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Second Quarter 2005 Tier 2 Monitoring Report

Former Nutting Truck and Caster Company Site Faribault, Minnesota

Prepared for
Prairie Avenue Leasing

July 2005

BARR

Second Quarter 2005 Tier 2 Monitoring Report

Former Nutting Truck and Caster Company Site Faribault, Minnesota

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BARR

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Minneapolis, MN 55435
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Second Quarter 2005 Tier 2 Monitoring Report
Former Nutting Truck and Caster Company Site

Nutting Truck and Caster Site **Monitoring Period:** Second Quarter 2005
Tier 2 Groundwater Monitoring Program **Date:** July 27, 2005

Sample Collection and Analysis Completeness: 100%

Samples were collected from wells B4, B5, B8, B12, W13, PW17, and PW18 and analyzed by Legend Technical Services for trichloroethylene, 1,1-dichlorothylene, cis-1,2-dichlorothylene, and trans-1,2-dichlorothylene and vinyl chloride.

Contingency Plan Criteria Elements

Sentinel Wells B8, B12, W14

COC concentrations are less than detection limit: Yes

Wells PW17 and PW18

TCE concentration trend is stable or decreasing: Yes, see Figures 3a and 3b

Quality Assurance Review (See Laboratory Report for Details):

Holding Time: All holding times were met by Legend Technical Services.

Duplicates: PW17, Relative Percent Differences were less than 10% for all parameters. Duplicate values are included on Table 2.

Blanks: All parameters were reported as less than the detection limit in the trip, field and method blanks.

Surrogate Recovery: All surrogate recover data met QA/QC requirements except for surrogate 4-bromofluorobenzene in method blank sample where this parameter was reported as 74.6% of total and the QA requirement is for 75% to 124% recovery..

Matrix Spike Duplicate Recovery: Meets QA/QC requirements.

List of Tables:	**Table 1 Groundwater Elevations** **Table 2 Water Quality Data (including duplicates and blanks)**
List of Figures:	**Figure 1 Site Map** **Figure 2 Groundwater Elevations** **Figures 3A and 3B Mann Kendall Test Analysis**
Attachments	**Attachment A Field Data Report** **Attachment B Laboratory Data Report**

Report was prepared by:

Janet B. Dalgleish PG No. 30407	**Date: July 27, 2005**

Tables

Table 1
Tier 2 Groundwater Elevations
1996-2005
(elevations in ft./MSL)

Location	B4	B5	B8	B12	W13	W14	PW17	PW18
11/25/1987	974.44	--	972.37	972.06	974.83	973.51	972.38	972.41
12/03/1987	973.89	--	972.77	970.73	974.19	971.97	946.96	971.03
12/11/1987	974.83	--	972.66	971.86	975.15	972.90	933.59	971.14
12/21/1987	973.82	--	972.64	970.72	974.16	971.88	933.59	971.58
01/13/1988	973.71	--	972.64	970.62	974.03	971.85	940.38	971.56
02/04/1988	973.64	--	972.62	970.59	973.98	971.82	938.41	971.68
03/21/1988	974.16	--	972.86	970.89	974.36	972.10	933.29	972.17
05/18/1988	974.03	--	972.04	971.79	974.33	972.16	933.28	972.34
07/27/1988	973.58	--	971.45	971.35	973.74	971.61	942.56	972.02
09/01/1988	973.27	--	971.23	970.97	973.53	971.30	949.86	962.17
11/18/1988	973.14	--	971.15	970.93	973.35	971.27	951.68	961.94
04/07/1989	--	--	--	--	--	--	945.35	964.95
05/15/1989	973.46	--	971.51	971.30	973.65	971.63	950.04	965.89
08/16/1989	972.81	--	--	--	973.0	--	951.68	964.98
10/23/1989	972.54	--	970.45	970.50	972.76	970.86	947.09	964.49
01/02/1990	--	--	--	--	972.54	--	937.61	965.04
05/08/1990	972.55	--	970.66	970.76	972.76	970.89	950.17	962.97
08/20/1990	--	--	--	--	--	--	933.39	961.99
12/11/1990	973.15	--	971.02	971.11	973.40	971.42	932.99	959.76
03/11/1991	--	--	--	--	973.08	--	933.31	961.81
06/18/1991	974.63	--	972.67	972.47	974.85	972.79	933.53	--
09/10/1991	--	--	--	--	--	--	946.68	960.22
11/21/1991	974.09	--	972.11	971.87	974.43	972.22	943.93	962.04
06/11/1992	974.86	--	972.75	972.50	975.20	972.85	949.69	967.75
09/22/1992	--	--	--	--	--	--	955.49	965.84
11/24/1992	974.75	--	--	--	975.15	--	948.14	965.00
03/29/1993	--	--	--	--	--	--	961.48	965.09
07/14/1993	976.74	--	974.51	974.24	977.13	974.63	964.16	966.60
09/08/1993	--	--	--	--	--	--	974.28	970.89
11/11/1993	975.68	--	--	--	976.15	--	966.19	966.39
05/12/1994	975.41	978.84	973.13	972.86	975.80	973.24	973.44	966.51
10/25/1994	975.60	--	--	--	975.96	--	968.19	967.04
05/24/1995	975.03	978.34	972.73	972.50	975.39	972.86	967.87	963.09
09/25/1995	974.63	--	--	--	975.07	--	962.47	966.44
08/02/1996	975.30	978.34	972.58	972.36	975.35	972.70	969.02	962.29
11/20/1996	974.49	--	--	--	974.74	--	952.89	961.59
05/30/1997	974.58	--	972.42	972.16	975.00	972.54	950.75	965.39
11/26/1997	974.94	--	--	--	975.44	--	950.84	966.39
06/02/1999	975.51	978.90	973.38	973.12	975.95	973.50	958.19	963.59
05/02/2000	974.16	977.45	972.10	969.82	974.61	972.19	964.63	961.66
03/21/2001	973.75	976.84	971.76	971.52	974.15	971.88	966.74	961.61
05/08/2002	973.84	976.97	971.78	971.56	974.27	971.93	955.92	961.59
04/17/2003	973.48	976.36	971.50	971.25	973.84	971.60	966.41	972.03
05/12/2004	973.12	975.72	971.24	970.96	973.69	971.33	955.99	961.91
12/02/2004	974.10	976.99	972.08	971.84	974.39	972.17	972.78	972.75
05/10/2005	974.09	976.78	971.99	971.72	974.36	972.08	972.71	972.68

-- Not measured.

Table 2
Tier 2 Groundwater Quality Data
1996-2005
Nutting - Prairie Leasing
(concentrations in ug/L)

Location	Date	Dup	Trichloro-ethylene	1,1-Dichloro-ethylene	1,2-Dichloro-ethylene,cis	1,2-Dichloro-ethylene, trans	Vinyl chloride
B4	08/02/1996		100	<2.5	<5.0	<5.0	<5.0
B4	11/20/1996		68	<0.5	<1.0	<1.0	--
B4	05/30/1997		73	<0.50	<0.50	<0.50	--
B4	11/26/1997		82	<0.50	<0.50	<0.50	--
B4	05/19/1998		47	0.66	<0.50	<0.50	--
B4	06/02/1999		350	<0.50	0.57	<0.50	--
B4	05/02/2000		130	<0.20	<0.30	<0.30	--
B4	03/21/2001		200	<0.50	0.52	<0.50	<1.0
B4	05/08/2002		150	<5.0	<5.0	<5.0	<5.0
B4	04/17/2003		82	<1.0	<1.0	<1.0	<1.0
B4	05/12/2004		35	<1.0	<1.0	<1.0	<0.20
B4	12/02/2004		47	<1.0	<1.0	<1.0	--
B4	05/10/2005		24	<1.0	<1.0	<1.0	<1.0
B5	08/02/1996		4.9	<0.50	<1.0	<1.0	<1.0
B5	05/19/1998		9.1	<0.50	<0.50	<0.50	--
B5	06/02/1999		1.7	<0.50	<0.50	<0.50	--
B5	05/02/2000		2.2	<0.20	<0.30	<0.30	--
B5	03/21/2001		2.4	<0.50	<0.50	<0.50	<1.0
B5	05/08/2002		<5.0	<5.0	<5.0	<5.0	<5.0
B5	04/17/2003		1.1	<1.0	<1.0	<1.0	<1.0
B5	05/12/2004		1.0	<1.0	<1.0	<1.0	<0.20
B5	12/02/2004		2.1	<1.0	<1.0	<1.0	--
B5	05/10/2005		1.3	<1.0	<1.0	<1.0	<1.0
B8	08/02/1996		<0.50	<0.50	<1.0	<1.0	<1.0
B8	05/30/1997		<0.50	<0.50	<0.50	<0.50	--
B8	05/19/1998		<0.50	<0.50	<0.50	<0.50	--
B8	06/02/1999		<0.50	<0.50	<0.50	<0.50	--
B8	05/02/2000		0.77	<0.20	<0.30	<0.30	--
B8	03/21/2001		<0.50	<0.50	<0.50	<0.50	<1.0
B8	05/08/2002		<5.0	<5.0	<5.0	<5.0	<5.0
B8	04/17/2003		<1.0	<1.0	<1.0	<1.0	<1.0
B8	05/12/2004		<1.0	<1.0	<1.0	<1.0	<0.20
B8	12/02/2004		<1.0	<1.0	<1.0	<1.0	--
B8	05/10/2005		<1.0	<1.0	<1.0	<1.0	<1.0
B12	08/02/1996		<0.50	<0.50	<1.0	<1.0	<1.0
B12	05/30/1997		<0.50	<0.50	<0.50	<0.50	--
B12	05/19/1998		<0.50	<0.50	<0.50	<0.50	--
B12	06/02/1999		<0.50	<0.50	<0.50	<0.50	--
B12	05/02/2000		0.49	<0.20	<0.30	<0.30	--
B12	03/21/2001		<0.50	<0.50	<0.50	<0.50	<1.0
B12	05/08/2002		<5.0	<5.0	<5.0	<5.0	<5.0
B12	04/17/2003		<1.0	<1.0	<1.0	<1.0	<1.0
B12	05/12/2004		<1.0	<1.0	<1.0	<1.0	<0.20
B12	12/02/2004		<1.0	<1.0	<1.0	<1.0	--
B12	05/10/2005		<1.0	<1.0	<1.0	<1.0	<1.0
W13	08/02/1996		9.9	<0.50	2.4	<1.0	<1.0
W13	11/20/1996		5.7	<0.5	1.4	<1.0	--
W13	05/30/1997		16	<0.50	2.6	<0.50	--
W13	11/26/1997		11	<0.50	2.2	<0.50	--

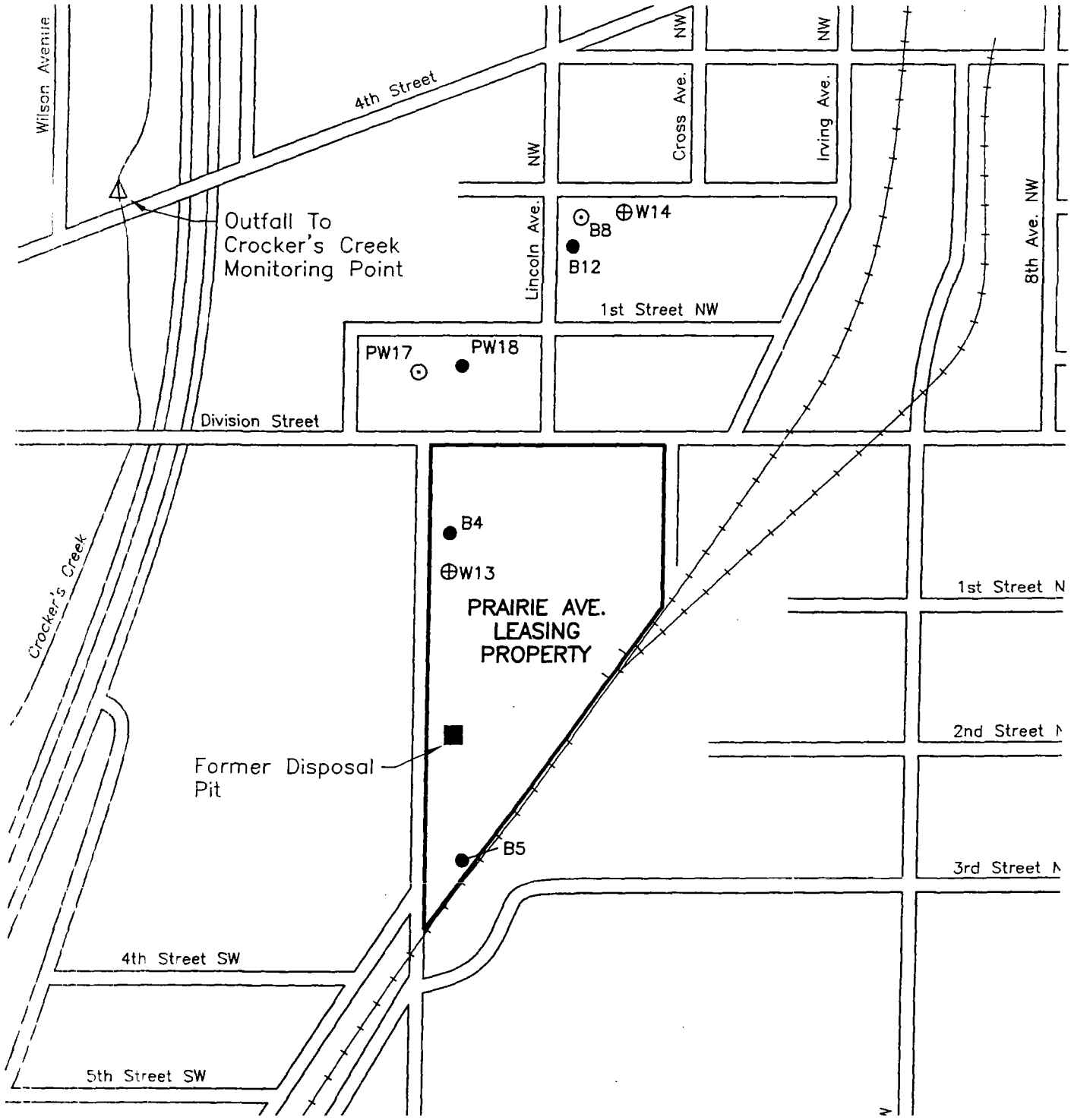
Table 2
Tier 2 Groundwater Quality Data
1996-2005
Nutting - Prairie Leasing
(concentrations in ug/L)

Location	Date	Dup	Trichloro-ethylene	1,1-Dichloro-ethylene	1,2-Dichloro-ethylene,cis	1,2-Dichloro-ethylene, trans	Vinyl chloride
W13	05/19/1998		11	<0.50	3.3	<0.50	--
W13	06/02/1999		22	<0.50	5.5	<0.50	--
W13	05/02/2000		24	<0.20	1.3	<0.30	--
W13	04/17/2003		21	<1.0	2.4	<1.0	<1.0
W13	05/12/2004		18	<1.0	2.9	<1.0	<0.20
W13	12/02/2004		20	<1.0	2.6	<1.0	--
W13	05/10/2005		20	<1.0	2.2	<1.0	<1.0
W14	08/02/1996		<0.50	<0.50	<1.0	<1.0	<1.0
W14	05/30/1997		<0.50	<0.50	<0.50	<0.50	--
W14	05/19/1998		<0.50	<0.50	<0.50	<0.50	--
W14	06/02/1999		<0.50	<0.50	<0.50	<0.50	--
W14	05/02/2000		0.96	<0.20	<0.30	<0.30	--
W14	03/21/2001		<0.50	<0.50	<0.50	<0.50	<1.0
W14	05/08/2002		<5.0	<5.0	<5.0	<5.0	<5.0
W14	04/17/2003		<1.0	<1.0	<1.0	<1.0	<1.0
W14	05/12/2004		<1.0	<1.0	<1.0	<1.0	<0.20
W14	12/02/2004		<1.0	<1.0	<1.0	<1.0	--
W14	05/10/2005		<1.0	<1.0	<1.0	<1.0	<1.0
PW17	08/02/1996		5.0	<0.50	1.1	<1.0	<1.0
PW17	11/20/1996		4.2	<0.5	1.4	<1.0	--
PW17	05/30/1997		5.0	<0.50	0.99	<0.50	--
PW17	11/26/1997		5.0	<0.50	0.56	<0.50	--
PW17	05/19/1998		3.9	<0.50	0.51	<0.50	--
PW17	06/02/1999		4.9	<0.50	0.58	<0.50	--
PW17	05/02/2000		4.0	<0.20	0.53	<0.30	--
PW17	03/21/2001		4.0	<0.50	0.75	<0.50	<1.0
PW17	05/08/2002		3.3 j	<5.0	<5.0	<5.0	<5.0
PW17	04/17/2003		6.2	<1.0	<1.0	<1.0	<1.0
PW17	05/12/2004		2.6	<1.0	<1.0	<1.0	<0.20
PW17	05/10/2005		3.0	<1.0	<1.0	<1.0	<1.0
PW17	05/10/2005	DUP	3.3	<1.0	<1.0	<1.0	<1.0
PW18	08/02/1996		9.2	<0.50	<1.0	<1.0	<1.0
PW18	11/20/1996		5.9	<0.5	<1.0	<1.0	--
PW18	05/30/1997		11	<0.50	0.65	<0.50	--
PW18	05/30/1997	DUP	11	<0.50	0.63	<0.50	--
PW18	11/26/1997		11	<0.50	<0.50	<0.50	--
PW18	05/19/1998		9.9	<0.50	<0.50	<0.50	--
PW18	06/02/1999		11	<0.50	0.59	<0.50	--
PW18	05/02/2000		8.2	<0.20	<0.30	<0.30	--
PW18	03/21/2001		8.5	<0.50	<0.50	<0.50	<1.0
PW18	05/08/2002		7.9	<5.0	<5.0	<5.0	<5.0
PW18	04/17/2003		12	<1.0	<1.0	<1.0	<1.0
PW18	05/12/2004		6.1	<1.0	<1.0	<1.0	<0.20
PW18	12/02/2004		9.5	<1.0	<1.0	<1.0	--
PW18	12/02/2004	DUP	9.8	<1.0	<1.0	<1.0	--
PW18	05/10/2005		5.8	<1.0	<1.0	<1.0	<1.0

-- Not analyzed.

j Reported value is less than the stated laboratory quantitation limit and is considered an estimated value.

Figures



0 400 800

SCALE IN FEET

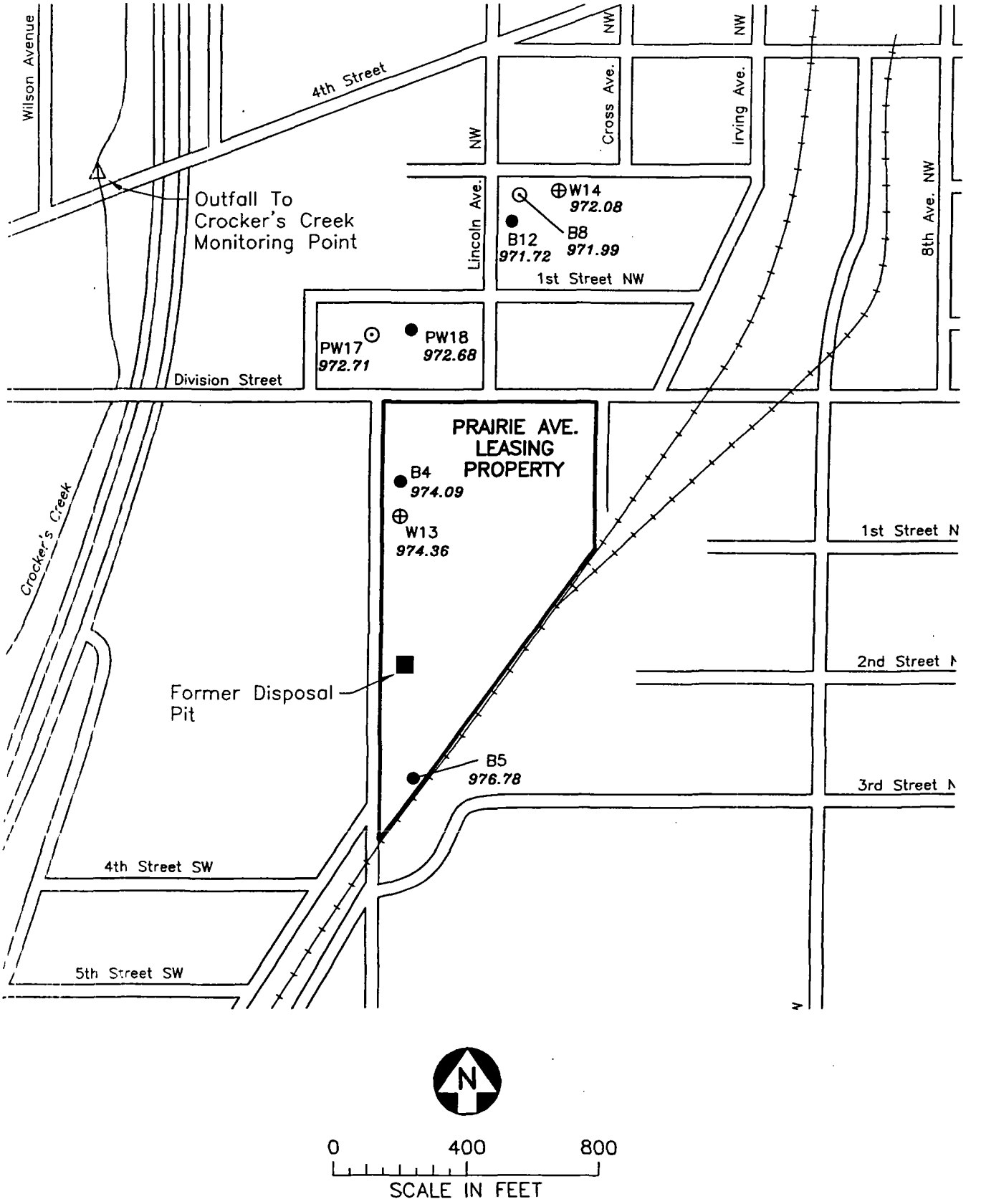
Monitoring Wells

- ● Glacial Drift Aquifer
- ⊙ St. Peter Sandstone Aquifer
- ⊕ Praire du Chien Aquifer

Figure 1

TIER 2 MONITORING LOCATIONS
Nutting Truck and Caster Site
Faribault, Minnesota

rig M:\CAD\236006\20996_1.DWG Plot at 1 01/12/2005 11:36:36



Monitoring Wells

- Glacial Drift Aquifer
- St. Peter Sandstone Aquifer
- Praire du Chien Aquifer

Figure 2

GROUNDWATER ELEVATIONS
MAY 2005
Nutting Truck and Caster Site
Faribault, Minnesota

Figure 3A
MANN-KENDALL STATISTICAL ANALYSIS
PW-17 Trichloroethene

Date	11/26/1997	05/19/1998	06/02/1999	05/02/2000	03/21/2001	05/08/2002	04/17/2003	05/12/2004	05/10/2005	05/10/2005	
Sampling Event	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	
Trichloroethene Concentratio	5	3.9	4.9	4	4	3.3	6.2	2.6	3	3.3	**Sum of Rows**
Compare to Event 1		-1	-1	-1	-1	-1	1	-1	-1	-1	-7
Compare to Event 2			1	1	1	-1	1	-1	-1	-1	0
Compare to Event 3				-1	-1	-1	1	-1	-1	-1	-5
Compare to Event 4					0	-1	1	-1	-1	-1	-3
Compare to Event 5						-1	1	-1	-1	-1	-3
Compare to Event 6							1	-1	-1	0	-1
Compare to Event 7								-1	-1	-1	-3
Compare to Event 8									1	1	2
Compare to Event 9										1	1

Mann-Kendall Statistic (Total) =	-19
Confidence (from Lookup Table)	94.6%
MAROS Trend Conclusion	Probably Decreasing

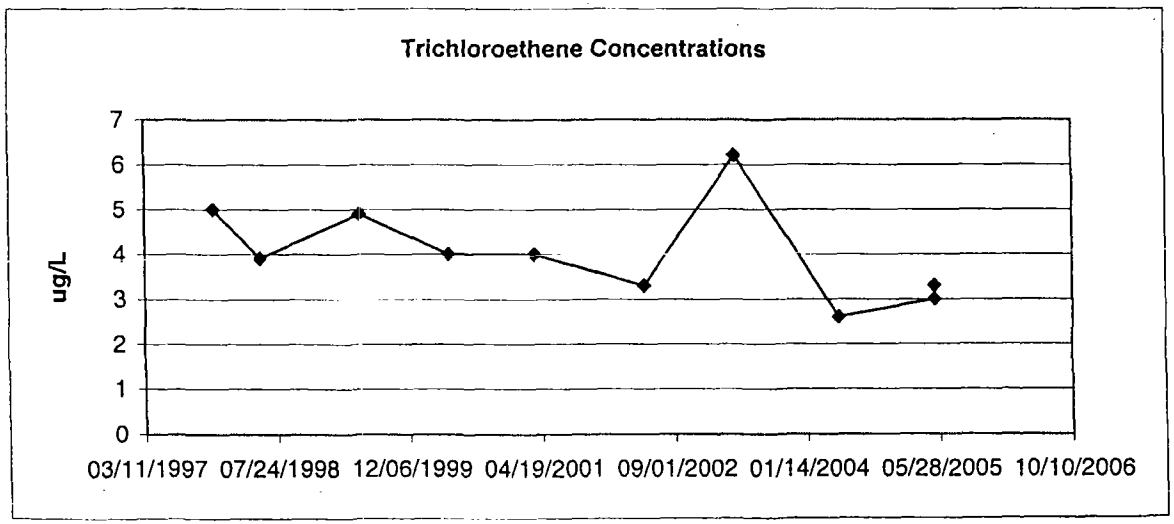
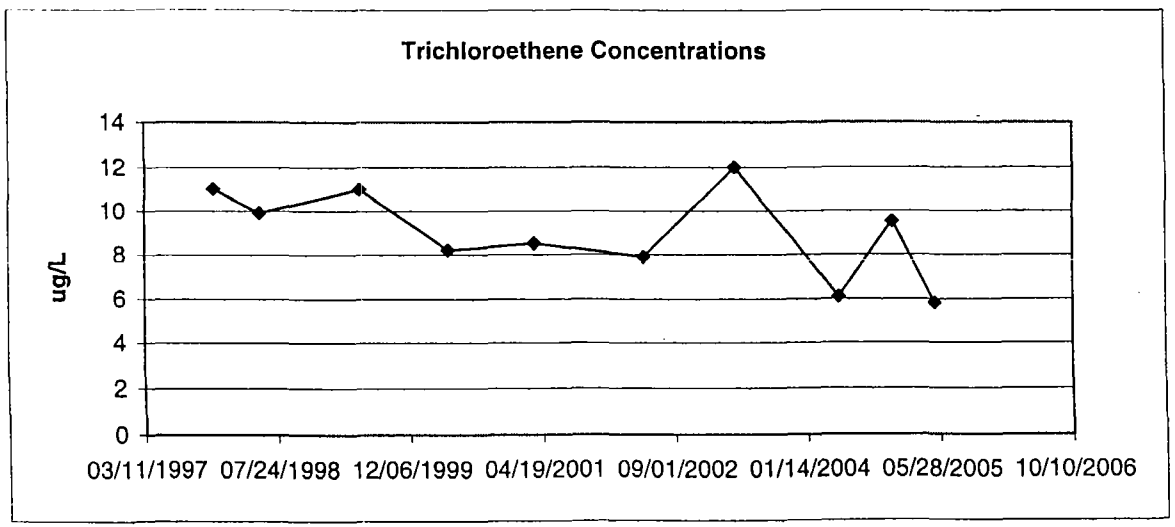


Figure 3B
MANN-KENDALL STATISTICAL ANALYSIS
PW-18

Trichloroethene Concentrations

Date	11/26/1997	05/19/1998	06/02/1999	05/02/2000	03/21/2001	05/08/2002	04/17/2003	05/12/2004	12/02/2004	05/10/2005	
Sampling Event	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	
Contaminant Concentration	11	9.9	11	8.2	8.5	7.9	12	6.1	9.5	5.8	**Sum of Rows**
Compare to Event 1		-1	0	-1	-1	-1	1	-1	-1	-1	-6
Compare to Event 2			1	-1	-1	-1	1	-1	-1	-1	-4
Compare to Event 3				-1	-1	-1	1	-1	-1	-1	-5
Compare to Event 4					1	-1	1	-1	1	-1	0
Compare to Event 5						-1	1	-1	1	-1	-1
Compare to Event 6							1	-1	1	-1	0
Compare to Event 7								-1	-1	-1	-3
Compare to Event 8									1	-1	0
Compare to Event 9										-1	-1

Mann-Kendall Statistic (Total) =	-20
Confidence (from Lookup Table)	96.4%
MAROS Trend Conclusion	Decreasing



Attachments

Attachment A

Field Data Report

BARR

FIELD SAMPLING REPORT

Date: May 31, 2005

Project: Former Nutting Truck and Caster Company

Contact: Marta Nelson
Barr Engineering Company
4700 W. 77th Street
Minneapolis, MN 55435-4803

Field Sampling

Year 2, Tier 2 groundwater monitoring was conducted at the former Nutting Company site on May 10, 2005.

Field Report

Attachments:

- Field log cover sheet
- Water level summary
- Field data summary
- Field log data sheets
- Meter calibration summary
- Chain-of-Custody #20990

Laboratory Analysis Status

Samples were delivered to Legend Analytical Laboratories for analysis. Refer to chain-of-custody for specific information on analysis.

Kim Johannessen
Water Quality

::ODMA\PCDOCS\DOCS\245871\1

FIELD DATA SUMMARY

Project: PRAIRIE AVE. LEASING

Project number: 23/66-006

Staff: KSJ

Monitoring location	Date	Temp (oC)	Conductivity @ 25 oC	pH	Eh	DO mg/l
W14	**5-10-05**	**10.4**	**714**	**7.07**	**-93**	**0.54**
B8	"	**10.6**	**681**	**7.17**	**-110**	**2.85**
B12	"	**11.1**	**799**	**7.06**	**-25**	**3.59**
B5	"	**11.0**	**625**	**6.78**	**72**	**8.31**
B4	"	**12.6**	**1022**	**6.74**	**211**	**7.25**
W13	"	**11.7**	**769**	**7.25**	**-77**	**0.51**
PW17	"	**11.2**	**730**	**7.11**	**-180**	**0.11**
PW18	"	**11.3**	**776**	**7.01**	**-23**	**1.47**

WATER LEVEL REPORT

Project: PRAIRIE AVE. LEASING

Project Number: 23/66-006

Staff: KSJ Date: 5-10-05

Monitoring Location	Measuring point elevation	Water level depth	Total well depth	Static water elevation	Comments
B4	1006.54	32.45	44.0	--	
B5	1008.74	31.96	40.0	--	
B8	999.28	27.29	67.0	--	
B12	998.16	26.44	47.0	--	
W13	1006.74	32.38	96.0	--	
W14	999.00	26.92	79.0	--	
B15	1007.43	—	43.0	--	
PW17	1007.39	34.68	73.0	--	
PW18	1007.39	34.71	48.5	--	

BARR

Barr Engineering Company
Field Log Data Sheet

Client: Prairie Ave Leasing	Monitoring Point: B8
Location: Faribault	Date: 5-10-05
Project #: 23/66-006 DEP	Sample Time: 1225

GENERAL DATA		STABILIZATION TEST						
Barr lock:	YES							
Casing diameter:	2"	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Total well depth:*	67.0	1207/19g.	10.6	665	7.25	-119	3.29	clear
Static water level:*	27.29	1214/26g.	10.7	674	7.20	-113	2.93	"
Water depth:*	39.7	1220/32g.	10.6	681	7.17	-110	2.85	"
Well volume: (gal)	6.5							
Purge method:	Subm.							
Sample method:	bailer							
Start time:	1148	Odor: none detected						
Stop time:	1220	Purge Appearance: clear						
Duration: (minutes)	32	Sample Appearance: clear						
Rate, gpm:	1	Comments:						
Volume, purged:	32 gal							
Duplicate collected?	—							
Sample collection by:	KSJ	CO2-	Mn2-	Fe(T)-	Fe2-			

Others present:

WELL INSPECTION (answer for each category, state if lock replaced, detail any repairs needed on back of form)

CASING & CAP: COLLAR: LOCK: OTHER:

MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:

VOC- 3 semi-volatile- general- nutrient- cyanide- DRO- Sulfide-

oil,grease- bacteria- total metal- filtered metal- methane- filter-

Others:

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

BARR

Barr Engineering Company
Field Log Data Sheet

Client:	Prairie Ave Leasing	Monitoring Point:	B5
Location:	Faribault	Date:	10-5-05
Project #:	23/66.006DEP	Sample Time:	1400

GENERAL DATA		STABILIZATION TEST						
Barr lock:	YES							
Casing diameter:	2" PVC	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	* Turbidity Appearance
Total well depth:*	40.0	1344/4g.	10.8	629	6.82	58	8.53	Clear
Static water level:*	31.96	1347/5g.	10.9	627	6.79	68	8.39	"
Water depth:*	8.	1356/7g.	11.0	625	6.78	72	8.31	Clear
Well volume: (gal)	1.3							
Purge method:	Subm.							
Sample method:	bailer							
Start time:	1327	Odor: none detected						
Stop time:	1356	Purge Appearance: clear						
Duration: (minutes)	28	Sample Appearance: Clear						
Rate, gpm:	.25	Comments:						
Volume, purged:	7 gal							
Duplicate collected?	—							
Sample collection by:	KSJ	CO2-	Mn2-	Fe(T)-	Fe2-			

Others present:

WELL INSPECTION (answer for each category, state if lock replaced, detail any repairs needed on back of form)

CASING & CAP: COLLAR: LOCK: OTHER:

MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:

VOC- 3 semi-volatile- general- nutrient- cyanide- DRO- Sulfide-

Oil,grease- bacteria- total metal- filtered metal- methane- filter-

Others:

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

BARR

Barr Engineering Company
Field Log Data Sheet

Client:	Prairie Ave Leasing	Monitoring Point:	W13
Location:	Faribault	Date:	5-10-05
Project #:	23/66-006 DEP	Sample Time:	1745

GENERAL DATA		STABILIZATION TEST						
Barr lock:	YES							
Casing diameter:	4"	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Total well depth:*	96.0	1532/42g	11.9	697	7.44	-195	0.19	clear
Static water level:*	32.38	1606/84g	11.8	755	7.35	-140	0.31	"
Water depth:*	63.6	1658/126g	11.7	763	7.29	-101	0.45	"
Well volume: (gal)	42	1740/168g	11.7	769	7.25	-77	0.51	"
Purge method:	Subm.							
Sample method:	bailer							
Start time:	1452	Odor: none detected						
Stop time:	1740	Purge Appearance: Clear						
Duration: (minutes)	168	Sample Appearance: Clear						
Rate gpm:	1	Comments:						
Volume, purged:	168 gal							
Duplicate collected?	–							
Sample collection by:	KSJ	CO2-	Mn2-	Fe(T)-	Fe2-			

Others present:

WELL INSPECTION (answer for each category, state if lock replaced, detail any repairs needed on back of form)

CASING & CAP: COLLAR: LOCK: OTHER:

MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:

VOC- 3 semi-volatile- general- nutrient- cyanide- DRO- Sulfide-

oil,grease- bacteria- total metal- filtered metal- methane- filter-

Others:

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

BARR

Barr Engineering Company
Field Log Data Sheet

Client:	Prairie Ave Leasing	Monitoring Point:	PW18
Location:	Faribault	Date:	5-10-05
Project #:	23/66-006 DEP	Sample Time:	2035

GENERAL DATA		STABILIZATION TEST						
Barr lock:	YES							
Casing diameter:	8"	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Total well depth:*	48.5	1945/35g.	11.3	771	7.07	-42	1.29	clear
Static water level:*	34.71	2002/70g.	11.3	774	7.03	-28	1.42	"
Water depth:*	13.8	2030/105g.	11.3	776	7.01	-23	1.47	"
Well volume: (gal)	35							
Purge method:	Subm.							
Sample method:	bailer							
Start time:	1987	Odor: none detected						
Stop time:		Purge Appearance: clear						
Duration: (minutes)		Sample Appearance: clear						
Rate, gpm:	2	Comments: FB-1						
Volume, purged:								
Duplicate collected?	–							
Sample collection by:	KSJ	CO2-	Mn2-	Fe(T)-	Fe2-			

Others present:

WELL INSPECTION (answer for each category, state if lock replaced, detail any repairs needed on back of form)

CASING & CAP: COLLAR: LOCK: OTHER:

MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:

VOC- 3 semi-volatile- general- nutrient- cyanide- DRO- Sulfide-

oil,grease- bacteria- total metal- filtered metal- methane- filter-

Others:

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

BARR

Chain of Custody

4700 West 77th Street
Minneapolis, MN 55435-4803
(952) 832-2600

Project Number: 73/66-006 DEP

20090

Project Manager: JBD

Project Contact: MSH

Laboratory: Legacal

	Sample Identification	Collection Date	Collection Time	Matrix: Water	Matrix: Soil	Type: Grab	Type: Comp.	Type: QC	Volatile Organic (Unpres.)	Volatile Organic (Pres.)	Semivolatile Organic	Total Metals (HNO_3)	Dissolved Metals (HNO_3)	General (Unpreserved)	Cyanide (NaOH, Asc. Acid)	Nutrients (H_2SO_4)	Oil and Grease (H_2SO_4)	TOC (H_2SO_4)	Sulfide (Zn Acetate)	Total Phenol (H_2SO_4)	Methane	Bacteria	DRO (HCL)			Total No. Of Containers	Remarks/ Analysis Required:
1.	W14	5-10-05	1135	✓		✓				3																3	Table 1, Partial VOC's
2.	B8	↓	1225	✓		✓				3																3	(4 compounds 8260)
3.	B12		1300	✓		✓				3																3	↓
4.	B5		1400	✓		✓				3																3	
5.	B4		1440	✓		✓				3																3	
6.	W13		1745	✓		✓				3																3	
7.	PW17		1915	✓		✓				3																3	
8.	PW18			✓		✓				3																3	
9.	M-1			✓		✓		✓		3																3	
10.	FB-1			✓				✓		3																3	
11.	TB			✓				✓		1																1	
12.																											
13.																											
14.																											
15.																											
16.																											
17.																											

Sampled By: Kim Johannessen

Relinquished By: [signature]

Samples Shipped VIA: ☐ Air Freight ☐ Fed. Exp. ☒ Sampler ☐ Other

Date:

Time: 5/12/05

Received by:

Air Bill Number:

Date:

Time:

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Green - Lab Coordinator

Attachment B

Laboratory Data Report

LEGEND
Technical Services, Inc.
www.legend-group.com

775 Vandalia Street
St. Paul, MN 55114
Tel: 651.642.1150
Fax: 651.642.1239

May 13, 2005

RECEIVED
MAY 18 2005
BARR
ENGINEERING CO.

Ms. Marta Nelson
Barr Engineering Co.
4700 W 77th St
Minneapolis, MN 55435

Work Order Number: 0502007
RE: 23/66-006

Enclosed are the results of analyses for samples received by the laboratory on 05/12/05. If you have any questions concerning this report, please feel free to contact me.

All samples will be retained by LEGEND for 30 days from the date of this report and then discarded unless other arrangements are made.

Minnesota Certification # 027-123-295

Prepared by,
LEGEND TECHNICAL SERVICES, INC

Chris Bremer
Laboratory Director

Terri Olson
QA/QC Coordinator

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LEGEND
Technical Services, Inc.

775 Vandalia Street
St Paul, MN 55114
651.642.1150

Barr Engineering Co. 4700 W 77th St Minneapolis MN, 55435	Project: 23/66-006 Project Number: 23/66-006 DEP Project Manager: Ms. Marta Nelson	**Date Reported:** May 16, 2005

VOC GCMS 8260B
LEGEND Technical Services, Inc

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
W14 (0502007-01) Groundwater Sampled: 05/10/05 11:35 Received: 05/12/05 09:30										
1,1-Dichloroethene	<1.0	1.0	0.14	ug/L	1	B5E1310	05/13/05	05/13/05	EPA 8260B	
cis-1,2-Dichloroethene	<1.0	1.0	0.13	ug/L	1	"	"	"	"	
trans-1,2-Dichloroethene	<1.0	1.0	0.14	ug/L	1	"	"	"	"	
Trichloroethene	<1.0	1.0	0.20	ug/L	1	"	"	"	"	
Vinyl chloride	<1.0	1.0	0.13	ug/L	1	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*79.6*			*75-124 %*		"	"	"	"	
Surrogate: Dibromofluoromethane	*86.0*			*75-125 %*		"	"	"	"	
Surrogate: Toluene-d8	*82.6*			*75-125 %*		"	"	"	"	
B8 (0502007-02) Groundwater Sampled: 05/10/05 12:25 Received: 05/12/05 09:30										
1,1-Dichloroethene	<1.0	1.0	0.14	ug/L	1	B5E1310	05/13/05	05/13/05	EPA 8260B	
cis-1,2-Dichloroethene	<1.0	1.0	0.13	ug/L	1	"	"	"	"	
trans-1,2-Dichloroethene	<1.0	1.0	0.14	ug/L	1	"	"	"	"	
Trichloroethene	<1.0	1.0	0.20	ug/L	1	"	"	"	"	
Vinyl chloride	<1.0	1.0	0.13	ug/L	1	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*84.0*			*75-124 %*		"	"	"	"	
Surrogate: Dibromofluoromethane	*88.2*			*75-125 %*		"	"	"	"	
Surrogate: Toluene-d8	*84.8*			*75-125 %*		"	"	"	"	
B12 (0502007-03) Groundwater Sampled: 05/10/05 13:00 Received: 05/12/05 09:30										
1,1-Dichloroethene	<1.0	1.0	0.14	ug/L	1	B5E1310	05/13/05	05/13/05	EPA 8260B	
cis-1,2-Dichloroethene	<1.0	1.0	0.13	ug/L	1	"	"	"	"	
trans-1,2-Dichloroethene	<1.0	1.0	0.14	ug/L	1	"	"	"	"	
Trichloroethene	<1.0	1.0	0.20	ug/L	1	"	"	"	"	
Vinyl chloride	<1.0	1.0	0.13	ug/L	1	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*80.2*			*75-124 %*		"	"	"	"	
Surrogate: Dibromofluoromethane	*89.2*			*75-125 %*		"	"	"	"	
Surrogate: Toluene-d8	*83.8*			*75-125 %*		"	"	"	"	

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LEGEND
Technical Services, Inc.

775 Vandalia Street
St Paul, MN 55114
651.642.1150

Barr Engineering Co.	Project: 23/66-006	
4700 W 77th St	Project Number: 23/66-006 DEP	Date Reported:
Minneapolis MN, 55435	Project Manager: Ms. Marta Nelson	May 16, 2005

VOC GCMS 8260B
LEGEND Technical Services, Inc

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PW 17 (0502007-07) Groundwater Sampled: 05/10/05 19:15 Received: 05/12/05 09:30										
1,1-Dichloroethene	<1.0	1.0	0.14	ug/L	1	B5E1310	05/13/05	05/13/05	EPA 8260B	
cis-1,2-Dichloroethene	<1.0	1.0	0.13	ug/L	1	"	"	"	"	
trans-1,2-Dichloroethene	<1.0	1.0	0.14	ug/L	1	"	"	"	"	
Trichloroethene	**3.0**	1.0	0.20	ug/L	1	"	"	"	"	
Vinyl chloride	<1.0	1.0	0.13	ug/L	1	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*80.8*			*75-124*	*%*	"	"	"	"	
Surrogate: Dibromofluoromethane	*88.6*			*75-125*	*%*	"	"	"	"	
Surrogate: Toluene-d8	*83.2*			*75-125*	*%*	"	"	"	"	
PW 18 (0502007-08) Groundwater Sampled: 05/10/05 00:00 Received: 05/12/05 09:30										
1,1-Dichloroethene	<1.0	1.0	0.14	ug/L	1	B5E1310	05/13/05	05/13/05	EPA 8260B	
cis-1,2-Dichloroethene	<1.0	1.0	0.13	ug/L	1	"	"	"	"	
trans-1,2-Dichloroethene	<1.0	1.0	0.14	ug/L	1	"	"	"	"	
Trichloroethene	**5.8**	1.0	0.20	ug/L	1	"	"	"	"	
Vinyl chloride	<1.0	1.0	0.13	ug/L	1	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*77.8*			*75-124*	*%*	"	"	"	"	
Surrogate: Dibromofluoromethane	*87.4*			*75-125*	*%*	"	"	"	"	
Surrogate: Toluene-d8	*83.2*			*75-125*	*%*	"	"	"	"	
M-1 (0502007-09) Groundwater Sampled: 05/10/05 00:00 Received: 05/12/05 09:30										
1,1-Dichloroethene	<1.0	1.0	0.14	ug/L	1	B5E1310	05/13/05	05/14/05	EPA 8260B	
cis-1,2-Dichloroethene	<1.0	1.0	0.13	ug/L	1	"	"	"	"	
trans-1,2-Dichloroethene	<1.0	1.0	0.14	ug/L	1	"	"	"	"	
Trichloroethene	**3.3**	1.0	0.20	ug/L	1	"	"	"	"	
Vinyl chloride	<1.0	1.0	0.13	ug/L	1	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*77.8*			*75-124*	*%*	"	"	"	"	
Surrogate: Dibromofluoromethane	*84.8*			*75-125*	*%*	"	"	"	"	
Surrogate: Toluene-d8	*82.4*			*75-125*	*%*	"	"	"	"	

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LEGEND
Technical Services, Inc.

775 Vandalia Street
St Paul, MN 55114
651.642.1150

Barr Engineering Co. 4700 W 77th St Minneapolis MN, 55435	Project: 23/66-006 Project Number: 23/66-006 DEP Project Manager: Ms. Marta Nelson	**Date Reported:** May 16, 2005

VOC GCMS 8260B - Quality Control
LEGEND Technical Services, Inc

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Batch B5E1310 - Volatiles										
Blank (B5E1310-BLK1)				Prepared & Analyzed: 05/13/05						
1,1-Dichloroethene	<1.0	1.0	ug/L							
Benzene	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
cis-1,2-Dichloroethene	<1.0	1.0	ug/L							
Toluene	<1.0	1.0	ug/L							
trans-1,2-Dichloroethene	<1.0	1.0	ug/L							
Trichloroethene	<1.0	1.0	ug/L							
Vinyl chloride	<1.0	1.0	ug/L							
Surrogate: 4-Bromofluorobenzene	*37.3*		*ug/L*	*50.0*		74.6	*75-124*			*S-02*
Surrogate: Dibromofluoromethane	*42.1*		*ug/L*	*50.0*		84.2	*75-125*			
Surrogate: Toluene-d8	*40.3*		*ug/L*	*50.0*		80.6	*75-125*			
LCS (B5E1310-BS1)				Prepared: 05/13/05 Analyzed: 05/14/05						
1,1-Dichloroethene	53.2	1.0	ug/L	50.0		106	76.1-120			
Benzene	52.0	1.0	ug/L	50.0		104	80-120			
Chlorobenzene	49.2	1.0	ug/L	50.0		98.4	80-122			
Toluene	51.7	1.0	ug/L	50.0		103	80-120			
Trichloroethene	51.6	1.0	ug/L	50.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	*41.2*		*ug/L*	*50.0*		82.4	*75-124*			
Surrogate: Dibromofluoromethane	*44.3*		*ug/L*	*50.0*		88.6	*75-125*			
Surrogate: Toluene-d8	*42.9*		*ug/L*	*50.0*		85.8	*75-125*			
Matrix Spike (B5E1310-MS1)		Source: 0502007-03		Prepared: 05/13/05 Analyzed: 05/14/05						
1,1-Dichloroethene	53.2	1.0	ug/L	50.0	<1.0	106	80-120			
Benzene	51.9	1.0	ug/L	50.0	<1.0	104	80-124			
Chlorobenzene	48.7	1.0	ug/L	50.0	<1.0	97.4	77.5-120			
Toluene	50.7	1.0	ug/L	50.0	<1.0	101	75.4-120			

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LEGEND
Technical Services, Inc.

775 Vandalia Street
St Paul, MN 55114
651.642.1150

Barr Engineering Co. 4700 W 77th St Minneapolis MN, 55435	Project: 23/66-006 Project Number: 23/66-006 DEP Project Manager: Ms. Marta Nelson	**Date Reported:** May 16, 2005

Notes and Definitions

S-02	Surrogate recovery outside of laboratory acceptance limits.
<	Less than value listed
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
NA	Not applicable. The %RPD is not calculated from values less than the reporting limit.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Privileged and Confidential Draft Document

#0502007

Table 1
Monitoring Network Summary

	Tier 1	Tier 2			
Sample Locations	2nd Qtr.	Year 1 Event 1	Year 1 Event 2	Year 2 Events 3 & 4	Year 3 Events 5 & 6
B4	P VOCs/8260	VOCs/8260 Natural Attenuation Parameters	Detected and P VOCs/8260 Recommended Natural Attenuation Parameters	Detected and P VOCs/8260	Detected and P VOCs/8260
B8					
B12					
W13					
W14					
B15					
PW17					
PW18					
NPDES Permit Monitoring					
PW17	P VOCs/8260	NA	NA	NA	NA
PW18	P VOCs/8260	NA	NA	NA	NA
Outfall 20100 (Catch Basin)	Oil & Grease, TOC, pH P VOCs/8260	NA	NA	NA	NA
Outfall Crocker=s Creek	P VOCs/8260	NA	NA	NA	NA

P VOCs/8260 Partial Volatile Organic Compounds include: 1,1-dichloroethylene, 1,2-dichloroethylene, (cis/trans),1,1,2-trichloroethylene(TCE), vinyl chloride. Samples will be analyzed by Method 8260. Detection limit is 1 µg/L for all P VOC parameters.

NA - Not Applicable

651-642-1239