

# LEGGETTE, BRASHEARS & GRAHAM, INC.

## PROFESSIONAL GROUND-WATER AND ENVIRONMENTAL ENGINEERING SERVICES

140 EAST HINKS LANE, SUITE 126  
SIOUX FALLS, SD 57104  
605-334-6000  
FAX 605-334-1850  
www.lbgweb.com



July 27, 2007

Ms. Barb Gnabasik  
Minnesota Pollution Control Agency  
525 S. Lake Avenue, Suite 400  
Duluth, MN 55802

RE: April 2007 Ground-Water Monitoring Event  
City of Sartell/SPX Corporation  
Closed Hazardous Waste Lagoon #3  
EPA ID - MND985668342

Dear Ms. Gnabasik:

Leggette, Brashears & Graham, Inc. (LBG) has completed the April 2007 ground-water monitoring and sampling event at the City of Sartell/SPX Corporation Closed Hazardous Waste Lagoon #3. The purpose of this letter is to summarize and submit the data to the Minnesota Pollution Control Agency (MPCA) on behalf of the City of Sartell. These data were obtained and are reported in accordance with the hazardous waste permit dated September 29, 1994.

### Work Completed

On April 10, 2007, LBG collected fluid-level data and ground-water samples from the monitor wells in accordance with the required ground-water monitoring schedule. Figure 1 shows the monitor well locations and the water-table elevation contours for this monitoring event. Table 1 summarizes the fluid-level measurements and calculated elevations for each well.

Ground-water samples were collected from monitor wells P-5R, P-5R Duplicate, P-9R, P-12R, and P-13 on April 10, 2007. The samples were submitted to Test America Analytical Testing

Corporation (Test America) in Cedar Falls, Iowa for analysis of inorganics, nutrients, and trace metals. An equipment blank was also collected for inorganics, nutrients, and trace metals for Quality Assurance/Quality Control (QA/QC). Ground-water samples were also collected from the City of Sartell Landfill wells P-5A, P-6, P-7, P-10, P-11A, and PW-0 on April 10 and 11, 2007. The samples were submitted to Test America for analysis of dissolved boron. A Data Verification Report which includes the laboratory analytical reports and field sampling data sheets from the sampling event is attached. Monitoring wells P-5R and P-9R are sampled as part of both the closed Hazardous Waste Lagoon site and the closed City of Sartell Landfill; therefore, the data collected for both sites is included in the analytical reports.

#### **Problems or Delays and Solutions**

There were no notable problems or delays during the sampling event. All wells were sampled as specified in the monitoring plan.

#### **Anticipated Work Schedule**

The next monitoring and sampling event is scheduled for October 2007.

#### **Sampling and Analytical Results**

Figure 1 shows that the indicated ground-water flow direction is generally to the southeast. This is normal for the site. No anomalies in the fluid-level data are apparent.

A summary of the analytical results from the April 2007 event are provided on Table 2. Of the hazardous constituents to which the ground-water protection standards apply (arsenic, barium, cadmium, lead and selenium), only barium and cadmium were detected. A summary of the hazardous constituents can be found on Table 3. Other contaminants that exceeded either a

secondary maximum contaminant limit (SMCL), an intervention limit (IL) or a health risk limit (HRL) include total dissolved solids, sulfate, nitrate as nitrogen, and dissolved boron.

Barium was detected in all the wells during the April 2007 sampling event. The concentrations ranged from 42.1 to 71.6  $\mu\text{g/L}$ . The detections of barium are below the regulatory limits; however, the detections of barium in P-5R and P-9R are slightly above the calculated site-specific Tolerance Limit of 67  $\mu\text{g/L}$ . Because the concentrations in P-5R and P-9R are only slightly above the Tolerance Limit, no further action is warranted.

Cadmium was only detected in P-9R during the April 2007 sampling event at a concentration of 0.186  $\mu\text{g/L}$ . The detected concentration is below the regulatory limits. A site-specific Tolerance Limit for cadmium has previously been calculated, but it has been based predominantly on the background detection limits (15 of 16 events), which are artifacts and not indicative of any real concentrations at the site. Consequently, the calculated Tolerance Limit is of little practical use in evaluating the current detections of cadmium. Because the cadmium concentration in P-9R does not exceed the regulatory limits, no further action is warranted at this time.

Total dissolved solids (TDS) were detected above the SMCL of 500 mg/L in P-5R, P-9R, and P-12R during the April 2007 sampling event. The detected concentrations range from 588 mg/L (P-12R) to 984 mg/L (P-5R). The detected concentrations are within the historical range for the site.

Sulfate was detected above the SMCL of 250 mg/L in P-5R during the April 2007 sampling event at a concentration of 333 mg/L. The detected concentration is within the historical range for the site.

Nitrate as nitrogen was detected above the IL of 2.5 mg/L in all the wells during the April 2007 sampling event. The detected concentrations range from 4.42 mg/L (P-5R) to 5.51 mg/L (P-12R). The detected concentrations are within the historical range for the site.

For the City of Sartell/SPX Corporation Hazardous Waste Lagoon wells, dissolved boron was detected above the HRL of 0.6 mg/L only in P-5R during the April 2007 sampling event. The detected concentration of 2.18 mg/L (also detected in April 2001) is the historical high concentration

for the well. For the City of Sartell Landfill wells, dissolved boron was detected above the HRL in PW-0 and P-11A during the April 2007 event; however, the concentrations detected in PW-0 and P-11A have continued to decrease since the sampling of dissolved boron was initiated in October 2004. A map showing the concentrations of dissolved boron can be found on Figure 2.

Concentrations of COD, chloride, sulfate, nitrate as N, dissolved barium, and dissolved calcium were detected in the Equipment Blank; however, the detections were flagged with a "J". The "J" flag indicates that the analytes are present but at a concentration less than the laboratory reporting limit and the detections are estimated. Specific conductance was also detected in the Equipment Blank at a concentration of 1.66 mg/L, which is just above the laboratory reporting limit of 1.0 mg/L.

### **Recommendations**

No changes to the monitoring program are warranted at this time. The continuation of ground-water monitoring as directed by the MPCA is recommended.

Sincerely,  
LEGGETTE, BRASHEARS & GRAHAM, INC.



Melissa Karstens  
Environmental Scientist II

Reviewed by:



Tim Kenyon, PG  
Vice President

MK/kak

H:\Data\WPLANDFILL\DeZurik and Sartell\Dezurik\DeZurik April 2007.RPT.wpd

cc: Mr. Brad Borders, City of Sartell  
Mr. Dan McGrade, SPX Corporation

**TABLES**

**TABLE 1  
CITY OF SARTELL/SPX CORPORATION  
CLOSED HAZARDOUS WASTE LAGOON #3  
SARTELL, MINNESOTA**

**Ground-Water Elevation Data**

<b>DATE</b>	<b>P-5R</b>	<b>P-5R</b>	<b>P-9R</b>	<b>P-9R</b>	<b>P-12R</b>	<b>P-12R</b>	<b>P-13</b>	<b>P-13</b>
<b>Elevation</b>		<b>1099.04</b>		<b>1102.98</b>		<b>1101.33</b>		<b>1105.12</b>
4/4/1990								
6/26/1990				1020.74				1025.77
10/2/1990				1023.05				1026.18
12/18/1990				1023.25				1026.23
4/4/1991				1022.79				1026.14
8/1/1991				1024.43				1026.45
10/31/1991				1024.97				1026.48
4/23/1992				1024.36				1026.46
10/21/1992				1024.28				
4/20/1993				1022.94				1026.00
10/27/1993		1026.14		1025.2		1025.37		1026.98
4/20/1994		1024.73		1024.56		1024.75		1026.59
7/11/1994				1025.52				
10/17/1994		1025.47		1025.34		1025.44		1027.04
4/11/1995		1024.79		1025.01		1024.80		1026.75
10/9/1995		1025.63		1025.52		1025.53		1026.98
4/17/1996		1024.94		1024.83		1024.97		1026.59
10/15/1996		1024.40		1024.25		1024.37		1026.47
4/15/1997		1024.35		1024.22		1024.23		1026.45
10/14/1997		1026.04		1025.81		1025.91		1027.27
4/13/1998		1024.84		1024.69		1024.84		1026.44
10/6/1998		1024.62		1024.47		1024.63		1026.37
4/27/1999		1023.63		1023.48		1023.64		1026.10
10/27/1999		1023.93		1023.81		1023.93		1026.24
4/25/2000	76.04	1023.00	79.13	1023.85	78.33	1023.00	78.90	1026.22
10/23/2000	76.87	1022.17	80.08	1022.90	79.15	1022.18	79.04	1026.08
4/18/2001	76.92	1022.12	80.12	1022.86	79.23	1022.10	79.18	1025.94
7/24/2001	75.12	1023.92	78.27	1024.71	77.39	1024.06	78.91	1026.21
10/23/2001	75.29	1023.75	78.46	1024.52	77.54	1023.79	78.94	1026.18
4/29/2002	75.53	1023.51	78.68	1024.30	77.79	1023.54	79.08	1026.04
10/16/2002		1025.57		1026.33		1025.58		1026.75
4/15/2003	74.39	1024.65		1025.43		1024.69		1026.33
10/7/2003	74.93	1024.11	78.1	1024.88	77.16	1024.17	79.05	1026.07
4/27/2004	75.65	1023.39	78.85	1024.13	77.94	1023.39	78.89	1026.23
10/12/2004	75.06	1023.98	78.25	1024.73	77.33	1024.00	78.8	1026.32
4/27/2005	75.42	1023.62	78.6	1024.38	77.7	1023.63	78.91	1026.21
10/12/2005	74.80	1024.24	77.96	1025.02	77.07	1024.26	78.68	1026.44
4/11/2006	74.28	1024.76	77.45	1025.53	76.56	1024.77	78.54	1026.58
10/10/2006	74.77	1024.27	77.94	1025.04	77.01	1024.32	78.70	1026.42
4/10/2007	75.47	1023.57	78.64	1024.34	77.73	1023.60	78.88	1026.24

blank = not measured

**TABLE 2  
CITY OF SARTELL/SPX CORPORATION  
CLOSED HAZARDOUS WASTE LAAGOON #3  
SARTELL, MINNESOTA**

**2007 Water Quality Data Summary**

Analyte	Units	MCL (mg/L)	SMCL (mg/L)	IL (mg/L)	HRL (mg/L)	P-5R	Duplicate P-5R	P-9R	P-12R	P-13	Equipment Blank	P-5A*	P-6*	P-7*	P-10*	P-11A*	PW-O*
Total Organic Carbon	mg/L					10-Apr-07	10-Apr-07	10-Apr-07	10-Apr-07	10-Apr-07	10-Apr-07	10-Apr-07	10-Apr-07	10-Apr-07	10-Apr-07	10-Apr-07	10-Apr-07
Chloride	mg/L		250			2.75	2.6	1.93	1.57	0.745 (J)	<0.13	31.1	21.2	16.4	4.11 (J)	10.2	35.6
Specific Conductance	umhos/cm					50.5	50.5	48.8	56.7	28.4	0.806 (J)	1040	679	1610	909	2050	1120
Chemical Oxygen Demand	mg/L					1420	1420	1040	998	766	1.66	1040	679	1610	909	2050	1120
pH**	su		6.5-8.5			2.7 (J)	2.4 (J)	<1.16	<1.16	1.4 (J)	2.8 (J)						
Total Phenols	mg/L					6.67	6.67	6.84	6.68	6.95	5.5	6.80	7.35	7.02	6.74	6.65	7.03
Sodium	mg/L					<0.0018	<0.0018	<0.0018	<0.0018	<0.00163	<0.0018						
Total Dissolved Solids	mg/L		500			49.7	50.3	10.5	15.3	5.19	<0.0878	31.1	12.6	79	15.0	59.8	33.9
Sulfate	mg/L		250			984	996	616	588	452	<11	692	408	816	524	1580	736
Total Cyanide	mg/L	0.2				333	295	107	82.9	37.5	3.16 (J)	124	32.3	252	17.9	554	137
Fluoride	mg/L	4	2			<0.002	<0.002	<0.0002	<0.002	<0.002	<0.002						
Nitrate as Nitrogen	mg/L	10				0.387 (J)	0.346 (J)	1.38	0.756 (J)	0.176 (J)	<0.065						
Dissolved Arsenic	mg/L	0.01				4.42	4.5	4.93	5.51	4.98	0.0608 (J)						
Dissolved Barium	mg/L	2				<0.00042	<0.00042	<0.00042	<0.00042	<0.00042	<0.00042	<0.00042	<0.00042	<0.00042	<0.00042	<0.00042	<0.00042
Dissolved Boron	mg/L	0.005				0.0716	0.0701	0.0714	0.0603	0.0421	0.000781(J)						
Dissolved Cadmium	mg/L	0.005				2.18	2.07	<0.068	0.169	<0.068	<0.068	0.399	<0.068	0.167	<0.068	5.39	0.767
Dissolved Calcium	mg/L	0.1				<0.00013	<0.00013	0.000186 (J)	<0.00013	<0.00013	<0.00013	<0.00013	<0.00013	<0.00013	<0.00013	<0.00013	<0.00013
Dissolved Chromium	mg/L	0.03				183	180	143	139	109	0.0273 (J)	129	92.6	116	127	261	146
Dissolved Iron	mg/L	0.015	0.3			<0.0152	<0.0152	<0.0152	<0.0152	<0.0152	<0.0152	<0.0152	<0.0152	<0.0152	<0.0152	<0.0152	<0.0152
Dissolved Lead	mg/L	0.005				<0.00059	<0.00059	<0.00059	<0.00059	<0.00059	<0.00059	<0.00059	<0.00059	<0.00059	<0.00059	<0.00059	<0.00059
Dissolved Manganese	mg/L	0.05				57.1	54.7	40.7	37.9	28.4	<0.00985	36.9	29.1	39.4	32.9	107	43.4
Dissolved Selenium	mg/L	0.05				0.00904(J)	0.00862(J)	0.0219	0.00462(J)	0.00066	<0.00066	1.43	0.216	0.00332	<0.00066	0.0248	0.00813(J)
Dissolved Zinc	mg/L	5				<0.00527	<0.00527	<0.00527	<0.00527	<0.00527	<0.00527	<0.00527	<0.00527	<0.00527	<0.00527	<0.00527	0.0639

Blank = not analyzed

Detections are in **BOLD**

(J) - Analyte was detected at a concentration less than the laboratory reporting limit  
 \* - Except for Dissolved Boron, the data for the City of Sartell wells was not collected as part of the DeZurik Hazardous Waste Lagoon monitoring program, but has been included herein for context.

\*\* - the pH results for the monitoring wells are from the field sampling data after well stabilization. A field pH reading was not take for the equipment blank.

**TABLE 3**  
**Summary of Analytical and Statistical Analysis Results**  
**City of Sartell/SPX Corporation Closed Hazardous Waste Lagoon No. 3**  
**(units = µg/L, dissolved)**

WELL NUMBER	DATE	ARSENIC	BARIUM	CADMIUM	LEAD	SELENIUM
P-5A	12/27/1989	ND	50	ND	ND	ND
P-5A	6/28/1990	ND	ND	0.5	5	ND
P-5A	10/4/1990	ND	110	ND	ND	ND
P-5A	12/18/1990	ND	80	ND	ND	ND
P-5A	4/4/1991	ND	60	0.4	ND	ND
P-5A	8/1/1991	ND	67	ND	ND	ND
P-5A-1	10/31/1991	ND	63	0.32	ND	ND
P-5A-2	10/31/1991	ND	60	0.43	ND	ND
P-5A-3	10/31/1991	ND	62	0.38	ND	ND
P-5A-4	10/31/1991	ND	62	0.55	ND	ND
P-5A	4/23/1992	ND	56	ND	ND	ND
P-5A	9/30/1992	ND	ND	ND	ND	ND
P-5A	4/20/1993	ND	ND	ND	ND	ND
P-5R	10/27/1993	ND	78	1.4	ND	ND
P-5R	1/10/1994	--	ND	--	--	--
P-5R	4/20/1994	ND	ND	ND	ND	<6.02
P-5R	10/17/1994	ND	ND	ND	ND	ND
P-5R	4/11/1995	ND	ND	ND	ND	ND
P-5R	10/11/1995	ND	52	ND	ND	ND
P-5R	4/17/1996	ND	ND	ND	ND	ND
P-5R	10/16/1996	< 3.0	ND	0.36	< 3.0	< 3.0
P-5R	4/17/1997	< 3.0	50	< 0.30	< 3.0	< 3.0
P-5R	10/16/1997	<3.0	ND	<0.30	<3.0	<3.0
P-5R	4/13/1998	<2	16	<0.2	<1	<3
P-5R	10/6/1998	<2	33	<0.2	<1	<3
P-5R	4/27/1999	<2	131	<0.2	<1	<1
P-5R	10/27/1999	<2	210*	<0.2	<1	<1
P-5R	4/24/2000	<2	204	<0.2	<1	<1
P-5R	10/23/2000	<2	183	<0.2	<1	<1
P-5R	4/18/2001	<10	79	<1	<10	10
P-5R Resample	7/26/2001	<5	66	<0.5	<2	<5
P-5R Resample Dup	7/26/2001	<5	71	<0.5	<2	<5
P-5R	10/23/2001	<5	49	<0.5	<2	<5
P-5R	4/29/2002	7	50	<0.5	<2	5
P-5R	10/16/2002	<1	53	<2	<0.5	<1
P-5R	4/15/2003	<1	54	<0.2	<0.5	1.44
P-5R	10/7/2003	<5	54	<0.1	<0.5	<0.5
P-5R	4/27/2004	<0.5	60	<0.1	<0.5	0.89
P-5R	10/12/2004	0.77	66	<0.1	<0.5	2.62
P-5R	4/27/2005	0.66	69	<0.1	<0.5	1.2
P-5R	10/12/2005	0.61	74	<0.1	<0.5	<5
P-5R (DUP)	10/12/2005	0.67	74	<0.1	<0.5	<5
P-5R	4/11/2006	<0.42	83.7	<0.13	<0.82	<2.2
P-5R (DUP)	4/11/2006	<0.42	79.3	<0.13	<0.82	<2.2
P-5R	10/10/2006	<0.42	76.7	<0.13	<0.59	<2.2
P-5R (DUP)	10/10/2006	<0.42	77.5	<0.13	<0.59	<2.2
P-5R	4/10/2007	<0.42	71.6	<0.13	<0.59	<2.2
P-5R (DUP)	4/10/2007	<0.42	70.1	<0.13	<0.59	<2.2
P-9R	4/4/1991	ND	ND	ND	ND	ND
P-9R	8/1/1991	ND	ND	ND	ND	ND
P-9R-1	10/31/1991	ND	ND	ND	ND	ND



**TABLE 3**  
**Summary of Analytical and Statistical Analysis Results**  
**City of Sartell/SPX Corporation Closed Hazardous Waste Lagoon No. 3**  
**(units = µg/L, dissolved)**

WELL NUMBER	DATE	ARSENIC	BARIUM	CADMIUM	LEAD	SELENIUM
P-94-2	10/31/1991	ND	ND	ND	ND	ND
P-9R-3	10/31/1991	ND	ND	0.3	ND	ND
P-9R-4	10/31/1991	ND	ND	ND	ND	ND
P-9R	4/23/1992	ND	ND	0.19	ND	ND
P-9R	9/30/1992	ND	ND	ND	ND	ND
P-9R	4/20/1993	ND	ND	ND	ND	ND
P-9R	10/27/1993	ND	ND	0.7	ND	ND
P-9R	4/20/1994	ND	ND	ND	ND	<6.02
P-9R	10/17/1994	ND	ND	ND	ND	ND
P-9R	4/11/1995	ND	ND	ND	ND	ND
P-9R	10/10/1995	ND	ND	ND	ND	ND
P-9R	4/17/1996	ND	ND	ND	ND	ND
P-9R	10/16/1996	< 3.0	ND	< 0.30	< 3.0	< 3.0
P-9R	4/16/1997	< 3.0	53	< 0.30	< 3.0	< 3.0
P-9R	10/15/1997	<3.0	61	1.4	<3.0	<3.0
P-9R	4/10/1998	<2	17	0.7	2	<3
P-9R	10/6/1998	<2	46	<0.2	<1	<3
P-9R	4/27/1999	<2	191	<0.2	1.4	<1
P-9R	10/27/1999	<2	126*	0.35	<1	<1
P-9R	4/25/2000	<2	99	0.26	<1	<1
P-9R	10/23/2000	<2	115	<0.2	<1	<1
P-9R	4/18/2001	<10	80	<1	<10	10
P-9R Resample	7/25/2001	<5	79	<0.5	<2	<5
P-9R	10/23/2001	<5	70	<0.5	<2	<5
P-9R	4/29/2002	10	70	<0.5	<2	<5
P-9R	10/16/2002	<1	62	<0.2	<0.5	1.54
P-9R	4/15/2003	<1	69	<0.2	<0.5	1.81
P-9R	10/7/2003	<0.5	72	<0.1	<0.5	<0.5
P-9R	4/27/2004	<0.5	64	<0.1	<0.5	<0.5
P-9R	10/12/2004	<0.5	73	0.1	<0.5	2.08
P-9R	4/27/2005	0.51	76	0.41	<0.5	0.88
P-9R	10/12/2005	<0.5	79	0.25	<0.5	<5
P-9R	4/11/2006	<0.42	102	0.273	<0.82	<2.2
P-9R	10/10/2006	<0.42	78.2	0.301	<0.59	<2.2
P-9R	4/10/2007	<0.42	71.4	0.186	<0.59	<2.2
P-12	4/4/1991	ND	ND	ND	ND	ND
P-12	8/1/1991	ND	ND	0.32	ND	ND
P-12-1	10/31/1991	ND	ND	0.31	ND	ND
P-12-2	10/31/1991	ND	ND	0.33	ND	ND
P-12-3	10/31/1991	ND	ND	ND	ND	ND
P-12-4	10/31/1991	ND	ND	ND	ND	ND
P-12	4/23/1992	ND	ND	ND	ND	ND
P-12	9/30/1992	ND	ND	ND	ND	ND
P-12	4/20/1993	ND	ND	ND	ND	ND
P-12R	10/27/1993	ND	ND	13	ND	ND
P-12R	1/10/1994	--	--	ND	--	--
P-12R	4/20/1994	ND	ND	ND	ND	<6.02
P-12R	10/17/1994	ND	ND	ND	ND	ND
P-12R	4/11/1995	ND	ND	ND	ND	ND
P-12R	10/10/1995	ND	ND	ND	5.2	ND
P-12R	4/17/1996	ND	ND	ND	ND	ND
P-12R	10/16/1996	< 3.0	ND	0.63	< 3.0	< 3.0

**TABLE 3**  
**Summary of Analytical and Statistical Analysis Results**  
**City of Sartell/SPX Corporation Closed Hazardous Waste Lagoon No. 3**  
**(units = µg/L, dissolved)**

WELL NUMBER	DATE	ARSENIC	BARIUM	CADMIUM	LEAD	SELENIUM
P-12R	4/17/1997	<3.0	ND	<0.30	<3.0	<3.0
P-12R	10/16/1997	<3.0	ND	<0.30	<3.0	<3.0
P-12R	4/13/1998	<2	9	<0.2	<1	<3
P-12R	10/6/1998	<2	30	<0.2	<1	<3
P-12R	4/27/1999	<2	54	<0.2	<1	<1
P-12R	10/27/1999	<2	159*	<0.2	<1	<1
P-12R	4/25/2000	<2	135	<0.2	1.1	<1
P-12R	10/24/2000	<2	185	<0.2	<1	<1
P-12R	4/18/2001	<10	60	<1	<10	<10
P-12R Resample	7/26/2001	<5	64	<0.5	<2	<5
P-12R	10/23/2001	<5	37	<0.5	<2	<5
P-12R	4/29/2002	9	50	<0.5	<2	10
P-12R	10/16/2002	<1	60	<0.2	<0.5	6.28
P-12R	4/15/2003	<1	49	<0.2	<0.5	3.88
P-12R	10/7/2003	<0.5	57	<0.1	<0.5	2.35
P-12R	4/27/2004	<0.5	57	<0.1	<0.5	0.72
P-12R	10/12/2004	<0.5	63	<0.1	<0.5	3.2
P-12R	4/27/2005	0.59	60	<0.1	<0.5	1.3
P-12R	10/12/2005	<0.5	67	<0.1	<0.5	<5
P-12R	4/11/2006	<0.42	71.6	<0.13	<0.82	<2.2
P-12R	10/10/2006	<0.42	64.7	<0.13	<0.59	<2.2
P-12R	4/10/2007	<0.42	60.3	<0.13	<0.59	<2.2
P-13	6/28/1990	<3.0	<50	<0.3	<3.0	<3.0
P-13A	6/28/1990	<3.0	<50	<0.3	<3.0	<3.0
P-13B	6/28/1990	<3.0	<50	<0.3	<3.0	<3.0
P-13C	6/28/1990	<3.0	<50	<0.3	<3.0	<3.0
P-13	10/4/1990	<3.0	<50	<0.3	<3.0	<3.0
P-13A	10/4/1990	<3.0	60	<0.3	<3.0	<3.0
P-13B	10/4/1990	<3.0	<50	<0.3	<3.0	<3.0
P-13C	10/4/1990	<3.0	<50	<0.3	<3.0	<3.0
P-13A	12/18/1990	<3.0	<50	<0.3	<3.0	<3.0
P-13B	12/18/1990	<3.0	<50	<0.3	<3.0	<3.0
P-13C	12/18/1990	<3.0	<50	<0.3	<3.0	<3.0
P-13D	12/18/1990	<3.0	<50	<0.3	<3.0	<3.0
P-13	4/4/1991	<3.0	<50	<0.3	<3.0	<3.0
P-13	8/1/1991	<3.0	<50	<0.3	<3.0	<3.0
P-13-1	10/31/1991	<3.0	<50	<0.3	<3.0	<3.0
P-13-2	10/31/1991	<3.0	<50	0.88	<3.0	<3.0
P-13-3	10/31/1991	<3.0	<50	<0.3	<3.0	<3.0
P-13-4	10/31/1991	<3.0	<50	<0.3	<3.0	<3.0
P-13-1	4/23/1992	<3.0	<50	<0.3	<3.0	<3.0
P-13-2	4/23/1992	<3.0	<50	<0.3	<3.0	<3.0
P-13-3	4/23/1992	<3.0	<50	<0.3	<3.0	<3.0
P-13-4	4/23/1992	<3.0	<50	<0.3	<3.0	<3.0
P-13	9/30/1992	<3.0	<50	<0.3	<3.0	<3.0
P-13-1	10/8-9/92	<3.0	<50	<0.3	<3.0	<3.0
P-13-2	10/8-9/92	<3.0	<50	<0.3	<3.0	<3.0
P-13-3	10/8-9/92	<3.0	<50	<0.3	<3.0	<3.0
P-13A	4/20/1993	<3.0	<50	<0.3	<3.0	<3.0
P-13B	4/20/1993	<3.0	<50	<0.3	<3.0	<3.0
P-13C	4/20/1993	<3.0	<50	<0.3	<3.0	<3.0
P-13D	4/20/1993	<3.0	<50	<0.3	<3.0	<3.0

**TABLE 3**  
**Summary of Analytical and Statistical Analysis Results**  
**City of Sartell/SPX Corporation Closed Hazardous Waste Lagoon No. 3**  
**(units = µg/L, dissolved)**

WELL NUMBER	DATE	ARSENIC	BARIUM	CADMIUM	LEAD	SELENIUM
P-13A	10/29/1993	< 3.0	< 50	3.3*	< 3.0	< 3.0
P-13B	10/29/1993	< 3.0	< 50	5.5*	< 3.0	< 3.0
P-13C	10/29/1993	< 3.0	< 50	3.9*	< 3.0	< 3.0
P-13D	10/29/1993	< 3.0	< 50	17*	< 3.0	< 3.0
P-13	4/20/1994	< 3.0	< 50	< 0.3	< 3.0	< 6.02
P-13A	4/20/1994	< 3.0	< 50	< 0.3	< 3.0	< 6.02
P-13B	4/20/1994	< 3.0	< 50	0.31	< 3.0	< 6.02
P-13C	4/20/1994	< 3.0	< 50	< 0.3	< 3.0	< 6.02
P-13	10/17/1994	< 3.0	54	< 0.3	< 3.0	< 3.0
P-13A	10/18/1994	< 3.0	< 50	< 0.3	< 3.0	< 3.0
P-13B	10/18/1994	< 3.0	< 50	< 0.3	< 3.0	< 3.0
P-13C	10/18/1994	< 3.0	< 50	< 0.3	< 3.0	< 3.0
P-13	4/11/1995	< 3.0	< 50	< 0.3	< 3.0	< 3.0
P-13A	4/11/1995	< 3.0	< 50	< 0.3	< 3.0	< 3.0
P-13B	4/11/1995	< 3.0	< 50	< 0.3	< 3.0	< 3.0
P-13C	4/12/1995	< 3.0	< 50	< 0.3	< 3.0	< 3.0
P-13	10/11/1995	< 3.0	< 50	< 0.3	< 3.0	< 3.0
P-13A	10/11/1995	< 3.0	< 50	< 0.3	< 3.0	< 3.0
P-13B	10/11/1995	< 3.0	< 50	< 0.3	< 3.0	< 3.0
P-13C	10/11/1995	< 3.0	< 50	< 0.3	< 3.0	< 3.0
P-13	4/17/1996	< 3.0	< 50	< 0.3	< 3.0	< 3.0
P-13A	4/17/1996	< 3.0	< 50	< 0.3	< 3.0	< 3.0
P-13B	4/17/1996	< 3.0	< 50	< 0.3	< 3.0	< 3.0
P-13C	4/17/1996	< 3.0	< 50	< 0.3	< 3.0	< 3.0
P-13	10/16/1996	< 3.0	< 50	< 0.30	< 3.0	< 3.0
P-13A	10/16/1996	< 3.0	< 50	< 0.30	< 3.0	< 3.0
P-13B	10/17/1996	< 3.0	< 50	< 0.30	< 3.0	< 3.0
P-13C	10/17/1996	< 3.0	< 50	< 0.30	< 3.0	< 3.0
P-13	4/16/1997	< 3.0	< 50	< 0.30	< 3.0	< 3.0
P-13A	4/17/1997	< 3.0	< 50	< 0.30	< 3.0	< 3.0
P-13B	4/17/1997	< 3.0	< 50	< 0.30	< 3.0	< 3.0
P-13C	4/17/1997	< 3.0	< 50	< 0.30	< 3.0	< 3.0
P-13	10/15/1997	< 3.0	< 50	< 0.30	< 3.0	< 3.0
P-13A	10/16/1997	< 3.0	< 50	< 0.30	< 3.0	< 3.0
P-13B	10/16/1997	< 3.0	< 50	< 0.30	< 3.0	< 3.0
P-13C	10/16/1997	< 3.0	< 50	< 0.30	< 3.0	< 3.0
P-13A	4/9/1998	< 2	< 6	< 0.2	< 1	< 3
P-13B	4/10/1998	< 2	< 6	< 0.2	< 1	< 3
P-13C	4/10/1998	2.2	< 6	< 0.2	< 1	< 3
P-13D	4/13/1998	< 2	< 6	< 0.2	< 1	< 3
P-13A	10/5/1998	< 2	27	< 0.2	< 1	< 3
P-13B	10/5/1998	< 2	101	< 0.2	< 1	< 3
P-13C	10/6/1998	< 2	180	< 0.2	< 1	< 3
P-13D	10/6/1998	< 2	135	< 0.2	< 1	< 3
P-13A	4/26/1999	< 2	66	< 0.2	< 1	< 1
P-13B	4/26/1999	< 2	178	< 0.2	< 1	< 1
P-13C	4/27/1999	< 2	114	< 0.2	< 1	< 1
P-13D	4/27/1999	< 2	151	< 0.2	< 1	< 1
P-13A	10/26/1999	< 2	95*	< 0.2	< 1	< 1
P-13B	10/27/1999	< 2	300*	< 0.2	< 1	< 1
P-13C	10/27/1999	< 2	196*	< 0.2	< 1	< 1
P-13D	10/27/1999	< 2	229*	< 0.2	< 1	< 1
P-13A	4/24/2000	< 2	156	< 0.2	< 1	< 1
P-13A	10/23/2000	< 2	115	< 0.2	< 1	< 1

**TABLE 3**  
**Summary of Analytical and Statistical Analysis Results**  
**City of Sartell/SPX Corporation Closed Hazardous Waste Lagoon No. 3**  
**(units = µg/L, dissolved)**

WELL NUMBER	DATE	ARSENIC	BARIUM	CADMIUM	LEAD	SELENIUM
P-13	4/18/2001	<10	43	<1	<10	<10
P-13Dup	4/18/2001	<10	43	<1	<10	<10
P-13 Resample	7/26/2001	<5	42	<0.5	<2	<5
P-13	10/23/2001	<5	38	<0.5	<2	<5
P-13Dup	10/23/2001	<5	37	<0.5	<2	<5
P-13	4/29/2002	10	40	<0.5	<2	<5
P-13Dup	4/29/2002	10	40	<0.5	<2	<5
P-13	10/16/2002	<1	37	<0.2	<0.5	<1
P-13 Dup	10/16/2002	<1	36	<0.2	<0.5	<1
P-13	4/15/2003	<1	38	<0.2	<0.5	1.22
P-13 DUP	4/15/2003	<1	37	<0.2	<0.5	1.23
P-13	10/7/2003	<0.5	42	<0.1	<0.5	<0.5
P-13 DUP	10/7/2003	<0.5	40	<0.1	<0.5	<0.5
P-13	4/27/2004	<0.5	36	<0.1	<0.5	<0.5
P-13 DUP	4/27/2004	<0.5	35	<0.1	<0.5	<0.5
P-13	10/12/2004	0.52	37	<0.1	<0.5	1.22
P-13 Dup	10/12/2004	0.5	37	<0.1	<0.5	1.27
P-13	4/27/2005	0.71	40	<0.1	<0.5	0.63
P-13 Dup	4/27/2005	0.65	42	<0.1	<0.5	0.72
P-13	10/12/2005	<0.5	44	<0.1	<0.5	<5
P-13	4/11/2006	<0.42	76.4	0.415	<0.82	<2.2
P-13	10/10/2006	<0.42	47	<0.13	<0.59	<2.2
P-13	4/10/2007	<0.42	42.1	<0.13	<0.59	<2.2

Regulatory Limits:

MCL:	50	2000	5	15	50
SMCL:	N/A	N/A	N/A	N/A	N/A
HRL:	N/A	2000	4	N/A	30
IL:	12.5	375	1.25	5	11

Background Detection limit\*\*

Background Mean#

Background Standard deviation#

K<sub>0.95</sub>

Tolerance level#\*\*

3	50	0.3	3	3
3	42	0.307	3	3
1.732	9.850	0.554	1.732	1.732
2.523	2.523	2.523	2.523	2.523
7.4	67	1.7	7.4	7.4

ND Not detected.

-- Not measured.

# The Poisson Distribution method was used for calculating the mean and standard deviation for background constituents with two or less reported results above the detection limit. For background constituents with three or more results above the detection limit, the arithmetic mean and standard deviation is calculated.

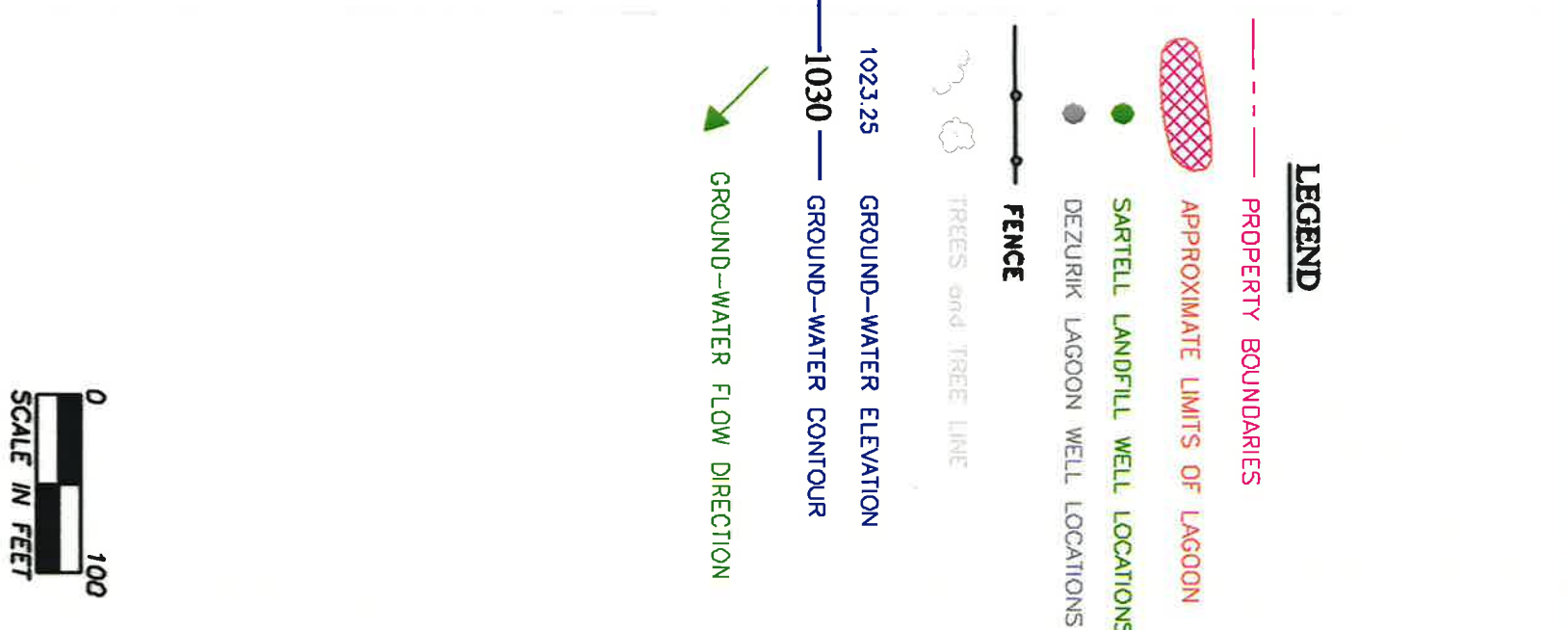
\* Data collected is considered suspect.

\*\* In 1998, new analytical equipment allowed the laboratory to obtain lower detection limits than that obtained in previous sampling years. These detection limits are lower than those required in the August 1994 Part B Permit Application for evaluating compliance of wells. Where the reported detection limit is lower than the required detection limit, the required detection limit is used for calculating the tolerance level to maintain continuity in evaluating compliance.

Note: Sample results in bold type exceed MCL and/or HRL

Note: The sample size for background is kept at 16 based on page 15 of August 1994 Part B Permit Application. Use the last 4 quarters of background data.

**FIGURES**



DATE	REVISED
7/7/05	M. Karstens

**LEGGETTE, BRASHEARS & GRAHAM, INC.**  
 Professional Ground-Water  
 and Environmental Services  
 140 East Hinks Lane, Suite 126  
 Sioux Falls, South Dakota 57104  
 (605) 334-8000

**CITY OF SARTELL & SPX CORPORATION**  
 CLOSED LANDFILL AND HAZARDOUS WASTE LAGOON SITES  
 SARTELL, MINNESOTA

**GROUND-WATER CONTOUR MAP - APRIL 10, 2007 DATA**

FILE: Sor-Dez Site Map.dwg      DATE: July 2001      FIGURE: 1



- LEGEND**
- PROPERTY BOUNDARIES
  - APPROXIMATE LIMITS OF LAGOON
  - SARTELL LANDFILL WELL LOCATIONS
  - DEZURIK LAGOON WELL LOCATIONS
  - FENCE
  - ☁ TREES AND TREE LINE
  - 0.767 Dissolved Boron (mg/L)



<b>DATE</b>	<b>REVISED</b>
7/7/05	M.Kerstens
 <b>LEGGETTE, BRASHEARS &amp; GRAHAM, INC.</b> Professional Ground-Water and Environmental Services 140 East Hinks Lane, Suite 126 Sioux Falls, South Dakota 57104 (605) 334-6000	

<b>CITY OF SARTELL &amp; SPX CORPORATION</b> CLOSED LANDFILL AND HAZARDOUS WASTE LAGOON SITES SARTELL, MINNESOTA	
Dissolved Boron Concentrations - April 2007 Sampling Event	
<b>FILE:</b>	Sar-Dez Site Map.dwg
<b>DATE:</b>	July 2001
<b>FIGURE:</b>	2

**ATTACHMENT**

**Data Verification Report**



**CITY OF SARTELL & SPX CORPORATION  
CLOSED HAZARDOUS WASTE LAGOON #3 - MND985668342  
SARTELL, MINNESOTA**

**DATA VERIFICATION REPORT  
APRIL 2007 ANALYTICAL DATA**

Prepared for

The City of Sartell and SPX Corporation

July 27, 2007

**LEGGETTE, BRASHEARS & GRAHAM, INC.  
Professional Ground-Water and Environmental Services  
140 East Hinks Lane, Suite 126  
Sioux Falls, South Dakota 57104  
(605) 334-6000**

## TABLE OF CONTENTS

	<b>Page</b>
1.0 INTRODUCTION .....	1
2.0 ANALYTICAL REPORT REVIEW .....	1
2.1 Sample Preservation and Holding Times .....	1
2.2 Calibration .....	2
2.3 Field Duplicate and Blanks .....	3
Field Duplicate and Equipment Blank .....	3
Laboratory Blank .....	4
2.4 MS/MSD, Lab Duplicates, and Lab Control Samples .....	4
2.5 Quantification Limits .....	6
2.6 Analytical Report Contents .....	6
3.0 CONCLUSIONS .....	7
4.0 STANDARD OF CARE .....	9

TABLES

APPENDICES

**LIST OF TABLES**  
**(at end of report)**

**Table**

- 1 Ground-Water Monitoring Parameters
- 2 Laboratory Quality Control Checks

**LIST OF APPENDICES**  
**(at end of report)**

**Appendix**

- I Laboratory Analytical Reports
- II Field Sampling Sheets - April 2007 Sampling Event

**CITY OF SARTELL & SPX CORPORATION  
CLOSED HAZARDOUS WASTE LAGOON #3  
SARTELL, MINNESOTA**

**DATA VERIFICATION REPORT  
APRIL 2007 DATA**

**1.0 INTRODUCTION**

Leggette, Brashears & Graham, Inc. (LBG) has completed the review of the April 2007 ground-water monitoring data at the City of Sartell/SPX Corporation Closed Hazardous Waste Lagoon #3. The purpose of this report is to review the laboratory analytical reports and verify that the data in the reports is accurate and acceptable. A detailed description of the ground-water sampling results and comparison to historical data is included in the semi-annual report; therefore, a discussion of these details is not included in this report. The review of the laboratory analytical reports was conducted utilizing the Laboratory Data Checklist developed by the Minnesota Pollution Control Agency (MPCA) in May 1998, the draft Quality Assurance Project Plan dated April 2007, and the items listed in comment #4 of Enclosure 1 of the MPCA letter dated June 5, 2007.

**2.0 ANALYTICAL REPORT REVIEW**

**2.1 Sample Preservation and Holding Times**

The laboratory analytical reports were reviewed to ensure that the ground-water samples were preserved properly and that they were analyzed within the EPA required holding times. The preservatives and required holding times for the ground-water samples are listed on Table 1 attached at the end of this report. Copies of the laboratory analytical reports can be found in Appendix I. Please note, for work order CQD0535, the analytical report includes data that is associated with the ground-water samples for the City of Sartell closed landfill site. Only the data that was collected for the closed lagoon site is discussed below.

Review of the laboratory analytical reports indicates that the ground-water samples were preserved properly (i.e. no data qualifiers) and that they were received in the laboratory at temperatures of 1°C and 2°C, which are below the compliance temperature of 4°C (+/- 2°C). The analytical data also indicates that with the exception of pH, the ground-water samples were analyzed within the required holding times. The holding time for pH was out of compliance because pH is to be measured immediately after the ground-water samples are collected. Because the samples had to be shipped overnight to the laboratory, the pH measurements could not be taken until they arrived and were logged-in at the laboratory. Field pH measurements, however, were taken from the sampling location for well stabilization and before the ground-water samples were collected. Because the field pH measurements were collected during well stabilization, they are considered more accurate and representative of the actual sample conditions. The samples collected for laboratory analysis are only a single point measurement and possibly less representative of the sample conditions. The field pH measurements are on the field sampling sheets which can be found in Appendix II.

## **2.2 Calibration**

Initial and Continuing Calibration Check Standards (CCCS) are performed in the laboratory and are used for any analytical method that requires the instrument to have a calibration curve. Methods that utilize the calibration curve require the re-analysis of one of the standard concentrations for every 10 samples to determine the instrument is still in calibration. The calibration information is not included in the laboratory analytical reports; however, if any anomalies occur with the instrument calibration, a discussion will be included in the narrative of the laboratory analytical reports. Copies of the laboratory analytical reports can be found in Appendix I.

Review of the narratives of the laboratory analytical reports indicates no problems or discussion of the initial or continuing calibration of the laboratory instruments. It can be assumed that the data falls within the calibration checks.

### **2.3 Field Duplicates and Blanks**

#### **Field Duplicate and Equipment Blank**

A field duplicate and equipment blank were collected during the April 2007 sampling event. The field duplicate was collected from a known monitoring well (P-5R) after the original sample was collected and was analyzed for the same analytes as the original sample. The field duplicate is utilized as a quality control check on sampling methods and procedures. The equipment blank is used to determine if the field equipment used in sample collection was being properly decontaminated. The equipment blank was collected by running laboratory provided de-ionized water through the field equipment after decontamination and collecting and analyzing the water for the same analytes as the ground-water samples. The analytes for the ground-water samples, the field duplicate, and the equipment blank are listed on Table 1. The results from the field duplicate and equipment blank can be found in Appendix I. Please note, for work order CQD0535, the analytical report includes data that is associated with the ground-water samples for the City of Sartell closed landfill site. Only the data that was collected for the closed lagoon site is discussed below.

Review of the results from the field duplicate indicates that the ground-water data is consistent with the results from the original sample and are within 25% of the results from P-5R. Review of the results from the equipment blank indicates that concentrations of chemical oxygen demand (COD), chloride, sulfate, nitrate as N, dissolved barium, and dissolved calcium were detected in the equipment blank; however, the concentrations were flagged with the data qualifier "J". The "J" flag indicates that the analytes were detected at a concentration less than the laboratory reporting limit but greater than the method detection limit. Data that falls within this

range are considered estimated. Specific conductance was also detected in the equipment blank at a concentration of 1.66 mg/L which is just above the laboratory reporting limit of 1 mg/L.

#### Laboratory Blank

A laboratory blank was also analyzed during the April 2007 sampling event. The laboratory blank is a sample that has not been exposed to the ground-water samples and is used to monitor contamination during sample collection, transport, storage, and analysis. The laboratory blank is subjected to the same analytical and measurement processes as the ground-water samples to establish a background value. The results for the laboratory blank can be found in the Quality Assurance/Quality Control (QA/QC) section of the laboratory analytical reports located in Appendix I.

Review of the laboratory blank data indicates that concentrations of nitrate as N, total organic carbon (TOC), and nitrate+nitrite as N were detected in the laboratory blank; however, the concentrations were flagged with the data qualifier "J". As stated above, the "J" flag indicates that the analytes were detected at a concentration less than the laboratory reporting limit but greater than the method detection limit. Data that falls within this range are considered estimated.

#### 2.4 MS/MSD, Lab Duplicates, and Lab Control Samples

Matrix spikes (MS), matrix spike duplicates (MSD), laboratory duplicates, and laboratory control samples are used by the laboratory as quality control checks for the accuracy and precision of the analytical data. MS and MSD samples are prepared by adding a known amount of a target analyte to a specified amount of matrix sample and analyzed to measure the accuracy of the recovery of the target analyte. Laboratory duplicates are a sample split into two separate aliquots and analyzed as independent samples for a check of precision. Laboratory control samples (LCS) are samples that are free of the analytes of concern and are spiked with a known

amount from a source independent of the calibration standards or a material containing known amounts of an analyte. The LCS is used to establish intra-laboratory precision and to assess the performance of the measurement system. A list of the quality control checks and recovery limits for this site can be found on Table 2. The results for the MS, MSD, laboratory duplicates, and LCS are located in the QA/QC section of the laboratory analytical reports located in Appendix I. Please note, for work order CQD0535, the analytical report includes data that is associated with the ground-water samples for the City of Sartell closed landfill site. Only the data that was collected for the closed lagoon site is discussed below.

Review of the MS/MSD results indicates that for work orders CQD0535 and CQD0537, chloride, cyanide, selenium, lead, calcium, and magnesium were flagged with data qualifiers. Chloride and lead were flagged with the data qualifier "M1a" which indicates that the MS or MSD recoveries were below the control recovery limits for those compounds. Cyanide was flagged with the data qualifier "M1" which indicates that the MSD recovery was below the control recovery limit for cyanide. Both calcium and magnesium were flagged with the data qualifier "MHA" which indicates that there were high levels of those analytes in the samples and the MS/MSD calculations do not provide useful spike recovery information. Selenium was flagged with the data qualifier "S" which indicates the MS and MSD were analyzed by using a standard addition. The method of standard addition is a technique where a standard is added at one or more levels to portions of a sample which compensates for enhancement or depression of an analyte signal by the sample matrix. With the standard method, the MS recovery was below the control recovery limit; however, the other MS spike sample recovery was within the control limit.

Review of the laboratory duplicate data indicates that only one of the samples for total dissolved solids (TDS) was flagged with the data qualifier "R" which indicates that relative percent difference (RPD) exceeded the control limit. This is due to the high concentration of the analyte present in the sample. The other samples for TDS did not exceed the control limit. The



pH samples were also flagged because the holding times were exceeded. A discussion of the holding times for pH can be found in section 2.1 of this Data Verification Report.

Review of the LCS data indicates that the spike recoveries for all the analytes are within the control limits, and with the exception of the holding time data qualifier for pH, no other data qualifiers were noted. A discussion of the holding times for pH can be found in section 2.1 of this Data Verification Report.

### **2.5 Quantification Limits**

Quantification limits are used by the laboratory to give them a level of comfort when reporting the concentration of an analyte. The quantification limits or reporting limits are not the same as the method detection limits and should be a factor of 2 to 10 times the method detection limits.

Review of the quantification limits indicates that they are within 2 to 10 times the method detection limits and are reasonable for this site.

### **2.6 Analytical Report Contents**

The laboratory analytical reports were reviewed for the contents listed in the Laboratory Data Checklist. As listed in the Laboratory Data Checklist, the following items must be included in the analytical reports: date received, date extracted/digested, date analyzed, analytical method number, reporting limits, alphabetized compound list, CAS numbers, concentration found, narrative, signature of lab officer on report, surrogate recoveries, MS/MSD/Duplicate recoveries/RPDs, flags for data anomalies, lab project number, lab and client sample numbers, client project name, the Chain of Custody, and explanation of any method modifications (if applicable).

Review of the content of the laboratory analytical reports indicates that with the exception of the date extracted/digested and the CAS numbers, all the items in the list above are

included in the reports. In a phone conversation with the laboratory on July 17, 2007, it was determined that the data system in the laboratory has been updated and the extraction/digestion date and the CAS numbers can now be included in the reports. All future analytical reports for this site will include both the extraction/digestion date and the CAS number for each compound.

### **3.0 CONCLUSIONS**

Review of the laboratory analytical reports indicates that the ground-water samples were preserved properly (i.e. no preservation-related data qualifiers), they were received in the laboratory at temperatures of 1 °C and 2 °C, which are below the compliance temperature of 4 °C (+/- 2 °C), and with the exception of pH, the ground-water samples were analyzed within the required holding times. The holding time for pH was out of compliance because pH should be measured immediately after the ground-water samples are collected. Field pH measurements were collected during well stabilization and before the samples were collected and are within the required holding time. The field pH measurements are more representative of the sample conditions and should be used for analyzing the ground-water data instead of the laboratory pH measurements; therefore the laboratory pH measurements are not valid and the data is rejected.

Review of the narratives of the laboratory analytical reports indicates no problems or discussion of the initial or continuing calibration of the laboratory instruments; therefore, the data is considered valid and is accepted.

Review of the results from the field duplicate from P-5R indicates that the ground-water data is consistent with the results from the original sample from P-5R and are within 25% of the original results. The data from the duplicate is considered valid and is accepted.

Review of the results from the equipment blank indicates that concentrations of chemical oxygen demand (COD), chloride, sulfate, nitrate as N, dissolved barium, and dissolved calcium were detected in the equipment blank; however, the concentrations were flagged with the data qualifier "J" which indicates that the analytes were detected at a concentration less than the

laboratory reporting limit but greater than the method detection limit. Specific conductance was also detected in the equipment blank at a concentration just above the laboratory reporting limit of 1 mg/L. Because the majority of the detections in the equipment blank are less than the laboratory reporting limit, the analytical data is considered valid and is accepted.

Review of the laboratory blank data indicates that concentrations of nitrate as N, total organic carbon (TOC), and nitrate+nitrite as N were detected in the laboratory blank; however, the concentrations were flagged with the data qualifier "J" which indicates that the analytes were detected at a concentration less than the laboratory reporting limit but greater than the method detection limit. The data from the laboratory blank is considered valid and is accepted.

Review of the MS/MSD, laboratory duplicate, and LCS results indicate that either the MS or MSD samples for chloride, cyanide, selenium, lead, calcium, and magnesium were flagged with data qualifiers and the laboratory duplicate for TDS was also flagged with a data qualifier. With the exception of the holding time for pH, there were no data qualifier for the LCS. For chloride, lead, and cyanide, the MS or MSD were out of the range for the control recovery limits. With high concentrations of calcium and magnesium in the samples, the MS/MSD calculations do not provide useful spike recovery information for calcium or magnesium. The selenium MS was analyzed by using a standard addition and the spike recovery was below the control limit; however, the other MS spike sample recovery was within the control limit. Based on laboratory protocol outlined in Section 11 of their Quality Assurance Manual dated May 2005, if the MS/MSD recoveries are out of range, further evaluation is performed by the laboratory. The MS/MSD data is compared to the LCS data. If the LCS data is out of range then re-extraction and re-analysis of the samples are performed. Because the LCS data for this site was within the control range, the MS/MSD data is flagged accordingly and the problems with the recoveries lie within the sample matrix itself; therefore, the MS/MSD data is valid and accepted. Consequently, the ground-water analytical data from the monitoring well samples are not impacted by the data qualifiers and are accepted.

Review of the content of the laboratory analytical reports indicates that all the items listed in the Laboratory Data Checklist are included in the reports except for the extraction/digestion date and the CAS numbers for the compounds. Because the data system for the laboratory can now include the extraction/digestion date and the CAS numbers on the analytical reports, all future analytical reports will have the full list of items in the Laboratory Data Checklist.

#### 4.0 STANDARD OF CARE

Results contained in the report represent our professional opinions. These results were arrived at in accordance with currently accepted hydrogeologic and engineering practices at the time and location. Other than this, no warranty is implied or intended.

LEGGETTE, BRASHEARS & GRAHAM, INC.



Melissa Karstens  
Environmental Scientist II

Reviewed By:



Tim Kenyon  
Vice President

TK:kak

h:\data\wp\landfill\DeZurik and Sartell\DeZurik\April 2007 Data Verification Report.wpd

**TABLES**

**TABLE 1**  
**CITY OF SARTELL/SPX CORPORATION**  
**CLOSED HAZARDOUS WASTE LAGOON #3**  
**SARTELL, MINNEOSTA**

**Ground-Water Monitoring Parameters**

Parameters & Bottles Used	Preservatives	Methods	Method Detection Limits	Laboratory Reporting Limits	Prep/Analysis Holding Times
<b>Dissolved Metals - 1 - 500 mL Plastic</b>					
Dissolved Arsenic	HNO <sub>3</sub> (pH <2) & cool <4°C	SW 7060A	0.00042 mg/L	0.001 mg/L	6 Months
Dissolved Barium	HNO <sub>3</sub> (pH <2) & cool <4°C	SW 6010B	0.00058 mg/L	0.01 mg/L	6 Months
Dissolved Boron	HNO <sub>3</sub> (pH <2) & cool <4°C	SW 6010B	0.068 mg/L	0.1 mg/L	6 Months
Dissolved Cadmium	HNO <sub>3</sub> (pH <2) & cool <4°C	SW 7131A	0.00013 mg/L	0.0005 mg/L	6 Months
Dissolved Calcium	HNO <sub>3</sub> (pH <2) & cool <4°C	SW 6010B	0.0149 mg/L	1.0 mg/L	6 Months
Dissolved Chromium	HNO <sub>3</sub> (pH <2) & cool <4°C	SW 6010B	0.0152 mg/L	0.02 mg/L	6 Months
Dissolved Iron	HNO <sub>3</sub> (pH <2) & cool <4°C	SW 6010B	0.0123 mg/L	0.1 mg/L	6 Months
Dissolved Lead	HNO <sub>3</sub> (pH <2) & cool <4°C	SW 7421	0.00059 mg/L	0.004 mg/L	6 Months
Dissolved Magnesium	HNO <sub>3</sub> (pH <2) & cool <4°C	SW 6010B	0.00985 mg/L	1.0 mg/L	6 Months
Dissolved Manganese	HNO <sub>3</sub> (pH <2) & cool <4°C	SW 6010B	0.00066 mg/L	0.01 mg/L	6 Months
Dissolved Selenium	HNO <sub>3</sub> (pH <2) & cool <4°C	SW 7740	0.0022 mg/L	0.005 mg/L	6 Months
Dissolved Sodium	HNO <sub>3</sub> (pH <2) & cool <4°C	SW 6010B	0.0878 mg/L	1.0 mg/L	6 Months
Dissolved Zinc	HNO <sub>3</sub> (pH <2) & cool <4°C	SW 6010B	0.00527 mg/L	0.02 mg/L	6 Months
<b>Inorganic Parameters - 2 - 1 Liter Plastic</b>					
Chloride	Cool, <4 °C	SM 4500-ClE	0.138 mg/L	5.0 mg/L	28 Days
Fluoride	Cool, <4°C	SM 4500-F B&C	0.065 mg/L	1.0 mg/L	28 Days
Sulfate	Cool, <4°C	ASTM 516-90	1.8 mg/L	10.0 mg/L	28 Days
Total Dissolved Solids	Cool, <4°C	SM 2540 C	11.0 mg/L	20.0 mg/L	7 Days
pH	Cool, <4°C	EPA 150.1	0.1 pH Units	0.1 pH Units	Immediately
Specific Conductance	Cool, <4°C	SM 2510B	0.530 umhos/cm	1.0 umhos/cm	28 Days
Nitrate as Nitrogen	Cool, <4°C	EPA 353.3	0.022 mg/L	0.1 mg/L	48 Hours
<b>Inorganic Parameters - 1 - 250 mL Plastic</b>					
Total Organic Carbon (TOC)	H <sub>2</sub> SO <sub>4</sub> (pH <2) & cool <4°C	SW 9060	0.130 mg/L	1.00 mg/L	28 Days
Chemical Oxygen Demand (COD)	H <sub>2</sub> SO <sub>4</sub> (pH <2) & cool <4°C	SM 5220 D	1.16 mg/L	5.0 mg/L	28 Days
Total Cyanide - 1 - 250 mL Plastic	NaOH (pH ≥ 12) & cool <4°C	EPA 335.3	0.002 mg/L	0.005 mg/L	14 Days
Phenols - 1 - 1 Liter Amber Glass	HNO <sub>3</sub> (pH <2) & cool <4°C	EPA 420.2	0.0018 mg/L	0.02 mg/L	28 Days

**TABLE 2**  
**CITY OF SARTELL/SPX CORPORATION**  
**CLOSED HAZARDOUS WASTE LAGOON #3**  
**SARTELL, MINNESOTA**

**Laboratory Quality Control Checks**

Parameters	Laboratory Blank	LCS	Matrix Spike	Matrix Spike Duplicate	Laboratory Duplicate	CCV	LCS Accuracy (%R)	MS/MSD Precision (RPD)	MS/MSD Accuracy (%R)	Lab DUP Precision (RPD)
TOC	1/Event	1/Event	1/Event	1/Event		1/Event	85-110	≤ 20	75-125	
Chloride	1/Event	1/Event	1/Event	1/Event		1/Event	90-110	≤ 20	90-110	
Conductivity	1/Event	1/Event			1/Event		85-115			≤ 10
Cyanide	1/Event	1/Event	1/Event	1/Event	1/Event	1/Event	90-110	≤ 29	72-121	≤ 29
Fluoride	1/Event	1/Event	1/Event	1/Event		1/Event	80-110	≤ 20	75-125	
COD	1/Event	1/Event	1/Event	1/Event		1/Event	90-110	≤ 20	75-125	
pH	1/Event	1/Event			1/Event	1/Event	98-102			≤ 10
Phenols	1/Event	1/Event	1/Event	1/Event		1/Event	90-110	≤ 15	90-110	
TDS	1/Event	1/Event			1/Event		90-110			≤ 20
Sulfate	1/Event	1/Event	1/Event	1/Event		1/Event	85-120	≤ 15	75-125	
Nitrate	1/Event	1/Event	1/Event	1/Event		1/Event	90-110	≤ 15	75-125	
<b>Dissolved Metals</b>										
Dissolved Arsenic	1/Event	1/Event	1/Event	1/Event	1/Event	1/Event	80-120	≤ 20	75-125	≤ 15
Dissolved Barium	1/Event	1/Event	1/Event	1/Event	1/Event	1/Event	85-115	≤ 10	75-120	≤ 20
Dissolved Boron	1/Event	1/Event	1/Event	1/Event	1/Event	1/Event	85-110	≤ 10	75-125	≤ 20
Dissolved Cadmium	1/Event	1/Event	1/Event	1/Event	1/Event	1/Event	80-120	≤ 20	75-120	≤ 20
Dissolved Calcium	1/Event	1/Event	1/Event	1/Event	1/Event	1/Event	85-115	≤ 10	75-125	≤ 20
Dissolved Chromium	1/Event	1/Event	1/Event	1/Event	1/Event	1/Event	85-110	≤ 10	85-120	≤ 10
Dissolved Iron	1/Event	1/Event	1/Event	1/Event	1/Event	1/Event	85-115	≤ 10	75-125	≤ 15
Dissolved Lead	1/Event	1/Event	1/Event	1/Event	1/Event	1/Event	85-115	≤ 20	75-125	≤ 20
Dissolved Magnesium	1/Event	1/Event	1/Event	1/Event	1/Event	1/Event	85-115	≤ 10	75-125	≤ 15
Dissolved Manganese	1/Event	1/Event	1/Event	1/Event	1/Event	1/Event	85-110	≤ 10	80-120	≤ 15
Dissolved Selenium	1/Event	1/Event	1/Event	1/Event	1/Event	1/Event	80-115	≤ 50	75-125	≤ 20
Dissolved Sodium	1/Event	1/Event	1/Event	1/Event	1/Event	1/Event	90-120	≤ 10	75-125	≤ 10
Dissolved Zinc	1/Event	1/Event	1/Event	1/Event	1/Event	1/Event	85-115	≤ 35	80-125	≤ 20

LCS = Laboratory Control Standard  
 CCV = Continuing Calibration Verification Standard  
 %R = Percent Recovery  
 RPD = Relative Percent Difference

The Blank, LCS, Matrix Spike, Matrix Spike Duplicate and Duplicate will be included on the analytical report. The CCV will be analyzed but is not included on the report.

**APPENDIX I**

**Laboratory Analytical Results**



APR 27 2007

April 25, 2007

## Client:

LBG - SIOUX FALLS - LANDFILLS  
140 East Hinks Lane, #126  
Sioux Falls, SD 57104

Work Order: CQD0537  
Project Name: DeZurik Landfill  
Project Number: DeZurik Landfill

Attn: Melissa Karstens

Date Received: 04/11/07

An executed copy of the chain of custody is also included as an addendum to this report

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-(800)750-2401

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
P-12R	CQD0537-01	04/10/07 10:32
Duplicate	CQD0537-02	04/10/07
Equipment Blank	CQD0537-03	04/10/07 08:40
P-13	CQD0537-04	04/10/07 09:33

EPA 335.3 analysis performed at Lab ID: 047-999-345

**Samples were received into laboratory on ice.**

NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

Please refer to the Temperature and Sample Receipt form that is included with this report for additional information regarding the condition of samples at the time of receipt by the laboratory.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.

Minnesota Certification Number: 019-999-319

*Reproduction of this analytical report is permitted only in its entirety. This report shall not be reproduced except in full without the written approval of the laboratory.*

*TestAmerica Analytical Testing Corporation certifies that the analytical results contained herein apply only to the specific sample analyzed.*

Approved By:



TestAmerica - Cedar Falls, IA  
Linda Cmelik  
Project Coordinator

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0537  
 Project: DeZurik Landfill  
 Project Number: DeZurik Landfill

Received: 04/11/07  
 Reported: 04/25/07 07:17

## ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
<b>Sample ID: CQD0537-01 (P-12R - Ground Water)</b>						<b>Sampled: 04/10/07 10:32</b>		<b>Recvd: 04/11/07 09:30</b>		
General Chemistry Parameters										
Chemical Oxygen Demand	<1.16		mg/L	1.16	5.00	1	04/12/07 16:46	mkr	7040521	SM 5220D
Chloride	56.7		mg/L	0.138	5.00	1	04/16/07 12:52	jcf	7040697	SM 4500CI E
Fluoride	0.0756	J	mg/L	0.0650	1.00	0.983	04/20/07 16:00	jmh	7040991	SM 4500F BC
pH	8.0	H3	pH Units	0.1	0.1	1	04/11/07 21:59	kan	7040529	EPA 150.1
Phenol	<0.00180		mg/L	0.00180	0.0200	0.968	04/18/07 09:18	mdk	7040766	EPA 420.2
Specific conductance	998		umhos/cm	0.530	1.00	1	04/12/07 11:00	sas	7040593	SM 2510B
Sulfate	82.9		mg/L	7.62	25.0	2.5	04/16/07 15:52	jph	7040740	ASTM D516-90
Total Organic Carbon	1.57		mg/L	0.130	1.00	1	04/13/07 20:45	jcf	7040643	SW 9060
Nitrate as N	5.51		mg/L	0.275	1.25	12.5	04/12/07 09:05	jph	7040620	EPA 353.3
General Chemistry Parameters - Dissolved										
Total Dissolved Solids	588		mg/L	11.0	20.0	1	04/12/07 10:00	sas	7040587	SM 2540C
Dissolved Metals by SW 846 Series Methods										
Arsenic	<0.000420		mg/L	0.000420	0.00100	1	04/12/07 20:36	llw	7040627	SW 7060A
Barium	0.0603		mg/L	0.000580	0.0100	1	04/18/07 13:06	lbb	7040899	SW 6010B
Boron	0.169		mg/L	0.0680	0.100	1	04/18/07 13:06	lbb	7040899	SW 6010B
Cadmium	<0.000130		mg/L	0.000130	0.000500	1	04/11/07 21:55	evb	7040533	SW 7131A
Calcium	139		mg/L	0.0149	1.00	1	04/18/07 13:05	lbb	7040899	SW 6010B
Chromium	<0.0152		mg/L	0.0152	0.0200	1	04/18/07 13:06	lbb	7040899	SW 6010B
Iron	0.0390	J	mg/L	0.0123	0.100	1	04/18/07 13:06	lbb	7040899	SW 6010B
Lead	<0.000590		mg/L	0.000590	0.00400	1	04/12/07 22:17	llw	7040626	SW 7421
Magnesium	37.9		mg/L	0.00985	1.00	1	04/18/07 13:05	lbb	7040899	SW 6010B
Manganese	0.00462	J	mg/L	0.000660	0.0100	1	04/18/07 13:06	lbb	7040899	SW 6010B
Selenium	<0.00220		mg/L	0.00220	0.00500	1	04/12/07 17:18	evb	7040617	SW 7740
Sodium	15.3		mg/L	0.0878	1.00	1	04/18/07 13:05	lbb	7040899	SW 6010B
Zinc	<0.00527		mg/L	0.00527	0.0200	1	04/18/07 13:06	lbb	7040899	SW 6010B
General Chemistry Parameters										
Cyanide	<0.00200		mg/L	0.00200	0.00500	1	04/20/07 21:12	NDJ	7043885	EPA 335.4
<b>Sample ID: CQD0537-02 (Duplicate - Ground Water)</b>						<b>Sampled: 04/10/07</b>		<b>Recvd: 04/11/07 09:30</b>		
General Chemistry Parameters										
Chemical Oxygen Demand	2.40	J	mg/L	1.16	5.00	1	04/12/07 16:46	mkr	7040521	SM 5220D
Chloride	50.5		mg/L	0.138	5.00	1	04/16/07 12:53	jcf	7040697	SM 4500CI E
Fluoride	0.346	J	mg/L	0.0650	1.00	0.967	04/20/07 16:00	jmh	7040991	SM 4500F BC
pH	8.0	H3	pH Units	0.1	0.1	1	04/11/07 21:59	kan	7040529	EPA 150.1
Phenol	<0.00180		mg/L	0.00180	0.0200	0.96	04/18/07 09:18	mdk	7040766	EPA 420.2
Specific conductance	1420		umhos/cm	0.530	1.00	1	04/12/07 11:00	sas	7040593	SM 2510B
Sulfate	295		mg/L	30.5	100	10	04/16/07 15:52	jph	7040740	ASTM D516-90
Total Organic Carbon	2.60		mg/L	0.130	1.00	1	04/13/07 21:01	jcf	7040643	SW 9060
Nitrate as N	4.50		mg/L	0.110	0.500	5	04/11/07 15:00	jph	7040599	EPA 353.3
General Chemistry Parameters - Dissolved										
Total Dissolved Solids	996		mg/L	11.0	20.0	1	04/12/07 10:00	sas	7040587	SM 2540C
Dissolved Metals by SW 846 Series Methods										
Arsenic	<0.000420		mg/L	0.000420	0.00100	1	04/12/07 20:39	llw	7040627	SW 7060A
Barium	0.0701		mg/L	0.000580	0.0100	1	04/18/07 13:10	lbb	7040899	SW 6010B
Boron	2.07		mg/L	0.0680	0.100	1	04/18/07 13:10	lbb	7040899	SW 6010B
Cadmium	<0.000130		mg/L	0.000130	0.000500	1	04/11/07 21:58	evb	7040533	SW 7131A
Calcium	180		mg/L	0.0149	1.00	1	04/18/07 13:10	lbb	7040899	SW 6010B
Chromium	<0.0152		mg/L	0.0152	0.0200	1	04/18/07 13:10	lbb	7040899	SW 6010B
Iron	<0.0123		mg/L	0.0123	0.100	1	04/18/07 13:10	lbb	7040899	SW 6010B
Lead	<0.000590		mg/L	0.000590	0.00400	1	04/12/07 22:21	llw	7040626	SW 7421

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0537  
 Project: DeZurik Landfill  
 Project Number: DeZurik Landfill

Received: 04/11/07  
 Reported: 04/25/07 07:17

## ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
<b>Sample ID: CQD0537-02 (Duplicate - Ground Water) - cont.</b>					<b>Sampled: 04/10/07</b>			<b>Recvd: 04/11/07 09:30</b>		
Dissolved Metals by SW 846 Series Methods - cont.										
Magnesium	54.7		mg/L	0.00985	1.00	1	04/18/07 13:10	lbb	7040899	SW 6010B
Manganese	0.00862	J	mg/L	0.000660	0.0100	1	04/18/07 13:10	lbb	7040899	SW 6010B
Selenium	<0.00220		mg/L	0.00220	0.00500	1	04/12/07 17:21	evb	7040617	SW 7740
Sodium	50.3		mg/L	0.0878	1.00	1	04/18/07 13:10	lbb	7040899	SW 6010B
Zinc	<0.00527		mg/L	0.00527	0.0200	1	04/18/07 13:10	lbb	7040899	SW 6010B
General Chemistry Parameters										
Cyanide	<0.00200		mg/L	0.00200	0.00500	1	04/20/07 21:12	NDJ	7043885	EPA 335.4
<b>Sample ID: CQD0537-03 (Equipment Blank - Ground Water)</b>					<b>Sampled: 04/10/07 08:40</b>			<b>Recvd: 04/11/07 09:30</b>		
General Chemistry Parameters										
Chemical Oxygen Demand	2.80	J	mg/L	1.16	5.00	1	04/12/07 16:46	mkr	7040521	SM 5220D
Chloride	0.806	J	mg/L	0.138	5.00	1	04/16/07 12:53	jcf	7040697	SM 4500Cl E
Fluoride	<0.0650		mg/L	0.0650	1.00	1	04/20/07 16:00	jmh	7040991	SM 4500F BC
pH	5.5	H3	pH Units	0.1	0.1	1	04/11/07 21:59	kan	7040529	EPA 150.1
Phenol	<0.00180		mg/L	0.00180	0.0200	0.976	04/18/07 09:19	mdk	7040766	EPA 420.2
Specific conductance	1.66		umhos/cm	0.530	1.00	1	04/12/07 11:00	sas	7040593	SM 2510B
Sulfate	3.16	J	mg/L	3.05	10.0	1	04/16/07 15:52	jph	7040740	ASTM D516-90
Total Organic Carbon	<0.130		mg/L	0.130	1.00	1	04/13/07 21:14	jcf	7040643	SW 9060
Nitrate as N	0.0608	J	mg/L	0.0220	0.100	1	04/11/07 15:00	jph	7040599	EPA 353.3
General Chemistry Parameters - Dissolved										
Total Dissolved Solids	<11.0		mg/L	11.0	20.0	1	04/12/07 10:00	sas	7040587	SM 2540C
Dissolved Metals by SW 846 Series Methods										
Arsenic	<0.000420		mg/L	0.000420	0.00100	1	04/12/07 20:42	llw	7040627	SW 7060A
Barium	0.000781	J	mg/L	0.000580	0.0100	1	04/18/07 13:37	lbb	7040899	SW 6010B
Boron	<0.0680		mg/L	0.0680	0.100	1	04/18/07 13:37	lbb	7040899	SW 6010B
Cadmium	<0.000130		mg/L	0.000130	0.000500	1	04/11/07 22:02	evb	7040533	SW 7131A
Calcium	0.0273	J	mg/L	0.0149	1.00	1	04/18/07 13:37	lbb	7040899	SW 6010B
Chromium	<0.0152		mg/L	0.0152	0.0200	1	04/18/07 13:37	lbb	7040899	SW 6010B
Copper	<0.0123		mg/L	0.0123	0.100	1	04/18/07 13:37	lbb	7040899	SW 6010B
Lead	<0.000590		mg/L	0.000590	0.00400	1	04/12/07 22:24	llw	7040626	SW 7421
Magnesium	<0.00985		mg/L	0.00985	1.00	1	04/18/07 13:37	lbb	7040899	SW 6010B
Manganese	<0.000660		mg/L	0.000660	0.0100	1	04/18/07 13:37	lbb	7040899	SW 6010B
Selenium	<0.00220		mg/L	0.00220	0.00500	1	04/12/07 17:24	evb	7040617	SW 7740
Sodium	<0.0878		mg/L	0.0878	1.00	1	04/18/07 13:37	lbb	7040899	SW 6010B
Zinc	<0.00527		mg/L	0.00527	0.0200	1	04/18/07 13:37	lbb	7040899	SW 6010B
General Chemistry Parameters										
Cyanide	<0.00200		mg/L	0.00200	0.00500	1	04/20/07 21:12	NDJ	7043885	EPA 335.4

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0537  
 Project: DeZurik Landfill  
 Project Number: DeZurik Landfill

Received: 04/11/07  
 Reported: 04/25/07 07:17

## ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
<b>Sample ID: CQD0537-04 (P-13 - Ground Water)</b>							<b>Sampled: 04/10/07 09:33</b>		<b>Recvd: 04/11/07 09:30</b>	
<b>General Chemistry Parameters</b>										
Chemical Oxygen Demand	1.40	J	mg/L	1.16	5.00	1	04/12/07 16:46	mkr	7040521	SM 5220D
Chloride	28.4		mg/L	0.138	5.00	1	04/16/07 12:54	jcf	7040697	SM 4500Cl E
Fluoride	0.176	J	mg/L	0.0650	1.00	0.983	04/20/07 16:00	jmh	7040991	SM 4500F BC
pH	7.8	H3	pH Units	0.1	0.1	1	04/11/07 21:59	kan	7040529	EPA 150.1
Phenol	<0.00163		mg/L	0.00163	0.0181	0.904	04/18/07 09:20	mdk	7040766	EPA 420.2
Specific conductance	766		umhos/cm	0.530	1.00	1	04/12/07 11:00	sas	7040593	SM 2510B
Sulfate	37.5		mg/L	6.10	20.0	2	04/16/07 15:52	jph	7040740	ASTM D516-90
Total Organic Carbon	0.745	J	mg/L	0.130	1.00	1	04/13/07 21:29	jcf	7040643	SW 9060
Nitrate as N	4.98		mg/L	0.275	1.25	12.5	04/11/07 17:17	jph	7040599	EPA 353.3
<b>General Chemistry Parameters - Dissolved</b>										
Total Dissolved Solids	452		mg/L	11.0	20.0	1	04/12/07 13:45	sas	7040589	SM 2540C
<b>Dissolved Metals by SW 846 Series Methods</b>										
Arsenic	<0.000420		mg/L	0.000420	0.00100	1	04/12/07 20:46	llw	7040627	SW 7060A
Barium	0.0421		mg/L	0.000580	0.0100	1	04/18/07 13:42	lbb	7040899	SW 6010B
Boron	<0.0680		mg/L	0.0680	0.100	1	04/18/07 13:42	lbb	7040899	SW 6010B
Cadmium	<0.000130		mg/L	0.000130	0.000500	1	04/11/07 22:05	evb	7040533	SW 7131A
Calcium	109		mg/L	0.0149	1.00	1	04/18/07 13:42	lbb	7040899	SW 6010B
Chromium	<0.0152		mg/L	0.0152	0.0200	1	04/18/07 13:42	lbb	7040899	SW 6010B
Copper	<0.0123		mg/L	0.0123	0.100	1	04/18/07 13:42	lbb	7040899	SW 6010B
Lead	<0.000590		mg/L	0.000590	0.00400	1	04/12/07 22:33	llw	7040626	SW 7421
Magnesium	28.4		mg/L	0.00985	1.00	1	04/18/07 13:42	lbb	7040899	SW 6010B
Manganese	<0.000660		mg/L	0.000660	0.0100	1	04/18/07 13:42	lbb	7040899	SW 6010B
Selenium	<0.00220		mg/L	0.00220	0.00500	1	04/12/07 17:31	evb	7040617	SW 7740
Sodium	5.19		mg/L	0.0878	1.00	1	04/18/07 13:42	lbb	7040899	SW 6010B
Zinc	<0.00527		mg/L	0.00527	0.0200	1	04/18/07 13:42	lbb	7040899	SW 6010B
<b>General Chemistry Parameters</b>										
Cyanide	<0.00200		mg/L	0.00200	0.00500	1	04/20/07 21:12	NDJ	7043885	EPA 335.4

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0537  
 Project: DeZurik Landfill  
 Project Number: DeZurik Landfill

Received: 04/11/07  
 Reported: 04/25/07 07:17

## LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Spike Result Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC	RPD Limits	RPD Limit	Q
<b>General Chemistry Parameters</b>												
Chemical Oxygen Demand	7040521		mg/L	1.16	5.00	<1.16						
Nitrate as N	7040599		mg/L	0.0220	0.100	0.0306						J
Nitrate as N	7040620		mg/L	0.0220	0.100	0.0254						J
Total Organic Carbon	7040643		mg/L	0.130	1.00	<0.130						
Chloride	7040697		mg/L	0.138	5.00	0.688						J
Sulfate	7040740		mg/L	3.05	10.0	<3.05						
Phenol	7040766		mg/L	0.00180	0.0200	<0.00180						
Fluoride	7040991		mg/L	0.0650	1.00	<0.0650						
<b>General Chemistry Parameters - Dissolved</b>												
Total Dissolved Solids	7040587		mg/L	11.0	20.0	<11.0						
Total Dissolved Solids	7040589		mg/L	11.0	20.0	<11.0						
<b>Dissolved Metals by SW 846 Series Methods</b>												
Cadmium	7040533		mg/L	0.000130	0.000500	<0.000130						
Selenium	7040617		mg/L	0.00220	0.00500	<0.00220						
Lead	7040626		mg/L	0.000590	0.00400	<0.000590						
Arsenic	7040627		mg/L	0.000420	0.00100	<0.000420						
Barium	7040899		mg/L	0.000580	0.0100	<0.000580						
Boron	7040899		mg/L	0.0680	0.100	<0.0680						
Calcium	7040899		mg/L	0.0149	1.00	<0.0149						
Chromium	7040899		mg/L	0.0152	0.0200	<0.0152						
Copper	7040899		mg/L	0.0123	0.100	<0.0123						
Magnesium	7040899		mg/L	0.00985	1.00	<0.00985						
Manganese	7040899		mg/L	0.000660	0.0100	<0.000660						
Sodium	7040899		mg/L	0.0878	1.00	<0.0878						
Zinc	7040899		mg/L	0.00527	0.0200	<0.00527						
<b>General Chemistry Parameters</b>												
Cyanide	7043885		mg/L	0.00200	0.00500	<0.00200						

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0537  
 Project: DeZurik Landfill  
 Project Number: DeZurik Landfill

Received: 04/11/07  
 Reported: 04/25/07 07:17

## LABORATORY DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Spike Result Level	Units	MDL	MRL	Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
<b>General Chemistry Parameters</b>												
pH	7040529		pH Units	0.1	0.1	7.0					10	H3
pH	7040529		pH Units	0.1	0.1	8.0					10	H3
QC Source Sample: CQD0492-01												
Specific conductance	7040593	1040	umhos/cm	0.530	1.00	1026				1	10	
<b>General Chemistry Parameters - Dissolved</b>												
QC Source Sample: CQD0473-01												
Total Dissolved Solids	7040587	10900	mg/L	11.0	20.0	8400				26	20	R
QC Source Sample: CQD0530-01												
Total Dissolved Solids	7040587	292	mg/L	11.0	20.0	320				9	20	
QC Source Sample: CQD0537-04												
Total Dissolved Solids	7040589	452	mg/L	11.0	20.0	496				9	20	
QC Source Sample: CQD0599-07												
Total Dissolved Solids	7040589	1580	mg/L	11.0	20.0	1560				1	20	
<b>Dissolved Metals by SW 846 Series Methods</b>												
QC Source Sample: CQD0534-01												
Cadmium	7040533	<0.00013	mg/L	0.000130	0.000500	<0.000130					20	
QC Source Sample: CQD0473-01												
Selenium	7040617	<0.0022	mg/L	0.00220	0.00500	<0.00220					20	
QC Source Sample: CQD0537-03												
Selenium	7040617	<0.0022	mg/L	0.00220	0.00500	<0.00220					20	
QC Source Sample: CQD0473-01												
Lead	7040626	<0.00059	mg/L	0.000590	0.00400	<0.000590					20	
QC Source Sample: CQD0535-01												
Lead	7040626	<0.00059	mg/L	0.000590	0.00400	<0.000590					20	
QC Source Sample: CQD0473-02												
Arsenic	7040627	0.00136	mg/L	0.000420	0.00100	0.00138				1	15	
QC Source Sample: CQD0535-01												
Arsenic	7040627	<0.00042	mg/L	0.000420	0.00100	<0.000420					15	
QC Source Sample: CQD0534-01												
Barium	7040899	0.0700	mg/L	0.000580	0.0100	0.0713				2	20	
Boron	7040899	0.357	mg/L	0.0680	0.100	0.378				6	20	
Calcium	7040899	129	mg/L	0.0149	1.00	133				3	20	
Chromium	7040899	<0.015	mg/L	0.0152	0.0200	<0.0152					10	
Iron	7040899	0.0127	mg/L	0.0123	0.100	<0.0123					15	
Magnesium	7040899	36.9	mg/L	0.00985	1.00	38.8				5	15	
Manganese	7040899	1.43	mg/L	0.000660	0.0100	1.50				5	15	
Sodium	7040899	31.1	mg/L	0.0878	1.00	32.4				4	10	
Zinc	7040899	<0.0053	mg/L	0.00527	0.0200	<0.00527					20	
QC Source Sample: CQD0599-02												
Barium	7040899	0.0302	mg/L	0.000580	0.0100	0.0297				2	20	
Boron	7040899	<0.068	mg/L	0.0680	0.100	<0.0680					20	
Calcium	7040899	78.4	mg/L	0.0149	1.00	79.3				1	20	
Chromium	7040899	<0.015	mg/L	0.0152	0.0200	<0.0152					10	
Iron	7040899	<0.012	mg/L	0.0123	0.100	<0.0123					15	
Magnesium	7040899	20.9	mg/L	0.00985	1.00	21.6				3	15	
Manganese	7040899	<0.00066	mg/L	0.000660	0.0100	<0.000660					15	
Sodium	7040899	4.89	mg/L	0.0878	1.00	4.71				4	10	
Zinc	7040899	<0.0053	mg/L	0.00527	0.0200	<0.00527					20	

LBG - SIOUX FALLS - LANDFILLS  
140 East Hinks Lane, #126  
Sioux Falls, SD 57104  
Melissa Karstens

Work Order: CQD0537  
Project: DeZurik Landfill  
Project Number: DeZurik Landfill

Received: 04/11/07  
Reported: 04/25/07 07:17

## LABORATORY DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Spike		Units	MDL	MRL	Result	% REC	Dup %REC	% REC		RPD Limit	Q
		Result	Level							Limits	RPD		
General Chemistry Parameters													
QC Source Sample: NQD1685-01													
Cyanide	7043885	<0.0020		mg/L	0.00200	0.00500	<0.00200					29	

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0537  
 Project: DeZurik Landfill  
 Project Number: DeZurik Landfill

Received: 04/11/07  
 Reported: 04/25/07 07:17

## LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Spike Result Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
<b>General Chemistry Parameters</b>												
Chemical Oxygen Demand	7040521	251	mg/L	2.32	10.0	273		109	90-110			
pH	7040529		pH Units	0.1	0.1	7.0			98-102			H3
Specific conductance	7040593	479.0	umhos/cm	N/A	N/A	469.0		98	85-115			
Nitrate as N	7040599	4.27	mg/L	0.275	1.25	4.38		103	90-110			
Nitrate as N	7040620	4.27	mg/L	0.275	1.25	4.07		95	90-110			
Total Organic Carbon	7040643	20.3	mg/L	0.520	4.00	20.2		100	85-110			
Chloride	7040697	81.3	mg/L	N/A	N/A	83.6		103	90-110			
Sulfate	7040740	46.0	mg/L	6.10	20.0	43.4		94	85-120			
Phenol	7040766	0.160	mg/L	0.00180	0.0200	0.159		99	90-110			
Fluoride	7040991	100	mg/L	0.419	6.44	90.2		90	80-110			
<b>General Chemistry Parameters - Dissolved</b>												
Total Dissolved Solids	7040587	1000	mg/L	N/A	N/A	1020		102	90-110			
Total Dissolved Solids	7040589	1000	mg/L	N/A	N/A	1010		101	90-110			
<b>Dissolved Metals by SW 846 Series Methods</b>												
Cadmium	7040533	0.0221	mg/L	0.0001300	0.000500	0.0216		98	80-120			
Selenium	7040617	0.151	mg/L	0.00220	0.00500	0.149		99	80-115			
Lead	7040626	0.169	ug/mL	N/A	N/A	0.166		98	85-115			
Arsenic	7040627	0.0541	ug/mL	N/A	N/A	0.0532		98	80-120			
Barium	7040899	2.00	mg/L	0.000580	0.0100	1.87		94	85-115			
Boron	7040899	2.00	mg/L	0.0680	0.100	1.94		97	85-110			
Calcium	7040899	10.0	mg/L	0.0149	1.00	9.69		97	85-115			
Chromium	7040899	2.00	mg/L	0.0152	0.0200	1.96		98	85-115			
Cobalt	7040899	10.0	mg/L	0.0123	0.100	9.93		99	85-115			
Magnesium	7040899	10.0	mg/L	0.00985	1.00	10.0		100	85-115			
Manganese	7040899	2.00	mg/L	0.000660	0.0100	1.93		96	85-110			
Sodium	7040899	50.0	mg/L	0.0878	1.00	49.1		98	90-120			
Zinc	7040899	2.00	mg/L	0.00527	0.0200	1.98		99	85-115			
<b>General Chemistry Parameters</b>												
Cyanide	7043885	0.100	ug/mL	N/A	N/A	0.0991		99	90-110			



LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0537  
 Project: DeZurik Landfill  
 Project Number: DeZurik Landfill

Received: 04/11/07  
 Reported: 04/25/07 07:17

## MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Spike Result Level	Units	MDL	MRL	Dup Result	% Result	Dup %REC	% REC	REC Limits	RPD RPD	RPD Limit	Q
<b>General Chemistry Parameters</b>													
<b>QC Source Sample: CQD0429-06</b>													
Chemical Oxygen Demand	7040521	<1.16 50.0	mg/L	1.16	5.00	48.8	59.7	98	119	75-125	20	20	
<b>QC Source Sample: CQD0507-07</b>													
Nitrate as N	7040599	0.0465 0.200	mg/L	0.0220	0.100	0.224	0.219	89	86	75-125	2	15	
<b>QC Source Sample: CQD0537-01</b>													
Nitrate as N	7040620	5.51 2.50	mg/L	0.275	1.25	7.66	7.49	86	79	75-125	2	15	
<b>QC Source Sample: CQD0441-01</b>													
Total Organic Carbon	7040643	56.1 50.0	mg/L	1.30	10.0	105	106	98	100	75-125	1	20	
<b>QC Source Sample: CQD0507-07</b>													
Chloride	7040697	111 25.0	mg/L	0.138	5.00	130	131	76	80	90-110	1	20	M1a
<b>QC Source Sample: CQD0507-07</b>													
Sulfate	7040740	55.0 20.0	mg/L	6.10	20.0	76.3	75.8	106	104	75-125	1	15	
<b>QC Source Sample: CQD0472-01</b>													
Phenol	7040766	<0.0018 0.160	mg/L	0.00180	0.0200	0.158	0.162	99	101	90-110	2	15	
<b>QC Source Sample: CQD0491-01</b>													
Fluoride	7040991	126 25.0	mg/L	0.926	14.2	150	148	96	88	75-125	1	20	
<b>General Chemistry Parameters</b>													
<b>QC Source Sample: NQD1081-01</b>													
Cyanide	7043885	0.000400 0.100	ug/mL	N/A	N/A	0.113	0.142	113	142	72-121	23	29	M1

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0537  
 Project: DeZurik Landfill  
 Project Number: DeZurik Landfill

Received: 04/11/07  
 Reported: 04/25/07 07:17

### OTHER

Analyte	Seq/ Batch	Source Spike Result Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
<b>Dissolved Metals by SW 846 Series Methods</b>												
<b>QC Source Sample: CQD0534-02</b>												
Cadmium	7040533	0.000052	0.0011	ug/mL	N/A	N/A	0.00126	110	75-120			
			9									
<b>QC Source Sample: CQD0473-02</b>												
Selenium	7040617	-0.00257	0.0238	ug/mL	N/A	N/A	0.00870	47	75-125			S
<b>QC Source Sample: CQD0537-04</b>												
Selenium	7040617	-0.000957	0.0238	ug/mL	N/A	N/A	0.0219	96	75-125			
<b>QC Source Sample: CQD0473-02</b>												
Lead	7040626	-0.000700	0.0227	ug/mL	N/A	N/A	0.0130	60	75-125			M1a
<b>QC Source Sample: CQD0535-02</b>												
Lead	7040626	-0.000823	0.0227	ug/mL	N/A	N/A	0.0217	99	75-125			
<b>QC Source Sample: CQD0473-01</b>												
Arsenic	7040627	-0.000291	0.0227	ug/mL	N/A	N/A	0.0220	98	75-125			
<b>QC Source Sample: CQD0535-02</b>												
Arsenic	7040627	-0.000333	0.0227	ug/mL	N/A	N/A	0.0242	108	75-125			
<b>QC Source Sample: CQD0534-02</b>												
Barium	7040899	0.181	0.962	ug/mL	N/A	N/A	1.29	115	75-120			
Boron	7040899	0.0116	1.92	ug/mL	N/A	N/A	1.91	99	75-125			
Calcium	7040899	92.6	1.92	ug/mL	N/A	N/A	90.1	-130	75-125			MHA
Chromium	7040899	-0.000850	0.962	ug/mL	N/A	N/A	1.00	104	85-120			
Cobalt	7040899	0.520	1.92	ug/mL	N/A	N/A	2.58	107	75-125			
Magnesium	7040899	29.1	1.92	ug/mL	N/A	N/A	30.4	68	75-125			MHA
Manganese	7040899	0.216	0.962	ug/mL	N/A	N/A	1.34	117	80-120			
Mercury	7040899	12.6	2.88	ug/mL	N/A	N/A	15.2	90	75-125			
Zinc	7040899	-0.00539	0.962	ug/mL	N/A	N/A	1.16	121	80-125			
<b>QC Source Sample: CQD0599-03</b>												
Barium	7040899	0.0439	0.962	ug/mL	N/A	N/A	1.01	100	75-120			
Boron	7040899	-0.00205	1.92	ug/mL	N/A	N/A	1.56	81	75-125			
Calcium	7040899	111	1.92	ug/mL	N/A	N/A	119	417	75-125			MHA
Chromium	7040899	0.000239	0.962	ug/mL	N/A	N/A	0.899	93	85-120			
Cobalt	7040899	-0.00188	1.92	ug/mL	N/A	N/A	1.85	96	75-125			
Magnesium	7040899	29.0	1.92	ug/mL	N/A	N/A	32.9	203	75-125			MHA
Manganese	7040899	-0.000103	0.962	ug/mL	N/A	N/A	0.989	103	80-120			
Sodium	7040899	5.78	2.88	ug/mL	N/A	N/A	8.85	107	75-125			
Zinc	7040899	-0.00524	0.962	ug/mL	N/A	N/A	0.906	95	80-125			

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0537  
 Project: DeZurik Landfill  
 Project Number: DeZurik Landfill

Received: 04/11/07  
 Reported: 04/25/07 07:17

## CERTIFICATION SUMMARY

### TestAmerica - Cedar Falls, IA

Method	Matrix	Nelac	Minnesota
ASTM D516-90	Water - NonPotable	X	X
EPA 150.1	Water - NonPotable	X	
EPA 353.3	Water - NonPotable	X	X
EPA 420.2	Water - NonPotable	X	X
SM 2510B	Water - NonPotable	X	X
SM 2540C	Water - NonPotable	X	X
SM 4500C1 E	Water - NonPotable	X	X
SM 4500F BC	Water - NonPotable	X	
SM 5220D	Water - NonPotable	X	X
SW 6010B	Water - NonPotable	X	X
SW 7060A	Water - NonPotable	X	X
SW 7131A	Water - NonPotable	X	X
SW 7421	Water - NonPotable	X	X
SW 7740	Water - NonPotable	X	X
SW 9060	Water - NonPotable	X	

### Subcontracted Laboratories

TestAmerica Analytical Testing Corp.- Nashville NELAC Cert #87358, Illinois Cert #001366, Iowa Cert #131, Kansas Cert #E-10229, Minnesota Cert #047-999-345, Wisconsin Cert #998020436  
 2960 Foster Creighton Dr. - Nashville, TN 37204

Method Performed: EPA 335.4

Samples: CQD0537-01, CQD0537-02, CQD0537-03, CQD0537-04

*Any abnormalities or departures from sample acceptance policy shall be documented on the 'Sample Receipt and Temperature Log Form' and 'Sample Non-conformance Form' (if applicable) included with this report.*

*For information concerning certifications of this facility or another TestAmerica facility, please visit our website at [www.TestAmericaInc.com](http://www.TestAmericaInc.com)*

*Samples collected by TestAmerica Field Services personnel are noted on the Chain of Custody (COC) and are sampled in accordance with TA-CF SOP CF09-01.*

## DATA QUALIFIERS AND DEFINITIONS

- H3** Sample was received and analyzed past holding time
- J** Analyte detected at a level less than the Reporting Limit(RL) and greater than or equal to the Method Detection Limit(MDL). Concentrations within this range are estimated
- M1** The MS and/or MSD were above the acceptance limits due to sample matrix interference See Blank Spike (LCS).
- M1a** The MS and/or MSD were outside control limits.
- MHA** Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information
- R** Sample duplicate RPD exceeded the laboratory control limit
- S** Analyzed by standard addition.

## ADDITIONAL COMMENTS

TestAmerica - Cedar Falls, IA  
 Linda Cmelik  
 Project Coordinator





## Sample Receipt and Temperature Log Form

Client: LBG

Project: Dezunk Haz. Waste

City: \_\_\_\_\_

Date: 4-11-07 Receiver's Initials: MR

Time (Delivered): 9:30

### Temperature Record:

Cooler ID# (If Applicable)  
SJC-8

2 °C / On Ice

### Thermometer:

- IR - 905085 "A"
- IR - 809065 "B"
- IR - 61854108
- 22126775

### Courier:

<input type="checkbox"/> UPS	<input type="checkbox"/> TA Courier
<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> TA Field Services
<input type="checkbox"/> DHL	<input type="checkbox"/> Client
<input type="checkbox"/> US Postal Service	<input type="checkbox"/> Other
<input type="checkbox"/> Spee-Dee	

Temp Blank

Temperature out of compliance

Custody seals present?

Yes

Custody seals intact?

Yes  No

Non-Conformance report started

### Exceptions Noted

<input type="checkbox"/> Sample(s) not received in a cooler.
<input type="checkbox"/> Sample(s) received same day of sampling.
<input type="checkbox"/> Evidence of a chilling process
<input type="checkbox"/> Temperature not taken:

## Sample Receipt and Temperature Log Form

Client: URS

Project: DeZurik HAZ Waste

City: \_\_\_\_\_

Date: 4-11-07

Receiver's Initials: MR

Time (Delivered): 9:30

### Temperature Record:

**Cooler ID#** (If Applicable)  
427  
1 °C / On Ice

### Thermometer:

- IR - 905085 "A"
- IR - 809065 "B"
- IR - 61854108
- 22126775

### Courier:

- |  |  |
|--|--|
| <input type="checkbox"/> UPS               | <input type="checkbox"/> TA Courier        |
| <input checked="" type="checkbox"/> FedEx  | <input type="checkbox"/> TA Field Services |
| <input type="checkbox"/> DHL               | <input type="checkbox"/> Client            |
| <input type="checkbox"/> US Postal Service | <input type="checkbox"/> Other             |
| <input type="checkbox"/> Spee-Dee          |  |

Temp Blank

Temperature out of compliance

Custody seals present?

Yes

Custody seals intact?

Yes  No

Non-Conformance report started

### Exceptions Noted

- Sample(s) not received in a cooler.
- Samples(s) received same day of sampling.
- Evidence of a chilling process
- Temperature not taken:

April 27, 2007

APR 30 2007

## Client:

LBG - SIOUX FALLS - LANDFILLS  
140 East Hinks Lane, #126  
Sioux Falls, SD 57104

Work Order: CQD0535  
Project Name: DeZurik and Sartell Landfills  
Project Number: Sartell, MN

Attn: Melissa Karstens

Date Received: 04/11/07

An executed copy of the chain of custody is also included as an addendum to this report

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-(800)750-2401

**SAMPLE IDENTIFICATION****LAB NUMBER****COLLECTION DATE AND TIME**

P-9R	CQD0535-01	04/10/07 13:29
P-5R	CQD0535-02	04/10/07 11:35

EPA 335.3, SM 2580 analysis performed at Lab ID: 047-999-345

**Samples were received into laboratory at a temperature of 1 °C.**

NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

Please refer to the Temperature and Sample Receipt form that is included with this report for additional information regarding the condition of samples at the time of receipt by the laboratory.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.  
Minnesota Certification Number: 019-999-319

*Reproduction of this analytical report is permitted only in its entirety. This report shall not be reproduced except in full without the written approval of the laboratory.*

*TestAmerica Analytical Testing Corporation certifies that the analytical results contained herein apply only to the specific sample analyzed.*

Approved By:



TestAmerica - Cedar Falls, IA  
Linda Cmelik  
Project Coordinator



LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535  
 Project: DeZurik and Sartell Landfills  
 Project Number: Sartell, MN

Received: 04/11/07  
 Reported: 04/27/07 15:11

## ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
<b>Sample ID: CQD0535-01 (P-9R - Ground Water)</b>					<b>Sampled: 04/10/07 13:29</b>			<b>Recvd: 04/11/07 09:30</b>		
<b>General Chemistry Parameters</b>										
Alkalinity, Total (CaCO3)	363		mg/L	1.68	5.00	1	04/17/07 16:18	mdk	7040800	SM 2320B
Ammonia as N	<0.0210		mg/L	0.0210	0.200	1	04/23/07 11:09	jcf	7041003	EPA 350.1
Chemical Oxygen Demand	<1.16		mg/L	1.16	5.00	1	04/12/07 16:46	mkr	7040521	SM 5220D
Chloride	48.8		mg/L	0.138	5.00	1	04/16/07 12:48	jcf	7040697	SM 4500Cl E
Fluoride	1.38		mg/L	0.0650	1.00	0.967	04/20/07 16:00	jmh	7040991	SM 4500F BC
Nitrate/Nitrite as N	4.93		mg/L	0.275	1.25	12.5	04/11/07 15:00	jph	7040602	EPA 353.3
pH	7.9	H3	pH Units	0.1	0.1	1	04/11/07 21:59	kan	7040529	EPA 150.1
Phenol	<0.00180		mg/L	0.00180	0.0200	0.976	04/18/07 09:16	mdk	7040766	EPA 420.2
Specific conductance	1040		umhos/cm	0.530	1.00	1	04/12/07 11:00	sas	7040593	SM 2510B
Sulfate	107		mg/L	15.2	50.0	5	04/16/07 15:52	jph	7040740	ASTM D516-90
Total Organic Carbon	1.93		mg/L	0.130	1.00	1	04/13/07 19:36	jcf	7040643	SW 9060
Total Suspended Solids	<2.27		mg/L	2.27	3.00	1	04/12/07 15:08	mkr	7040580	USGS I-3765-85
Nitrate as N	4.93		mg/L	0.275	1.25	12.5	04/11/07 15:00	jph	7040599	EPA 353.3
<b>General Chemistry Parameters - Dissolved</b>										
Total Dissolved Solids	616		mg/L	11.0	20.0	1	04/12/07 10:00	sas	7040587	SM 2540C
<b>Calculated Analyses</b>										
Cation/Anion Balance	0.00		%	NA	0.5	1	04/26/07 15:39	lmc	7041252	SM 1030 F
<b>Dissolved Metals by SW 846 Series Methods</b>										
Arsenic	<0.000420		mg/L	0.000420	0.00100	1	04/12/07 20:21	llw	7040627	SW 7060A
Barium	0.0714		mg/L	0.000580	0.0100	1	04/18/07 12:56	lbb	7040899	SW 6010B
Boron	<0.0680		mg/L	0.0680	0.100	1	04/18/07 12:56	lbb	7040899	SW 6010B
Cadmium	0.000186 J		mg/L	0.000130	0.000500	1	04/11/07 21:49	evb	7040533	SW 7131A
Calcium	143		mg/L	0.0149	1.00	1	04/18/07 12:56	lbb	7040899	SW 6010B
Chromium	<0.0152		mg/L	0.0152	0.0200	1	04/18/07 12:56	lbb	7040899	SW 6010B
Copper	<0.0130		mg/L	0.0130	0.0200	1	04/18/07 12:56	lbb	7040899	SW 6010B
Cron	<0.0123		mg/L	0.0123	0.100	1	04/18/07 12:56	lbb	7040899	SW 6010B
Lead	<0.000590		mg/L	0.000590	0.00400	1	04/12/07 22:05	llw	7040626	SW 7421
Magnesium	40.7		mg/L	0.00985	1.00	1	04/18/07 12:56	lbb	7040899	SW 6010B
Manganese	0.0219		mg/L	0.000660	0.0100	1	04/18/07 12:56	lbb	7040899	SW 6010B
Mercury	<0.0140		ug/L	0.0140	0.200	1	04/19/07 10:55	bkp	7040849	SW 7470A
Potassium	1.72		mg/L	0.0516	1.00	1	04/18/07 12:56	lbb	7040899	SW 6010B
Selenium	<0.00220		mg/L	0.00220	0.00500	1	04/12/07 17:05	evb	7040617	SW 7740
Sodium	10.5		mg/L	0.0878	1.00	1	04/18/07 12:56	lbb	7040899	SW 6010B
Zinc	<0.00527		mg/L	0.00527	0.0200	1	04/18/07 12:56	lbb	7040899	SW 6010B
<b>Volatile Organic Compounds</b>										
Acetone	<4.62		ug/L	4.62	10.0	1	04/12/07 20:47	DMD	7040645	SW 8260B
Allyl chloride	<0.190		ug/L	0.190	2.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Benzene	<0.160		ug/L	0.160	0.500	1	04/12/07 20:47	DMD	7040645	SW 8260B
Bromobenzene	<0.170		ug/L	0.170	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Bromochloromethane	<0.310		ug/L	0.310	5.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Bromodichloromethane	<0.120		ug/L	0.120	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Bromoform	<0.150		ug/L	0.150	5.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Bromomethane	<0.480		ug/L	0.480	4.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
2-Butanone (MEK)	<0.910		ug/L	0.910	10.0	1	04/12/07 20:47	DMD	7040645	SW 8260B
n-Butylbenzene	<0.0900		ug/L	0.0900	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
sec-Butylbenzene	<0.120		ug/L	0.120	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
tert-Butylbenzene	<0.140		ug/L	0.140	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Carbon Tetrachloride	<0.130		ug/L	0.130	2.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Chlorobenzene	<0.0800		ug/L	0.0800	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Chlorodibromomethane	<0.250		ug/L	0.250	5.00	1	04/12/07 20:47	DMD	7040645	SW 8260B

TestAmerica - Cedar Falls, IA  
 Linda Cmelik  
 Project Coordinator

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535  
 Project: DeZurik and Sartell Landfills  
 Project Number: Sartell, MN

Received: 04/11/07  
 Reported: 04/27/07 15:11

## ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
<b>Sample ID: CQD0535-01 (P-9R - Ground Water) - cont.</b>				<b>Sampled: 04/10/07 13:29</b>			<b>Recvd: 04/11/07 09:30</b>			
Volatile Organic Compounds - cont.										
Dichlorofluoromethane	<0.120		ug/L	0.120	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Chloroethane	0.540	J	ug/L	0.500	4.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Chloroform	0.680	J	ug/L	0.0800	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Chloromethane	<0.200		ug/L	0.200	3.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
2-Chlorotoluene	<0.200		ug/L	0.200	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
p-Chlorotoluene	<0.150		ug/L	0.150	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,2-Dibromo-3-chloropropane	<0.750		ug/L	0.750	10.0	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,2-Dibromoethane (EDB)	<0.130		ug/L	0.130	10.0	1	04/12/07 20:47	DMD	7040645	SW 8260B
Dibromomethane	<0.220		ug/L	0.220	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,2-Dichlorobenzene	<0.150		ug/L	0.150	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,3-Dichlorobenzene	<0.130		ug/L	0.130	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,4-Dichlorobenzene	<0.120		ug/L	0.120	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Dichlorodifluoromethane	<0.170		ug/L	0.170	3.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,1-Dichloroethane	<0.0900		ug/L	0.0900	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,2-Dichloroethane	<0.160		ug/L	0.160	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,1-Dichloroethene	<0.190		ug/L	0.190	2.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
cis-1,2-Dichloroethene	<0.200		ug/L	0.200	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
trans-1,2-Dichloroethene	<0.150		ug/L	0.150	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,2-Dichloropropane	<0.400		ug/L	0.400	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,3-Dichloropropane	<0.190		ug/L	0.190	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
2,2-Dichloropropane	<0.240		ug/L	0.240	4.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,1-Dichloropropene	<0.170		ug/L	0.170	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
cis-1,3-Dichloropropene	<0.160		ug/L	0.160	5.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
trans-1,3-Dichloropropene	<0.160		ug/L	0.160	5.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Diethyl ether	<0.350		ug/L	0.350	1.70	1	04/12/07 20:47	DMD	7040645	SW 8260B
Ethylbenzene	<0.180		ug/L	0.180	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Hexachlorobutadiene	<0.390		ug/L	0.390	5.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Isopropylbenzene	<0.190		ug/L	0.190	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
p-Isopropyltoluene	<0.130		ug/L	0.130	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1-Methyl-2-pentanone (MIBK)	<0.310		ug/L	0.310	10.0	1	04/12/07 20:47	DMD	7040645	SW 8260B
Methylene Chloride	<0.450		ug/L	0.450	5.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Methyl tert-Butyl Ether	<0.120		ug/L	0.120	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Naphthalene	<0.350		ug/L	0.350	5.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
n-Propylbenzene	<0.140		ug/L	0.140	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Styrene	<0.100		ug/L	0.100	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,1,1,2-Tetrachloroethane	<0.160		ug/L	0.160	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,1,1,2,2-Tetrachloroethane	<0.230	C	ug/L	0.230	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Tetrachloroethene	<0.240		ug/L	0.240	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Tetrahydrofuran	<2.05		ug/L	2.05	50.0	1	04/12/07 20:47	DMD	7040645	SW 8260B
Toluene	<0.100		ug/L	0.100	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,2,3-Trichlorobenzene	<2.15		ug/L	2.15	5.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,2,4-Trichlorobenzene	<0.490		ug/L	0.490	5.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,1,1-Trichloroethane	<0.150		ug/L	0.150	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,1,2-Trichloroethane	<0.300		ug/L	0.300	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Trichloroethene	<0.170		ug/L	0.170	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Trichlorofluoromethane	<0.150		ug/L	0.150	4.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,2,3-Trichloropropane	<0.180		ug/L	0.180	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,1,2-Trichlorotrifluoroethane	<0.270		ug/L	0.270	2.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,2,4-Trimethylbenzene	<0.160		ug/L	0.160	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
1,3,5-Trimethylbenzene	<0.140		ug/L	0.140	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535  
 Project: DeZurik and Sartell Landfills  
 Project Number: Sartell, MN

Received: 04/11/07  
 Reported: 04/27/07 15:11

## ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
<b>Sample ID: CQD0535-01 (P-9R - Ground Water) - cont.</b>					<b>Sampled: 04/10/07 13:29</b>		<b>Recvd: 04/11/07 09:30</b>			
Volatile Organic Compounds - cont.										
Vinyl chloride	<0.160		ug/L	0.160	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
m,p-Xylene	<0.300		ug/L	0.300	2.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
o-Xylene	<0.170		ug/L	0.170	1.00	1	04/12/07 20:47	DMD	7040645	SW 8260B
Surr: Dibromofluoromethane (80-120%)	94 %									
Surr: Toluene-d8 (80-110%)	97 %									
Surr: 4-Bromofluorobenzene (65-115%)	90 %									

LBG - SIOUX FALLS - LANDFILLS  
140 East Hinks Lane, #126  
Sioux Falls, SD 57104  
Melissa Karstens

Work Order: CQD0535  
Project: DeZurik and Sartell Landfills  
Project Number: Sartell, MN

Received: 04/11/07  
Reported: 04/27/07 15:11

## ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Seq/ Analyst Batch	Method
Sample ID: CQD0535-01 (P-9R - Ground Water) - cont.				Sampled: 04/10/07 13:29		Recvd: 04/11/07 09:30		
Volatile Organic Compounds - cont.								
VOC Preservation Check								
PH	<2.00		units	2.00	1	04/13/07 13:04	sjn 7040654	SW

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535  
 Project: DeZurik and Sartell Landfills  
 Project Number: Sartell, MN

Received: 04/11/07  
 Reported: 04/27/07 15:11

## ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
<b>Sample ID: CQD0535-01 (P-9R - Ground Water) - cont.</b>					<b>Sampled: 04/10/07 13:29</b>			<b>Recvd: 04/11/07 09:30</b>		
OC Preservation Check - cont.										
General Chemistry Parameters										
Cyanide	<0.00200		mg/L	0.00200	0.00500	1	04/20/07 21:12	NDJ	7043885	EPA 335.4
Oxidation/Reduction Potential	435	H3	mV vs. NHE	3.00	3.00	1	04/17/07 13:50	TCB	7042981	SM 2580
<b>Sample ID: CQD0535-02 (P-5R - Ground Water)</b>					<b>Sampled: 04/10/07 11:35</b>			<b>Recvd: 04/11/07 09:30</b>		
General Chemistry Parameters										
Alkalinity, Total (CaCO3)	407		mg/L	1.68	5.00	1	04/17/07 16:18	mdk	7040800	SM 2320B
Ammonia as N	<0.0210		mg/L	0.0210	0.200	1	04/23/07 11:10	jcf	7041003	EPA 350.1
Chemical Oxygen Demand	2.70	J	mg/L	1.16	5.00	1	04/12/07 16:46	mkr	7040521	SM 5220D
Chloride	50.5		mg/L	0.138	5.00	1	04/16/07 12:51	jcf	7040697	SM 4500Cl E
Fluoride	0.387	J	mg/L	0.0650	1.00	1	04/20/07 16:00	jmh	7040991	SM 4500F BC
Nitrate/Nitrite as N	4.55		mg/L	0.110	0.500	5	04/11/07 15:00	jph	7040602	EPA 353.3
pH	8.0	H3	pH Units	0.1	0.1	1	04/11/07 21:59	kan	7040529	EPA 150.1
Phenol	<0.00180		mg/L	0.00180	0.0200	0.928	04/18/07 09:17	mdk	7040766	EPA 420.2
Specific conductance	1420		umhos/cm	0.530	1.00	1	04/12/07 11:00	sas	7040593	SM 2510B
Sulfate	333		mg/L	30.5	100	10	04/16/07 15:52	jph	7040740	ASTM D516-90
Total Organic Carbon	2.75		mg/L	0.130	1.00	1	04/13/07 19:52	jcf	7040643	SW 9060
Total Suspended Solids	<2.27		mg/L	2.27	3.00	1	04/12/07 15:08	mkr	7040580	USGS I-3765-85
Nitrate as N	4.42		mg/L	0.0220	0.100	1	04/11/07 15:00	jph	7040599	EPA 353.3
General Chemistry Parameters - Dissolved										
Total Dissolved Solids	984		mg/L	11.0	20.0	1	04/12/07 10:00	sas	7040587	SM 2540C
Calculated Analyses										
Cation/Anion Balance	-2.00		%	NA	0.5	1	04/26/07 15:39	lmc	7041252	SM 1030 F
Dissolved Metals by SW 846 Series Methods										
Arsenic	<0.000420		mg/L	0.000420	0.00100	1	04/12/07 20:28	llw	7040627	SW 7060A
Barium	0.0716		mg/L	0.000580	0.0100	1	04/18/07 13:01	lbb	7040899	SW 6010B
Boron	2.18		mg/L	0.0680	0.100	1	04/18/07 13:00	lbb	7040899	SW 6010B
Cadmium	<0.000130		mg/L	0.000130	0.000500	1	04/11/07 21:52	evb	7040533	SW 7131A
Calcium	183		mg/L	0.0149	1.00	1	04/18/07 13:00	lbb	7040899	SW 6010B
Chromium	<0.0152		mg/L	0.0152	0.0200	1	04/18/07 13:01	lbb	7040899	SW 6010B
Copper	<0.0130		mg/L	0.0130	0.0200	1	04/18/07 13:00	lbb	7040899	SW 6010B
Iron	<0.0123		mg/L	0.0123	0.100	1	04/18/07 13:01	lbb	7040899	SW 6010B
Lead	<0.000590		mg/L	0.000590	0.00400	1	04/12/07 22:11	llw	7040626	SW 7421
Magnesium	57.1		mg/L	0.00985	1.00	1	04/18/07 13:00	lbb	7040899	SW 6010B
Manganese	0.00904	J	mg/L	0.000660	0.0100	1	04/18/07 13:01	lbb	7040899	SW 6010B
Mercury	<0.0140		ug/L	0.0140	0.200	1	04/19/07 11:00	bkp	7040849	SW 7470A
Potassium	2.03		mg/L	0.0516	1.00	1	04/18/07 13:00	lbb	7040899	SW 6010B
Selenium	<0.00220		mg/L	0.00220	0.00500	1	04/12/07 17:15	evb	7040617	SW 7740
Sodium	49.7		mg/L	0.0878	1.00	1	04/18/07 13:00	lbb	7040899	SW 6010B
Zinc	<0.00527		mg/L	0.00527	0.0200	1	04/18/07 13:01	lbb	7040899	SW 6010B
Volatile Organic Compounds										
Acetone	<4.62		ug/L	4.62	10.0	1	04/12/07 21:19	DMD	7040645	SW 8260B
Allyl chloride	<0.190		ug/L	0.190	2.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Benzene	<0.160		ug/L	0.160	0.500	1	04/12/07 21:19	DMD	7040645	SW 8260B
Bromobenzene	<0.170		ug/L	0.170	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Bromochloromethane	<0.310		ug/L	0.310	5.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Bromodichloromethane	<0.120		ug/L	0.120	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Bromoform	<0.150		ug/L	0.150	5.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Bromomethane	<0.480		ug/L	0.480	4.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
2-Butanone (MEK)	<0.910		ug/L	0.910	10.0	1	04/12/07 21:19	DMD	7040645	SW 8260B

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535  
 Project: DeZurik and Sartell Landfills  
 Project Number: Sartell, MN

Received: 04/11/07  
 Reported: 04/27/07 15:11

## ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
<b>Sample ID: CQD0535-02 (P-5R - Ground Water) - cont.</b>				<b>Sampled: 04/10/07 11:35</b>			<b>Recvd: 04/11/07 09:30</b>			
<b>Volatile Organic Compounds - cont.</b>										
n-Butylbenzene	<0.0900		ug/L	0.0900	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
sec-Butylbenzene	<0.120		ug/L	0.120	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
tert-Butylbenzene	<0.140		ug/L	0.140	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Carbon Tetrachloride	<0.130		ug/L	0.130	2.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Chlorobenzene	<0.0800		ug/L	0.0800	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Chlorodibromomethane	<0.250		ug/L	0.250	5.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Dichlorofluoromethane	<0.120		ug/L	0.120	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Chloroethane	<0.500		ug/L	0.500	4.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
<b>Chloroform</b>	<b>0.790</b>	<b>J</b>	ug/L	0.0800	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Chloromethane	<0.200		ug/L	0.200	3.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
o-Chlorotoluene	<0.200		ug/L	0.200	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
p-Chlorotoluene	<0.150		ug/L	0.150	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,2-Dibromo-3-chloropropane	<0.750		ug/L	0.750	10.0	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,2-Dibromoethane (EDB)	<0.130		ug/L	0.130	10.0	1	04/12/07 21:19	DMD	7040645	SW 8260B
Dibromomethane	<0.220		ug/L	0.220	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,2-Dichlorobenzene	<0.150		ug/L	0.150	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,3-Dichlorobenzene	<0.130		ug/L	0.130	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,4-Dichlorobenzene	<0.120		ug/L	0.120	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Dichlorodifluoromethane	<0.170		ug/L	0.170	3.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,1-Dichloroethane	<0.0900		ug/L	0.0900	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,2-Dichloroethane	<0.160		ug/L	0.160	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,1-Dichloroethene	<0.190		ug/L	0.190	2.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
cis-1,2-Dichloroethene	<0.200		ug/L	0.200	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
trans-1,2-Dichloroethene	<0.150		ug/L	0.150	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,2-Dichloropropane	<0.400		ug/L	0.400	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,3-Dichloropropane	<0.190		ug/L	0.190	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,2-Dichloropropane	<0.240		ug/L	0.240	4.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,1-Dichloropropene	<0.170		ug/L	0.170	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
cis-1,3-Dichloropropene	<0.160		ug/L	0.160	5.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
trans-1,3-Dichloropropene	<0.160		ug/L	0.160	5.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Diethyl ether	<0.350		ug/L	0.350	1.70	1	04/12/07 21:19	DMD	7040645	SW 8260B
Ethylbenzene	<0.180		ug/L	0.180	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Hexachlorobutadiene	<0.390		ug/L	0.390	5.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Isopropylbenzene	<0.190		ug/L	0.190	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
p-Isopropyltoluene	<0.130		ug/L	0.130	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
4-Methyl-2-pentanone (MIBK)	<0.310		ug/L	0.310	10.0	1	04/12/07 21:19	DMD	7040645	SW 8260B
Methylene Chloride	<0.450		ug/L	0.450	5.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Methyl tert-Butyl Ether	<0.120		ug/L	0.120	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Naphthalene	<0.350		ug/L	0.350	5.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
n-Propylbenzene	<0.140		ug/L	0.140	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Styrene	<0.100		ug/L	0.100	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,1,1,2-Tetrachloroethane	<0.160		ug/L	0.160	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,1,1,2,2-Tetrachloroethane	<0.230	<b>C</b>	ug/L	0.230	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Tetrachloroethene	<0.240		ug/L	0.240	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Tetrahydrofuran	<2.05		ug/L	2.05	50.0	1	04/12/07 21:19	DMD	7040645	SW 8260B
Toluene	<0.100		ug/L	0.100	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,2,3-Trichlorobenzene	<2.15		ug/L	2.15	5.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,2,4-Trichlorobenzene	<0.490		ug/L	0.490	5.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,1,1-Trichloroethane	<0.150		ug/L	0.150	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,1,2-Trichloroethane	<0.300		ug/L	0.300	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535  
 Project: DeZurik and Sartell Landfills  
 Project Number: Sartell, MN

Received: 04/11/07  
 Reported: 04/27/07 15:11

## ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Seq/ Analyst	Batch	Method
Sample ID: CQD0535-02 (P-5R - Ground Water) - cont.					Sampled: 04/10/07 11:35			Recvd: 04/11/07 09:30		
Volatile Organic Compounds - cont.										
Trichloroethene	<0.170		ug/L	0.170	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Trichlorofluoromethane	<0.150		ug/L	0.150	4.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,2,3-Trichloropropane	<0.180		ug/L	0.180	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,1,2-Trichlorotrifluoroethane	<0.270		ug/L	0.270	2.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,2,4-Trimethylbenzene	<0.160		ug/L	0.160	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
1,3,5-Trimethylbenzene	<0.140		ug/L	0.140	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Vinyl chloride	<0.160		ug/L	0.160	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
m,p-Xylene	<0.300		ug/L	0.300	2.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
o-Xylene	<0.170		ug/L	0.170	1.00	1	04/12/07 21:19	DMD	7040645	SW 8260B
Surrogate: Dibromofluoromethane (80-120%)	95 %									
Surrogate: Toluene-d8 (80-110%)	96 %									
Surrogate: 4-Bromofluorobenzene (65-115%)	90 %									

LBG - SIOUX FALLS - LANDFILLS  
140 East Hinks Lane, #126  
Sioux Falls, SD 57104  
Melissa Karstens

Work Order: CQD0535

Received: 04/11/07  
Reported: 04/27/07 15:11

Project: DeZurik and Sartell Landfills  
Project Number: Sartell, MN

## ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Seq/ Analyst Batch	Method
Sample ID: CQD0535-02 (P-5R - Ground Water) - cont.				Sampled: 04/10/07 11:35		Recvd: 04/11/07 09:30		
Volatile Organic Compounds - cont.								
VOC Preservation Check								
H	<2.00		units	2.00	1	04/13/07 13:04	sjn 7040654	SW



LBG - SIOUX FALLS - LANDFILLS  
140 East Hinks Lane, #126  
Sioux Falls, SD 57104  
Melissa Karstens

Work Order: CQD0535  
Project: DeZurik and Sartell Landfills  
Project Number: Sartell, MN

Received: 04/11/07  
Reported: 04/27/07 15:11

## ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Seq/ Analyst	Batch	Method
Sample ID: CQD0535-02 (P-5R - Ground Water) - cont.					Sampled: 04/10/07 11:35			Recvd: 04/11/07 09:30		
OC Preservation Check - cont.										
General Chemistry Parameters										
Cyanide	<0.00200		mg/L	0.00200	0.00500	1	04/20/07 21:12	NDJ	7043885	EPA 335.4
Oxidation/Reduction Potential	443	H3	mV vs. NHE	3.00	3.00	1	04/17/07 13:50	TCB	7042981	SM 2580

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535  
 Project: DeZurik and Sartell Landfills  
 Project Number: Sartell, MN

Received: 04/11/07  
 Reported: 04/27/07 15:11

## LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Spike		Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	REC Limits	RPD RPD	RPD Limit	Q
		Result	Level											
<b>General Chemistry Parameters</b>														
Chemical Oxygen Demand	7040521			mg/L	1.16	5.00	<1.16							
Total Suspended Solids	7040580			mg/L	2.27	3.00	<2.27							
Nitrate as N	7040599			mg/L	0.0220	0.100	0.0306							J
Nitrate/Nitrite as N	7040602			mg/L	0.0220	0.100	0.0306							J
Total Organic Carbon	7040643			mg/L	0.130	1.00	<0.130							
Chloride	7040697			mg/L	0.138	5.00	0.688							J
Sulfate	7040740			mg/L	3.05	10.0	<3.05							
Phenol	7040766			mg/L	0.00180	0.0200	<0.00180							
Fluoride	7040991			mg/L	0.0650	1.00	<0.0650							
Ammonia as N	7041003			mg/L	0.0210	0.200	<0.0210							
<b>General Chemistry Parameters - Dissolved</b>														
Total Dissolved Solids	7040587			mg/L	11.0	20.0	<11.0							
<b>Dissolved Metals by SW 846 Series Methods</b>														
Cadmium	7040533			mg/L	0.0001300	0.000500	<0.000130							
Selenium	7040617			mg/L	0.00220	0.00500	<0.00220							
Lead	7040626			mg/L	0.000590	0.00400	<0.000590							
Arsenic	7040627			mg/L	0.000420	0.00100	<0.000420							
Mercury	7040849			ug/L	0.0140	0.200	<0.0140							
Barium	7040899			mg/L	0.000580	0.0100	<0.000580							
Boron	7040899			mg/L	0.0680	0.100	<0.0680							
Calcium	7040899			mg/L	0.0149	1.00	<0.0149							
Chromium	7040899			mg/L	0.0152	0.0200	<0.0152							
Copper	7040899			mg/L	0.0130	0.0200	<0.0130							
Iron	7040899			mg/L	0.0123	0.100	<0.0123							
Magnesium	7040899			mg/L	0.00985	1.00	<0.00985							
Manganese	7040899			mg/L	0.000660	0.0100	<0.000660							
Potassium	7040899			mg/L	0.0516	1.00	<0.0516							
Sodium	7040899			mg/L	0.0878	1.00	<0.0878							
Zinc	7040899			mg/L	0.00527	0.0200	<0.00527							

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535  
 Project: DeZurik and Sartell Landfills  
 Project Number: Sartell, MN

Received: 04/11/07  
 Reported: 04/27/07 15:11

## LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Spike Result Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC	RPD Limits	RPD Limit	Q
<b>Volatile Organic Compounds</b>												
Acetone	7040645		ug/L	4.62	10.0	<4.62						
Allyl chloride	7040645		ug/L	0.190	2.00	<0.190						
Benzene	7040645		ug/L	0.160	0.500	<0.160						
Bromobenzene	7040645		ug/L	0.170	1.00	<0.170						
Bromochloromethane	7040645		ug/L	0.310	5.00	<0.310						
Bromodichloromethane	7040645		ug/L	0.120	1.00	<0.120						
Bromoform	7040645		ug/L	0.150	5.00	<0.150						
Bromomethane	7040645		ug/L	0.480	4.00	<0.480						
2-Butanone (MEK)	7040645		ug/L	0.910	10.0	<0.910						
n-Butylbenzene	7040645		ug/L	0.0900	1.00	<0.0900						
sec-Butylbenzene	7040645		ug/L	0.120	1.00	0.180						J
tert-Butylbenzene	7040645		ug/L	0.140	1.00	0.180						J
Carbon Tetrachloride	7040645		ug/L	0.130	2.00	<0.130						
Chlorobenzene	7040645		ug/L	0.0800	1.00	<0.0800						
Chlorodibromomethane	7040645		ug/L	0.250	5.00	<0.250						
Dichlorofluoromethane	7040645		ug/L	0.120	1.00	<0.120						
Chloroethane	7040645		ug/L	0.500	4.00	<0.500						
Chloroform	7040645		ug/L	0.0800	1.00	<0.0800						
Chloromethane	7040645		ug/L	0.200	3.00	<0.200						
2-Chlorotoluene	7040645		ug/L	0.200	1.00	<0.200						
4-Chlorotoluene	7040645		ug/L	0.150	1.00	<0.150						
1,2-Dibromo-3-chloropropane	7040645		ug/L	0.750	10.0	<0.750						
1,2-Dibromoethane (EDB)	7040645		ug/L	0.130	10.0	<0.130						
Dibromomethane	7040645		ug/L	0.220	1.00	<0.220						
1,2-Dichlorobenzene	7040645		ug/L	0.150	1.00	<0.150						
1,3-Dichlorobenzene	7040645		ug/L	0.130	1.00	<0.130						
1,4-Dichlorobenzene	7040645		ug/L	0.120	1.00	<0.120						
Dichlorodifluoromethane	7040645		ug/L	0.170	3.00	<0.170						
1,1-Dichloroethane	7040645		ug/L	0.0900	1.00	<0.0900						
1,2-Dichloroethane	7040645		ug/L	0.160	1.00	<0.160						
1,1-Dichloroethene	7040645		ug/L	0.190	2.00	<0.190						
cis-1,2-Dichloroethene	7040645		ug/L	0.200	1.00	<0.200						
trans-1,2-Dichloroethene	7040645		ug/L	0.150	1.00	<0.150						
1,2-Dichloropropane	7040645		ug/L	0.400	1.00	<0.400						
1,3-Dichloropropane	7040645		ug/L	0.190	1.00	<0.190						
2,2-Dichloropropane	7040645		ug/L	0.240	4.00	<0.240						
1,1-Dichloropropene	7040645		ug/L	0.170	1.00	<0.170						
cis-1,3-Dichloropropene	7040645		ug/L	0.160	5.00	<0.160						
trans-1,3-Dichloropropene	7040645		ug/L	0.160	5.00	<0.160						
Diethyl ether	7040645		ug/L	0.350	1.70	<0.350						
Ethylbenzene	7040645		ug/L	0.180	1.00	<0.180						
Hexachlorobutadiene	7040645		ug/L	0.390	5.00	0.670						J
Isopropylbenzene	7040645		ug/L	0.190	1.00	<0.190						
p-Isopropyltoluene	7040645		ug/L	0.130	1.00	<0.130						
m-Methyl-2-pentanone (MIBK)	7040645		ug/L	0.310	10.0	<0.310						

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535  
 Project: DeZurik and Sartell Landfills  
 Project Number: Sartell, MN

Received: 04/11/07  
 Reported: 04/27/07 15:11

## LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Spike		Units	MDL	MRL	Dup %		Dup % REC	RPD	Q
		Result	Level				Result	REC			
<b>Volatile Organic Compounds</b>											
Methylene Chloride	7040645			ug/L	0.450	5.00	<0.450				
Methyl tert-Butyl Ether	7040645			ug/L	0.120	1.00	<0.120				
Naphthalene	7040645			ug/L	0.350	5.00	<0.350				
n-Propylbenzene	7040645			ug/L	0.140	1.00	<0.140				
Styrene	7040645			ug/L	0.100	1.00	<0.100				
1,1,1,2-Tetrachloroethane	7040645			ug/L	0.160	1.00	<0.160				
1,1,1,2,2-Tetrachloroethane	7040645			ug/L	0.230	1.00	<0.230				
Tetrachloroethene	7040645			ug/L	0.240	1.00	<0.240				
Tetrahydrofuran	7040645			ug/L	2.05	50.0	<2.05				
Toluene	7040645			ug/L	0.100	1.00	<0.100				
1,2,3-Trichlorobenzene	7040645			ug/L	2.15	5.00	<2.15				
1,2,4-Trichlorobenzene	7040645			ug/L	0.490	5.00	<0.490				
1,1,1-Trichloroethane	7040645			ug/L	0.150	1.00	<0.150				
1,1,2-Trichloroethane	7040645			ug/L	0.300	1.00	<0.300				
Trichloroethene	7040645			ug/L	0.170	1.00	<0.170				
Trichlorofluoromethane	7040645			ug/L	0.150	4.00	<0.150				
1,2,3-Trichloropropane	7040645			ug/L	0.180	1.00	<0.180				
1,1,2-Trichlorotrifluoroethane	7040645			ug/L	0.270	2.00	<0.270				
1,2,4-Trimethylbenzene	7040645			ug/L	0.160	1.00	<0.160				
1,3,5-Trimethylbenzene	7040645			ug/L	0.140	1.00	<0.140				
Vinyl chloride	7040645			ug/L	0.160	1.00	<0.160				
1,4-Xylene	7040645			ug/L	0.300	2.00	<0.300				
o-Xylene	7040645			ug/L	0.170	1.00	<0.170				
Surrogate: Dibromofluoromethane	7040645			ug/L				105		80-120	
Surrogate: Toluene-d8	7040645			ug/L				96		80-110	
Surrogate: 4-Bromofluorobenzene	7040645			ug/L				90		65-115	
<b>General Chemistry Parameters</b>											
Cyanide	7043885			mg/L	0.00200	0.00500	<0.00200				

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535

Received: 04/11/07  
 Reported: 04/27/07 15:11

Project: DeZurik and Sartell Landfills

Project Number: Sartell, MN

## LABORATORY DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Spike Result Level	Units	MDL	MRL	Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
<b>General Chemistry Parameters</b>												
pH	7040529		pH Units	0.1	0.1	7.0					10	H3
pH	7040529		pH Units	0.1	0.1	8.0					10	H3
<b>QC Source Sample: CQD0531-01</b>												
Total Suspended Solids	7040580	6.00	mg/L	2.27	3.00	6.33				5	20	
<b>QC Source Sample: CQD0555-01</b>												
Total Suspended Solids	7040580	107	mg/L	6.81	9.00	106				1	20	
<b>QC Source Sample: CQD0492-01</b>												
Specific conductance	7040593	1040	umhos/cm	0.530	1.00	1026				1	10	
<b>General Chemistry Parameters - Dissolved</b>												
<b>QC Source Sample: CQD0473-01</b>												
Total Dissolved Solids	7040587	10900	mg/L	11.0	20.0	8400				26	20	R
<b>QC Source Sample: CQD0530-01</b>												
Total Dissolved Solids	7040587	292	mg/L	11.0	20.0	320				9	20	
<b>Dissolved Metals by SW 846 Series Methods</b>												
<b>QC Source Sample: CQD0534-01</b>												
Cadmium	7040533	<0.00013	mg/L	0.0001300	0.000500	<0.0001300					20	
<b>QC Source Sample: CQD0473-01</b>												
Selenium	7040617	<0.0022	mg/L	0.00220	0.00500	<0.00220					20	
<b>QC Source Sample: CQD0537-03</b>												
Selenium	7040617	<0.0022	mg/L	0.00220	0.00500	<0.00220					20	
<b>QC Source Sample: CQD0473-01</b>												
Lead	7040626	<0.00059	mg/L	0.000590	0.00400	<0.000590					20	
<b>QC Source Sample: CQD0535-01</b>												
Lead	7040626	<0.00059	mg/L	0.000590	0.00400	<0.000590					20	
<b>QC Source Sample: CQD0473-02</b>												
Arsenic	7040627	0.00136	mg/L	0.000420	0.00100	0.00138				1	15	
<b>QC Source Sample: CQD0535-01</b>												
Arsenic	7040627	<0.00042	mg/L	0.000420	0.00100	<0.000420					15	
<b>QC Source Sample: CQD0534-01</b>												
Barium	7040899	0.0700	mg/L	0.000580	0.0100	0.0713				2	20	
Boron	7040899	0.357	mg/L	0.0680	0.100	0.378				6	20	
Calcium	7040899	129	mg/L	0.0149	1.00	133				3	20	
Chromium	7040899	<0.015	mg/L	0.0152	0.0200	<0.0152					10	
Copper	7040899	<0.013	mg/L	0.0130	0.0200	<0.0130					20	
Iron	7040899	0.0127	mg/L	0.0123	0.100	<0.0123					15	
Magnesium	7040899	36.9	mg/L	0.00985	1.00	38.8				5	15	
Manganese	7040899	1.43	mg/L	0.000660	0.0100	1.50				5	15	
Potassium	7040899	3.45	mg/L	0.0516	1.00	3.71				7	10	
Sodium	7040899	31.1	mg/L	0.0878	1.00	32.4				4	10	
Zinc	7040899	<0.0053	mg/L	0.00527	0.0200	<0.00527					20	
<b>QC Source Sample: CQD0599-02</b>												
Barium	7040899	0.0302	mg/L	0.000580	0.0100	0.0297				2	20	
Boron	7040899	<0.068	mg/L	0.0680	0.100	<0.0680					20	
Calcium	7040899	78.4	mg/L	0.0149	1.00	79.3				1	20	
Chromium	7040899	<0.015	mg/L	0.0152	0.0200	<0.0152					10	
Copper	7040899	<0.013	mg/L	0.0130	0.0200	<0.0130					20	
Iron	7040899	<0.012	mg/L	0.0123	0.100	<0.0123					15	
Magnesium	7040899	20.9	mg/L	0.00985	1.00	21.6				3	15	
Manganese	7040899	<0.00066	mg/L	0.000660	0.0100	<0.000660					15	
Potassium	7040899	1.13	mg/L	0.0516	1.00	1.08				5	10	

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535  
 Project: DeZurik and Sartell Landfills  
 Project Number: Sartell, MN

Received: 04/11/07  
 Reported: 04/27/07 15:11

## LABORATORY DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Spike Result Level	Units	MDL	MRL	Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
<b>Dissolved Metals by SW 846 Series Methods</b>												
<b>QC Source Sample: CQD0599-02</b>												
Sodium	7040899	4.89	mg/L	0.0878	1.00	4.71				4	10	
Zinc	7040899	<0.0053	mg/L	0.00527	0.0200	<0.00527					20	
<b>General Chemistry Parameters</b>												
<b>QC Source Sample: NQD1500-03</b>												
Oxidation/Reduction Potential	7042981	436	nV vs. NHE	3.00	3.00	435				0	200	H3
<b>QC Source Sample: NQD1685-01</b>												
Cyanide	7043885	<0.0020	mg/L	0.00200	0.00500	<0.00200					29	

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535  
 Project: DeZurik and Sartell Landfills  
 Project Number: Sartell, MN

Received: 04/11/07  
 Reported: 04/27/07 15:11

## LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	Limit	Q
<b>General Chemistry Parameters</b>													
Chemical Oxygen Demand	7040521		251	mg/L	2.32	10.0	273		109	90-110			
pH	7040529			pH Units	0.1	0.1	7.0			98-102			H3
Total Suspended Solids	7040580		100	mg/L	N/A	N/A	96.0		96	80-115			
Specific conductance	7040593		479.0	umhos/cm	N/A	N/A	469.0		98	85-115			
Nitrate as N	7040599		4.27	mg/L	0.275	1.25	4.38		103	90-110			
Nitrate/Nitrite as N	7040602		4.27	mg/L	0.275	1.25	4.38		103	80-120			
Total Organic Carbon	7040643		20.3	mg/L	0.520	4.00	20.2		100	85-110			
Chloride	7040697		81.3	mg/L	N/A	N/A	83.6		103	90-110			
Sulfate	7040740		46.0	mg/L	6.10	20.0	43.4		94	85-120			
Phenol	7040766		0.160	mg/L	0.00180	0.0200	0.159		99	90-110			
Alkalinity, Total (CaCO3)	7040800		35.6	mg/L	N/A	N/A	35.0		98	80-115			
Fluoride	7040991		100	mg/L	0.419	6.44	90.2		90	80-110			
Ammonia as N	7041003		8.37	mg/L	0.0210	0.200	8.55		102	90-110			
<b>General Chemistry Parameters - Dissolved</b>													
Total Dissolved Solids	7040587		1000	mg/L	N/A	N/A	1020		102	90-110			
<b>Dissolved Metals by SW 846 Series Methods</b>													
Cadmium	7040533		0.0221	mg/L	0.0001300	0.000500	0.0216		98	80-120			
Selenium	7040617		0.151	mg/L	0.00220	0.00500	0.149		99	80-115			
Lead	7040626		0.169	ug/mL	N/A	N/A	0.166		98	85-115			
Arsenic	7040627		0.0541	ug/mL	N/A	N/A	0.0532		98	80-120			
Mercury	7040849		1.64	ug/L	N/A	N/A	1.68		102	75-130			
Barium	7040899		2.00	mg/L	0.000580	0.0100	1.87		94	85-115			
Boron	7040899		2.00	mg/L	0.0680	0.100	1.94		97	85-110			
Calcium	7040899		10.0	mg/L	0.0149	1.00	9.69		97	85-115			
Chromium	7040899		2.00	mg/L	0.0152	0.0200	1.96		98	85-115			
Copper	7040899		2.00	mg/L	0.0130	0.0200	2.01		100	85-115			
Iron	7040899		10.0	mg/L	0.0123	0.100	9.93		99	85-115			
Magnesium	7040899		10.0	mg/L	0.00985	1.00	10.0		100	85-115			
Manganese	7040899		2.00	mg/L	0.000660	0.0100	1.93		96	85-110			
Potassium	7040899		50.0	mg/L	0.0516	1.00	49.9		100	90-120			
Sodium	7040899		50.0	mg/L	0.0878	1.00	49.1		98	90-120			
Zinc	7040899		2.00	mg/L	0.00527	0.0200	1.98		99	85-115			

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535  
 Project: DeZurik and Sartell Landfills  
 Project Number: Sartell, MN

Received: 04/11/07  
 Reported: 04/27/07 15:11

## LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC	REC Limits	RPD RPD	RPD Limit	Q
<b>Dissolved Metals by SW 846 Series Methods</b>														
<b>Volatile Organic Compounds</b>														
Acetone	7040645		20.0	ug/L	N/A	N/A	24.1		120		50-145			
Allyl chloride	7040645		20.0	ug/L	N/A	N/A	21.3		106		60-150			
Benzene	7040645		20.0	ug/L	N/A	N/A	20.4		102		75-125			
Bromobenzene	7040645		20.0	ug/L	N/A	N/A	17.7		88		75-120			
Bromochloromethane	7040645		20.0	ug/L	N/A	N/A	20.2		101		70-140			
Bromodichloromethane	7040645		20.0	ug/L	N/A	N/A	17.2		86		75-115			
Bromoform	7040645		20.0	ug/L	N/A	N/A	15.7		78		55-115			
Bromomethane	7040645		20.0	ug/L	N/A	N/A	14.4		72		40-130			
2-Butanone (MEK)	7040645		20.0	ug/L	N/A	N/A	21.1		106		50-140			
i-Butylbenzene	7040645		20.0	ug/L	N/A	N/A	20.3		102		65-130			
sec-Butylbenzene	7040645		20.0	ug/L	N/A	N/A	19.9		100		70-125			
tert-Butylbenzene	7040645		20.0	ug/L	N/A	N/A	19.0		95		70-125			
Carbon Tetrachloride	7040645		20.0	ug/L	N/A	N/A	15.8		79		65-120			
Chlorobenzene	7040645		20.0	ug/L	N/A	N/A	18.6		93		75-115			
Chlorodibromomethane	7040645		20.0	ug/L	N/A	N/A	14.6		73		65-110			
Dichlorofluoromethane	7040645		20.0	ug/L	N/A	N/A	21.6		108		65-150			
Chloroethane	7040645		20.0	ug/L	N/A	N/A	23.4		117		60-145			
Chloroform	7040645		20.0	ug/L	N/A	N/A	20.8		104		70-125			
Chloromethane	7040645		20.0	ug/L	N/A	N/A	21.1		106		35-130			
2-Chlorotoluene	7040645		20.0	ug/L	N/A	N/A	15.4		77		75-125			
o-Chlorotoluene	7040645		20.0	ug/L	N/A	N/A	19.0		95		70-125			
1,2-Dibromo-3-chloropropane	7040645		20.0	ug/L	N/A	N/A	17.0		85		35-120			
1,2-Dibromoethane (EDB)	7040645		20.0	ug/L	N/A	N/A	19.1		96		75-120			
Dibromomethane	7040645		20.0	ug/L	N/A	N/A	22.7		114		75-125			
o,2-Dichlorobenzene	7040645		20.0	ug/L	N/A	N/A	18.6		93		70-115			
1,3-Dichlorobenzene	7040645		20.0	ug/L	N/A	N/A	18.8		94		70-120			
1,4-Dichlorobenzene	7040645		20.0	ug/L	N/A	N/A	19.2		96		70-120			
Dichlorodifluoromethane	7040645		20.0	ug/L	N/A	N/A	13.7		68		50-140			
1,1-Dichloroethane	7040645		20.0	ug/L	N/A	N/A	21.5		108		50-145			
1,2-Dichloroethane	7040645		20.0	ug/L	N/A	N/A	20.0		100		70-130			
1,1-Dichloroethene	7040645		20.0	ug/L	N/A	N/A	21.9		110		65-135			
cis-1,2-Dichloroethene	7040645		20.0	ug/L	N/A	N/A	21.6		108		75-130			
trans-1,2-Dichloroethene	7040645		20.0	ug/L	N/A	N/A	21.4		107		65-130			
1,2-Dichloropropane	7040645		20.0	ug/L	N/A	N/A	20.4		102		70-125			
1,3-Dichloropropane	7040645		20.0	ug/L	N/A	N/A	20.8		104		75-125			
1,2-Dichloropropane	7040645		20.0	ug/L	N/A	N/A	12.7		64		35-130			
1,1-Dichloropropene	7040645		20.0	ug/L	N/A	N/A	21.2		106		65-130			
cis-1,3-Dichloropropene	7040645		20.0	ug/L	N/A	N/A	16.9		84		55-115			
trans-1,3-Dichloropropene	7040645		20.0	ug/L	N/A	N/A	15.6		78		45-120			
Diethyl ether	7040645		20.0	ug/L	N/A	N/A	23.4		117		65-130			
Ethylbenzene	7040645		20.0	ug/L	N/A	N/A	19.1		96		75-125			
Hexachlorobutadiene	7040645		20.0	ug/L	N/A	N/A	16.9		84		65-110			
Isopropylbenzene	7040645		20.0	ug/L	N/A	N/A	18.3		92		75-120			
p-Isopropyltoluene	7040645		20.0	ug/L	N/A	N/A	19.3		96		70-125			



LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535  
 Project: DeZurik and Sartell Landfills  
 Project Number: Sartell, MN

Received: 04/11/07  
 Reported: 04/27/07 15:11

### LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup		% REC	Dup %REC	%REC Limits	RPD RPD	RPD Limit	Q
							Result	Result						
<b>Volatile Organic Compounds</b>														
1-Methyl-2-pentanone (MIBK)	7040645		20.0	ug/L	N/A	N/A		21.6		108			65-120	
Methylene Chloride	7040645		20.0	ug/L	N/A	N/A		21.4		107			65-135	
Methyl tert-Butyl Ether	7040645		20.0	ug/L	N/A	N/A		21.0		105			60-135	
Naphthalene	7040645		20.0	ug/L	N/A	N/A		22.0		110			25-120	
i-Propylbenzene	7040645		20.0	ug/L	N/A	N/A		21.0		105			65-125	
Styrene	7040645		20.0	ug/L	N/A	N/A		18.2		91			70-120	
1,1,1,2-Tetrachloroethane	7040645		20.0	ug/L	N/A	N/A		16.4		82			75-115	
1,1,2,2-Tetrachloroethane	7040645		20.0	ug/L	N/A	N/A		20.2		101			70-120	
Tetrachloroethene	7040645		20.0	ug/L	N/A	N/A		17.5		88			70-120	
Tetrahydrofuran	7040645		20.0	ug/L	N/A	N/A		26.3		132			40-135	
Toluene	7040645		20.0	ug/L	N/A	N/A		19.1		96			75-120	
1,2,3-Trichlorobenzene	7040645		20.0	ug/L	N/A	N/A		19.5		98			30-125	
1,2,4-Trichlorobenzene	7040645		20.0	ug/L	N/A	N/A		18.1		90			50-110	
1,1,1-Trichloroethane	7040645		20.0	ug/L	N/A	N/A		17.6		88			70-120	
1,1,2-Trichloroethane	7040645		20.0	ug/L	N/A	N/A		20.7		104			75-120	
Trichloroethene	7040645		20.0	ug/L	N/A	N/A		20.2		101			75-120	
Trichlorofluoromethane	7040645		20.0	ug/L	N/A	N/A		18.7		94			65-130	
1,2,3-Trichloropropane	7040645		20.0	ug/L	N/A	N/A		18.9		94			75-120	
1,1,2-Trichlorotrifluoroethane	7040645		20.0	ug/L	N/A	N/A		21.8		109			65-135	
1,2,4-Trimethylbenzene	7040645		20.0	ug/L	N/A	N/A		17.4		87			70-120	
1,3,5-Trimethylbenzene	7040645		20.0	ug/L	N/A	N/A		17.1		86			75-125	
Vinyl chloride	7040645		20.0	ug/L	N/A	N/A		20.8		104			60-135	
m,p-Xylene	7040645		40.0	ug/L	N/A	N/A		35.2		88			70-130	
o-Xylene	7040645		20.0	ug/L	N/A	N/A		18.5		92			75-120	
Surrogate: Dibromofluoromethane	7040645			ug/L						103			80-115	
Surrogate: Toluene-d8	7040645			ug/L						95			85-110	
Surrogate: 4-Bromofluorobenzene	7040645			ug/L						91			80-115	
<b>General Chemistry Parameters</b>														
Cyanide	7043885		0.100	ug/mL	N/A	N/A		0.0991		99			90-110	

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535  
 Project: DeZurik and Sartell Landfills  
 Project Number: Sartell, MN

Received: 04/11/07  
 Reported: 04/27/07 15:11

## MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Spike Result	Level	Units	MDL	MRL	Dup Result	% Result	Dup % REC	% REC Limits	RPD RPD	RPD Limit	Q	
<b>General Chemistry Parameters</b>														
QC Source Sample: CQD0429-06														
Chemical Oxygen Demand	7040521	<1.16	50.0	mg/L	1.16	5.00	48.8	59.7	98	119	75-125	20	20	
QC Source Sample: CQD0507-07														
Nitrate as N	7040599	0.0465	0.200	mg/L	0.0220	0.100	0.224	0.219	89	86	75-125	2	15	
QC Source Sample: CQD0441-01														
Total Organic Carbon	7040643	56.1	50.0	mg/L	1.30	10.0	105	106	98	100	75-125	1	20	
QC Source Sample: CQD0507-07														
Chloride	7040697	111	25.0	mg/L	0.138	5.00	130	131	76	80	90-110	1	20	M1a
QC Source Sample: CQD0507-07														
Sulfate	7040740	55.0	20.0	mg/L	6.10	20.0	76.3	75.8	106	104	75-125	1	15	
QC Source Sample: CQD0472-01														
Phenol	7040766	<0.0018	0.160	mg/L	0.00180	0.0200	0.158	0.162	99	101	90-110	2	15	
QC Source Sample: CQD0507-07														
Alkalinity, Total (CaCO3)	7040800	490	114	mg/L	N/A	N/A	612	612	107	107	75-125	0	10	
QC Source Sample: CQD0491-01														
Fluoride	7040991	126	25.0	mg/L	0.926	14.2	150	148	96	88	75-125	1	20	
QC Source Sample: CQD0429-01														
Ammonia as N	7041003	<0.021	10.0	mg/L	0.0210	0.200	9.30	9.17	93	92	90-110	1	20	
<b>Dissolved Metals by SW 846 Series Methods</b>														
QC Source Sample: CQD0534-01														
Mercury	7040849	0.0106	1.64	ug/L	N/A	N/A	1.62	1.64	98	99	75-130	1	10	
<b>Volatile Organic Compounds</b>														
QC Source Sample: CQD0473-02														
Acetone	7040645	7.91	20.0	ug/L	N/A	N/A	28.7	26.8	104	94	50-145	7	35	
Allyl chloride	7040645	<0.19	20.0	ug/L	N/A	N/A	21.9	21.1	110	106	60-155	4	30	
Benzene	7040645	<0.16	20.0	ug/L	N/A	N/A	20.2	20.5	101	102	70-125	1	15	
Bromobenzene	7040645	<0.17	20.0	ug/L	N/A	N/A	17.1	17.6	86	88	75-120	3	15	
Bromochloromethane	7040645	<0.31	20.0	ug/L	N/A	N/A	19.9	19.3	100	96	70-140	3	20	
Bromodichloromethane	7040645	<0.12	20.0	ug/L	N/A	N/A	17.5	17.4	88	87	70-120	1	20	
Bromoform	7040645	<0.15	20.0	ug/L	N/A	N/A	16.8	16.6	84	83	50-120	1	20	
Bromomethane	7040645	<0.48	20.0	ug/L	N/A	N/A	15.6	15.1	78	76	40-135	3	30	
2-Butanone (MEK)	7040645	<0.91	20.0	ug/L	N/A	N/A	22.0	22.0	110	110	50-145	0	35	
n-Butylbenzene	7040645	0.0900	20.0	ug/L	N/A	N/A	18.4	17.7	92	88	55-130	4	20	
sec-Butylbenzene	7040645	<0.12	20.0	ug/L	N/A	N/A	18.4	19.6	92	98	65-125	6	20	
tert-Butylbenzene	7040645	0.170	20.0	ug/L	N/A	N/A	17.3	18.2	86	90	55-135	5	20	
Carbon Tetrachloride	7040645	<0.13	20.0	ug/L	N/A	N/A	15.6	15.8	78	79	60-115	1	20	
Chlorobenzene	7040645	<0.080	20.0	ug/L	N/A	N/A	18.0	18.8	90	94	70-115	4	15	
Chlorodibromomethane	7040645	<0.25	20.0	ug/L	N/A	N/A	15.4	15.0	77	75	55-125	3	20	
Dichlorofluoromethane	7040645	<0.12	20.0	ug/L	N/A	N/A	20.6	20.0	103	100	70-135	3	20	
Chloroethane	7040645	<0.50	20.0	ug/L	N/A	N/A	21.5	22.7	108	114	60-140	5	20	
Chloroform	7040645	<0.080	20.0	ug/L	N/A	N/A	20.1	19.4	100	97	65-125	4	20	
Chloromethane	7040645	<0.20	20.0	ug/L	N/A	N/A	20.1	21.0	100	105	30-125	4	35	
2-Chlorotoluene	7040645	<0.20	20.0	ug/L	N/A	N/A	16.0	17.7	80	88	65-125	10	25	
4-Chlorotoluene	7040645	<0.15	20.0	ug/L	N/A	N/A	16.8	18.1	84	90	65-130	7	20	
1,2-Dibromo-3-chloropropane	7040645	<0.75	20.0	ug/L	N/A	N/A	18.2	20.1	91	100	45-140	10	35	
1,2-Dibromoethane (EDB)	7040645	<0.13	20.0	ug/L	N/A	N/A	19.5	20.6	98	103	70-130	5	15	
Dibromomethane	7040645	<0.22	20.0	ug/L	N/A	N/A	21.2	21.0	106	105	75-130	1	25	

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535  
 Project: DeZurik and Sartell Landfills  
 Project Number: Sartell, MN

Received: 04/11/07  
 Reported: 04/27/07 15:11

## MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% Result	Dup %REC	% REC	REC Limits	RPD RPD	RPD Limit	Q
<b>Volatile Organic Compounds</b>														
<b>QC Source Sample: CQD0473-02</b>														
1,2-Dichlorobenzene	7040645	<0.15	20.0	ug/L	N/A	N/A	17.8	17.3	89	86	75-120	3	20	
1,3-Dichlorobenzene	7040645	<0.13	20.0	ug/L	N/A	N/A	17.6	17.8	88	89	70-120	1	20	
1,4-Dichlorobenzene	7040645	<0.12	20.0	ug/L	N/A	N/A	18.1	17.4	90	87	65-125	4	20	
Dichlorodifluoromethane	7040645	<0.17	20.0	ug/L	N/A	N/A	13.0	12.6	65	63	40-130	3	20	
1,1-Dichloroethane	7040645	<0.090	20.0	ug/L	N/A	N/A	21.3	20.0	106	100	55-135	6	20	
1,2-Dichloroethane	7040645	<0.16	20.0	ug/L	N/A	N/A	19.4	19.2	97	96	60-140	1	30	
1,1-Dichloroethene	7040645	<0.19	20.0	ug/L	N/A	N/A	20.7	21.0	104	105	55-130	1	20	
cis-1,2-Dichloroethene	7040645	<0.20	20.0	ug/L	N/A	N/A	21.5	20.3	108	102	65-135	6	20	
trans-1,2-Dichloroethene	7040645	<0.15	20.0	ug/L	N/A	N/A	19.6	19.0	98	95	60-125	3	20	
1,2-Dichloropropane	7040645	<0.40	20.0	ug/L	N/A	N/A	20.3	20.6	102	103	65-125	1	20	
1,3-Dichloropropane	7040645	<0.19	20.0	ug/L	N/A	N/A	21.6	21.6	108	108	70-125	0	15	
2,2-Dichloropropane	7040645	<0.24	20.0	ug/L	N/A	N/A	6.70	13.0	34	65	30-125	64	35	R
1,1-Dichloropropene	7040645	<0.17	20.0	ug/L	N/A	N/A	20.2	19.3	101	96	55-130	5	20	
cis-1,3-Dichloropropene	7040645	<0.16	20.0	ug/L	N/A	N/A	17.0	16.7	85	84	55-115	2	20	
trans-1,3-Dichloropropene	7040645	<0.16	20.0	ug/L	N/A	N/A	16.2	16.4	81	82	40-120	1	20	
Diethyl ether	7040645	<0.35	20.0	ug/L	N/A	N/A	23.0	21.5	115	108	60-135	7	20	
Ethylbenzene	7040645	<0.18	20.0	ug/L	N/A	N/A	17.3	18.7	86	94	65-125	8	15	
1,2,3,4-Tetrachlorobutadiene	7040645	<0.39	20.0	ug/L	N/A	N/A	15.3	15.2	76	76	50-130	1	25	
Isopropylbenzene	7040645	<0.19	20.0	ug/L	N/A	N/A	17.6	17.7	88	88	60-130	1	20	
p-Isopropyltoluene	7040645	<0.13	20.0	ug/L	N/A	N/A	18.2	18.7	91	94	65-125	3	20	
2-Methyl-2-pentanone (MIBK)	7040645	<0.31	20.0	ug/L	N/A	N/A	23.7	24.1	118	120	60-135	2	20	
Methylene Chloride	7040645	<0.45	20.0	ug/L	N/A	N/A	20.4	19.3	102	96	60-135	6	20	
Methyl tert-Butyl Ether	7040645	<0.12	20.0	ug/L	N/A	N/A	21.9	21.0	110	105	50-145	4	25	
Naphthalene	7040645	<0.35	20.0	ug/L	N/A	N/A	21.9	22.1	110	110	55-150	1	35	
1,2-Dichloropropane	7040645	<0.14	20.0	ug/L	N/A	N/A	18.8	17.6	94	88	50-130	7	30	
Styrene	7040645	<0.10	20.0	ug/L	N/A	N/A	18.1	18.4	90	92	30-125	2	30	
1,1,1,2-Tetrachloroethane	7040645	<0.16	20.0	ug/L	N/A	N/A	16.8	17.0	84	85	70-120	1	15	
1,1,2,2-Tetrachloroethane	7040645	<0.23	20.0	ug/L	N/A	N/A	21.7	22.2	108	111	65-135	2	20	
1,2-Dichloroethene	7040645	<0.24	20.0	ug/L	N/A	N/A	17.0	17.6	85	88	60-125	3	20	
Tetrahydrofuran	7040645	<2.05	20.0	ug/L	N/A	N/A	24.2	24.8	121	124	45-140	2	35	
Toluene	7040645	0.220	20.0	ug/L	N/A	N/A	18.6	19.5	92	96	60-130	5	15	
1,2,3-Trichlorobenzene	7040645	<2.15	20.0	ug/L	N/A	N/A	16.6	18.3	83	92	55-150	10	35	
1,2,4-Trichlorobenzene	7040645	<0.49	20.0	ug/L	N/A	N/A	15.9	16.3	80	82	60-130	2	30	
1,1,1-Trichloroethane	7040645	<0.15	20.0	ug/L	N/A	N/A	17.3	17.0	86	85	60-120	2	20	
1,1,2-Trichloroethane	7040645	<0.30	20.0	ug/L	N/A	N/A	21.4	20.6	107	103	70-125	4	20	
1,1,2-Trichloroethene	7040645	<0.17	20.0	ug/L	N/A	N/A	19.4	19.4	97	97	60-120	0	30	
1,1,2-Trichlorofluoromethane	7040645	<0.15	20.0	ug/L	N/A	N/A	17.8	17.0	89	85	60-125	5	20	
1,2,3-Trichloropropane	7040645	<0.18	20.0	ug/L	N/A	N/A	18.9	19.3	94	96	70-125	2	20	
1,1,2-Trichlorotrifluoroethane	7040645	<0.27	20.0	ug/L	N/A	N/A	19.5	18.1	98	90	55-125	7	20	
1,2,4-Trimethylbenzene	7040645	<0.16	20.0	ug/L	N/A	N/A	16.4	17.1	82	86	35-130	4	35	
1,3,5-Trimethylbenzene	7040645	<0.14	20.0	ug/L	N/A	N/A	16.8	17.7	84	88	40-135	5	30	
Vinyl chloride	7040645	<0.16	20.0	ug/L	N/A	N/A	20.9	19.6	104	98	55-130	6	20	
m,p-Xylene	7040645	<0.30	40.0	ug/L	N/A	N/A	35.8	36.5	90	91	45-140	2	15	
o-Xylene	7040645	<0.17	20.0	ug/L	N/A	N/A	18.2	19.1	91	96	45-140	5	30	
Surrogate: Dibromofluoromethane	7040645			ug/L					99	100	85-120			

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535  
 Project: DeZurik and Sartell Landfills  
 Project Number: Sartell, MN

Received: 04/11/07  
 Reported: 04/27/07 15:11

## MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Spike			MDL	MRL	Dup		% REC	Dup %REC	REC Limits	RPD		Q
		Result	Level	Units			Result	Result				RPD	Limit	
<b>Volatile Organic Compounds</b>														
QC Source Sample: CQD0473-02														
Surrogate: Toluene-d8	7040645			ug/L			98	101		85-110				
Surrogate: 4-Bromofluorobenzene	7040645			ug/L			91	96		75-115				
<b>General Chemistry Parameters</b>														
QC Source Sample: NQD1081-01														
Cyanide	7043885	0.000400	0.100	ug/mL	N/A	N/A	0.113	0.142	113	142	72-121	23	29	M1

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535  
 Project: DeZurik and Sartell Landfills  
 Project Number: Sartell, MN

Received: 04/11/07  
 Reported: 04/27/07 15:11

### OTHER

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% Dup REC	Dup % REC	% REC Limits	RPD RPD Limit	Q
<b>Dissolved Metals by SW 846 Series Methods</b>												
<b>QC Source Sample: CQD0534-02</b>												
Cadmium	7040533	0.000052	0.0011	ug/mL	N/A	N/A	0.00126		110	75-120		
			9									
<b>QC Source Sample: CQD0473-02</b>												
Selenium	7040617	-0.00257	0.0238	ug/mL	N/A	N/A	0.00870		47	75-125		S
<b>QC Source Sample: CQD0537-04</b>												
Selenium	7040617	-0.000957	0.0238	ug/mL	N/A	N/A	0.0219		96	75-125		
<b>QC Source Sample: CQD0473-02</b>												
Lead	7040626	-0.000700	0.0227	ug/mL	N/A	N/A	0.0130		60	75-125		M1a
<b>QC Source Sample: CQD0535-02</b>												
Lead	7040626	-0.000823	0.0227	ug/mL	N/A	N/A	0.0217		99	75-125		
<b>QC Source Sample: CQD0473-01</b>												
Arsenic	7040627	-0.000291	0.0227	ug/mL	N/A	N/A	0.0220		98	75-125		
<b>QC Source Sample: CQD0535-02</b>												
Arsenic	7040627	-0.000333	0.0227	ug/mL	N/A	N/A	0.0242		108	75-125		
<b>QC Source Sample: CQD0534-02</b>												
Barium	7040899	0.181	0.962	ug/mL	N/A	N/A	1.29		115	75-120		
Boron	7040899	0.0116	1.92	ug/mL	N/A	N/A	1.91		99	75-125		
Calcium	7040899	92.6	1.92	ug/mL	N/A	N/A	90.1		-130	75-125		MHA
Chromium	7040899	-0.000850	0.962	ug/mL	N/A	N/A	1.00		104	85-120		
Copper	7040899	-0.0219	1.92	ug/mL	N/A	N/A	2.27		119	80-125		
Iron	7040899	0.520	1.92	ug/mL	N/A	N/A	2.58		107	75-125		
Magnesium	7040899	29.1	1.92	ug/mL	N/A	N/A	30.4		68	75-125		MHA
Manganese	7040899	0.216	0.962	ug/mL	N/A	N/A	1.34		117	80-120		
Potassium	7040899	1.70	3.85	ug/mL	N/A	N/A	6.13		115	75-125		
Sodium	7040899	12.6	2.88	ug/mL	N/A	N/A	15.2		90	75-125		
Zinc	7040899	-0.00539	0.962	ug/mL	N/A	N/A	1.16		121	80-125		
<b>QC Source Sample: CQD0599-03</b>												
Barium	7040899	0.0439	0.962	ug/mL	N/A	N/A	1.01		100	75-120		
Boron	7040899	-0.00205	1.92	ug/mL	N/A	N/A	1.56		81	75-125		
Calcium	7040899	111	1.92	ug/mL	N/A	N/A	119		417	75-125		MHA
Chromium	7040899	0.000239	0.962	ug/mL	N/A	N/A	0.899		93	85-120		
Copper	7040899	-0.0223	1.92	ug/mL	N/A	N/A	1.93		102	80-125		
Iron	7040899	-0.00188	1.92	ug/mL	N/A	N/A	1.85		96	75-125		
Magnesium	7040899	29.0	1.92	ug/mL	N/A	N/A	32.9		203	75-125		MHA
Manganese	7040899	-0.000103	0.962	ug/mL	N/A	N/A	0.989		103	80-120		
Potassium	7040899	1.42	3.85	ug/mL	N/A	N/A	5.37		103	75-125		
Sodium	7040899	5.78	2.88	ug/mL	N/A	N/A	8.85		107	75-125		
Zinc	7040899	-0.00524	0.962	ug/mL	N/A	N/A	0.906		95	80-125		

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Melissa Karstens

Work Order: CQD0535  
 Project: DeZurik and Sartell Landfills  
 Project Number: Sartell, MN

Received: 04/11/07  
 Reported: 04/27/07 15:11

## CERTIFICATION SUMMARY

### TestAmerica - Cedar Falls, IA

Method	Matrix	Nelac	Minnesota
ASTM D516-90	Water - NonPotable	X	X
EPA 150.1	Water - NonPotable	X	
EPA 350.1	Water - NonPotable	X	
EPA 353.3	Water - NonPotable	X	X
EPA 420.2	Water - NonPotable	X	X
SM 1030 F	Water - NonPotable		
SM 2320B	Water - NonPotable	X	X
SM 2510B	Water - NonPotable	X	X
SM 2540C	Water - NonPotable	X	X
SM 4500CI E	Water - NonPotable	X	X
SM 4500F BC	Water - NonPotable	X	
SM 5220D	Water - NonPotable	X	X
SW 6010B	Water - NonPotable	X	X
SW 7060A	Water - NonPotable	X	X
SW 7131A	Water - NonPotable	X	X
SW 7421	Water - NonPotable	X	X
SW 7470A	Water - NonPotable	X	X
SW 7740	Water - NonPotable	X	X
SW 8260B	Water - NonPotable	X	X
SW 9060	Water - NonPotable	X	
SW	Water - NonPotable		
USGS I-3765-85	Water - NonPotable	X	X

### Subcontracted Laboratories

TestAmerica Analytical Testing Corp - Nashville NELAC Cert #87358, Illinois Cert #001366, Iowa Cert #131, Kansas Cert #E-10229, Minnesota Cert #047-999-345, Wisconsin Cert #998020436  
 2960 Foster Creighton Dr. - Nashville, TN 37204

Method Performed: EPA 335.4

Samples: CQD0535-01, CQD0535-02

Method Performed: SM 2580

Samples: CQD0535-01, CQD0535-02

*Any abnormalities or departures from sample acceptance policy shall be documented on the 'Sample Receipt and Temperature Log Form' and 'Sample Non-conformance Form' (if applicable) included with this report.*

*For information concerning certifications of this facility or another TestAmerica facility, please visit our website at [www.TestAmericaInc.com](http://www.TestAmericaInc.com)*

*Samples collected by TestAmerica Field Services personnel are noted on the Chain of Custody (COC) and are sampled in accordance with TA-CF SOP CF09-01.*

TestAmerica - Cedar Falls, IA  
 Linda Cmelik  
 Project Coordinator

LBG - SIOUX FALLS - LANDFILLS  
140 East Hinks Lane, #126  
Sioux Falls, SD 57104  
Melissa Karstens

Work Order: CQD0535  
Project: DeZurik and Sartell Landfills  
Project Number: Sartell, MN

Received: 04/11/07  
Reported: 04/27/07 15:11

## DATA QUALIFIERS AND DEFINITIONS

**C** Calibration Verification recovery was above the method control limit for this analyte Analyte not detected, data not impacted.  
**H3** Sample was received and analyzed past holding time  
**J** Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated  
**M1** The MS and/or MSD were above the acceptance limits due to sample matrix interference See Blank Spike (LCS).  
**M1a** The MS and/or MSD were outside control limits.  
**MHA** Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information  
**R** Sample duplicate RPD exceeded the laboratory control limit  
**S** Analyzed by standard addition.

## ADDITIONAL COMMENTS





## Sample Receipt and Temperature Log Form

Client: LBG

Project: DeZurik + Samell Spoz

City: \_\_\_\_\_

Date: 4-11-07 Receiver's Initials: NR Time (Delivered): 8:30

### Temperature Record:

### Thermometer:

### Courier:

**Cooler ID#** (If Applicable)  
901  
1 °C / On Ice

- IR - 905085 "A"
- IR - 809065 "B"
- IR - 61854108
- 22126775

<input type="checkbox"/> UPS	<input type="checkbox"/> TA Courier
<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> TA Field Services
<input type="checkbox"/> DHL	<input type="checkbox"/> Client
<input type="checkbox"/> US Postal Service	<input type="checkbox"/> Other
<input type="checkbox"/> Spee-Dee	

Temp Blank

Temperature out of compliance

Custody seals present?

Yes

Custody seals intact?

Yes  No

Non-Conformance report started

### Exceptions Noted

<input type="checkbox"/> Sample(s) not received in a cooler.
<input type="checkbox"/> Samples(s) received same day of sampling.
<input type="checkbox"/> Evidence of a chilling process
<input type="checkbox"/> Temperature not taken:

\*Refer to SOP CF01-01 for Temperature Criteria

APR 23 2007

April 18, 2007

## Client:

LBG - SIOUX FALLS - LANDFILLS  
140 East Hinks Lane, #126  
Sioux Falls, SD 57104

Work Order: CQD0600  
Project Name: DeZurik and Sartell Landfills  
Project Number: 0601.D&SHWL.00

Attn: Tim Kenyon

Date Received: 04/12/07

An executed copy of the chain of custody is also included as an addendum to this report

If you have any questions relating to this analytical report please contact your Laboratory Project Manager at 1-(800)750-2401

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
P-5A	CQD0600-01	04/10/07 14:55
P-6	CQD0600-02	04/10/07 16:56
P-7	CQD0600-03	04/10/07 14:07
P-10	CQD0600-04	04/11/07 10:30
P-11A	CQD0600-05	04/11/07 15:51
P-O	CQD0600-06	04/11/07 16:40

Samples were received into laboratory at a temperature of 1 °C.

NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

Please refer to the Temperature and Sample Receipt form that is included with this report for additional information regarding the condition of samples at the time of receipt by the laboratory.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.

Minnesota Certification Number: 019-999-319

*Reproduction of this analytical report is permitted only in its entirety. This report shall not be reproduced except in full without the written approval of the laboratory.*

*TestAmerica Analytical Testing Corporation certifies that the analytical results contained herein apply only to the specific sample analyzed.*

Approved By:



TestAmerica - Cedar Falls, IA  
Linda Cmelik  
Project Coordinator

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Tim Kenyon

Work Order: CQD0600  
 Project: DeZurik and Sartell Landfills  
 Project Number: 0601.D&SHWL.00

Received: 04/12/07  
 Reported: 04/18/07 15:21

## ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Seq/ Analyst	Batch	Method
<b>Sample ID: CQD0600-01 (P-5A - Ground Water)</b>					<b>Sampled: 04/10/07 14:55</b>			<b>Recvd: 04/12/07 09:30</b>		
Dissolved Metals by SW 846 Series Methods										
Boron	0.399		mg/L	0.0680	0.100	1	04/17/07 20:25	lbb	7040835	SW 6010B
<b>Sample ID: CQD0600-02 (P-6 - Ground Water)</b>					<b>Sampled: 04/10/07 16:56</b>			<b>Recvd: 04/12/07 09:30</b>		
Dissolved Metals by SW 846 Series Methods										
Boron	<0.0680		mg/L	0.0680	0.100	1	04/17/07 20:30	lbb	7040835	SW 6010B
<b>Sample ID: CQD0600-03 (P-7 - Ground Water)</b>					<b>Sampled: 04/10/07 14:07</b>			<b>Recvd: 04/12/07 09:30</b>		
Dissolved Metals by SW 846 Series Methods										
Boron	0.167		mg/L	0.0680	0.100	1	04/17/07 20:35	lbb	7040835	SW 6010B
<b>Sample ID: CQD0600-04 (P-10 - Ground Water)</b>					<b>Sampled: 04/11/07 10:30</b>			<b>Recvd: 04/12/07 09:30</b>		
Dissolved Metals by SW 846 Series Methods										
Boron	<0.0680		mg/L	0.0680	0.100	1	04/17/07 20:50	lbb	7040836	SW 6010B
<b>Sample ID: CQD0600-05 (P-11A - Ground Water)</b>					<b>Sampled: 04/11/07 15:51</b>			<b>Recvd: 04/12/07 09:30</b>		
Dissolved Metals by SW 846 Series Methods										
Boron	5.39		mg/L	0.0680	0.100	1	04/17/07 21:13	lbb	7040836	SW 6010B
<b>Sample ID: CQD0600-06 (P-O - Ground Water)</b>					<b>Sampled: 04/11/07 16:40</b>			<b>Recvd: 04/12/07 09:30</b>		
Dissolved Metals by SW 846 Series Methods										
Boron	0.767		mg/L	0.0680	0.100	1	04/17/07 21:23	lbb	7040836	SW 6010B

LBG - SIOUX FALLS - LANDFILLS  
140 East Hinks Lane, #126  
Sioux Falls, SD 57104  
Tim Kenyon

Work Order: CQD0600

Received: 04/12/07  
Reported: 04/18/07 15:21

Project: DeZurik and Sartell Landfills

Project Number: 0601.D&SHWL.00

## LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Spike		Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	REC Limits	RPD RPD	Limit	Q
		Result	Level											
Dissolved Metals by SW 846 Series Methods														
Boron	7040835			mg/L	0.0680	0.100	<0.0680							
Boron	7040836			mg/L	0.0680	0.100	<0.0680							

LBG - SIOUX FALLS - LANDFILLS  
 140 East Hinks Lane, #126  
 Sioux Falls, SD 57104  
 Tim Kenyon

Work Order: CQD0600  
 Project: DeZurik and Sartell Landfills  
 Project Number: 0601.D&SHWL.00

Received: 04/12/07  
 Reported: 04/18/07 15:21

## LABORATORY DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Spike Result Level	Units	MDL	MRL	Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
<b>Dissolved Metals by SW 846 Series Methods</b>												
<b>QC Source Sample: CQD0543-03</b>												
Boron	7040835	<0.068	mg/L	0.0680	0.100	<0.0680					20	
<b>QC Source Sample: CQD0588-02</b>												
Boron	7040835	0.0884	mg/L	0.0680	0.100	0.0896				1	20	J
<b>QC Source Sample: CQD0600-04</b>												
Boron	7040836	<0.068	mg/L	0.0680	0.100	<0.0680					20	
<b>QC Source Sample: CQD0608-08</b>												
Boron	7040836	0.815	mg/L	0.0680	0.100	0.821				1	20	

LBG - SIOUX FALLS - LANDFILLS  
140 East Hinks Lane, #126  
Sioux Falls, SD 57104  
Tim Kenyon

Work Order: CQD0600

Received: 04/12/07  
Reported: 04/18/07 15:21

Project: DeZurik and Sartell Landfills  
Project Number: 0601.D&SHWL.00

### LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Spike		Units	MDL	MRL	Dup %		Dup % REC	RPD	Q
		Result	Level				Result	REC			
<b>Dissolved Metals by SW 846 Series Methods</b>											
Boron	7040835	2.00		mg/L	0.0680	0.100	2.01	100		85-110	
Boron	7040836	2.00		mg/L	0.0680	0.100	2.01	100		85-110	

LBG - SIOUX FALLS - LANDFILLS

140 East Hinks Lane, #126

Sioux Falls, SD 57104

Tim Kenyon

Work Order: CQD0600

Project: DeZurik and Sartell Landfills

Project Number: 0601.D&SHWL.00

Received: 04/12/07

Reported: 04/18/07 15:21

### OTHER

Analyte	Seq/ Batch	Source Spike		Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC Limits	RPD		Q
		Result	Level								RPD	Limit	
<b>Dissolved Metals by SW 846 Series Methods</b>													
<b>QC Source Sample: CQD0543-04</b>													
Boron	7040835	0.0264	1.92	ug/mL	N/A	N/A	1.89	97		75-125			
<b>QC Source Sample: CQD0600-05</b>													
Boron	7040836	5.39	1.92	ug/mL	N/A	N/A	7.06	87		75-125			
<b>QC Source Sample: CQD0608-09</b>													
Boron	7040836	3.87	1.92	ug/mL	N/A	N/A	5.68	94		75-125			

LBG - SIOUX FALLS - LANDFILLS  
140 East Hinks Lane, #126  
Sioux Falls, SD 57104  
Tim Kenyon

Work Order: CQD0600  
Project: DeZurik and Sartell Landfills  
Project Number: 0601.D&SHWL.00

Received: 04/12/07  
Reported: 04/18/07 15:21

### CERTIFICATION SUMMARY

TestAmerica - Cedar Falls, IA

Method	Matrix	Nelac	Minnesota
SW 6010B	Water - NonPotable	X	X

*Any abnormalities or departures from sample acceptance policy shall be documented on the 'Sample Receipt and Temperature Log Form' and 'Sample Non-conformance Form' (if applicable) included with this report.*

*For information concerning certifications of this facility or another TestAmerica facility, please visit our website at [www.TestAmericaInc.com](http://www.TestAmericaInc.com)*

*Samples collected by TestAmerica Field Services personnel are noted on the Chain of Custody (COC) and are sampled in accordance with TA-CF SOP CF09-01.*

### DATA QUALIFIERS AND DEFINITIONS

Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated

### ADDITIONAL COMMENTS



Client Name: LEGGETTE, BRASHMEARS & GRAHAM, INC Client #: \_\_\_\_\_

Address: 140 EAST HINES LANE #126

City/State/Zip Code: SIoux FALLS SD 57104

REPORT TO: Project Manager: MELISSA KARSTENS

Telephone Number: 605-334-6000

Sampler Name: (Print Name) \_\_\_\_\_

Sampler Signature: \_\_\_\_\_

Email Address: \_\_\_\_\_

To assist us in using the proper analytical methods,  
is this work being conducted for regulatory purposes?  
Compliance Monitoring

Project Name: DeZUREK and SARTRELL SITES


Project #: 0601. DASHWL.00

Site/Location ID: \_\_\_\_\_ State: \_\_\_\_\_

Report To: \_\_\_\_\_

Invoice To: LEGGETTE BRASHMEARS & GRAHAM, INC

Quote #: \_\_\_\_\_ PO#: \_\_\_\_\_

TAT Standard <input type="checkbox"/> Rush (surcharges may apply)	Date Needed: _____	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix				Preservation & # of Containers				Analyze For:	QC Deliverables	REMARKS	
						SL - Sludge DW - Drinking Water	GW - Groundwater S - Soil/Solid	MW - Wastewater Specy Other	HNO <sub>3</sub>	HCl	NaOH	H <sub>2</sub> SO <sub>4</sub>	Methanol				None
P-5A		4.10.07	1455	G	Y	Gw1											
P-6		4.10.07	1456	G	Y	Gw1											
P-7		4.10.07	1407	G	Y	Gw1											
P-10		4.11.07	1030	G	Y	Gw1											
P-11A		4.10.07	1551	G	Y	Gw1											
PW-0		4.10.07	1640	G	Y	Gw1											
P-8A		4.11.07	1058	G	Y	Gw1											
LABORATORY COMMENTS:																	
<p>Special Instructions: _____</p> <p>Relinquished By:  Date: <u>4.11.07</u> Time: <u>1430</u></p> <p>Relinquished By: _____ Date: _____ Time: _____</p> <p>Relinquished By: _____ Date: _____ Time: _____</p> <p>Received By: <u>FEDER 850431749305</u> Date: <u>4/12/07</u> Time: <u>9:30</u></p> <p>Received By: <u>John Quelling</u> Date: _____ Time: _____</p> <p>Received By: _____ Date: _____ Time: _____</p>																	

## Sample Receipt and Temperature Log Form

Client: LBG

Project: De Zurik & Sartell Sites

City: Sioux Falls

Date: 4-12-07 Receiver's Initials: CH Time (Delivered): 9:30

### Temperature Record:

Cooler ID# (If Applicable)  
672

1° °C / On Ice

### Thermometer:

- IR - 905085 "A"
- IR - 809065 "B"
- IR - 61854108
- 22126775

### Courier:

<input type="checkbox"/> UPS	<input type="checkbox"/> TA Courier
<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> TA Field Services
<input type="checkbox"/> DHL	<input type="checkbox"/> Client
<input type="checkbox"/> US Postal Service	<input type="checkbox"/> Other
<input type="checkbox"/> Spee-Dee	

Temp Blank

Temperature out of compliance

Custody seals present?

Yes

Custody seals intact?

Yes  No

Non-Conformance report started

### Exceptions Noted

<input type="checkbox"/> Sample(s) not received in a cooler.
<input type="checkbox"/> Samples(s) received same day of sampling.
<input type="checkbox"/> Evidence of a chilling process
<input type="checkbox"/> Temperature not taken:

**APPENDIX II**

**Field Sampling Sheets - April 2007 Sampling Event**

## GROUND-WATER SAMPLING DATA SHEET

Client Code: 6SARBT	Project Title: DEZURIK LANDFILL LAGOON #3
Job Code: DESHWL	Address: 12TH ST N
Date: 4.10.07	City, State, Zip: SARTELL, MN.

General Data	Stabilization Data						
Location ID: P-5R	Volume (gallons)	Well Volume	Temp (C)	ORP (mV)	SC (uS)	pH	D.O. Flow through
Bay Number: 10G013	4.00	1.0	10.6	186	1385	6.67	0.4
Rising Diameter (in): 4"	7.75	2.0	11.0	182	1375	6.68	0.4
Well Depth (ft): 81.35 <sup>TOTOC</sup> <sub>MEASURED</sub>	11.75	3.0	11.0	181	1367	6.68	0.5
Depth to water (ft): 75.47	15.50	4.0	11.0	179	1365	6.67	0.3
Column length (ft): 5.88							
Column volume (gal): 3.84							
Total volume purged (gal): 19.50							

Miscellaneous	
Purge Method:	DC PUMP
Sampling Method:	DC PUMP
Analysis Requested:	Dissolved metals, CL, FL, NO3, SO4, COD, Cyanide, Phenols, TOC, TDS, pH, Conductivity
Weather Conditions:	OVERCAST, 32°

Sample Description: CLEAN, NO ODOUR

Remarks: DUPLICATE SAMPLE ALL PARAMETERS

Sampler: CMH	Time Sample Collected: 1135
--------------	-----------------------------

## GROUND-WATER SAMPLING DATA SHEET

Client Code: 6SARBT	Project Title: DEZURIK LANDFILL LAGOON #3
Job Code: DESHWL	Address: 12TH ST N
Date: 4.10.07	City, State, Zip: SARTELL, MN.

General Data	Stabilization Data						
Location ID: P-9R	Volume (gallons)	Well Volume	Temp (C)	ORP (mV)	SC (uS)	pH	D.O. Flow through
Key Number: 10G013	5.00	1.0	10.5	230	946	7.15	0.7
Piping Diameter (in): 4"	10.00	2.0	10.4	217	981	6.95	0.9
Well Depth (ft): 86.20 <sup>TOTOC</sup> MEASURED	15.00	3.0	10.4	206	986	6.87	1.0
Depth to water (ft): 78.64	20.00	4.0	10.4	201	988	6.85	1.1
Column length (ft): 7.56	25.00	5.0	10.4	192	990	6.84	1.2
Column volume (gal): 4.94							
Total volume purged (gal): 25.00							

### Miscellaneous

Purge Method:	DC PUMP
Sampling Method:	DC PUMP
Analysis Requested:	Dissolved metals, CL, FL, NO3, SO4, COD, Cyanide, Phenols, TOC, TDS, pH, Conductivity
Weather Conditions:	OVERCAST, 32°
Sample Description:	CLEAR NO ODOOR
Remarks:	

Sampler: CMH	Time Sample Collected: 13:29
--------------	------------------------------

**Leggette, Brashears & Graham, Inc.**  
 8 Pine Tree Drive, Suite 250  
 St. Paul, Minnesota 55112

## GROUND-WATER SAMPLING DATA SHEET

Client Code: 6SARBT

Project Title: DEZURIK LANDFILL LAGOON #3

Job Code: DESHWL

Address: 12TH ST N

Date: 4.10.07

City, State, Zip: SARTELL, MN.

### General Data

### Stabilization Data

General Data	Volume (gallons)	Well Volume	Temp (C)	ORP (mV)	SC (uS)	pH	D.O. Flow through
Location ID: P-12R	6.00	1.0	10.1	234	966	6.90	2.0
Bay Number: 10G013	12.00	2.0	10.2	163	958	6.87	2.7
Casing Diameter (in): 4"	18.00	3.0	10.2	120	957	6.87	2.8
Well Depth (ft): 86.80 <sup>TPR</sup> MEASURED	24.00	4.0	10.2	114	958	6.86	3.0
Depth to water (ft): 77.73							
Column length (ft): 9.07							
Column volume (gal): 5.92							
Total volume purged (gal): 24.00							

### Miscellaneous

Purge Method: DC PUMP

Sampling Method: DC PUMP

Analysis Requested: Dissolved metals, CL, FL, NO3, SO4, COD, Cyanide, Phenols, TOC, TDS, pH, Conductivity

Weather Conditions: P. CLOUDY - 31

Sample Description: CLEAR NO ODOOR

Remarks:

Sampler: CMH

Time Sample Collected: 1032

**Leggette, Brashears & Graham, Inc.**  
 8 Pine Tree Drive, Suite 250  
 St. Paul, Minnesota 55112

## GROUND-WATER SAMPLING DATA SHEET

Client Code: 6SARBT	Project Title: DEZURIK LANDFILL LAGOON #3
Job Code: DESHWL	Address: 12TH ST N
Date: 4.10.07	City, State, Zip: SARTELL, MN.

General Data	Stabilization Data						
Location ID: P-13	Volume (gallons)	Well Volume	Temp (C)	ORP (mV)	SC (uS)	pH	D.O. Flow through
Bay Number: 10G013	5.25	1.0	10.6	233	729	7.02	2.1
Casing Diameter (in): 4"	10.50	2.0	10.6	220	731	6.97	2.0
Well Depth (ft): 86.90 <sup>TO TOC MEASURED</sup>	15.75	3.0	10.6	218	732	6.95	2.2
Depth to water (ft): 78.88	21.00	4.0	10.6	211	735	6.95	2.2
Column length (ft): 8.02							
Column volume (gal): 5.24							
Total volume purged (gal): 21.00							

### Miscellaneous

Purge Method:	DC PUMP
Sampling Method:	DC PUMP
Analysis Requested:	Dissolved metals, CL, FL, NO3, SO4, COD, Cyanide, Phenols, TOC, TDS, pH, Conductivity
Weather Conditions:	OVERCAST WINDY 31°

Sample Description: CLEAR NO ODOOR

Remarks: EQUIPMENT BLANK COLLECTED BEFORE THIS WELL (8:40)

Sampler: CMH	Time Sample Collected: 933
--------------	----------------------------

**Leggette, Brashears & Graham, Inc.**  
 8 Pine Tree Drive, Suite 250  
 St. Paul, Minnesota 55112







To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?  
Compliance Monitoring

PZ

Client Name: LEGGETTE BRASHERS & BRADHAM Client #: 1126  
 Address: 140 EAST HINKS LANE  
 City/State/Zip Code: ST LOUIS MO 63104  
 Project Manager: MELISSA KARSTENS  
 Telephone Number: 605 334 6000 Fax: 605 334 0850  
 Sampler Name: (Print Name) \_\_\_\_\_  
 Sampler Signature: \_\_\_\_\_

Project Name: DEZURIK HAZARDOUS WASTE / AGOON  
 Project #: 0601.D7SHWL00  
 Site/Location ID: \_\_\_\_\_ State: \_\_\_\_\_  
 Report To: \_\_\_\_\_  
 Invoice To: LEGGETTE BRASHERS & BRADHAM, INC  
 Quote #: \_\_\_\_\_ PO#: \_\_\_\_\_

TAT Standard  Rush (surcharges may apply)  
 Date Needed: \_\_\_\_\_  
 Fax Results:  Y  N  
 EMAIL RESULTS:  Y  
 SAMPLE ID: EQUIPMENT BLANK  
P-13

Matrix	Preservation & # of Containers						Field Filtered	Date Sampled	Time Sampled	G = Grab, C = Composite	Analyze For:	QC Deliverables	REMARKS
	SL - Sludge	GW - Groundwater	WW - Wastewater	HNO <sub>3</sub>	HCl	NaOH							
SL - Sludge DW - Drinking Water													
GW - Groundwater S - Soil/Solid													
WW - Wastewater Specify Other													
Chloride Cond													
FLPHIDS													
SULFATE ALTRATE													
TDC COD													
CYANIDE													
DRENOLS													
DISS. AS BA													
DISS. MG, MN, SE													
DISS. ZN, CU, AL, NI, CR													

Special Instructions: \_\_\_\_\_

Reinquished By: \_\_\_\_\_ Date: 4/10/01 Time: 1800

Reinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Reinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

LABORATORY COMMENTS:

Init Lab Temp: \_\_\_\_\_ Rec Lab Temp: \_\_\_\_\_

Custody Seals: Y N N/A  
 Bottles Supplied by Test America: Y N

Method of Shipment: \_\_\_\_\_

Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_



FLUID-LEVEL DATA SHEET

DATE: 4.10.07

CLIENT NAME: DEZURIK LANDFILL LAGOON #3

CLIENT CODE: 6SARBT

LOCATION: 12 TH ST N, SARTELL, MN

JOB CODE: DESHWL

WEATHER CONDITIONS: overcast 31°

RECORDED BY: CMH

MEASURING DEVICE: SOLINST

WELL	DEPTH TO PRODUCT	DEPTH TO WATER	ELEVATION TOC	ELEVATION WATER	PRODUCT THICKNESS	FLOW THROUGH D.O.
P-5R		75.47				0.4
P-9R		78.64				1.2
P-12R		77.73				3.0
P-13		78.88				2.2

DAILY ACTIVITY LOG

8:00	ARRIVAL ON SITE - CALL CITY EMPLOYEE TO GAIN ACCESS TO WELLS INSIDE LOCKED FENCED AREA. MEASURE FLUID LEVELS P-10, P-4, P-8A + P-8B WHILE WAITING.
8:30	GAIN ACCESS TO WELLS
8:40	SAMPLE - EQUIPMENT BLANK - POURED WATER THROUGH DC PUMP AND TUBING AND COLLECTED SAMPLE FOR ALL PARAMETERS
9:08	BARB GUNBASIK - MPCA - ON SITE TO OBSERVE SAMPLING. SHE MUST OBSERVE DEZURIK SAMPLING EVERY 3 YEARS
9:10	SAMPLING P-13, P-12R, P-5R, DUPLICATE (P-5R) P-9R. ALL PURGE AND DECON WATER CONTAINORIZED AND DISPOSED OF IN SEWER GRATE DOWN THE ROAD (12 <sup>TH</sup> ST)
12:30	BARB DEPARTS
13:40	COMPLETE DEZURIK SAMPLING
13:45	SAMPLING - SARTELL WELLS P-7, P-5A, P-11A, P-6, PW-0
17:15	COMPLETE SAMPLING - SARTELL WELLS IN ADDITION TO REGULAR PARAMETERS ALL WELLS WERE ALSO SAMPLED FOR DISS. BORON
17:20	DEPARTURE FROM SITE
17:53	ARRIVAL AT PEO EX SAMPLE SHIPMENT