

**CITY OF SARTELL
DEZURIK HAZARDOUS WASTE LAGOON #3 - MND985668342
SARTELL, MINNESOTA**

**2003 ANNUAL REPORT & STATISTICAL ANALYSIS
GROUND-WATER MONITORING DATA**

Prepared for

City of Sartell/DeZurik Hazardous Waste Lagoon #3

January 29, 2004

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**CITY OF SARTELL
DEZURIK HAZARDOUS WASTE LAGOON #3
SARTELL, MINNESOTA**

**2003 ANNUAL REPORT & STATISTICAL ANALYSIS
GROUND-WATER MONITORING DATA**

INTRODUCTION

Leggette, Brashears and Graham, Inc. (LBG) has completed the ground-water monitoring and statistical analysis for the DeZurik Hazardous Waste Landfill Lagoon No.3 located in Sartell, Minnesota. This report was prepared in accordance with the terms of the landfill permit. Ground-water monitoring was performed during two sampling events in 2003. Sampling consisted of collecting ground water samples from four monitoring wells. The samples were analyzed for total metals, dissolved metals and inorganic parameters.

The goal of the ground-water monitoring was to provide information regarding depth and quality of the ground water. The goal of the statistical analysis was to show with statistical assurance that the hazardous waste lagoon is not adversely impacting the ground water and, if the ground water is impacted, to provide information regarding the nature and location of the impacts.

BACKGROUND

Background information was obtained from the reissued Part B Permit Application approved by the MPCA in September of 1994. The DeZurik Hazardous Lagoon No.3 (site) is located in the SW1/4 of Section 16, Township 125 North, Range 28 West within the city limits of the City of Sartell, Minnesota and is approximately 0.2 acres in size (Figure 1). Sludges were disposed of from various DeZurik operations in the city. The site was closed in 1987 with a multi-layer 6-foot cover system.

Scope of Work

This report presents the sampling results from the April and October 2003 monitoring events. The 2003 ground-water monitoring results were compared to historical data for the site and to state and federal water quality standards.

This annual report incorporates information that was included in the semiannual report presented to the MPCA in July 2003, and also includes the following information:

- A narrative describing the effects that the site is exerting on surrounding ground-water quality and any changes made to or maintenance needed in the monitoring network;
- A description of sampling dates and procedures;
- Results of appropriate statistical procedures;
- Water level monitoring data and potentiometric maps for each sampling event;
- Calculation of ground-water flow velocities;
- Laboratory analytical reports;
- Graphs showing concentration versus time for target parameters historically detected above background levels in ground water; and
- Summary tables showing laboratory analysis and water elevation data for each well sampled to date.

Hydrogeologic Setting

A detailed description of the geology and hydrogeology of the site is provided in the Part B Permit Application. The information below has been summarized from the application.

The general geology of the area in which the site is located consists of unconsolidated glacial deposits (approximately 80 to 100 feet) that overlie Precambrian granitic bedrock. Previous studies indicated there are three geologic/hydrogeologic units underneath the site that affect ground-water movement and flow. The surficial unit consists of silty fine-grained sands that soil borings indicate are approximately 15 feet thick. Outwash deposits are located below the fine sands and consist of silty sands and gravel. The outwash is considered the upper-most aquifer and is present to 70 to 80 feet below ground surface (bgs). The third layer consists of clayey weathered bedrock occurring at approximately 70 to 80 feet bgs which acts as an aquitard restricting the downward flow of ground water into the bedrock.

GROUND-WATER MONITORING

Ground-Water Monitoring Network

The wells that comprise the monitoring network for the site are shown on Figures 2 and 3. Upgradient well P-13 and downgradient wells P-5R, P-9R, and P-12R were sampled in 2003. Ground-water samples were collected by LBG field personnel according to the methods presented in Appendix II. The spring sampling round was completed on April 15, 2003 and the samples were sent to Minnesota Valley Testing Laboratories (MVTL) in New Ulm, Minnesota. The fall sampling round was completed on October 16, 2003 and the ground-water samples were also sent to MVTL for analysis.

Prior to sampling, the general condition of each well was noted on the field sampling data sheets presented in Appendix I. All of the wells were in good condition during both sampling events in 2003.

Ground-Water Elevation and Flow Monitoring

Ground-water elevations were measured in wells P-13, P-5R, P-5A, P-9R, and P-12R on April 15 and October 7, 2003 according to the methods presented in Appendix II. Water level data which includes historical information is summarized in Table 1. Ground-water flow is primarily to the southeast, which is consistent with historical results. Hydrographs of ground-water elevation data are presented on Graph 1. Ground-water potentiometric maps are presented as Figures 2 and 3.

The hydraulic gradient remains consistent for the area. In 1994, for the Part B Permit Application, the average gradient was 0.006 ft/ft. In 1998, the average hydraulic gradient was 0.006 ft/ft. The hydraulic gradients in 2002 were 0.008 ft/ft and 0.004 ft/ft for spring and fall sampling events, respectively. In 2003, the hydraulic gradients were 0.005 ft/ft in the spring and 0.007 ft/ft in the fall. These gradients were calculated with elevations and distances from wells P-13 to P-9R.

The average linear ground-water flow rates can be calculated using the following equation and assumptions:

$$V = K \cdot I / n_e$$

Where:

V = ground-water velocity

K = hydraulic conductivity (assumed 0.39 ft/min)

I = hydraulic gradient (ft/ft)

n_e = effective porosity (assumed 25%)

The calculated linear flow rates based on the above equation and assumptions are 11.23 ft/day for the spring sampling event and 15.72 ft/day for the fall sampling event. The spring velocity is lower than the previous spring velocity of 17.97 ft/day; and the fall velocity is lower than the 2001 fall velocity of 20.22 ft/day.

Ground-Water Quality Monitoring

Field sampling data sheets for the fall sampling event are presented in Appendix I and the laboratory analytical report is presented in Appendix III. Ground-water quality data for the site was statistically analyzed and compared to various state water quality standards. The pertinent standards are described below.

- Maximum Contaminant Level (MCL) -The MCLs are enforceable standards that apply to public water systems, as established in the National Interim Primary Drinking Water Standards for the United States.
- Secondary Maximum Containment Level (SMCL) -The SMCL applies to public water systems. The standards are established primarily for taste, odor, and aesthetic reasons, not due to adverse health affects.
- Intervention Limits (IL) - The ILs are established for landfills in the State of Minnesota. The ILs apply to ground-water quality at the compliance boundary, generally located 200 feet from the waste boundaries.
- Health Risk Limits (HRLs) -The HRLs are risk-based levels for constituents in ground water. The HRLs are determined by the Minnesota Department of Health and are enforceable under Minnesota Rules 4717.7100 to 4717.7800.

Background concentrations for target contaminants (arsenic, barium, cadmium, lead, and selenium) are established at the upgradient well, P-13. The background data during the spring and fall sampling rounds of 2003 remained consistent with past data (Table 2) except for barium.

Background concentration results for barium increased over historical levels during the 1998 and 1999 sampling events; however, the background barium concentrations have decreased significantly since the 2001 sampling events.

Background concentration results for arsenic, cadmium, lead, and selenium in well P-13 remain below the background detection limit. In wells P-5 and P-12R, selenium was detected during the spring 2003 event; however, concentrations of selenium dropped below the detection limits during the fall event. In well P-9R, selenium was detected above the background detection limit during the spring 2003 sampling event; however, the concentrations of selenium dropped below the detection limit during the fall event.

Dissolved boron, manganese, nitrate, and total dissolved solids (TDS) levels exceeded federal or state water quality standards in the spring and/or fall in at least one monitoring well, as detailed below. A summary of the exceeded parameters is presented in Table 4.

- Concentrations of dissolved boron have remained above the HRL in well P-5R. Concentrations have been detected in wells P-9R, P-12R, and P-13 since 2000; however they have remained below the HRL.
- Concentrations of dissolved manganese have remained below the SMCL in wells P-5R, P-9R, and P-13. The concentration of dissolved manganese in well P-12R have remained above the SMCL since fall 2002.
- Concentrations of nitrates have remained above the IL in all the wells in the spring and fall of 2003; however, the concentrations remain below the MCL and HRL.
- Concentrations of TDS have remained above the SMCL in well P-9R. In wells P-5R and P-12R, concentrations of TDS decreased below the SMCL in spring 2003; however, the concentrations increased above the SMCL in the fall.

STATISTICAL ANALYSIS

Statistical analysis was performed on the results of the sampling events to determine if detections in downgradient wells (P-5R, P-9R, P-12R) are above background concentrations in the upgradient well (P-13). The statistical analysis was completed in accordance with the Part B Permit

reissued in September 1994. The analysis was performed on dissolved concentrations of arsenic, barium, cadmium, lead and selenium. The results are presented in Table 3.

The tolerance interval was calculated for each of the above analytes based on historical levels in upgradient well P-13. The Poisson Distribution was used to estimate the population mean and variance for arsenic, cadmium, lead and selenium. Since more than two detects occurred for barium, the arithmetic mean and standard deviation were used to calculate the tolerance interval for barium. The decreased background concentrations in 2002 and 2003 for barium lowered the tolerance interval from 210 $\mu\text{g/L}$ to 190 $\mu\text{g/L}$. The assumed tolerance factor of 2.523 is based on a confidence factor of 95 percent with a typical set of background data (n= 16). The following equation was used to calculate the tolerance:

$$T = U + (k * s) . \text{ Where:}$$

T = Tolerance interval

U = Population mean

k = Tolerance factor

s = Standard deviation

As stated in the correspondence dated September 29, 1998 from DeZurik to the MPCA, even though laboratory detection limits are lower, tolerance levels continue to be calculated assuming the means are equal to the reporting limits identified in the November 1994 Quality Assurance Project Plan (QAPP), as long as the detects are less than the QAPP reporting limits.

The contaminants of concern were all below or decreased below background concentrations for the 2003 sampling events. No contaminants of concern have exceeded background concentrations since 1990. Graphs of concentration versus time for barium, cadmium, and selenium are presented on Graphs 2, 3 and 4. These parameters are the only contaminants of concern to have exceeded background concentrations in the past.

CONCLUSIONS AND RECOMMENDATIONS

Review of the laboratory analytical results and the results of the statistical analysis indicate that concentrations of contaminants of concern (arsenic, barium, cadmium, lead, and selenium) were

below or decreased below background concentrations in wells P-5R, P-9R and P-12R at the DeZurik Lagoon No.3 in 2003. Overall, the monitoring well network is in good condition and correctly placed to monitor potential releases from the site.

In at least one well, an IL, SMCL and/or HRL were exceeded during both the spring and fall sampling events. The SMCL standard of 500 mg/L for TDS was exceeded in P-5R, P-9R and P-12R; however, the concentrations remained relatively steady from the 2001 sampling events. In Well P-13, concentrations of TDS remained below the SMCL.

The HRL for boron was only exceeded in P-5R and remained comparable with concentrations from the 2001 sampling events. Concentrations of boron were not detected in wells P-9R, P-12R and P-13.

Concentrations of manganese detected in well P-12R exceeded the SMCL, but did not exceed the HRL. Manganese was also detected in wells P-9R and P-13; however, the concentrations were below the SMCL.

The IL for nitrate was exceeded in P-5R, P-9R, P-12R, and P-13 during the spring and fall sampling events; however they remain comparable to concentrations detected in 2001.

The calculated ground-water flow velocities for the spring and fall 2003 sampling events are 11.23 ft/day and 15.72 ft/day, respectively.

Based on the data summarized above, continued monitoring at the site is recommended. No changes in the monitoring plan are warranted at this time.

STANDARD OF CARE

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

If you have any questions about this report, or need additional information, please contact me at (605) 334-6000.

Very truly yours,

LEGGETTE, BRASHEARS & GRAHAM, INC.



Melissa Karstens
Environmental Scientist

Reviewed by:

PROFESSIONAL GEOLOGIST

I hereby certify that this plan, document, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Geologist under the laws of the State of Minnesota

Print Name: Timothy L. Kenyon

Signature: 

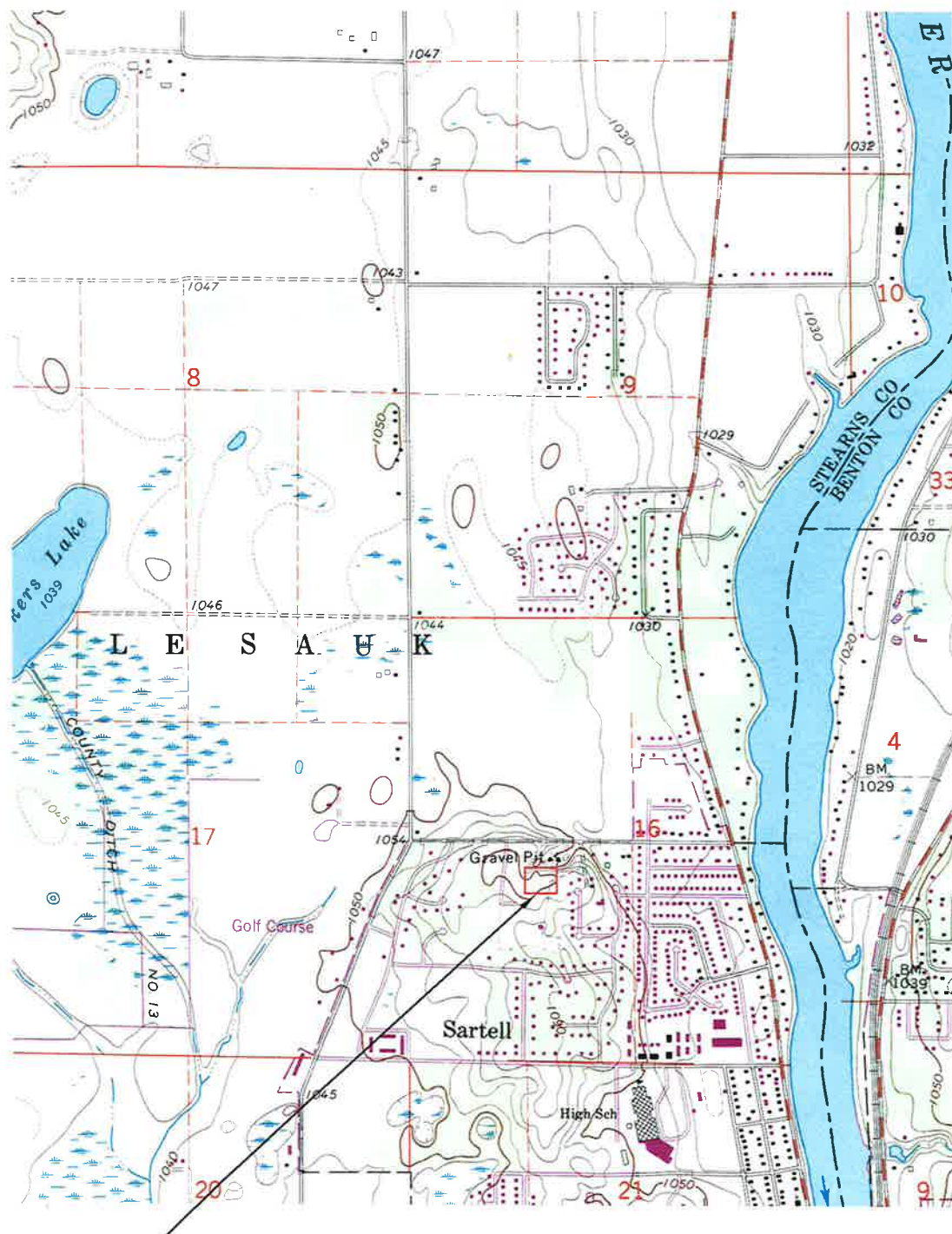
Date: 1-23-09 License # 30512

Tim Kenyon
Principal
Minnesota Professional Geologist #30512

TK:kak

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FIGURES




APPROXIMATE LOCATION OF SITE



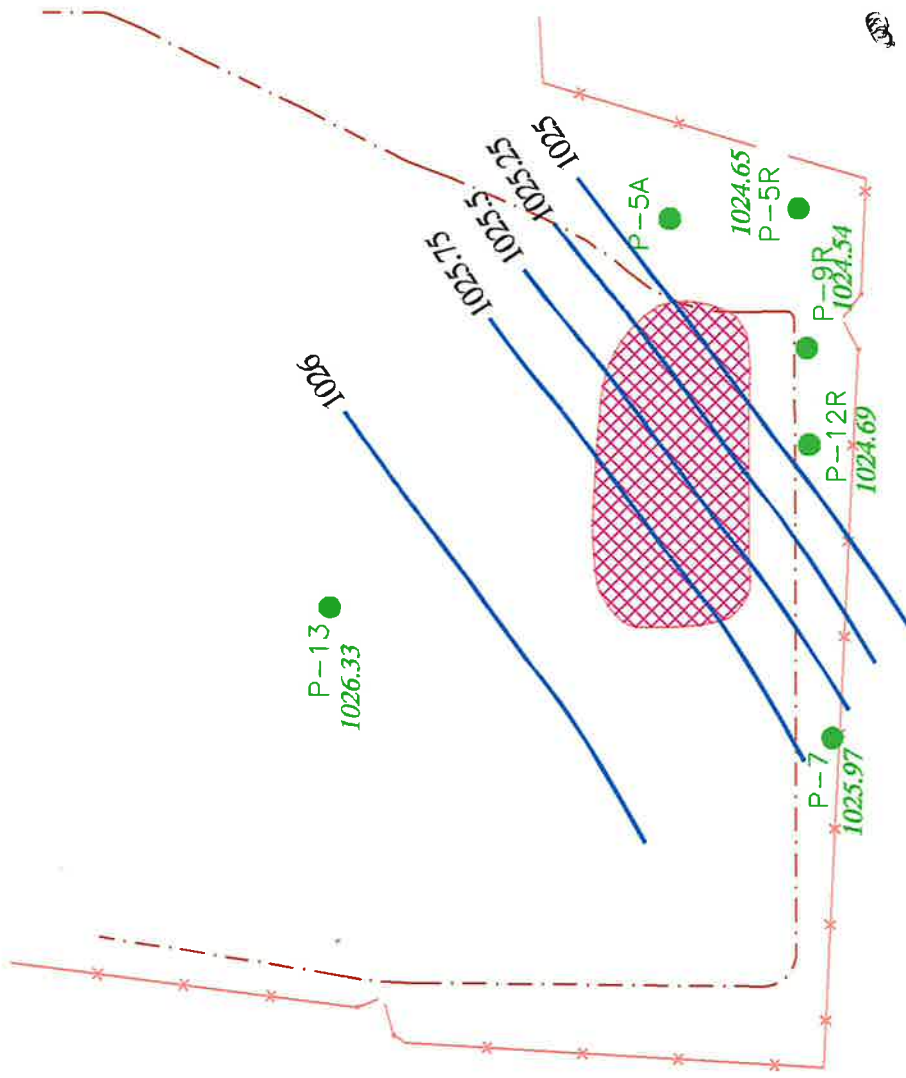
QUADRANGLE LOCATION
 Revisions shown in purple and woodland compiled in cooperation with State of Minnesota agencies from aerial photographs taken 1991 and other sources
 Contours not revised. This information not field checked
 Map edited 1993



DATE	REVISED	 LEGGETTE, BRASHEARS & GRAHAM, INC. Professional Ground-Water and Environmental Services 1113 East 14th Street Sioux Falls, South Dakota 57104 (605) 334-8000	DEZURIK HAZARDOUS WASTE LAGOON #3 SARTELL, MINNESOTA	
			Site Location Map	
			Source: USGS 7.5 Minute Series; Little Rock Lake Quad	
			FILE: Dez-topo.dwg	DATE: January, 2002
			FIGURE: 1	

LEGEND

- P-13
GROUNDWATER MONITORING WELL LOCATION AND TABLE ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- FENCE
- - - APPROXIMATE LIMIT OF LANDFILL WASTE
- ▨ APPROXIMATE LIMIT OF LAGOON
- 1025
WATER TABLE CONTOUR (DASHED WHERE INFERRED)



DEZURIK HAZARDOUS WASTE LAGOON #3

SARTELL, MINNESOTA

LEGGETTE, BRASHEARS & GRAHAM, INC.

Professional Ground-Water and Environmental Services
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DATE	REVISED

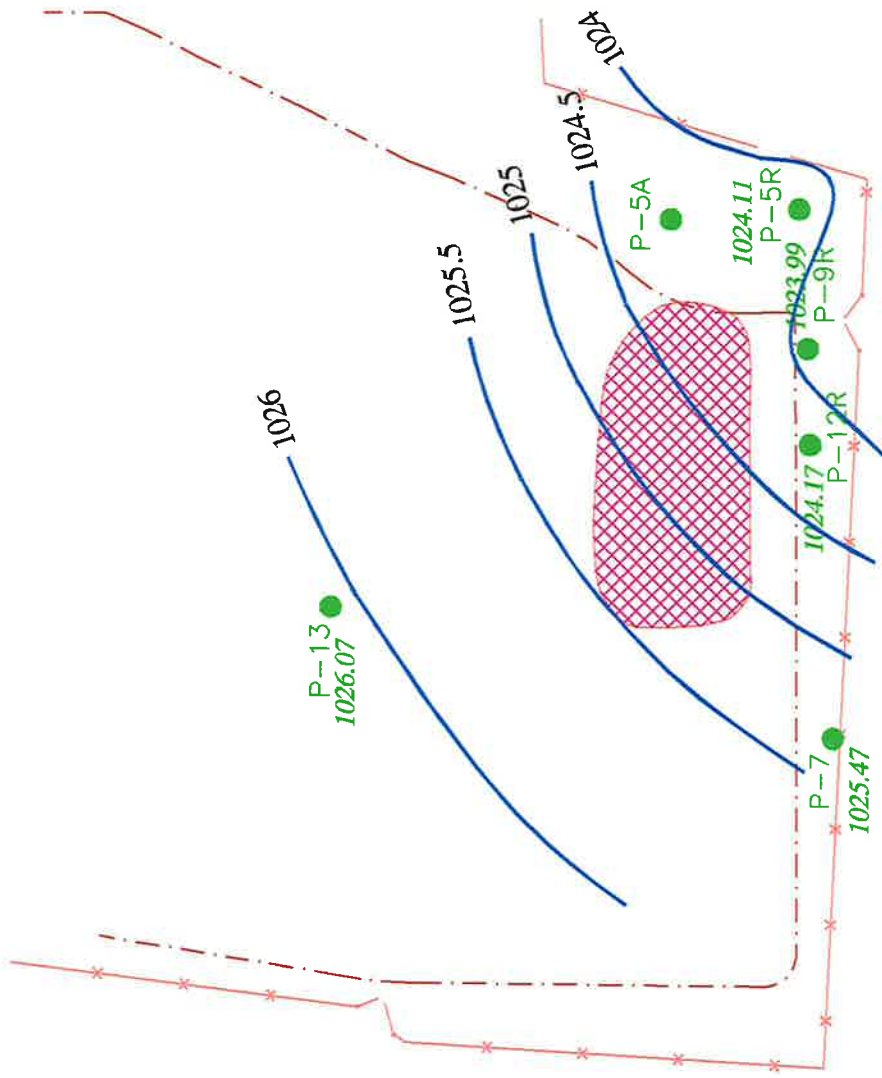
GROUND-WATER ELEVATIONS AND INFERRED FLOW DIRECTION (15 APR 03)

FILE: dezurik site map.dwg DATE: July 2001

FIGURE: 2

LEGEND

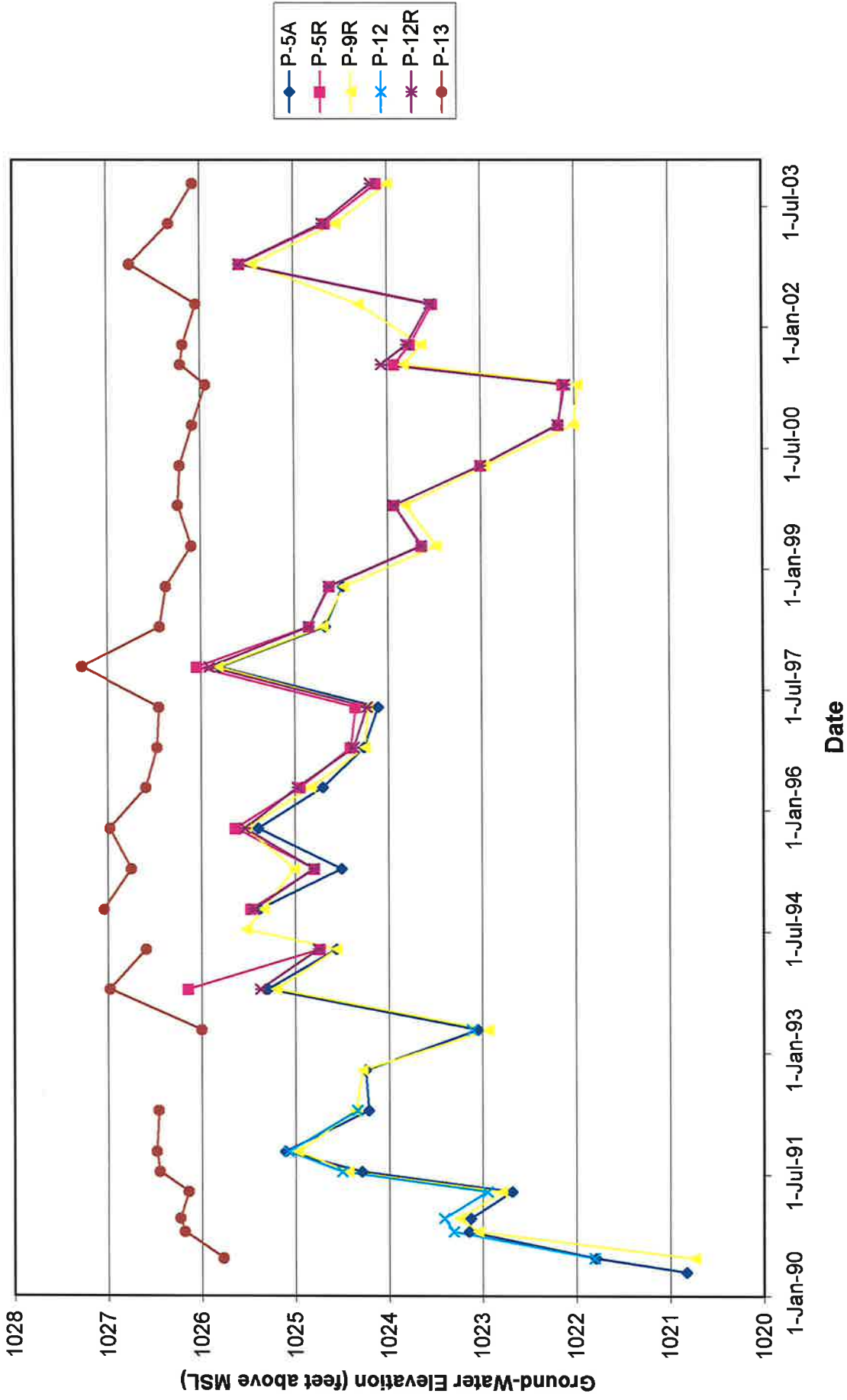
-  GROUNDWATER MONITORING WELL LOCATION AND NUMBER WITH WATER TABLE ELEVATION IN FEET ABOVE MEAN SEA LEVEL
-  FENCE
-  APPROXIMATE LIMIT OF LANDFILL WASTE
-  APPROXIMATE LIMIT OF LAGOON
-  WATER TABLE CONTOUR (DASHED WHERE INFERRED)



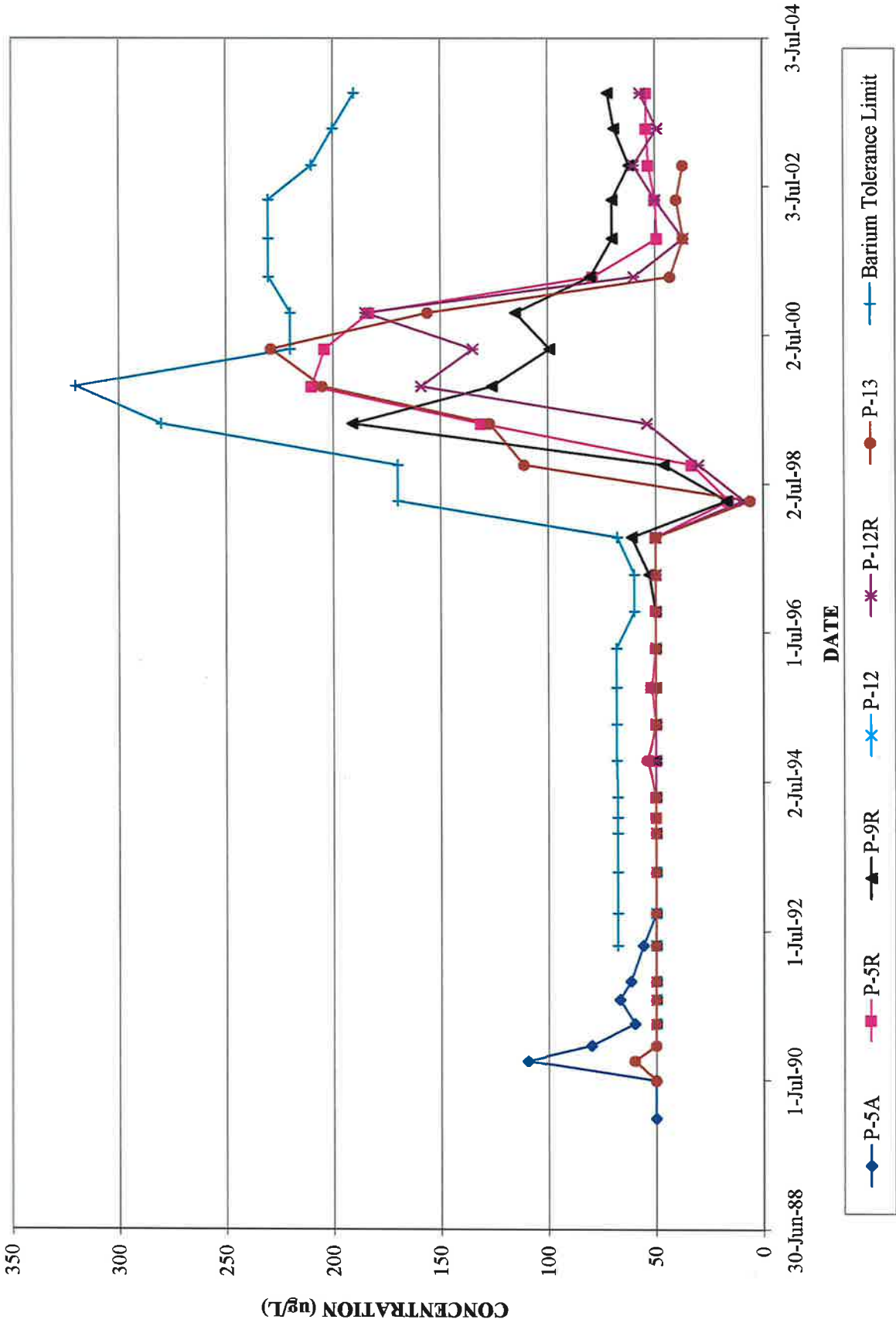
DATE	REVISED	<p>LEGGETTE, BRASHEARS & GRAHAM, INC. Professional Ground-Water and Environmental Services 1113 East 14th Street Sioux Falls, South Dakota 57104 (605) 334-6000</p> 	
<p>DEZURIK HAZARDOUS WASTE LAGOON #3 SARTELL, MINNESOTA</p>			
<p>GROUND-WATER ELEVATIONS AND INFERRED FLOW DIRECTION (7 OCT 03)</p>			
FILE:	dezurik_ellipse_map.dwg	DATE:	July 2001
		FIGURE:	3

GRAPHS

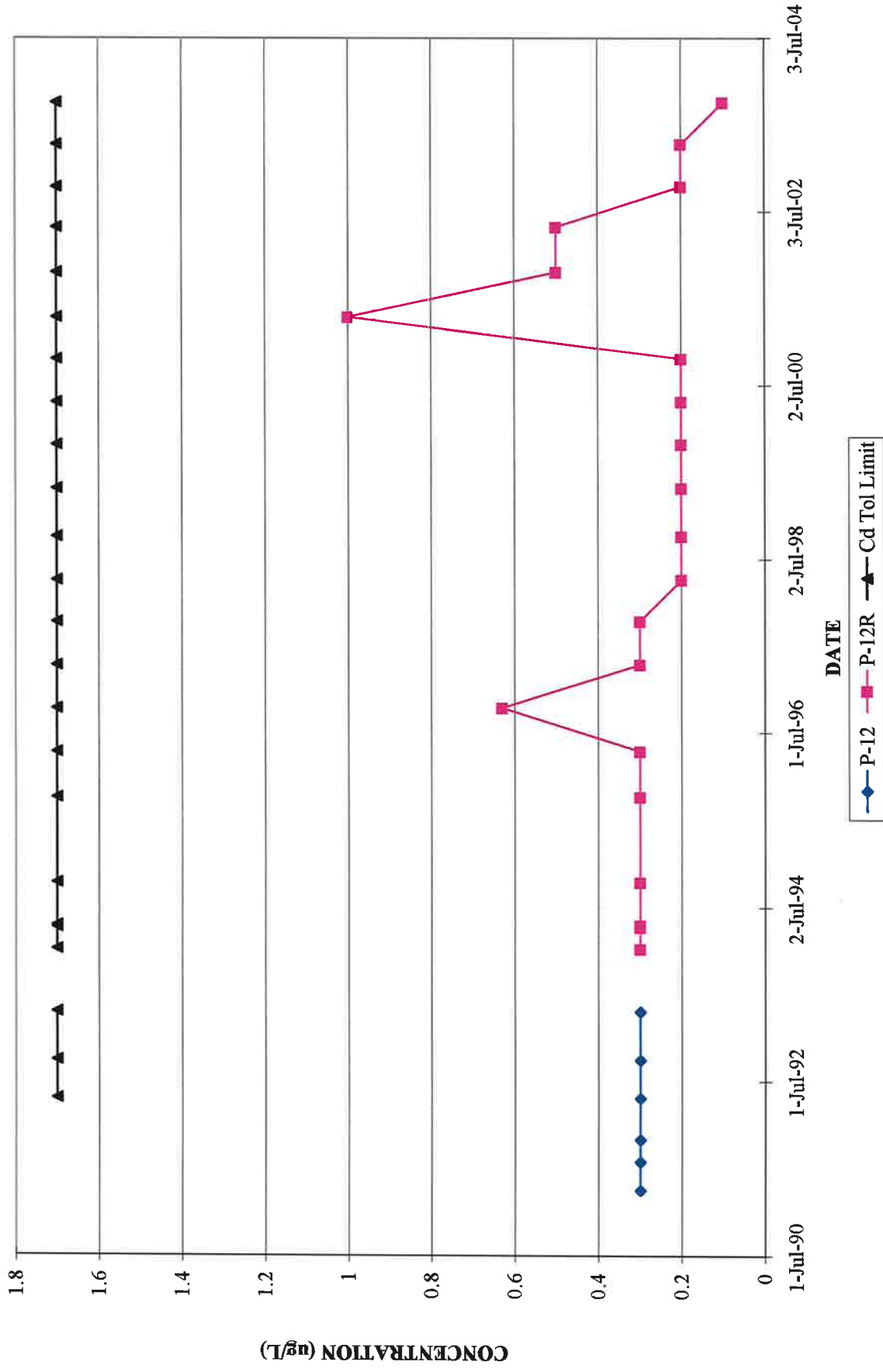
Graph 1
DeZurik Ground-Water Elevation Data



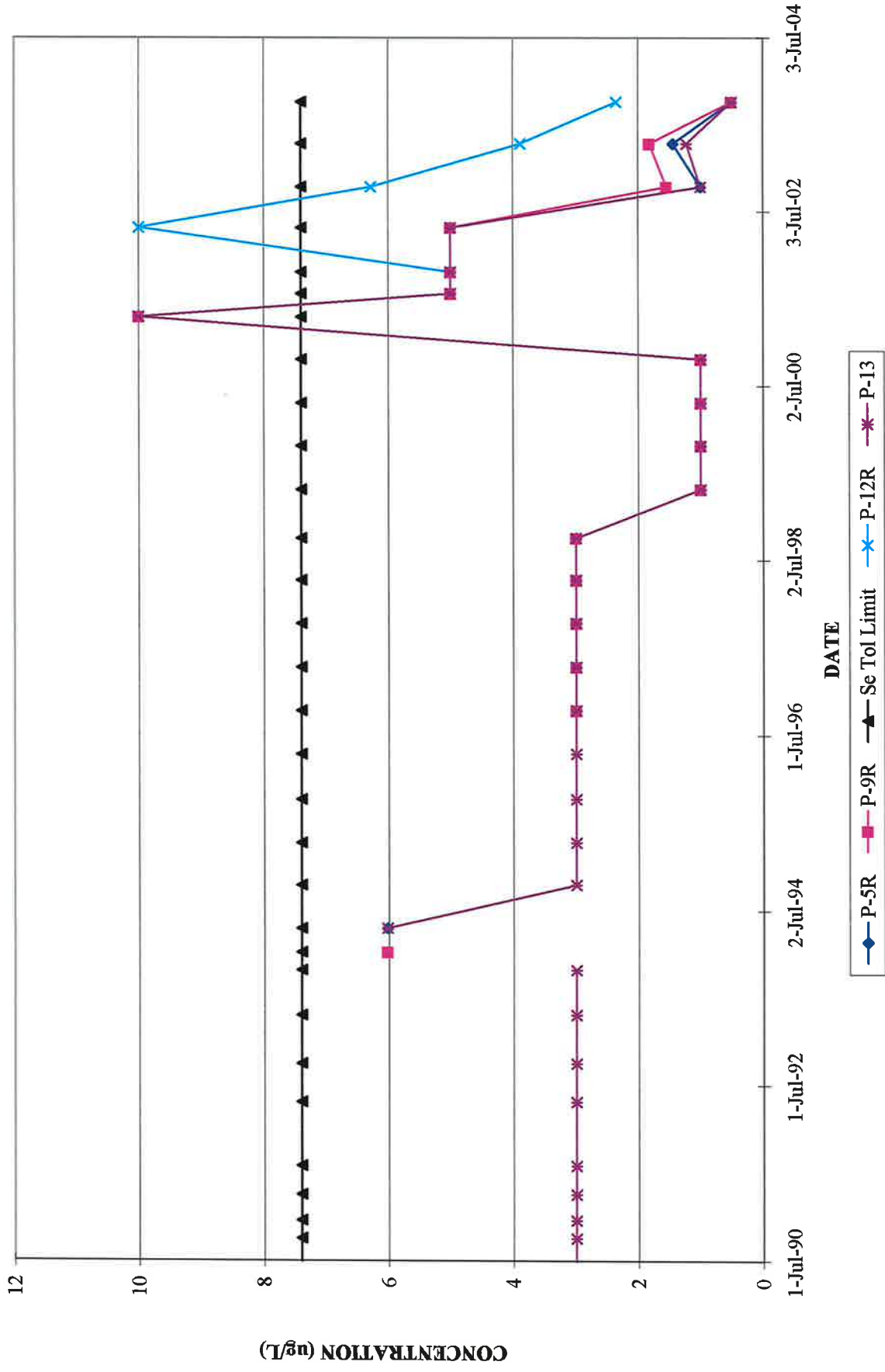
Graph 2
Historical Concentrations of Dissolved Barium



Graph 3
Historical Concentrations of Dissolved Cadmium



Graph 4
Historical Concentrations of Dissolved Selenium



TABLES

TABLE 1
Water Elevations
DeZurik Hazardous Waste Lagoon #3

DATE	P-5A	P-5R	P-9R	P-12	P-12R	P-13
Elevation		1099.04	1102.09		1101.33	1105.12
4/4/1990	1020.83					
6/26/1990	1021.79		1020.74	1021.81		1025.77
10/2/1990	1023.15		1023.05	1023.31		1026.18
12/18/1990	1023.13		1023.25	1023.41		1026.23
4/4/1991	1022.69		1022.79	1022.95		1026.14
7/31/1991	1024.29		1024.43	1024.5		1026.45
10/31/1991	1025.11		1024.97	1025.07		1026.48
4/23/1992	1024.22		1024.36	1024.34		1026.46
10/21/1992	1024.25		1024.28			
4/20/1993	1023.05		1022.94	1023.11		1026
10/27/1993	1025.29	1026.14	1025.2		1025.37	1026.98
4/20/1994	1024.56	1024.73	1024.56		1024.75	1026.59
7/11/1994			1025.52			
10/17/1994	1025.38	1025.47	1025.34		1025.44	1027.04
4/11/1995	1024.50	1024.79	1025.01		1024.80	1026.75
10/9/1995	1025.39	1025.63	1025.52		1025.53	1026.98
4/17/1996	1024.70	1024.94	1024.83		1024.97	1026.59
10/15/1996	1024.26	1024.40	1024.25		1024.37	1026.47
4/15/1997	1024.11	1024.35	1024.22		1024.23	1026.45
10/14/1997	1025.8	1026.04	1025.81		1025.91	1027.27
4/13/1998	1024.67	1024.84	1024.69		1024.84	1026.44
10/6/1998	1024.48	1024.62	1024.47		1024.63	1026.37
4/27/1999		1023.63	1023.48		1023.64	1026.1
10/27/1999		1023.93	1023.81		1023.93	1026.24
4/25/2000		1023.00	1022.96		1023.00	1026.22
10/23/2000		1022.17	1022.01		1022.18	1026.08
4/18/2001		1022.12	1021.97		1022.10	1025.94
7/26/2001		1023.92	1023.82		1024.06	1026.21
10/23/2001		1023.75	1023.63		1023.79	1026.18
4/29/2002		1023.51	1024.30		1023.54	1026.04
10/16/2002		1025.57	1025.44		1025.58	1026.75
4/15/2003		1024.65	1024.54		1024.69	1026.33
10/7/2003		1024.11	1023.99		1024.17	1026.07

blank = not measured

TABLE 2

DEZURIK HAZARDOUS WASTE LAGOON #3
SARTELL, MINNESOTA

2003 Water Quality Data Summary

Analyte	Units	IL (mg/L)	HRL (mg/L)	P-9R 15-Apr-03	P-9R 7-Oct-03	P-13 15-Apr-03	Duplicate (P-13) 15-Apr-03	P-13 7-Oct-03	Duplicate (P-13) 7-Oct-03	P-5R 15-Apr-03	P-5R 7-Oct-03
Total Organic Carbon	mg/L			2.1	3.1	1.3	1.1	1.9	1.9	1.9	2.5
Chloride	mg/L			35.7	32.2	29.8	29.2	32.3	29.8	47.6	44.8
Conductivity	umhos/cm			1032	943	786	784	737	668	1190	1090
Chemical Oxygen Demand	mg/L			20	10	42	40	20	20	44	44
pH	su			7.20	7.40	7.30	7.30	7.60	7.80	7.10	7.90
Total Phenols	mg/L			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Sodium	mg/L			12.2	12	4.94	4.87	4.74	4.74	26.5	28.7
Total Dissolved Solids	mg/L			597	589	334	50	426	468	280	768
Sulfate	mg/L			115	96.7	70.4	62.5	50.4	65.2	226	207
Total Cyanide	mg/L			<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fluoride	mg/L			<0.1	<0.1	0.1	0.1	<0.1	<0.1	0.1	<0.1
Nitrate as N	mg/L	2.5	10	5.81	5.82	5.11	5.12	5.24	5.23	5.63	5.3
Dissolved Arsenic	mg/L	0.0125		<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005
Dissolved Barium	mg/L	0.375	2	0.069	0.072	0.038	0.037	0.042	0.04	0.054	0.054
Dissolved Boron	mg/L		0.6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.18	1.11
Dissolved Cadmium	mg/L			<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001
Dissolved Calcium	mg/L			142	136	111	112	112	113	158	151
Dissolved Chromium	mg/L	0.03		<0.002	<0.006	<0.002	<0.002	<0.006	<0.006	<0.002	<0.006
Dissolved Iron	mg/L			<0.008	<0.01	0.014	0.01	<0.01	<0.01	0.01	<0.01
Dissolved Lead	mg/L			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Dissolved Magnesium	mg/L			39.8	39.2	27	26.9	27.1	27.6	44.6	<0.003
Dissolved Manganese	mg/L	0.1		0.025	0.02	0.018	0.02	<0.003	<0.003	<0.003	<0.003
Dissolved Selenium	mg/L	0.011	0.03	0.00181	<0.0005	0.00122	0.00123	<0.0005	<0.0005	0.00144	<0.0005
Dissolved Zinc	mg/L		2	<0.007	0.015	<0.007	<0.007	0.012	0.011	<0.007	0.013

Blank = not analyzed
Detections are in **BOLD**

TABLE 2

DEZURIK HAZARDOUS WASTE LAGOON #3
SARTELL, MINNESOTA

2003 Water Quality Data Summary

Analyte	Units	IL (mg/L)	HRL (mg/L)	P-12R 15-Apr-03	P-12R 7-Oct-03
Total Organic Carbon	mg/L			2.2	3.1
Chloride	mg/L			30.2	34.2
Conductivity	umhos/cm			970	871
Chemical Oxygen Demand	mg/L			38	40
pH	su			7.30	7.40
Total Phenols	mg/L			<0.005	<0.005
Sodium	mg/L			29.2	23.8
Total Dissolved Solids	mg/L			482	626
Sulfate	mg/L			121	129
Total Cyanide	mg/L			<0.02	<0.02
Fluoride	mg/L			<0.1	<0.1
Nitrate as N	mg/L	2.5	10	4.60	6.24
Dissolved Arsenic	mg/L	0.0125		<0.001	<0.0005
Dissolved Barium	mg/L	0.375	2	0.049	0.057
Dissolved Boron	mg/L		0.6	<0.1	<0.1
Dissolved Cadmium	mg/L			<0.0002	<0.0001
Dissolved Calcium	mg/L			124	130
Dissolved Chromium	mg/L	0.03		<0.002	<0.006
Dissolved Iron	mg/L			0.164	0.097
Dissolved Lead	mg/L			<0.0005	<0.0005
Dissolved Magnesium	mg/L			32.6	34.2
Dissolved Manganese	mg/L		0.1	0.078	0.076
Dissolved Selenium	mg/L	0.011	0.03	0.00388	0.00235
Dissolved Zinc	mg/L		2	<0.007	0.013

Blank = not analyzed
Detections are in **BOLD**

TABLE 3
Summary of Analytical and Statistical Analysis Results
DeZurik 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-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
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

TABLE 3
Summary of Analytical and Statistical Analysis Results
DeZurik Hazardous Waste Lagoon No. 3
(units = µg/L, dissolved)

WELL NUMBER	DATE	ARSENIC	BARIUM	CADMIUM	LEAD	SELENIUM
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-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
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-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

TABLE 3
Summary of Analytical and Statistical Analysis Results
DeZurik Hazardous Waste Lagoon No. 3
(units = µg/L, dissolved)

WELL NUMBER	DATE	ARSENIC	BARIIUM	CADMIUM	LEAD	SELENIUM
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
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

TABLE 3
Summary of Analytical and Statistical Analysis Results
DeZurik Hazardous Waste Lagoon No. 3
(units = µg/L, dissolved)

WELL NUMBER	DATE	ARSENIC	BARIUM	CADMIUM	LEAD	SELENIUM
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
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

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**	3	50	0.3	3	3
Background Mean#	3	58	0.3	3	3
Background Standard deviation#	1.732	51.676	0.548	1.732	1.732
K _{0.95}	2.523	2.523	2.523	2.523	2.523
Tolerance level#**	7.4	190	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

TABLE 4

DEZURIK HAZARDOUS WASTE LAGOON #3
SARTELL, MINNESOTA

2000 through 2003 Water Quality Data - Exceeded Parameters (in mg/L)

Analyte	Well	Spring 2000	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	MCL	SMCL	IL	HRL
Boron	P-5R	1.18	1.62	2.18	1.01	1.10	0.62	1.18	1.11				0.6
	P-9R	<0.1	<0.1	0.15	0.05	0.04	<0.1	<0.1	<0.1				
	P-12R	<0.1	<0.1	0.086	0.07	0.04	0.1	<0.1	<0.1				
	P-13	<0.1	<0.1	0.07	0.05	0.04	<0.1	<0.1	<0.1				
Manganese	P-5R	0.092	0.063	0.024	<0.005	<0.005	<0.003	<0.003	<0.003		0.05		0.1
	P-9R	0.024	0.036	0.03	0.03	0.01	0.02	0.025	0.02				
	P-12R	0.022	0.006	0.057	0.02	0.006	0.078	0.078	0.076				
	P-13	0.013	0.014	0.006	0.01	0.006	0.003	0.018	<0.003				
Nitrate	P-5R	5.57	NS	4.52	5.78	5.8	6.32	5.63	5.3	10		2.5	10
	P-9R	4.59	NS	5.82	5.74	5.2	6.05	5.81	5.82				
	P-12R	4.72	NS	5.05	5.04	5.0	5.11	4.6	6.42				
	P-13	5.8	NS	5.46	5.21	5.2	5.23	5.11	5.24				
TDS	P-5R	717	852	820	710	680	436	280	768		500		
	P-9R	509	625	560	600	520	592	597	589				
	P-12R	582	585	520	510	500	1060	482	626				
	P-13	413	456	400	430	430	308	334	426				

- Lowest Standard

BOLD - Exceeded Lowest Standard

NS - Not Sampled

APPENDIX I

Field Sampling Data Sheets

FLUID-LEVEL DATA SHEET

DATE: 4.15.03

CLIENT NAME: DEZURIK LANDFILL LAGOON #3

CLIENT CODE: 6SARBT

LOCATION: 12 TH ST N, SARTELL, MN

JOB CODE: DESHWL

WEATHER CONDITIONS: P. CLOUDY. WINDY, 45°

RECORDED BY: CMH

MEASURING DEVICE: SOLINST

WELL	DEPTH TO HYDROCARBON	DEPTH TO WATER	ELEVATION TOG	ELEVATION WATER	PRODUCT THICKNESS	COMMENTS
P-5R		74.39				
P-9R		77.55				
P-12R		76.64				
P-13		78.79				

DAILY ACTIVITY LOG

10:52	DEPARTURE FROM OFFICE
12:18	ARRIVAL ON SITE
12:20	SAMPLING P-13, P-5R, P-12R, P-9R
	DUPLICATE - P-13
15:50	COMPLETE SAMPLING - SARTELL LANDFILL WELL SAMPLING

GROUND-WATER SAMPLING DATA SHEET

Client Code: 6SARBT

Project Title: DEZURIK LANDFILL LAGOON #3

Job Code: DESHWL

Address: 12TH ST N

Date:

4.15.03

City, State, Zip: SARTELL, MN.

General Data

Stabilization Data

General Data	Volume (gallons)	Well Volume	Temp (C)	ORP (mV)	SC (uS)	pH
Location ID: P-5R	5.00	1.0	11.2	149	1151	6.83
Key Number: 206-013	10.00	2.0	11.2	51	1151	6.84
Casing Diameter (in): 4"	14.00	3.0	11.2	30	1151	6.84
Well Depth (ft): 81.35 TOTOC						
Depth to water (ft): 74.39						
Column length (ft): 6.96						
Column volume (gal): 4.54						
Total volume purged (gal): 14.00						

Miscellaneous

Purge Method: PVC, BAILER

Sampling Method: DISP. BAILER

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

Weather Conditions: overcast, w/wind 50°

Sample Description: SUBSTRATE SILTY, TAN/RUST TINT, NO ODOUR

Remarks:

Sampler: CMH

Time Sample Collected: 1405

Leggette, Brashears & Graham, Inc.
1210 West County Road E
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:

4.15.03

City, State, Zip: SARTELL, MN.

General Data	Stabilization Data					
Location ID:	Volume (gallons)	Well Volume	Temp (C)	ORP (mV)	SC (uS)	pH
P.9R	6.00	1.0	10.7	37	890	7.14
Key Number: 206013	12.00	2.0	10.7	40	962	7.02
Casing Diameter (in): 4"	17.00	3.0	10.7	45	1007	6.98
Well Depth (ft): 86.20 TO TOC	23.00	4.0	10.7	32	996	7.01
Depth to water (ft): 77.55						
Column length (ft): 8.65						
Column volume (gal): 5.65						
Total volume purged (gal): 23.00						

Miscellaneous

Purge Method: PVC BAILER

Sampling Method: DISP. BAILER

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

Weather Conditions:

P. cloudy, windy, 53°

Sample Description:

SUBMITTY SHINY TAN/RUST TINT, NO OODOR

Remarks:

Sampler: CMH

Time Sample Collected:

1539

Leggette, Brashears & Graham, Inc.
1210 West County Road E
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:

4.15.03

City, State, Zip: SARTELL, MN.

General Data

Stabilization Data

Location ID:	Volume (gallons)	Well Volume	Temp (C)	ORP (mV)	SC (uS)	pH
P12R	7.00	1.0	10.4	-25	933	7.01
Key Number: 106013	14.00	2.0	10.3	-87	935	7.04
Casing Diameter (in): 4"	20.00	3.0	10.3	-55	933	7.03
Well Depth (ft): 86.80 TOTOC						
Depth to water (ft): 76.64						
Column length (ft): 10.16						
Column volume (gal): 6.63						
Total volume purged (gal): 20.00						

Miscellaneous

Purge Method: PVC, BAILER

Sampling Method: DISP. BAILER

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

Weather Conditions: P. Cloudy, 54°

Sample Description: SUBMIT RUSH TANTAT, NO DATA

Remarks:

Sampler: CMH

Time Sample Collected: 1452

Leggette, Brashears & Graham, Inc.
1210 West County Road E
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: 4.15.03

City, State, Zip: SARTELL, MN.

General Data

Stabilization Data

General Data	Volume (gallons)	Well Volume	Temp (C)	ORP (mV)	SC (uS)	pH
Location ID: P-13						
Key Number: 106013	6.00	1.0	11.0	77	744	6.97
Casing Diameter (in): 4"	11.00	2.0	10.9	73	746	6.97
Well Depth (ft): 86.90 TOTAL	16.00	3.0	10.9	74	748	6.98
Depth to water (ft): 78.79						
Column length (ft): 8.11						
Column volume (gal): 5.30						
Total volume purged (gal): 16.00						

Miscellaneous

Purge Method: PVC BAILER

Sampling Method: DISP. BAILER

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

Weather Conditions: P. Cloudy, Windy, 50°

Sample Description: SLIGHTLY SILTY, TAN TINT, NO O.P.O.R.

Remarks: DUPLICATE SAMPLE ALL PARAMETERS

Sampler: CMH

Time Sample Collected: 1303

Leggette, Brashears & Graham, Inc.
1210 West County Road E
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: 10.7.03

City, State, Zip: SARTELL, MN.

General Data	Stabilization Data					
Location ID: P-5R	Volume (gallons)	Well Volume	Temp (C)	ORP (mV)	SC (uS)	pH
Key Number: 106013	5.00	1.0	11.1	111	1107	6.62
Casing Diameter (in): 4"	9.00	2.0	11.1	87	1100	6.70
Well Depth (ft): 81.35 TOTOC	13.00	3.0	11.1	72	1103	6.70
Depth to water (ft): 74.93	17.00	4.0	11.1	59	1098	6.71
Column length (ft): 6.42						
Column volume (gal): 4.19						
Total volume purged (gal): 17.00						

Miscellaneous

Purge Method: PVC. BAILER

Sampling Method: DISP. BAILER

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

Weather Conditions: CLEAR. 63°

Sample Description: SILTY, TAN/RUST TINT, NO ODOOR

Remarks:

Sampler: CMH

Time Sample Collected: 10:15

Leggette, Brashears & Graham, Inc.
 1210 West County Road E
 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:

10-7-03

City, State, Zip: SARTELL, MN.

General Data

Stabilization Data

Location ID:	Volume (gallons)	Well Volume	Temp (C)	ORP (mV)	SC (uS)	pH
P-9R	6.00	1.0	11.1	64	896	6.89
Key Number: 106P13	11.00	2.0	10.7	16	946	6.98
Casing Diameter (in): 4"	16.00	3.0	10.6	11	956	6.94
Well Depth (ft): 86.20 TO TOP	22.00	4.0	10.6	5	954	6.97
Depth to water (ft): 78.10						
Column length (ft): 8.10						
Column volume (gal): 5.29						
Total volume purged (gal): 22.00						

Miscellaneous

Purge Method: PVC. BAILER

Sampling Method: DISP. BAILER

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

Weather Conditions: CLEAR, 65°

Sample Description: CLEAR, NO ODOOR

Remarks:

Sampler: CMH

Time Sample Collected: 11:09

Leggette, Brashears & Graham, Inc.
1210 West County Road E
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: 10-7-03

City, State, Zip: SARTELL, MN.

General Data

Stabilization Data

Location ID:	Volume (gallons)	Well Volume	Temp (C)	ORP (mV)	SC (uS)	pH
P-12R	7.00	1.0	10.6	21	922	7.25
Key Number: 106P13	13.00	2.0	10.5	-10	926	7.22
Casing Diameter (in): 4"	19.00	3.0	10.5	-13	923	7.19
Well Depth (ft): 86.80 TOTOC	26.00	4.0	10.5	-8	924	7.19
Depth to water (ft): 77.16						
Column length (ft): 9.64						
Column volume (gal): 6.29						
Total volume purged (gal): 26.00						

Miscellaneous

Purge Method: PVC. BAILER

Sampling Method: DISP. BAILER

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

Weather Conditions: CLEAR, 72°

Sample Description: SILTY TAN / RUSTY TWT? NO OROA

Remarks:

Sampler: CMH

Time Sample Collected: 12:30

Leggette, Brashears & Graham, Inc.
1210 West County Road E
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:

10. 7 .03

City, State, Zip: SARTELL, MN.

General Data	Stabilization Data					
Location ID:	Volume (gallons)	Well Volume	Temp (C)	ORP (mV)	SC (uS)	pH
P-13	6.00	1.0	10.8	135	733	6.40
Key Number: 10G013	11.00	2.0	10.7	95	737	6.72
Casing Diameter (in): 4"	16.00	3.0	10.7	70	737	6.74
Well Depth (ft): 86.90 TO TOC	21.00	4.0	10.7	55	737	6.76
Depth to water (ft): 79.05						
Column length (ft): 7.85						
Column volume (gal): 5.13						
Total volume purged (gal): 21.00						

Miscellaneous

Purge Method: PVC BAILER

Sampling Method: DISP. BAILER

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

Weather Conditions: CLEAR, 55°

Sample Description: SILTY, FAN TINT, NO ODOOR

Remarks: DUPLICATE SAMPLE ALL PARAMETERS

Sampler: CMH

Time Sample Collected: 9:13

Leggette, Brashears & Graham, Inc.
 1210 West County Road E
 St. Paul, Minnesota 55112

CHAIN OF CUSTODY RECORD

PROJECT NAME DEZURIC LAUNDRY SAMPLERS: (Signature)		CLIENT NAME DEZURIC		LABORATORY NAME: MVTL	
SAMPLE NO. 1073 1075 1117 1232 ↓		TIME ✓ ✓ ✓ ✓ ↓			
GRAB ✓ ✓ ✓ ✓ ✓		COMP ✓ ✓ ✓ ✓ ✓		REMARKS	
SAMPLE LOCATIONS P 13 P 5R P 9R P 10R DUPLICATE					
NO. OF CON-TAINERS 6 6 6 6 6					
RECEIVED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)					
RELINQUISHED BY: (Signature) DATE/TIME RELINQUISHED BY: (Signature)					
RECEIVED FOR LABORATORY BY: (Signature) DATE/TIME RECEIVED FOR LABORATORY BY: (Signature)					
REPORT TO: REMARKS / BILLING INFORMATION:					
TIM KAYON - LBS 1113 LAST 1450 ST 5000 AVE. 50 57104 6055-334-6000					

LEGGETTE, BRASHEARS & GRAHAM, INC.
 1210 WEST COUNTY ROAD E
 ST. PAUL, MINNESOTA 55112
 (651) 490-1405



WHITE - PROJECT FILE YELLOW - LABORATORY PINK - SHIPPING RECORD

APPENDIX II

Methods

METHODOLOGIES

Monitor-Well Development

The monitor wells are developed by surging with dedicated stainless-steel bailers or by hand pumping until the discharge is relatively sediment free.

Ground-Water Monitoring

Fluid-level elevations are measured to the nearest 0.01 foot using the top of well casing as a reference point with a steel tape, an electronic water-level indicator or an interface phase probe. Prior to insertion into each monitor well, the measuring device is cleaned with alcohol and rinsed with distilled water. The steel tapes are accurate to approximately ± 0.01 foot. The electronic water-level indicator manufacturer's reported accuracy is ± 0.04 foot. The interface phase probe has a manufacturer's reported accuracy of approximately ± 0.01 foot.

Ground-Water Sampling

The monitor wells are sampled in order from the suspected cleanest to the suspected most contaminated. Wells containing measurable accumulations of free-phase product are not sampled. The sampling procedure is as follows.

- The fluid level in the well is measured to the nearest 0.01 foot as described in the ground-water monitoring section above.
- The well volume is calculated.
- A minimum of three standing well volumes are purged from the well. During purging, the temperature, pH and conductivity of each successive well volume removed is recorded. After 3 successive similar readings are obtained for these parameters, indicating stabilization, the ground-water sample is collected.
- The water is purged with and the sample is collected with either a dedicated stainless steel bailer or a dedicated disposable polyethylene bailer. Samples for volatile analyses are collected first, followed by any other required parameters. A minimum of one field blank is collected per sampling day by pouring distilled water or deionized water into the bailer prior to use in a well as a quality control procedure.
- All data are recorded on field sampling sheets and chain of custody forms. Samples are transported to a laboratory following appropriate documentation, preservation and chain of custody procedures.

Laboratory Analyses

The soil and/or ground-water samples are placed in clean jars supplied by the laboratory, preserved in an ice-filled cooler and shipped along with a chain of custody form via overnight courier to the laboratory. The samples are analyzed for total petroleum hydrocarbons and benzene, toluene, ethylbenzene, xylenes and methyl tertiary butyl ether by the USGS/California (modified 8015 method) or an equivalent method acceptable to the DENR.

APPENDIX III

Laboratory Analytical Results



MINNESOTA VALLEY TESTING LABORATORIES, INC.

1126 N. Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
 1411 S. 12th St. ~ Bismarck, ND 58502 ~ 800-279-6885 ~ Fax 701-258-9724
 710 S. 14th St. ~ Grand Forks, ND 58201 ~ 800-272-7645 ~ Fax 701-772-0028
 35 W. Lincoln Way ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885



JUN 20 2003

Page: 1 of

TIM KENYON
 LEGGETTE BRASHEARS & GRAHAM INC
 1113 E 14TH ST
 SIOUX FALLS SD 57104

Report Date: 27 May 03
 Lab Number: 03-A10975
 Work Order #:12-3796
 Account #: 019464
 Sample Matrix: GROUNDWATER
 Date Sampled: 15 Apr 03 13:03
 Date Received: 16 Apr 03 9:50

Project Name: DEZURIK LANDFILL
 Sample Description: P-13

Temperature at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Specific Conductance	786.0	umhos/cm	0.1	SM 2510B	16 Apr 03 14:48	NDK
pH	7.3	units	1.0	SM 4500 H-B	17 Apr 03 17:00	NNS
Carbon, Total Organic	1.3	ng/L	0.5	415.1	23 Apr 03	OL
Nitrate	5.11	ng/L as N	NA	353.2	22 May 03 8:16	Calculated
Sulfate	70.4	ng/L	4.0	375.4	17 Apr 03 14:30	DAS
Chloride	29.8	ng/L	3.0	325.2	25 Apr 03 13:10	DAS
Nitrate+Nitrite	5.14	ng/L as N	0.20	353.2	18 Apr 03 15:36	DAS
Nitrite	0.032	ng/L as N	0.020	EPA 353.2	22 May 03 8:16	DAS
Phenolics, Total	< 5	ug/L	5	420.1	21 Apr 03 8:20	JD
Cyanide, Total	< 0.02	ng/L	0.02	335.2	28 Apr 03 11:57	JD
Mercury, Dissolved	< 0.06	ug/L	0.2	245.1	18 Apr 03 9:21	TB
Chemical Oxygen Demand	42	ng/L	5	410.4	18 Apr 03 6:30	JD
Solids, Total Dissolved	334	ng/L	1	SM 2540C	17 Apr 03 17:00	TJP
Calcium, Dissolved	111.0	ng/L	0.018	6010	1 May 03 9:45	JGS
Magnesium, Dissolved	27.00	ng/L	0.036	6010	1 May 03 9:45	JGS
Sodium, Dissolved	4.940	ng/L	0.096	6010	1 May 03 9:45	JGS
Barium, Dissolved	0.038	ng/L	0.001	6010	23 Apr 03 10:01	JGS
Chromium, Dissolved	< 0.002	ng/L	0.002	6010	23 Apr 03 10:01	JGS
Iron, Dissolved	0.014	ng/L	0.008	6010	23 Apr 03 10:01	JGS
Manganese, Dissolved	0.018	ng/L	0.003	6010	23 Apr 03 10:01	JGS
Zinc, Dissolved	< 0.007	ng/L	0.007	6010	23 Apr 03 10:01	JGS
Boron, Dissolved	< 0.1	ng/L	0.1	6010	30 Apr 03 15:59	JGS
Arsenic, Dissolved	< 1	ug/L	1	200.8	21 Apr 03 18:14	TB
Cadmium, Dissolved	< 0.2	ug/L	0.2	200.8	21 Apr 03 18:14	TB

L = Reporting Limit

elevated "Less Than Result" (<): @ = Due to sample matrix ‡ = Due to sample concentration
 ! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB # 132

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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Page: 2 of

TIM KENYON
LEGGETTE BRASHEARS & GRAHAM INC
1113 E 14TH ST
SIOUX FALLS SD 57104

Report Date: 27 May 03
Lab Number: 03-A10975
Work Order #: 12-3796
Account #: 019464
Sample Matrix: GROUNDWATER
Date Sampled: 15 Apr 03 13:03
Date Received: 16 Apr 03 9:50

Project Name: DEZURIK LANDFILL
Sample Description: P-13

Temperature at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Lead, Dissolved	< 0.5 ug/L		0.5	200.8	21 Apr 03 18:14	TB
Selenium, Dissolved	1.22 ug/L		1.00	200.8	21 Apr 03 18:14	TB
Fluoride	0.10 mg/L		0.10	SM 18th ED 4500-P C	18 Apr 03 6:30	JD

OL = Analysis performed by an Outside Laboratory.

Approved by:

Michael K. Grob, Inorganic/Microbiology
Laboratory Manager New Ulm, MN

L = Reporting Limit

^elevated "Less Than Result" (<): @ = Due to sample matrix
! = Due to sample quantity

= Due to sample concentration
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447690 ND MICRO # 1013-M ND HW/DW # R-040 IA LAB # 122

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TIM KENYON
LEGGETTE BRASHEARS & GRAHAM INC
1113 E 14TH ST
SIOUX FALLS SD 57104

Report Date: 27 May 03
Lab Number: 03-A10976
Work Order #:12-3796
Account #: 019464
Sample Matrix: GROUNDWATER
Date Sampled: 15 Apr 03 14:05
Date Received: 16 Apr 03 9:50

Project Name: DEZURIK LANDFILL
Sample Description: P-5R

Temperature at Receipt: 4.0C

Table with 7 columns: Parameter, As Received Result, Method RL, Method Reference, Date Analyzed, and Analyst. Rows include Specific Conductance, pH, Carbon, Total Organic, Nitrate, Sulfate, Chloride, Nitrate+Nitrite, Nitrite, Phenolics, Total, Cyanide, Total, Mercury, Dissolved, Chemical Oxygen Demand, Solids, Total Dissolved, Calcium, Dissolved, Magnesium, Dissolved, Sodium, Dissolved, Barium, Dissolved, Chromium, Dissolved, Iron, Dissolved, Manganese, Dissolved, Zinc, Dissolved, Boron, Dissolved, Arsenic, Dissolved, and Cadmium, Dissolved.

= Reporting Limit

elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume



MINNESOTA VALLEY TESTING LABORATORIES, INC.

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TIM KENYON
LEGGETTE BRASHEARS & GRAHAM INC
1113 E 14TH ST
SIOUX FALLS SD 57104

Report Date: 27 May 03
Lab Number: 03-A10976
Work Order #:12-3796
Account #: 019464
Sample Matrix: GROUNDWATER
Date Sampled: 15 Apr 03 14:05
Date Received: 16 Apr 03 9:50

Project Name: DEZURIK LANDFILL
Sample Description: P-5R

Temperature at Receipt: 4.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, and Analyst. Rows include Lead, Dissolved; Selenium, Dissolved; and Fluoride.

OL = Analysis performed by an Outside Laboratory.

Approved by: [Signature]
Michael K. Grob, Inorganic/Microbiology
Laboratory Manager New Ulm, MN

RL = Reporting Limit

elevated 'Less Than Result' (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume



MINNESOTA VALLEY TESTING LABORATORIES, INC.

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TIM KENYON
LEGGETTE BRASHEARS & GRAHAM INC
1113 E 14TH ST
SIOUX FALLS SD 57104

Report Date: 27 May 03
Lab Number: 03-A10977
Work Order #: 12-3796
Account #: 019464
Sample Matrix: GROUNDWATER
Date Sampled: 15 Apr 03 14:52
Date Received: 16 Apr 03 9:50

Project Name: DEZURIK LANDFILL
Sample Description: P-12R

Temperature at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Specific Conductance	970.0	umhos/cm	0.1	SM 2510B	16 Apr 03 14:48	MDK
pH	7.3	units	1.0	SM 4500 H-B	17 Apr 03 17:00	NMS
Carbon, Total Organic	2.2	mg/L	0.5	415.1	23 Apr 03	OL
Nitrate	4.60	mg/L as N	NA	353.2	22 May 03 8:16	Calculated
Sulfate	121	mg/L	4.0	375.4	17 Apr 03 14:30	DAS
Chloride	30.2	mg/L	3.0	325.2	25 Apr 03 13:10	DAS
Nitrate+Nitrite	4.60	mg/L as N	0.20	353.2	18 Apr 03 15:36	DAS
Nitrite	< 0.02	mg/L as N	0.02	EPA 353.2	22 May 03 8:16	DAS
Phenolics, Total	< 5	ug/L	5	420.1	21 Apr 03 8:20	JD
Cyanide, Total	< 0.02	mg/L	0.02	335.2	28 Apr 03 11:57	JD
Mercury, Dissolved	< 0.06	ug/L	0.2	245.1	18 Apr 03 9:21	TB
Chemical Oxygen Demand	38	mg/L	5	410.4	18 Apr 03 6:30	JD
Solids, Total Dissolved	482	mg/L	1	SM 2540C	17 Apr 03 17:00	TJP
Calcium, Dissolved	124.0	mg/L	0.018	6010	1 May 03 9:45	JGS
Magnesium, Dissolved	32.60	mg/L	0.036	6010	1 May 03 9:45	JGS
Sodium, Dissolved	29.20	mg/L	0.096	6010	1 May 03 9:45	JGS
Barium, Dissolved	0.049	mg/L	0.001	6010	23 Apr 03 10:01	JGS
Chromium, Dissolved	< 0.002	mg/L	0.002	6010	23 Apr 03 10:01	JGS
Iron, Dissolved	0.164	mg/L	0.008	6010	23 Apr 03 10:01	JGS
Manganese, Dissolved	0.078	mg/L	0.003	6010	23 Apr 03 10:01	JGS
Zinc, Dissolved	< 0.007	mg/L	0.007	6010	23 Apr 03 10:01	JGS
Boron, Dissolved	< 0.1	mg/L	0.1	6010	30 Apr 03 15:59	JGS
Arsenic, Dissolved	< 1	ug/L	1	200.8	21 Apr 03 18:14	TB
Cadmium, Dissolved	< 0.2	ug/L	0.2	200.8	21 Apr 03 18:14	TB

RL = Reporting Limit

Levelled "Less Than Result" (<): # = Due to sample matrix
! = Due to sample quantity

= Due to sample concentration
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-W ND HW/DW # P-040 IA LAB # 132

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TIM KENYON
LEGGETTE BRASHEARS & GRAHAM INC
1113 E 14TH ST
SIOUX FALLS SD 57104

Report Date: 27 May 03
Lab Number: 03-A10977
Work Order #:12-3796
Account #: 019464
Sample Matrix: GROUNDWATER
Date Sampled: 15 Apr 03 14:52
Date Received: 16 Apr 03 9:50

Project Name: DEZURIK LANDFILL
Sample Description: P-12R

Temperature at Receipt: 4.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, and Analyst. Rows include Lead, Dissolved; Selenium, Dissolved; and Fluoride.

OL = Analysis performed by an Outside Laboratory.

Approved by: [Signature]
Michael K. Grob, Inorganic/Microbiology
Laboratory Manager New Ulm, MN

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-W ND HW/DW # R-040 IA LAB # 132

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Page: 1 of

TIM KENYON
LEGGETTE BRASHEARS & GRAHAM INC
 1113 E 14TH ST
 SIOUX FALLS SD 57104

Report Date: 27 May 03
Lab Number: 03-A10978
Work Order #:12-3796
Account #: 019464
Sample Matrix: GROUNDWATER
Date Sampled: 15 Apr 03 15:39
Date Received: 16 Apr 03 9:50

Project Name: DEZURIK LANDFILL
Sample Description: P-9R

Temperature at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Specific Conductance	1032	umhos/cm	0.1	SM 2510B	16 Apr 03 14:48	MDK
pH	7.2	units	1.0	SM 4500 H-B	17 Apr 03 17:00	NWS
Carbon, Total Organic	2.1	mg/L	0.5	415.1	23 Apr 03	OL
Nitrate	5.81	mg/L as N	NA	353.2	22 May 03 8:16	Calculated
Sulfate	115	mg/L	4.0	375.4	17 Apr 03 14:30	DAS
Chloride	35.7	mg/L	3.0	325.2	25 Apr 03 13:10	DAS
Nitrate+Nitrite	5.81	mg/L as N	0.20	353.2	18 Apr 03 15:37	DAS
Nitrite	< 0.02	mg/L as N	0.02	EPA 353.2	22 May 03 8:16	DAS
Phenolics, Total	< 5	ug/L	5	420.1	21 Apr 03 8:20	JD
Cyanide, Total	< 0.02	mg/L	0.02	335.2	28 Apr 03 11:57	JD
Mercury, Dissolved	< 0.06	ug/L	0.2	245.1	18 Apr 03 9:42	TB
Chemical Oxygen Demand	20	mg/L	5	410.4	18 Apr 03 6:30	JD
Solids, Total Dissolved	597	mg/L	1	SM 2540C	17 Apr 03 17:00	TJP
Calcium, Dissolved	142.0	mg/L	0.018	6010	1 May 03 9:45	JGS
Magnesium, Dissolved	39.80	mg/L	0.036	6010	1 May 03 9:45	JGS
Sodium, Dissolved	12.20	mg/L	0.096	6010	1 May 03 9:45	JGS
Barium, Dissolved	0.069	mg/L	0.001	6010	23 Apr 03 10:01	JGS
Chromium, Dissolved	< 0.002	mg/L	0.002	6010	23 Apr 03 10:01	JGS
Iron, Dissolved	< 0.008	mg/L	0.008	6010	23 Apr 03 10:01	JGS
Manganese, Dissolved	0.025	mg/L	0.003	6010	23 Apr 03 10:01	JGS
Zinc, Dissolved	< 0.007	mg/L	0.007	6010	23 Apr 03 10:01	JGS
Boron, Dissolved	< 0.1	mg/L	0.1	6010	30 Apr 03 15:59	JGS
Arsenic, Dissolved	< 1	ug/L	1	200.8	21 Apr 03 18:14	TB
Cadmium, Dissolved	< 0.2	ug/L	0.2	200.8	21 Apr 03 18:14	TB

= Reporting Limit

^ = Elevated "Less Than Result" (<): @ = Due to sample matrix ‡ = Due to sample concentration
 ! = Due to sample quantity + = Due to extract volume

CERTIFICATION. MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND HW/DW # R-040 IA LAB # 132

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TIM KENYON
LEGGETTE BRASHEARS & GRAHAM INC
1113 E 14TH ST
SIOUX FALLS SD 57104

Report Date: 27 May 03
Lab Number: 03-A10978
Work Order #:12-3796
Account #: 019464
Sample Matrix: GROUNDWATER
Date Sampled: 15 Apr 03 15:39
Date Received: 16 Apr 03 9:50

Project Name: DEZURIK LANDFILL
Sample Description: P-9R

Temperature at Receipt: 4.0C

Table with 7 columns: As Received Result, Method RL, Method Reference, Date Analyzed, and Analyst. Rows include Lead, Dissolved; Selenium, Dissolved; and Fluoride.

OL = Analysis performed by an Outside Laboratory.

Approved by: [Signature]
Michael K. Grob, Inorganic/Microbiology
Laboratory Manager New Ulm, MN

L = Reporting Limit

elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-N ND HW/DW # R-040 IA LAB # 133

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TIM KENYON
 LEGGETTE BRASHEARS & GRAHAM INC
 1113 E 14TH ST
 SIOUX FALLS SD 57104

Report Date: 27 May 03
 Lab Number: 03-A10979
 Work Order #:12-3796
 Account #: 019464
 Sample Matrix: GROUNDWATER
 Date Sampled: 15 Apr 03
 Date Received: 16 Apr 03 9:50

Project Name: DEZURIK LANDFILL
 Sample Description: DUPLICATE

Temperature at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Specific Conductance	784.0	umhos/cm	0.1	SM 2510B	16 Apr 03 14:48	MDK
pH	7.3	units	1.0	SM 4500 H-B	17 Apr 03 17:00	NNS
Carbon, Total Organic	1.1	ng/L	0.5	415.1	23 Apr 03	OL
Nitrate	5.12	ng/L as N	NA	353.2	22 May 03 8:16	Calculated
Sulfate	62.5	ng/L	4.0	375.4	17 Apr 03 14:30	DAS
Chloride	29.2	ng/L	3.0	325.2	25 Apr 03 13:10	DAS
Nitrate+Nitrite	5.12	ng/L as N	0.20	353.2	18 Apr 03 15:37	DAS
Nitrite	< 0.02	ng/L as N	0.02	EPA 353.2	22 May 03 8:16	DAS
Phenolics, Total	< 5	ug/L	5	420.1	21 Apr 03 8:20	JD
Cyanide, Total	< 0.02	ng/L	0.02	335.2	28 Apr 03 11:57	JD
Mercury, Dissolved	< 0.06	ug/L	0.2	245.1	18 Apr 03 9:42	TB
Chemical Oxygen Demand	40	ng/L	5	410.4	18 Apr 03 6:30	JD
Solids, Total Dissolved	50	ng/L	1	SM 2540C	17 Apr 03 17:00	TJP
Calcium, Dissolved	112.0	ng/L	0.018	6010	1 May 03 9:45	JGS
Magnesium, Dissolved	26.90	ng/L	0.036	6010	1 May 03 9:45	JGS
Sodium, Dissolved	4.870	ng/L	0.096	6010	1 May 03 9:45	JGS
Barium, Dissolved	0.037	ng/L	0.001	6010	23 Apr 03 10:01	JGS
Chromium, Dissolved	< 0.002	ng/L	0.002	6010	23 Apr 03 10:01	JGS
Iron, Dissolved	0.010	ng/L	0.008	6010	23 Apr 03 10:01	JGS
Manganese, Dissolved	0.020	ng/L	0.003	6010	23 Apr 03 10:01	JGS
Zinc, Dissolved	< 0.007	ng/L	0.007	6010	23 Apr 03 10:01	JGS
Boron, Dissolved	< 0.1	ng/L	0.1	6010	30 Apr 03 15:59	JGS
Arsenic, Dissolved	< 1	ug/L	1	200.8	21 Apr 03 18:14	TB
Cadmium, Dissolved	< 0.2	ug/L	0.2	200.8	21 Apr 03 18:14	TB

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
 ! = Due to sample quantity + = Due to extract volume



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TIM KENYON
LEGGETTE BRASHEARS & GRAHAM INC
1113 E 14TH ST
SIOUX FALLS SD 57104

Report Date: 27 May 03
Lab Number: 03-A10979
Work Order #: 12-3796
Account #: 019464
Sample Matrix: GROUNDWATER
Date Sampled: 15 Apr 03
Date Received: 16 Apr 03 9:50

Project Name: DEZURIK LANDFILL
Sample Description: DUPLICATE

Temperature at Receipt: 4.0C

Table with 6 columns: Analyte, As Received Result, Method RL, Method Reference, Date Analyzed, and Analyst. Rows include Lead, Dissolved; Selenium, Dissolved; and Fluoride.

OL = Analysis performed by an Outside Laboratory.

Approved by: [Signature]
Michael K. Grob, Inorganic/Microbiology
Laboratory Manager New Ulm, MN

RL = Reporting Limit

elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

12-5796

CHAIN OF CUSTODY RECORD

PROJECT NAME		CLIENT NAME		LABORATORY NAME: MUTL			
DEZURIK (NO FILE)		DEZURIK					
SAMPLERS: (Signature)				<div style="display: flex; justify-content: space-between; font-size: 0.8em;"> Disolved Metals PHEBOLS CYANIDE TOC N03 N03 CL, FL, SO₄, TH, TP, FOR COUPLER </div>			
SAMPLE NO.	DATE	TIME	GRAMS	COPIES	SAMPLE LOCATIONS	NO. OF CONTAINERS	
A10975	4-15-03	13:03	✓	3	P-13	6	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> [X] [X] [X] [X] [X] [X] [X] [X] [X] [X] [X] [X] [X] [X] [X] [X] [X] [X] </div>
76		1405	✓		P-5R	6	
77		1452	✓		P-12R	6	
78		1539	✓		P-9R	6	
79			✓		DUPLICATE	6	
RELINQUISHED BY: (Signature) _____ DATE/TIME: _____ RECEIVED BY: (Signature) _____ DATE/TIME: _____ RELINQUISHED BY: (Signature) _____ DATE/TIME: _____ RECEIVED BY: (Signature) _____ DATE/TIME: _____ RELINQUISHED BY: (Signature) _____ DATE/TIME: _____ RECEIVED BY: (Signature) _____ DATE/TIME: _____							
REPORT TO: TIM KENYON - LBG RECEIVED FOR LABORATORY BY: (Signature) _____ DATE/TIME: 4/16/03 9:50 D. Harris							
REMARKS / RECEIVED INFORMATION : LEGGETTE, BRASHEARS & GRAHAM, INC. 1210 WEST COUNTY ROAD E ST. PAUL, MINNESOTA 55112 (612) 490-1405							
REMARKS / RECEIVED INFORMATION : TIM KENYON 1113 EAST 14 TH ST, SIOUX FALLS, SD 57104 (605)-334-6000							



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 NOV 14 2003

Amended report 12 Nov 03.

TIM KENYON
 LEGGETTE BRASHEARS & GRAHAM INC
 140 E HINKS LN STE 126
 SIOUX FALLS SD 57104

Report Date: 5 Nov 03
 Lab Number: 03-A35066
 Work Order #: 12-10011
 Account #: 019464
 Sample Matrix: GROUNDWATER
 Date Sampled: 7 Oct 03 9:13
 Date Received: 8 Oct 03 10:10

Project Name: DEZURIK
 Sample Description: P-13

Temperature at Receipt: 5.00

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Specific Conductance	737.0	umhos/cm	0.1	SM 2510B	14 Oct 03 9:27	RBK
pH	7.6	units	1.0	SM 4500 H-B	12 Oct 03 11:00	AKF
Carbon, Total Organic	1.9	mg/L	0.5	415.1	16 Oct 03 8:00	WB
Nitrate	5.24	mg/L as N	NA	353.2	14 Oct 03 17:04	Calculated
Fluoride	< 0.1	mg/L	0.1	SM 18th ED 4500-F C	10 Oct 03 14:05	JD
Sulfate	50.4	mg/L	4.0	375.4	16 Oct 03 13:57	DAS
Chloride	32.3	mg/L	3.0	325.2	17 Oct 03 15:05	DAS
Phenolics, Total	< 5	ug/L	5	420.1	13 Oct 03 9:49	JD
Cyanide, Total	< 0.02	mg/L	0.02	335.2	14 Oct 03 13:01	JD
Chemical Oxygen Demand	20	mg/L	5	410.4	10 Oct 03 4:28	JD
Solids, Total Dissolved	426	mg/L	1	SM 2540C	10 Oct 03 13:04	AKF
Calcium, Dissolved	112.0	mg/L	1.000	6010	4 Nov 03 15:10	JGS
Magnesium, Dissolved	27.10	mg/L	1.000	6010	4 Nov 03 15:10	JGS
Sodium, Dissolved	4.740	mg/L	1.000	6010	4 Nov 03 15:10	JGS
Barium, Dissolved	0.042	mg/L	0.010	6010	27 Oct 03 17:39	JGS
Chromium, Dissolved	< 0.006	mg/L	0.006	6010	27 Oct 03 17:39	JGS
Iron, Dissolved	< 0.01	mg/L	0.01	6010	4 Nov 03 9:11	JGS
Manganese, Dissolved	< 0.003	mg/L	0.003	6010	27 Oct 03 17:39	JGS
Zinc, Dissolved	0.012	mg/L	0.010	6010	27 Oct 03 17:39	JGS
Boron, Dissolved	< 0.1	mg/L	0.1	6010	29 Oct 03 10:20	TB
Arsenic, Dissolved	< 0.5	ug/L	0.5	200.8	21 Oct 03 14:57	TB
Cadmium, Dissolved	< 0.1	ug/L	0.1	200.8	21 Oct 03 14:57	TB
Lead, Dissolved	< 0.5	ug/L	0.5	200.8	21 Oct 03 14:57	TB

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
 ! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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Amended report 12 Nov 03.

TIM KENYON
LEGGETTE BRASHEARS & GRAHAM INC
140 E HINKS LN STE 126
SIOUX FALLS SD 57104

Report Date: 5 Nov 03
Lab Number: 03-A35066
Work Order #: 12-10011
Account #: 019464
Sample Matrix: GROUNDWATER
Date Sampled: 7 Oct 03 9:13
Date Received: 8 Oct 03 10:10

Project Name: DEZURIK
Sample Description: P-13

Temperature at Receipt: 5.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Row 1: Selenium, Dissolved, < 0.5 ug/L, 0.5, 200.0, 21 Oct 03 14:57, TB

Approved by: [Signature]
Michael K. Grob, Inorganic/Microbiology
Laboratory Manager New Ulm, MN

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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Amended report 12 Nov 03.

TIM KENYON
 LEGGETTE BRASHEARS & GRAHAM INC
 140 E HINKS LN STE 126
 SIOUX FALLS SD 57104

Report Date: 5 Nov 03
 Lab Number: 03-A35067
 Work Order #: 12-10011
 Account #: 019464
 Sample Matrix: GROUNDWATER
 Date Sampled: 7 Oct 03 10:15
 Date Received: 8 Oct 03 10:10

Project Name: DEZURIK
 Sample Description: P-5R

Temperature at Receipt: 5.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Specific Conductance	1090	umhos/cm	0.1	SM 2510B	14 Oct 03 9:27	RBK
pH	7.9	units	1.0	SM 4500 H-B	12 Oct 03 11:00	AKF
Carbon, Total Organic	2.5	mg/L	0.5	415.1	16 Oct 03 8:00	WB
Nitrate	5.30	mg/L as N	NA	353.2	14 Oct 03 17:04	Calculated
Fluoride	< 0.1	mg/L	0.1	SM 10th ED 4500-F C	10 Oct 03 14:05	JD
Sulfate	207	mg/L	4.0	375.4	16 Oct 03 13:57	DAS
Chloride	44.8	mg/L	3.0	325.2	17 Oct 03 15:05	DAS
Phenolics, Total	< 5	ug/L	5	420.1	13 Oct 03 9:49	JD
Cyanide, Total	< 0.02	mg/L	0.02	335.2	14 Oct 03 13:01	JD
Chemical Oxygen Demand	44	mg/L	5	410.4	10 Oct 03 4:28	JD
Solids, Total Dissolved	768	mg/L	1	SM 2540C	10 Oct 03 13:04	AKF
Calcium, Dissolved	151.0	mg/L	1.000	6010	4 Nov 03 15:10	JGS
Magnesium, Dissolved	43.00	mg/L	1.000	6010	4 Nov 03 15:10	JGS
Sodium, Dissolved	20.70	mg/L	1.000	6010	4 Nov 03 15:10	JGS
Barium, Dissolved	0.054	mg/L	0.010	6010	27 Oct 03 17:39	JGS
Chromium, Dissolved	< 0.006	mg/L	0.006	6010	27 Oct 03 17:39	JGS
Iron, Dissolved	< 0.01	mg/L	0.01	6010	4 Nov 03 9:11	JGS
Manganese, Dissolved	< 0.003	mg/L	0.003	6010	27 Oct 03 17:39	JGS
Zinc, Dissolved	0.013	mg/L	0.010	6010	27 Oct 03 17:39	JGS
Boron, Dissolved	1.11	mg/L	0.10	6010	29 Oct 03 10:20	TB
Arsenic, Dissolved	< 0.5	ug/L	0.5	200.8	21 Oct 03 14:57	TB
Cadmium, Dissolved	< 0.1	ug/L	0.1	200.8	21 Oct 03 14:57	TB
Lead, Dissolved	< 0.5	ug/L	0.5	200.8	21 Oct 03 14:57	TB

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
 † = Due to sample quantity ‡ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 399447660 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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Amended report 12 Nov 03.

TIM KENYON
LEGGETTE BRASHEARS & GRAHAM INC
140 E HINKS LN STE 126
SIOUX FALLS SD 57104

Report Date: 5 Nov 03
Lab Number: 03-A35067
Work Order #: 12-10011
Account #: 019464
Sample Matrix: GROUNDWATER
Date Sampled: 7 Oct 03 10:15
Date Received: 8 Oct 03 10:10

Project Name: DEZURIK
Sample Description: P-5R

Temperature at Receipt: 5.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Row 1: Selenium, Dissolved, < 0.5 ug/L, 0.5, 200.8, 21 Oct 03 14:57, TB

Approved by:

Signature of Michael K. Grob
Michael K. Grob, Inorganic/Microbiology
Laboratory Manager New Ulm, MN

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447686 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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Amended report 12 Nov 03.

TIM KENYON
LEGGETTE BRASHEARS & GRAHAM INC
140 E HINKS LN STE 126
SIOUX FALLS SD 57104

Report Date: 5 Nov 03
Lab Number: 03-A35068
Work Order #: 12-10011
Account #: 019464
Sample Matrix: GROUNDWATER
Date Sampled: 7 Oct 03 11:19
Date Received: 8 Oct 03 10:10

Project Name: DEZURIK
Sample Description: P-9R

Temperature at Receipt: 5.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Specific Conductance	943.0	umhos/cm	0.1	SM 2510B	14 Oct 03 9:27	RBK
pH	7.4	units	1.0	SM 4500 H-B	12 Oct 03 11:00	AKF
Carbon, Total Organic	3.1	mg/L	0.5	415.1	16 Oct 03 8:00	WB
Nitrate	5.02	mg/L as N	NA	353.2	14 Oct 03 17:04	Calculated
Fluoride	< 0.1	mg/L	0.1	SM 18th ED 4500-F C	10 Oct 03 14:05	JD
Sulfate	96.7	mg/L	4.0	375.4	16 Oct 03 13:57	DAS
Chloride	32.2	mg/L	3.0	325.2	17 Oct 03 15:05	DAS
Phenolics, Total	< 5	ug/L	5	420.1	13 Oct 03 9:49	JD
Cyanide, Total	< 0.02	mg/L	0.02	335.2	14 Oct 03 13:01	JD
Chemical Oxygen Demand	10	mg/L	5	410.4	10 Oct 03 4:20	JD
Solids, Total Dissolved	589	mg/L	1	SM 2540C	10 Oct 03 13:04	AKF
Calcium, Dissolved	136.0	mg/L	1.000	6010	4 Nov 03 15:10	JGS
Magnesium, Dissolved	39.20	mg/L	1.000	6010	4 Nov 03 15:10	JGS
Sodium, Dissolved	12.00	mg/L	1.000	6010	4 Nov 03 15:10	JGS
Barium, Dissolved	0.072	mg/L	0.010	6010	27 Oct 03 17:39	JGS
Chromium, Dissolved	< 0.006	mg/L	0.006	6010	27 Oct 03 17:39	JGS
Iron, Dissolved	< 0.01	mg/L	0.01	6010	4 Nov 03 9:11	JGS
Manganese, Dissolved	0.020	mg/L	0.003	6010	27 Oct 03 17:39	JGS
Zinc, Dissolved	0.015	mg/L	0.010	6010	27 Oct 03 17:39	JGS
Boron, Dissolved	< 0.1	mg/L	0.1	6010	29 Oct 03 10:20	TB
Arsenic, Dissolved	< 0.5	ug/L	0.5	200.8	21 Oct 03 15:54	TB
Cadmium, Dissolved	< 0.1	ug/L	0.1	200.8	21 Oct 03 15:54	TB
Lead, Dissolved	< 0.5	ug/L	0.5	200.8	21 Oct 03 15:54	TB

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix
! = Due to sample quantity

= Due to sample concentration
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.



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Page: 2 of 2

Amended report 12 Nov 03.

TIM KENYON
LEGGETTE BRASHEARS & GRAHAM INC
140 E HINKS LN STE 126
SIOUX FALLS SD 57104

Report Date: 5 Nov 03
Lab Number: 03-A35068
Work Order #: 12-10011
Account #: 019464
Sample Matrix: GROUNDWATER
Date Sampled: 7 Oct 03 11:19
Date Received: 8 Oct 03 10:10

Project Name: DEZURIK
Sample Description: P-9R

Temperature at Receipt: 5.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Selenium, Dissolved	< 0.5	ug/L	0.5	200.8	21 Oct 03 15:54	TB

Approved by:

Michael K. Grob, Inorganic/Microbiology
Laboratory Manager New Ulm, MN

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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Page: 1 of 2

Amended report 12 Nov 03.

TIM KENYON
 LEGGETTE BRASHEARS & GRAHAM INC
 140 E HINKS LN STE 126
 SIOUX FALLS SD 57104

Report Date: 5 Nov 03
 Lab Number: 03-A35069
 Work Order #: 12-10011
 Account #: 019464
 Sample Matrix: GROUNDWATER
 Date Sampled: 7 Oct 03 12:32
 Date Received: 8 Oct 03 10:10

Project Name: DEZURIK
 Sample Description: P-12R

Temperature at Receipt: 5.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Specific Conductance	871.0	umhos/cm	0.1	SM 2510B	14 Oct 03 9:27	RBK
pH	7.4	units	1.0	SM 4500 H-B	12 Oct 03 11:00	AKF
Carbon, Total Organic	3.1	mg/L	0.5	415.1	16 Oct 03 8:00	WB
Nitrate	6.24	ng/L as N	NA	353.2	14 Oct 03 17:04	Calculated
Fluoride	< 0.1	mg/L	0.1	SM 18th ED 4500-F C	10 Oct 03 14:05	JD
Sulfate	129	ng/L	4.0	375.4	16 Oct 03 14:20	DAS
Chloride	34.2	mg/L	3.0	325.2	17 Oct 03 15:05	DAS
Phenolics, Total	< 5	ug/L	5	420.1	13 Oct 03 9:49	JD
Cyanide, Total	< 0.02	mg/L	0.02	335.2	14 Oct 03 13:01	JD
Chemical Oxygen Demand	40	mg/L	5	410.4	10 Oct 03 4:28	JD
Solids, Total Dissolved	626	mg/L	1	SM 2540C	10 Oct 03 13:04	AKF
Calcium, Dissolved	130.0	ng/L	1.000	6010	4 Nov 03 15:10	JGS
Magnesium, Dissolved	34.20	mg/L	1.000	6010	4 Nov 03 15:10	JGS
Sodium, Dissolved	23.80	ng/L	1.000	6010	4 Nov 03 15:10	JGS
Barium, Dissolved	0.057	mg/L	0.010	6010	27 Oct 03 17:39	JGS
Chromium, Dissolved	< 0.006	mg/L	0.006	6010	27 Oct 03 17:39	JGS
Iron, Dissolved	0.097	mg/L	0.010	6010	4 Nov 03 9:11	JGS
Manganese, Dissolved	0.076	mg/L	0.003	6010	27 Oct 03 17:39	JGS
Zinc, Dissolved	0.013	mg/L	0.010	6010	27 Oct 03 17:39	JGS
Boron, Dissolved	< 0.1	ng/L	0.1	6010	29 Oct 03 10:20	TB
Arsenic, Dissolved	< 0.5	ug/L	0.5	200.8	21 Oct 03 15:54	TB
Cadmium, Dissolved	< 0.1	ug/L	0.1	200.8	21 Oct 03 15:54	TB
Lead, Dissolved	< 0.5	ug/L	0.5	200.8	21 Oct 03 15:54	TB

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix ‡ = Due to sample concentration
 ! = Due to sample quantity † = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447600 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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Amended report 12 Nov 03.

TIM KENYON
LEGGETTE BRASHEARS & GRAHAM INC
140 E HINKS LN STE 126
SIOUX FALLS SD 57104

Report Date: 5 Nov 03
Lab Number: 03-A35069
Work Order #: 12-10011
Account #: 019464
Sample Matrix: GROUNDWATER
Date Sampled: 7 Oct 03 12:32
Date Received: 8 Oct 03 10:10

Project Name: DEZURIK
Sample Description: P-12R

Temperature at Receipt: 5.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Row 1: Selenium, Dissolved, 2.35 ug/L, 0.50, 200.0, 21 Oct 03 15:54, TB

Approved by: [Signature]
Michael K. Grob, Inorganic/Microbiology
Laboratory Manager New Ulm, MN

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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Amended report 12 Nov 03.

TIM KENYON
LEGGETTE BRASHEARS & GRAHAM INC
140 E HINKS LN STE 126
SIOUX FALLS SD 57104

Report Date: 5 Nov 03
Lab Number: 03-A35070
Work Order #:12-10011
Account #: 019464
Sample Matrix: GROUNDWATER
Date Sampled: 7 Oct 03
Date Received: 8 Oct 03 10:10

Project Name: DEZURIK
Sample Description: DUPLICATE

Temperature at Receipt: 5.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, and Analyst. Rows include Specific Conductance, pH, Carbon, Total Organic, Nitrate, Fluoride, Sulfate, Chloride, Phenolics, Total, Cyanide, Total, Chemical Oxygen Demand, Solids, Total Dissolved, Calcium, Dissolved, Magnesium, Dissolved, Sodium, Dissolved, Barium, Dissolved, Chromium, Dissolved, Iron, Dissolved, Manganese, Dissolved, Zinc, Dissolved, Boron, Dissolved, Arsenic, Dissolved, Cadmium, Dissolved, Lead, Dissolved.

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132



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Amended report 12 Nov 03.

TIM KENYON
LEGGETTE BRASHEARS & GRAHAM INC
140 E HINKS LN STE 126
SIOUX FALLS SD 57104

Report Date: 5 Nov 03
Lab Number: 03-A35070
Work Order #: 12-10011
Account #: 019464
Sample Matrix: GROUNDWATER
Date Sampled: 7 Oct 03
Date Received: 8 Oct 03 10:10

Project Name: DEZURIK
Sample Description: DUPLICATE

Temperature at Receipt: 5.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Row 1: Selenium, Dissolved < 0.5 ug/L 0.5 200.8 21 Oct 03 15:54 TB

Approved by: [Signature]
Michael K. Grob, Inorganic/Microbiology
Laboratory Manager New Ulm, MN

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447686 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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18-10011

CHAIN OF CUSTODY RECORD

PROJECT NAME		CLIENT NAME		NO. OF CON-TAINERS	REMARKS	LABORATORY NAME:
DEZURIK LANDFILL		DEZURIK				
SAMPLERS: <i>(Signature)</i>						
SAMPLE NO.	DATE	TIME	GRAV	CORR	SAMPLE LOCATIONS	REMARKS
	10.7.03	9:13	✓		P-13	[Cross-hatched area]
	10:15		✓		P-5R	
	11:19		✓		P-9R	
	12:32		✓		P-12R	
			✓		DUPLICATE	
<div style="display: flex; justify-content: space-between;"> <div> <p>RELINQUISHED BY: <i>(Signature)</i></p> <p>RELINQUISHED BY: <i>(Signature)</i></p> <p>RELINQUISHED BY: <i>(Signature)</i></p> </div> <div> <p>DATE/TIME RECEIVED BY: <i>(Signature)</i></p> <p>DATE/TIME RECEIVED BY: <i>(Signature)</i></p> <p>DATE/TIME RECEIVED BY: <i>(Signature)</i></p> </div> <div> <p>DATE/TIME</p> <p>DATE/TIME</p> <p>DATE/TIME</p> </div> <div> <p>RECEIVED BY: <i>(Signature)</i></p> <p>RECEIVED BY: <i>(Signature)</i></p> <p>RECEIVED BY: <i>(Signature)</i></p> </div> </div>						
<p>REPORT TO: TIM KENYON - LBG</p> <p>REMARKS / BILLING INFORMATION:</p> <p>LEGGETTE, BRASHEARS & GRAHAM, INC. 1210 WEST COUNTY ROAD E ST. PAUL, MINNESOTA 55112 (651) 490-1405</p>						