<5	<4	<5	<5	--	--	--
	6/8/2007	<1	26	--	13	--	<5	1	1	13	<20	11	340
	11/15/2007	<1	<30	--	4	--	<5	1	1	9	--	--	--
	6/26/2008	<1	<30	--	3	--	<5	1	<5	<5	100	7	420
	11/19/2008	<1	<30	--	6	--	<5	1	<5	<5	--	--	--
	6/25/2009	<1	<30	--	24	--	<5	<1	<5	<5	110	<5	200
	11/19/2009	**0.7**	**<30**	--	**5**	--	**<5**	**<4**	**<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.

Figures

FIGURE 1



REALM
COLDWATER ROAD LANDFILL FACILITY
FLINT, MICHIGAN

SITE LOCATION MAP

N

0 1
Miles

JANUARY 2010
4966/39196/001

O'BRIEN & GERE ENGINEERS, INC.

PLOT DATE: 2/17/2010 jmo

I:\078\PROJECTS\4966CW\39196\O&M 2009\DOC\DWG\001.MXD

I:\078\PROJECTS\4966 CW39196\O&M 2009\DOC\DWG\004.MXD

PLOT DATE: 1-11-2010 jmo

STANLEY ROAD

DIRT ROAD / TRAIL

RAILROAD

WETLANDS

B-2D

B-19AR

B-19A

KLEIN STREET

B-20D

~ LANDFILL ~

B-24r

B-18A

DRAINAGE SWALE

B-21D

DRAINAGE CULVERT (TYP)

B-7

CONTROL BUILDING

B-9

ABANDONED RAILROAD

B-27D

B-28

B-22D

B-23Dr

B-14

B-30

B-29

FENCE

I-475

MORRIS HILLS

CONCRETE / GRAVEL ROAD

MAP USES DATA FROM THE MICHIGAN CENTER FOR GEOGRAPHIC INFORMATION

FIGURE 2

N

LEGEND

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

REALM
COLDWATER ROAD
LANDFILL FACILITY
FLINT, MICHIGAN

SITE LAYOUT

0 150 300 450 600
Feet

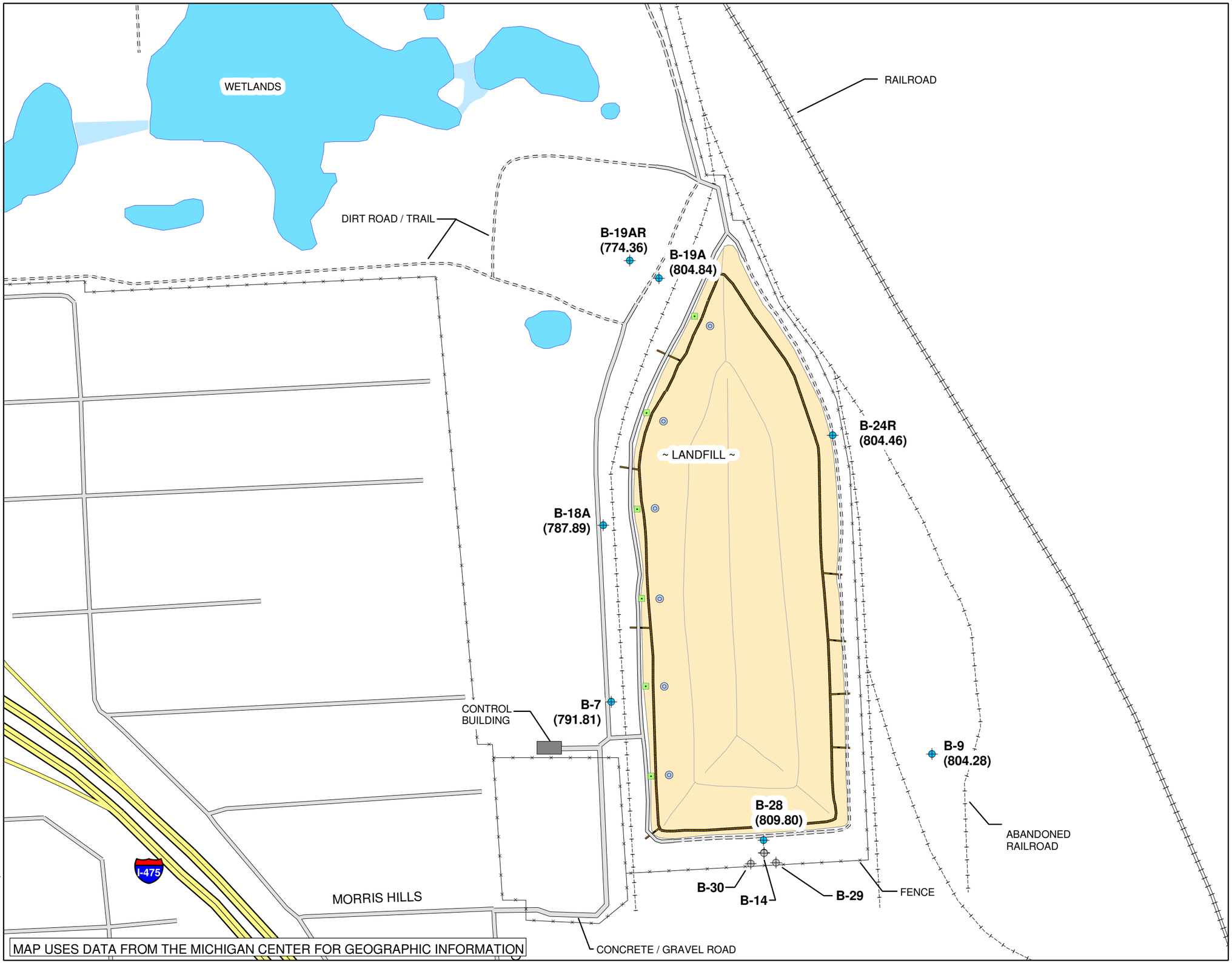
O'BRIEN & GERE ENGINEERS, INC.

JANUARY 2010
4966/39196-004

I:\PROJECTS\4966\39196\O&M 2009\DOC\DWG\011.MXD

PLOT DATE: 2/17/2010 jmo

FIGURE 3



N

LEGEND

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

REALM
COLDWATER ROAD
LANDFILL FACILITY
FLINT, MICHIGAN

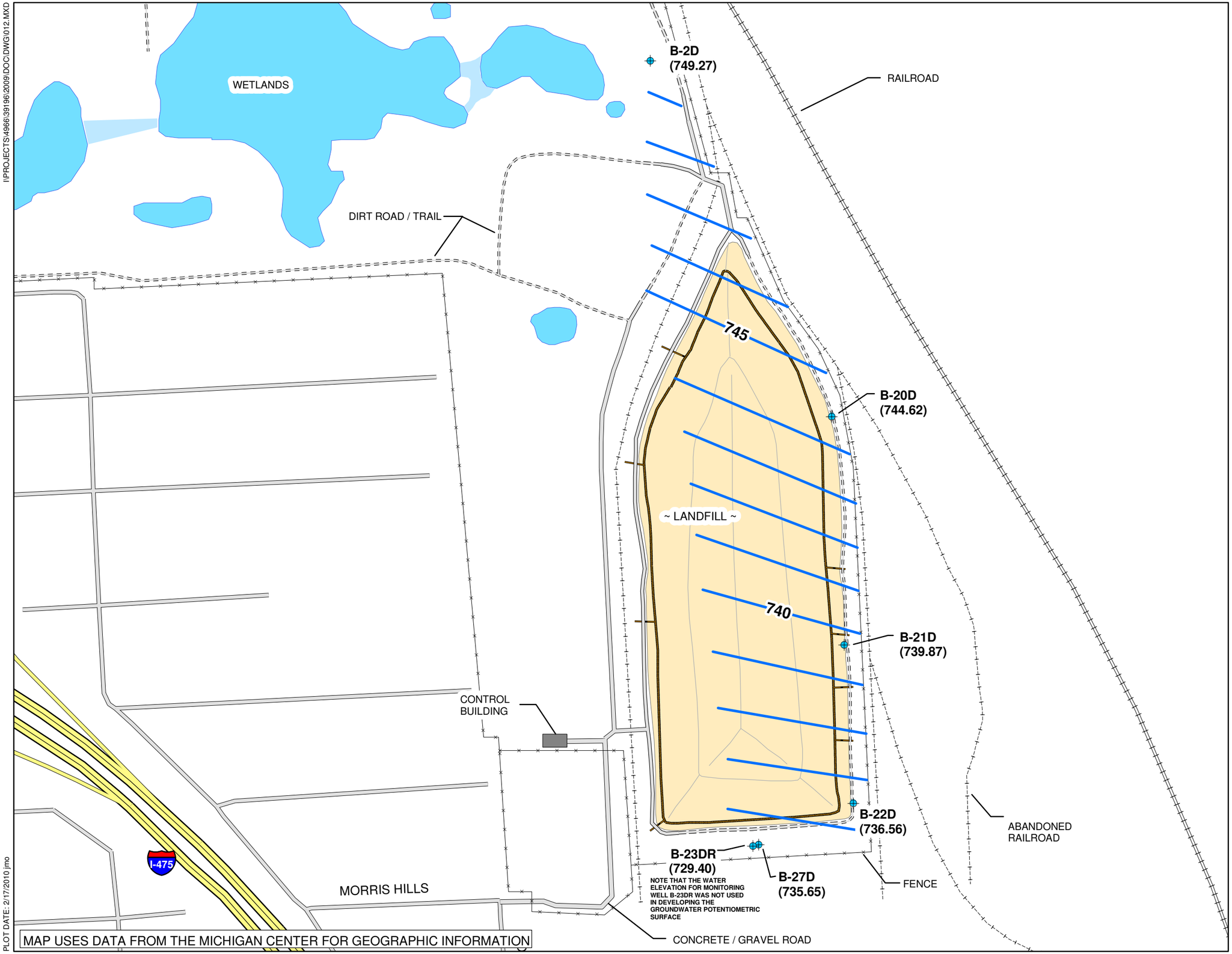
SHALLOW GROUNDWATER ELEVATION MAP NOVEMBER 16, 2009

0 75 150 300 450 600
Feet

FEBRUARY 2010
4966/39196-011

O'BRIEN & GERE ENGINEERS, INC.

I:\PROJECTS\4966\39196\2009\DOC\DWG\012.MXD



PLOT DATE: 2/17/2010 jmo

FIGURE 4

N

LEGEND

- ⊕ MONITORING WELL
- (749.27) GROUNDWATER ELEVATION
- 740 GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION

REALM
COLDWATER ROAD
LANDFILL FACILITY
FLINT, MICHIGAN

DRIFT AQUIFER GROUNDWATER POTENTIOMETRIC SURFACE MAP NOVEMBER 16, 2009

0 75 150 300 450 600
Feet

FEBRUARY 2010
4966/39196-012

O'BRIEN & GERE ENGINEERS, INC.

APPENDIX A

Sampling Procedures

GROUND WATER SAMPLING STANDARD OPERATING PROCEDURE
COLDWATER ROAD LANDFILL
FLINT, MICHIGAN

TABLE OF CONTENTS

List of Forms *(Following Text)*

Ground Water Sampling Log

Introduction

This procedure is for the collection of ground water samples for laboratory analysis.

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

One of the most important aspects of ground water 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 sampling method of "preference" for sites where particulate sorption is an issue is the "low stress/low flow" technique described herein. Experience has shown that the "low stress/low flow" technique typically achieves representative ground water 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. Ultra-low flow techniques are conducted at purging rates below 100 mL per minute, and should only be utilized after careful review and a procedural variance has been approved.

GM Procedures Referenced

- FMG 1.4 - Data Recording - Field Books/Digital Recording.
- FMG 5.1 - Water Level Measurements.
- FMG 8.0 - Field Instruments - Use/Calibration
- FMG 9.0 - Equipment Decontamination.

Procedural Guidelines

The following describes the "Low Stress/Low Flow Methods" technique for ground water sampling.

"Low Stress/Low Flow Methods" will be employed at the Coldwater Road Landfill site to collect ground water samples truly representative of the ground water present, and to minimize the impact of sediment/ colloid presence. Analyses typically sensitive to turbidity/sediment issues are PCBs, SVOCs, and inorganic constituents.

Preparatory Requirements

1. Verify well identification and location using borehole log details and location layout figures. Note the condition of the well and inform the Project Manager of any required repair work.

2. For new wells, prior to opening the well cap, measure the breathing space above the well casing with a PID to establish baseline levels. Repeat this measurement once the well cap is opened. If either of these measurements exceeds the air quality criteria in the Health and Safety Plan, field personnel should adjust their PPE accordingly.

3. Prior to commencing the ground water purging/sampling tasks, water level and total well depth measurements must be obtained to determine the volume of water in the well. Refer to FMG 5.1 - Water Level Measurements for details, as necessary. In some settings it maybe necessary to allow time for the water level to equilibrate. This condition exists if a watertight seal exists at the well cap and the water level has fluctuated above the top of screen, creating a vacuum or pressurized area within the well casing. Three water level checks will verify static water level conditions or changing conditions.

4. Calculate the water volume in the well. Typically overburden well volumes consider only the quantity of water standing in the well screen and riser; bedrock well volumes are calculated on the quantity of water within the open core hole and within the overburden casing.

5. Estimate the natural ground water flow rate into well to determine the approximate pumping rate for purging/sampling activities.

Well Purging and Stabilization Monitoring (Low Stress/Low Flow Method)

1. The GM method of preference for ground water sampling will be the low stress/low flow method described below.

2. Bladder pumps/submersible variable rate pumps (i.e., Grundfos™ Rediflo or equivalent) or peristaltic pumps are typically employed.

3. Slowly lower the pump, safety cable, tubing and electrical lines into the well to the depth specified by the project requirements. The pump or tubing should be placed in the well as early as possible before sampling is initiated (this is to minimize well disturbance). Peristaltic tubing placement should include a tubing "clamp" at the well head, to minimize vibration transfer into

the water column. The pump or tubing intake must be at the mid-point of the well screen to prevent disturbance and re-suspension of any sediment in the screen base. Bedrock well sampling may require pump/tubing placement in specific fracture zone areas or other areas, which will be identified within the project Work Plan.

4. Before starting the pump, measure the water level again with the pump in the well leaving the water level measuring device in the well when completed.

5. Purge the well at 100 to a maximum of 500 milliliters per minute (mL/min). During purging, the water level should be monitored approximately every 5 minutes, or as appropriate. A steady flow rate should be maintained which results in drawdown of 0.3 ft or less. The rate of pumping should not exceed the natural flow rate conditions of the well being sampled. Care should be taken to maintain pump suction and to avoid entrainment of air in the tubing. Record adjustments made to the pumping rates and water levels immediately after each adjustment.

   If drawdowns of 0.3 feet or less can not be maintained because of the permeability of the formation at a particular well location, "ultra-low flow" purge techniques will be employed. Ultra-low flow purge rates are rates below 100 mL/min. However, if ultra-low flow purging still results in the well purging "dry," the well will be allowed to recharge for the balance of the day. As a sufficient volume of water enters the well, field parameter measurements will be collected and purging will continue up to a maximum of 24 hours from the beginning of purging, at which time the ground water sample from the well will be collected.

6. Calibrate field instrument and document calibration activity. Calibration shall be performed in accordance with manufacturer's recommendations and FMG 8.0 - Field Instruments - Use/Calibration.

7. 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 ground water flow rate is achieved, and three consecutive readings for each parameter are within the following limits:

   - pH ±0.1 pH units of the average value of the three readings;
   - temperature ±3 percent of the average value of the three readings;
   - conductivity ±0.005 milliSiemen per centimeter (mS/cm) of the average value of the three readings for conductivity <1 mS/cm and ±0.01 mS/cm of the average value of the three readings for conductivity >1 MS/cm;
   - ORP ±10 millivolts (mV) of the average value of the three readings;
   - DO ±10 percent of the average value of the three readings; and
   - turbidity ±10 percent of the average value of the three readings, or a final value of less than 5 nephelometric turbidity units (NTU).

8. Should stabilization not be achieved for all field parameters, purging is continued until a maximum of 3 well volumes have been purged from the well. After purging 3 well volumes, purging is continued if the purge water remains visually turbid and appears to be clearing, or if stabilization parameters are varying slightly outside of the stabilization criteria listed above and appear to be approaching stabilization.

9. The pump must not be removed from the well between purging and sampling.

Sampling Techniques

1. Samples are typically collected directly from the pump with the ground water being discharged directly into the appropriate sample container. Avoid handling the interior of the bottle or bottle cap and don new gloves for each well sampled to avoid contamination of the sample.

2. Order of sample collection:
   - VOCs;
   - SVOCs and PCBs;
   - Total organic carbon (TOC);
   - Total organic halogens (TOX);
   - Extractable organics;
   - Total metals;
   - Dissolved metals;
   - Phenols;
   - Cyanide;
   - Sulfate and chloride; and
   - Nitrate and ammonia.

3. For low stress/low flow sampling, samples should be collected at a flow rate between 100 and 250 mL/min and such that drawdown of the water level within the well does not exceed the maximum allowable drawdown of 0.3 ft, except as noted in item 5. under well purging and stabilization monitoring.

4. The pumping rate used to collect a sample for VOCs should not exceed 100 mL/min. Samples should be transferred directly to the final container 40 mL glass vials completely full and topped with a teflon cap. Once capped the vial must be inverted and tapped to check for headspace/air presence (bubbles). If air is present the sample vial will be discarded, and re-collected until free of air.

5. Field filtration will be performed as indicated in the Post-Closure Care Plan. Sediment presence can interfere or bias sample results; false positive findings have been observed when turbid samples for inorganic (and other analytes) are analyzed. Field filtration can eliminate this concern; generally applicable to only inorganic/PCB analysis. In-line disposable filter cartridges are generally the easiest and quickest method for field filtration.

6. Sample labels/sample identification. All samples must be labeled with:

   - A unique sample number;
   - Date and time;
   - Parameters to be analyzed;
   - Project Reference ID; and
   - Sampler's initials.

7. Labels should be secured to the bottle(s) and should be written in indelible inks.

Equipment/Materials

1. pH, conductivity, nephlometric (i.e., turbidity), ORP, DO, and temperature multimeter. A separate turbidity meter may be utilized if necessary.

2. Flow-through cell for multimeter.

3. Field filtration units (if required).

4. Purging/sampling equipment:
   - Peristaltic pump (not suitable for VOCs [1]/SVOCs, or drawing water from depths greater than 25 ft [2]);
   - Suction pumps (not suitable for VOCs/SVOCs, or depths greater than 25 ft);
   - Submersible pumps (suitable for VOCs/SVOCs only at low flow rates); and
   - Bladder pumps (suitable for VOCs/SVOCs).

5. Water level probe.

6. Sampling materials (containers, log book/forms, coolers, chain-of-custody).

7. Post-Closure Care Plan.

8. Health and Safety Plan.

Note[1]: Peristaltic pump use for VOC collection is acceptable on select EPA/RCRA and MDEQ sites; this technique has gained acceptance in select areas (MDEQ allows VOC sampling with the peristaltic pump).

Note[2]: Exception is noted in locations that the suction line can be placed at the desired sample depth (i.e., 100 ft), and the natural recharge maintains a water level within 25 feet of the ground surface.

Field Notes

Field notes must document field activities and measurements collected during the sampling activities. FMG 1.4 - Data Recording - Field Books/Digital Recording describes the data/recording procedure for field activities. The log book/field file should document the following for each well sampled:

- Identification of well.
- PID readings before and after well opening (if required).
- Well depth.
- Static water level depth and measurement technique.
- Sounded well depth.
- Presence of immiscible layers and detection/collection method.
- Well yield – high or low.
- Purge volume, pumping rate, and final disposition.
- Time well purged.
- Measured field parameters and meter calibration records.
- Purge/sampling device used.
- Well sampling sequence.
- Sample appearance.
- Sample odors.
- Sample volume.
- Types of sample containers and sample identification.
- Preservative(s) used.
- Parameters requested for analysis.
- Field analysis data and method(s).
- Sample distribution and transporter.
- Analytical laboratory.
- Chain-of-custody number for shipment to laboratory.
- Field observations on sampling event.
- Name(s) of sampling personnel.
- Climatic conditions including air temperature.
- Problems encountered and any deviations made from the established sampling protocol.

A standard ground water sampling log form for documentation and reporting ground water purging and sampling events will be utilized.

Ground water/Decontamination Fluid Disposal

The Post-Closure Care Plan will identify the required disposal procedures for ground water and decontamination fluids. Ground water disposal methods will vary on a case-by-case basis but may range from:

1. Off-site treatment at private treatment/disposal facilities or public owned treatment facilities.

2. On-site treatment at Facility-operated facilities.

3. Direct discharge to the surrounding ground surface, allowing ground water infiltration to the underlying subsurface regime.

Decontamination fluids should be segregated and collected separately from wash waters/ground water containers.

References

ASTM D5474 - Guide for Selection of Data Elements for Ground water Investigations.

ASTM D4696 - Guide for Pore-Liquid Sampling from the Vadose Zone.

ASTM D5979 - Guide for Conceptualization and Characterization of Ground water Systems.

ASTM D5903 - Guide for Planning and Preparing for a Ground water Sampling Event.

ASTM D4448 - Standard Guide for Sampling Ground water Wells.

ASTM D6001 - Standard Guide for Direct Push Water Sampling for Geo-Environmental Investigations.

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

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

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

APPENDIX B

Ground Water Sampling Logs

O'Brien & Gere Engineers, Inc. — **Ground Water Sampling Log**

Date	11/16/09	Weather	clear 48°F
Site Name	Coldwater Road Landfill	Well #	B-2D
Location	Flint, MI	Evacuation Method	submersible pump
Project No.	4966/39196	Sampling Method	Low-flow
Personnel	KBS / SMD		

Well Information:

Depth of Well *	72.97 ft.	Water Volume /ft. for:	
Depth to Water *	55.91 ft.	X	2" Diameter Well = 0.163 X LWC
Length of Water Column	ft.		4" Diameter Well = 0.653 X LWC
Volume of Water in Well	gal.(s)		6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 2.3 gal.(s)
Did well go dry? NO

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration: Calibrated within Range

pH	✓
ORP	✓
Conductivity	✓
DO	

Water parameters:

Time	Pumping Rate (ml/min.)	Drawdown (ft) 0.3 feet or less	Temperature (Celsius) ±3 percent	Conductivity (mS/cm) ±0.005 (mS/cm)	Dissolved Oxygen (mg/L) ±10 percent	pH ±0.1 pH units	ORP (mV) ±10 millivolts	Turbidity (NTUs) ±10 percent
1440 initial	160	55.91	11.13	1.085	10.24	7.06	204.5	88
1445		55.99	10.89	1.061	8.91	7.08	203.2	190
1450		55.99	11.00	1.047	7.95	7.08	201.9	172
1455		55.99	11.16	1.047	6.87	7.12	194.5	111
1500		55.99	10.87	1.043	6.16	7.08	187.7	85
1505		55.99	10.58	1.035	5.80	7.09	185.6	72
1510		55.99	10.61	1.011	5.38	7.11	183.8	67
1515		55.99	10.64	1.002	4.85	7.12	178.7	56
1520		55.99	10.63	0.980	4.57	7.13	174.4	45
1525		55.99	10.50	0.948	4.38	7.13	170.7	47
1530		55.99	10.44	0.936	4.10	7.13	164.2	46
Water Sample: 1535 Time Collected	1610	55.99	10.46	0.932	3.99	7.14	162.5	56

Physical Appearance at Start		Physical Appearance at Sampling	
Color	slightly cloudy	Color	clear
Odor	—	Odor	—
Turbidity (> 100 NTU)	68	Turbidity (> 100 NTU)	31
Sheen/Free Product	—	Sheen/Free Product	—

Samples collected:

Analyses	# Bottles	Bottle Size/Type	Preservative	Field Filtered
Dissolved Metals - Cu, Cr, Ni, Zn	1	125 ml Plastic	HNO_3	yes
TOC	1	125 ml Plastic	H_2SO_4	
TOX	1	125 ml Plastic	H_2SO_4	
SpC	1	500 ml Plasitc	None	

Notes:

Time	Pump	DD	Temp	Con	Do	pH	ORP	Turb
1540	480	55.91	10,44	0.926	3.90	7.15	161.6	59
1545			10.42	0.893	3.71	7.18	159.1	42
1550			10.26	0.882	3.69	7.15	155.9	38
1555			10.28	0.866	3.70	7.17	155.6	41
1600			10.18	0.859	3.58	7.18	151.0	32
1605			10.16	0.856	3.49	7.18	148.6	34
1610			10.15	0.855	3.38	7.17	144.9	31

O'Brien & Gere Engineers, Inc. — **Ground Water Sampling Log**

Date	11/17/09	Weather	Clear 48°F
Site Name	Coldwater Road Landfill	Well #	B-7
Location	Flint, MI	Evacuation Method	peristaltic pump
Project No.	4966/39196	Sampling Method	Low-flow
Personnel	KBS / SMD		

Well Information:

Depth of Well *	31.59 ft.	Water Volume /ft. for:
Depth to Water *	23.41 ft.	X 2" Diameter Well = 0.163 X LWC
Length of Water Column	ft.	4" Diameter Well = 0.653 X LWC
Volume of Water in Well	gal.(s)	6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 1 gal.(s)

Did well go dry? ND

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

	Calibrated within Range
pH	Yes
ORP	Yes
Conductivity	Yes
DO	

Water parameters:

Time	Pumping Rate (ml/min.)	Drawdown (ft) 0.3 feet or less	Temperature (Celsius) ±3 percent	Conductivity (mS/cm) ±0.005 (mS/cm)	Dissolved Oxygen (mg/L) ±10 percent	pH ±0.1 pH units	ORP (mV) ±10 millivolts	Turbidity (NTUs) ±10 percent
1550 initial	80	24.10 initial	10.05 initial	1.282 initial	7.69 initial	7.69 initial	159.1 initial	64.6
1555		24.83	10.57	1.284	7.30	7.24	139.0	44.2
1600		24.94	10.49	1.284	7.51	7.21	141.0	33.6
1605		25.57	10.55	1.277	7.57	7.20	142.7	24.5
1610		26.21	10.72	1.260	7.70	7.25	143.8	16.6
1615		26.52	10.56	1.221	4.35	7.27	145.4	18.5
1620		26.85	10.43	1.191	5.17	7.29	147.5	22.0
1625		27.41	10.52	1.191	4.49	7.30	147.5	14.5
1630		27.79	10.33	1.192	4.50	7.31	148.3	14.6
1635		28.36	10.39	1.192	4.51	7.31	148.8	14.7

Water Sample:
Time Collected: 1635

Physical Appearance at Start		Physical Appearance at Sampling	
Color	Slightly Cloudy	Color	clear
Odor	—	Odor	—
Turbidity (> 100 NTU)	64.6	Turbidity (> 100 NTU)	14.7
Sheen/Free Product	—	Sheen/Free Product	—

Samples collected:

Analyses	# Bottles	Bottle Size/Type	Preservative	Field Filtered
Dissolved Metals - Cu, Cr, Ni, Zn	1	125 ml Plastic	HNO_3	yes
TOC	1	125 ml Plastic	H_2SO_4	
TOX	1	125 ml Plastic	H_2SO_4	
SpC	1	500 ml Plasitc	None	

Notes:

O'Brien & Gere Engineers, Inc. — **Ground Water Sampling Log**

Date	11/16/09	Weather	clear 45°F
Site Name	Coldwater Road Landfill	Well #	B-9
Location	Flint, MI	Evacuation Method	peristaltic pump
Project No.	4966/39196	Sampling Method	Low-flow
Personnel	KBS / SMD		

Well Information:

			Water Volume /ft. for:
Depth of Well *	25.35	ft.	
Depth to Water *	4.75	ft.	X 2" Diameter Well = 0.163 X LWC
Length of Water Column		ft.	4" Diameter Well = 0.653 X LWC
Volume of Water in Well		gal.(s)	6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 1 gal.(s)

Did well go dry? No

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

	Calibrated within Range
pH	✓
ORP	✓
Conductivity	✓
DO	

Water parameters:

Time	Pumping Rate (ml/min.)	Drawdown (ft) 0.3 feet or less	Temperature (Celsius) ±3 percent	Conductivity (mS/cm) ±0.005 (mS/cm)	Dissolved Oxygen (mg/L) ±10 percent	pH ±0.1 pH units	ORP (mV) ±10 millivolts	Turbidity (NTUs) ±10 percent
1210 initial	5.15	initial 90	12.74	2.973	0.62	6.53	204.5	91
1215	5.83		12.90	2.968	0.53	6.59	189.4	148
1220	6.48		12.77	2.965	0.68	6.63	180.6	152
1225	7.36		12.80	2.967	0.62	6.64	173.6	170
1230	7.71		12.70	2.967	0.63	6.66	170.0	88
1235	8.29		12.55	2.959	0.66	6.66	163.9	58
1240	8.47		12.71	2.941	0.44	6.69	149.2	40
1245	9.32		12.74	2.937	0.48	6.71	145.6	40
1250	9.54		12.73	2.934	0.50	6.70	142.0	38
1255	9.77		12.73	2.932	0.48	6.71	140.1	40

Water Sample:

Time Collected: _____

Physical Appearance at Start		Physical Appearance at Sampling	
Color	clear	Color	clear
Odor	—	Odor	—
Turbidity (> 100 NTU)	91	Turbidity (> 100 NTU)	40
Sheen/Free Product	—	Sheen/Free Product	

Samples collected:

Analyses	# Bottles	Bottle Size/Type	Preservative	Field Filtered
Dissolved Metals - Cu, Cr, Ni, Zn	1	125 ml Plastic	HNO_3	yes
TOC	1	125 ml Plastic	H_2SO_4	
TOX	1	125 ml Plastic	H_2SO_4	
SpC	1	500 ml Plasitc	None	

Notes:

O'Brien & Gere Engineers, Inc. — **Ground Water Sampling Log**

Date	11/18/09	Weather	Clear 50°F
Site Name	Coldwater Road Landfill	Well #	B-18A
Location	Flint, MI	Evacuation Method	peristaltic pump
Project No.	4966/39196	Sampling Method	Low-flow
Personnel	KBS / SMD		

Well Information:

			Water Volume /ft. for:
Depth of Well *	43.4 ft.		
Depth to Water *	24.24 ft.	X	2" Diameter Well = 0.163 X LWC
Length of Water Column	ft.		4" Diameter Well = 0.653 X LWC
Volume of Water in Well	gal.(s)		6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 0.6 gal.(s)

Did well go dry? ND

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration: Calibrated within Range

pH	✓
ORP	✓
Conductivity	✓
DO	

Water parameters:

Time		Pumping Rate (ml/min.)	Drawdown (ft) 0.3 feet or less	Temperature (Celsius) ±3 percent	Conductivity (mS/cm) ±0.005 (mS/cm)	Dissolved Oxygen (mg/L) ±10 percent	pH ±0.1 pH units	ORP (mV) ±10 millivolts	Turbidity (NTUs) ±10 percent
1136	initial	80	24.80	12.16	1.094	2.10	6.57	60.7	7.3
1135			25.19	11.80	1.097	1.22	6.66	15.2	6.3
1140			25.45	11.68	1.099	1.68	6.77	-13.2	6.3
1145			25.71	11.68	1.099	1.87	6.82	-22.9	3.7
1150			25.99	11.75	1.100	2.05	6.86	-26.3	2.3
1155			26.33	11.79	1.101	2.08	6.89	-24.7	2.3
1200		↓	26.61	11.73	1.101	2.04	6.89	-20.1	1.3

Water Sample:
Time Collected: 1200

Physical Appearance at Start		Physical Appearance at Sampling	
Color	Clear	Color	Clear
Odor	—	Odor	—
Turbidity (> 100 NTU)	7.3	Turbidity (> 100 NTU)	1.3
Sheen/Free Product	—	Sheen/Free Product	—

Samples collected:

Analyses	# Bottles	Bottle Size/Type	Preservative	Field Filtered
Dissolved Metals - Cu, Cr, Ni, Zn	1	125 ml Plastic	HNO_3	yes
TOC	1	125 ml Plastic	H_2SO_4	
TOX	1	125 ml Plastic	H_2SO_4	
SpC	1	500 ml Plasitc	None	

Notes:

O'Brien & Gere Engineers, Inc. — **Ground Water Sampling Log**

Date	11/19/09	Weather	overcast 48°F
Site Name	Coldwater Road Landfill	Well #	B-19Ar
Location	Flint, MI	Evacuation Method	submersible pump
Project No.	4966/39196	Sampling Method	Low-flow
Personnel	KBS / SMD		

Well Information:

Depth of Well *	46.5 ft.	Water Volume /ft. for:
Depth to Water *	~~38.09~~ 38.10 ft.	X 2" Diameter Well = 0.163 X LWC
Length of Water Column	ft.	4" Diameter Well = 0.653 X LWC
Volume of Water in Well	gal.(s)	6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 1 gal.(s)
Did well go dry? No

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration: Calibrated within Range

pH	✓
ORP	✓
Conductivity	✓
DO	

Water parameters:

Time	Pumping Rate (ml/min.)	Drawdown (ft) 0.3 feet or less	Temperature (Celsius) ±3 percent	Conductivity (mS/cm) ±0.005 (mS/cm)	Dissolved Oxygen (mg/L) ±10 percent	pH ±0.1 pH units	ORP (mV) ±10 millivolts	Turbidity (NTUs) ±10 percent
1135 initial	88 initial	38.91 initial	10.51 initial	1.036 initial	4.74 initial	7.31 initial	56.3 initial	357 initial
1140	↓	39.09	10.38	1.044	3.15	7.18	57.3	
1145		39.29	10.49	1.039	2.97	7.17	58.9	208
1150		39.49	10.50	1.027	2.89	7.21	60.8	144
1155		39.65	10.52	1.017	3.06	7.26	63.0	122
1200		39.75	10.58	1.011	2.97	7.31	64.9	79.9
1205		39.81	10.55	1.008	2.97	7.34	67.9	66.3
1210		39.92	10.49	1.003	3.03	7.38	70.2	55.8
1215		40.01	10.42	1.000	3.13	7.40	71.8	45.8
1220		40.09	10.38	0.998	3.14	7.41	73.0	43.4
1225	↓	40.14	10.36	0.996	3.16	7.41	73.3	40.2

Water Sample:
Time Collected: 1225

Physical Appearance at Start		Physical Appearance at Sampling	
Color	cloudy	Color	clear
Odor	—	Odor	
Turbidity (> 100 NTU)	357	Turbidity (> 100 NTU)	40.2
Sheen/Free Product	—	Sheen/Free Product	

Samples collected:

Analyses	# Bottles	Bottle Size/Type	Preservative	Field Filtered
Dissolved Metals - Cu, Cr, Ni, Zn	1	125 ml Plastic	HNO_3	yes
TOC	1	125 ml Plastic	H_2SO_4	
TOX	1	125 ml Plastic	H_2SO_4	
SpC	1	500 ml Plasitc	None	

Notes:

O'Brien & Gere Engineers, Inc. — **Ground Water Sampling Log**

Date	11/18/09	Weather	clear 53°F
Site Name	Coldwater Road Landfill		
Location	Flint, MI	Well #	B-20D
Project No.	4966/39196	Evacuation Method	submersible pump
Personnel	KBS / SMD	Sampling Method	Low-flow

Well Information:

			Water Volume /ft. for:
Depth of Well *	84.97	ft.	
Depth to Water *	11.94	ft.	X 2" Diameter Well = 0.163 X LWC
Length of Water Column		ft.	4" Diameter Well = 0.653 X LWC
Volume of Water in Well		gal.(s)	6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 7 gal.(s)

Did well go dry? NO

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration: Calibrated within Range

pH	✓
ORP	✓
Conductivity	✓
DO	

Water parameters:

Time	Pumping Rate (ml/min.)	Drawdown (ft) 0.3 feet or less	Temperature (Celsius) ±3 percent	Conductivity (mS/cm) ±0.005 (mS/cm)	Dissolved Oxygen (mg/L) ±10 percent	pH ±0.1 pH units	ORP (mV) ±10 millivolts	Turbidity (NTUs) ±10 percent
1300 initial	100 initial	72.31 initial	11.84 initial	1.056 initial	9.36 initial	7.37 initial	46.3 initial	890 initial
1305		72.31	11.88	1.046	3.91	7.19	-6.7	808
1310		72.31	11.65	1.042	2.81	7.11	-27.1	867
1315		72.31	11.62	1.044	1.88	7.05	-38.8	987
1320		72.31	11.77	1.047	1.09	7.04	-48.5	925
1325		72.31	11.91	1.049	0.85	7.03	-57.4	789
1330		72.31	11.99	1.052	0.63	7.03	-64.5	807
1335		72.31	11.95	1.051	0.61	7.03	-67.9	667
1340		72.31	11.95	1.052	0.55	7.02	-70.4	445
1345		72.31	11.94	1.052	0.53	7.02	-72.0	411
1350	↓	72.31	11.94	1.052	0.55	7.02	-73.5	360

Water Sample:
Time Collected: 14:20

Physical Appearance at Start		Physical Appearance at Sampling	
Color	cloudy	Color	Slightly cloudy
Odor	—	Odor	
Turbidity (> 100 NTU)	890	Turbidity (> 100 NTU)	173
Sheen/Free Product		Sheen/Free Product	

Samples collected:

Analyses	# Bottles	Bottle Size/Type	Preservative	Field Filtered
Dissolved Metals - Cu, Cr, Ni, Zn	1	125 ml Plastic	HNO_3	yes
TOC	1	125 ml Plastic	H_2SO_4	
TOX	1	125 ml Plastic	H_2SO_4	
SpC	1	500 ml Plasitc	None	

Notes:

Time	Pump	DD	Temp	Con	Do	pH	ORP	Turb
1355	100	72.31	12.00	1.053	0.48	7.02	-74.8	299
1400	↓	72.31	12.02	1.054	0.49	7.02	-75.2	252
1405		72.31	12.02	1.054	0.49	7.02	-74.5	224
1410		72.31	12.05	1.054	0.59	7.02	-77.2	187
1415		72.31	12.05	1.054	0.60	7.02	-77.5	176
1420		72.31	12.06	1.054	0.60	7.02	-77.8	173

O'Brien & Gere Engineers, Inc. — **Ground Water Sampling Log**

Date	11/19/09	Weather	overcast 48°F
Site Name	Coldwater Road Landfill	Well #	B-21D
Location	Flint, MI	Evacuation Method	submersible pump
Project No.	4966/39196	Sampling Method	Low-flow
Personnel	KBS / SMD		

Well Information:

			Water Volume /ft. for:
Depth of Well *	97.44 ft.		
Depth to Water *	82.32 ft.	X	2" Diameter Well = 0.163 X LWC
Length of Water Column	ft.		4" Diameter Well = 0.653 X LWC
Volume of Water in Well	gal.(s)		6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 3 gal.(s)

Did well go dry? NO

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration: Calibrated within Range

pH	✓
ORP	✓
Conductivity	✓
DO	

Water parameters:

Time	Pumping Rate (ml/min.)	Drawdown (ft) 0.3 feet or less	Temperature (Celsius) ±3 percent	Conductivity (mS/cm) ±0.005 (mS/cm)	Dissolved Oxygen (mg/L) ±10 percent	pH ±0.1 pH units	ORP (mV) ±10 millivolts	Turbidity (NTUs) ±10 percent
900	initial 100	initial 83.25	initial 10.87	initial 0.688	initial 6.29	initial 6.68	initial 207.3	initial 623
905			10:65	0.648	2.74	6.93	159.0	559
910			10:53	0.647	2.24	7.01	89.7	539
915		✓	10:52	0.646	2.02	7.06	50.7	484
920		83.25	10:44	0.648	1.70	7.08	22.3	527
925		83.26	10:32	0.649	1.42	7.09	1.2	615
930			10:22	0.650	1.25	7.10	-12.0	700
935			10:21	0.652	1.16	7.09	-20.6	835
940			10:58	0.665	0.95	7.14	-40.6	
945			10:70	0.676	0.87	7.15	-49.7	800
950			10:69	0.685	0.71	7.15	-57.8	766

Water Sample:
Time Collected: 1050

Physical Appearance at Start		Physical Appearance at Sampling	
Color	cloudy	Color	slightly cloudy
Odor	—	Odor	—
Turbidity (> 100 NTU)	623	Turbidity (> 100 NTU)	192
Sheen/Free Product	—	Sheen/Free Product	—

Samples collected:

Analyses	# Bottles	Bottle Size/Type	Preservative	Field Filtered
Dissolved Metals - Cu, Cr, Ni, Zn	1	125 ml Plastic	HNO_3	yes
TOC	1	125 ml Plastic	H_2SO_4	
TOX	1	125 ml Plastic	H_2SO_4	
SpC	1	500 ml Plasitc	None	

Notes:

DUP-03 collected

Time	pump	PD	Temp	Cond	DO	pH	ORP	Turb
955	100	83.25	10.84	0.697	0.58	7.16	-67.0	746
1000	↓	↓	10.66	0.701	0.51	7.17	-71.2	508
1005			10.37	0.703	0.49	7.16	-70.5	503
1010			10.36	0.703	0.53	7.13	-69.2	512
1015			10.30	0.701	0.50	7.17	-71.6	497
1020			10.04	0.700	0.57	7.15	-71.3	442
1025			10.28	0.704	0.62	7.18	-70.2	401
1030			10.29	0.710	0.56	7.19	-72.5	362
1035			10.23	0.717	0.58	7.18	-73.4	335
1040			10.20	0.717	0.54	7.16	-72.8	167
1045			10.18	0.718	0.54	7.17	-74.7	158
1050			10.20	0.718	0.53	7.17	-73.2	147

O'Brien & Gere Engineers, Inc. — **Ground Water Sampling Log**

Date	11/18/09	Weather	overcast 52°F
Site Name	Coldwater Road Landfill	Well #	B-22D
Location	Flint, MI	Evacuation Method	submersible pump
Project No.	4966/39196	Sampling Method	Low-flow
Personnel	KBS / SMD		

Well Information:

Depth of Well *	97.24 ft.	Water Volume /ft. for:	
Depth to Water *	87.02 ft.	X	2" Diameter Well = 0.163 X LWC
Length of Water Column	ft.		4" Diameter Well = 0.653 X LWC
Volume of Water in Well	gal.(s)		6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 1.5 gal.(s)

Did well go dry? No

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

	Calibrated within Range
pH	✓
ORP	✓
Conductivity	✓
DO	

Water parameters:

Time	Pumping Rate (ml/min.)	Drawdown (ft) 0.3 feet or less	Temperature (Celsius) ±3 percent	Conductivity (mS/cm) ±0.005 (mS/cm)	Dissolved Oxygen (mg/L) ±10 percent	pH ±0.1 pH units	ORP (mV) ±10 millivolts	Turbidity (NTUs) ±10 percent
1515 initial	100 initial	87.41 initial	11.71 initial	0.717 initial	7.17 initial	6.99 initial	-3.7 initial	654 initial
1520		87.41	11.46	0.722	1.50	7.05	-62.7	538
1525		87.41	11.39	0.722	1.02	7.08	-74.9	304
1530		87.41	11.37	0.722	0.75	7.10	-79.8	202
1535		87.41	11.34	0.723	0.68	7.12	-84.8	175
1540		87.41	11.32	0.723	0.63	7.13	-88.0	118
1545		87.41	11.33	0.727	0.63	7.13	-89.7	76.9
1550		87.41	11.31	0.728	0.61	7.13	-91.4	59.0
15:55		87.41	11.31	0.728	0.60	7.14	-92.4	51.8
1600		87.41	11.33	0.728	0.61	7.14	-93.7	42.4

Water Sample:
Time Collected: 1615

Physical Appearance at Start		Physical Appearance at Sampling	
Color	cloudy	Color	clear
Odor	—	Odor	—
Turbidity (> 100 NTU)	959	Turbidity (> 100 NTU)	32.9
Sheen/Free Product	—	Sheen/Free Product	—

Samples collected:

Analyses	# Bottles	Bottle Size/Type	Preservative	Field Filtered
Dissolved Metals - Cu, Cr, Ni, Zn	1	125 ml Plastic	HNO_3	yes
TOC	1	125 ml Plastic	H_2SO_4	
TOX	1	125 ml Plastic	H_2SO_4	
SpC	1	500 ml Plasitc	None	

Notes:

Time	Pump	DD	Temp	Con	Do	pH	ORP	Turb
1605	100	87.41	11.34	0.728	0.71	7.15	-93.9	33.6
1610		87.41	11.36	0.728	0.69	7.15	-94.1	31.7
1615		87.41	11.37	0.728	0.69	7.15	-93.8	30.9

O'Brien & Gere Engineers, Inc. — **Ground Water Sampling Log**

Date	11/18/09	Weather	Clear 50°F
Site Name	Coldwater Road Landfill	Well #	B-23Dr
Location	Flint, MI	Evacuation Method	submersible pump
Project No.	4966/39196	Sampling Method	Low-flow
Personnel	KBS / SMD		

Well Information:

			Water Volume /ft. for:
Depth of Well *	107	ft.	
Depth to Water *	84.12	ft.	X 2" Diameter Well = 0.163 X LWC
Length of Water Column		ft.	4" Diameter Well = 0.653 X LWC
Volume of Water in Well		gal.(s)	6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 1.5 gal.(s)

Did well go dry? No

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

	Calibrated within Range
pH	✓
ORP	✓
Conductivity	✓
DO	

Water parameters:

Time	Pumping Rate (ml/min.)	Drawdown (ft) 0.3 feet or less	Temperature (Celsius) ±3 percent	Conductivity (mS/cm) ±0.005 (mS/cm)	Dissolved Oxygen (mg/L) ±10 percent	pH ±0.1 pH units	ORP (mV) ±10 millivolts	Turbidity (NTUs) ±10 percent
11:00 initial	270	84.21	12.34	0.640	12.76	7.48	-72.5	660
11:05	180	84.21	11.89	0.677	1.51	7.26	-101.0	270
11:10	180	84.21	11.96	0.679	1.04	7.24	-104.8	187
11:15	180	84.21	11.95	0.679	0.92	7.22	-107.0	130
11:20	180	84.21	12.05	0.679	0.82	7.21	-107.4	98
11:25	180	84.21	12.13	0.680	0.84	7.21	-108.9	84
11:30	180	84.21	12.06	0.677	0.83	7.22	-109.9	78
11:35	180	84.21	11.98	0.671	0.85	7.22	-109.1	73
11:40	180	84.21	11.93	0.670	0.84	7.22	-109.2	68

Water Sample:

Time Collected: 11:40

Physical Appearance at Start		Physical Appearance at Sampling	
Color	Cloudy, Some tan color	Color	Slight Cloudiness
Odor		Odor	
Turbidity (> 100 NTU)	660	Turbidity (> 100 NTU)	
Sheen/Free Product	—	Sheen/Free Product	—

Samples collected:

Analyses	# Bottles	Bottle Size/Type	Preservative	Field Filtered
Dissolved Metals - Cu, Cr, Ni, Zn	1	125 ml Plastic	HNO_3	yes
TOC	1	125 ml Plastic	H_2SO_4	
TOX	1	125 ml Plastic	H_2SO_4	
SpC	1	500 ml Plasitc	None	

Notes:

O'Brien & Gere Engineers, Inc. — **Ground Water Sampling Log**

Date	11/18/09	Weather	clear 53 °F
Site Name	Coldwater Road Landfill	Well #	B-24r
Location	Flint, MI	Evacuation Method	peristaltic pump
Project No.	4966/39196	Sampling Method	Low-flow
Personnel	KBS / SMD		

Well Information:

			Water Volume /ft. for:
Depth of Well *	29.5	ft.	
Depth to Water *	12.92	ft.	X 2" Diameter Well = 0.163 X LWC
Length of Water Column		ft.	4" Diameter Well = 0.653 X LWC
Volume of Water in Well		gal.(s)	6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 1 gal.(s)

Did well go dry? No

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration: Calibrated within Range

pH	✓
ORP	✓
Conductivity	✓
DO	

Water parameters:

Time	Pumping Rate (ml/min.)	Drawdown (ft) 0.3 feet or less	Temperature (Celsius) ±3 percent	Conductivity (mS/cm) ±0.005 (mS/cm)	Dissolved Oxygen (mg/L) ±10 percent	pH ±0.1 pH units	ORP (mV) ±10 millivolts	Turbidity (NTUs) ±10 percent
1315 initial	160 initial	13.86 initial	12.71 initial	1.001 initial	9.73 initial	7.20 initial	-102.1 initial	
1320	140	14.41	12.79	1.006	0.83	7.08	-111.2	19
1325	120	14.72	12.93	1.023	0.47	7.08	-116.0	16
1330	120	15.04 ~~14.66~~	13.08	1.029	0.39	7.07	-121.4	17
1335	120	15.23	13.00	1.030	0.39	7.07	-122.7	16
1340	120	15.62	13.06	1.032	0.35	7.07	-124.0	17
1345	120	16.08	12.95	1.029	0.34	7.07	-123.9	17
1350	120	16.31	12.94	1.028	0.32	7.08	-125.6	16

Water Sample:

Time Collected: 1350

Physical Appearance at Start		Physical Appearance at Sampling	
Color	Clear	Color	Clear
Odor	—	Odor	—
Turbidity (> 100 NTU)	19	Turbidity (> 100 NTU)	16
Sheen/Free Product	—	Sheen/Free Product	—

Samples collected:

Analyses	# Bottles	Bottle Size/Type	Preservative	Field Filtered
Dissolved Metals - Cu, Cr, Ni, Zn	1	125 ml Plastic	HNO_3	yes
TOC	1	125 ml Plastic	H_2SO_4	
TOX	1	125 ml Plastic	H_2SO_4	
SpC	1	500 ml Plasitc	None	

Notes:

O'Brien & Gere Engineers, Inc. — **Ground Water Sampling Log**

Date	11/18/09	Weather	Partly cloudy 40°F
Site Name	Coldwater Road Landfill	Well #	B-27D
Location	Flint, MI	Evacuation Method	submersible pump
Project No.	4966/39196	Sampling Method	Low-flow
Personnel	KBS / SMD		

Well Information:

			Water Volume /ft. for:
Depth of Well *	89	ft.	
Depth to Water *	73.59	ft.	X 2" Diameter Well = 0.163 X LWC
Length of Water Column		ft.	4" Diameter Well = 0.653 X LWC
Volume of Water in Well		gal.(s)	6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 3 gal.(s)

Did well go dry? No

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration: Calibrated/within Range

pH	✓
ORP	
Conductivity	✓
DO	

Water parameters:

Time	Pumping Rate (ml/min.)	Drawdown (ft) 0.3 feet or less	Temperature (Celsius) ±3 percent	Conductivity (mS/cm) ±0.005 (mS/cm)	Dissolved Oxygen (mg/L) ±10 percent	pH ±0.1 pH units	ORP (mV) ±10 millivolts	Turbidity (NTUs) ±10 percent
8:55 initial	initial	initial 79.05	initial 10.30	initial 0.533	initial 8.05	initial 7.27	initial 12.1	initial
9:00	100	78.84	10.01	0.530	2.55	7.19	-44.0	
9:05	100	78.81	9.95	0.529	1.69	7.21	-52.3	
9:10	160	78.82	9.80	0.526	1.35	7.21	-57.4	821
9:15	160	78.86	10.15	0.532	1.00	7.23	-69.8	796
9:20	160	78.95	10.08	0.532	0.97	7.24	-75.6	743
9:25	200	79.01	10.51	0.537	0.93	7.25	-85.3	537
9:30	150	78.88	10.59	0.543	0.74	7.27	-92.7	461
9:35	150	78.9	10.52	0.538	0.76	7.28	-93.6	393
9:40	252	79.24	11.10	0.549	1.23	7.27	-96.5	294

Water Sample:
Time Collected: 1025

Physical Appearance at Start		Physical Appearance at Sampling	
Color	Cloudy brown	Color	Clear, some
Odor		Odor	
Turbidity (> 100 NTU)	1000+	Turbidity (> 100 NTU)	57
Sheen/Free Product		Sheen/Free Product	

Samples collected:

Analyses	# Bottles	Bottle Size/Type	Preservative	Field Filtered
Dissolved Metals - Cu, Cr, Ni, Zn	1	125 ml Plastic	HNO_3	yes
TOC	1	125 ml Plastic	H_2SO_4	
TOX	1	125 ml Plastic	H_2SO_4	
SpC	1	500 ml Plasitc	None	

Notes:

MD

Time	Rate	Draw	Temp.	Cond.	DO	pH	ORP	Turb.
9:45	160	79.09	10.98	0.548	0.90	7.29	-100.2	231
9:50	160	79.05	11.03	0.548	1.15	7.29	-96.1	177
9:55	160	79.05	11.08	0.550	1.21	7.29	-98.8	136
1000	160	79.12	11.11	0.552	0.78	7.29	-103.6	112
1005	160	79.07	11.13	0.553	0.76	7.29	-105.8	85
1010	160	79.07	11.12	0.555	0.72	7.29	-106.5	78
1015	160	79.07	11.16	0.556	0.69	7.30	-106.5	62
1020	160	79.07	11.17	0.556	0.71	7.29	-107.1	58
1025	160	79.07	11.20	0.557	0.68	7.29	-108.3	57

O'Brien & Gere Engineers, Inc. — **Ground Water Sampling Log**

Date	11/18/09	Weather	Partly cloudy 45°F
Site Name	Coldwater Road Landfill	Well #	B-28
Location	Flint, MI	Evacuation Method	peristaltic pump
Project No.	4966/39196	Sampling Method	Low-flow
Personnel	KBS / SMD		

Well Information:

			Water Volume /ft. for:
Depth of Well *	31.5 ft.		
Depth to Water *	5.15 ft.	X	2" Diameter Well = 0.163 X LWC
Length of Water Column	ft.		4" Diameter Well = 0.653 X LWC
Volume of Water in Well	gal.(s)		6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 1 gal.(s)

Did well go dry? No

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

	Calibrated within Range
pH	Yes
ORP	Yes
Conductivity	Yes
DO	

Water parameters:

Time	Pumping Rate (ml/min.)	Drawdown (ft) 0.3 feet or less	Temperature (Celsius) ±3 percent	Conductivity (mS/cm) ±0.005 (mS/cm)	Dissolved Oxygen (mg/L) ±10 percent	pH ±0.1 pH units	ORP (mV) ±10 millivolts	Turbidity (NTUs) ±10 percent
905 initial	80 initial	8.85 initial	10.98 initial	0.963 initial	9.89 initial	6.68 initial	188.0 initial	22.3
910		9.18	11.12	0.926	6.48	6.78	173.6	16.7
915		9.65	11.15	0.874	1.74	6.89	88.2	11.4
920		9.91	11.18	0.862	1.08	6.91	40.7	10.1
925		10.19	11.29	0.850	0.63	6.92	-3.4	8
930		10.42	11.25	0.842	0.55	6.91	-26.4	8
935		10.65	11.35	0.836	0.64	6.92	-34.5	8
940		10.71	11.40	0.836	0.52	6.92	-37.4	3
945		10.89	11.58	0.833	0.43	6.93	-40.1	7
950		11.06	11.61	0.833	0.42	6.93	-41.6	5
955	↓	11.17	11.59	0.833	0.41	6.94	-42.7	6

Water Sample:
Time Collected: 955

Physical Appearance at Start		Physical Appearance at Sampling	
Color	clear	Color	Clear
Odor	—	Odor	—
Turbidity (> 100 NTU)	22	Turbidity (> 100 NTU)	9
Sheen/Free Product	—	Sheen/Free Product	—

Samples collected:

Analyses	# Bottles	Bottle Size/Type	Preservative	Field Filtered
Dissolved Metals - Cu, Cr, Ni, Zn	1	125 ml Plastic	HNO_3	yes
TOC	1	125 ml Plastic	H_2SO_4	
TOX	1	125 ml Plastic	H_2SO_4	
SpC	1	500 ml Plasitc	None	

Notes:

APPENDIX C

Analytical Results

Analytical Laboratory Report

Report ID: S42578.01(01)
Generated on 12/08/2009

Report to

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

Phone: 248-477-5701 FAX:
Email: YantzCS@obg.com/SecresME@obg.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

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

Report Summary

Lab Sample ID(s): S42578.01-S42578.10
Project: Coldwater Road Landfill Semi-Annual Sampling
Collected Date: 11/16/2009 - 11/17/2009
Submitted Date/Time: 11/17/2009 13:35
Sampled by: Kevin Schneider
P.O. #:

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (10 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S42578.01	B-9-111609	Groundwater	11/16/2009 12:55
S42578.02	B-2D-111609	Groundwater	11/16/2009 16:10
S42578.03	Sump A-111709	Sump Water	11/17/2009 09:05
S42578.04	Vault A-111709	Wastewater	11/17/2009 09:50
S42578.05	Sump B-111709	Sump Water	11/17/2009 10:20
S42578.06	Vault B-111709	Wastewater	11/17/2009 10:40
S42578.07	Sump C-111709	Sump Water	11/17/2009 11:00
S42578.08	Vault C-111709	Wastewater	11/17/2009 11:20
S42578.09	Dup-01-111709	Sump Water	11/17/2009
S42578.10	Dup-02-111709	Wastewater	11/17/2009

Analytical Laboratory Report

Lab Sample ID: S42578.01
Sample Tag: B-9-111609
Collected Date/Time: 11/16/2009 12:55
Matrix: Groundwater
COC Reference: 45936

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.8	IR
1	125ml Plastic	None	Yes	4.8	IR
1	125ml Amber	H2SO4	Yes	4.8	IR
2	40ml Glass	H2SO4	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	11/23/09 12:00	SLS		
Inorganics								
Conductivity	3,030	umhos/cm		120.1	11/20/09 14:08	JKB		
TOC	3	mg/L	1	EPA 415	11/25/09 12:00	TestA		O1
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 13:01	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/23/09 13:01	SLS	7440-50-8	
Nickel, Dissolved	0.016	mg/L	0.005	200.8	11/23/09 13:01	SLS	7440-02-0	
Zinc, Dissolved	0.008	mg/L	0.005	200.8	11/23/09 13:01	SLS	7440-66-6	
Organics								
TOX	84.1	ug/L	30.0	9020A	11/24/09 12:00	TestA		O

O-Analysis performed by outside laboratory. See attached report. 1-Method blank contamination.The associated method blank contains the target analyte at a reportable level.

Analytical Laboratory Report

Lab Sample ID: S42578.02
Sample Tag: B-2D-111609
Collected Date/Time: 11/16/2009 16:10
Matrix: Groundwater
COC Reference: 45936

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.8	IR
1	125ml Plastic	None	Yes	4.8	IR
1	125ml Amber	H2SO4	Yes	4.8	IR
2	40ml Glass	H2SO4	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	11/23/09 12:00	SLS		
Inorganics								
Conductivity	835	umhos/cm		120.1	11/20/09 14:12	JKB		
TOC	4	mg/L	1	EPA 415	11/25/09 12:00	TestA		O1
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 13:04	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/23/09 13:04	SLS	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 13:04	SLS	7440-02-0	
Zinc, Dissolved	0.006	mg/L	0.005	200.8	11/23/09 13:04	SLS	7440-66-6	
Organics								
TOX	Not detected	ug/L	30.0	9020A	11/24/09 12:00	TestA		O

O-Analysis performed by outside laboratory. See attached report. 1-Method blank contamination.The associated method blank contains the target analyte at a reportable level

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

PROJECT NO. 42578

42578

Lot #: A9K200568

Paula Shaw

Merit Laboratories
2680 E Lansing Drive
Lansing, MI 48823

TESTAMERICA LABORATORIES, INC.

Approved for release.
Denise D. Heckler
Project Manager
12/7/2009 3:27 PM

Denise D. Heckler
Project Manager
denise.heckler@testamericainc.com

December 7, 2009

CASE NARRATIVE

A9K200568

The following report contains the analytical results for ten water samples submitted to TestAmerica North Canton by Merit Laboratories from the 42578 Site, project number 42578. The samples were received November 20, 2009, according to documented sample acceptance procedures.

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

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

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

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

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

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

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

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 3.2°C.

CASE NARRATIVE (continued)

GENERAL CHEMISTRY

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive or mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "J". Refer to the sample report pages for the affected analytes(s).

QUALITY CONTROL ELEMENTS NARRATIVE

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

QC BATCH

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

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

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

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

LABORATORY CONTROL SAMPLE

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

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

METHOD BLANK

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

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

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

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

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

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

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

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

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

SURROGATE COMPOUNDS

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

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

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

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

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

EXECUTIVE SUMMARY - Detection Highlights

A9K200568

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
42578.01 11/16/09 12:55 001				
Total Organic Carbon	3 J	1	mg/L	MCAWW 415.1
Total Organic Halogens	84.1	30.0	ug/L	SW846 9020B
42578.02 11/16/09 16:10 002				
Total Organic Carbon	4 J	1	mg/L	MCAWW 415.1
42578.03 11/17/09 09:05 003				
Total Organic Carbon	69 J	4	mg/L	MCAWW 415.1
42578.04 11/17/09 09:50 004				
Total Organic Carbon	6 J	1	mg/L	MCAWW 415.1
42578.05 11/17/09 10:20 005				
Total Organic Carbon	52 J	2	mg/L	MCAWW 415.1
42578.06 11/17/09 10:40 006				
Total Organic Carbon	3 J	1	mg/L	MCAWW 415.1
42578.07 11/17/09 11:00 007				
Total Organic Carbon	90 J	4	mg/L	MCAWW 415.1
42578.08 11/17/09 11:20 008				
Total Organic Carbon	5 J	1	mg/L	MCAWW 415.1

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A9K200568

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
42578.09 11/17/09 009				
Total Organic Carbon	98 J	4	mg/L	MCAWW 415.1
42578.10 11/17/09 010				
Total Organic Carbon	5 J	1	mg/L	MCAWW 415.1

ANALYTICAL METHODS SUMMARY

A9K200568

PARAMETER	ANALYTICAL METHOD
Total Organic Carbon	MCAWW 415.1
Total Organic Halogens	SW846 9020B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A9K200568

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LPWC1	001	42578.01	11/16/09	12:55
LPWC8	002	42578.02	11/16/09	16:10
LPWC9	003	42578.03	11/17/09	09:05
LPWDC	004	42578.04	11/17/09	09:50
LPWDF	005	42578.05	11/17/09	10:20
LPWDH	006	42578.06	11/17/09	10:40
LPWDJ	007	42578.07	11/17/09	11:00
LPWDK	008	42578.08	11/17/09	11:20
LPWDM	009	42578.09	11/17/09	
LPWDP	010	42578.10	11/17/09	

NOTE(S):

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

Merit Laboratories

Client Sample ID: 42578.01

General Chemistry

Lot-Sample #...: A9K200568-001 **Work Order #...:** LPWC1 **Matrix.....:** WG
Date Sampled...: 11/16/09 12:55 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**3 J**	**1**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**
	Dilution Factor: 1			MDL.....: 0.2		
Total Organic Halogens	**84.1**	**30.0**	**ug/L**	**SW846 9020B**	**11/24/09**	**9328327**
	Dilution Factor: 1			MDL.....: 19.0		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Merit Laboratories

Client Sample ID: 42578.02

General Chemistry

Lot-Sample #...: A9K200568-002 **Work Order #...:** LPWC8 **Matrix.....:** WG
Date Sampled...: 11/16/09 16:10 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**4 J**	**1**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**
		Dilution Factor: 1		MDL.....: 0.2		
Total Organic Halogens	ND	30.0	ug/L	SW846 9020B	11/24/09	9328327
		Dilution Factor: 1		MDL.....: 19.0		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Merit Laboratories

Client Sample ID: 42578.03

General Chemistry

Lot-Sample #...: A9K200568-003 **Work Order #...:** LPWC9 **Matrix.....:** WG
Date Sampled...: 11/17/09 09:05 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**69 J**	**4**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**

Dilution Factor: 4 MDL.....: 1

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Merit Laboratories

Client Sample ID: 42578.04

General Chemistry

Lot-Sample #...: A9K200568-004 **Work Order #...:** LPWDC **Matrix.....:** WG
Date Sampled...: 11/17/09 09:50 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**6 J**	**1**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**

Dilution Factor: 1 MDL.....: 0.2

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Merit Laboratories

Client Sample ID: 42578.05

General Chemistry

Lot-Sample #...: A9K200568-005 **Work Order #...:** LPWDF **Matrix.....:** WG
Date Sampled...: 11/17/09 10:20 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**52 J**	**2**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**

Dilution Factor: 2 MDL.....: 0.5

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Merit Laboratories

Client Sample ID: 42578.06

General Chemistry

Lot-Sample #...: A9K200568-006 **Work Order #...:** LPWDH **Matrix.....:** WG
Date Sampled...: 11/17/09 10:40 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**3 J**	**1**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**

Dilution Factor: 1 MDL.....: 0.2

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Merit Laboratories

Client Sample ID: 42578.07

General Chemistry

Lot-Sample #...: A9K200568-007 **Work Order #...:** LPWDJ **Matrix.....:** WG
Date Sampled...: 11/17/09 11:00 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**90 J**	**4**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**

Dilution Factor: 4 MDL.....: 1

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Merit Laboratories

Client Sample ID: 42578.08

General Chemistry

Lot-Sample #...: A9K200568-008 **Work Order #...:** LPWDK **Matrix.....:** WG
Date Sampled...: 11/17/09 11:20 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**5 J**	**1**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**

Dilution Factor: 1 MDL.....: 0.2

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Merit Laboratories

Client Sample ID: 42578.09

General Chemistry

Lot-Sample #...: A9K200568-009 **Work Order #...:** LPWDM **Matrix.....:** WG
Date Sampled...: 11/17/09 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**98 J**	**4**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**

Dilution Factor: 4 MDL.....: 1

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Merit Laboratories

Client Sample ID: 42578.10

General Chemistry

Lot-Sample #...: A9K200568-010 **Work Order #...:** LPWDP **Matrix.....:** WG
Date Sampled...: 11/17/09 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**5 J**	**1**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**

Dilution Factor: 1 MDL.....: 0.2

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

TestAmerica
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QUALITY CONTROL SECTION

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A9K200568 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Halogens		Work Order #: LP7FF1AA		MB Lot-Sample #:	A9K240000-327	
	ND	30.0	ug/L	SW846 9020B	11/24/09	9328327
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: LP40D1AA		MB Lot-Sample #:	A9K250000-140	
	0.3 B	**1**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**
		Dilution Factor: 1				

NOTE(S):

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

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A9K200568 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Halogens		Work Order #: LP7FF1AC	LCS Lot-Sample#: A9K240000-327		
	98	(67 - 115)	SW846 9020B	11/24/09	9328327
		Dilution Factor: 1			
Total Organic Carbon		Work Order #: LP40D1AC	LCS Lot-Sample#: A9K250000-140		
	94	(88 - 115)	MCAWW 415.1	11/25/09	9329140
		Dilution Factor: 1			

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A9K200568 **Matrix.....:** WATER
Date Sampled...: 11/17/09 13:15 **Date Received..:** 11/19/09

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Halogens	WO#: LPQ0H1AD-MS/LPQ0H1AE-MSD					MS Lot-Sample #: A9K190488-001	
	83	(59 - 126)			SW846 9020B	11/24/09	9328327
	94	(59 - 126)	13	(0-99)	SW846 9020B	11/24/09	9328327
	Dilution Factor: 1						

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A9K200568 **Matrix.....:** WG
Date Sampled...: 11/16/09 12:55 **Date Received..:** 11/20/09

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	WO#: LPWC11AD-MS/LPWC11AE-MSD					MS Lot-Sample #: A9K200568-001	
	97	(72 - 136)			MCAWW 415.1	11/25/09	9329140
	98	(72 - 136)	1.2	(0-20)	MCAWW 415.1	11/25/09	9329140
		Dilution Factor: 1					

NOTE(S):

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Merit Labs	Client Project Manager: Paula Shaw	Site Contact:	Lab Contact:	COC No:
Address: 2680 East Lansing Dr.	Telephone:	Telephone:	Telephone:	1 of 1 COCs
City/State/Zip: East Lansing, MI 48823	Email:	Analysis Turnaround Time (CALENDAR DAYS or WORKING DAYS)	Analyses	
Phone: 517-332-0167		TAT if different from below Std. ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: 42578	Method of Shipment/Carrier: UPS			
Project Number:	Shipping/Tracking No:			
PO# 42578				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Unpres	Other:	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	TOC	TOX	Sample Specific Notes / Special Instructions:
42578.01	11-16	12:55		✓				3									X	X	
.02	11-16	16:10		✓				3									X	X	
.03	11-17	09:05		✓				2									X		
.04		09:50		✓				2									X		
.05		10:20		✓				2									X		
.06		10:40		✓				2									X		
.07		11:00		✓				2									X		
.08		11:20		✓				2									X		
.09				✓				2									X		
.10	↓			✓				2									X		

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

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

Special Instructions/QC Requirements & Comments:

Relinquished by: Paula Shaw	Company: Merit	Date/Time: 16:00/11-19-09	Received by: UPS	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by: Chr Lyd	Company: TAL	Date/Time: 11/20/09 10:00
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TAL-0018 (1008)

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** A9K200568

North Canton Facility

Client Merit Labs Project 42578 By: Chri Lingel

Cooler Received on 11-20-09 Opened on 11-20-09 (Signature)

FedEx ☒ UPS ☒ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other _____

TestAmerica Cooler # _____ Multiple Coolers ☐ Foam Box ☐ Client Cooler ☒ Other _____

1. Were custody seals on the outside of the cooler(s)? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
   If YES, Quantity_____ Quantity Unsalvageable_____
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☐ No ☐ NA ☒
   Were custody seals on the bottle(s)? Yes ☐ No ☒
   If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other _____
6. Cooler temperature upon receipt 3.2 °C See back of form for multiple coolers/temps ☐
   METHOD: IR ☒ Other ☐ _____
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☑ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☑ No ☐ NA ☐
10. Were correct bottle(s) used for the test(s) indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☑
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☐ No ☑ Were VOAs on the COC? Yes ☐ No ☑

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

Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

_____

_____

_____

_____

_____

_____

15. SAMPLE CONDITION

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

Sample(s)_____ were received in a broken container.

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

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot#* 031909-HNO_3; *Sulfuric Acid Lot#* 082509-H_2SO_4; *Sodium Hydroxide Lot#* 100108 -*NaOH; Hydrochloric Acid Lot#* 092006-*HCl; Sodium Hydroxide and Zinc Acetate Lot#* 100108-$(CH_3COO)_2ZN/NaOH$. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
01	<2	11/20/09	CrL
02	<2	〃	〃

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

45936

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Cliff Yantz
COMPANY: O'Brien & Gere
ADDRESS: 37000 Grand River
CITY: Farmington Hills STATE: MI ZIP CODE: 48335
PHONE NO.: 248-477-5701 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: Coldwater Rd Landfill Semi Annual Sampling
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Schneider
TURNAROUND TIME REQUIRED: ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER
DELIVERABLES REQUIRED: ☒ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

SPECIAL INSTRUCTIONS/NOTES: Metals Are: Cu, Cr, Ni, Zn

MERIT LAB NO.	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TOC	TOX	Specific Conductivity	Dissolved Metals	TSS
42578.01	11/16/09	1255	B-9-111609	GW	5	1		1	3				X	X	X	X	
.02	11/16/09	1610	B-2D-111609	GW	5	1		1	3				X	X	X	X	
.03	11/17/09	905	Sump A-111709	WSW	4	1		1	2				X		X	X	X
.04	11/17/09	950	Vault A-111709	WW	4	1		1	2				X		X	X	X
			~~Vault B-111709~~														KBS
.05	11/17/09	1020	Sump B-111709	WSW	4	1		1	2				X		X	X	X
.06	11/17/09	1040	Vault B-111709	WW	4	1		1	2				X		X	X	X
.07	11/17/09	1100	Sump C-111709	WSW	4	1		1	2				X		X	X	X
.08	11/17/09	1120	Vault C-111709	WW	4	1		1	2				X		X	X	X
.09	11/17/09	—	Dup-01-111709	WSW	4	1		1	2				X		X	X	X
.10	11/17/09	—	Dup-02-111709	WW	4	1		1	2				X		X	X	X

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	OBG	11/17/09	1210
RECEIVED BY: SIGNATURE/ORGANIZATION	Merit	11-17-09	1210
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	Merit	11-17-09	1535
RECEIVED BY: SIGNATURE/ORGANIZATION	Merit	11-17-09	1535

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 4.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Analytical Laboratory Report

Report ID: S42591.01(01)
Generated on 12/08/2009

Report to

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

Phone: 248-477-5701 FAX:
Email: YantzCS@obg.com/SecresME@obg.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

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

Report Summary

Lab Sample ID(s): S42591.01-S42591.08
Project: Coldwater Road Landfill Semi-Annual Sampling
Collected Date: 11/17/2009 - 11/18/2009
Submitted Date/Time: 11/18/2009 13:35
Sampled by: Kevin Schneider
P.O. #:

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (8 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S42591.01	Sump D-111709	Sump Water	11/17/2009 13:45
S42591.02	Vault D-111709	Wastewater	11/17/2009 14:00
S42591.03	Sump E-111709	Sump Water	11/17/2009 14:25
S42591.04	Vault E-111709	Wastewater	11/17/2009 14:40
S42591.05	Sump F-111709	Sump Water	11/17/2009 15:00
S42591.06	Vault F-111709	Wastewater	11/17/2009 15:20
S42591.07	B-7-111709	Groundwater	11/17/2009 16:35
S42591.08	B-28-111809	Groundwater	11/18/2009 09:55

Analytical Laboratory Report

Lab Sample ID: S42591.07
Sample Tag: B-7-111709
Collected Date/Time: 11/17/2009 16:35
Matrix: Groundwater
COC Reference: 53647

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR
2	40ml Glass	H2SO4	Yes	4.2	IR
1	125ml Amber	H2SO4	Yes	4.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	11/23/09 12:00	SLS		
Inorganics								
Conductivity	1,090	umhos/cm		120.1	11/20/09 14:44	JKB		
TOC	8	mg/L	1	EPA 415	11/24/09 12:00	TestA		O
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:06	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/23/09 15:06	SLS	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:06	SLS	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:06	SLS	7440-66-6	
Organics								
TOX	25.3	ug/L	30.0	9020A	11/24/09 12:00	TestA		O1

O-Analysis performed by outside laboratory. See attached report.
1-Estimated result.Result is less than RL.

Analytical Laboratory Report

Lab Sample ID: S42591.08
Sample Tag: B-28-111809
Collected Date/Time: 11/18/2009 09:55
Matrix: Groundwater
COC Reference: 53647

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR
2	40ml Glass	H2SO4	Yes	4.2	IR
1	125ml Amber	H2SO4	Yes	4.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	11/23/09 12:00	SLS		
Inorganics								
Conductivity	814	umhos/cm		120.1	11/20/09 14:46	JKB		
TOC	2	mg/L	1	EPA 415	11/24/09 12:00	TestA		O
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:09	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/23/09 15:09	SLS	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:09	SLS	7440-02-0	
Zinc, Dissolved	0.020	mg/L	0.005	200.8	11/23/09 15:09	SLS	7440-66-6	
Organics								
TOX	Not detected	ug/L	30.0	9020A	11/24/09 12:00	TestA		O

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

PROJECT NO. 42591

42591

Lot #: A9K200560

Paula Shaw

Merit Laboratories
2680 E Lansing Drive
Lansing, MI 48823

TESTAMERICA LABORATORIES, INC.

Approved for release.
Denise D. Heckler
Project Manager
12/7/2009 2:46 PM

Denise D. Heckler
Project Manager
denise.heckler@testamericainc.com

December 7, 2009

CASE NARRATIVE

A9K200560

The following report contains the analytical results for eight water samples submitted to TestAmerica North Canton by Merit Laboratories from the 42591 Site, project number 42591. The samples were received November 20, 2009, according to documented sample acceptance procedures.

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

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

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

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

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

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

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

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 3.2°C.

CASE NARRATIVE (continued)

GENERAL CHEMISTRY

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive or mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

QUALITY CONTROL ELEMENTS NARRATIVE

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

QC BATCH

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

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

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

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

LABORATORY CONTROL SAMPLE

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

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

METHOD BLANK

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

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

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

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

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

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

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

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

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

SURROGATE COMPOUNDS

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

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

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

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

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

EXECUTIVE SUMMARY - Detection Highlights

A9K200560

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
42591.01 11/17/09 13:45 001				
Total Organic Carbon	130	4	mg/L	MCAWW 415.1
42591.02 11/17/09 14:00 002				
Total Organic Carbon	6	1	mg/L	MCAWW 415.1
42591.03 11/17/09 14:25 003				
Total Organic Carbon	5	1	mg/L	MCAWW 415.1
42591.04 11/17/09 14:40 004				
Total Organic Carbon	5	1	mg/L	MCAWW 415.1
42591.05 11/17/09 15:00 005				
Total Organic Carbon	10	1	mg/L	MCAWW 415.1
42591.06 11/17/09 15:20 006				
Total Organic Carbon	3	1	mg/L	MCAWW 415.1
42591.07 11/17/09 16:35 007				
Total Organic Carbon	8	1	mg/L	MCAWW 415.1
Total Organic Halogens	25.3 B	30.0	ug/L	SW846 9020B
42591.08 11/18/09 09:55 008				
Total Organic Carbon	2	1	mg/L	MCAWW 415.1

ANALYTICAL METHODS SUMMARY

A9K200560

PARAMETER	ANALYTICAL METHOD
Total Organic Carbon	MCAWW 415.1
Total Organic Halogens	SW846 9020B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A9K200560

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LPV9F	001	42591.01	11/17/09	13:45
LPV9T	002	42591.02	11/17/09	14:00
LPV9W	003	42591.03	11/17/09	14:25
LPV90	004	42591.04	11/17/09	14:40
LPV99	005	42591.05	11/17/09	15:00
LPWAC	006	42591.06	11/17/09	15:20
LPWAF	007	42591.07	11/17/09	16:35
LPWAM	008	42591.08	11/18/09	09:55

NOTE(S):

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

Merit Laboratories

Client Sample ID: 42591.01

General Chemistry

Lot-Sample #...: A9K200560-001 **Work Order #...:** LPV9F **Matrix.....:** WG
Date Sampled...: 11/17/09 13:45 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**130**	**4**	**mg/L**	**MCAWW 415.1**	**11/24/09**	**9328321**

Dilution Factor: 4 MDL.....: 1

Merit Laboratories

Client Sample ID: 42591.02

General Chemistry

Lot-Sample #...: A9K200560-002 **Work Order #...:** LPV9T **Matrix.....:** WG
Date Sampled...: 11/17/09 14:00 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**6**	**1**	**mg/L**	**MCAWW 415.1**	**11/24/09**	**9328321**

Dilution Factor: 1 MDL.....: 0.2

Merit Laboratories

Client Sample ID: 42591.03

General Chemistry

Lot-Sample #...: A9K200560-003 **Work Order #...:** LPV9W **Matrix.....:** WG
Date Sampled...: 11/17/09 14:25 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**5**	**1**	**mg/L**	**MCAWW 415.1**	**11/24/09**	**9328321**

Dilution Factor: 1 MDL.....: 0.2

Merit Laboratories

Client Sample ID: 42591.04

General Chemistry

Lot-Sample #...: A9K200560-004 **Work Order #...:** LPV90 **Matrix.....:** WG
Date Sampled...: 11/17/09 14:40 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**5**	**1**	**mg/L**	**MCAWW 415.1**	**11/24/09**	**9328321**

Dilution Factor: 1 MDL.....: 0.2

Merit Laboratories

Client Sample ID: 42591.05

General Chemistry

Lot-Sample #...: A9K200560-005 **Work Order #...:** LPV99 **Matrix.....:** WG
Date Sampled...: 11/17/09 15:00 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**10**	**1**	**mg/L**	**MCAWW 415.1**	**11/24/09**	**9328321**

Dilution Factor: 1 MDL.....: 0.2

Merit Laboratories

Client Sample ID: 42591.06

General Chemistry

Lot-Sample #...: A9K200560-006 **Work Order #...:** LPWAC **Matrix.....:** WG
Date Sampled...: 11/17/09 15:20 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**3**	**1**	**mg/L**	**MCAWW 415.1**	**11/24/09**	**9328321**

Dilution Factor: 1 MDL.....: 0.2

Merit Laboratories

Client Sample ID: 42591.07

General Chemistry

Lot-Sample #...: A9K200560-007 **Work Order #...:** LPWAF **Matrix.....:** WG
Date Sampled...: 11/17/09 16:35 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**8**	**1**	**mg/L**	**MCAWW 415.1**	**11/24/09**	**9328321**
	Dilution Factor: 1			MDL.....: 0.2		
Total Organic Halogens	**25.3 B**	**30.0**	**ug/L**	**SW846 9020B**	**11/24/09**	**9328327**
	Dilution Factor: 1			MDL.....: 19.0		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

Merit Laboratories

Client Sample ID: 42591.08

General Chemistry

Lot-Sample #...: A9K200560-008 **Work Order #...:** LPWAM **Matrix.....:** WG
Date Sampled...: 11/18/09 09:55 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**2**	**1**	**mg/L**	**MCAWW 415.1**	**11/24/09**	**9328321**
	Dilution Factor: 1			MDL.....: 0.2		
Total Organic Halogens	ND	30.0	ug/L	SW846 9020B	11/24/09	9328327
	Dilution Factor: 1			MDL.....: 19.0		

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

QUALITY CONTROL SECTION

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A9K200560 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon		Work Order #: LP4N71AA		MB Lot-Sample #:	A9K240000-321	
	ND	1	mg/L	MCAWW 415.1	11/24/09	9328321
		Dilution Factor: 1				
Total Organic Halogens		Work Order #: LP7FF1AA		MB Lot-Sample #:	A9K240000-327	
	ND	30.0	ug/L	SW846 9020B	11/24/09	9328327
		Dilution Factor: 1				

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A9K200560 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon		Work Order #: LP4N71AC	LCS Lot-Sample#: A9K240000-321		
	101	(88 - 115)	MCAWW 415.1	11/24/09	9328321
		Dilution Factor: 1			
Total Organic Halogens		Work Order #: LP7FF1AC	LCS Lot-Sample#: A9K240000-327		
	98	(67 - 115)	SW846 9020B	11/24/09	9328327
		Dilution Factor: 1			

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A9K200560 **Matrix.....:** WATER
Date Sampled...: 11/17/09 13:15 **Date Received..:** 11/19/09

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Halogens	WO#: LPQ0H1AD-MS/LPQ0H1AE-MSD					MS Lot-Sample #: A9K190488-001	
	83	(59 - 126)			SW846 9020B	11/24/09	9328327
	94	(59 - 126)	13	(0-99)	SW846 9020B	11/24/09	9328327
	Dilution Factor: 1						
Total Organic Carbon	WO#: LPVDT1AX-MS/LPVDT1A0-MSD					MS Lot-Sample #: A9K200460-004	
	103	(72 - 136)			MCAWW 415.1	11/24/09	9328321
	103	(72 - 136)	0.07	(0-20)	MCAWW 415.1	11/24/09	9328321
	Dilution Factor: 1						

NOTE(S):

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Merit Labs	Client Project Manager: Paula Straw	Site Contact:	Lab Contact:	COC No:
Address: 2680 East Lansing Dr.	Telephone:	Telephone:	Telephone:	1 of 1 COCs
City/State/Zip: East Lansing, MI 48823	Email:	Analysis Turnaround Time (calendar days)	Analyses	
Phone: 517-332-0167		TAT if different from below Std. ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: 42591	Method of Shipment/Carrier: UPS			
Project Number:	Shipping/Tracking No:			
PO# 42591		Matrix / Containers & Preservatives	TOC, TOX	

Sample Identification	Sample Date	Sample Time	Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Unpres	Other:	Field Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	TOC	TOX	Sample Specific Notes / Special Instructions:
42591.01	11-17	13:45		✓													X		
.02		14:00		✓													X		
.03		14:25		✓													X		
.04		14:40		✓													X		
.05		15:00		✓													X		
.06		15:20		✓													X		
.07	↓	16:35		✓													X	X	
.08	11-18	09:55		✓													X	X	

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

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

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Paula Straw	Merit	11-19-09/1600	UPS		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
			Chris Leigh	TAL	11/20/09 10:00
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TAL-0018 (1008)

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** A9K200560

North Canton Facility

Client Merit Labs Project 42591 By: Chri Lingel (Signature)

Cooler Received on 11-20-09 Opened on 11-20-09

FedEx ~~Air~~ UPS ☒ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other _____

TestAmerica Cooler # _____ Multiple Coolers ☐ Foam Box ☐ Client Cooler ☒ Other _____

1. Were custody seals on the outside of the cooler(s)? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
   If YES, Quantity_____ Quantity Unsalvageable_____
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☐ No ☐ NA ☒
   Were custody seals on the bottle(s)? Yes ☐ No ☒
   If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other _____
6. Cooler temperature upon receipt 3.2 °C See back of form for multiple coolers/temps ☐
   METHOD: IR ☒ Other ☐ _____
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☑ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☑ No ☐ NA ☐
10. Were correct bottle(s) used for the test(s) indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☑
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☐ No ☑ Were VOAs on the COC? Yes ☐ No ☑

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

Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

_____

_____

_____

_____

_____

_____

15. SAMPLE CONDITION

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

Sample(s)_____ were received in a broken container.

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

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot#* 031909-HNO_3; *Sulfuric Acid Lot#* 082509-H_2SO_4; *Sodium Hydroxide Lot#* 100108 -*NaOH; Hydrochloric Acid Lot#* 092006-*HCl; Sodium Hydroxide and Zinc Acetate Lot#* 100108-$(CH_3COO)_2ZN/NaOH$. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
07	<2	11-20-09	CSL
08	<2	"	"

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

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

C.O.C. PAGE # 1 OF 1

53647

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Cliff Yantz
COMPANY: O'Brien & Gere
ADDRESS: 37000 Grand River
CITY: Farmington Hills STATE: MI ZIP CODE: 48335
PHONE NO.: 248-477-5701 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO: P.O. NO.:

PROJECT NO./NAME: Coldwater Rd Landfill semi Annual sampling
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Schneider

TURNAROUND TIME REQUIRED: ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED: ☒ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

SPECIAL INSTRUCTIONS/NOTES: Metals Are Cu, Cr, Ni, Zn

MERIT LAB NO.	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TOC	Specific Conductivity	Dissolved Metals	TSS	TOX
42591.01	11/17/09	1345	Sump D - 111709	ww	4	1		1	2				X	X	X	X	
.02		1400	Vault D - 111709	ww	4	1		1	2				X	X	X	X	
.03		1425	Sump E - 111709	ww	4	1		1	2				X	X	X	X	
.04		1440	Vault E - 111709	ww	4	1		1	2				X	X	X	X	
.05		1500	Sump F - 111709	ww	4	1		1	2				X	X	X	X	
.06		1520	Vault F - 111709	ww	4	1		1	2				X	X	X	X	
.07	↓	1635	B-7-111709	GW	5	1		1	3				X	X	X		X
.08	11/18/09	955	B-28-111809	GW	5	1		1	3				X	X	X		X

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11/18/09	TIME 10 25	RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11-18-09	TIME 1325
RECEIVED BY: SIGNATURE/ORGANIZATION	OBG	DATE 11-18-09	TIME 1325	RECEIVED BY: SIGNATURE/ORGANIZATION	Barbara Bullock	DATE 11-18-09	TIME 13:35
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME	SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES. TEMP. ON ARRIVAL 4.2
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME	SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Analytical Laboratory Report

Report ID: S42606.01(01)
Generated on 12/08/2009

Report to

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

Phone: 248-477-5701 FAX:
Email: YantzCS@obg.com/SecresME@obg.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

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

Report Summary

Lab Sample ID(s): S42606.01-S42606.10
Project: Coldwater Road Landfill Semi-Annual Sampling
Collected Date: 11/18/2009 - 11/19/2009
Submitted Date/Time: 11/19/2009 14:05
Sampled by: Kevin Schneider
P.O. #:

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (10 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S42606.01	B-27D-111809	Groundwater	11/18/2009 10:25
S42606.02	B-23Dr-111809	Groundwater	11/18/2009 11:40
S42606.03	B-18A-111809	Groundwater	11/18/2009 12:00
S42606.04	B-24r-111809	Groundwater	11/18/2009 13:50
S42606.05	B-20D-111809	Groundwater	11/18/2009 14:20
S42606.06	B-22D-111809	Groundwater	11/18/2009 16:15
S42606.07	EB-01-111909	Groundwater	11/19/2009
S42606.08	B-21D-111909	Groundwater	11/19/2009 10:50
S42606.09	DUP-03-111909	Groundwater	11/19/2009
S42606.10	B-19Ar-111909	Groundwater	11/19/2009 12:25

Analytical Laboratory Report

Lab Sample ID: S42606.01
Sample Tag: B-27D-111809
Collected Date/Time: 11/18/2009 10:25
Matrix: Groundwater
COC Reference: 53649

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.7	IR
1	250ml Plastic	None	Yes	4.7	IR
2	40ml Glass	H2SO4	Yes	4.7	IR
1	125ml Amber	H2SO4	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	11/23/09 12:00	SLS		
Inorganics								
Conductivity	653	umhos/cm		120.1	11/24/09 12:08	JKB		
TOC	2	mg/L	1	EPA 415	11/25/09 12:00	TestA		O1
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:32	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/23/09 15:32	SLS	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:32	SLS	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:32	SLS	7440-66-6	
Organics								
TOX	Not detected	ug/L	30.0	9020A	11/24/09 12:00	TestA		O

O-Analysis performed by outside laboratory. See attached report. 1-Method blank contamination.The associated method blank contains the target analyte at a reportable level

Analytical Laboratory Report

Lab Sample ID: S42606.02
Sample Tag: B-23Dr-111809
Collected Date/Time: 11/18/2009 11:40
Matrix: Groundwater
COC Reference: 53649

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.7	IR
1	250ml Plastic	None	Yes	4.7	IR
2	40ml Glass	H2SO4	Yes	4.7	IR
1	125ml Amber	H2SO4	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	11/23/09 12:00	SLS		
Inorganics								
Conductivity	756	umhos/cm		120.1	11/24/09 12:12	JKB		
TOC	2	mg/L	1	EPA 415	11/25/09 12:00	TestA		O1
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:35	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/23/09 15:35	SLS	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:35	SLS	7440-02-0	
Zinc, Dissolved	0.010	mg/L	0.005	200.8	11/23/09 15:35	SLS	7440-66-6	
Organics								
TOX	Not detected	ug/L	30.0	9020A	11/24/09 12:00	TestA		O

O-Analysis performed by outside laboratory. See attached report. 1-Method blank contamination.The associated method blank contains the target analyte at a reportable level

Analytical Laboratory Report

Lab Sample ID: S42606.03
Sample Tag: B-18A-111809
Collected Date/Time: 11/18/2009 12:00
Matrix: Groundwater
COC Reference: 53649

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.7	IR
1	250ml Plastic	None	Yes	4.7	IR
2	40ml Glass	H2SO4	Yes	4.7	IR
1	125ml Amber	H2SO4	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	11/23/09 12:00	SLS		
Inorganics								
Conductivity	1,070	umhos/cm		120.1	11/24/09 12:14	JKB		
TOC	2	mg/L	1	EPA 415	11/25/09 12:00	TestA		O1
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:38	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/23/09 15:38	SLS	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:38	SLS	7440-02-0	
Zinc, Dissolved	0.045	mg/L	0.005	200.8	11/23/09 15:38	SLS	7440-66-6	
Organics								
TOX	Not detected	ug/L	30.0	9020A	11/24/09 12:00	TestA		O

O-Analysis performed by outside laboratory. See attached report. 1-Method blank contamination.The associated method blank contains the target analyte at a reportable level

Analytical Laboratory Report

Lab Sample ID: S42606.04
Sample Tag: B-24r-111809
Collected Date/Time: 11/18/2009 13:50
Matrix: Groundwater
COC Reference: 53649

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.7	IR
1	250ml Plastic	None	Yes	4.7	IR
2	40ml Glass	H2SO4	Yes	4.7	IR
1	125ml Amber	H2SO4	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	11/23/09 12:00	SLS		
Inorganics								
Conductivity	1,140	umhos/cm		120.1	11/24/09 12:16	JKB		
TOC	5	mg/L	1	EPA 415	11/25/09 12:00	TestA		O1
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:41	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/23/09 15:41	SLS	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:41	SLS	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:41	SLS	7440-66-6	
Organics								
TOX	86.4	ug/L	30.0	9020A	11/24/09 12:00	TestA		O

O-Analysis performed by outside laboratory. See attached report. 1-Method blank contamination.The associated method blank contains the target analyte at a reportable level

Analytical Laboratory Report

Lab Sample ID: S42606.05
Sample Tag: B-20D-111809
Collected Date/Time: 11/18/2009 14:20
Matrix: Groundwater
COC Reference: 53649

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.7	IR
1	250ml Plastic	None	Yes	4.7	IR
2	40ml Glass	H2SO4	Yes	4.7	IR
1	125ml Amber	H2SO4	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	11/23/09 12:00	SLS		
Inorganics								
Conductivity	1,030	umhos/cm		120.1	11/24/09 12:18	JKB		
TOC	2	mg/L	1	EPA 415	11/25/09 12:00	TestA		O1
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:44	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/23/09 15:44	SLS	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:44	SLS	7440-02-0	
Zinc, Dissolved	0.005	mg/L	0.005	200.8	11/23/09 15:44	SLS	7440-66-6	
Organics								
TOX	Not detected	ug/L	30.0	9020A	11/25/09 12:00	TestA		O

O-Analysis performed by outside laboratory. See attached report. 1-Method blank contamination.The associated method blank contains the target analyte at a reportable level

Analytical Laboratory Report

Lab Sample ID: S42606.06
Sample Tag: B-22D-111809
Collected Date/Time: 11/18/2009 16:15
Matrix: Groundwater
COC Reference: 53649

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.7	IR
1	250ml Plastic	None	Yes	4.7	IR
2	40ml Glass	H2SO4	Yes	4.7	IR
1	125ml Amber	H2SO4	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	11/23/09 12:00	SLS		
Inorganics								
Conductivity	710	umhos/cm		120.1	11/24/09 12:20	JKB		
TOC	2	mg/L	1	EPA 415	11/25/09 12:00	TestA		O1
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:47	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/23/09 15:47	SLS	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:47	SLS	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:47	SLS	7440-66-6	
Organics								
TOX	Not detected	ug/L	30.0	9020A	11/25/09 12:00	TestA		O

O-Analysis performed by outside laboratory. See attached report. 1-Method blank contamination.The associated method blank contains the target analyte at a reportable level

Analytical Laboratory Report

Lab Sample ID: S42606.07
Sample Tag: EB-01-111909
Collected Date/Time: 11/19/2009 :
Matrix: Groundwater
COC Reference: 53649

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.7	IR
1	250ml Plastic	None	Yes	4.7	IR
2	40ml Glass	H2SO4	Yes	4.7	IR
1	125ml Amber	H2SO4	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	11/23/09 12:00	SLS		
Inorganics								
Conductivity	5	umhos/cm		120.1	11/24/09 12:22	JKB		
TOC	0.7	mg/L	1	EPA 415	11/25/09 12:00	TestA		O1
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:49	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/23/09 15:49	SLS	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:49	SLS	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:49	SLS	7440-66-6	
Organics								
TOX	Not detected	ug/L	30.0	9020A	11/25/09 12:00	TestA		O

O-Analysis performed by outside laboratory. See attached report. 1-Estimated result.Result is less than RL./ Method blank contamination.The associated method blank contains the target analyte at a reportable level

Analytical Laboratory Report

Lab Sample ID: S42606.08
Sample Tag: B-21D-111909
Collected Date/Time: 11/19/2009 10:50
Matrix: Groundwater
COC Reference: 53649

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.7	IR
1	250ml Plastic	None	Yes	4.7	IR
2	40ml Glass	H2SO4	Yes	4.7	IR
1	125ml Amber	H2SO4	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	11/23/09 12:00	SLS		
Inorganics								
Conductivity	745	umhos/cm		120.1	11/24/09 12:24	JKB		
TOC	2	mg/L	1	EPA 415	11/25/09 12:00	TestA		O1
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:52	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/23/09 15:52	SLS	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:52	SLS	7440-02-0	
Zinc, Dissolved	0.006	mg/L	0.005	200.8	11/23/09 15:52	SLS	7440-66-6	
Organics								
TOX	41.2	ug/L	30.0	9020A	11/25/09 12:00	TestA		O

O-Analysis performed by outside laboratory. See attached report. 1-Method blank contamination.The associated method blank contains the target analyte at a reportable level

Analytical Laboratory Report

Lab Sample ID: S42606.09
Sample Tag: DUP-03-111909
Collected Date/Time: 11/19/2009 :
Matrix: Groundwater
COC Reference: 53649

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.7	IR
1	250ml Plastic	None	Yes	4.7	IR
2	40ml Glass	H2SO4	Yes	4.7	IR
1	125ml Amber	H2SO4	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	11/23/09 12:00	SLS		
Inorganics								
Conductivity	739	umhos/cm		120.1	11/24/09 12:26	JKB		
TOC	2	mg/L	1	EPA 415	11/25/09 12:00	TestA		O1
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:55	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/23/09 15:55	SLS	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:55	SLS	7440-02-0	
Zinc, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:55	SLS	7440-66-6	
Organics								
TOX	Not detected	ug/L	30.0	9020A	11/25/09 12:00	TestA		O

O-Analysis performed by outside laboratory. See attached report. 1-Method blank contamination.The associated method blank contains the target analyte at a reportable level

Analytical Laboratory Report

Lab Sample ID: S42606.10
Sample Tag: B-19Ar-111909
Collected Date/Time: 11/19/2009 12:25
Matrix: Groundwater
COC Reference: 53649

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.7	IR
1	250ml Plastic	None	Yes	4.7	IR
2	40ml Glass	H2SO4	Yes	4.7	IR
1	125ml Amber	H2SO4	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	11/23/09 12:00	SLS		
Inorganics								
Conductivity	994	umhos/cm		120.1	11/24/09 12:28	JKB		
TOC	2	mg/L	1	EPA 415	11/25/09 12:00	TestA		O1
Metals								
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:58	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	11/23/09 15:58	SLS	7440-50-8	
Nickel, Dissolved	Not detected	mg/L	0.005	200.8	11/23/09 15:58	SLS	7440-02-0	
Zinc, Dissolved	0.007	mg/L	0.005	200.8	11/23/09 15:58	SLS	7440-66-6	
Organics								
TOX	Not detected	ug/L	30.0	9020A	11/25/09 12:00	TestA		O

O-Analysis performed by outside laboratory. See attached report. 1-Method blank contamination.The associated method blank contains the target analyte at a reportable level

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

PROJECT NO. 42606

42606

Lot #: A9K200570

Paula Shaw

Merit Laboratories
2680 E Lansing Drive
Lansing, MI 48823

TESTAMERICA LABORATORIES, INC.

Approved for release.
Denise D. Heckler
Project Manager
12/7/2009 3:28 PM

Denise D. Heckler
Project Manager
denise.heckler@testamericainc.com

December 7, 2009

ACCREDITED IN ACCORDANCE WITH nelac

CASE NARRATIVE

A9K200570

The following report contains the analytical results for ten water samples submitted to TestAmerica North Canton by Merit Laboratories from the 42606 Site, project number 42606. The samples were received November 20, 2009, according to documented sample acceptance procedures.

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

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

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

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

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

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

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

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 3.2°C.

CASE NARRATIVE (continued)

GENERAL CHEMISTRY

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive or mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "J". Refer to the sample report pages for the affected analytes(s).

More than twelve (12) hours transpired between QC, (CCV,CCB) for sample(s) 42606.10, 42606.05, 42606.06, 42606.07, 42606.08, and 42606.09. Since all QC passed on entire run, and due to insufficient sample volume to rerun samples, the data is accepted and reported.

QUALITY CONTROL ELEMENTS NARRATIVE

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

QC BATCH

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

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

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

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

LABORATORY CONTROL SAMPLE

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

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

METHOD BLANK

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

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

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

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

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

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

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

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

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

SURROGATE COMPOUNDS

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

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

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

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

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

EXECUTIVE SUMMARY - Detection Highlights

A9K200570

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
42606.01 11/18/09 10:25 001				
Total Organic Carbon	2 J	1	mg/L	MCAWW 415.1
42606.02 11/18/09 11:40 002				
Total Organic Carbon	2 J	1	mg/L	MCAWW 415.1
42606.03 11/18/09 12:00 003				
Total Organic Carbon	2 J	1	mg/L	MCAWW 415.1
42606.04 11/18/09 13:50 004				
Total Organic Carbon	5 J	1	mg/L	MCAWW 415.1
Total Organic Halogens	86.4	30.0	ug/L	SW846 9020B
42606.05 11/18/09 14:20 005				
Total Organic Carbon	2 J	1	mg/L	MCAWW 415.1
42606.06 11/18/09 16:15 006				
Total Organic Carbon	2 J	1	mg/L	MCAWW 415.1
42606.07 11/19/09 007				
Total Organic Carbon	0.7 B,J	1	mg/L	MCAWW 415.1
42606.08 11/19/09 10:50 008				
Total Organic Carbon	2 J	1	mg/L	MCAWW 415.1
Total Organic Halogens	41.2	30.0	ug/L	SW846 9020B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A9K200570

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
42606.09 11/19/09 009				
Total Organic Carbon	2 J	1	mg/L	MCAWW 415.1
42606.10 11/19/09 12:25 010				
Total Organic Carbon	2 J	1	mg/L	MCAWW 415.1

ANALYTICAL METHODS SUMMARY

A9K200570

PARAMETER	ANALYTICAL METHOD
Total Organic Carbon	MCAWW 415.1
Total Organic Halogens	SW846 9020B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A9K200570

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LPWEM	001	42606.01	11/18/09	10:25
LPWER	002	42606.02	11/18/09	11:40
LPWET	003	42606.03	11/18/09	12:00
LPWEV	004	42606.04	11/18/09	13:50
LPWEW	005	42606.05	11/18/09	14:20
LPWEX	006	42606.06	11/18/09	16:15
LPWE1	007	42606.07	11/19/09	
LPWE2	008	42606.08	11/19/09	10:50
LPWE4	009	42606.09	11/19/09	
LPWE6	010	42606.10	11/19/09	12:25

NOTE(S):

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

Merit Laboratories

Client Sample ID: 42606.01

General Chemistry

Lot-Sample #...: A9K200570-001 **Work Order #...:** LPWEM **Matrix.....:** WG
Date Sampled...: 11/18/09 10:25 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**2 J**	**1**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**
		Dilution Factor: 1		MDL.....: 0.2		
Total Organic Halogens	ND	30.0	ug/L	SW846 9020B	11/24/09	9328327
		Dilution Factor: 1		MDL.....: 19.0		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Merit Laboratories

Client Sample ID: 42606.02

General Chemistry

Lot-Sample #...: A9K200570-002 **Work Order #...:** LPWER **Matrix.....:** WG
Date Sampled...: 11/18/09 11:40 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**2 J**	**1**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**
	Dilution Factor: 1			MDL.....: 0.2		
Total Organic Halogens	ND	30.0	ug/L	SW846 9020B	11/24/09	9328327
	Dilution Factor: 1			MDL.....: 19.0		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Merit Laboratories

Client Sample ID: 42606.03

General Chemistry

Lot-Sample #...: A9K200570-003 **Work Order #...:** LPWET **Matrix.....:** WG
Date Sampled...: 11/18/09 12:00 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**2 J**	**1**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**
	Dilution Factor: 1			MDL.....: 0.2		
Total Organic Halogens	ND	30.0	ug/L	SW846 9020B	11/24/09	9328327
	Dilution Factor: 1			MDL.....: 19.0		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Merit Laboratories

Client Sample ID: 42606.04

General Chemistry

Lot-Sample #...: A9K200570-004 **Work Order #...:** LPWEV **Matrix.....:** WG
Date Sampled...: 11/18/09 13:50 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**5 J**	**1**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**
		Dilution Factor: 1		MDL.....: 0.2		
Total Organic Halogens	**86.4**	**30.0**	**ug/L**	**SW846 9020B**	**11/24/09**	**9328327**
		Dilution Factor: 1		MDL.....: 19.0		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Merit Laboratories

Client Sample ID: 42606.05

General Chemistry

Lot-Sample #...: A9K200570-005 **Work Order #...:** LPWEW **Matrix.....:** WG
Date Sampled...: 11/18/09 14:20 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**2 J**	**1**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**
	Dilution Factor: 1			MDL.....: 0.2		
Total Organic Halogens	ND	30.0	ug/L	SW846 9020B	11/25/09	9328327
	Dilution Factor: 1			MDL.....: 19.0		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Merit Laboratories

Client Sample ID: 42606.06

General Chemistry

Lot-Sample #...: A9K200570-006 **Work Order #...:** LPWEX **Matrix.....:** WG
Date Sampled...: 11/18/09 16:15 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**2 J**	**1**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**
		Dilution Factor: 1		MDL.....: 0.2		
Total Organic Halogens	ND	30.0	ug/L	SW846 9020B	11/25/09	9328327
		Dilution Factor: 1		MDL.....: 19.0		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Merit Laboratories

Client Sample ID: 42606.07

General Chemistry

Lot-Sample #...: A9K200570-007 **Work Order #...:** LPWE1 **Matrix.....:** WG
Date Sampled...: 11/19/09 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.7 B,J**	**1**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**
	Dilution Factor: 1			MDL.....: 0.2		
Total Organic Halogens	ND	30.0	ug/L	SW846 9020B	11/25/09	9328327
	Dilution Factor: 1			MDL.....: 19.0		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Merit Laboratories

Client Sample ID: 42606.08

General Chemistry

Lot-Sample #...: A9K200570-008 **Work Order #...:** LPWE2 **Matrix.....:** WG
Date Sampled...: 11/19/09 10:50 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**2 J**	**1**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**
		Dilution Factor: 1		MDL.....: 0.2		
Total Organic Halogens	**41.2**	**30.0**	**ug/L**	**SW846 9020B**	**11/25/09**	**9328327**
		Dilution Factor: 1		MDL.....: 19.0		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Merit Laboratories

Client Sample ID: 42606.09

General Chemistry

Lot-Sample #...: A9K200570-009 **Work Order #...:** LPWE4 **Matrix.....:** WG
Date Sampled...: 11/19/09 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**2 J**	**1**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**
		Dilution Factor: 1		MDL.....: 0.2		
Total Organic Halogens	ND	30.0	ug/L	SW846 9020B	11/25/09	9328327
		Dilution Factor: 1		MDL.....: 19.0		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Merit Laboratories

Client Sample ID: 42606.10

General Chemistry

Lot-Sample #...: A9K200570-010 **Work Order #...:** LPWE6 **Matrix.....:** WG
Date Sampled...: 11/19/09 12:25 **Date Received..:** 11/20/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**2 J**	**1**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**
	Dilution Factor: 1			MDL.....: 0.2		
Total Organic Halogens	ND	30.0	ug/L	SW846 9020B	11/25/09	9328327
	Dilution Factor: 1			MDL.....: 19.0		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

QUALITY CONTROL SECTION

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A9K200570 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Halogens		Work Order #: LP7FF1AA		MB Lot-Sample #:	A9K240000-327	
	ND	30.0	ug/L	SW846 9020B	11/24/09	9328327
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: LP40D1AA		MB Lot-Sample #:	A9K250000-140	
	0.3 B	**1**	**mg/L**	**MCAWW 415.1**	**11/25/09**	**9329140**
		Dilution Factor: 1				

NOTE(S):

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

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A9K200570 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Halogens		Work Order #: LP7FF1AC	LCS Lot-Sample#: A9K240000-327		
	98	(67 - 115)	SW846 9020B	11/24/09	9328327
		Dilution Factor: 1			
Total Organic Carbon		Work Order #: LP40D1AC	LCS Lot-Sample#: A9K250000-140		
	94	(88 - 115)	MCAWW 415.1	11/25/09	9329140
		Dilution Factor: 1			

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A9K200570 **Matrix.....:** WATER
Date Sampled...: 11/16/09 12:55 **Date Received..:** 11/20/09

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Halogens	WO#: LPQ0H1AD-MS/LPQ0H1AE-MSD					MS Lot-Sample #: A9K190488-001	
	83	(59 - 126)			SW846 9020B	11/24/09	9328327
	94	(59 - 126)	13	(0-99)	SW846 9020B	11/24/09	9328327
	Dilution Factor: 1						
Total Organic Carbon	WO#: LPWC11AD-MS/LPWC11AE-MSD					MS Lot-Sample #: A9K200568-001	
	97	(72 - 136)			MCAWW 415.1	11/25/09	9329140
	98	(72 - 136)	1.2	(0-20)	MCAWW 415.1	11/25/09	9329140
	Dilution Factor: 1						

NOTE(S):

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Merit Labs	Client Project Manager: Paula Shaw	Site Contact:	Lab Contact:	COC No:
Address: 2680 East Lansing Dr.	Telephone:	Telephone:	Telephone:	1 of 1 COCs
City/State/Zip: East Lansing, MI 48823	Email:	Analysis Turnaround Time (in BUSdays)	Analyses	For lab use only
Phone: 517-332-0167		TAT if different from below std.		Walk-in client: ☐
Project Name: 42606	Method of Shipment/Carrier: UPS	☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Lab pickup: ☐
Project Number:	Shipping/Tracking No:			Lab sampling: ☐
PO# 42606				Job/SDG No.:

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite (C) / Grab (G)	TOC	TOX	Sample Specific Notes / Special Instructions:
42606.01	11-18	10:25		✓				3									X	X	
.02	↓	11:40		✓				3									X	X	
.03		12:00		✓				3									X	X	
.04		13:50		✓				3									X	X	
.05		14:20		✓				3									X	X	
.06	↓	16:15		✓				3									X	X	
.07	11-19			✓				3									X	X	
.08	↓	10:50		✓				3									X	X	
.09				✓				3									X	X	
.10	↓	12:25		✓				3									X	X	

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

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

Special Instructions/QC Requirements & Comments:

Relinquished by: Paula Shaw	Company: Merit	Date/Time: 11-19-09/1600	Received by: UPS	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by: Ch Lyd	Company: TAL	Date/Time: 11/20/09 10:00
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TAL-0018 (1008)

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** A9K200570

North Canton Facility

Client Merit Labs Project 42606 By: Chri Lingel (Signature)

Cooler Received on 11-20-09 Opened on 11-20-09

FedEx ~~Xpress~~ UPS ☒ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other _____

TestAmerica Cooler # _____ Multiple Coolers ☐ Foam Box ☐ Client Cooler ☒ Other _____

1. Were custody seals on the outside of the cooler(s)? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
   If YES, Quantity_____ Quantity Unsalvageable_____
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☐ No ☐ NA ☒
   Were custody seals on the bottle(s)? Yes ☐ No ☒
   If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other _____
6. Cooler temperature upon receipt 3.2 °C See back of form for multiple coolers/temps ☐
   METHOD: IR ☒ Other ☐ _____
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☑ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☑ No ☐ NA ☐
10. Were correct bottle(s) used for the test(s) indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☑
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☐ No ☑ Were VOAs on the COC? Yes ☐ No ☑

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

Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

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

Sample(s)_____ were received in a broken container.

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

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot#* 031909-HNO_3; *Sulfuric Acid Lot#* 082509-H_2SO_4; *Sodium Hydroxide Lot#* 100108 -*NaOH; Hydrochloric Acid Lot#* 092006-*HCl; Sodium Hydroxide and Zinc Acetate Lot#* 100108-$(CH_3COO)_2ZN$/*NaOH.* What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
01	≤2	11/20/09	CSL
02	≤2		
03	≤2		
04	≤2		
05	≤2		
06	≤2		
07	≤2		
08	≤2		

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials
09	≤2	11/20/09	CSL
10	≤2	↓	↓

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

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

C.O.C. PAGE # 1 OF 1

53649

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Cliff Yantz
COMPANY: O'Brien & Gere
ADDRESS: 37000 Grand River
CITY: Farmington Hills STATE: MI ZIP CODE: 48335
PHONE NO.: 248-477-5701 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: Coldwater Rd Landfill Semi Annual Sampling
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Schreiber
TURNAROUND TIME REQUIRED: ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER
DELIVERABLES REQUIRED: ☒ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SO=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

SPECIAL INSTRUCTIONS/NOTES: Metals are: Cu, Cr, Ni, Zn

MERIT LAB NO.	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	NaOH	OTHER	TDC	TOX	Specific Conductivity	Dissolved Metals
42400201	11/18/09	1075	B-27D-111809	GW	5	1		1	3				X	X	X	X
.02		1140	B-23Dr-111809	GW	5	1		1	3				X	X	X	X
.03		1200	B-18A-111809	GW	5	1		1	3				X	X	X	X
.04		1350	B-24r-111809	GW	5	1		1	3				X	X	X	X
.05		1420	B-20D-111809	GW	5	1		1	3				X	X	X	X
.06	↓	1615	B-22D-111809	GW	5	1		1	3				X	X	X	X
.07	11/19/09	—	EB-01-111909	WQ	5	1		1	3				X	X	X	X
.08		1050	B-21D-111909	GW	5	1		1	3				X	X	X	X
.09		—	DUP-03-111909	GW	5	1		1	3				X	X	X	X
.10	↓	1225	B-19Ar-111909	GW	5	1		1	3				X	X	X	X

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	OBG	11/19/09	1310
RECEIVED BY: SIGNATURE/ORGANIZATION	Merit	11-19-09	1315
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	Merit	11-19-09	1405
RECEIVED BY: SIGNATURE/ORGANIZATION	Barbara Robertson	11-19-09	14:05

SEAL NO.: SEAL INTACT YES ☐ NO ☐ INITIALS:
SEAL NO.: SEAL INTACT YES ☐ NO ☐ INITIALS:
NOTES: TEMP. ON ARRIVAL 4.7

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

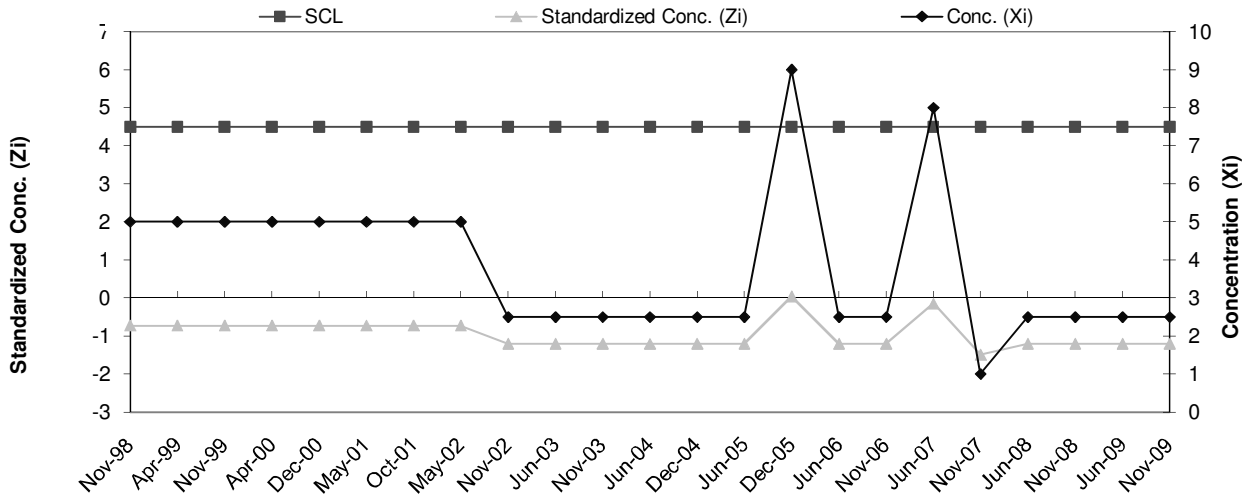
APPENDIX D

Shewart - Charts

REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-2d Cr

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10		
2	Aug-95	10		
3	Jun-96	10		
4	Aug-96	10	**8.78**	**5.19**
5	Nov-96	10		
6	May-97	10		
7	Nov-97	5		
8	May-98	5		

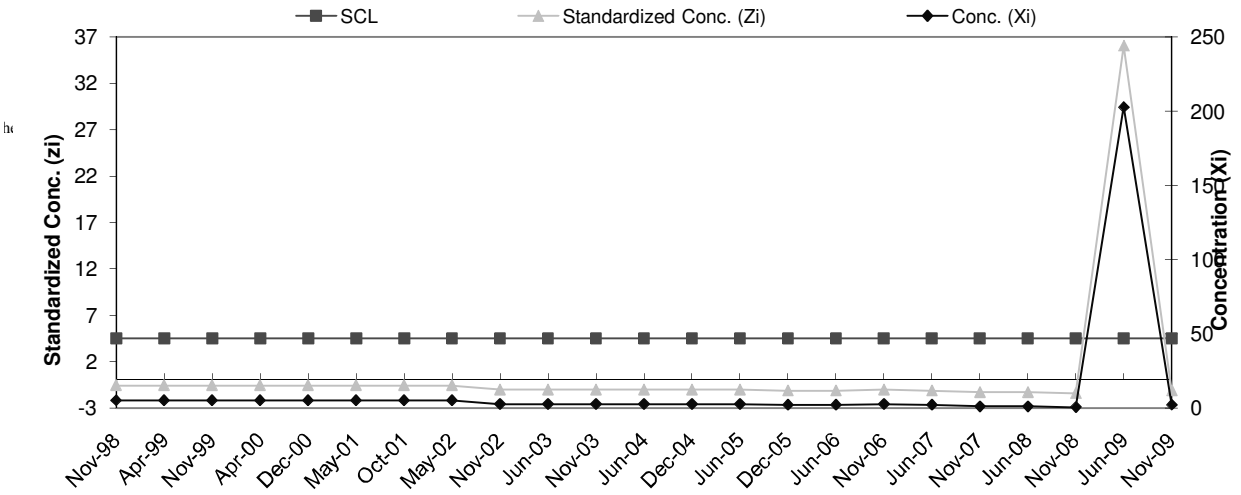
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	5	-0.73
10	Apr-99	4.5	5	-0.73
11	Nov-99	4.5	5	-0.73
12	Apr-00	4.5	5	-0.73
13	Dec-00	4.5	5	-0.73
14	May-01	4.5	5	-0.73
15	Oct-01	4.5	5	-0.73
16	May-02	4.5	5	-0.73
17	Nov-02	4.5	2.5	-1.21
18	Jun-03	4.5	2.5	-1.21
19	Nov-03	4.5	2.5	-1.21
20	Jun-04	4.5	2.5	-1.21
21	Dec-04	4.5	2.5	-1.21
22	Jun-05	4.5	2.5	-1.21
23	Dec-05	4.5	9	0.04
24	Jun-06	4.5	2.5	-1.21
25	Nov-06	4.5	2.5	-1.21
26	Jun-07	4.5	8	-0.15
27	Nov-07	4.5	1	-1.50
28	Jun-08	4.5	2.5	-1.21
29	Nov-08	4.5	2.5	-1.21
30	Jun-09	4.5	2.5	-1.21
31	Nov-09	4.5	2.5	-1.21



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-2d Cu

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

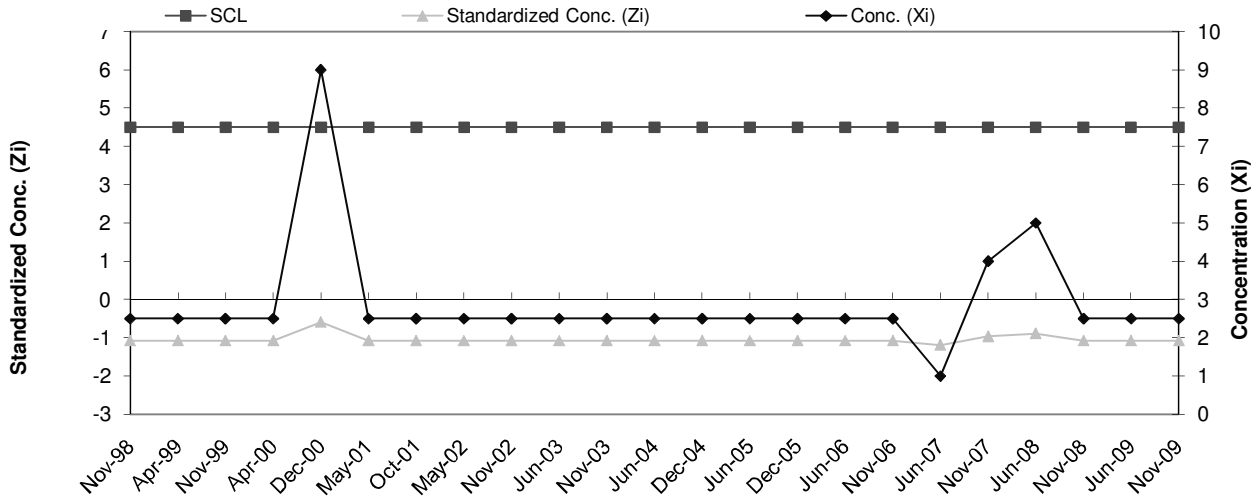
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	5	-0.58
10	Apr-99	4.5	5	-0.58
11	Nov-99	4.5	5	-0.58
12	Apr-00	4.5	5	-0.58
13	Dec-00	4.5	5	-0.58
14	May-01	4.5	5	-0.58
15	Oct-01	4.5	5	-0.58
16	May-02	4.5	5	-0.58
17	Nov-02	4.5	2.5	-1.04
18	Jun-03	4.5	2.5	-1.04
19	Nov-03	4.5	2.5	-1.04
20	Jun-04	4.5	2.5	-1.04
21	Dec-04	4.5	2.5	-1.04
22	Jun-05	4.5	2.5	-1.04
23	Dec-05	4.5	2	-1.14
24	Jun-06	4.5	2	-1.14
25	Nov-06	4.5	2.5	-1.04
26	Jun-07	4.5	2	-1.14
27	Nov-07	4.5	1	-1.32
28	Jun-08	4.5	1	-1.32
29	Nov-08	4.5	0.5	-1.41
30	Jun-09	4.5	203	36.09
31	Nov-09	4.5	2	-1.14



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-2d Ni

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	15		
2	Aug-95	20		
3	Jun-96	10		
4	Aug-96	10	**16.83**	**13.28**
5	Nov-96	10		
6	May-97	28		
7	Nov-97	39		
8	May-98	2.5		

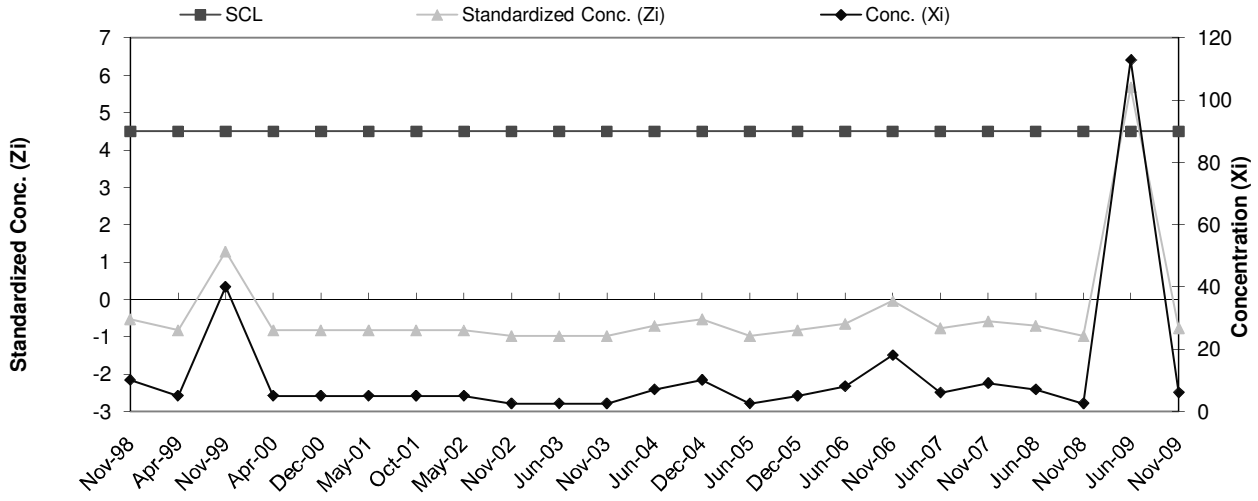
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	2.5	-1.08
10	Apr-99	4.5	2.5	-1.08
11	Nov-99	4.5	2.5	-1.08
12	Apr-00	4.5	2.5	-1.08
13	Dec-00	4.5	9	-0.59
14	May-01	4.5	2.5	-1.08
15	Oct-01	4.5	2.5	-1.08
16	May-02	4.5	2.5	-1.08
17	Nov-02	4.5	2.5	-1.08
18	Jun-03	4.5	2.5	-1.08
19	Nov-03	4.5	2.5	-1.08
20	Jun-04	4.5	2.5	-1.08
21	Dec-04	4.5	2.5	-1.08
22	Jun-05	4.5	2.5	-1.08
23	Dec-05	4.5	2.5	-1.08
24	Jun-06	4.5	2.5	-1.08
25	Nov-06	4.5	2.5	-1.08
26	Jun-07	4.5	1	-1.19
27	Nov-07	4.5	4	-0.97
28	Jun-08	4.5	5	-0.89
29	Nov-08	4.5	2.5	-1.08
30	Jun-09	4.5	2.5	-1.08
31	Nov-09	4.5	2.5	-1.08



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-2d Zn

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10		
2	Aug-95	10		
3	Jun-96	10		
4	Aug-96	50	**18.75**	**16.62**
5	Nov-96	30		
6	May-97	30		
7	Nov-97	5		
8	May-98	5		

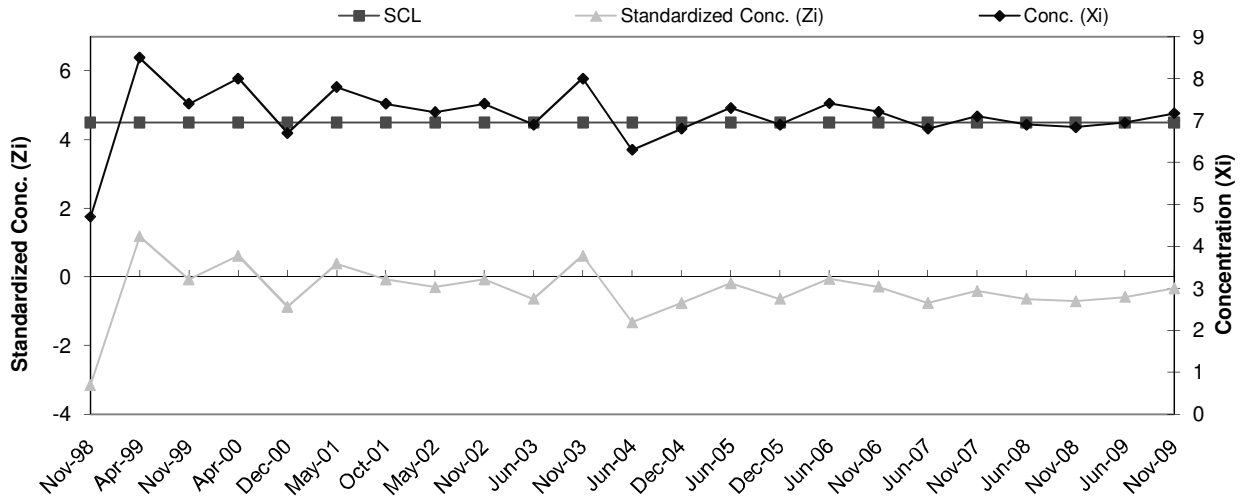
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	10	-0.53
10	Apr-99	4.5	5	-0.83
11	Nov-99	4.5	40	1.28
12	Apr-00	4.5	5	-0.83
13	Dec-00	4.5	5	-0.83
14	May-01	4.5	5	-0.83
15	Oct-01	4.5	5	-0.83
16	May-02	4.5	5	-0.83
17	Nov-02	4.5	2.5	-0.98
18	Jun-03	4.5	2.5	-0.98
19	Nov-03	4.5	2.5	-0.98
20	Jun-04	4.5	7	-0.71
21	Dec-04	4.5	10	-0.53
22	Jun-05	4.5	2.5	-0.98
23	Dec-05	4.5	5	-0.83
24	Jun-06	4.5	8	-0.65
25	Nov-06	4.5	18	-0.05
26	Jun-07	4.5	6	-0.77
27	Nov-07	4.5	9	-0.59
28	Jun-08	4.5	7	-0.71
29	Nov-08	4.5	2.5	-0.98
30	Jun-09	4.5	113	5.67
31	Nov-09	4.5	6	-0.77



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-2d pH

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	9.0		
2	Aug-95	8.3		
3	Jun-96	7.5		
4	Aug-96	7.7	**7.46**	**0.88**
5	Nov-96	7.3		
6	May-97	6.3		
7	Nov-97	6.9		
8	May-98	6.7		

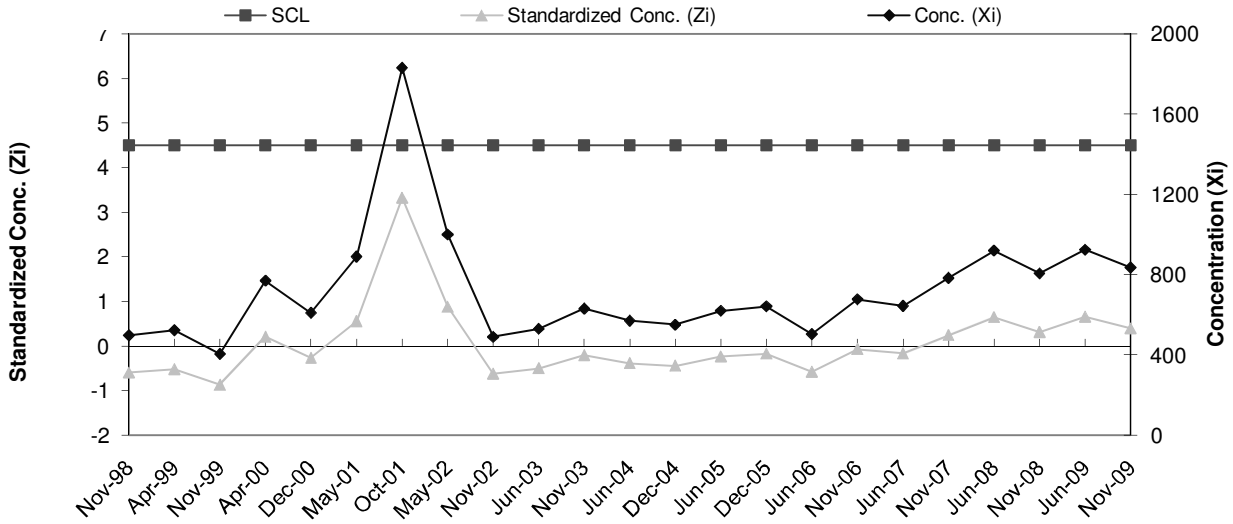
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	4.7	-3.15
10	Apr-99	4.5	8.5	1.18
11	Nov-99	4.5	7.4	-0.07
12	Apr-00	4.5	8.0	0.61
13	Dec-00	4.5	6.7	-0.87
14	May-01	4.5	7.8	0.38
15	Oct-01	4.5	7.4	-0.07
16	May-02	4.5	7.2	-0.30
17	Nov-02	4.5	7.4	-0.07
18	Jun-03	4.5	6.9	-0.64
19	Nov-03	4.5	8.0	0.61
20	Jun-04	4.5	6.3	-1.32
21	Dec-04	4.5	6.8	-0.75
22	Jun-05	4.5	7.3	-0.19
23	Dec-05	4.5	6.9	-0.64
24	Jun-06	4.5	7.4	-0.06
25	Nov-06	4.5	7.2	-0.29
26	Jun-07	4.5	6.8	-0.75
27	Nov-07	4.5	7.1	-0.41
28	Jun-08	4.5	6.9	-0.64
29	Nov-08	4.5	6.8	-0.71
30	Jun-09	4.5	7.0	-0.58
31	Nov-09	4.5	7.2	-0.33



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-2d SpC

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	434.0	701.50	339.46
2	Aug-95	479.0		
3	Jun-96	580.0		
4	Aug-96	641.0		
5	Nov-96	769.0		
6	May-97	1500.0		
7	Nov-97	660.0		
8	May-98	549.0		

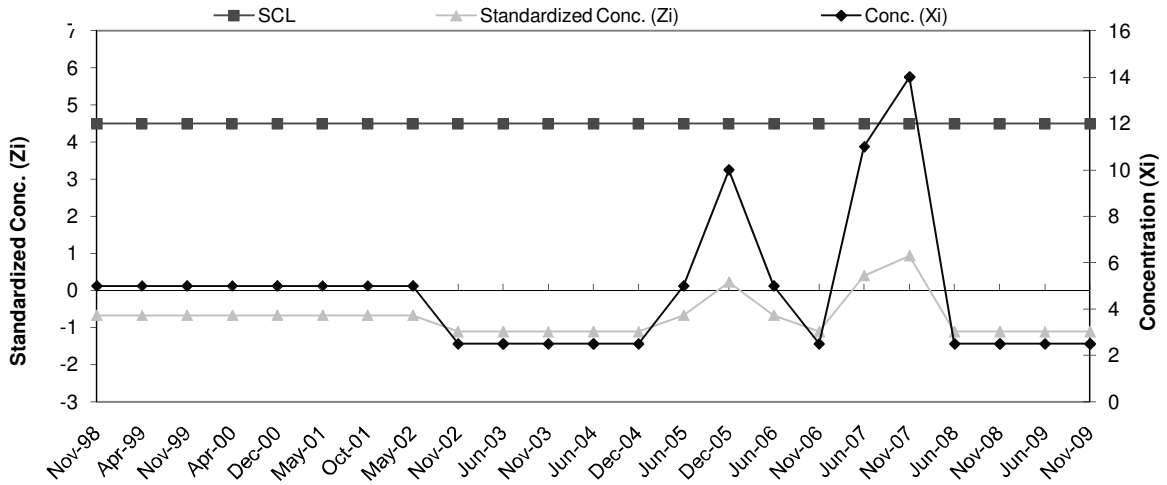
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	498.0	-0.60
10	Apr-99	4.5	523.0	-0.53
11	Nov-99	4.5	405.0	-0.87
12	Apr-00	4.5	770.0	0.20
13	Dec-00	4.5	610.0	-0.27
14	May-01	4.5	890.0	0.56
15	Oct-01	4.5	1830.0	3.32
16	May-02	4.5	1000.0	0.88
17	Nov-02	4.5	490.0	-0.62
18	Jun-03	4.5	530.0	-0.51
19	Nov-03	4.5	630.0	-0.21
20	Jun-04	4.5	570.0	-0.39
21	Dec-04	4.5	550.0	-0.45
22	Jun-05	4.5	620.0	-0.24
23	Dec-05	4.5	642.0	-0.18
24	Jun-06	4.5	504.1	-0.58
25	Nov-06	4.5	677.0	-0.07
26	Jun-07	4.5	644.0	-0.17
27	Nov-07	4.5	783.0	0.24
28	Jun-08	4.5	920.0	0.64
29	Nov-08	4.5	806.0	0.31
30	Jun-09	4.5	924.0	0.66
31	Nov-09	4.5	835.0	0.39



REALM - COLDWATER ROAD 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		
2	Aug-95	10		
3	Feb-96	10		
4	Jun-96	10	**8.75**	**5.60**
5	Aug-96	10		
6	Nov-96	10		
7	May-97	5		
8	May-98	5		

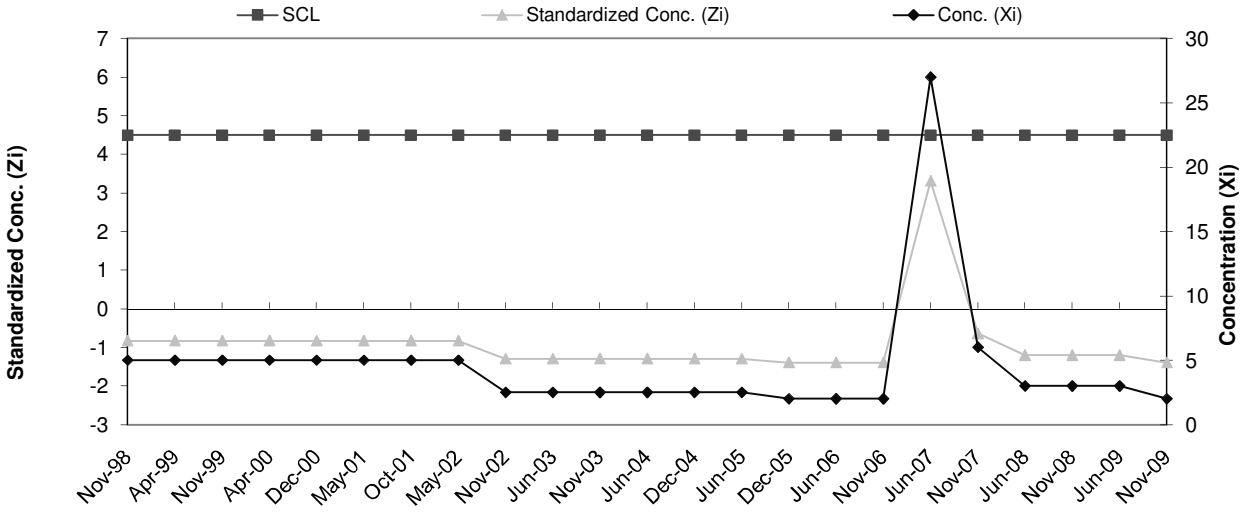
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	5	-0.67
10	Apr-99	4.5	5	-0.67
11	Nov-99	4.5	5	-0.67
12	Apr-00	4.5	5	-0.67
13	Dec-00	4.5	5	-0.67
14	May-01	4.5	5	-0.67
15	Oct-01	4.5	5	-0.67
16	May-02	4.5	5	-0.67
17	Nov-02	4.5	2.5	-1.12
18	Jun-03	4.5	2.5	-1.12
19	Nov-03	4.5	2.5	-1.12
20	Jun-04	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



REALM - COLDWATER ROAD 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		

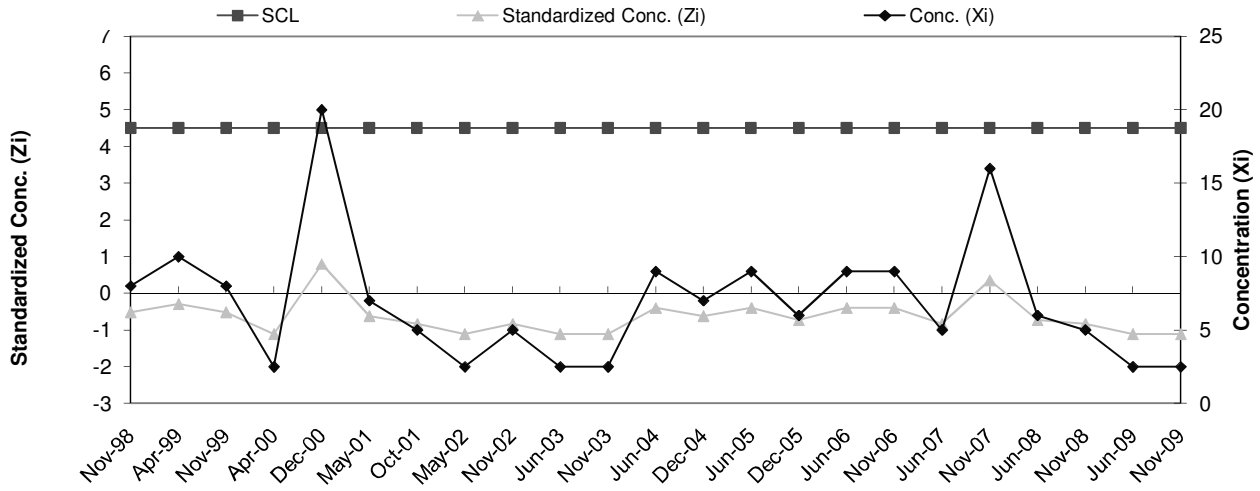
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	5	-0.83
10	Apr-99	4.5	5	-0.83
11	Nov-99	4.5	5	-0.83
12	Apr-00	4.5	5	-0.83
13	Dec-00	4.5	5	-0.83
14	May-01	4.5	5	-0.83
15	Oct-01	4.5	5	-0.83
16	May-02	4.5	5	-0.83
17	Nov-02	4.5	2.5	-1.30
18	Jun-03	4.5	2.5	-1.30
19	Nov-03	4.5	2.5	-1.30
20	Jun-04	4.5	2.5	-1.30
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



REALM - COLDWATER ROAD 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		
2	Aug-95	20		
3	Feb-96	20		
4	Jun-96	10	**12.70**	**9.19**
5	Aug-96	10		
6	Nov-96	20		
7	May-97	14		
8	May-98	2.5		

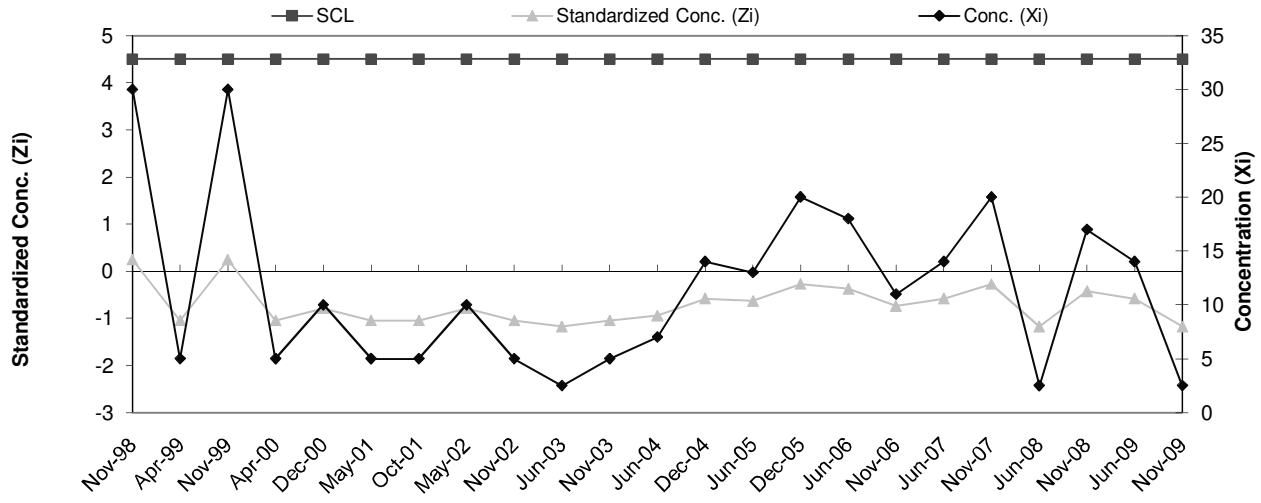
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	8	-0.51
10	Apr-99	4.5	10	-0.29
11	Nov-99	4.5	8	-0.51
12	Apr-00	4.5	2.5	-1.11
13	Dec-00	4.5	20	0.79
14	May-01	4.5	7	-0.62
15	Oct-01	4.5	5	-0.84
16	May-02	4.5	2.5	-1.11
17	Nov-02	4.5	5	-0.84
18	Jun-03	4.5	2.5	-1.11
19	Nov-03	4.5	2.5	-1.11
20	Jun-04	4.5	9	-0.40
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



REALM - COLDWATER ROAD 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		
2	Aug-95	10		
3	Feb-96	22		
4	Jun-96	20	**25.25**	**19.40**
5	Aug-96	60		
6	Nov-96	50		
7	May-97	10		
8	May-98	20		

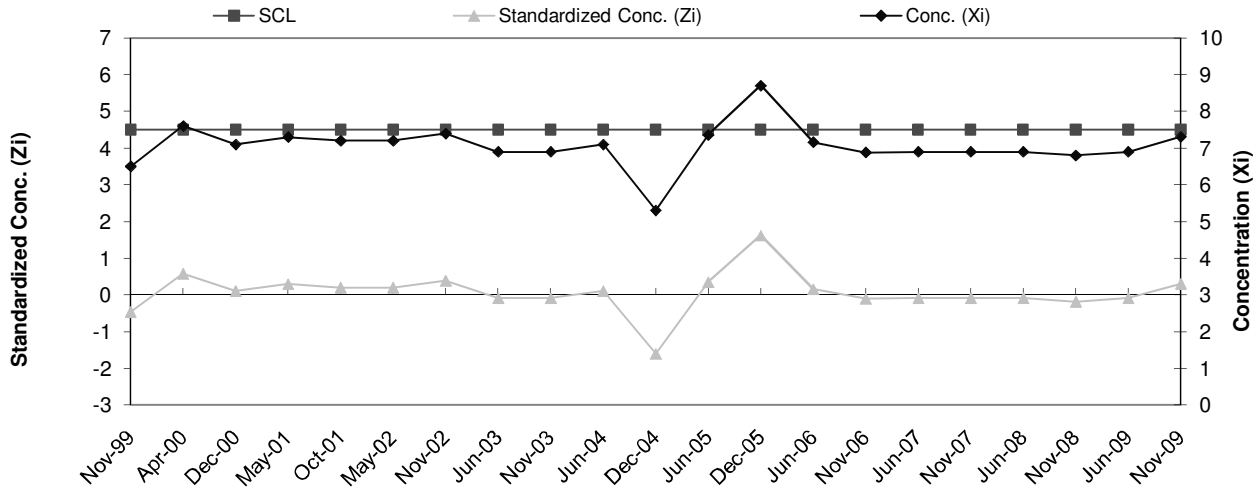
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	30	0.24
10	Apr-99	4.5	5	-1.04
11	Nov-99	4.5	30	0.24
12	Apr-00	4.5	5	-1.04
13	Dec-00	4.5	10	-0.79
14	May-01	4.5	5	-1.04
15	Oct-01	4.5	5	-1.04
16	May-02	4.5	10	-0.79
17	Nov-02	4.5	5	-1.04
18	Jun-03	4.5	2.5	-1.17
19	Nov-03	4.5	5	-1.04
20	Jun-04	4.5	7	-0.94
21	Dec-04	4.5	14	-0.58
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



REALM - COLDWATER ROAD 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		

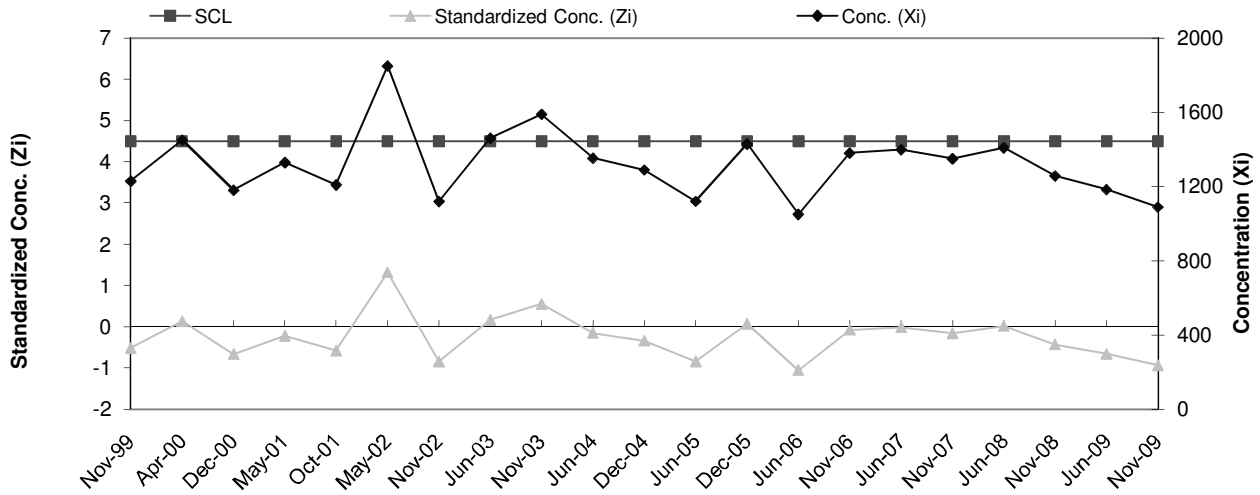
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-99	4.5	6.5	-0.46
10	Apr-00	4.5	7.6	0.58
11	Dec-00	4.5	7.1	0.11
12	May-01	4.5	7.3	0.30
13	Oct-01	4.5	7.2	0.20
14	May-02	4.5	7.2	0.20
15	Nov-02	4.5	7.4	0.39
16	Jun-03	4.5	6.9	-0.08
17	Nov-03	4.5	6.9	-0.08
18	Jun-04	4.5	7.1	0.11
19	Dec-04	4.5	5.3	-1.60
20	Jun-05	4.5	7.4	0.35
21	Dec-05	4.5	8.7	1.62
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



REALM - COLDWATER ROAD 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		

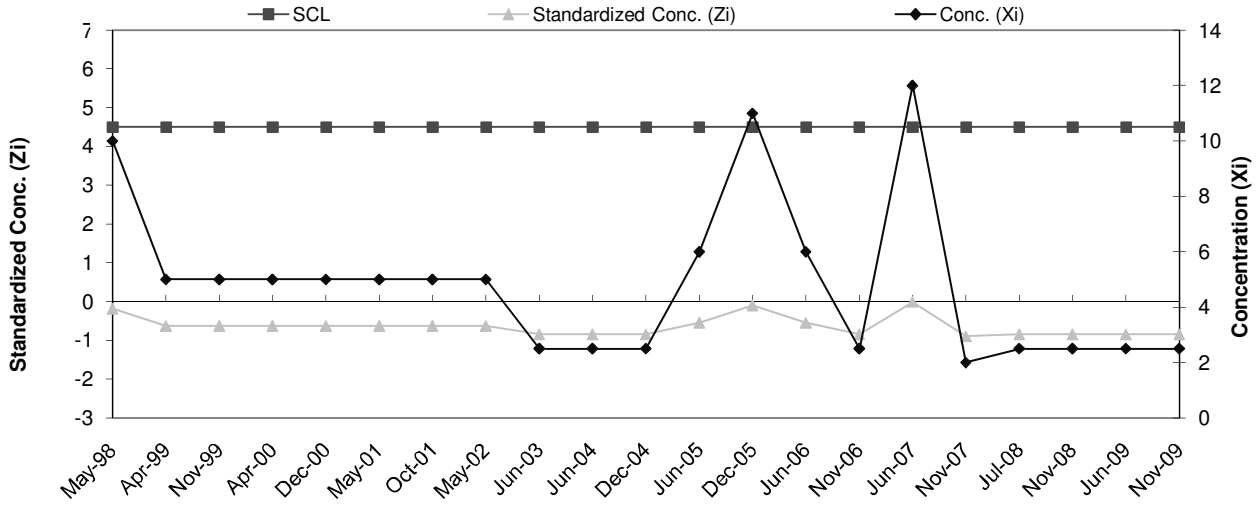
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-99	4.5	1230.0	-0.52
10	Apr-00	4.5	1450.0	0.13
11	Dec-00	4.5	1180.0	-0.67
12	May-01	4.5	1330.0	-0.23
13	Oct-01	4.5	1210.0	-0.58
14	May-02	4.5	1850.0	1.32
15	Nov-02	4.5	1120.0	-0.85
16	Jun-03	4.5	1460.0	0.16
17	Nov-03	4.5	1590.0	0.55
18	Jun-04	4.5	1353.0	-0.16
19	Dec-04	4.5	1290.0	-0.34
20	Jun-05	4.5	1121.0	-0.85
21	Dec-05	4.5	1430.0	0.07
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



REALM - COLDWATER ROAD 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		
2	Aug-95	37		
3	Feb-96	10		
4	Jun-96	10	**12.12**	**11.34**
5	Aug-96	10		
6	Nov-96	10		
7	May-97	5		
8	Nov-97	5		

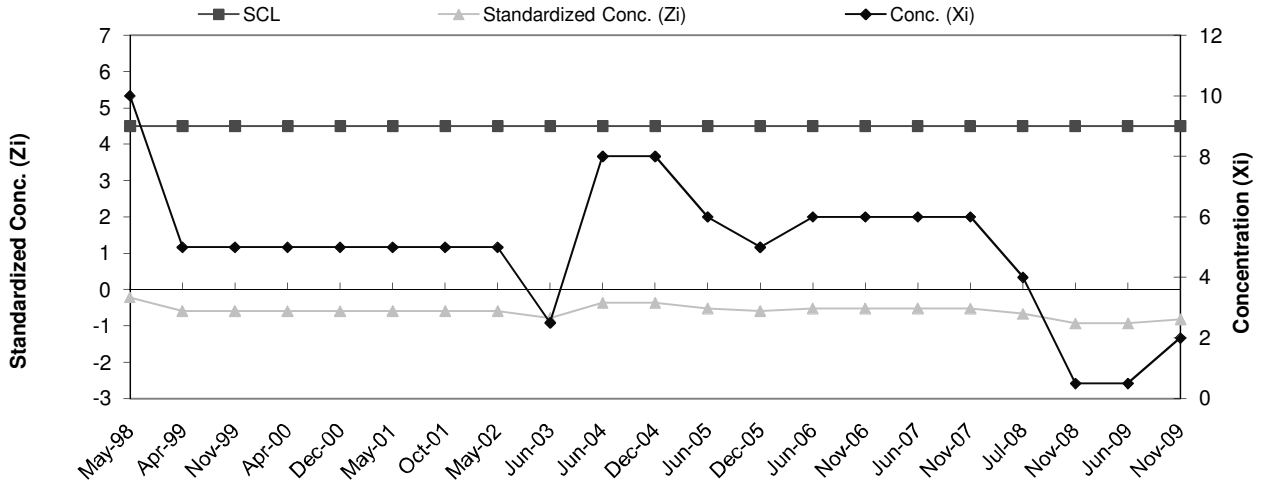
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	10	-0.19
10	Apr-99	4.5	5	-0.63
11	Nov-99	4.5	5	-0.63
12	Apr-00	4.5	5	-0.63
13	Dec-00	4.5	5	-0.63
14	May-01	4.5	5	-0.63
15	Oct-01	4.5	5	-0.63
16	May-02	4.5	5	-0.63
17	Jun-03	4.5	2.5	-0.85
18	Jun-04	4.5	2.5	-0.85
19	Dec-04	4.5	2.5	-0.85
20	Jun-05	4.5	6	-0.54
21	Dec-05	4.5	11	-0.10
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



REALM - COLDWATER ROAD 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		
2	Aug-95	43		
3	Feb-96	10		
4	Jun-96	10	**12.87**	**13.26**
5	Aug-96	10		
6	Nov-96	10		
7	May-97	5		
8	Nov-97	5		

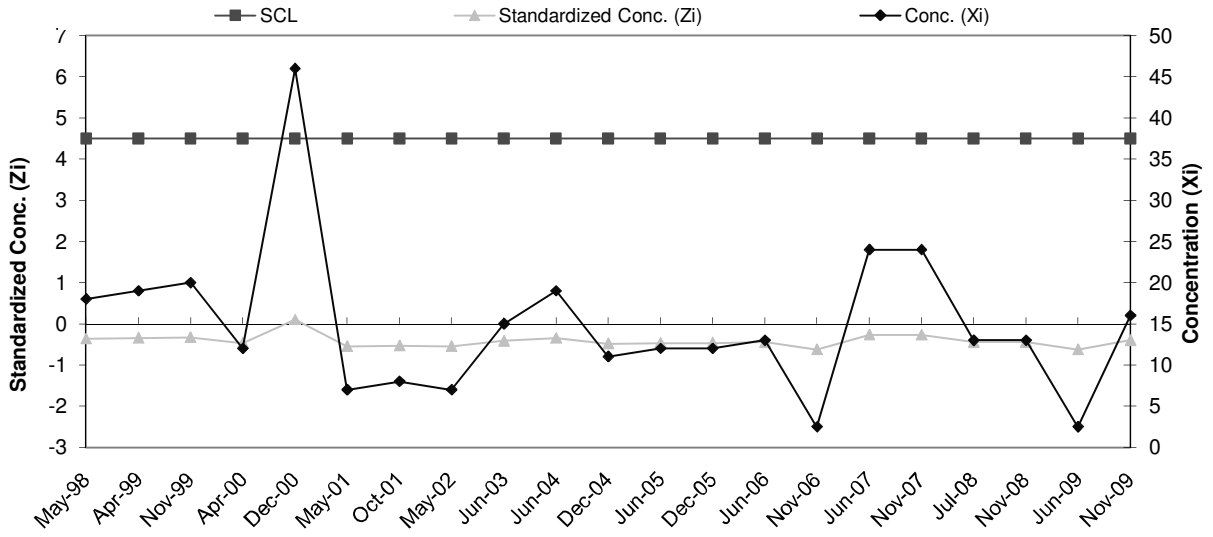
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	10	-0.22
10	Apr-99	4.5	5	-0.59
11	Nov-99	4.5	5	-0.59
12	Apr-00	4.5	5	-0.59
13	Dec-00	4.5	5	-0.59
14	May-01	4.5	5	-0.59
15	Oct-01	4.5	5	-0.59
16	May-02	4.5	5	-0.59
17	Jun-03	4.5	2.5	-0.78
18	Jun-04	4.5	8	-0.37
19	Dec-04	4.5	8	-0.37
20	Jun-05	4.5	6	-0.52
21	Dec-05	4.5	5	-0.59
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



REALM - COLDWATER ROAD 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		
2	Aug-95	20		
3	Feb-96	20		
4	Jun-96	10	**39.83**	**59.86**
5	Aug-96	10		
6	Nov-96	10		
7	May-97	51		
8	Nov-97	183		

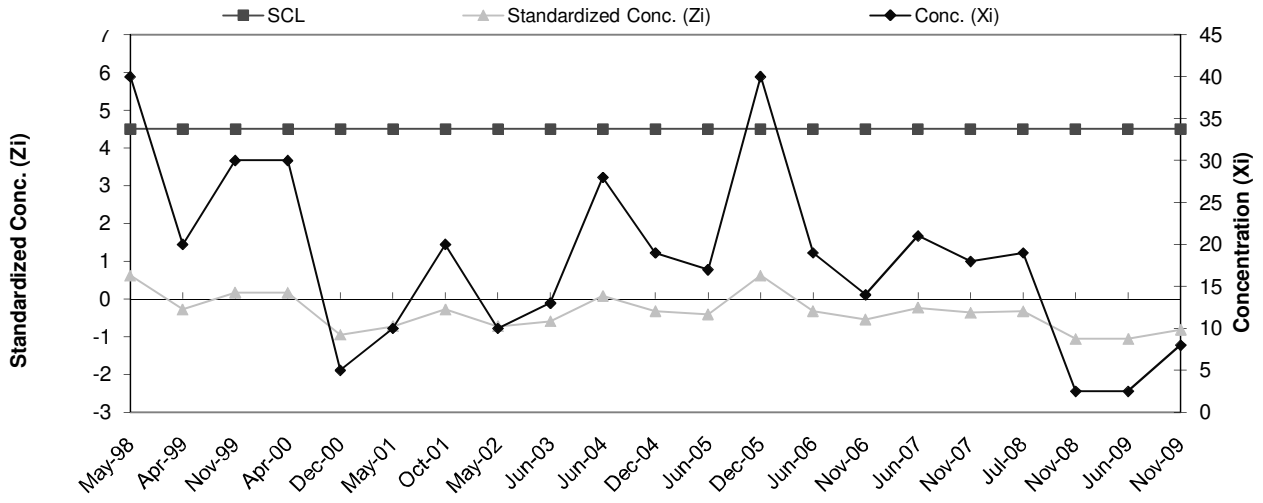
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	18	-0.36
10	Apr-99	4.5	19	-0.35
11	Nov-99	4.5	20	-0.33
12	Apr-00	4.5	12	-0.46
13	Dec-00	4.5	46	0.10
14	May-01	4.5	7	-0.55
15	Oct-01	4.5	8	-0.53
16	May-02	4.5	7	-0.55
17	Jun-03	4.5	15	-0.41
18	Jun-04	4.5	19	-0.35
19	Dec-04	4.5	11	-0.48
20	Jun-05	4.5	12	-0.46
21	Dec-05	4.5	12	-0.46
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



REALM - COLDWATER ROAD 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		
2	Aug-95	10		
3	Feb-96	10		
4	Jun-96	10	**26.23**	**22.36**
5	Aug-96	70		
6	Nov-96	40		
7	May-97	20		
8	Nov-97	40		

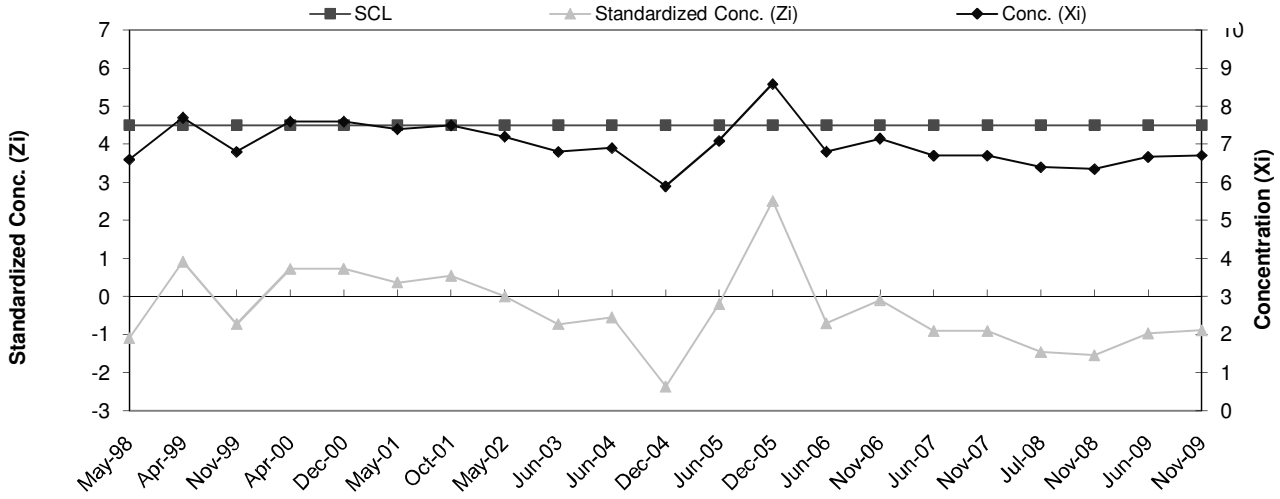
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	40	0.62
10	Apr-99	4.5	20	-0.28
11	Nov-99	4.5	30	0.17
12	Apr-00	4.5	30	0.17
13	Dec-00	4.5	5	-0.95
14	May-01	4.5	10	-0.73
15	Oct-01	4.5	20	-0.28
16	May-02	4.5	10	-0.73
17	Jun-03	4.5	13	-0.59
18	Jun-04	4.5	28	0.08
19	Dec-04	4.5	19	-0.32
20	Jun-05	4.5	17	-0.41
21	Dec-05	4.5	40	0.62
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



REALM - COLDWATER ROAD 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		

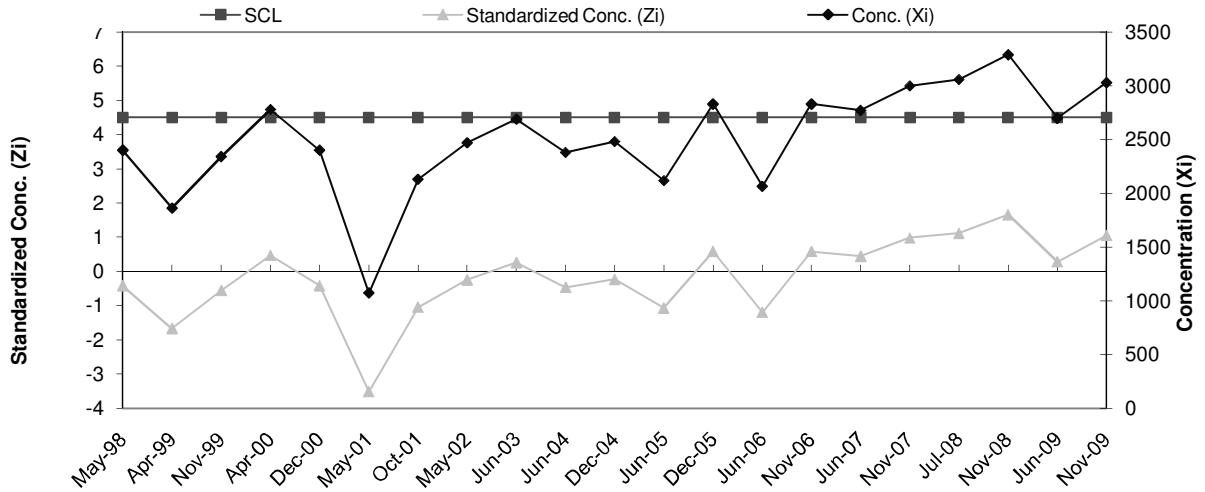
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	6.6	-1.09
10	Apr-99	4.5	7.7	0.91
11	Nov-99	4.5	6.8	-0.73
12	Apr-00	4.5	7.6	0.73
13	Dec-00	4.5	7.6	0.73
14	May-01	4.5	7.4	0.36
15	Oct-01	4.5	7.5	0.55
16	May-02	4.5	7.2	0.00
17	Jun-03	4.5	6.8	-0.73
18	Jun-04	4.5	6.9	-0.55
19	Dec-04	4.5	5.9	-2.36
20	Jun-05	4.5	7.1	-0.20
21	Dec-05	4.5	8.6	2.51
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



REALM - COLDWATER ROAD 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	Aug-95	1829		
3	Feb-96	2860		
4	Jun-96	2550	**2,578.63**	**428.85**
5	Aug-96	2310		
6	Nov-96	3280		
7	May-97	2600		
8	Nov-97	2800		

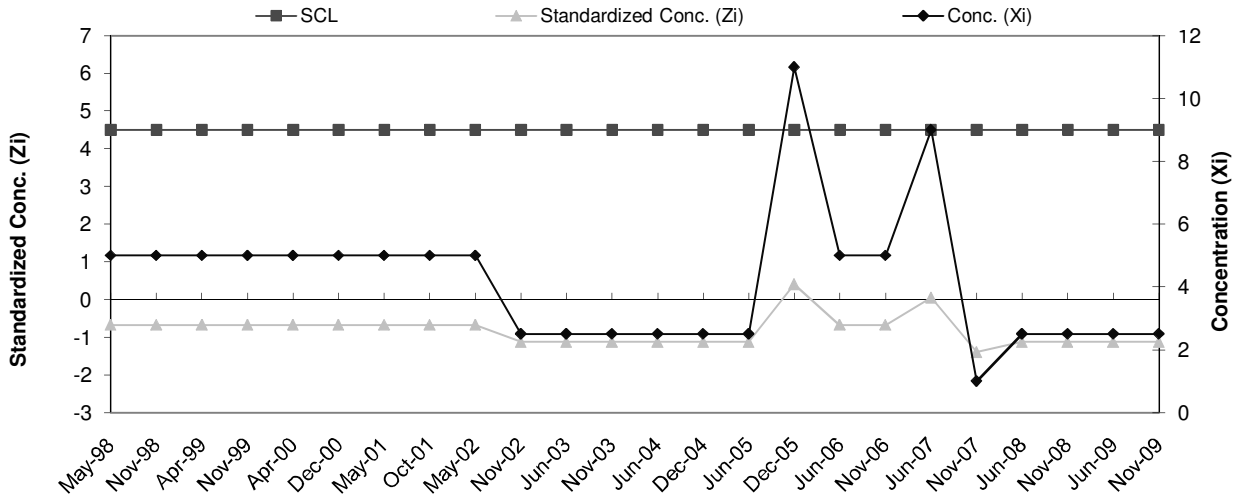
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	2400	-0.42
10	Apr-99	4.5	1860	-1.68
11	Nov-99	4.5	2340	-0.56
12	Apr-00	4.5	2780	0.47
13	Dec-00	4.5	2400	-0.42
14	May-01	4.5	1070	-3.52
15	Oct-01	4.5	2130	-1.05
16	May-02	4.5	2470	-0.25
17	Jun-03	4.5	2690	0.26
18	Jun-04	4.5	2379	-0.47
19	Dec-04	4.5	2480	-0.23
20	Jun-05	4.5	2116	-1.08
21	Dec-05	4.5	2830	0.59
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



REALM - COLDWATER ROAD 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		
2	Aug-95	10		
3	Feb-96	10		
4	Jun-96	10	**8.74**	**5.57**
5	Aug-96	10		
6	Nov-96	10		
7	May-97	5		
8	Nov-97	5		

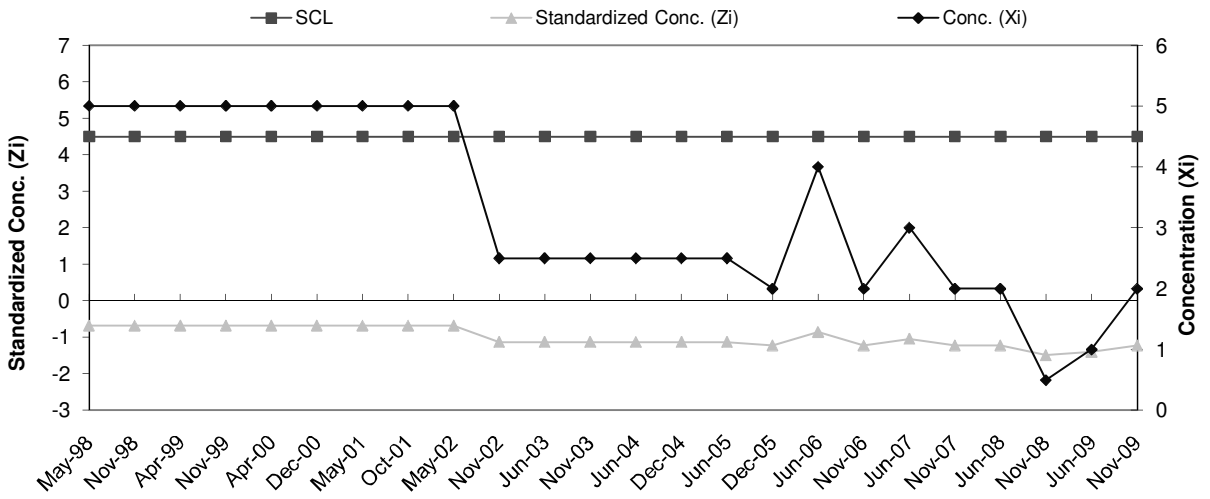
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.67
10	Nov-98	4.5	5	-0.67
11	Apr-99	4.5	5	-0.67
12	Nov-99	4.5	5	-0.67
13	Apr-00	4.5	5	-0.67
14	Dec-00	4.5	5	-0.67
15	May-01	4.5	5	-0.67
16	Oct-01	4.5	5	-0.67
17	May-02	4.5	5	-0.67
18	Nov-02	4.5	2.5	-1.12
19	Jun-03	4.5	2.5	-1.12
20	Nov-03	4.5	2.5	-1.12
21	Jun-04	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



REALM - COLDWATER ROAD 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		
2	Aug-95	10		
3	Feb-96	10		
4	Jun-96	10	**8.78**	**5.56**
5	Aug-96	10		
6	Nov-96	10		
7	May-97	5		
8	Nov-97	5		

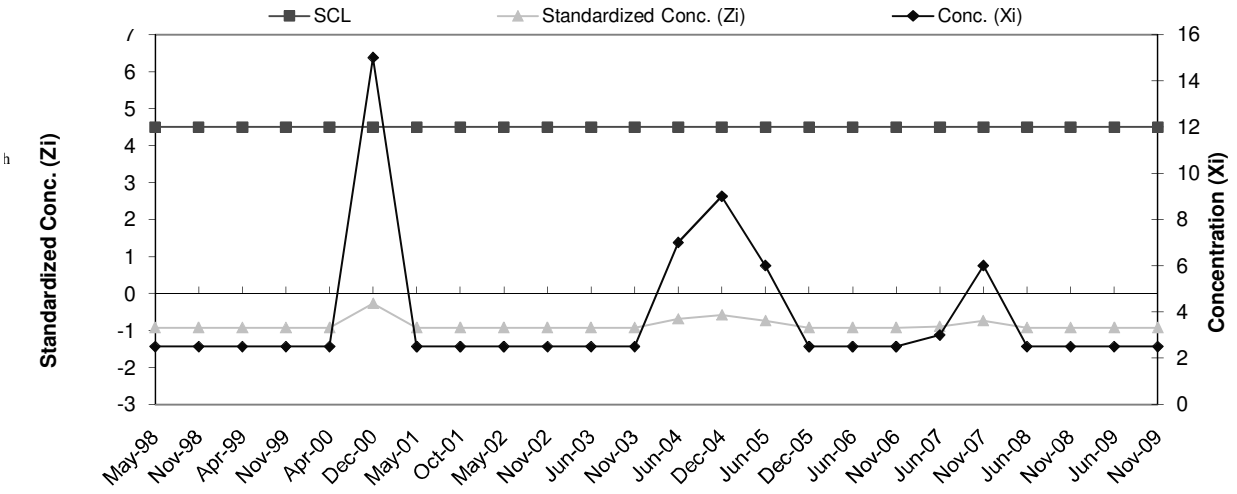
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.68
10	Nov-98	4.5	5	-0.68
11	Apr-99	4.5	5	-0.68
12	Nov-99	4.5	5	-0.68
13	Apr-00	4.5	5	-0.68
14	Dec-00	4.5	5	-0.68
15	May-01	4.5	5	-0.68
16	Oct-01	4.5	5	-0.68
17	May-02	4.5	5	-0.68
18	Nov-02	4.5	2.5	-1.13
19	Jun-03	4.5	2.5	-1.13
20	Nov-03	4.5	2.5	-1.13
21	Jun-04	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



REALM - COLDWATER ROAD 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		
2	Aug-95	20		
3	Feb-96	20		
4	Jun-96	10	**20.01**	**18.96**
5	Aug-96	10		
6	Nov-96	10		
7	May-97	13		
8	Nov-97	62		

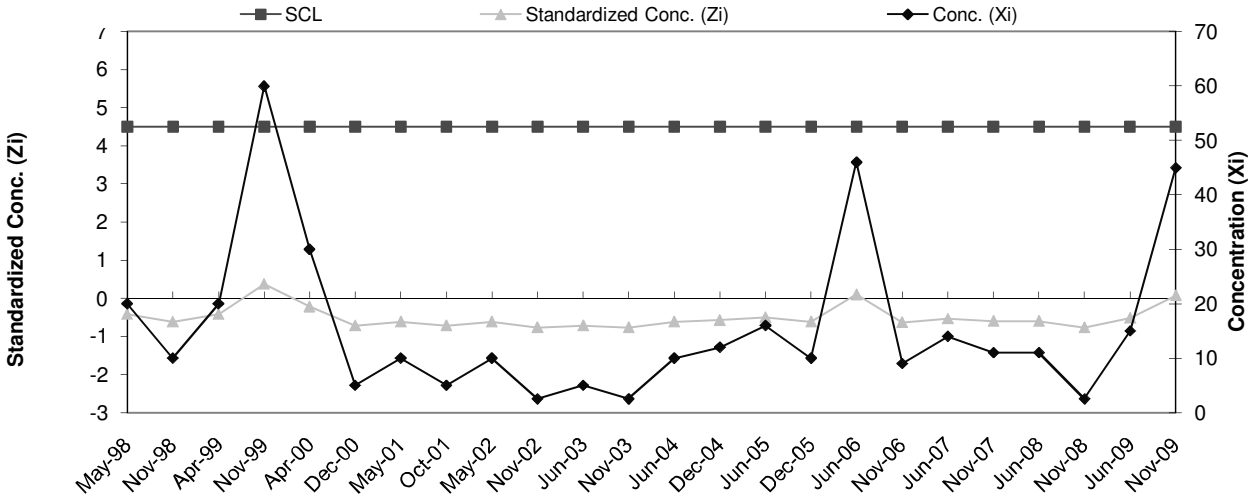
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	2.5	-0.92
10	Nov-98	4.5	2.5	-0.92
11	Apr-99	4.5	2.5	-0.92
12	Nov-99	4.5	2.5	-0.92
13	Apr-00	4.5	2.5	-0.92
14	Dec-00	4.5	15	-0.26
15	May-01	4.5	2.5	-0.92
16	Oct-01	4.5	2.5	-0.92
17	May-02	4.5	2.5	-0.92
18	Nov-02	4.5	2.5	-0.92
19	Jun-03	4.5	2.5	-0.92
20	Nov-03	4.5	2.5	-0.92
21	Jun-04	4.5	7	-0.69
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



REALM - COLDWATER ROAD 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		
2	Aug-95	10		
3	Feb-96	10		
4	Jun-96	10	**41.25**	**50.67**
5	Aug-96	60		
6	Nov-96	70		
7	May-97	10		
8	Nov-97	10		

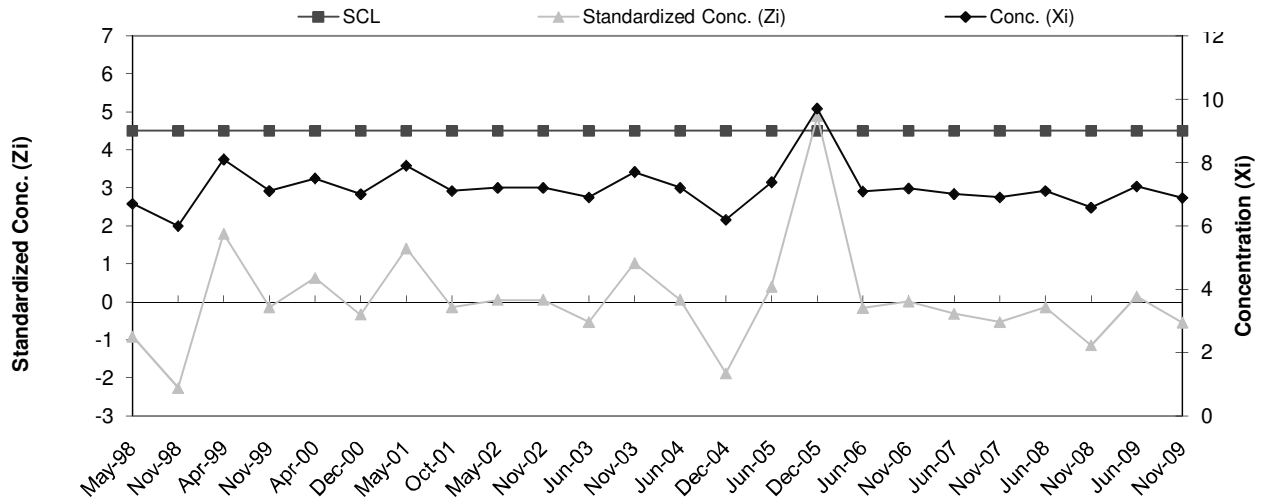
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	20	-0.42
10	Nov-98	4.5	10	-0.62
11	Apr-99	4.5	20	-0.42
12	Nov-99	4.5	60	0.37
13	Apr-00	4.5	30	-0.22
14	Dec-00	4.5	5	-0.72
15	May-01	4.5	10	-0.62
16	Oct-01	4.5	5	-0.72
17	May-02	4.5	10	-0.62
18	Nov-02	4.5	2.5	-0.76
19	Jun-03	4.5	5	-0.72
20	Nov-03	4.5	2.5	-0.76
21	Jun-04	4.5	10	-0.62
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



REALM - COLDWATER ROAD 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		

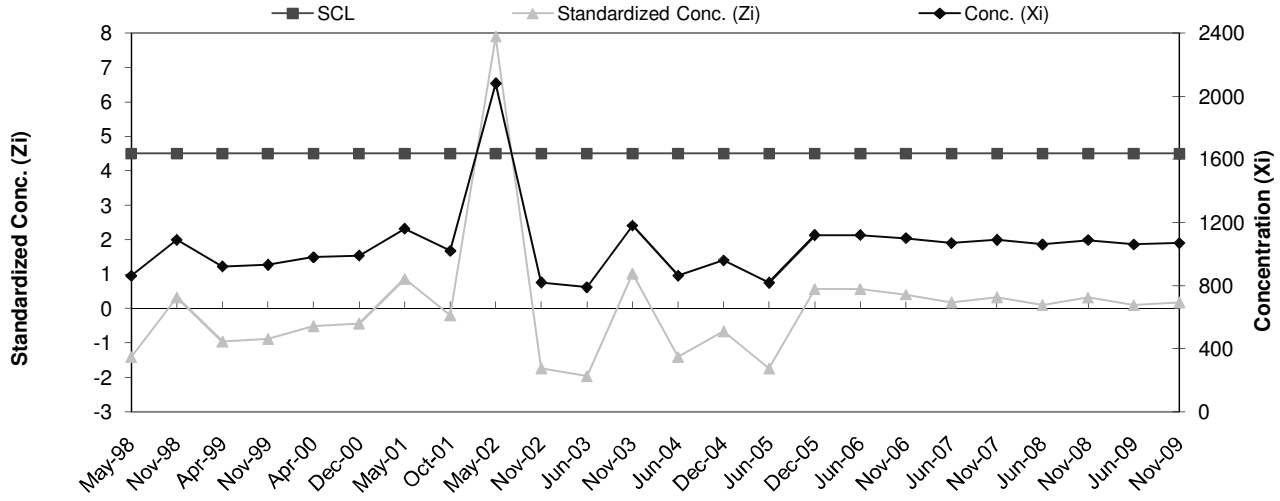
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	6.7	-0.92
10	Nov-98	4.5	6.0	-2.27
11	Apr-99	4.5	8.1	1.79
12	Nov-99	4.5	7.1	-0.14
13	Apr-00	4.5	7.5	0.63
14	Dec-00	4.5	7.0	-0.34
15	May-01	4.5	7.9	1.40
16	Oct-01	4.5	7.1	-0.14
17	May-02	4.5	7.2	0.05
18	Nov-02	4.5	7.2	0.05
19	Jun-03	4.5	6.9	-0.53
20	Nov-03	4.5	7.7	1.01
21	Jun-04	4.5	7.2	0.05
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



REALM - COLDWATER ROAD 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		
2	Aug-95	989		
3	Feb-96	1021		
4	Jun-96	944.0	**1,046.75**	**130.80**
5	Aug-96	1041		
6	Nov-96	1331		
7	May-97	900		
8	Nov-97	1100		

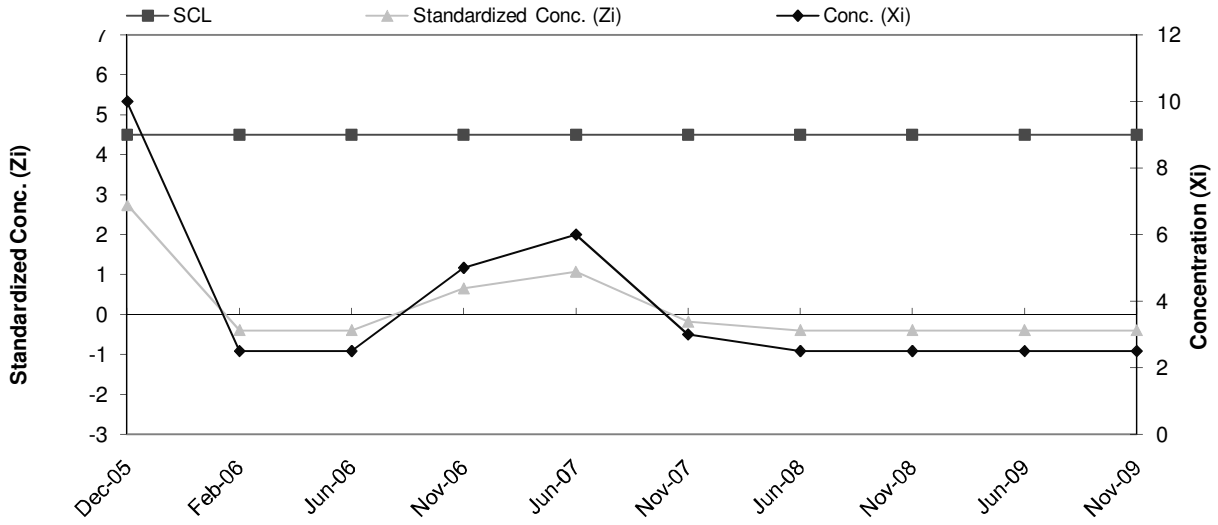
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	862	-1.41
10	Nov-98	4.5	1090.0	0.33
11	Apr-99	4.5	921	-0.96
12	Nov-99	4.5	932	-0.88
13	Apr-00	4.5	980	-0.51
14	Dec-00	4.5	990.0	-0.43
15	May-01	4.5	1160	0.87
16	Oct-01	4.5	1020	-0.20
17	May-02	4.5	2080	7.90
18	Nov-02	4.5	820	-1.73
19	Jun-03	4.5	790	-1.96
20	Nov-03	4.5	1180	1.02
21	Jun-04	4.5	863	-1.40
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



REALM - COLDWATER ROAD 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		
2	May-01	5		
3	May-02	5		
4	Jun-03	2.5	**3.44**	**2.39**
5	Nov-03	2.5		
6	Jun-04	2.5		
7	Dec-04	2.5		
8	Jun-05	2.5		

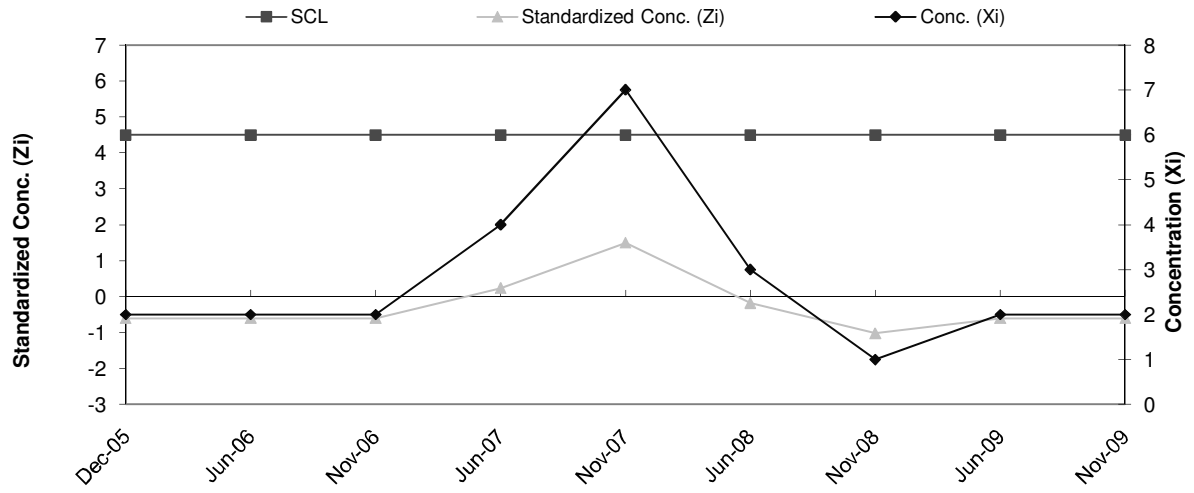
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Dec-05	4.5	10	2.74
10	Feb-06	4.5	2.5	-0.39
11	Jun-06	4.5	2.5	-0.39
12	Nov-06	4.5	5	0.65
13	Jun-07	4.5	6	1.07
14	Nov-07	4.5	3	-0.18
15	Jun-08	4.5	2.5	-0.39
16	Nov-08	4.5	2.5	-0.39
17	Jun-09	4.5	2.5	-0.39
18	Nov-09	4.5	2.5	-0.39



REALM - COLDWATER ROAD 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		

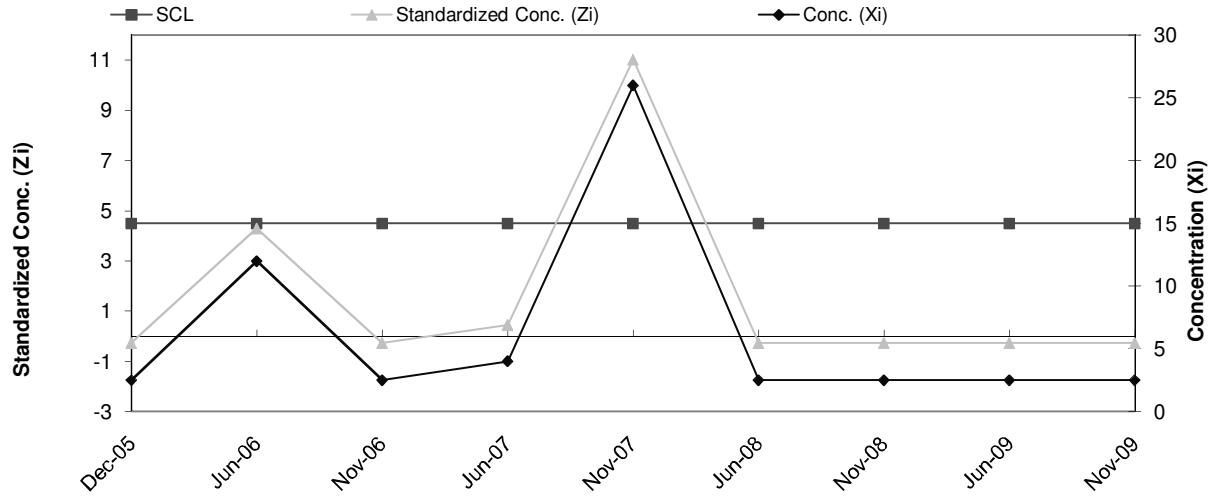
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Dec-05	4.5	2	-0.60
10	Jun-06	4.5	2	-0.60
11	Nov-06	4.5	2	-0.60
12	Jun-07	4.5	4	0.24
13	Nov-07	4.5	7	1.50
14	Jun-08	4.5	3	-0.18
15	Nov-08	4.5	1	-1.02
16	Jun-09	4.5	2	-0.60
17	Nov-09	4.5	2	-0.60



REALM - COLDWATER ROAD 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		
2	May-01	2.5		
3	May-02	2.5		
4	Jun-03	2.5	**3.06**	**2.08**
5	Nov-03	2.5		
6	Jun-04	2.5		
7	Dec-04	2.5		
8	Jun-05	7		

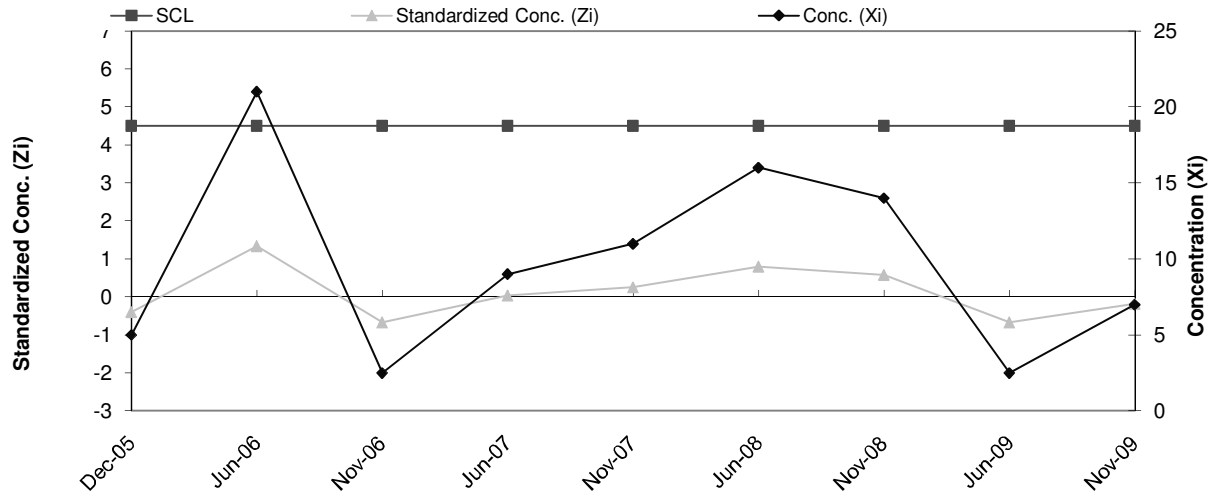
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Dec-05	4.5	2.5	-0.27
10	Jun-06	4.5	12	4.30
11	Nov-06	4.5	2.5	-0.27
12	Jun-07	4.5	4	0.45
13	Nov-07	4.5	26	11.03
14	Jun-08	4.5	2.5	-0.27
15	Nov-08	4.5	2.5	-0.27
16	Jun-09	4.5	2.5	-0.27
17	Nov-09	4.5	2.5	-0.27



REALM - COLDWATER ROAD 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		

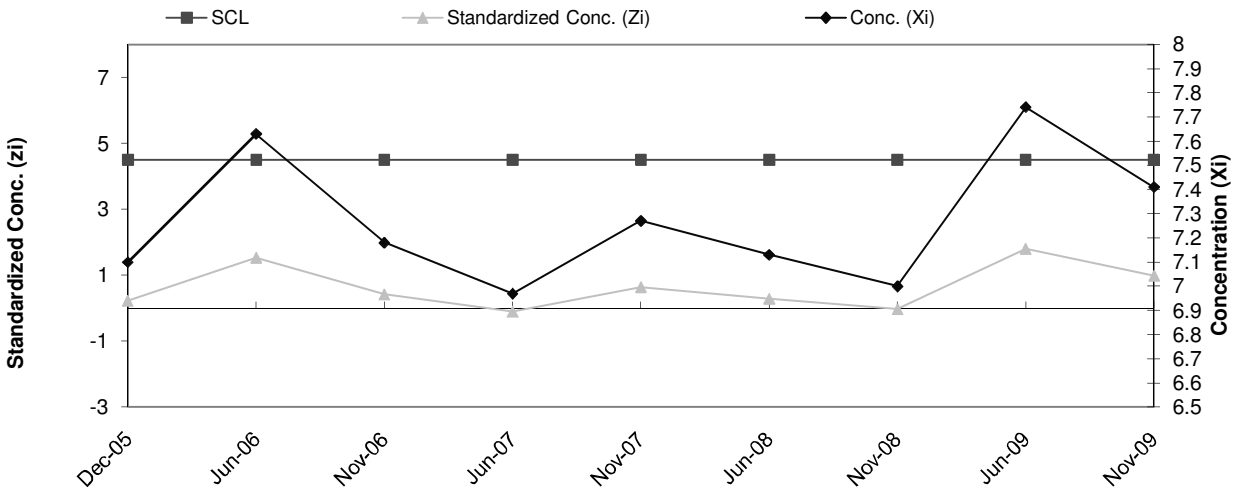
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Dec-05	4.5	5	-0.40
10	Jun-06	4.5	21	1.33
11	Nov-06	4.5	2.5	-0.67
12	Jun-07	4.5	9	0.03
13	Nov-07	4.5	11	0.25
14	Jun-08	4.5	16	0.79
15	Nov-08	4.5	14	0.57
16	Jun-09	4.5	2.5	-0.67
17	Nov-09	4.5	7	-0.18



REALM - COLDWATER ROAD 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		

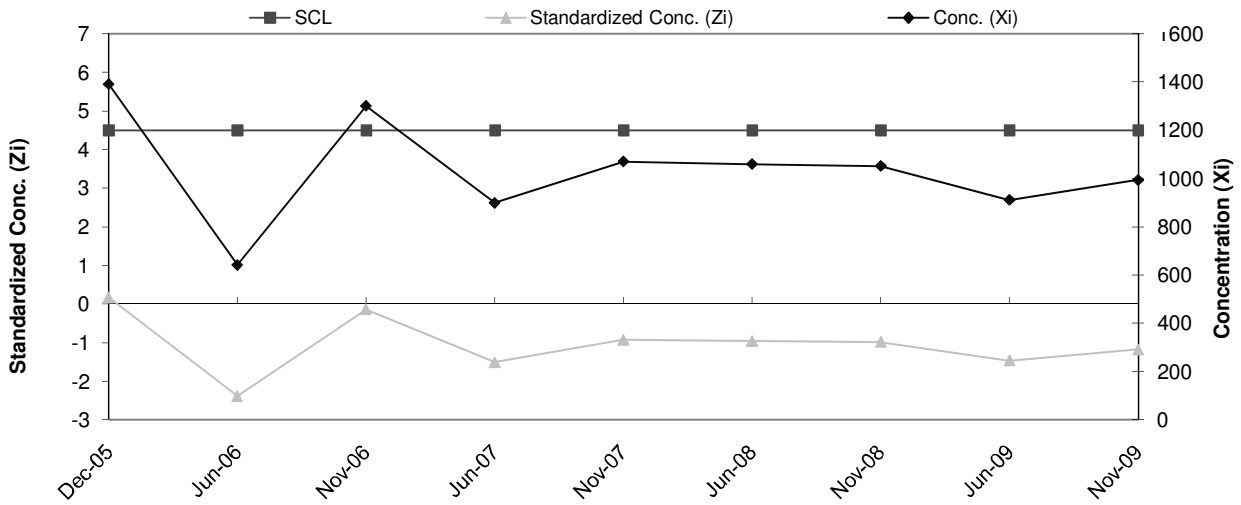
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Dec-05	4.5	7.1	0.22
10	Jun-06	4.5	7.6	1.53
11	Nov-06	4.5	7.2	0.42
12	Jun-07	4.5	7.0	-0.10
13	Nov-07	4.5	7.3	0.64
14	Jun-08	4.5	7.1	0.29
15	Nov-08	4.5	7.0	-0.03
16	Jun-09	4.5	7.7	1.80
17	Nov-09	4.5	7.4	0.99



REALM - COLDWATER ROAD 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		
2	May-01	1050		
3	May-02	1740		
4	Jun-03	1350	**1,340.63**	**293.72**
5	Nov-03	1620		
6	Jun-04	1316		
7	Dec-04	1340		
8	Jun-05	829		

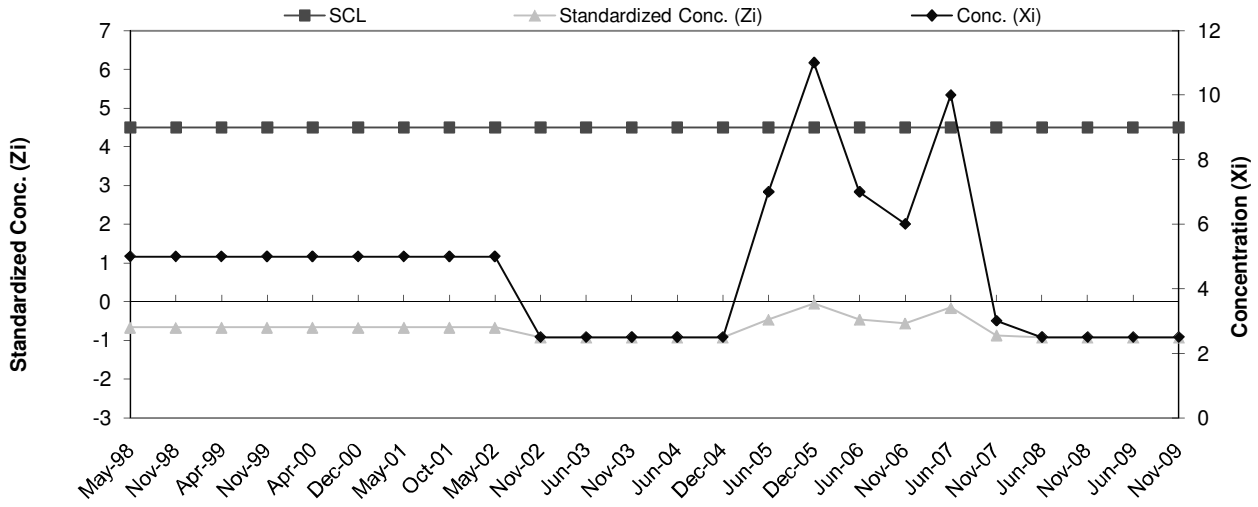
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Dec-05	4.5	1390	0.17
10	Jun-06	4.5	642	-2.38
11	Nov-06	4.5	1300	-0.14
12	Jun-07	4.5	899	-1.50
13	Nov-07	4.5	1070	-0.92
14	Jun-08	4.5	1060	-0.96
15	Nov-08	4.5	1052	-0.98
16	Jun-09	4.5	911	-1.46
17	Nov-09	4.5	994	-1.18



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-20d Cr

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10		
2	Aug-95	10		
3	Feb-96	32		
4	Jun-96	10	**11.51**	**9.80**
5	Aug-96	10		
6	Nov-96	10		
7	May-97	5		
8	Nov-97	5		

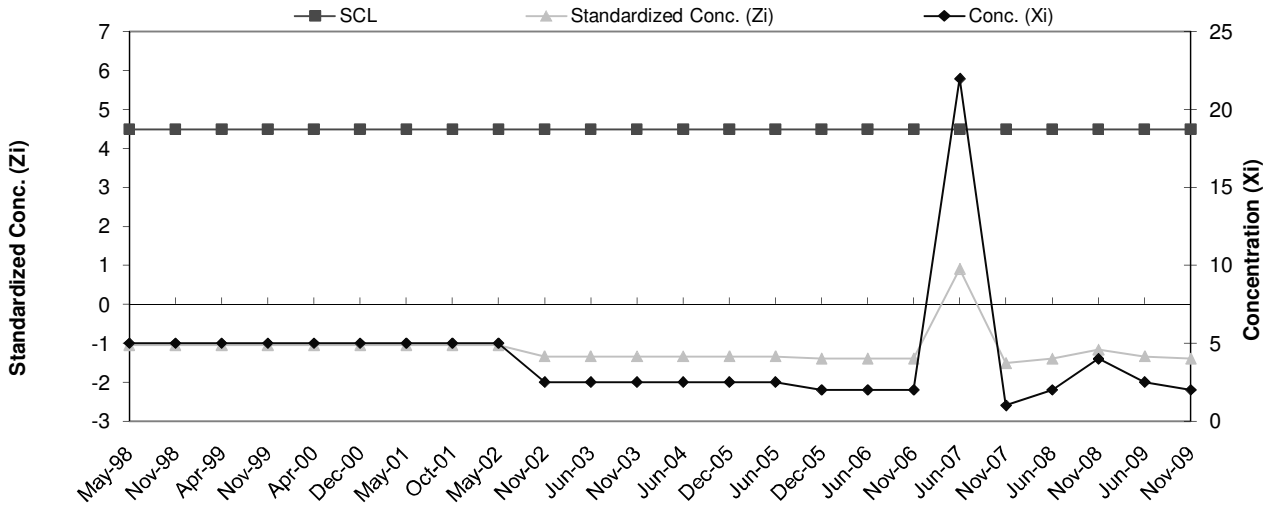
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.66
10	Nov-98	4.5	5	-0.66
11	Apr-99	4.5	5	-0.66
12	Nov-99	4.5	5	-0.66
13	Apr-00	4.5	5	-0.66
14	Dec-00	4.5	5	-0.66
15	May-01	4.5	5	-0.66
16	Oct-01	4.5	5	-0.66
17	May-02	4.5	5	-0.66
18	Nov-02	4.5	2.5	-0.92
19	Jun-03	4.5	2.5	-0.92
20	Nov-03	4.5	2.5	-0.92
21	Jun-04	4.5	2.5	-0.92
22	Dec-04	4.5	2.5	-0.92
23	Jun-05	4.5	7	-0.46
24	Dec-05	4.5	11	-0.05
25	Jun-06	4.5	7	-0.46
26	Nov-06	4.5	6	-0.56
27	Jun-07	4.5	10	-0.15
28	Nov-07	4.5	3	-0.87
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



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-20d Cu

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10		
2	Aug-95	20		
3	Feb-96	28		
4	Jun-96	10	**14.13**	**8.70**
5	Aug-96	10		
6	Nov-96	10		
7	May-97	5		
8	Nov-97	20		

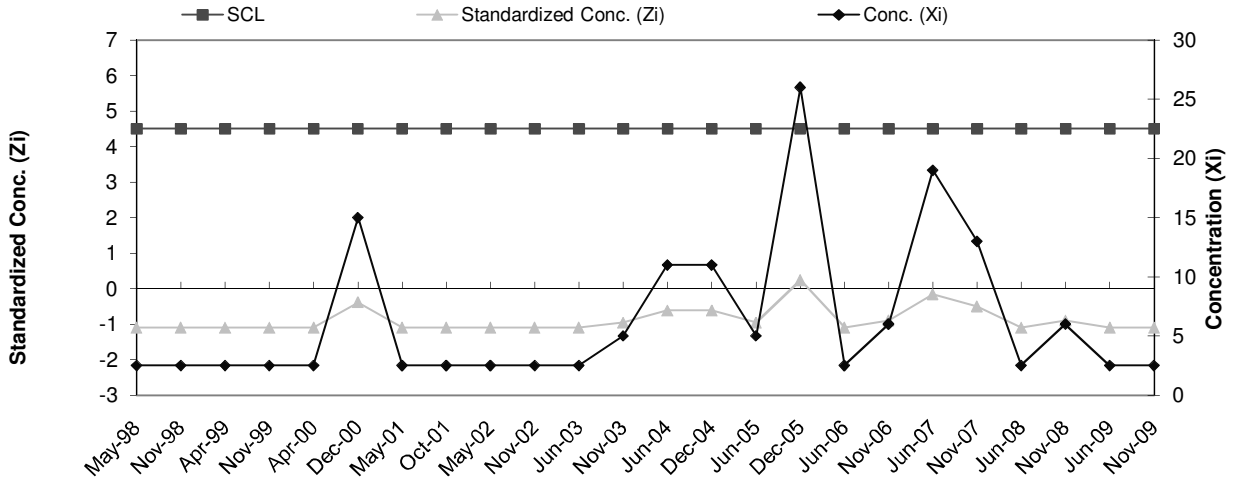
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-1.05
10	Nov-98	4.5	5	-1.05
11	Apr-99	4.5	5	-1.05
12	Nov-99	4.5	5	-1.05
13	Apr-00	4.5	5	-1.05
14	Dec-00	4.5	5	-1.05
15	May-01	4.5	5	-1.05
16	Oct-01	4.5	5	-1.05
17	May-02	4.5	5	-1.05
18	Nov-02	4.5	2.5	-1.34
19	Jun-03	4.5	2.5	-1.34
20	Nov-03	4.5	2.5	-1.34
21	Jun-04	4.5	2.5	-1.34
22	Dec-05	4.5	2.5	-1.34
23	Jun-05	4.5	2.5	-1.34
24	Dec-05	4.5	2	-1.39
25	Jun-06	4.5	2	-1.39
26	Nov-06	4.5	2	-1.39
27	Jun-07	4.5	22	0.90
28	Nov-07	4.5	1	-1.51
29	Jun-08	4.5	2	-1.39
30	Nov-08	4.5	4	-1.16
31	Jun-09	4.5	2.5	-1.34
32	Nov-09	4.5	2	-1.39



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-20d Ni

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	15		
2	Aug-95	20		
3	Feb-96	54		
4	Jun-96	10	**21.88**	**17.64**
5	Aug-96	10		
6	Nov-96	10		
7	May-97	15		
8	Nov-97	41		

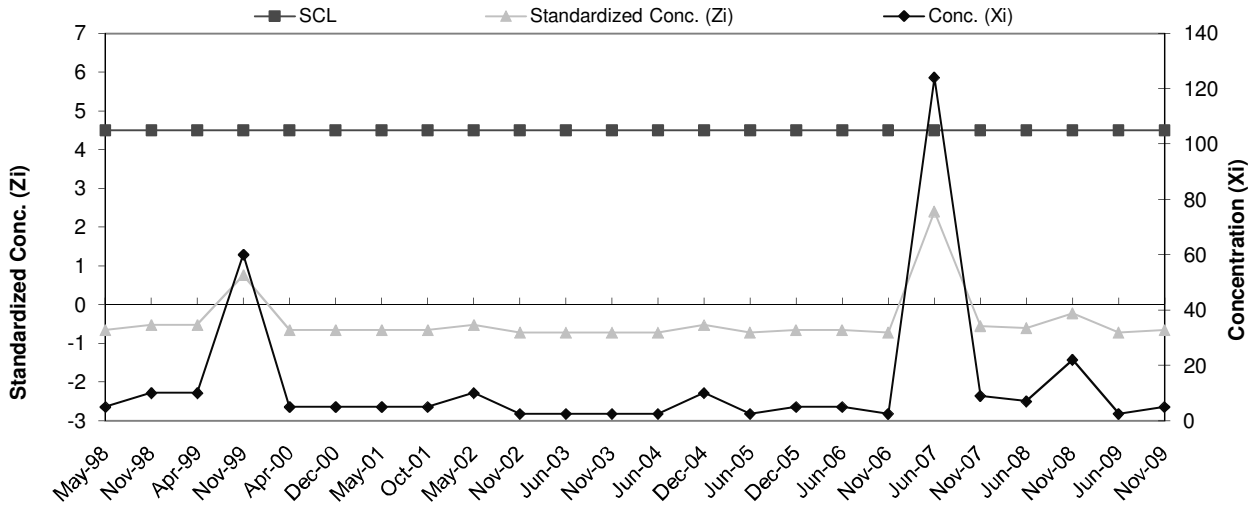
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	2.5	-1.10
10	Nov-98	4.5	2.5	-1.10
11	Apr-99	4.5	2.5	-1.10
12	Nov-99	4.5	2.5	-1.10
13	Apr-00	4.5	2.5	-1.10
14	Dec-00	4.5	15	-0.39
15	May-01	4.5	2.5	-1.10
16	Oct-01	4.5	2.5	-1.10
17	May-02	4.5	2.5	-1.10
18	Nov-02	4.5	2.5	-1.10
19	Jun-03	4.5	2.5	-1.10
20	Nov-03	4.5	5	-0.96
21	Jun-04	4.5	11	-0.62
22	Dec-04	4.5	11	-0.62
23	Jun-05	4.5	5	-0.96
24	Dec-05	4.5	26	0.23
25	Jun-06	4.5	2.5	-1.10
26	Nov-06	4.5	6	-0.90
27	Jun-07	4.5	19	-0.16
28	Nov-07	4.5	13	-0.50
29	Jun-08	4.5	2.5	-1.10
30	Nov-08	4.5	6	-0.90
31	Jun-09	4.5	2.5	-1.10
32	Nov-09	4.5	2.5	-1.10



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-20d Zn

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10		
2	Aug-95	10		
3	Feb-96	120		
4	Jun-96	10	**30.66**	**38.93**
5	Aug-96	40		
6	Nov-96	40		
7	May-97	10		
8	Nov-97	5		

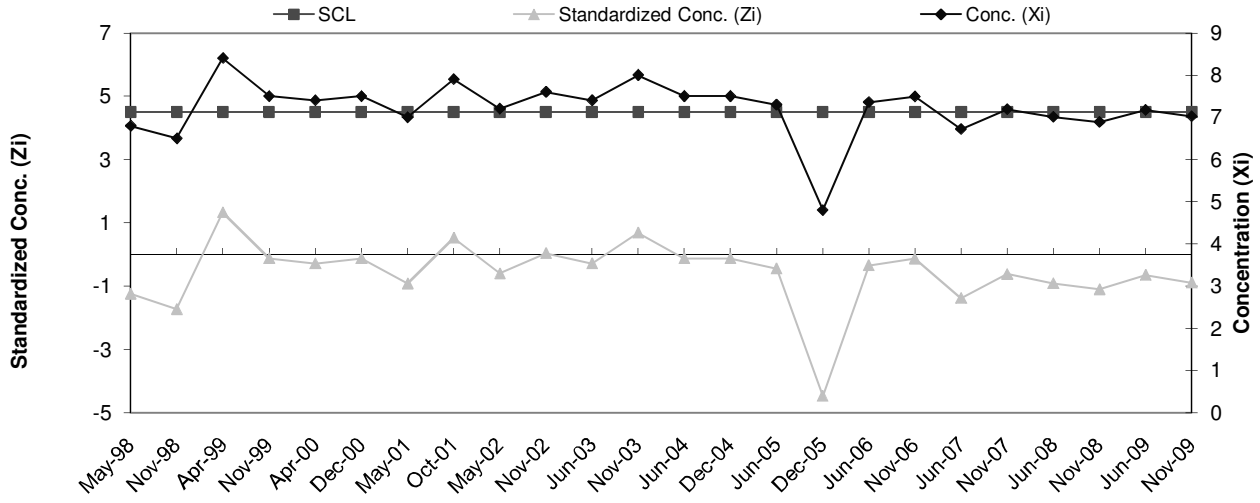
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.66
10	Nov-98	4.5	10	-0.53
11	Apr-99	4.5	10	-0.53
12	Nov-99	4.5	60	0.75
13	Apr-00	4.5	5	-0.66
14	Dec-00	4.5	5	-0.66
15	May-01	4.5	5	-0.66
16	Oct-01	4.5	5	-0.66
17	May-02	4.5	10	-0.53
18	Nov-02	4.5	2.5	-0.72
19	Jun-03	4.5	2.5	-0.72
20	Nov-03	4.5	2.5	-0.72
21	Jun-04	4.5	2.5	-0.72
22	Dec-04	4.5	10	-0.53
23	Jun-05	4.5	2.5	-0.72
24	Dec-05	4.5	5	-0.66
25	Jun-06	4.5	5	-0.66
26	Nov-06	4.5	2.5	-0.72
27	Jun-07	4.5	124	2.40
28	Nov-07	4.5	9	-0.56
29	Jun-08	4.5	7	-0.61
30	Nov-08	4.5	22	-0.22
31	Jun-09	4.5	2.5	-0.72
32	Nov-09	4.5	5	-0.66



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-20d pH

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	8.3		
2	Aug-95	8.1		
3	Feb-96	7.1		
4	Jun-96	7.9	**7.58**	**0.62**
5	Aug-96	8.0		
6	Nov-96	7.7		
7	May-97	6.8		
8	Nov-97	6.7		

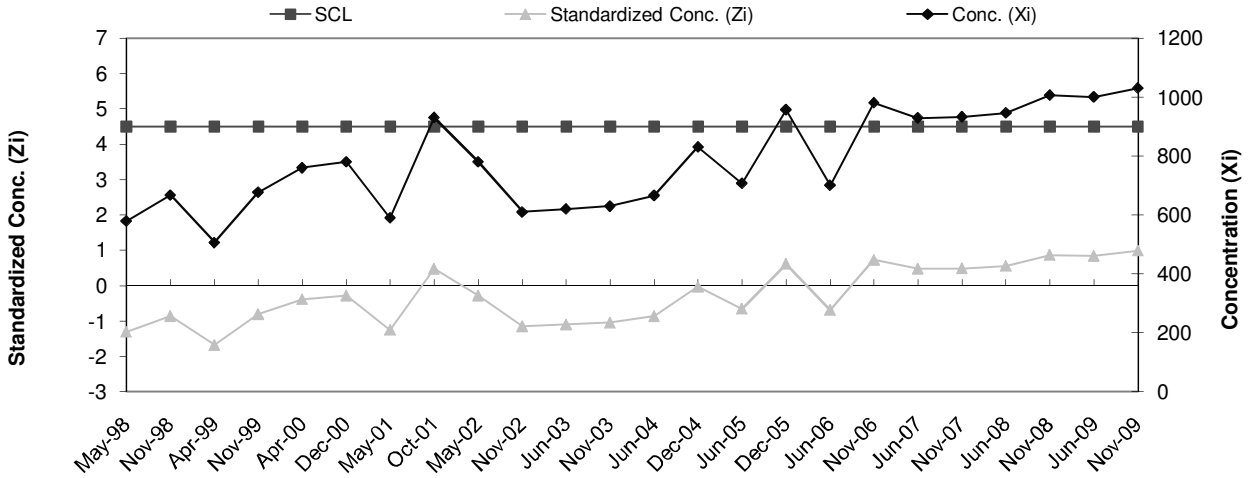
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	6.8	-1.25
10	Nov-98	4.5	6.5	-1.73
11	Apr-99	4.5	8.4	1.33
12	Nov-99	4.5	7.5	-0.12
13	Apr-00	4.5	7.4	-0.28
14	Dec-00	4.5	7.5	-0.12
15	May-01	4.5	7.0	-0.93
16	Oct-01	4.5	7.9	0.52
17	May-02	4.5	7.2	-0.60
18	Nov-02	4.5	7.6	0.04
19	Jun-03	4.5	7.4	-0.28
20	Nov-03	4.5	8.0	0.68
21	Jun-04	4.5	7.5	-0.12
22	Dec-04	4.5	7.5	-0.12
23	Jun-05	4.5	7.3	-0.44
24	Dec-05	4.5	4.8	-4.47
25	Jun-06	4.5	7.4	-0.35
26	Nov-06	4.5	7.5	-0.14
27	Jun-07	4.5	6.7	-1.38
28	Nov-07	4.5	7.2	-0.62
29	Jun-08	4.5	7.0	-0.91
30	Nov-08	4.5	6.9	-1.10
31	Jun-09	4.5	7.2	-0.65
32	Nov-09	4.5	7.0	-0.89



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-20d SpC

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	771		
2	Aug-95	1204		
3	Feb-96	801		
4	Jun-96	745	**835.75**	**196.61**
5	Aug-96	750		
6	Nov-96	1075		
7	May-97	640		
8	Nov-97	700		

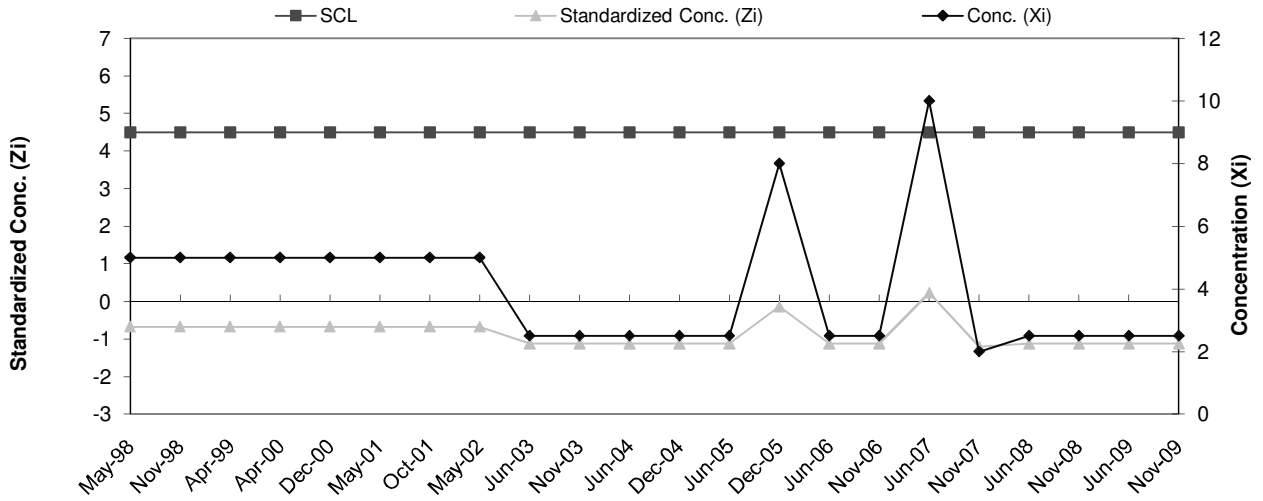
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	579	-1.31
10	Nov-98	4.5	667	-0.86
11	Apr-99	4.5	506	-1.68
12	Nov-99	4.5	677	-0.81
13	Apr-00	4.5	760	-0.39
14	Dec-00	4.5	780	-0.28
15	May-01	4.5	590	-1.25
16	Oct-01	4.5	930	0.48
17	May-02	4.5	780	-0.28
18	Nov-02	4.5	610	-1.15
19	Jun-03	4.5	620	-1.10
20	Nov-03	4.5	630	-1.05
21	Jun-04	4.5	666	-0.86
22	Dec-04	4.5	830	-0.03
23	Jun-05	4.5	707	-0.65
24	Dec-05	4.5	957	0.62
25	Jun-06	4.5	701	-0.69
26	Nov-06	4.5	980	0.73
27	Jun-07	4.5	929	0.47
28	Nov-07	4.5	932	0.49
29	Jun-08	4.5	946	0.56
30	Nov-08	4.5	1006	0.87
31	Jun-09	4.5	1000	0.84
32	Nov-09	4.5	1030	0.99



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-21d Cr

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

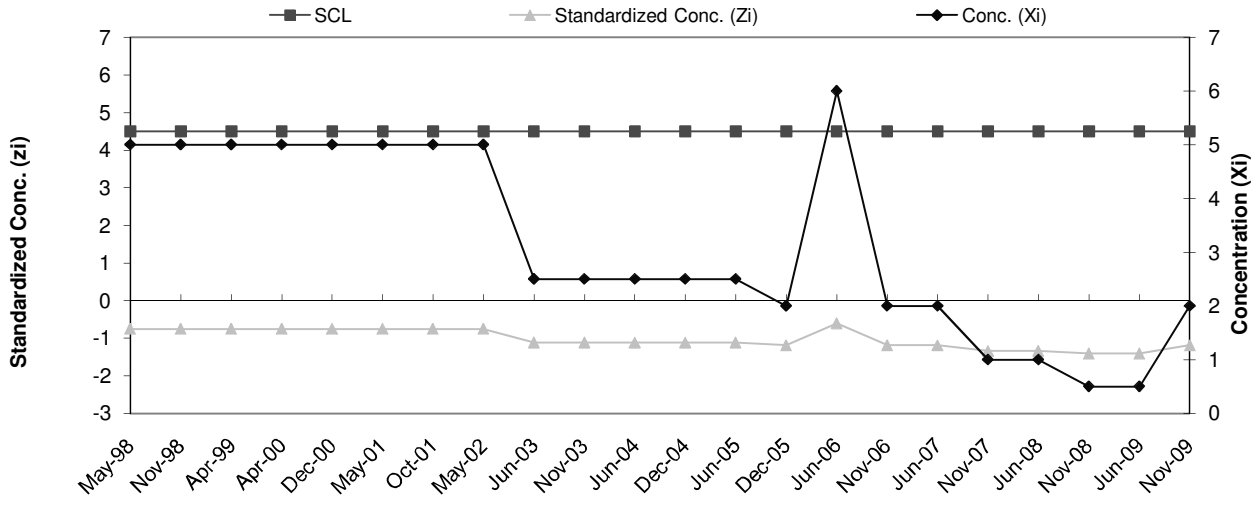
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.67
10	Nov-98	4.5	5	-0.67
11	Apr-99	4.5	5	-0.67
12	Apr-00	4.5	5	-0.67
13	Dec-00	4.5	5	-0.67
14	May-01	4.5	5	-0.67
15	Oct-01	4.5	5	-0.67
16	May-02	4.5	5	-0.67
18	Jun-03	4.5	2.5	-1.12
19	Nov-03	4.5	2.5	-1.12
20	Jun-04	4.5	2.5	-1.12
21	Dec-04	4.5	2.5	-1.12
22	Jun-05	4.5	2.5	-1.12
23	Dec-05	4.5	8	-0.13
24	Jun-06	4.5	2.5	-1.12
25	Nov-06	4.5	2.5	-1.12
26	Jun-07	4.5	10	0.23
27	Nov-07	4.5	2	-1.21
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



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-21d Cu

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10		
2	Aug-95	21		
3	Feb-96	10		
4	Jun-96	10	**10.13**	**6.83**
5	Aug-96	10		
6	Nov-96	10		
7	May-97	5		
8	Nov-97	5		

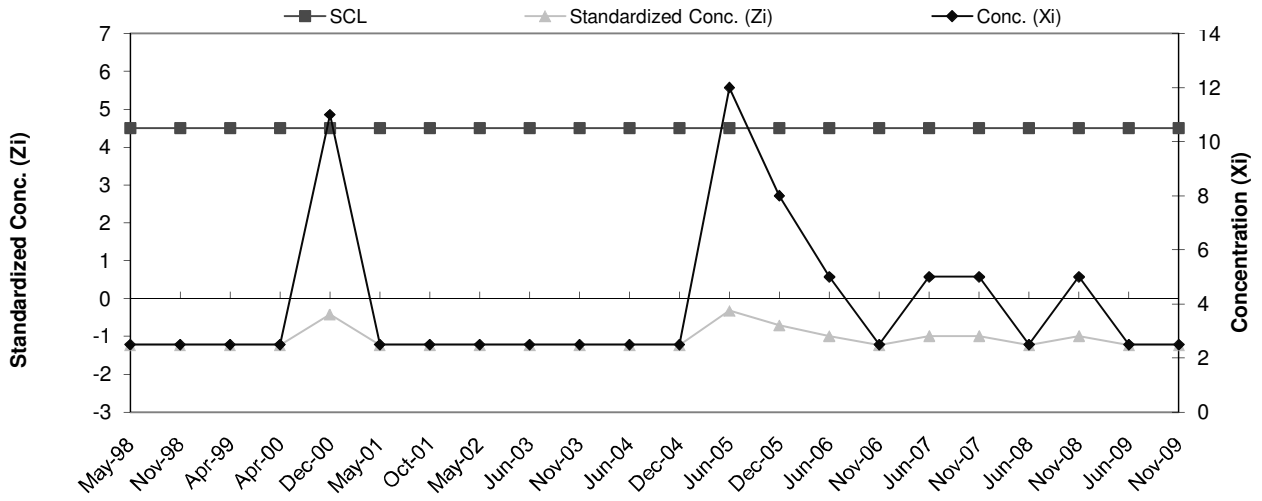
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.75
10	Nov-98	4.5	5	-0.75
11	Apr-99	4.5	5	-0.75
12	Apr-00	4.5	5	-0.75
13	Dec-00	4.5	5	-0.75
14	May-01	4.5	5	-0.75
15	Oct-01	4.5	5	-0.75
16	May-02	4.5	5	-0.75
18	Jun-03	4.5	2.5	-1.12
19	Nov-03	4.5	2.5	-1.12
20	Jun-04	4.5	2.5	-1.12
21	Dec-04	4.5	2.5	-1.12
22	Jun-05	4.5	2.5	-1.12
23	Dec-05	4.5	2	-1.19
24	Jun-06	4.5	6	-0.60
25	Nov-06	4.5	2	-1.19
26	Jun-07	4.5	2	-1.19
27	Nov-07	4.5	1	-1.34
28	Jun-08	4.5	1	-1.34
29	Nov-08	4.5	0.5	-1.41
30	Jun-09	4.5	0.5	-1.41
31	Nov-09	4.5	2	-1.19



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-21d Ni

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	15	15.37	10.43
2	Aug-95	20		
3	Feb-96	20		
4	Jun-96	10		
5	Aug-96	10		
6	Nov-96	10		
7	May-97	8		
8	Nov-97	30		

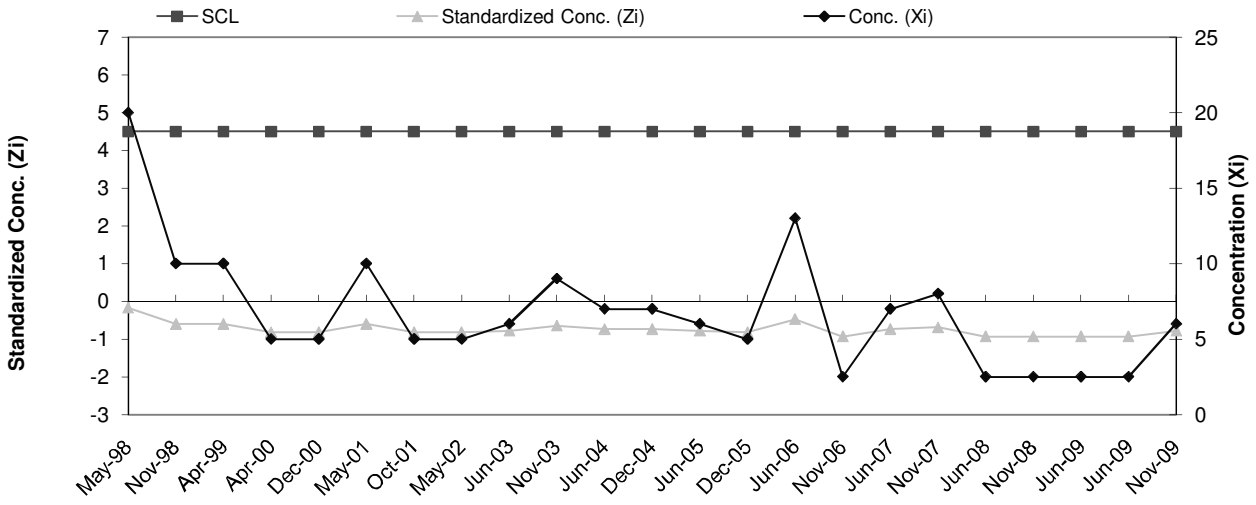
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	2.5	-1.23
10	Nov-98	4.5	2.5	-1.23
11	Apr-99	4.5	2.5	-1.23
12	Apr-00	4.5	2.5	-1.23
13	Dec-00	4.5	11	-0.42
14	May-01	4.5	2.5	-1.23
15	Oct-01	4.5	2.5	-1.23
16	May-02	4.5	2.5	-1.23
18	Jun-03	4.5	2.5	-1.23
19	Nov-03	4.5	2.5	-1.23
20	Jun-04	4.5	2.5	-1.23
20	Dec-04	4.5	2.5	-1.23
21	Jun-05	4.5	12	-0.32
22	Dec-05	4.5	8	-0.71
23	Jun-06	4.5	5	-0.99
24	Nov-06	4.5	2.5	-1.23
25	Jun-07	4.5	5	-0.99
26	Nov-07	4.5	5	-0.99
27	Jun-08	4.5	2.5	-1.23
28	Nov-08	4.5	5	-0.99
30	Jun-09	4.5	2.5	-1.23
31	Nov-09	4.5	2.5	-1.23



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-21d Zn

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	61		
2	Aug-95	10		
3	Feb-96	10		
4	Jun-96	10	**23.89**	**23.00**
5	Aug-96	50		
6	Nov-96	40		
7	May-97	5		
8	Nov-97	5		

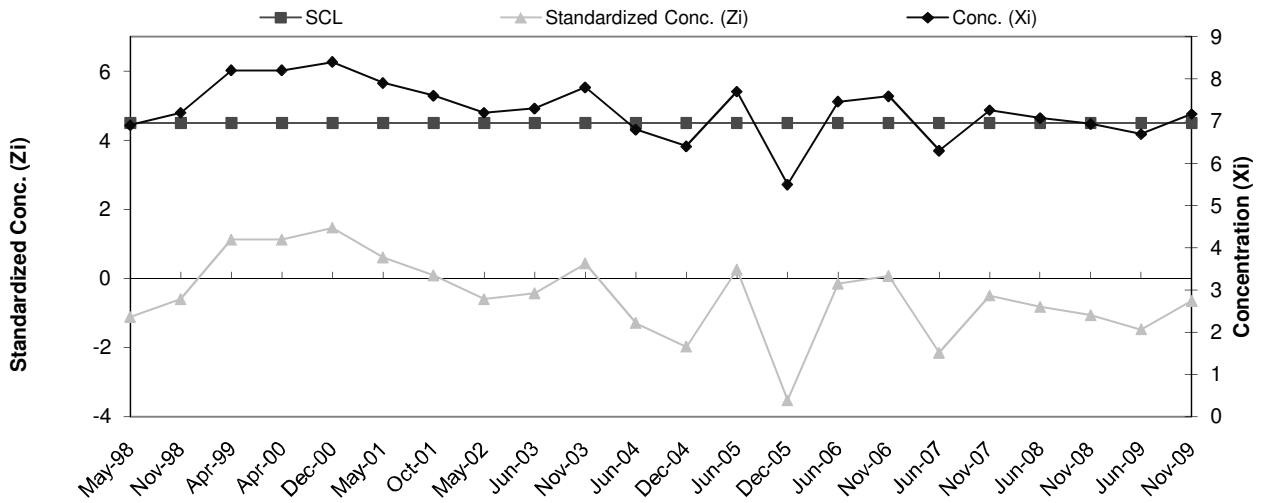
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	20	-0.17
10	Nov-98	4.5	10	-0.60
11	Apr-99	4.5	10	-0.60
12	Apr-00	4.5	5	-0.82
13	Dec-00	4.5	5	-0.82
14	May-01	4.5	10	-0.60
15	Oct-01	4.5	5	-0.82
16	May-02	4.5	5	-0.82
18	Jun-03	4.5	6	-0.78
19	Nov-03	4.5	9	-0.65
20	Jun-04	4.5	7	-0.73
21	Dec-04	4.5	7	-0.73
22	Jun-05	4.5	6	-0.78
23	Dec-05	4.5	5	-0.82
24	Jun-06	4.5	13	-0.47
25	Nov-06	4.5	2.5	-0.93
26	Jun-07	4.5	7	-0.73
27	Nov-07	4.5	8	-0.69
28	Jun-08	4.5	2.5	-0.93
29	Nov-08	4.5	2.5	-0.93
30	Jun-09	4.5	2.5	-0.93
31	Jun-09	4.5	2.5	-0.93
32	Nov-09	4.5	6	-0.78



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-21d pH

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	8.3	**7.55**	**0.58**
2	Aug-95	8.1		
3	Feb-96	7.7		
4	Jun-96	7.6		
5	Aug-96	7.9		
6	Nov-96	7.3		
7	May-97	6.8		
8	Nov-97	6.7		

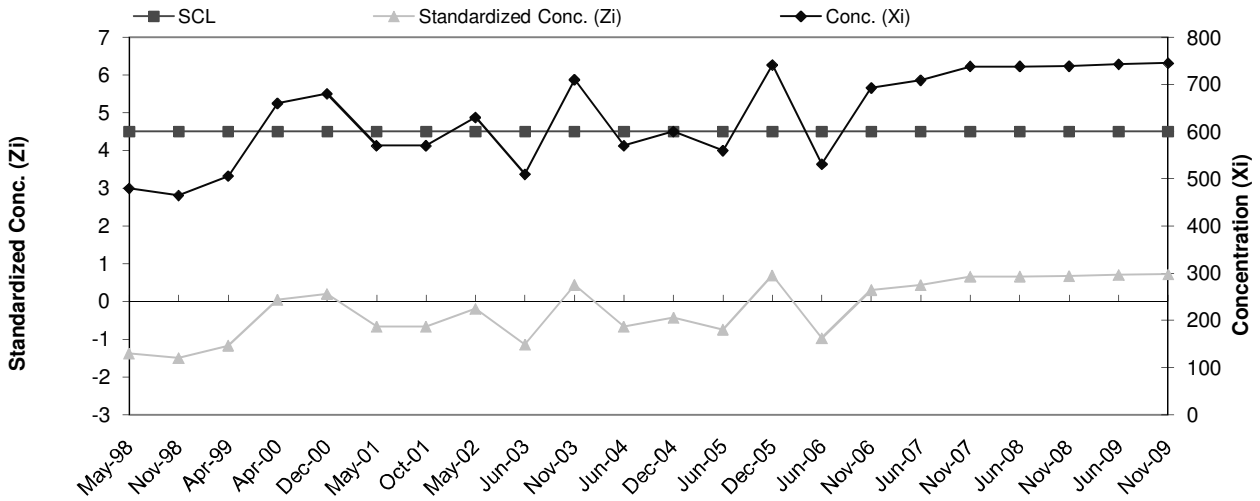
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	6.9	-1.12
10	Nov-98	4.5	7.2	-0.60
11	Apr-99	4.5	8.2	1.12
12	Apr-00	4.5	8.2	1.12
13	Dec-00	4.5	8.4	1.46
14	May-01	4.5	7.9	0.60
15	Oct-01	4.5	7.6	0.09
16	May-02	4.5	7.2	-0.60
18	Jun-03	4.5	7.3	-0.43
19	Nov-03	4.5	7.8	0.43
20	Jun-04	4.5	6.8	-1.29
21	Dec-04	4.5	6.4	-1.98
22	Jun-05	4.5	7.7	0.26
23	Dec-05	4.5	5.5	-3.53
24	Jun-06	4.5	7.5	-0.16
25	Nov-06	4.5	7.6	0.07
26	Jun-07	4.5	6.3	-2.15
27	Nov-07	4.5	7.3	-0.50
28	Jun-08	4.5	7.1	-0.83
29	Nov-08	4.5	6.9	-1.07
30	Jun-09	4.5	6.7	-1.48
31	Nov-09	4.5	7.2	-0.65



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-21d SpC

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	870		
2	Aug-95	684		
3	Feb-96	646		
4	Jun-96	577	**654.13**	**126.68**
5	Aug-96	576		
6	Nov-96	810		
7	May-97	530		
8	Nov-97	540		

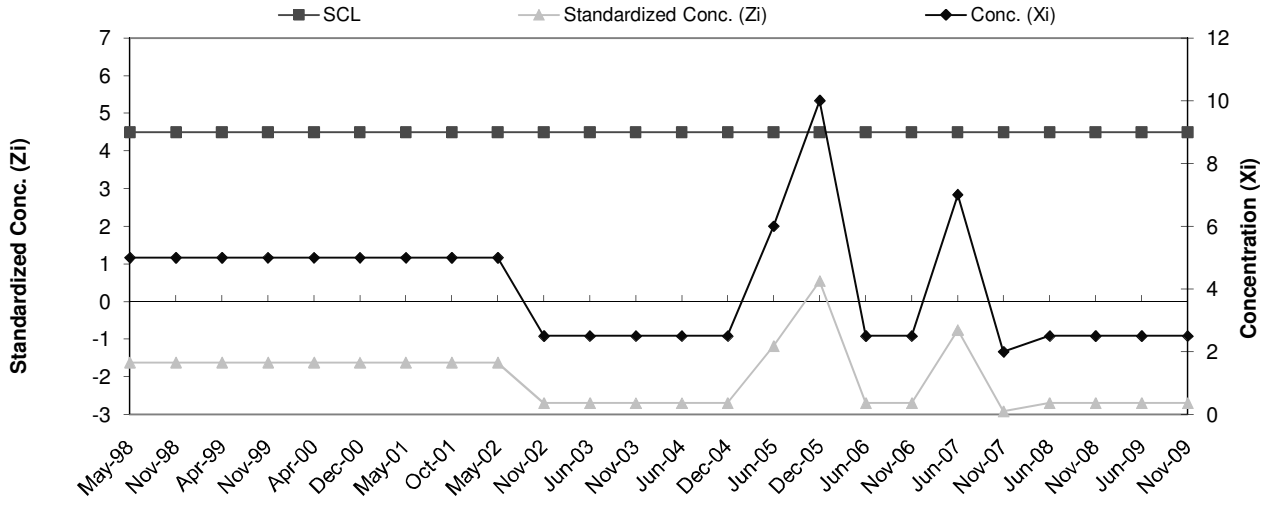
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	480	-1.37
10	Nov-98	4.5	465	-1.49
11	Apr-99	4.5	506	-1.17
12	Apr-00	4.5	660	0.05
13	Dec-00	4.5	680	0.20
14	May-01	4.5	570	-0.66
15	Oct-01	4.5	570	-0.66
16	May-02	4.5	630	-0.19
18	Jun-03	4.5	510	-1.14
19	Nov-03	4.5	710	0.44
20	Jun-04	4.5	570	-0.66
21	Dec-04	4.5	600	-0.43
22	Jun-05	4.5	560	-0.74
23	Dec-05	4.5	741	0.69
24	Jun-06	4.5	531.3	-0.97
25	Nov-06	4.5	693	0.31
26	Jun-07	4.5	709	0.43
27	Nov-07	4.5	738	0.66
28	Jun-08	4.5	738	0.66
29	Nov-08	4.5	739	0.67
30	Jun-09	4.5	743	0.70
31	Nov-09	4.5	745	0.72



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-22D Cr

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10		
2	Aug-95	10		
3	Feb-96	10		
4	Jun-96	10	**8.75**	**2.31**
5	Aug-96	10		
6	Nov-96	10		
7	May-97	5		
8	Nov-97	5		

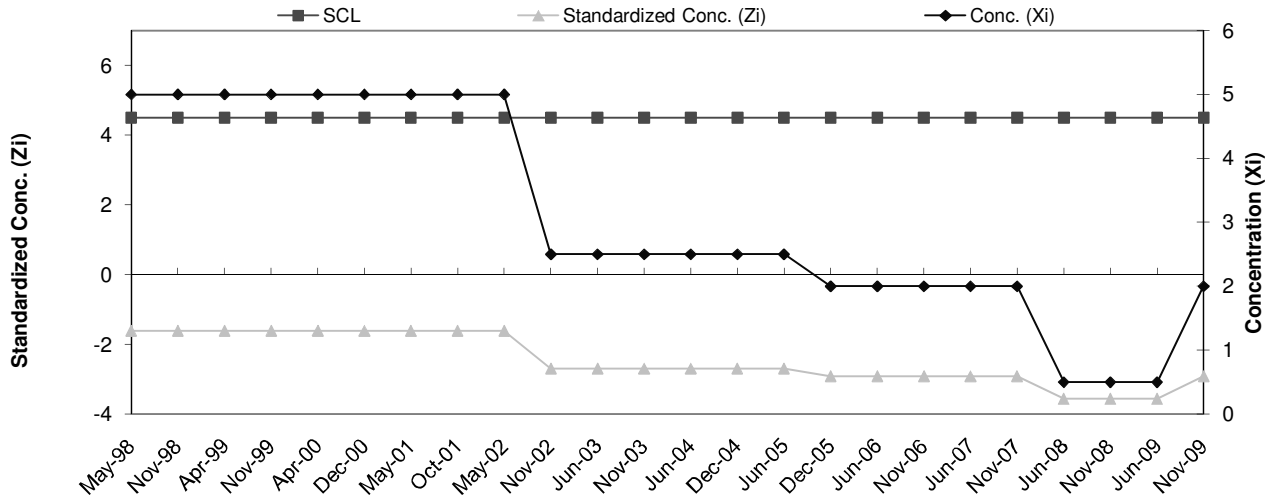
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-1.62
10	Nov-98	4.5	5	-1.62
11	Apr-99	4.5	5	-1.62
12	Nov-99	4.5	5	-1.62
13	Apr-00	4.5	5	-1.62
14	Dec-00	4.5	5	-1.62
15	May-01	4.5	5	-1.62
16	Oct-01	4.5	5	-1.62
17	May-02	4.5	5	-1.62
18	Nov-02	4.5	2.5	-2.70
19	Jun-03	4.5	2.5	-2.70
20	Nov-03	4.5	2.5	-2.70
21	Jun-04	4.5	2.5	-2.70
22	Dec-04	4.5	2.5	-2.70
23	Jun-05	4.5	6	-1.19
24	Dec-05	4.5	10	0.54
25	Jun-06	4.5	2.5	-2.70
26	Nov-06	4.5	2.5	-2.70
27	Jun-07	4.5	7	-0.76
28	Nov-07	4.5	2	-2.92
29	Jun-08	4.5	2.5	-2.70
30	Nov-08	4.5	2.5	-2.70
31	Jun-09	4.5	2.5	-2.70
32	Nov-09	4.5	2.5	-2.70



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-22D Cu

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10		
2	Aug-95	10		
3	Feb-96	10		
4	Jun-96	10	**8.75**	**2.31**
5	Aug-96	10		
6	Nov-96	10		
7	May-97	5		
8	Nov-97	5		

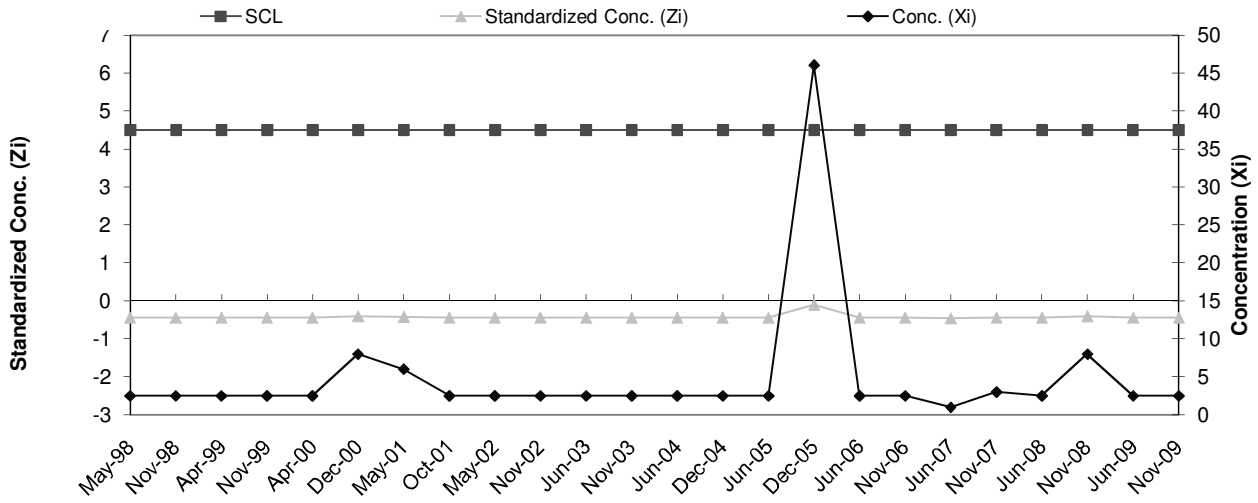
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-1.62
10	Nov-98	4.5	5	-1.62
11	Apr-99	4.5	5	-1.62
12	Nov-99	4.5	5	-1.62
13	Apr-00	4.5	5	-1.62
14	Dec-00	4.5	5	-1.62
15	May-01	4.5	5	-1.62
16	Oct-01	4.5	5	-1.62
17	May-02	4.5	5	-1.62
18	Nov-02	4.5	2.5	-2.70
19	Jun-03	4.5	2.5	-2.70
20	Nov-03	4.5	2.5	-2.70
21	Jun-04	4.5	2.5	-2.70
22	Dec-04	4.5	2.5	-2.70
23	Jun-05	4.5	2.5	-2.70
24	Dec-05	4.5	2	-2.92
25	Jun-06	4.5	2	-2.92
26	Nov-06	4.5	2	-2.92
27	Jun-07	4.5	2	-2.92
28	Nov-07	4.5	2	-2.92
29	Jun-08	4.5	0.5	-3.56
30	Nov-08	4.5	0.5	-3.56
31	Jun-09	4.5	0.5	-3.56
32	Nov-09	4.5	2	-2.92



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-22D Ni

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	370		
2	Aug-95	20		
3	Feb-96	20		
4	Jun-96	10	**58.94**	**125.96**
5	Aug-96	10		
6	Nov-96	10		
7	May-97	2.5		
8	Nov-97	29		

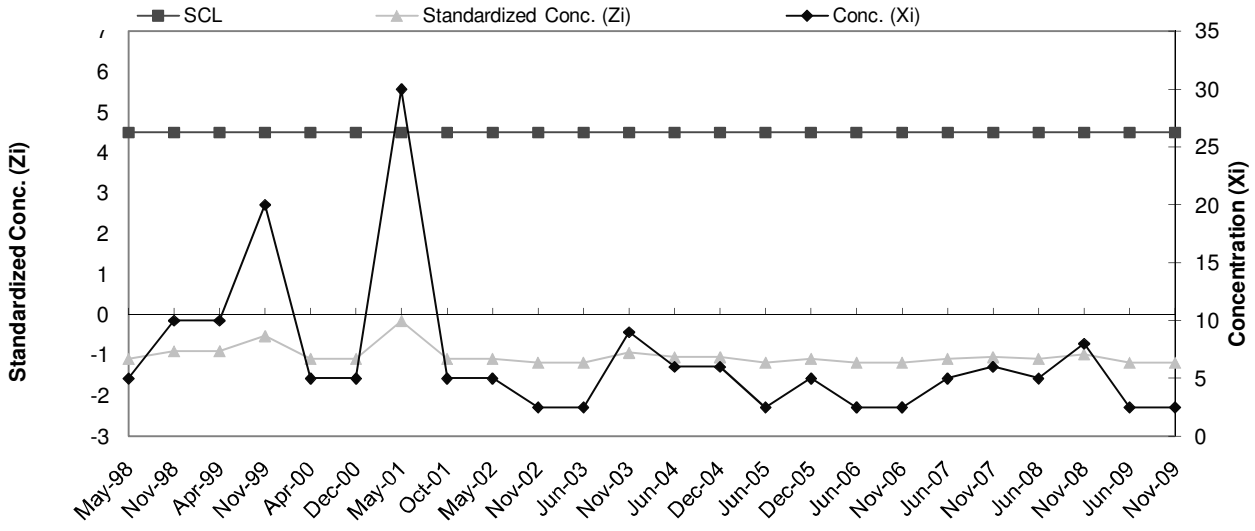
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	2.5	-0.45
10	Nov-98	4.5	2.5	-0.45
11	Apr-99	4.5	2.5	-0.45
12	Nov-99	4.5	2.5	-0.45
13	Apr-00	4.5	2.5	-0.45
14	Dec-00	4.5	8	-0.40
15	May-01	4.5	6	-0.42
16	Oct-01	4.5	2.5	-0.45
17	May-02	4.5	2.5	-0.45
18	Nov-02	4.5	2.5	-0.45
19	Jun-03	4.5	2.5	-0.45
20	Nov-03	4.5	2.5	-0.45
21	Jun-04	4.5	2.5	-0.45
22	Dec-04	4.5	2.5	-0.45
23	Jun-05	4.5	2.5	-0.45
24	Dec-05	4.5	46	-0.10
25	Jun-06	4.5	2.5	-0.45
26	Nov-06	4.5	2.5	-0.45
27	Jun-07	4.5	1	-0.46
28	Nov-07	4.5	3	-0.44
29	Jun-08	4.5	2.5	-0.45
30	Nov-08	4.5	8	-0.40
31	Jun-09	4.5	2.5	-0.45
32	Nov-09	4.5	2.5	-0.45



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-22D Zn

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10		
2	Aug-95	47		
3	Feb-96	80		
4	Jun-96	20	**34.00**	**26.69**
5	Aug-96	50		
6	Nov-96	50		
7	May-97	5		
8	Nov-97	10		

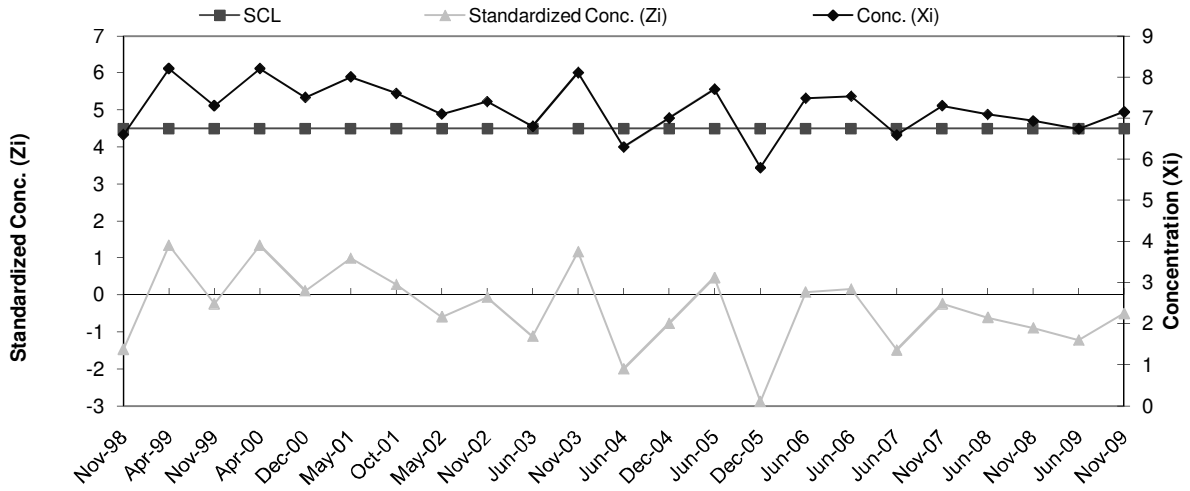
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-1.09
10	Nov-98	4.5	10	-0.90
11	Apr-99	4.5	10	-0.90
12	Nov-99	4.5	20	-0.52
13	Apr-00	4.5	5	-1.09
14	Dec-00	4.5	5	-1.09
15	May-01	4.5	30	-0.15
16	Oct-01	4.5	5	-1.09
17	May-02	4.5	5	-1.09
18	Nov-02	4.5	2.5	-1.18
19	Jun-03	4.5	2.5	-1.18
20	Nov-03	4.5	9	-0.94
21	Jun-04	4.5	6	-1.05
22	Dec-04	4.5	6	-1.05
23	Jun-05	4.5	2.5	-1.18
24	Dec-05	4.5	5	-1.09
25	Jun-06	4.5	2.5	-1.18
26	Nov-06	4.5	2.5	-1.18
27	Jun-07	4.5	5	-1.09
28	Nov-07	4.5	6	-1.05
29	Jun-08	4.5	5	-1.09
30	Nov-08	4.5	8	-0.97
31	Jun-09	4.5	2.5	-1.18
32	Nov-09	4.5	2.5	-1.18



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-22D pH

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	7.7	**7.44**	**0.57**
2	Aug-95	8.3		
3	Jun-96	7.5		
4	Aug-96	8.1		
5	Nov-96	7.2		
6	May-97	6.7		
7	Nov-97	6.9		
8	May-98	7.1		

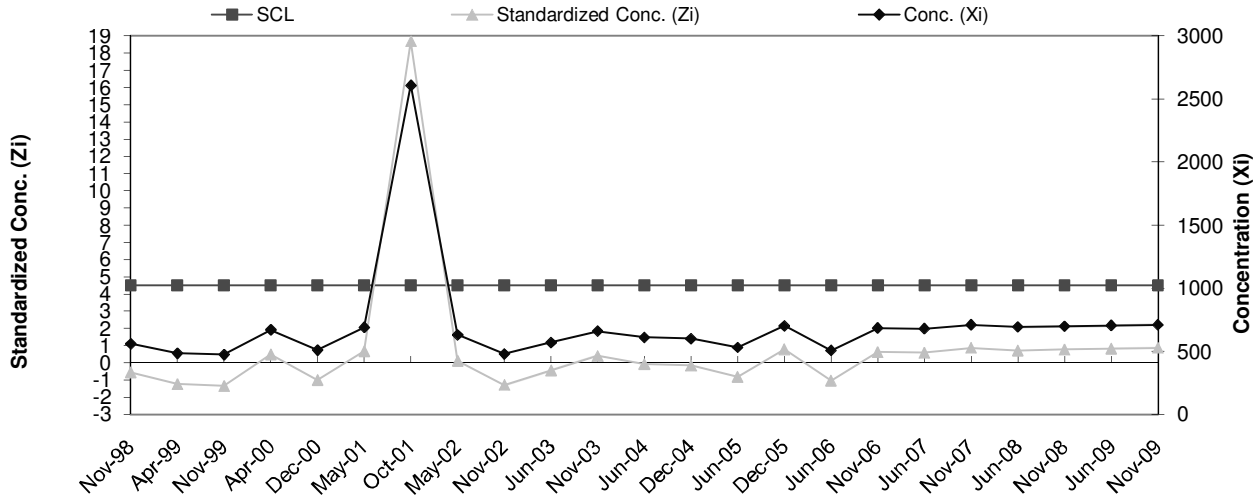
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	6.6	-1.47
10	Apr-99	4.5	8.2	1.34
11	Nov-99	4.5	7.3	-0.24
12	Apr-00	4.5	8.2	1.34
13	Dec-00	4.5	7.5	0.11
14	May-01	4.5	8	0.99
15	Oct-01	4.5	7.6	0.29
16	May-02	4.5	7.1	-0.59
17	Nov-02	4.5	7.4	-0.07
18	Jun-03	4.5	6.8	-1.12
19	Nov-03	4.5	8.1	1.17
20	Jun-04	4.5	6.3	-2.00
21	Dec-04	4.5	7	-0.77
22	Jun-05	4.5	7.7	0.46
23	Dec-05	4.5	5.8	-2.88
24	Jun-06	4.5	7.5	0.07
25	Jun-06	4.5	7.5	0.16
26	Jun-07	4.5	6.6	-1.49
27	Nov-07	4.5	7.3	-0.24
28	Jun-08	4.5	7.1	-0.61
29	Nov-08	4.5	6.9	-0.89
30	Jun-09	4.5	6.7	-1.23
31	Nov-09	4.5	7.2	-0.51



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-22D SpC

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	573		
2	Aug-95	739		
3	Jun-96	600		
4	Aug-96	608	**617.25**	**106.65**
5	Nov-96	817		
6	May-97	550		
7	Nov-97	550		
8	May-98	501		

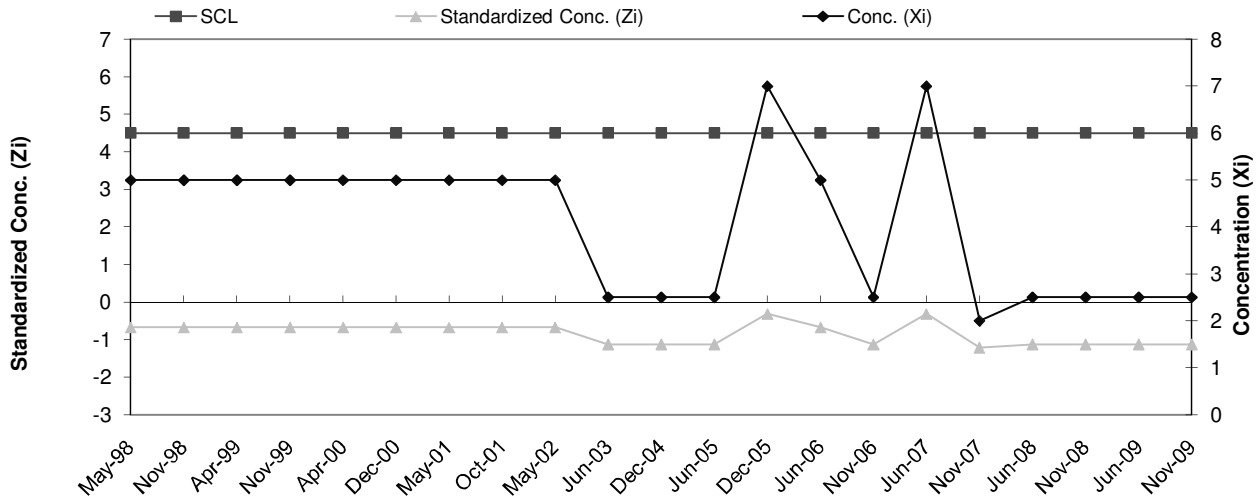
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-98	4.5	559	-0.55
10	Apr-99	4.5	485	-1.24
11	Nov-99	4.5	474	-1.34
12	Apr-00	4.5	670	0.49
13	Dec-00	4.5	510	-1.01
14	May-01	4.5	690	0.68
15	Oct-01	4.5	2610	18.68
16	May-02	4.5	630	0.12
17	Nov-02	4.5	480	-1.29
18	Jun-03	4.5	570	-0.44
19	Nov-03	4.5	660	0.40
20	Jun-04	4.5	610	-0.07
21	Dec-04	4.5	600	-0.16
22	Jun-05	4.5	531	-0.81
23	Dec-05	4.5	702	0.79
24	Jun-06	4.5	507	-1.04
25	Nov-06	4.5	684	0.63
26	Jun-07	4.5	680	0.59
27	Nov-07	4.5	710	0.87
28	Jun-08	4.5	694	0.72
29	Nov-08	4.5	699	0.77
30	Jun-09	4.5	705	0.82
31	Nov-09	4.5	710	0.87



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-23d Cr

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10		
2	Aug-95	10		
3	Feb-96	10		
4	Jun-96	10	**8.79**	**5.60**
5	Aug-96	10		
6	Nov-96	10		
7	May-97	5		
8	Nov-97	5		

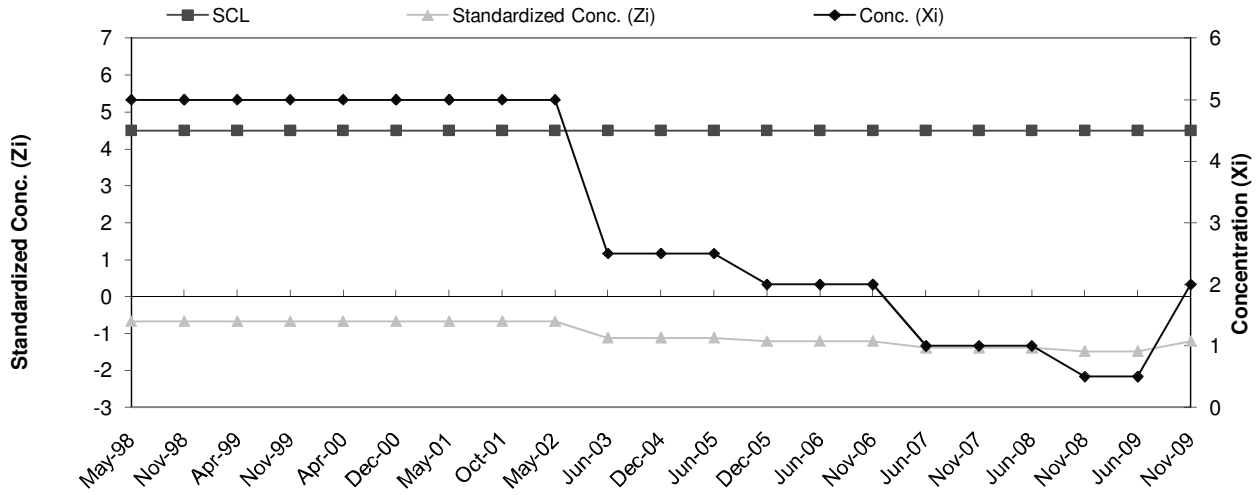
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.68
10	Nov-98	4.5	5	-0.68
11	Apr-99	4.5	5	-0.68
12	Nov-99	4.5	5	-0.68
13	Apr-00	4.5	5	-0.68
14	Dec-00	4.5	5	-0.68
15	May-01	4.5	5	-0.68
16	Oct-01	4.5	5	-0.68
17	May-02	4.5	5	-0.68
18	Jun-03	4.5	2.5	-1.12
19	Dec-04	4.5	2.5	-1.12
20	Jun-05	4.5	2.5	-1.12
21	Dec-05	4.5	7.0	-0.32
22	Jun-06	4.5	5.0	-0.68
23	Nov-06	4.5	2.5	-1.12
24	Jun-07	4.5	7	-0.32
25	Nov-07	4.5	2	-1.21
26	Jun-08	4.5	2.5	-1.12
27	Nov-08	4.5	2.5	-1.12
28	Jun-09	4.5	2.5	-1.12
29	Nov-09	4.5	2.5	-1.12



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-23d Cu

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10		
2	Aug-95	10		
3	Feb-96	10		
4	Jun-96	10	**8.75**	**5.59**
5	Aug-96	10		
6	Nov-96	10		
7	May-97	5		
8	Nov-97	5		

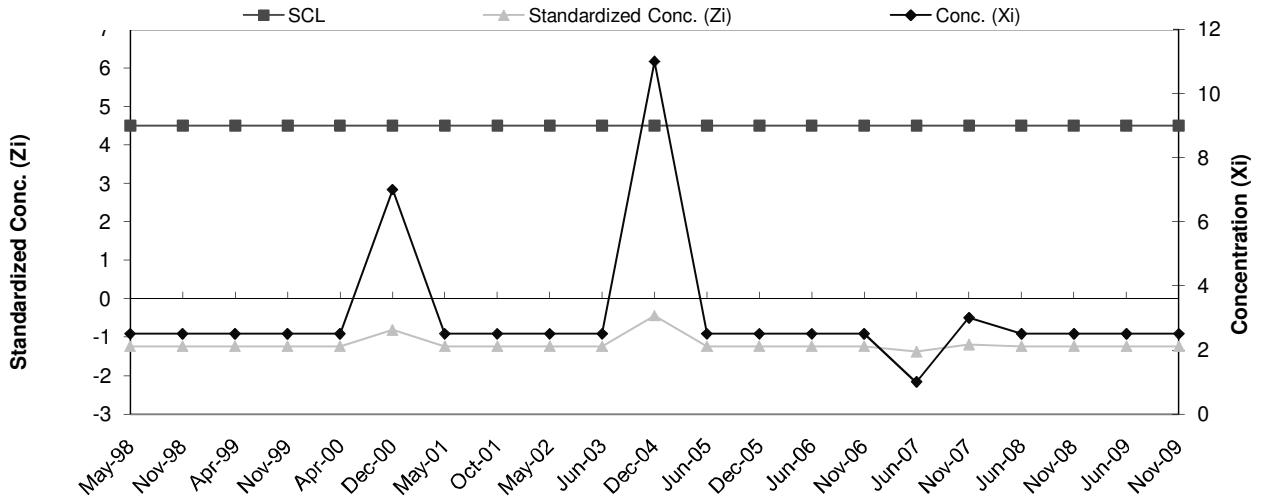
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5	-0.67
10	Nov-98	4.5	5	-0.67
11	Apr-99	4.5	5	-0.67
12	Nov-99	4.5	5	-0.67
13	Apr-00	4.5	5	-0.67
14	Dec-00	4.5	5	-0.67
15	May-01	4.5	5	-0.67
16	Oct-01	4.5	5	-0.67
17	May-02	4.5	5	-0.67
18	Jun-03	4.5	2.5	-1.12
19	Dec-04	4.5	2.5	-1.12
20	Jun-05	4.5	2.5	-1.12
21	Dec-05	4.5	2.0	-1.21
22	Jun-06	4.5	2.0	-1.21
23	Nov-06	4.5	2.0	-1.21
24	Jun-07	4.5	1	-1.39
25	Nov-07	4.5	1	-1.39
26	Jun-08	4.5	1	-1.39
27	Nov-08	4.5	0.5	-1.48
28	Jun-09	4.5	0.5	-1.48
29	Nov-09	4.5	2	-1.21



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-23d Ni

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	15		
2	Aug-95	20		
3	Feb-96	20		
4	Jun-96	10	**15.61**	**10.57**
5	Aug-96	10		
6	Nov-96	10		
7	May-97	9		
8	Nov-97	31		

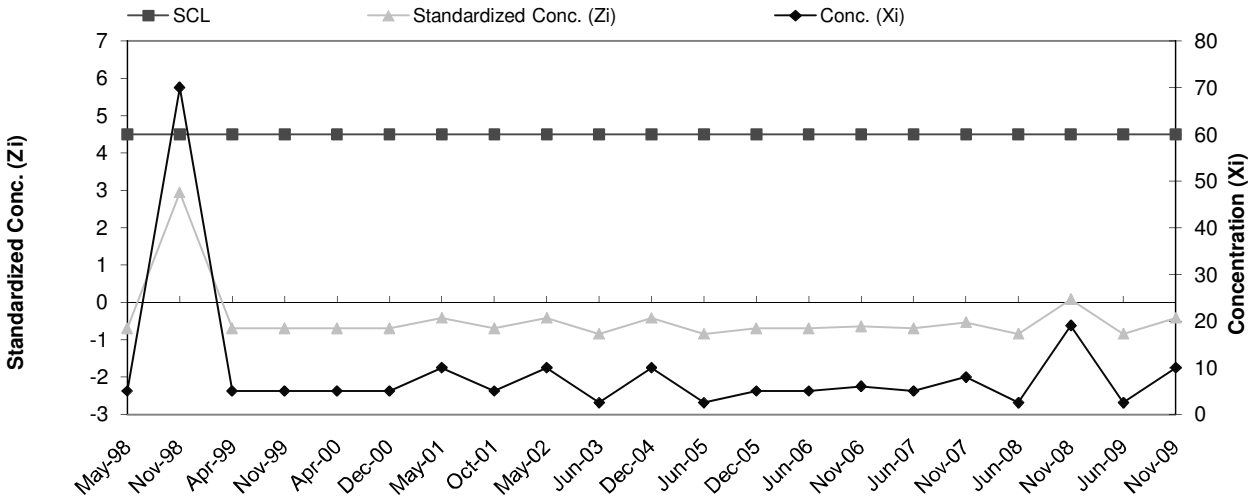
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	2.5	-1.24
10	Nov-98	4.5	2.5	-1.24
11	Apr-99	4.5	2.5	-1.24
12	Nov-99	4.5	2.5	-1.24
13	Apr-00	4.5	2.5	-1.24
14	Dec-00	4.5	7.0	-0.81
15	May-01	4.5	2.5	-1.24
16	Oct-01	4.5	2.5	-1.24
17	May-02	4.5	2.5	-1.24
18	Jun-03	4.5	2.5	-1.24
19	Dec-04	4.5	11.0	-0.44
20	Jun-05	4.5	2.5	-1.24
21	Dec-05	4.5	2.5	-1.24
22	Jun-06	4.5	2.5	-1.24
23	Nov-06	4.5	2.5	-1.24
24	Jun-07	4.5	1	-1.38
25	Nov-07	4.5	3	-1.19
26	Jun-08	4.5	2.5	-1.24
27	Nov-08	4.5	2.5	-1.24
28	Jun-09	4.5	2.5	-1.24
29	Nov-09	4.5	2.5	-1.24



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-23d Zn

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	10		
2	Aug-95	10		
3	Feb-96	10		
4	Jun-96	10	**17.49**	**17.84**
5	Aug-96	50		
6	Nov-96	40		
7	May-97	5		
8	Nov-97	5		

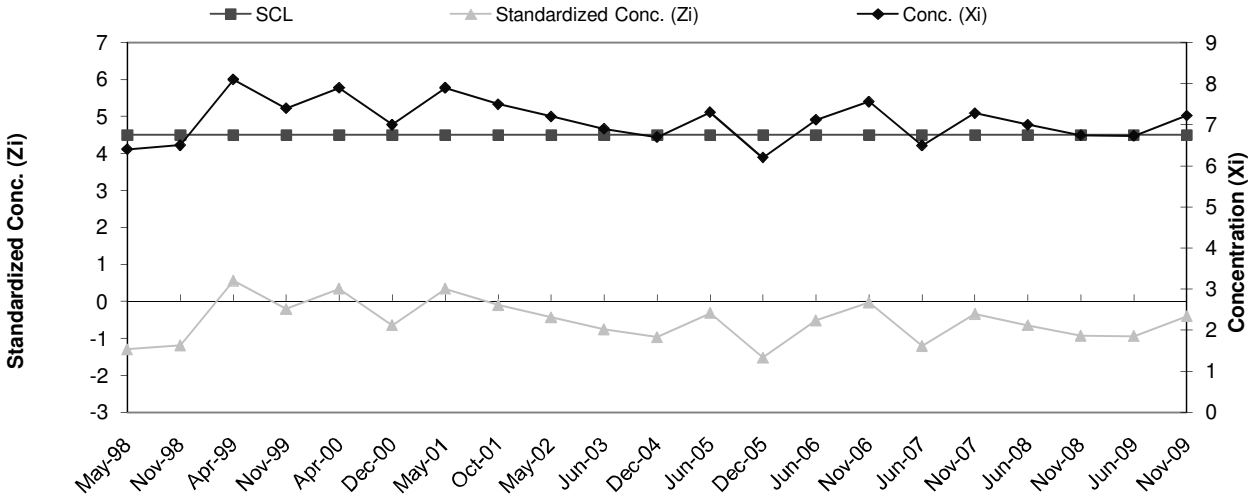
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	5.0	-0.70
10	Nov-98	4.5	70.0	2.94
11	Apr-99	4.5	5.0	-0.70
12	Nov-99	4.5	5.0	-0.70
13	Apr-00	4.5	5.0	-0.70
14	Dec-00	4.5	5.0	-0.70
15	May-01	4.5	10.0	-0.42
16	Oct-01	4.5	5.0	-0.70
17	May-02	4.5	10.0	-0.42
18	Jun-03	4.5	2.5	-0.84
19	Dec-04	4.5	10.0	-0.42
20	Jun-05	4.5	2.5	-0.84
21	Dec-05	4.5	5.0	-0.70
22	Jun-06	4.5	5.0	-0.70
23	Nov-06	4.5	6.0	-0.64
24	Jun-07	4.5	5	-0.70
25	Nov-07	4.5	8	-0.53
26	Jun-08	4.5	2.5	-0.84
27	Nov-08	4.5	19	0.08
28	Jun-09	4.5	2.5	-0.84
29	Nov-09	4.5	10	-0.42



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-23d pH

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	7.3		
2	Aug-95	8.2		
3	Feb-96	7.5		
4	Jun-96	8.3	**7.59**	**0.91**
5	Aug-96	8.9		
6	Nov-96	7.7		
7	May-97	6.8		
8	Nov-97	6.0		

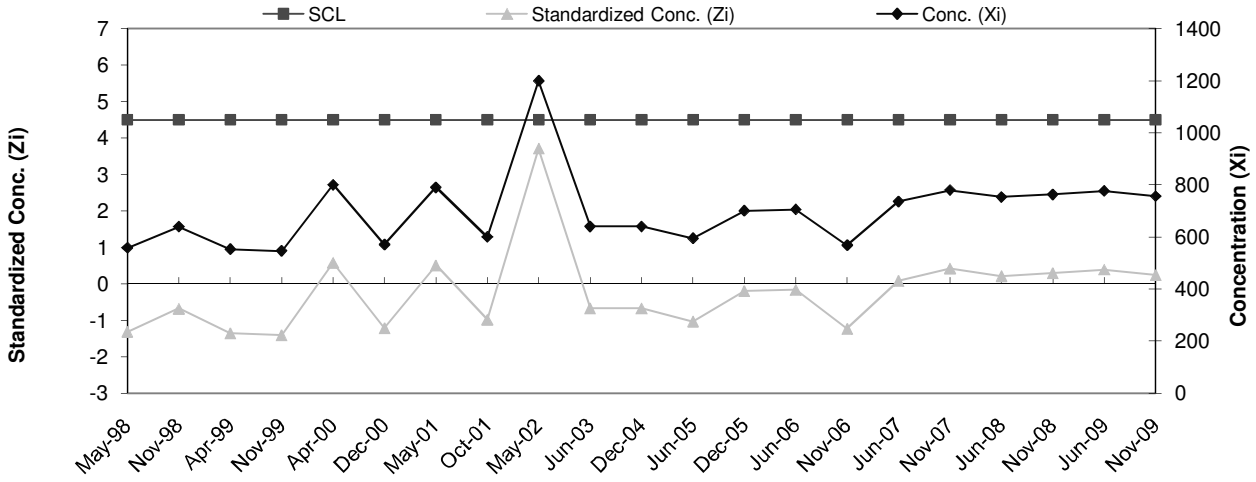
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	6.4	-1.30
10	Nov-98	4.5	6.5	-1.19
11	Apr-99	4.5	8.1	0.56
12	Nov-99	4.5	7.4	-0.21
13	Apr-00	4.5	7.9	0.34
14	Dec-00	4.5	7.0	-0.64
15	May-01	4.5	7.9	0.34
16	Oct-01	4.5	7.5	-0.10
17	May-02	4.5	7.2	-0.42
18	Jun-03	4.5	6.9	-0.75
19	Dec-04	4.5	6.7	-0.97
20	Jun-05	4.5	7.3	-0.31
21	Dec-05	4.5	6.2	-1.52
22	Jun-06	4.5	7.1	-0.51
23	Nov-06	4.5	7.6	-0.03
24	Jun-07	4.5	6.5	-1.20
25	Nov-07	4.5	7.3	-0.34
26	Jun-08	4.5	7.0	-0.64
27	Nov-08	4.5	6.7	-0.93
28	Jun-09	4.5	6.7	-0.94
29	Nov-09	4.5	7.2	-0.40



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-23d SpC

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-95	680		
2	Aug-95	845		
3	Feb-96	751		
4	Jun-96	632	**725.75**	**127.98**
5	Aug-96	691		
6	Nov-96	977		
7	May-97	610		
8	Nov-97	620		

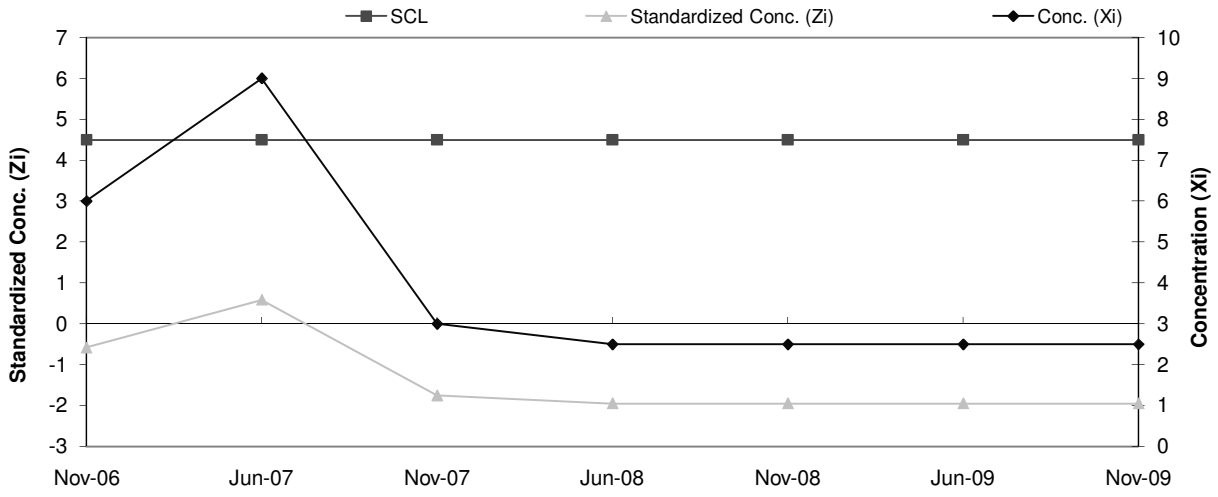
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	May-98	4.5	558	-1.31
10	Nov-98	4.5	639	-0.68
11	Apr-99	4.5	552	-1.36
12	Nov-99	4.5	546	-1.40
13	Apr-00	4.5	800	0.58
14	Dec-00	4.5	570	-1.22
15	May-01	4.5	790	0.50
16	Oct-01	4.5	600	-0.98
17	May-02	4.5	1200	3.71
18	Jun-03	4.5	640	-0.67
19	Dec-04	4.5	640	-0.67
20	Jun-05	4.5	594	-1.03
21	Dec-05	4.5	700	-0.20
22	Jun-06	4.5	705	-0.16
23	Nov-06	4.5	568	-1.23
24	Jun-07	4.5	736	0.08
25	Nov-07	4.5	780	0.42
26	Jun-08	4.5	753	0.21
27	Nov-08	4.5	763	0.29
28	Jun-09	4.5	776	0.39
29	Nov-09	4.5	756	0.24



REALM - COLDWATER ROAD 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		

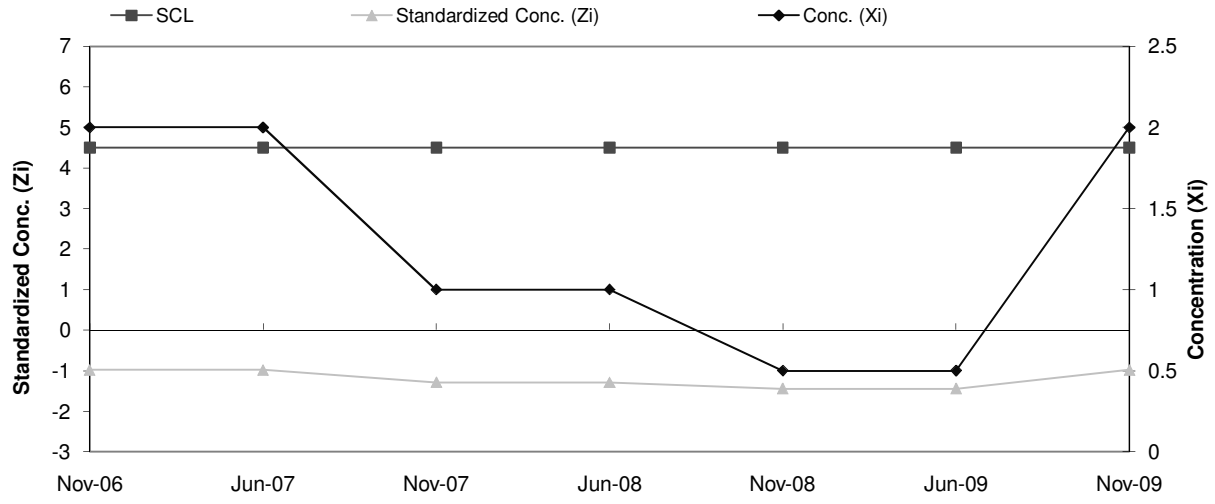
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-06	4.5	6	-0.59
10	Jun-07	4.5	9	0.59
11	Nov-07	4.5	3	-1.76
12	Jun-08	4.5	2.5	-1.95
13	Nov-08	4.5	2.5	-1.95
14	Jun-09	4.5	2.5	-1.95
15	Nov-09	4.5	2.5	-1.95



REALM - COLDWATER ROAD 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		

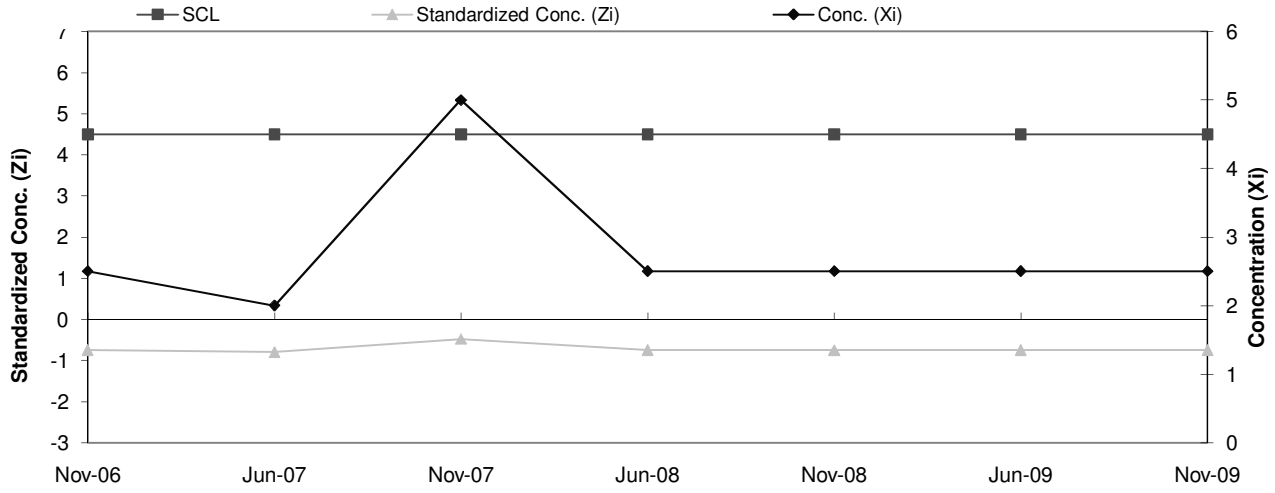
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-06	4.5	2	-0.98
10	Jun-07	4.5	2	-0.98
11	Nov-07	4.5	1	-1.29
12	Jun-08	4.5	1	-1.29
13	Nov-08	4.5	0.5	-1.44
14	Jun-09	4.5	0.5	-1.44
15	Nov-09	4.5	2	-0.98



REALM - COLDWATER ROAD 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		

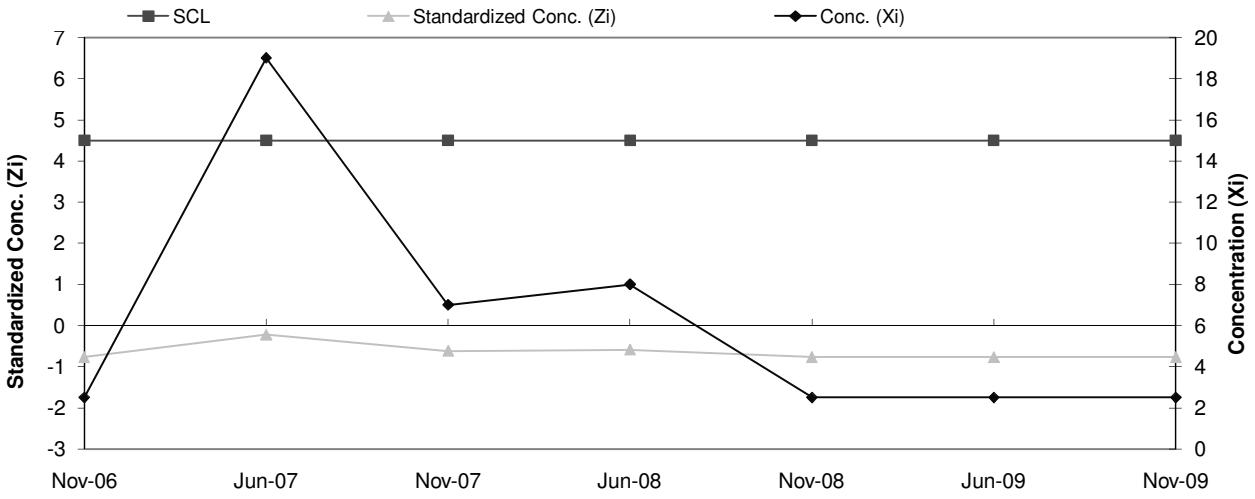
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-06	4.5	2.5	-0.74
10	Jun-07	4.5	2	-0.80
11	Nov-07	4.5	5	-0.47
12	Jun-08	4.5	2.5	-0.74
13	Nov-08	4.5	2.5	-0.74
14	Jun-09	4.5	2.5	-0.74
15	Nov-09	4.5	2.5	-0.74



REALM - COLDWATER ROAD 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		

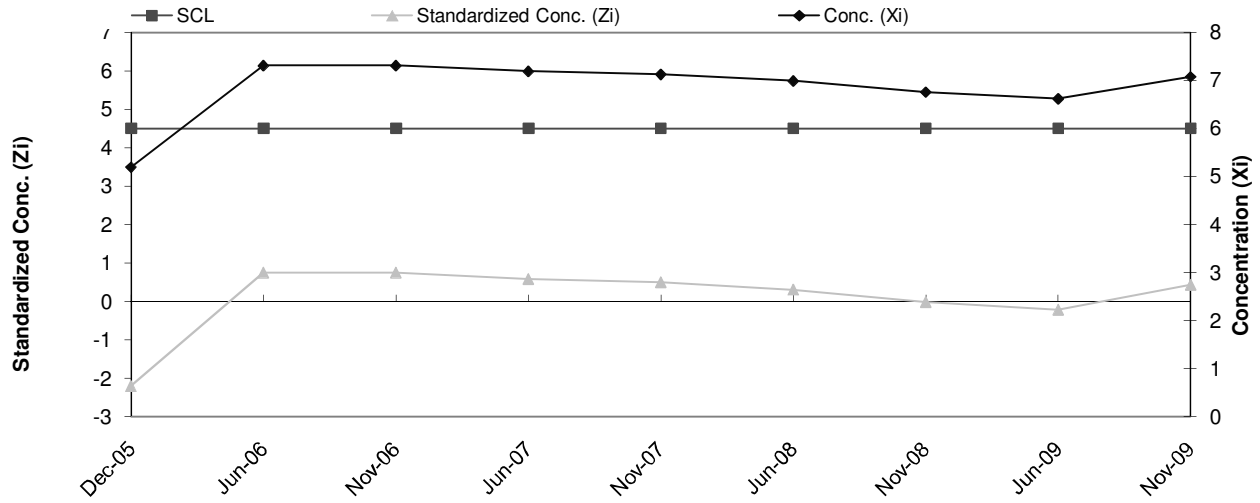
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-06	4.5	2.5	-0.77
10	Jun-07	4.5	19	-0.22
11	Nov-07	4.5	7	-0.62
12	Jun-08	4.5	8	-0.58
13	Nov-08	4.5	2.5	-0.77
14	Jun-09	4.5	2.5	-0.77
15	Nov-09	4.5	2.5	-0.77



REALM - COLDWATER ROAD 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		

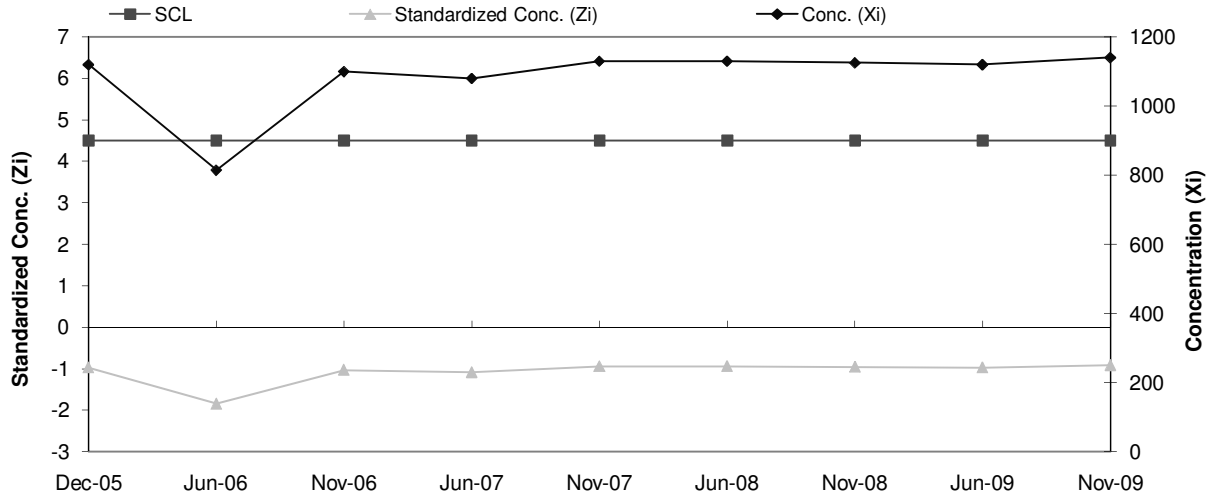
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Dec-05	4.5	5.2	-2.20
10	Jun-06	4.5	7.3	0.75
11	Nov-06	4.5	7.3	0.75
12	Jun-07	4.5	7.2	0.58
13	Nov-07	4.5	7.1	0.50
14	Jun-08	4.5	7.0	0.30
15	Nov-08	4.5	6.8	-0.02
14	Jun-09	4.5	6.6	-0.22
15	Nov-09	4.5	7.1	0.43



REALM - COLDWATER ROAD 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		

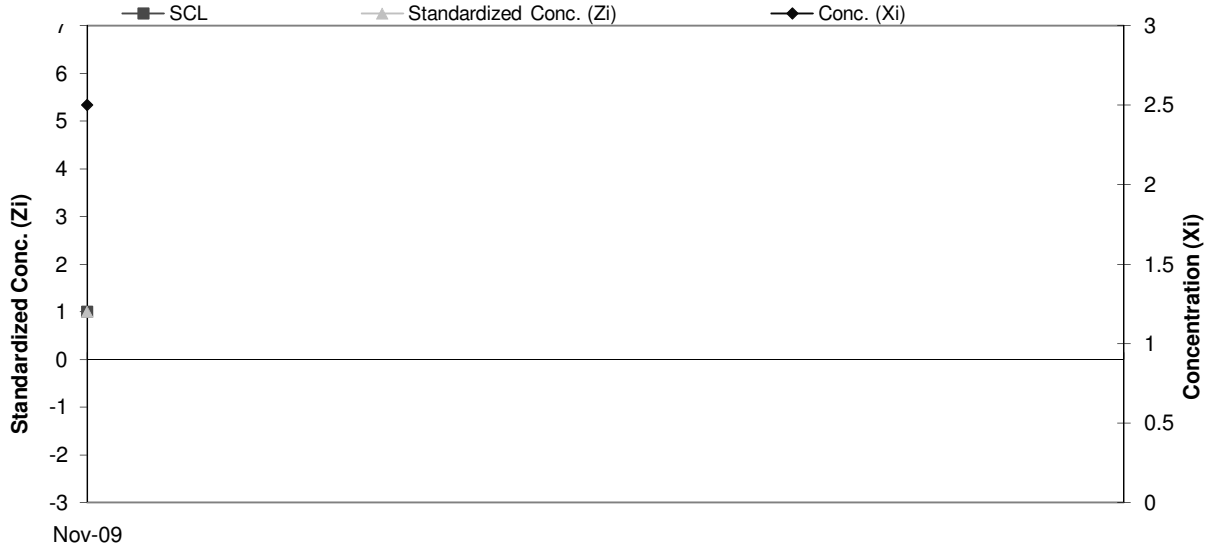
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Dec-05	4.5	1120	-0.97
10	Jun-06	4.5	814	-1.84
11	Nov-06	4.5	1100	-1.03
12	Jun-07	4.5	1080	-1.09
13	Nov-07	4.5	1130	-0.95
14	Jun-08	4.5	1130	-0.95
15	Nov-08	4.5	1125	-0.96
16	Jun-09	4.5	1120	-0.97
17	Nov-09	4.5	1140	-0.92



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-27 Cr

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Dec-05	9	**4.50**	**3.05**
2	Jun-06	6		
3	Nov-06	2.5		
4	Jun-07	9		
5	Nov-07	2		
6	Jun-08	2.5		
7	Nov-08	2.5		
8	Jun-09	2.5		

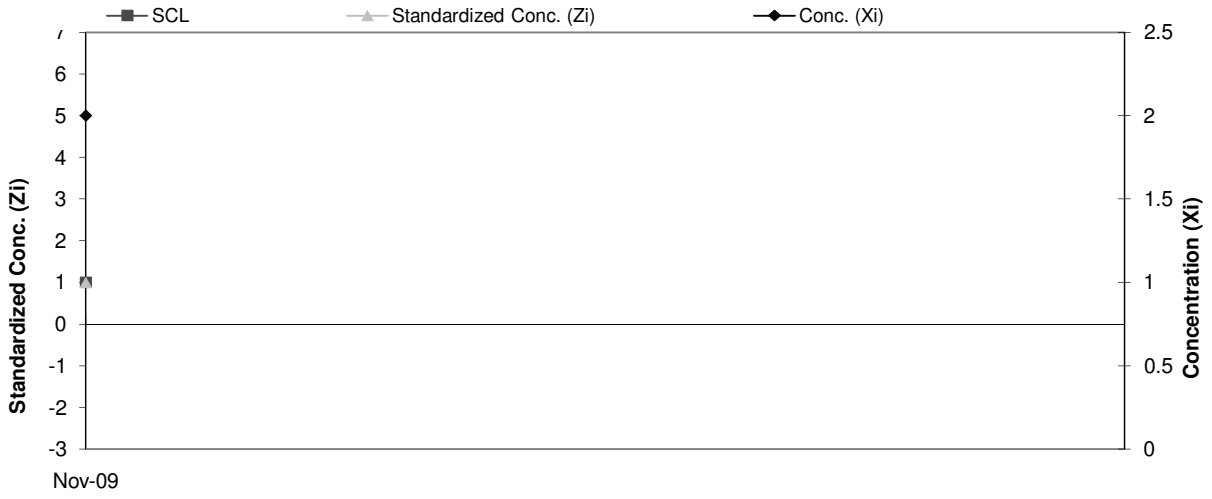
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-09	4.5	2.5	-0.66



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-27 Cu

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Dec-05	2	**1.38**	**0.69**
2	Jun-06	2		
3	Nov-06	2		
4	Jun-07	2		
5	Nov-07	1		
6	Jun-08	0.5		
7	Nov-08	0.5		
8	Jun-09	1		

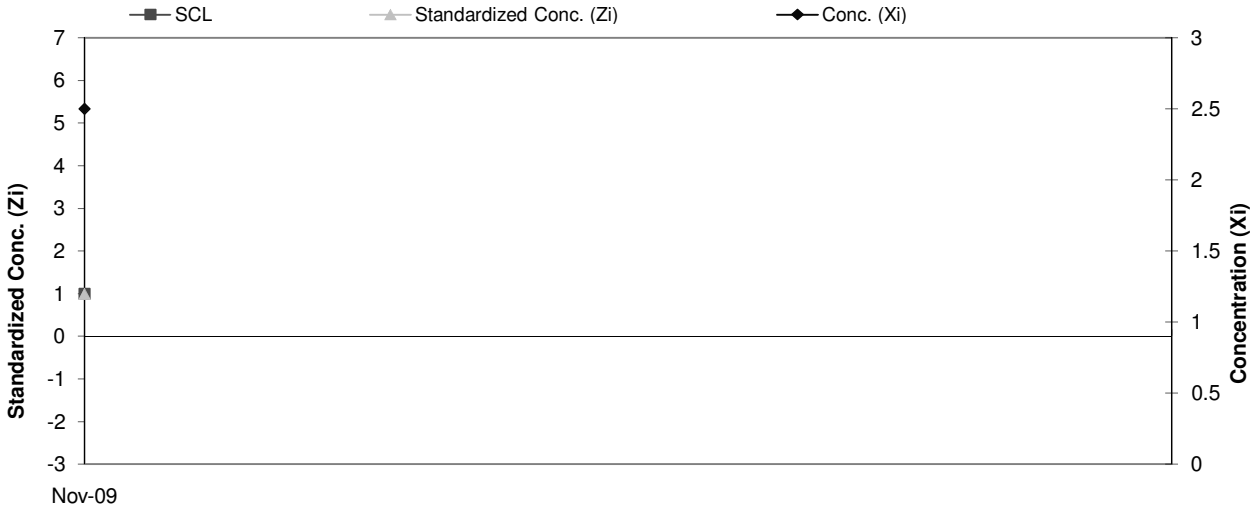
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-09	4.5	2	0.90



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-27 Ni

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Dec-05	6	**3.88**	**1.85**
2	Jun-06	7		
3	Nov-06	2.5		
4	Jun-07	3		
5	Nov-07	5		
6	Jun-08	2.5		
7	Nov-08	2.5		
8	Jun-09	2.5		

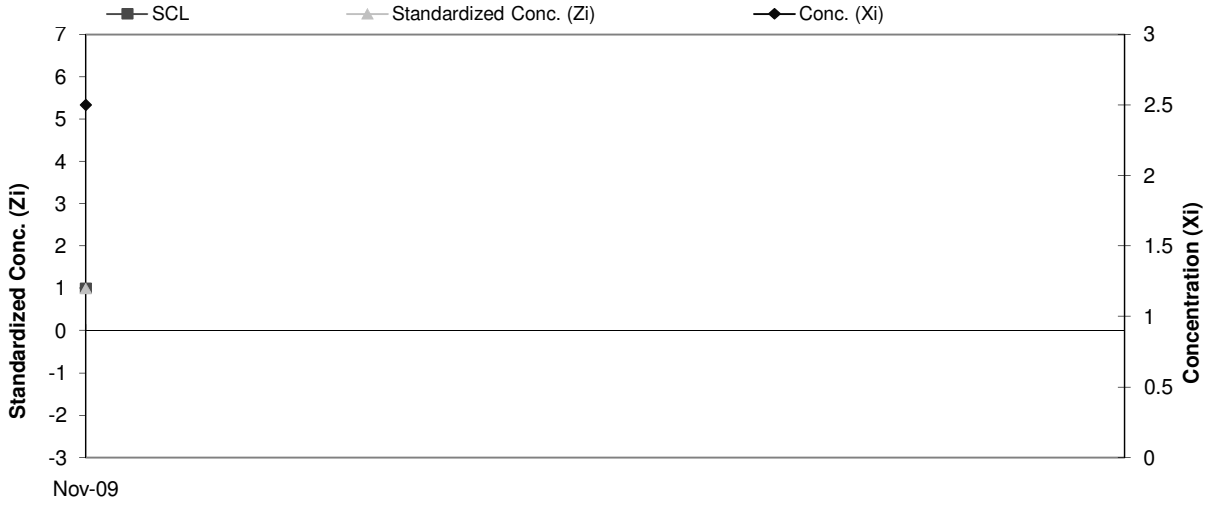
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-09	4.5	2.5	-0.74



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-27 Zn

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Dec-05	5	**11.56**	**13.97**
2	Jun-06	6		
3	Nov-06	6		
4	Jun-07	36		
5	Nov-07	32		
6	Jun-08	2.5		
7	Nov-08	2.5		
8	Jun-09	2.5		

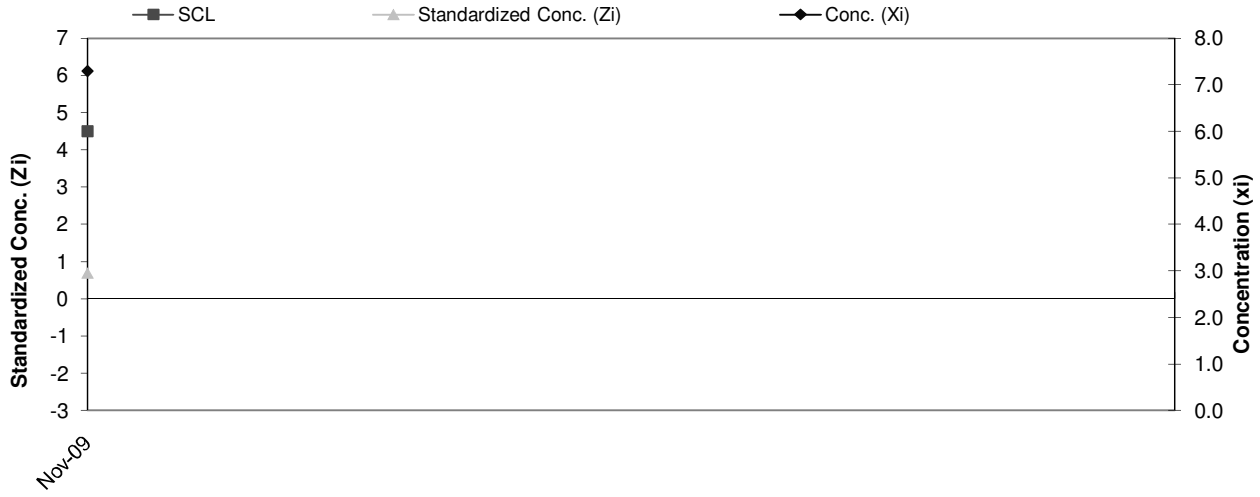
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-09	4.5	2.5	-0.65



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-27 pH

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Dec-05	5.1	**6.79**	**0.73**
2	Jun-06	7.1		
3	Nov-06	7.5		
4	Jun-07	6.6		
5	Nov-07	7.3		
6	Jun-08	7.1		
7	Nov-08	6.8		
8	Jun-09	6.8		

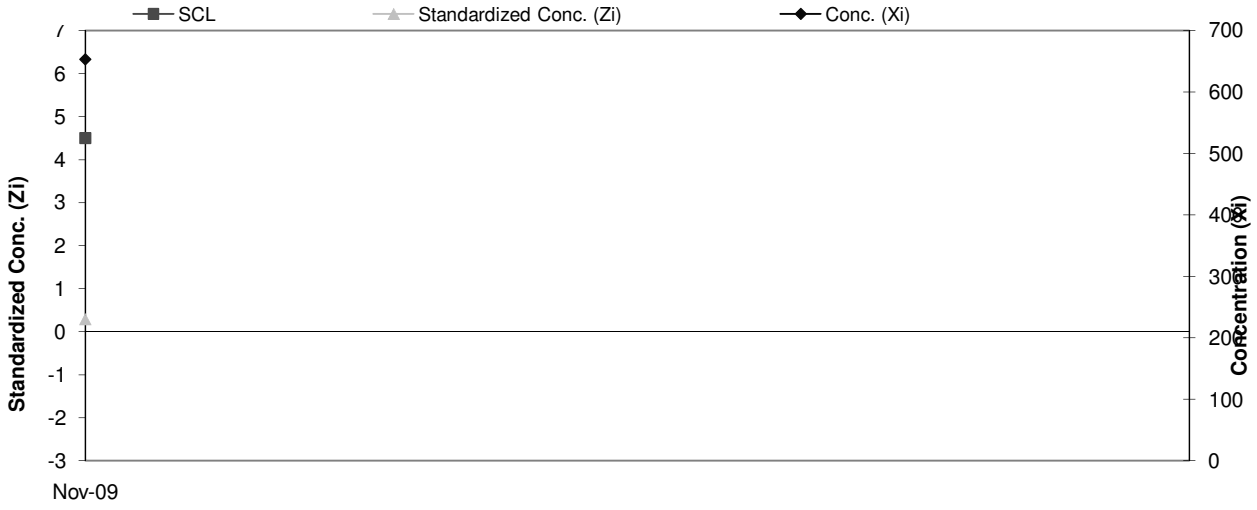
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-09	4.5	7.3	0.69



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-27 SpC

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Dec-05	714		
2	Jun-06	594		
3	Nov-06	540		
4	Jun-07	628	**637.75**	**52.08**
5	Nov-07	649		
6	Jun-08	659		
7	Nov-08	667		
8	Jun-09	651		

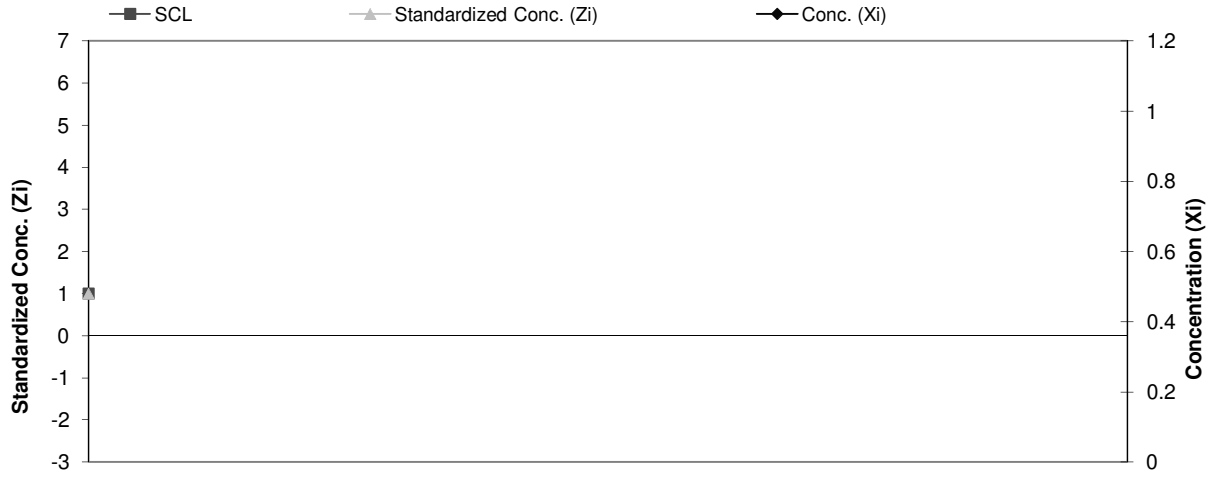
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)
9	Nov-09	4.5	653	0.29



REALM - COLDWATER ROAD 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		

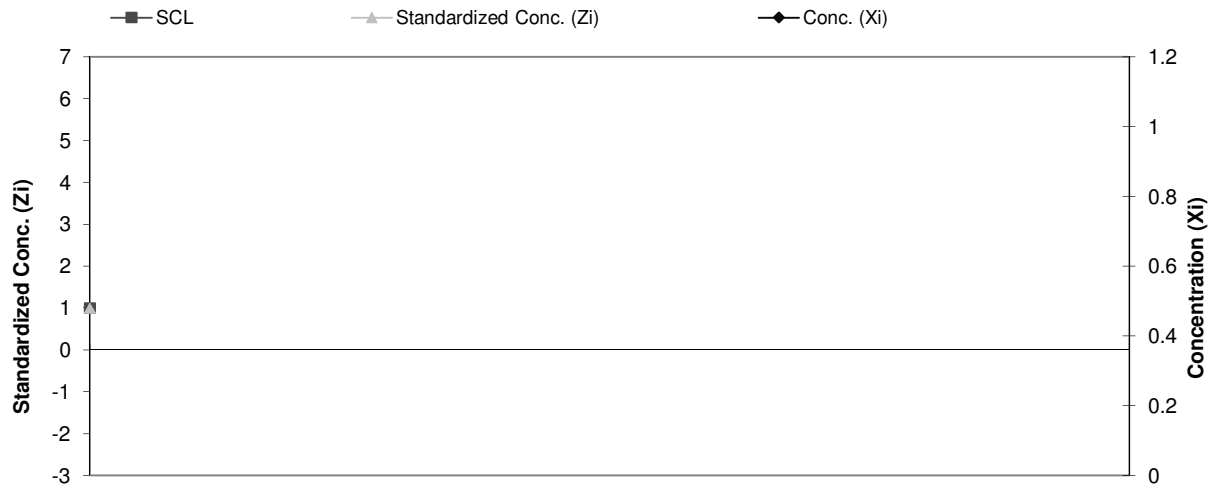
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)



REALM - COLDWATER ROAD 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		

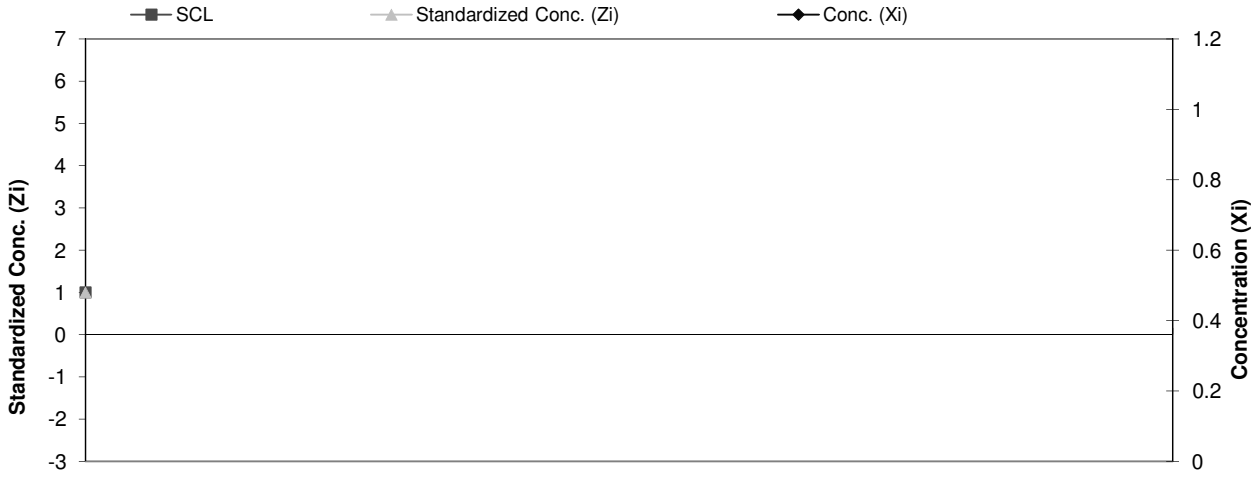
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
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		

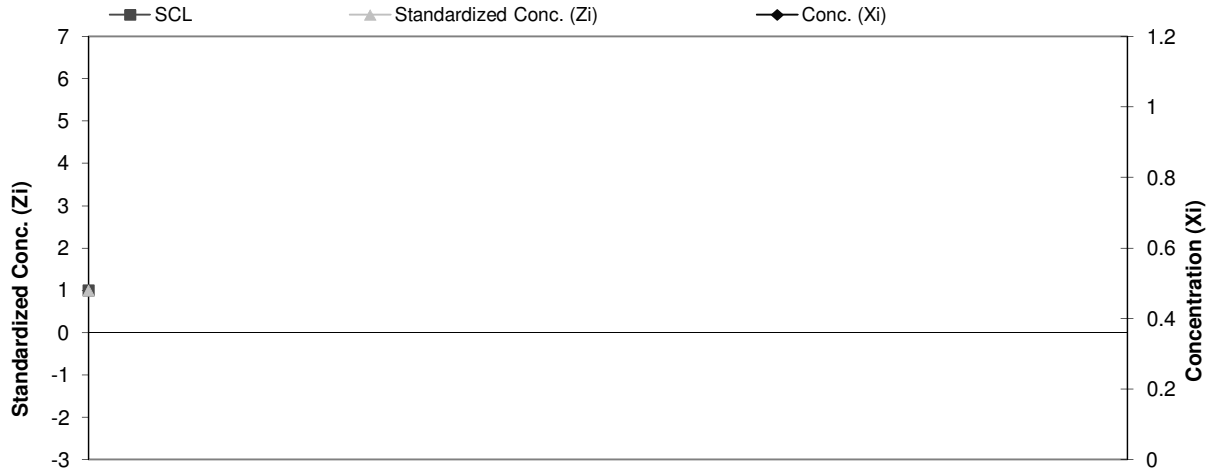
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)



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

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-06	18	**8.75**	**6.88**
2	Dec-06	5		
3	Jun-07	6		
4	Nov-07	11		
5	Jun-08	5		
6	Nov-08	2.5		
7	Jun-09	2.5		
8	Nov-09	20		

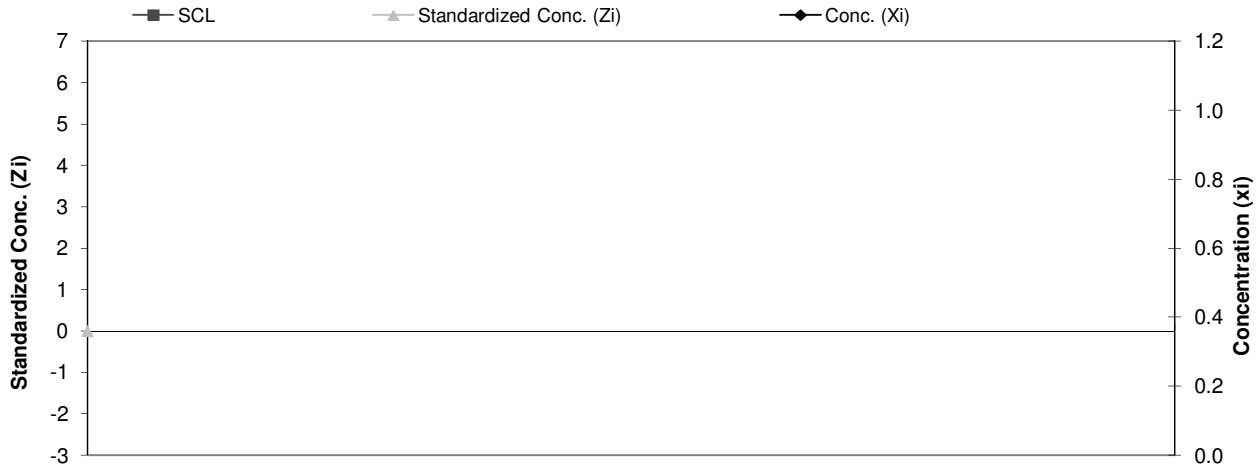
Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)



REALM - COLDWATER ROAD FACILITY
RCRA GROUND WATER DETECTION MONITORING SYSTEM
SHEWART CONTROL CHART
B-28 pH

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-06	7.1	**6.97**	**0.21**
2	Dec-06	7.4		
3	Jun-07	6.8		
4	Nov-07	6.8		
5	Jun-08	6.9		
6	Nov-08	6.8		
7	Jun-09	7.0		
8	Nov-09	6.9		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)



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

Baseline Data				
Ti	Date	Conc.	Mean	Std. Dev
1	Jun-06	785	**817.25**	**19.14**
2	Dec-06	812		
3	Jun-07	845		
4	Nov-07	816		
5	Jun-08	840		
6	Nov-08	804		
7	Jun-09	822		
8	Nov-09	814		

Ti	Date	SCL	Conc. (Xi)	Standardized Conc. (Zi)