September 28, 2000

Mr. John Feeney
Southeast Region Annex
4041 North Richards Street
P.O. Box 12436
Milwaukee, WI 53212-0436

Subject: **Lime Kiln Landfill Groundwater Monitoring Data**
Village of Grafton, Wisconsin

Dear John:

Two rounds of groundwater monitoring data are included from the Lime Kiln Park groundwater monitoring program; Quarter 1 (March) and Quarter 2 (June) of 2000. The data is included in electronic and hard copy format for your use. In addition to the raw laboratory data, I have included a summary of the detected compounds from both quarters so that you may easily evaluate the data.

No data analysis is provided with this submittal. The data will be analyzed after the collection of four full rounds of data. The fourth round will be collected in December, and an annual report submittal to the WDNR is anticipated in March, 2001. ~~The report will incorporate data collected to date at the site, beginning in 1997 during the site investigation.~~

As always, should you have any questions, please contact me.

Sincerely,

Earth Tech, Inc.

B.J. Le Roy
Project Geologist

c: Darrell Hofland
Mark Gottlieb
Joan Underwood

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date that 12/02

2002 Annual Report

Lime Kiln Landfill
Grafton, Wisconsin

Prepared for:

Village of Grafton
Grafton, Wisconsin

Prepared by:

Earth Tech, Inc.
4135 Technology Parkway
Sheboygan, WI 53083

December 2003

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1.0 INTRODUCTION

1.1 PURPOSE

This annual report summarizes the environmental monitoring results and trends at the Lime Kiln Landfill, and evaluates the effectiveness of the natural attenuation remedy that is being assessed as approved in the Investigation Report (Earth Tech, 1999). This is the third annual report submitted for the site, and it describes and documents site conditions and activities from January 2000 to December 2002. This report fulfills the requirements of NR 724 that requires reporting of groundwater analysis and site activities. Accordingly, this report includes:

- Presentation of groundwater analytical results.
- Evaluation of groundwater data trends and evidence of the natural attenuation process.
- Recommendations for future monitoring considerations.

Groundwater data presented in this report includes thirteen sample events completed in 2000 (January, March, June, September, and December), 2001 (March, June, October, and December) and 2002 (March, June, October, and December). Routine quarterly monitoring data has been, and will continue to be, provided to the WDNR separate from the Annual Report format. The next scheduled annual report will be compiled after the fourth quarter of 2003.

1.2 REPORT ORGANIZATION

The report is organized as follows; Section 1 provides a brief regulatory summary, describing where the site is to date within the regulatory framework. The investigation scope of work, as well as the site setting, is summarized in Section 2. Section 3, groundwater monitoring, presents the physical and chemical groundwater data collected as part of the monitoring that has taken place during 2000 and 2001. Section 4 is a summary of the natural attenuation process as it occurs at Lime Kiln Landfill. Sections 5 and 6 are the conclusions and recommendations of this report.

2.0 SITE INVESTIGATION SUMMARY

This section summarizes the Site Investigation and Preliminary Remedial Action Investigation Report (Earth Tech, 1999). A full explanation of the site history and investigation is in the Site Investigation Report.

The Lime Kiln Landfill in Grafton, Wisconsin, was investigated under Wisconsin Administrative Code (WAC) NR 700 by the Wisconsin Department of Natural Resources (WDNR) because of impacts of the landfill on the environment.

The Lime Kiln Landfill is defined as a "complex" site under NR 700 based on the groundwater sample results. This designation requires the following be completed : 1) site investigation, 2) identification and evaluation of remedial action options, 3) remedial alternative selection, 4) design, 5) maintenance and operation of remedial actions implemented, and 6) site monitoring. The Village of Grafton completed Items 1 and 2 of this list in the Site Investigation and Preliminary Remedial Action Identification Report (Earth Tech, 1999). Items 3 and 4 are complete, and items 5 and 6 are ongoing.

2.1 SITE LOCATION

The Lime Kiln Landfill site is within the limits of Lime Kiln Park in the Village of Grafton, Ozaukee County. The Milwaukee River borders the south and east edges of the park, while residential areas border the northeast, west, and southwest sides of the Park, as well as the east side of the Milwaukee River. Industries and businesses are located west, north, and northwest of the park along Wisconsin Avenue. The quarry area actually filled is approximately 1.4 acres based upon the field investigation results. The landfill location and site conditions are shown on Figure 1. There have been no changes to the site conditions since the 2000 annual report.

2.2 CONCEPTUAL HYDROGEOLOGIC MODEL

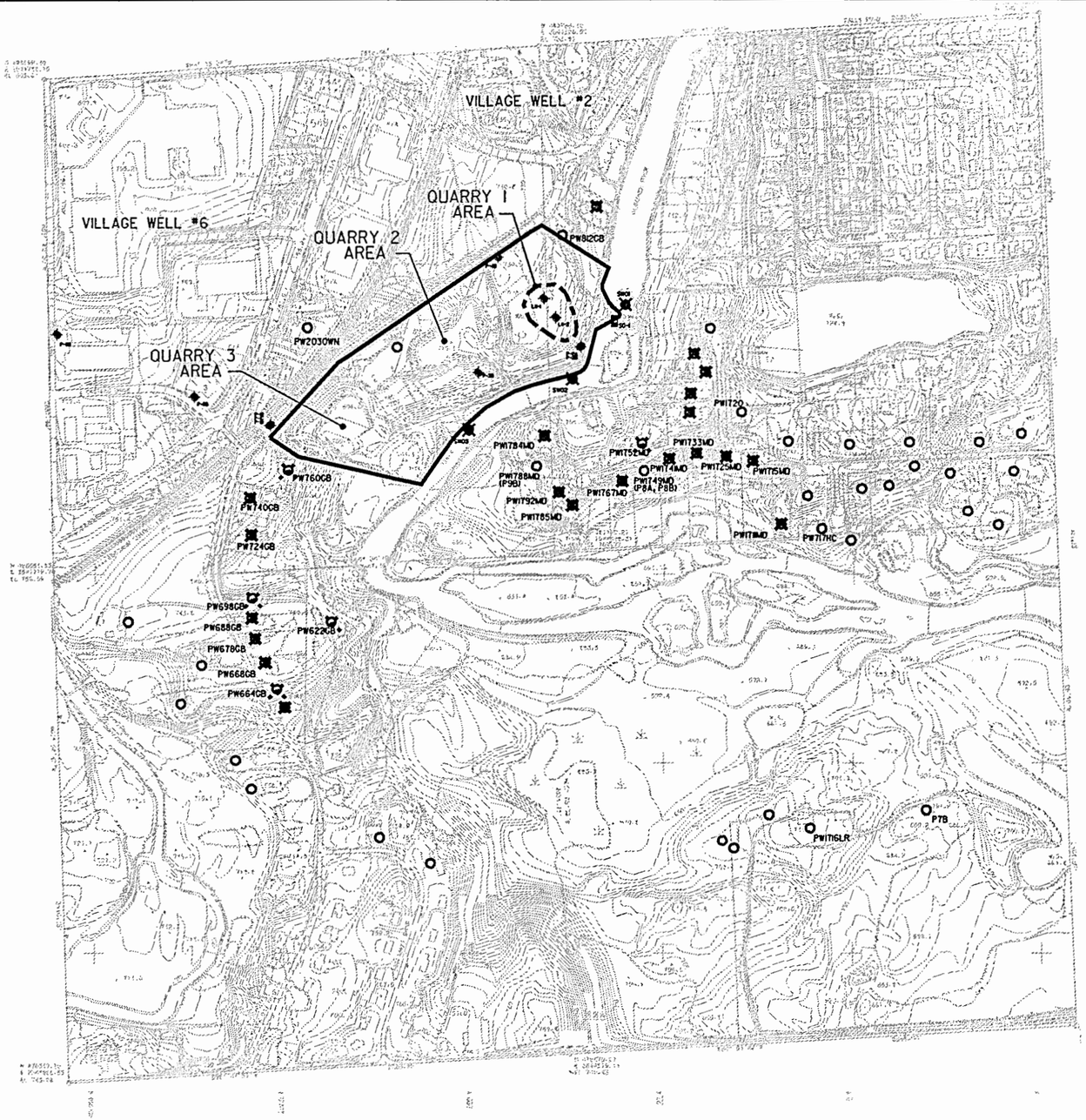
The conceptual groundwater flow model consists of thin unconsolidated glacial deposits and fill which overlie an unconfined dolomite bedrock aquifer. The dolomite aquifer contains lithologic changes, and individual hydrostratigraphic units were classified as aquifers or aquitards. The vertical extent of the conceptual model is bounded by a lower permeability aquitard.

The Silurian-age dolomite aquifer is comprised of undifferentiated Racine Formation and the Romeo beds of the Racine Formation. The aquifer extends approximately 200 feet below the top of bedrock, coincident with the contact of the underlying Waukesha Formation. The Waukesha Formation is designated as an aquitard because it is fine-grained and unweathered.

Northwest of the Park, the water table is on the order of 15 to 20 feet below the ground surface. At the landfill, the water table is about 20 feet below ground surface, saturating the lower portion of the waste in the landfill.

The Milwaukee River forms the eastern boundary of the Park. The 500- to 700-foot reach of the river immediately downstream of the dam adjacent to the park is higher than the water table. Water, therefore, flows from the river bottom to the aquifer.

The local component of the flow system in the vicinity of the site is less pronounced than the regional components. Groundwater in the uppermost aquifer (Racine Formation including the Romeo beds) is considered part of the regional flow systems with a recharge area encompassing the site, as well as



EXPLANATION

- LIME KILN PARK PROPERTY BOUNDARY
- LIMITS OF WASTE (GEOPHYSICS AND GEOPROBE)
- PRIVATE WATER SUPPLY WELL TO BE ABANDONED
- ABANDONED PRIVATE WATER SUPPLY WELL
- PRIVATE WATER SUPPLY WELLS THAT HAVE BEEN SAMPLED
- SURFACE WATER SAMPLE (SW-1)
- MONITORING WELL (P-1)
- LEACHATE WELL (LW-2)
- MONITORING WELL NEST (P-2A, P-2B)
- STAFF GAUGE (SG-1)

NOTES:

1. TOPOGRAPHIC BASE MAP AND PRIVATE WELL LOCATIONS COMPILED FROM WISCONSIN DEPARTMENT OF NATURAL RESOURCES.
2. HORIZONTAL DATUM BASED ON STATE PLANE COORDINATES.

N

SCALE 0' 175' 350' 700'

EARTH TECH

FIGURE 1
EXISTING CONDITIONS

2001 ANNUAL REPORT
VILLAGE OF GRAFTON
GRAFTON, WISCONSIN

NOV 2002 30250

topographically high areas west of the site. Longer flow paths and discharge to Lake Michigan located about 2.5 miles to the east of the site also characterize the regional flow system.

Once water reaches the water table, flow is controlled by the hydraulic head in the units as shown by water levels in wells surrounding the site. The downward gradients are consistent with the site's position within a recharge area as evidenced by vertical gradients observed in the investigation report.

Groundwater flow is controlled primarily by the bedrock structure and the regional discharge to Lake Michigan. In highly transmissive zones (higher hydraulic conductivity), advective contaminant transport within the aquifer yields a narrow plume, as seen downgradient of the Lime Kiln site.

The regional groundwater flow pattern may also be influenced by public and private water supply wells in the area. The Village of Grafton has seven water supply wells that pump groundwater. Two wells with limited usage are located upgradient of Lime Kiln Park and are shown on Figure 1. Private residence wells outside the Village limits also withdraw groundwater and may affect groundwater flow.

2.3 1999 INVESTIGATION REPORT CONCLUSIONS AND RECOMMENDATIONS

The 1999 Investigation Report had the following conclusions:

- The Lime Kiln Landfill is a source of groundwater impacts.
- Groundwater is impacted in the upper 100 to 200 feet of the Racine Dolomite.
- Two groundwater contaminant plumes were delineated during this investigation. Groundwater contamination from the landfill is limited to the area shown on Figure 8 of the investigation report (included in Appendix A). Groundwater contamination from other sources contribute to the West Plume, also shown on Figure 8. The plumes are distinguished by compounds unique to each plume. NR 140 standards are exceeded for limited compounds in each plume.
- Treatment of the landfill plume is occurring through natural attenuation of parent VOC products as evidenced by the presence of breakdown by-products, and the levels of natural attenuation indicators in groundwater.

The WDNR and the Village of Grafton agreed to the following in 2000 to implement a long-term monitoring program:

- Two private residence wells, PW1788MD and PW1749MD, were converted to monitoring wells screened in the "B" monitoring zone to monitor the west edge of downgradient contamination and to monitor the middle of the Lime Kiln plume.
- Two additional monitoring wells were installed. A shallow well was nested with the monitoring well at PW1749 (P8A, P8B) to monitor shallow groundwater concentrations in the middle of the plume. A downgradient well (P7B) was constructed on the Watts property, also in the "B" monitoring zone, to monitor concentrations between the known plume and downgradient private wells.
- The monitoring plan proposed in Table 13 of the Investigation Report was carried out for four quarters to evaluate natural attenuation as a remedial option at the Lime Kiln Landfill. The plan was then revised, and carried out four an additional four quarters in 2001.

2.4 CURRENT STATUS

Groundwater monitoring to determine the feasibility of natural attenuation as a remedial option is ongoing. This report includes an analysis of natural attenuation during the most recent eight rounds (2 years) of sampling. Groundwater sampling for this report took place between January 2000 and December 2002.

Prior submittals to the Department include the 2000 and 2001 Annual Reports, the 1999 Investigation Report, sampling results through December 2002, response to comments on the Investigation Report in January 2000, and construction documentation of required monitoring wells P7B, P8A and P8B, and P9B in June 2000. Groundwater sampling results are also submitted to the WDNR in the specified electronic format.

3.0 GROUNDWATER MONITORING

Groundwater monitoring results are being supplied in this report as required in NR 724. The monitoring plan is outlined in Table 1, which lists the wells, parameters, and monitoring frequency for 2002. In addition to groundwater sampling, water levels are collected from site wells to evaluate groundwater flow conditions.

Within the groundwater monitoring program, wells are divided into two major groups, labeled 1 and 2. Group 1 wells are used to evaluate the natural attenuation process. Group 2 wells are used to monitor the edges of the plume, and as sentinel wells for downgradient groundwater users. Group 1 wells are monitored quarterly for lists A (VOCs), B (natural attenuation parameters), and C (indicator parameters). Group B wells are monitored semi-annually for list A (VOCs) only.

3.1 GROUNDWATER OCCURRENCE AND FLOW

The water table represents the top of the groundwater flow system. The water table surface at the landfill has been measured in monitoring wells LH1 and P2A, at approximately 20 feet below ground surface.

Groundwater elevations for the piezometric surface within the Racine Formation "B" monitoring zone, at an elevation between approximately 630 and 650 feet MSL, are depicted on Figures 2 through 5. One piezometric surface was created for each quarter of the year as required. There are only slight variations in water elevations throughout the year.

As shown on the Figures 2 through 5, the piezometric surface ranges in elevation from approximately 710 feet MSL at upgradient well P4B to 690 feet MSL southeast of the site at P8B. Based on these elevations, groundwater within the undifferentiated Racine Formation flows to the south-southeast near Lime Kiln Park, as was shown during the site investigation.

Horizontal hydraulic gradients are similar to those calculated in the investigation report, ranging from 0.018 and 0.015 feet/foot.

Vertical hydraulic gradients were calculated for each quarter from water level data collected at piezometer nests P2A/P2B and P8A/P8B. Gradient calculations are documented in Appendix B. The vertical gradient is downward during four quarters at the P2 nest, consistent with those measured during the investigation. The calculated vertical gradient within the undifferentiated Racine Formation at the P2A/B piezometer ranges from approximately 0.035 to 0.058 feet/foot downward. At the P8A/B piezometer nest, the calculated vertical gradient ranges from 0.011 to 0.015 feet/foot downward during the four events. The overall downward flow component is consistent with the site's location within a recharge area.

3.2 SAMPLE DATA ANALYSIS

This section presents the data from the most recent eight sample events, completed in 2001 (March, June, September, and December) and 2002 (March, June, September, and December.)

The results were compiled and compared to NR 140 groundwater standards. They were also reviewed to identify trends in compound concentrations and evaluate the process of natural attenuation that is occurring at the site.

TABLE 1

MONITORING PLAN - 2002
VILLAGE OF GRAFTON

Parameter List

Analysis A.	VOCs
Analysis B.	Natural Attenuation Parameters - Methane, Ethane, Ethene, Chloride, Nitrate, DO, ORP, Iron II
Analysis C.	Indicator Parameters - pH, Temperature, Conductivity

Well Groups

Well List 1

LH1 - Groundwater within waste
P2A - Downgradient of landfill
P2B - Downgradient of landfill
P4B - Upgradient of landfill
P7B - Downgradient of landfill
P8A - Downgradient of landfill
P8B - (formerly PW1749) - Downgradient of plume

Well List 2

PW1530LR
PW1587LR
PW461HR
PW1716LR**
P3B* - Sidegradient of landfill - west side
PW717HC (Sidegradient of plume - east side)

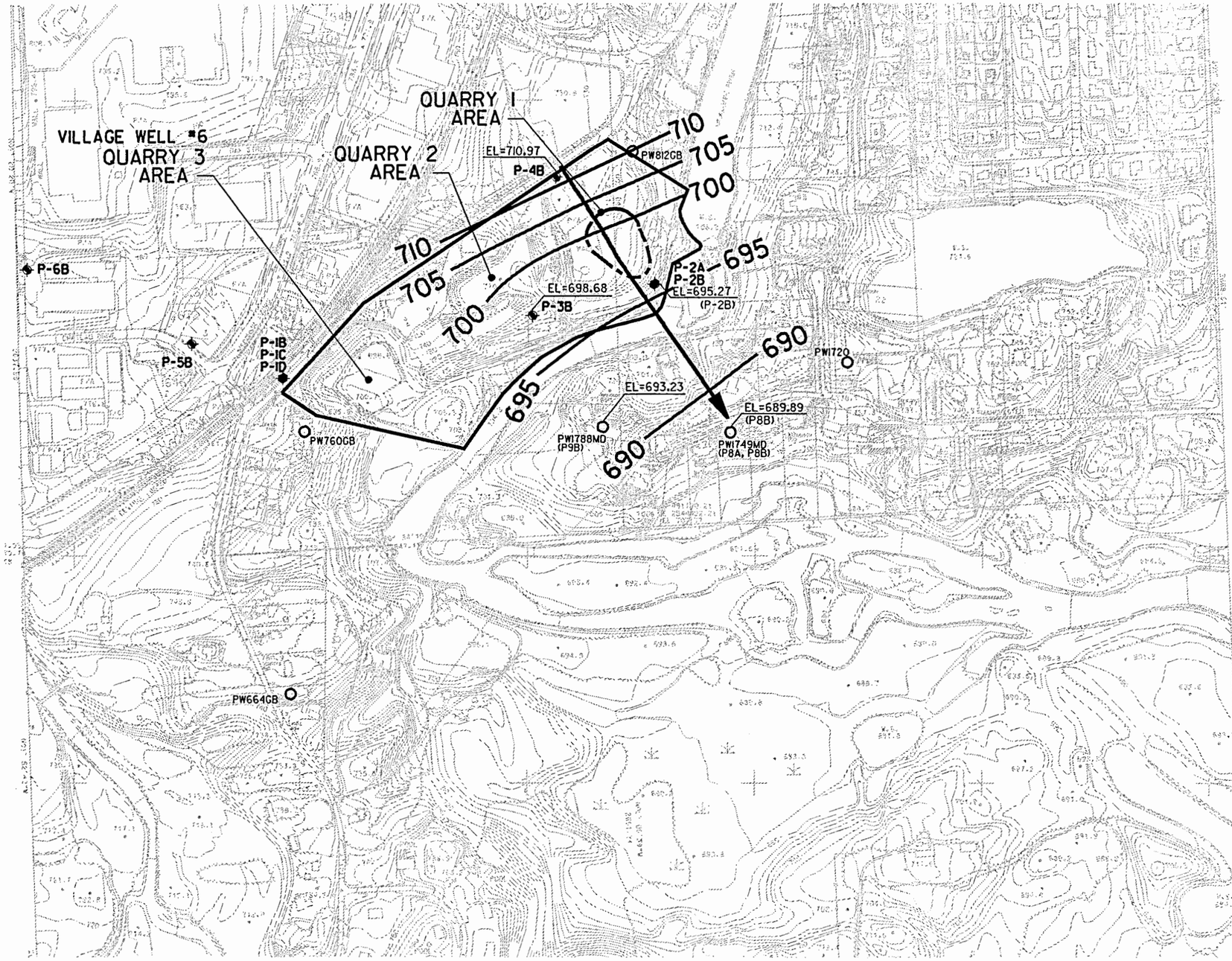
Monitoring Plan

Well List 1

Quarterly analysis of List A, B, C	(March, June, September, December)

Well List 2

Semi-annual analysis of List A	(June, December)
*Semi-annual analysis of List A	(March, September)
**Quarterly analysis of List A	(March, June, September, December)



EXPLANATION

- LIME KILN PARK PROPERTY BOUNDARY
- ESTIMATED LIMITS OF WASTE (GEOPHYSICS AND GEOPROBE)
- 700 GROUNDWATER CONTOURS (5 FOOT INTERVAL)
- GROUNDWATER FLOW DIRECTION
- EL=695.27 (P-2B) / P-2A P-2B — LEACHATE WELL NEST WITH PIEZOMETRIC ELEVATON. DESIGNATED WELL IN PARENTHESES
- EL=710.97 / P-4B — PIEZOMETER WITH PIEZOMETRIC ELEVATON
- EL=689.89 (P8B) — PRIVATE WELL WITH PIEZOMETRIC ELEVATON
- PW1749MD (P8A,P8B)

NOTES:

1. TOPOGRAPHIC BASE MAP AND PRIVATE WELL LOCATIONS COMPILED FROM WISCONSIN DEPARTMENT OF NATURAL RESOURCES.
2. HORIZONTAL DATUM SYSTEM BASED ON THE STATE PLANE COORDINATE SYSTEM.
3. ELEVATIONS ARE USGS MEAN SEA LEVEL, DATUM BASED ON GROUNDWATER LEVELS MEASURED ON MARCH 19, 2002.

N

SCALE 0' 125' 250' 500'

EARTH TECH

FIGURE 2
PIEZOMETRIC CONTOUR MAP- MARCH 2002
2002 ANNUAL REPORT
VILLAGE OF GRAFTON
GRAFTON, WISCONSIN

NOV 2003 30250

Levels
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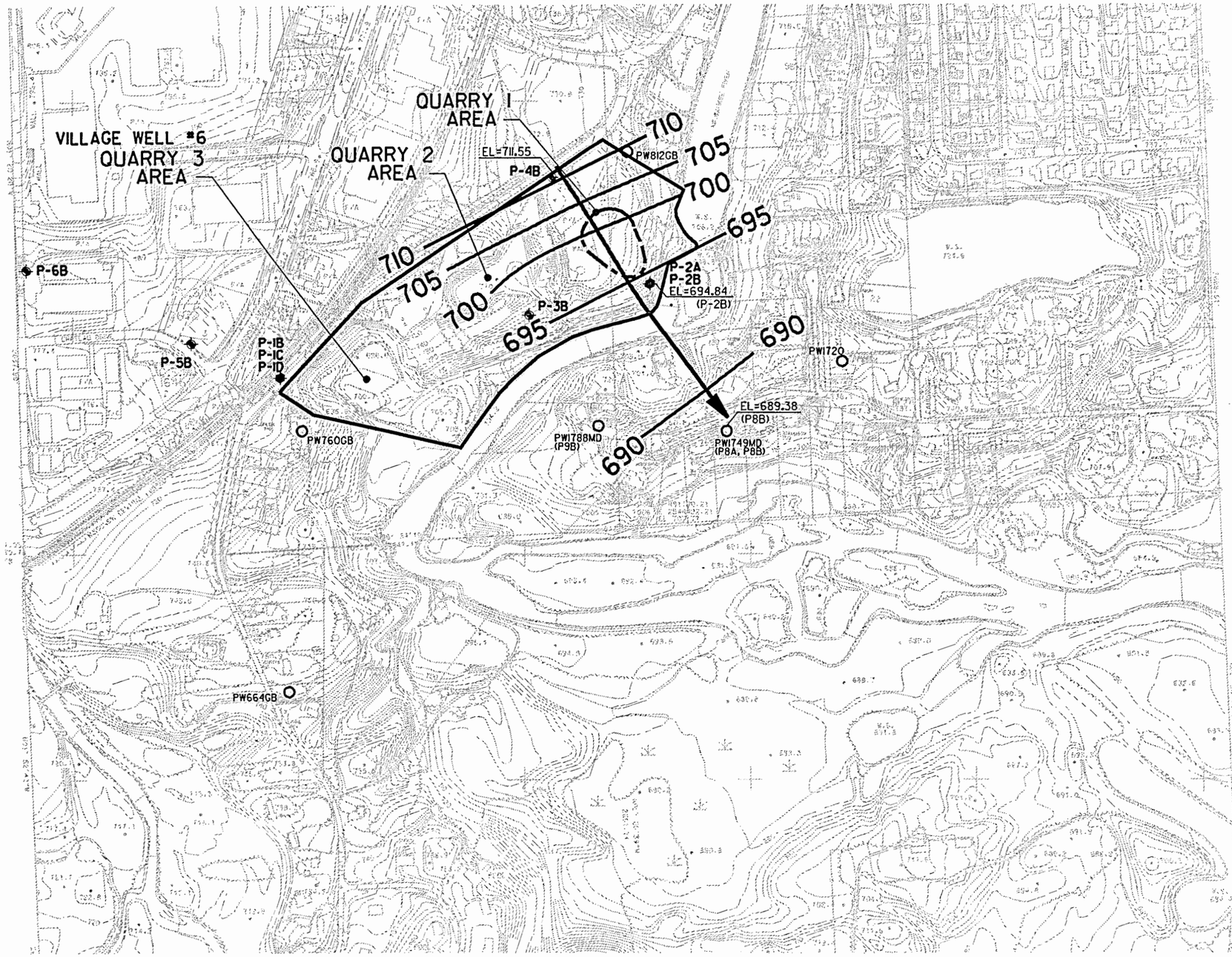
DATE =Tue Dec 2 14:39:35 2003
DGN =\\usshbs01\data\work\graftn01\cadd\2003\gw0302.dgn
LE 02
REFERENCE FILE 03 = \\usshbs01\data\work\graftn01\cadd\2003\workset
Levels =



EXPLANATION

- LIME KILN PARK PROPERTY BOUNDARY
- ESTIMATED LIMITS OF WASTE (GEOPHYSICS AND GEOPROBE)
- 700 GROUNDWATER CONTOURS (5 FOOT INTERVAL)
- GROUNDWATER FLOW DIRECTION
- EL=694.84 (P-2B) / P-2A P-2B — LEACHATE WELL NEST WITH PIEZOMETRIC ELEVATON. DESIGNATED WELL IN PARENTHESES
- EL=711.55 / P-4B — PIEZOMETER WITH PIEZOMETRIC ELEVATON
- EL=689.38 (P8B) / PW1749MD (P8A,P8B) — PRIVATE WELL WITH PIEZOMETRIC ELEVATON

NOTES:

1. TOPOGRAPHIC BASE MAP AND PRIVATE WELL LOCATIONS COMPILED FROM WISCONSIN DEPARTMENT OF NATURAL RESOURCES.
2. HORIZONTAL DATUM SYSTEM BASED ON THE STATE PLANE COORDINATE SYSTEM.
3. ELEVATIONS ARE USGS MEAN SEA LEVEL, DATUM BASED ON GROUNDWATER LEVELS MEASURED ON JUNE 12, 2002.

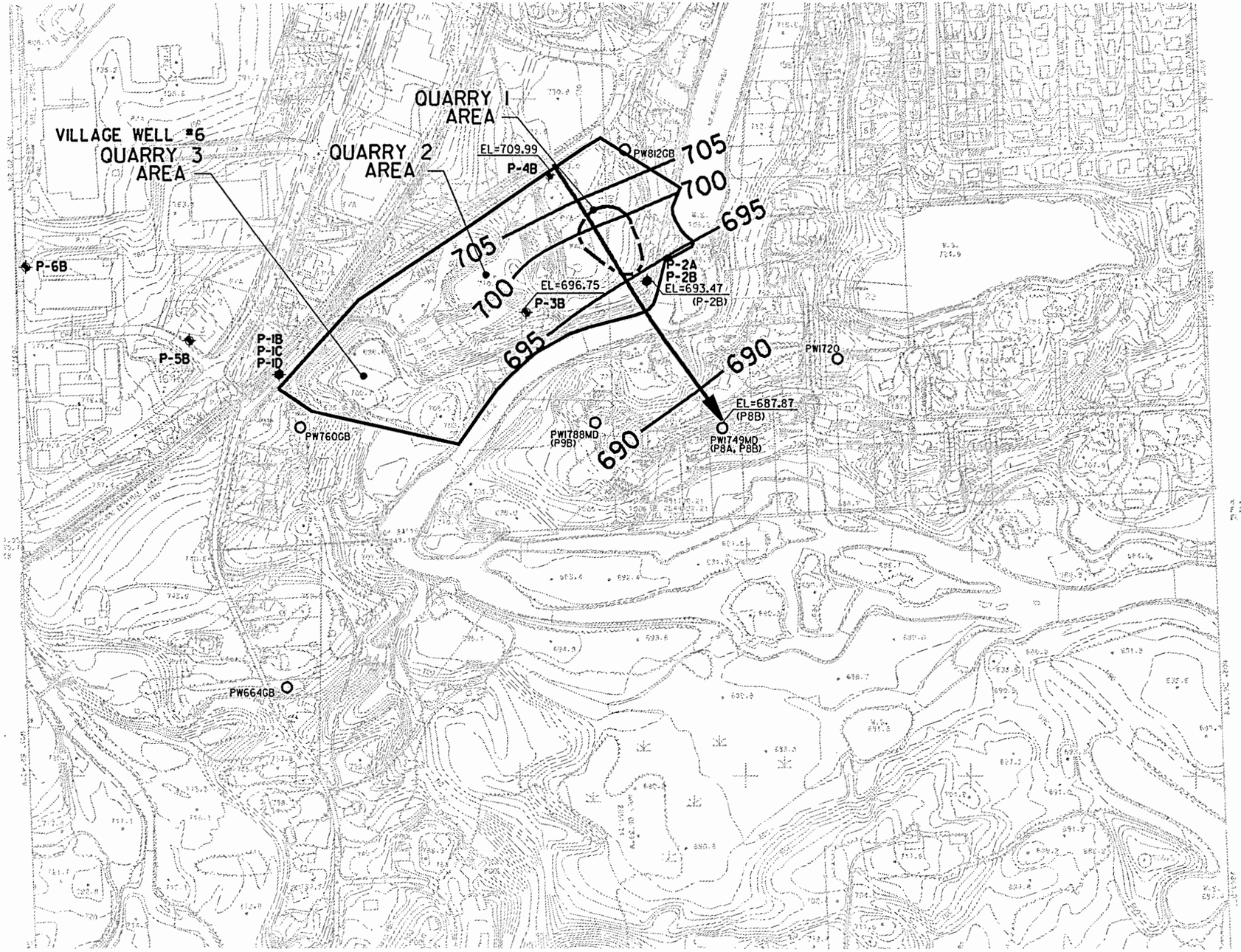
N

0' 125' 250' 500'
SCALE

EARTH TECH

FIGURE 3
PIEZOMETRIC CONTOUR MAP-
JUNE 2002
2002 ANNUAL REPORT
VILLAGE OF GRAFTON
GRAFTON, WISCONSIN
NOV 2003 30250

VILLAGE WELL #2



EXPLANATION

- LIME KILN PARK PROPERTY BOUNDARY
- ESTIMATED LIMITS OF WASTE (GEOPHYSICS AND GEOPROBE)
- 700 GROUNDWATER CONTOURS (5 FOOT INTERVAL)
- GROUNDWATER FLOW DIRECTION
- EL=693.47 (P-2B) / P-2A P-2B — LEACHATE WELL NEST WITH PIEZOMETRIC ELEVATON. DESIGNATED WELL IN PARENTHESES
- EL=709.99 / P-4B — PIEZOMETER WITH PIEZOMETRIC ELEVATON
- EL=687.87 (P8B) / PW1749MD (P8A,P8B) — PRIVATE WELL WITH PIEZOMETRIC ELEVATON

NOTES:

1. TOPOGRAPHIC BASE MAP AND PRIVATE WELL LOCATIONS COMPILED FROM WISCONSIN DEPARTMENT OF NATURAL RESOURCES.
2. HORIZONTAL DATUM SYSTEM BASED ON THE STATE PLANE COORDINATE SYSTEM.
3. ELEVATIONS ARE USGS MEAN SEA LEVEL. DATUM BASED ON GROUNDWATER LEVELS MEASURED ON SEPTEMBER 11, 2002.

N

SCALE 0' 125' 250' 500'

EARTH TECH

FIGURE 4
PIEZOMETRIC CONTOUR MAP- OCTOBER 2002
2002 ANNUAL REPORT
VILLAGE OF GRAFTON
GRAFTON, WISCONSIN

NOV 2003 30250

Levels *
DATE = Tue Dec 2 14:39:31 2003
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LE 02
REFERENCE FILE 03 = \\usshbs01\data\work\graftn01\cadd\2001\wordwork
Levels *
DATE = Tue Dec 2 14:39:31 2003
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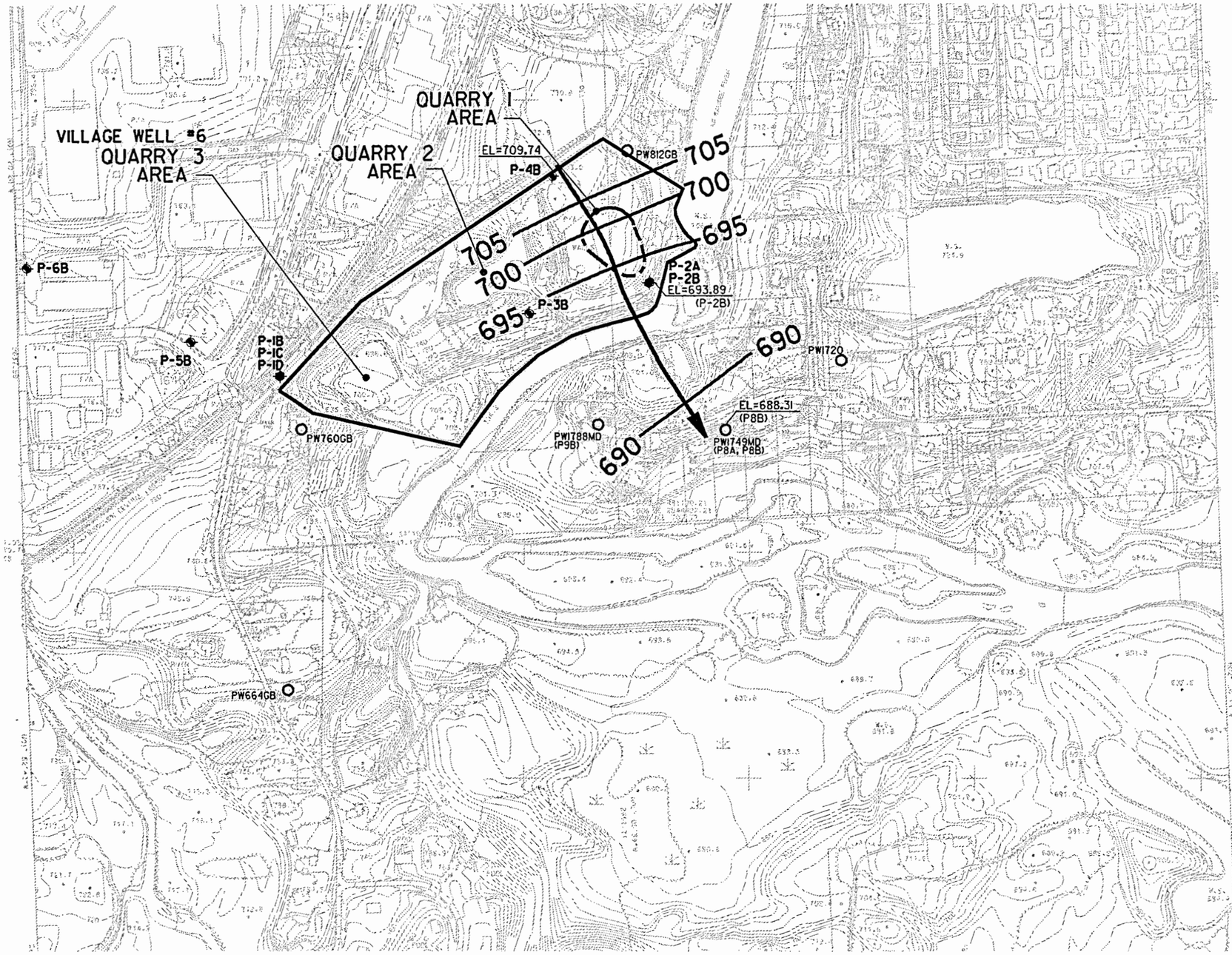
VILLAGE WELL #2



EXPLANATION

- LIME KILN PARK PROPERTY BOUNDARY
- ESTIMATED LIMITS OF WASTE (GEOPHYSICS AND GEOPROBE)
- 700 GROUNDWATER CONTOURS (5 FOOT INTERVAL)
- GROUNDWATER FLOW DIRECTION
- EL=693.89 (P-2B) / P-2A P-2B — LEACHATE WELL NEST WITH PIEZOMETRIC ELEVATON. DESIGNATED WELL IN PARENTHESES
- EL=709.74 / P-4B — PIEZOMETER WITH PIEZOMETRIC ELEVATON
- EL=688.31 (P8B) / PW1749MD (P8A,P8B) — PRIVATE WELL WITH PIEZOMETRIC ELEVATON

NOTES:

1. TOPOGRAPHIC BASE MAP AND PRIVATE WELL LOCATIONS COMPILED FROM WISCONSIN DEPARTMENT OF NATURAL RESOURCES.
2. HORIZONTAL DATUM SYSTEM BASED ON THE STATE PLANE COORDINATE SYSTEM.
3. ELEVATIONS ARE USGS MEAN SEA LEVEL, DATUM BASED ON GROUNDWATER LEVELS MEASURED ON DECEMBER 5, 2002.

N

SCALE 0' 125' 250' 500'

EARTH TECH

FIGURE 5
PIEZOMETRIC CONTOUR MAP-
DECEMBER 2002
2002 ANNUAL REPORT
VILLAGE OF GRAFTON
GRAFTON, WISCONSIN

NOV 2003 30250

3.2.1 Monitoring Plan

Groundwater monitoring wells are shown on Figure 1, and the 2002 monitoring plan is presented in Table 1. Groundwater results from eight rounds are summarized in Tables 2 and 3. Table 2 lists compounds that were detected in monitoring plan wells during 2002, and compounds that exceed the Preventive Action Limit (PAL) or the Enforcement Standard (ES) at one or more wells in the monitoring plan are marked accordingly. Table 3 lists groundwater trends (rising, falling, or stable) for the parameters listed in Table 2, and provides the trend analysis from the 2001 Annual Report for comparison. A complete list of 2002 detects and exceedances is included in Appendix C, and an electronic copy of 2002 results is included in the WDNR electronic format in Appendix C.

Compounds detected in monitoring plan wells were analyzed using the WDNR Remediation and Redevelopment Mann-Whitney Statistical software, and printouts of these analyses are included in Appendix D. The results of this analysis are described in the following sections and are organized like the monitoring plan. Trend charts are provided for trichloroethene (TCE) and vinyl chloride, the two most commonly detected parameters. Groundwater samples critical to the natural attenuation evaluation are summarized in Section 3.2.2, beginning at upgradient well P4B and working toward the downgradient well P7B. Downgradient private and side gradient protection well results are summarized in Section 3.2.3.

3.2.2 Monitoring List 1 - Natural Attenuation Wells

Upgradient Well P4B

Three chlorinated compounds were detected at P4B during 2001 and 2002. Cis-1,2-dichloroethene (DCE) was detected in seven of eight events, always below the PAL. TCE was detected in seven events, 6 times above the PAL and once above the ES in April 2001. Vinyl chloride was detected above the ES during the first seven monitoring events. It was not detected in December 2002. Nitrogen was detected during six events, and was above the PAL in each event. Iron was detected above the ES in June, 2002.

The presence of these compounds in the upgradient well suggests that there are groundwater constituents flowing into the site from upgradient sources. The steep groundwater gradient toward the site in the vicinity of the upgradient well makes it unlikely that the landfill is contributing to the concentrations detected at P4B.

Data trends for well P4B are shown on Figure 6, and Mann-Whitney Statistical trend analyses are located in Appendix D. TCE, and cis-1,2-DCE have stable trends according to the Mann-Whitney test. Vinyl chloride changed from a stable trend at the time of the 2001 annual report, to a decreasing trend in 2002. Other compounds detected at P4B were either inconsistently detected or were detected at levels that are very low or unreliable for trend analysis.

Leachate Wells LH1 and LH2

Eight VOCs have been consistently detected at LH1 and LH2, which are located within the landfill waste. Several other VOCs have been detected, though not consistently each sample event, as listed in Appendix D. Of these compounds, 1,1-dichloroethene (1,1 DCE), cis-1,2-DCE, tetrachloroethene (PCE), TCE, and vinyl chloride are consistently detected above the PAL or ES. 1,1-Dichloroethane (1,1 DCA), chloroethane, and trans-1,2-DCE are detected consistently below regulatory limits. Other VOCs are detected inconsistently, and rarely above the PAL. Chloride was detected several times above the ES, and mercury has been inconsistently detected above the PAL.

TABLE 2

DETECTED VOLATILE ORGANICS AND NR 140 PUBLIC HEALTH EXCEEDANCES JANUARY 2002 TO DECEMBER 2002 VILLAGE OF GRAFTON

Detected Compounds[1]	Exceeded ES[2]	Exceeded PAL[2]
1,1,1-Trichloroethane		
1,1,2-Trichlorotrifluoroethane		
1,1-Dichloroethane		
1,1-Dichloroethene		LH-1[5], P8A[5], P8B[5]
Benzene		LH-1
Chloride	P2A	LH-1
Chloroethane		
cis-1,2-Dichloroethene	LH-1[4], P2B[5], P8A[5], P8B[3]	
Ethane		
Ethene		
Methane		
Methylene chloride		LH-1
Tetrachloroethene	LH-1	P3B, P8A
trans-1,2-Dichloroethene		
Trichloroethene	LH-1[5], P2A[5], P2B[5], P3B[5], P7B[5], P8A[5], P8B[3]	P4B[5]
Vinyl chloride	LH-1[4], P2A[4], P2B[5], P4B[4], P8A[3], P8B[3]	

NOTES:

1 Volatile organic compounds that were detected in groundwater monitoring wells during the period.
2 Denotes compounds that exceeded standards at the listed wells during the previous 4 quarters.
3 Rising trend for the compound at the denoted well.
4 Falling trend for the compound at the denoted well.
5 Stable or no significant trend for the compound at the denoted well.

TABLE 3

TREND SUMMARY - NATURAL ATTENUATION MONITORING
LIME KILN LANDFILL
VILLAGE OF GRAFTON

2001-2002 Results

Compound	Upgradient	Landfill Wells		Plume Wells				
Test Name	P4B	LH1	LH2	P2A	P2B	P8A	P8B	P7B
1,1,1-Trichloroethane			NA	--	--	--	--	
1,1-Dichloroethane		↓	NA	↓	--	--	↑	
1,1-Dichloroethene		--	NA		--	--	--	
cis-1,2-Dichloroethene	--	↓	NA	↓	--	--	↑	--
trans-1,2-Dichloroethene		--	NA	--	--	--	--	
Trichloroethene	--	--	NA	--	--	--	↑	--
Vinyl chloride	↓	↓	NA	↓	--	↑	↑	

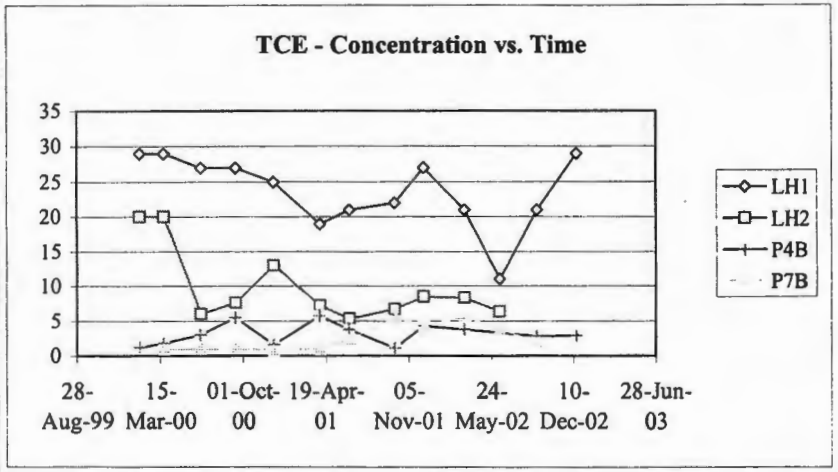
NOTE:
Trends determined using WDNR Mann-Whitney analysis spreadsheet.
Results of monitoring between January 2001 and December 2002.

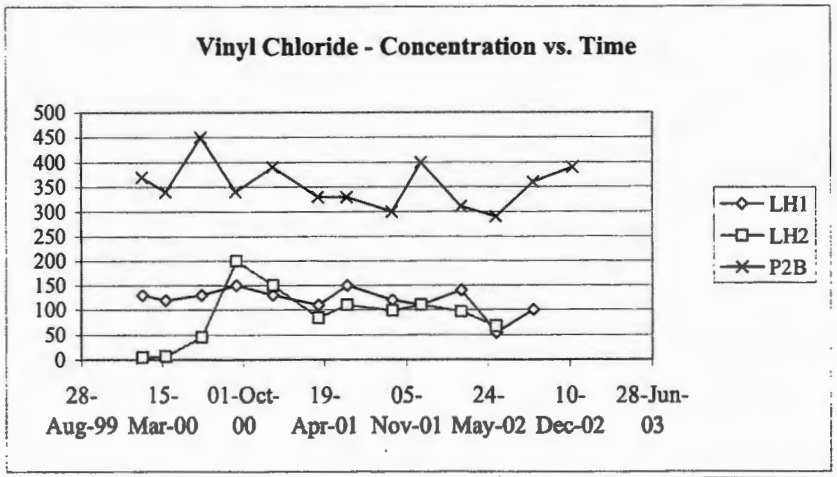
2000-2001 Results

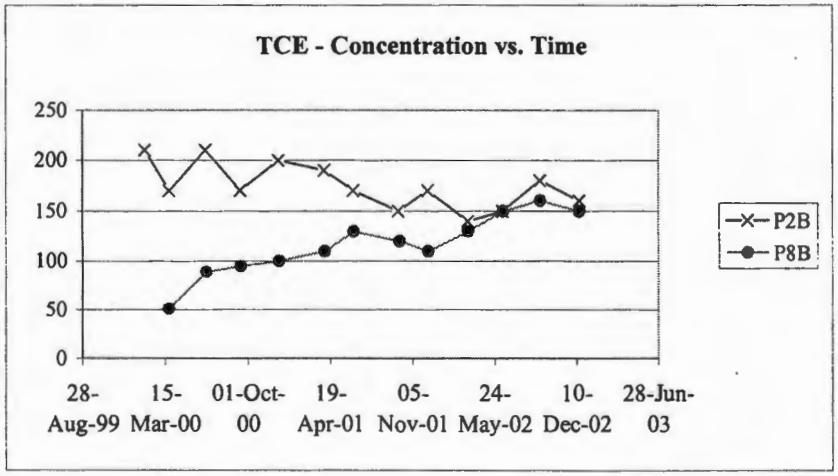
Compound	Upgradient	Landfill Wells		Plume Wells				
Test Name	P4B	LH1	LH2	P2A	P2B	P8A	P8B	P7B
1,1,1-Trichloroethane		--	--	--	--	--	--	
1,1-Dichloroethane		--	--	--	↓	--	↑	
1,1-Dichloroethene		--	--		↓	↑	↑	
cis-1,2-Dichloroethene	--	↓	--	--	--	--	↑	↑
trans-1,2-Dichloroethene		--	--	--	--	--	--	
Trichloroethene	--	↓	--	--	--	--	↑	↑
Vinyl chloride	--	--	--	--	↓	--	↑	--

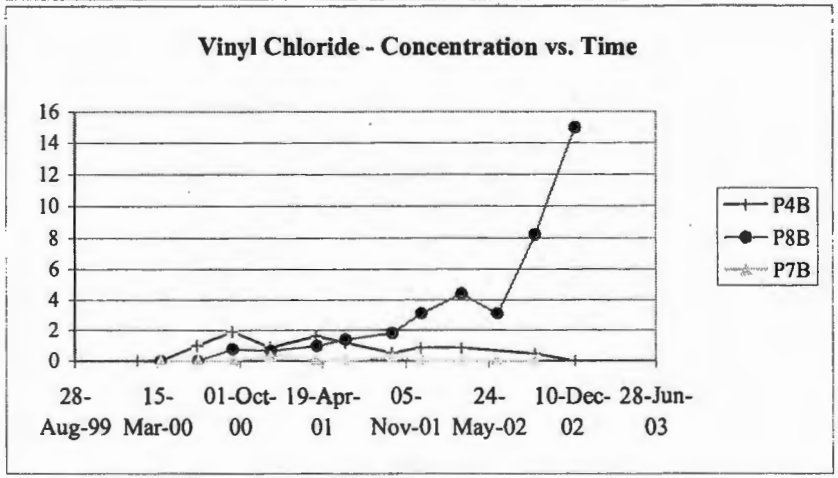
NOTE:
Trends determined using WDNR Mann-Whitney analysis spreadsheet.
Results of monitoring between January 2000 and December 2001.

Key	
↑	Rising trend
↓	Falling Trend
--	Stable, detected
	Not detected
NA	No analysis
	Above PAL during 2002









Concentration units are in ug/l.

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Figure 6
Village of Grafton - Lime Kiln Landfill
TCE and Vinyl Chloride Concentration Vs. Time Plots
2002 Groundwater Monitoring Plan Annual Report
November, 2003

Compound concentrations at LH1 within the PCE/TCE and 1,1,1-TCA breakdown pathways are either stable or decreasing. Figure 6 shows the decreasing concentration of vinyl chloride and stable level of TCE that are calculated by the Mann-Whitney analysis in Appendix D. Breakdown products from both pathways are present at LH1, including final end products chloroethane and ethane. The continuing presence of breakdown products suggests that natural attenuation is occurring.

At LH2, sampling was discontinued as of June 2002 because sampling at LH1 is sufficient to characterize water in the waste material.

Downgradient Wells P2A and P2B

Well nest P2A/P2B is located downgradient of the landfill within 50 feet of the waste limit. VOCs in both the TCE and 1,1,1-trichloroethane pathways have been detected at P2A and P2B. P2B concentrations are typically higher than at P2A, which is consistent with the measured downward gradient. In comparison to other wells in the monitoring program, the compounds associated with the landfill are detected at the highest concentrations at P2B.

Several chlorinated compounds were detected at the P2 monitoring nest, as listed in Appendix C. At P2A, vinyl chloride is consistently detected above the ES, and TCE is consistently above the PAL. Cis-1,2-DCE and trans-1,2-DCE were consistently detected below the PAL in 2002. Chloride is also consistently above the ES. At P2B, cis-1,2-DCE, TCE, and vinyl chloride are consistently detected above the ES. 1,1-DCA and trans-1,2-DCE are consistently detected at P2B below regulatory standards. Ethane, a final breakdown product of 1,1,1-TCA, is also consistently detected at P2B. 1,1,1-TCA has not been detected at P-2B since June of 2001.

At well P2A, concentration trends for the major chlorinated compounds are stable or decreasing as shown in Table 3. Since the 2001 report, 1,1-DCA, cis-1,2-DCE and vinyl chloride have changed from stable to decreasing trends.

At well P2B, concentration trends for the major chlorinated compounds are stable or decreasing as shown in Table 3. The presence of breakdown products and decreasing trends for chlorinated compounds demonstrates that attenuation continues to occur at this location.

Downgradient Wells P8A and P8B

Well nest P8A/P8B is located downgradient of P2B at 1749 Manchester Drive. VOCs in both the TCE and 1,1,1-TCA breakdown pathways have been detected at P8A and P8B. Compound concentrations are typically lower at P8B than at P8A.

At P8A, seven chlorinated VOCs are consistently detected. Of these, 1,1-DCE is consistently above the PAL, and cis-1,2-DCE, TCE, and vinyl chloride are detected above the ES. PCE was detected above the PAL once during 2002, down from three detects in 2001. Similarly at P8B, cis-1,2-DCE, vinyl chloride, and TCE are detected consistently above the ES. 1,1-DCE was above the PAL twice during 2002.

The marker compound from the West Plume, 1,1,2-trichlorotriflouroethane (Freon-113), is also consistently detected at P8B, showing that groundwater in the Manchester Road area (and further downgradient) is influenced by the West Plume (shown in Appendix A.) No other compounds are consistently above regulatory limits at either well. TCE is the only chlorinated compound with a higher concentration at the deeper well, which is assumed to be the result of influence from the West Plume.

Trends as measured by the Mann-Whitney test show increasing trends of several compounds at this location, as displayed in Table 3. At P8A, 1,1-DCE changed from a rising trend to a stable trend since

2001. Vinyl chloride changed from a stable trend to a rising trend since 2001. All other consistently detected compounds are stable.

P8B has rising trends of TCE, cis-1,2-DCE, 1,1-DCA, and vinyl chloride, though 1,1-DCA is at very low levels. 1,1-DCE, also at low levels, has changed from a rising trend to a stable trend since 2001.

TCE and vinyl chloride concentration trends are graphed on Figure 6. TCE is migrating from upgradient sources including the landfill and the West Plume, based on the continued presence of freon in the well. Increasing levels of breakdown products (cis-1,2-DCE and vinyl chloride) is evidence that TCE is breaking down through the attenuation processes. Increasing concentrations of both compounds are expected through the further breakdown of TCE. Trans-1,2-DCE, 1,1-DCE, and 1,1-DCA are present at low and unreliable levels at both wells, though these compounds are further evidence of TCE and 1,1,1-TCA breakdown regardless of upward or downward trends.

Downgradient Well P7B

Well P7B, located on the Watts property, is the well furthest downgradient monitoring of the Lime Kiln Landfill. TCE has been consistently detected during the monitoring period, and cis-1,2-DCE was consistently detected until June 2002, after which it was not detected. Both compounds have been consistently detected near background levels, with TCE consistently above the PAL. Vinyl chloride was not detected in 2002 as it was (twice) in 2001. Previously increasing trends of TCE and cis-1,2-DCE have become stable according to the Mann-Whitney test. These trends are further demonstrated on Figure 6 for TCE and vinyl chloride. Inconsistent detects and fluctuating levels at the P7B well indicate that the well is beyond the downgradient edge of the plume, and that the well provides a good indication of the extent of contamination from the Lime Kiln Plume.

3.2.3 Monitoring List 2 - Private and Sentinel Wells

Sidegradient Wells P3B and P9B, and Private Well 717 Heather Court

Well P3B is located west and sidegradient of the Lime Kiln Landfill plume. PCE and TCE are the only compounds consistently detected at P3B. As of December 2001, P9B is no longer sampled, because P3B and P8B are adequately monitoring the influence of the West Plume.

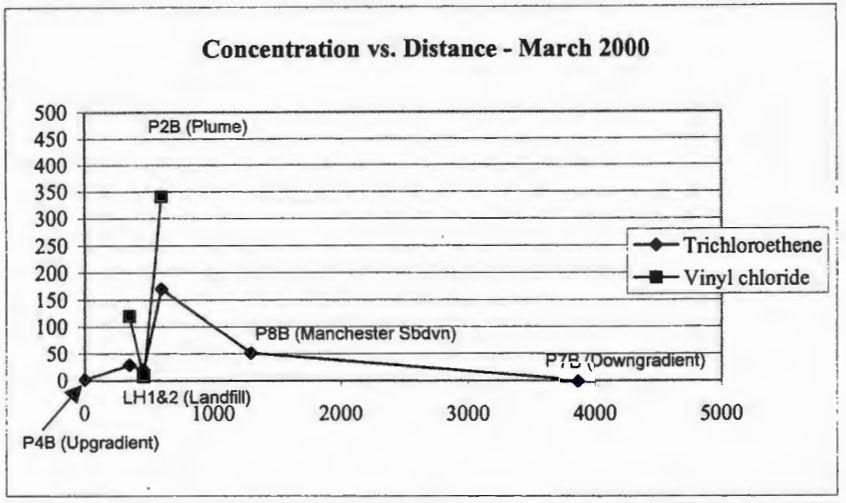
At P3B, PCE is consistently detected slightly above the PAL and TCE is consistently detected above the ES. While these compounds were detected in the Lime Kiln Landfill, concentration of these compounds at P3B are believed to be from sources unrelated to the landfill. The compounds were detected at wells directly upgradient of P3B during the site investigation at similar concentrations. Both compounds have demonstrated stable concentration trends.

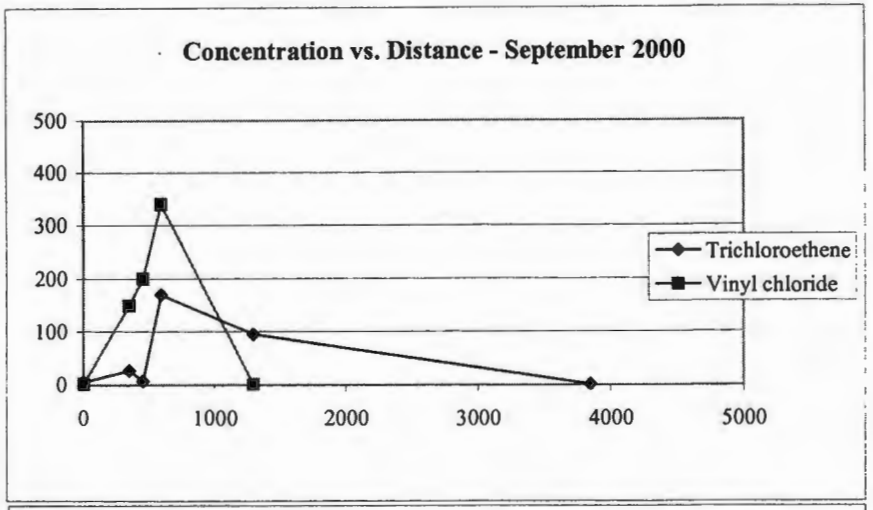
No VOC compounds have been detected in water from the private well at 717 Heather Court (PW717HC.)

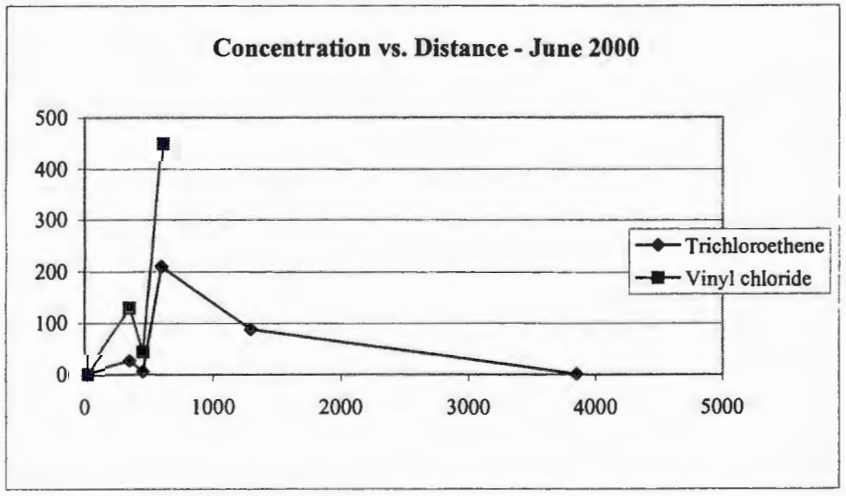
Downgradient Private Wells

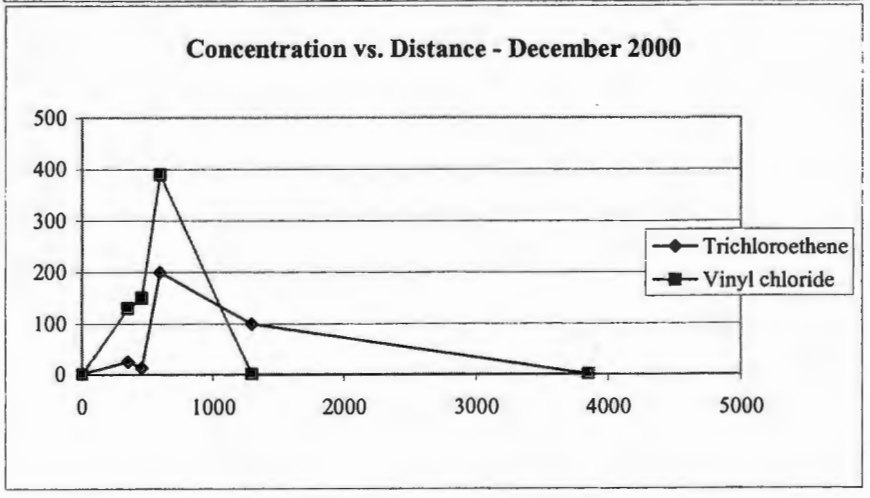
Four downgradient private wells (PW1530LR, PW1587LR, PW1716LR, PW461HR) are monitored for potential plume changes. At the four wells listed in Table 1, methylene chloride was detected in three wells during one sample event and was attributed to lab contamination. No other volatile organic compounds were detected at the four private wells.

3.3 LIME KILN LANDFILL PLUME TRENDS









Units are in feet and ug/l.

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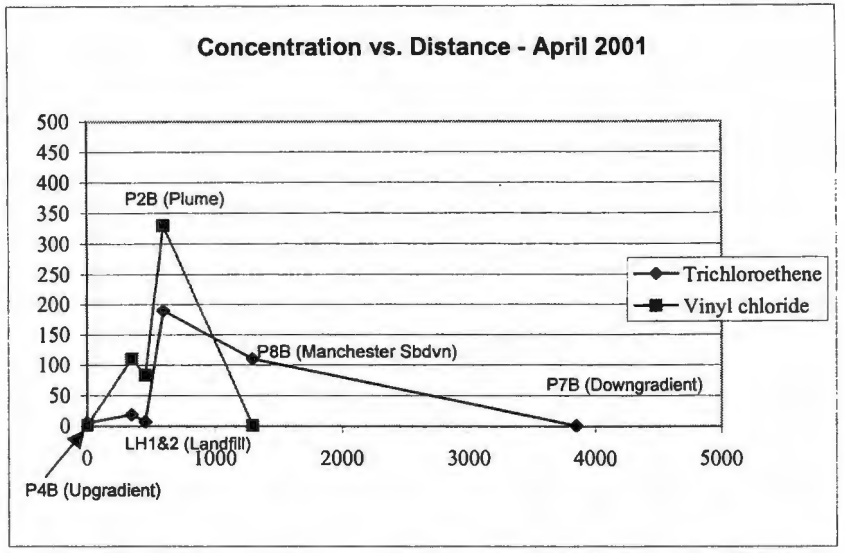
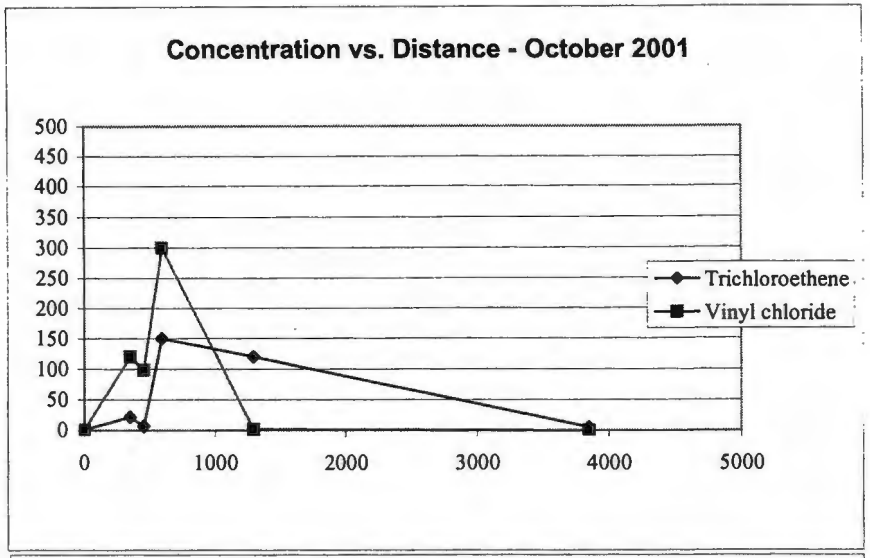
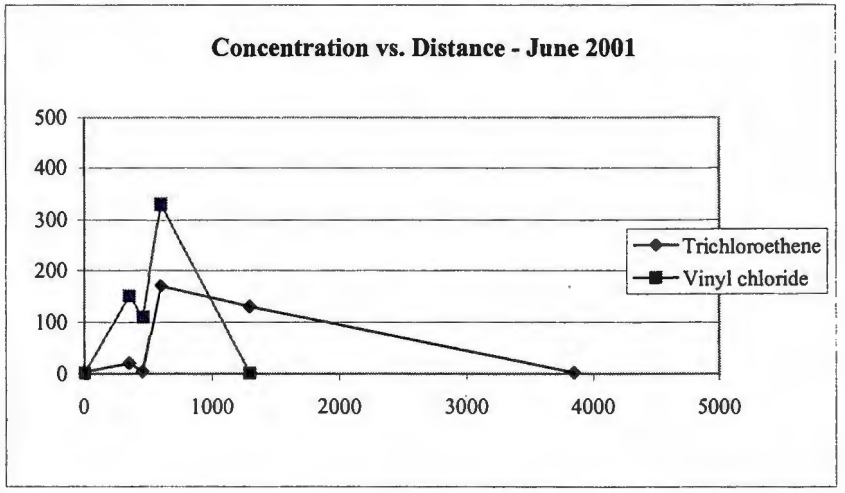
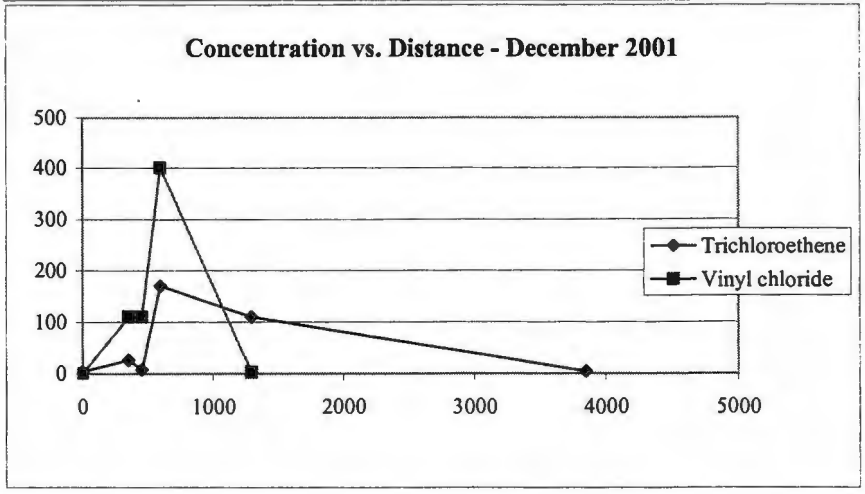
Figure 7
Village of Grafton - Lime Kiln Landfill
TCE and Vinyl Chloride Concentration Vs. Distance Plots
2002 Groundwater Monitoring Plan Annual Report
November, 2003









Units are in feet and ug/l.

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Figure 7
Village of Grafton - Lime Kiln Landfill
TCE and Vinyl Chloride Concentration Vs. Distance Plots
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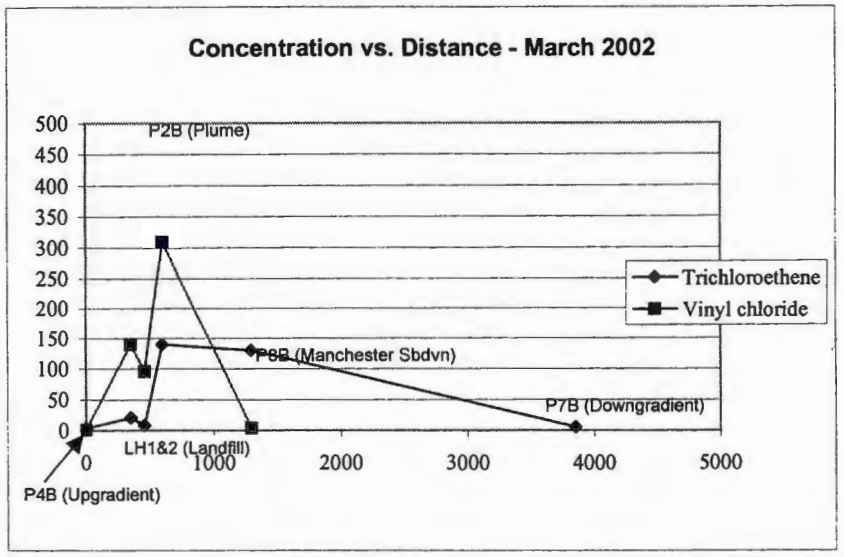

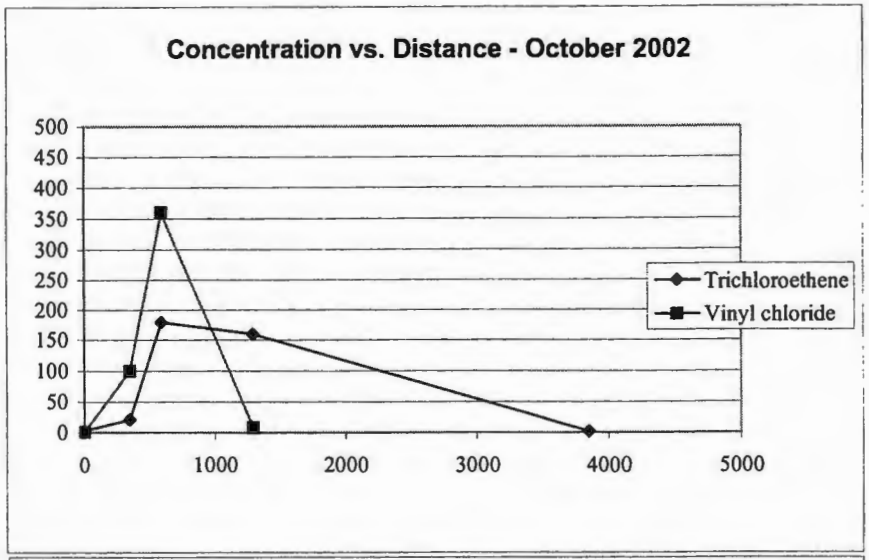

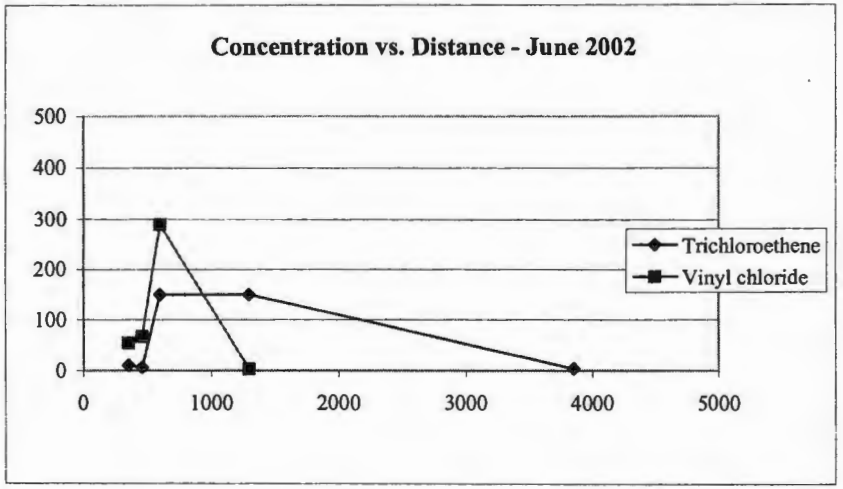

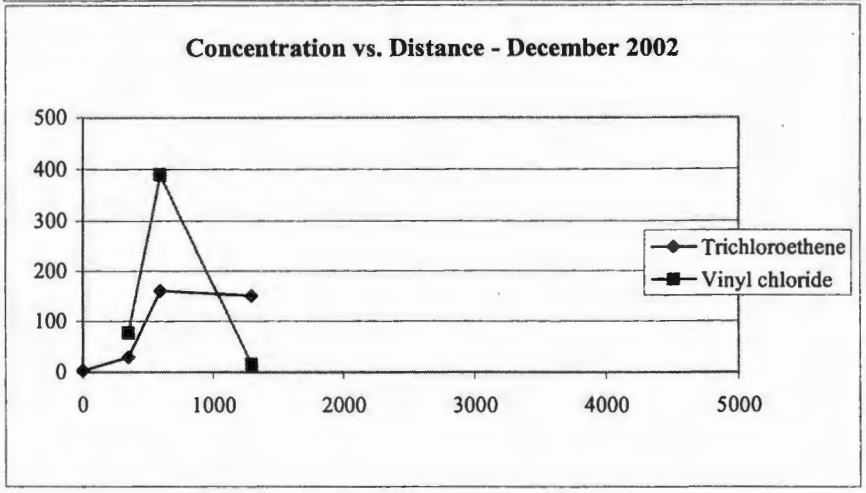

Units are in feet and ug/l.

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Figure 7
Village of Grafton - Lime Kiln Landfill
TCE and Vinyl Chloride Concentration Vs. Distance Plots
2002 Groundwater Monitoring Plan Annual Report
November, 2003

Concentration versus distance graphs were constructed according to WDNR natural attenuation guidance (March, 1997). Trend charts include data from the beginning of the investigation, dating back to January, 2000. TCE and vinyl chloride concentrations were plotted for each quarter on Figure 7 (three pages) at wells selected for natural attenuation analysis. These compounds were selected because they are the most commonly detected compounds within the plume, and because they represent typical plume characteristics.

Upon analysis of the twelve graphs shown on Figure 7, the general concentration distribution of vinyl chloride and TCE appears stable, which is expected for a plume that has been present for over 30 years. The shape and magnitude of each line graph is similar throughout the twelve events, with slight variations.

In comparison to other wells in the monitoring program, the compounds associated with the landfill are detected at the highest concentrations at P2B, slightly downgradient of the landfill. It is expected that the plume has moved beyond the landfill, because no new waste has been disposed at the landfill in the last 30 years, and the attenuation of contaminants is occurring at the landfill as evidenced by the presence of breakdown products within landfill wells.

Dissolved oxygen (DO) and oxidation-reduction potential (ORP) measurements are compiled in Table 4 for the monitoring events from 2000 through 2002. Values are organized by date and by distance from the landfill in order to evaluate conditions near the landfill. Each of these parameters can be useful indicators of biodegradation. Naturally occurring microorganisms prefer to use DO, when available, as an electron acceptor in aerobic biodegradation (DO >1 ppm). Typically, the inverse relationship between high contaminant concentrations and low DO concentrations indicate that anaerobic biodegradation is occurring within the impacted groundwater plume. Groundwater ORP is a measure of the relative tendency of a solution to donate or accept electrons. ORP can strongly depend on biodegradation processes and can strongly influence such processes.

In general, DO and ORP are higher at up and downgradient wells, with the lowest levels at LH1. Both of these secondary indicators demonstrate the expected relationship for such a landfill setting, which is an indication that natural attenuation is occurring in groundwater at the site.

Total organic carbon (TOC) sampling was performed during 2002 to evaluate the potential for oxidization and co-metabolism attenuation processes to occur beyond the reduced landfill area. As oxygen levels increase, reductive dechlorination decreases. TOC is needed by both oxidization and co-metabolism as an electron donor, allowing the chlorinated organic compounds to become electron acceptors. A consistent level of TOC is available, as shown in Table 4, which indicates that conditions are suitable for these processes to occur.

TABLE 4

DISSOLVED OXYGEN ,OXIDATION - REDUCTION POTENTIAL AND TOTAL ORGANIC CARBON MEASUREMENTS LIME KILN LANDFILL VILLAGE OF GRAFTON

Dissolved Oxygen (ppm)

Well[1]	P4B	LH1	LH2	P2A	P2B	P8B	P7B
Date							
March 23, 2000	2.2	1.82	NA	6.29	4.21	4.7	7.42
June 19, 2000	3.09	0.91	1.48	0.99	1.47	0.7	2.46
September 12, 2000	2.12	0.77	1.19	1	2.03	0.54	1.67
December 13, 2000	2.29	0.9	1.05	1.03	2.03	0.76	2.08
April 3, 2001	2.18	0.79	1.13	1.3	1.88	.87	2.15
June 13, 2001	2.12	0.88	0.99	1.69	1.85	.89	2.03
October 2, 2001	2.19	0.81	0.96	1.83	2.20	1.19	2.11
December 12, 2001	1.83	0.86	0.95	1.61	1.66	1.11	2.09
March 19, 2002	2.40	0.92	0.93	1.85	1.88	1.75	2.46
June 12, 2002	2.30	0.91	0.92	1.89	1.92	2.10	2.56
September 11, 2002	2.07	0.90	NS	1.76	2.01	1.84	2.50
December 17, 2002	2.30	0.96	NS	1.86	1.93	1.99	2.22

Oxidation - Reduction Potential (mV)

Well[1]	P4B	LH1	LH2	P2A	P2B	P8B	P7B
Date							
March 23, 2000	169	-143	NA	534	76	150	161
June 19, 2000	223	-148	-84	211	213	172	197
September 12, 2000	80	-136	-77	-37	60	77	137
December 13, 2000	154	-95	-72	-29	52	80	163
April 3, 2001	155	-149	-20	-33	57	73	76
June 13, 2001	168	-194	-29	-130	-128	89	81
October 2, 2001	183	-196	-40	13	-135	98	78
December 12, 2001	80	-118	-37	-42	90	67	77
March 19, 2002	131	-129	-37	10	90	142	179
June 12, 2002	99	-167	-60	26	93	100	119
September 11, 2002	87	-189	NS	30	43	136	150
December 17, 2002	38	-171	NS	-23	-19	68	97

Total Organic Carbon Units?

Well[1]	P4B	LH1	LH2	P2A	P2B	P8B	P7B
Date							
March 19, 2002	ND	4.1	3.0	4.0	1.9	1.5	2.0
June 12, 2002	3.1	2.9	3.2	6.0	3.6	3.0	2.8

NOTES:
NA = Measurement was not collected.
[1] = Wells are arranged from upgradient (P4B) to farthest downgradient (P7B).

4.0 NATURAL ATTENUATION SUMMARY

The information presented provides significant that natural attenuation is remediating the constituents in the Lime Kiln Landfill groundwater plume. The data supports two lines of evidence that natural attenuation is occurring. Primary: Concentrations of chlorinated solvents decrease with distance from the site, and the concentrations are stable or decreasing at most of the monitoring wells. Secondary: The daughter products of chlorinated ethenes and ethanes solvents are present, including cis-1,2-DCE, vinyl chloride, chloroethane, DCE, 1,1-DCA, chloride, ethene, and ethane. The predominance cis-1,2-DCE is a strong indicator of biological degradation of TCE, the main parent VOC detected at the landfill. Increasing concentration trends of daughter products downgradient of the landfill are expected. Additionally, DO and ORP tend to decrease in concentration within and near the landfill, indicating that conditions are condusive to reductive dechlorination of chlorinated solvents. TOC is available downgradient of the site to allow attenuation to occur beyond the reductive zone near the landfill.

5.0 CONCLUSIONS

The following conclusions resulted from groundwater monitoring and analysis at the Lime Kiln Landfill.

- Remediation is occurring through natural attenuation of parent VOCs as evidenced by the presence of daughter products, and the levels of natural attenuation indicator parameters in groundwater.
- With slight fluctuations, the groundwater plume from the landfill is generally stable, based on the length of time since the disposal of waste, the volume of the landfill, and natural attenuation processes that are occurring.
- Slight increases of TCE and vinyl chloride concentrations have been detected downgradient of the landfill in monitoring well P8B.
- Groundwater downgradient of Lime Kiln Park continues to be affected by sources other than the Lime Kiln Landfill.
- Groundwater quality has improved at the landfill and at the farthest downgradient well.

6.0 RECOMMENDATIONS

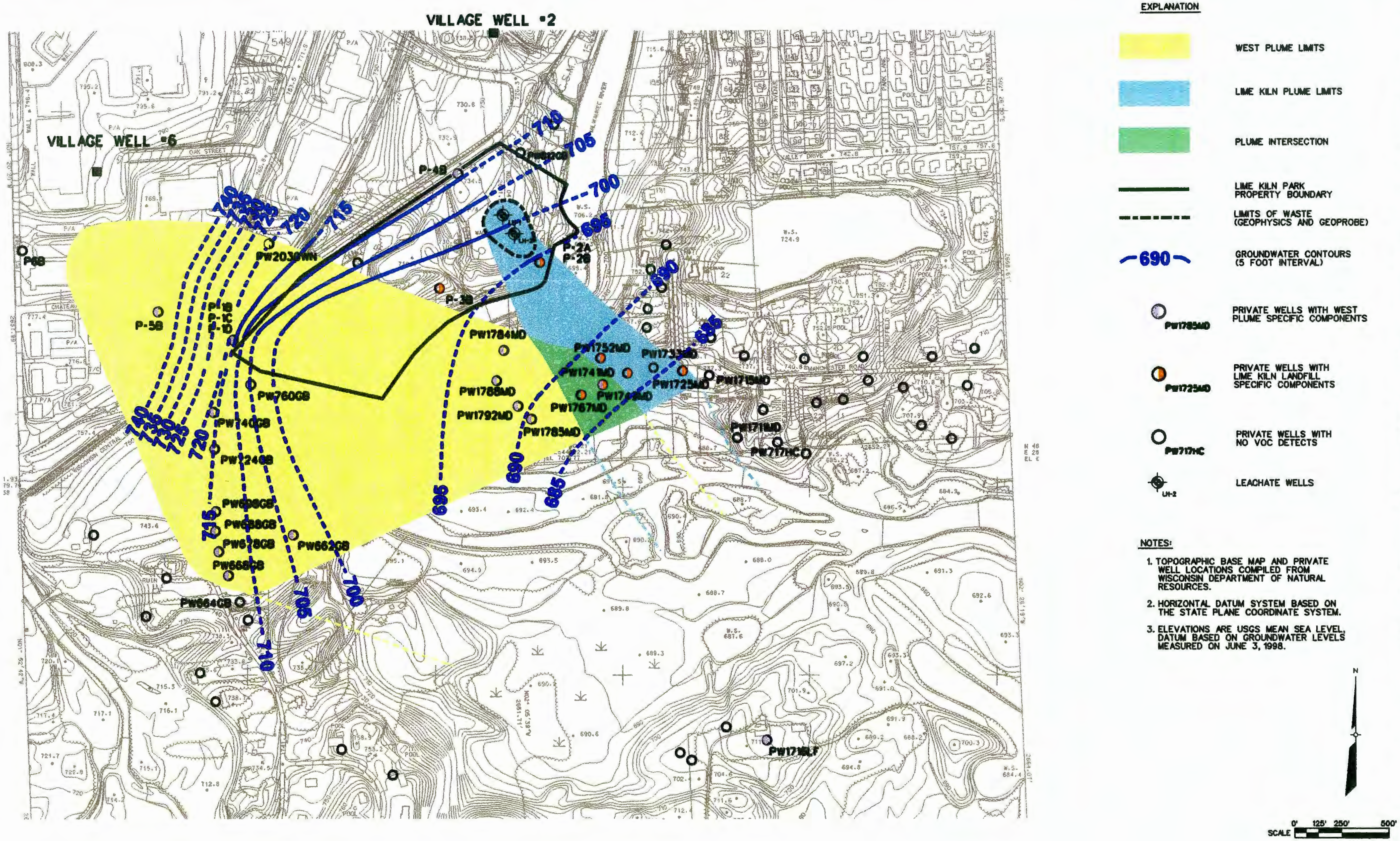
The following recommendations are made for the future monitoring and remedial action evaluation of the Lime Kiln Park Landfill.

- The monitoring plan, attached as Appendix E, should be continued in 2002 for four more sample events. While natural attenuation is occurring, there are several increasing concentration trends that should be further monitored and evaluated.

-

APPENDIX A

AFFECTED GROUNDWATER AREAS MAP



NOTES:

1. TOPOGRAPHIC BASE MAP AND PRIVATE WELL LOCATIONS COMPILED FROM WISCONSIN DEPARTMENT OF NATURAL RESOURCES.
2. HORIZONTAL DATUM SYSTEM BASED ON THE STATE PLANE COORDINATE SYSTEM.
3. ELEVATIONS ARE USGS MEAN SEA LEVEL. DATUM BASED ON GROUNDWATER LEVELS MEASURED ON JUNE 3, 1998.

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FIGURE 8
AFFECTED GROUNDWATER AREAS

2001 ANNUAL REPORT
VILLAGE OF GRAFTON
GRAFTON, WISCONSIN

AUG 2002 | 30250

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APPENDIX B

CALCULATION SHEET

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CALCULATION SHEET

PROJECT NO. 30250

CLIENT Village of Grafton SUBJECT Vertical Gradient Prepared By BJL Date

PROJECT Lime Kiln Park Reviewed By ____ Date

Approved By ____ Date

Objective: Calculate the Vertical Gradient for the Lime Kiln Park area in the Village of Grafton.

Criteria and Assumptions:

- Gradient is calculated by: change in water elevation / change in elevation of well bottom.

Vertical Gradient

Well Number	Date	Water Elevation	Ground Elevation	Well Depth	Elevation of Well Bottom	Gradient	Direction
P2A	April-02	697.1	711.5	22.77	690.65	-0.0351	Downward
P2B	April-02	695.27	711.5	75.44	638.56		
P8A	April-02	690.86	745.62	115.16	629.97	-0.011	Downward
P8B	April-02	689.89	740.35	198.45	541.84		
P2A	June-02	696.87	711.5	22.77	690.43	-0.039	Downward
P2B	June-02	694.84	711.5	75.44	638.35		
P8A	June-02	690.66	745.62	115.16	630.09	-0.0145	Downward
P8B	June-02	689.38	740.35	198.45	541.84		
P2A	October-02	696.5	711.5	22.78	690.43	-0.0582	Downward
P2B	October-02	693.47	711.5	75.43	638.35		
P8A	October-02	689.04	745.62	115.16	630.1	-0.0133	Downward
P8B	October-02	687.87	740.35	198.45	541.84		
P2A	December-02	696.76	711.5	22.78	690.43	-0.0551	Downward
P2B	December-02	693.89	711.5	75.43	638.35		
P8A	December-02	689.64	745.62	115.16	630.1	-0.0151	Downward
P8B	December-02	688.31	740.35	198.45	541.84		

APPENDIX C

GROUNDWATER MONITORING DATA

Village of Grafton - Lime Kiln Landfill

Detected Compounds and Regulatory Exceedences

January 2000 to December 2002

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
LH1							
	1/26/2000	1,1-Dichloroethane	8.8	ug/L	850	85	
	3/24/2000	1,1-Dichloroethane	8.6	ug/L	850	85	
	6/21/2000	1,1-Dichloroethane	4	ug/L	850	85	
	9/13/2000	1,1-Dichloroethane	6.2	ug/L	850	85	
	12/13/2000	1,1-Dichloroethane	5	ug/L	850	85	
	4/4/2001	1,1-Dichloroethane	3.8	ug/L	850	85	
	6/14/2001	1,1-Dichloroethane	4.9	ug/L	850	85	
	10/2/2001	1,1-Dichloroethane	5.6	ug/L	850	85	
	12/11/2001	1,1-Dichloroethane	7	ug/L	850	85	
	3/20/2002	1,1-Dichloroethane	4.9	ug/L	850	85	
	6/13/2002	1,1-Dichloroethane	25	ug/L	850	85	
	9/12/2002	1,1-Dichloroethane	6.3	ug/L	850	85	
	12/17/2002	1,1-Dichloroethane	7.1	ug/L	850	85	
	1/26/2000	1,1-Dichloroethene	1.3	ug/L	7	0.7	PAL
	3/24/2000	1,1-Dichloroethene	1.6	ug/L	7	0.7	PAL
	6/21/2000	1,1-Dichloroethene	1	ug/L	7	0.7	PAL
	9/13/2000	1,1-Dichloroethene	1.5	ug/L	7	0.7	PAL
	12/13/2000	1,1-Dichloroethene	1.3	ug/L	7	0.7	PAL
	4/4/2001	1,1-Dichloroethene	1.1	ug/L	7	0.7	PAL
	6/14/2001	1,1-Dichloroethene	1.4	ug/L	7	0.7	PAL
	10/2/2001	1,1-Dichloroethene	1.2	ug/L	7	0.7	PAL
	12/11/2001	1,1-Dichloroethene	1.4	ug/L	7	0.7	PAL
	3/20/2002	1,1-Dichloroethene	1.2	ug/L	7	0.7	PAL
	9/12/2002	1,1-Dichloroethene	0.8	ug/L	7	0.7	PAL
	12/17/2002	1,1-Dichloroethene	0.89	ug/L	7	0.7	PAL
	12/13/2000	Acetone	7.6	ug/L	1000	200	
	6/14/2001	Acetone	4.7	ug/L	1000	200	
	10/2/2001	Acetone	6.2	ug/L	1000	200	
	12/11/2001	Acetone	13	ug/L	1000	200	
	3/20/2002	Acetone	12	ug/L	1000	200	
	9/12/2002	Acetone	8.3	ug/L	1000	200	
	12/17/2002	Acetone	20	ug/L	1000	200	
	1/26/2000	Alkalinity as CaCO3	390	mg/L			
	6/21/2000	Alkalinity as CaCO3	370	mg/L			
	12/13/2000	Alkalinity as CaCO3	350	mg/L			
	6/21/2000	Arsenic - Dissolved	1	ug/L	50	5	
	12/13/2000	Arsenic - Dissolved	0.87	ug/L	50	5	
	1/26/2000	Barium - Dissolved	47	ug/L	2000	400	
	3/24/2000	Barium - Dissolved	47	ug/L	2000	400	
	6/21/2000	Barium - Dissolved	40	ug/L	2000	400	
	12/13/2000	Barium - Dissolved	31	ug/L	2000	400	
	9/13/2000	Benzene	0.31	ug/L	5	0.5	
	9/12/2002	Benzene	0.51	ug/L	5	0.5	PAL

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	1/26/2000	Chloride	120	mg/L	250	125	
	3/24/2000	Chloride	140	mg/L	250	125	PAL
	6/21/2000	Chloride	130	mg/L	250	125	PAL
	12/13/2000	Chloride	130	mg/L	250	125	PAL
	4/4/2001	Chloride	110	mg/L	250	125	
	6/14/2001	Chloride	15	mg/L	250	125	
	10/2/2001	Chloride	120	mg/L	250	125	
	12/11/2001	Chloride	130	mg/L	250	125	PAL
	3/20/2002	Chloride	110	mg/L	250	125	
	6/13/2002	Chloride	110	mg/L	250	125	
	9/12/2002	Chloride	120	mg/L	250	125	
	12/17/2002	Chloride	110	mg/L	250	125	
	3/24/2000	Chloroethane	2	ug/L	400	80	
	6/21/2000	Chloroethane	1	ug/L	400	80	
	9/13/2000	Chloroethane	2.5	ug/L	400	80	
	12/13/2000	Chloroethane	2.3	ug/L	400	80	
	4/4/2001	Chloroethane	1.8	ug/L	400	80	
	6/14/2001	Chloroethane	2.2	ug/L	400	80	
	10/2/2001	Chloroethane	1.1	ug/L	400	80	
	3/20/2002	Chloroethane	1.7	ug/L	400	80	
	12/13/2000	Chromium - Dissolved	0.37	ug/L	100	10	
	1/26/2000	cis-1,2-Dichloroethene	120	ug/L	70	7	ES
	3/24/2000	cis-1,2-Dichloroethene	110	ug/L	70	7	ES
	6/21/2000	cis-1,2-Dichloroethene	120	ug/L	70	7	ES
	9/13/2000	cis-1,2-Dichloroethene	140	ug/L	70	7	ES
	12/13/2000	cis-1,2-Dichloroethene	120	ug/L	70	7	ES
	4/4/2001	cis-1,2-Dichloroethene	100	ug/L	70	7	ES
	6/14/2001	cis-1,2-Dichloroethene	120	ug/L	70	7	ES
	10/2/2001	cis-1,2-Dichloroethene	110	ug/L	70	7	ES
	12/11/2001	cis-1,2-Dichloroethene	110	ug/L	70	7	ES
	3/20/2002	cis-1,2-Dichloroethene	99	ug/L	70	7	ES
	6/13/2002	cis-1,2-Dichloroethene	44	ug/L	70	7	PAL
	9/12/2002	cis-1,2-Dichloroethene	97	ug/L	70	7	ES
	12/17/2002	cis-1,2-Dichloroethene	77	ug/L	70	7	ES
	1/26/2000	Ethane	5.2	ug/l			
	3/24/2000	Ethane	3.7	ug/l			
	6/13/2002	Iron	390	ug/L	0.3	0.15	ES
	1/26/2000	Mercury - Dissolved	0.28	ug/L	2	0.2	PAL
	3/24/2000	Mercury - Dissolved	0.55	ug/L	2	0.2	PAL
	12/13/2000	Mercury - Dissolved	0.54	ug/L	2	0.2	PAL
	6/21/2000	Methylene chloride	1	ug/L	5	0.5	PAL
	9/13/2000	Methylene chloride	0.39	ug/L	5	0.5	
	12/13/2000	Methylene chloride	0.71	ug/L	5	0.5	PAL
	12/11/2001	Methylene chloride	1	ug/L	5	0.5	PAL
	1/26/2000	Nitrogen, nitrate	1.5	mg/L	10	2	
	3/24/2000	Nitrogen, nitrate	1.8	mg/L	10	2	
	6/21/2000	Nitrogen, nitrate	1	mg/L	10	2	
	4/4/2001	Nitrogen, nitrate	0.85	mg/L	10	2	
	6/14/2001	Nitrogen, nitrate	0.79	mg/L	10	2	
	12/11/2001	Nitrogen, nitrate	1.5	mg/L	10	2	

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	3/20/2002	Nitrogen, nitrate	1.3	mg/L	10	2	
	6/13/2002	Nitrogen, nitrate	0.89	mg/L	10	2	
	6/21/2000	Selenium - Dissolved	7	ug/L	50	10	
	12/13/2000	Selenium - Dissolved	5	ug/L	50	10	
	1/26/2000	Tetrachloroethene	4.4	ug/L	5	0.5	PAL
	3/24/2000	Tetrachloroethene	6.5	ug/L	5	0.5	ES
	6/21/2000	Tetrachloroethene	3	ug/L	5	0.5	PAL
	9/13/2000	Tetrachloroethene	3.7	ug/L	5	0.5	PAL
	12/13/2000	Tetrachloroethene	4.2	ug/L	5	0.5	PAL
	4/4/2001	Tetrachloroethene	2.2	ug/L	5	0.5	PAL
	6/14/2001	Tetrachloroethene	2.6	ug/L	5	0.5	PAL
	10/2/2001	Tetrachloroethene	4.4	ug/L	5	0.5	PAL
	12/11/2001	Tetrachloroethene	5.7	ug/L	5	0.5	ES
	3/20/2002	Tetrachloroethene	3.9	ug/L	5	0.5	PAL
	9/12/2002	Tetrachloroethene	3.8	ug/L	5	0.5	PAL
	12/17/2002	Tetrachloroethene	6.5	ug/L	5	0.5	ES
	12/13/2000	Toluene	0.42	ug/L	1000	200	
	12/13/2000	Toluene	0.42	ug/L	1000	200	
	4/4/2001	Toluene	0.35	ug/L	1000	200	
	4/4/2001	Toluene	0.35	ug/L	1000	200	
	6/14/2001	Toluene	0.27	ug/L	1000	200	
	6/14/2001	Toluene	0.27	ug/L	1000	200	
	1/26/2000	trans-1,2-Dichloroethene	5.1	ug/L	100	20	
	3/24/2000	trans-1,2-Dichloroethene	4.9	ug/L	100	20	
	6/21/2000	trans-1,2-Dichloroethene	5	ug/L	100	20	
	9/13/2000	trans-1,2-Dichloroethene	4.8	ug/L	100	20	
	12/13/2000	trans-1,2-Dichloroethene	5.1	ug/L	100	20	
	4/4/2001	trans-1,2-Dichloroethene	4.7	ug/L	100	20	
	6/14/2001	trans-1,2-Dichloroethene	5.3	ug/L	100	20	
	10/2/2001	trans-1,2-Dichloroethene	4.7	ug/L	100	20	
	12/11/2001	trans-1,2-Dichloroethene	5.6	ug/L	100	20	
	3/20/2002	trans-1,2-Dichloroethene	4.8	ug/L	100	20	
	6/13/2002	trans-1,2-Dichloroethene	3.1	ug/L	100	20	
	9/12/2002	trans-1,2-Dichloroethene	4	ug/L	100	20	
	12/17/2002	trans-1,2-Dichloroethene	7	ug/L	100	20	
	1/26/2000	Trichloroethene	29	ug/L	5	0.5	ES
	3/24/2000	Trichloroethene	29	ug/L	5	0.5	ES
	6/21/2000	Trichloroethene	27	ug/L	5	0.5	ES
	9/13/2000	Trichloroethene	27	ug/L	5	0.5	ES
	12/13/2000	Trichloroethene	25	ug/L	5	0.5	ES
	4/4/2001	Trichloroethene	19	ug/L	5	0.5	ES
	6/14/2001	Trichloroethene	21	ug/L	5	0.5	ES
	10/2/2001	Trichloroethene	22	ug/L	5	0.5	ES
	12/11/2001	Trichloroethene	27	ug/L	5	0.5	ES
	3/20/2002	Trichloroethene	21	ug/L	5	0.5	ES
	6/13/2002	Trichloroethene	11	ug/L	5	0.5	ES
	9/12/2002	Trichloroethene	21	ug/L	5	0.5	ES
	12/17/2002	Trichloroethene	29	ug/L	5	0.5	ES
	1/26/2000	Vinyl chloride	130	ug/L	0.2	0.02	ES
	3/24/2000	Vinyl chloride	120	ug/L	0.2	0.02	ES

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	6/21/2000	Vinyl chloride	130	ug/L	0.2	0.02	ES
	9/13/2000	Vinyl chloride	150	ug/L	0.2	0.02	ES
	12/13/2000	Vinyl chloride	130	ug/L	0.2	0.02	ES
	4/4/2001	Vinyl chloride	110	ug/L	0.2	0.02	ES
	6/14/2001	Vinyl chloride	150	ug/L	0.2	0.02	ES
	10/2/2001	Vinyl chloride	120	ug/L	0.2	0.02	ES
	12/11/2001	Vinyl chloride	110	ug/L	0.2	0.02	ES
	3/20/2002	Vinyl chloride	140	ug/L	0.2	0.02	ES
	6/13/2002	Vinyl chloride	54	ug/L	0.2	0.02	ES
	9/12/2002	Vinyl chloride	100	ug/L	0.2	0.02	ES
	12/17/2002	Vinyl chloride	47	ug/L	0.2	0.02	ES
LH2							
	1/26/2000	1,1,1-Trichloroethane	0.82	ug/L	200	40	
	3/24/2000	1,1,1-Trichloroethane	1.5	ug/L	200	40	
	1/26/2000	1,1-Dichloroethane	84	ug/L	850	85	
	3/24/2000	1,1-Dichloroethane	80	ug/L	850	85	
	6/21/2000	1,1-Dichloroethane	63	ug/L	850	85	
	9/13/2000	1,1-Dichloroethane	4.8	ug/L	850	85	
	12/13/2000	1,1-Dichloroethane	5.1	ug/L	850	85	
	4/4/2001	1,1-Dichloroethane	4.7	ug/L	850	85	
	6/14/2001	1,1-Dichloroethane	12	ug/L	850	85	
	10/2/2001	1,1-Dichloroethane	19	ug/L	850	85	
	12/11/2001	1,1-Dichloroethane	14	ug/L	850	85	
	3/20/2002	1,1-Dichloroethane	15	ug/L	850	85	
	6/13/2002	1,1-Dichloroethane	12	ug/L	850	85	
	12/13/2000	1,1-Dichloroethene	0.88	ug/L	7	0.7	PAL
	1/26/2000	Alkalinity as CaCO3	240	mg/L			
	6/21/2000	Alkalinity as CaCO3	190	mg/L			
	12/13/2000	Alkalinity as CaCO3	76	mg/L			
	6/21/2000	Arsenic - Dissolved	2	ug/L	50	5	
	12/13/2000	Arsenic - Dissolved	0.53	ug/L	50	5	
	1/26/2000	Barium - Dissolved	44	ug/L	2000	400	
	3/24/2000	Barium - Dissolved	40	ug/L	2000	400	
	6/21/2000	Barium - Dissolved	21	ug/L	2000	400	
	12/13/2000	Barium - Dissolved	28	ug/L	2000	400	
	1/26/2000	Chloride	150	mg/L	250	125	PAL
	3/24/2000	Chloride	530	mg/L	250	125	ES
	6/21/2000	Chloride	500	mg/L	250	125	ES
	12/13/2000	Chloride	96	mg/L	250	125	
	4/4/2001	Chloride	59	mg/L	250	125	
	6/14/2001	Chloride	48	mg/L	250	125	
	10/2/2001	Chloride	63	mg/L	250	125	
	12/11/2001	Chloride	83	mg/L	250	125	
	3/20/2002	Chloride	61	mg/L	250	125	
	6/13/2002	Chloride	52	mg/L	250	125	
	6/21/2000	Chloroethane	1	ug/L	400	80	
	9/13/2000	Chloroethane	4.8	ug/L	400	80	
	12/13/2000	Chloroethane	3.1	ug/L	400	80	
	4/4/2001	Chloroethane	2.6	ug/L	400	80	
	6/14/2001	Chloroethane	3	ug/L	400	80	

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	10/2/2001	Chloroethane	1.7	ug/L	400	80	
	12/11/2001	Chloroethane	1.2	ug/L	400	80	
	3/20/2002	Chloroethane	1.4	ug/L	400	80	
	1/26/2000	Chromium - Dissolved	1.2	ug/L	100	10	
	3/24/2000	Chromium - Dissolved	1.2	ug/L	100	10	
	6/21/2000	Chromium - Dissolved	1	ug/L	100	10	
	12/13/2000	Chromium - Dissolved	0.87	ug/L	100	10	
	1/26/2000	cis-1,2-Dichloroethene	40	ug/L	70	7	PAL
	3/24/2000	cis-1,2-Dichloroethene	31	ug/L	70	7	PAL
	6/21/2000	cis-1,2-Dichloroethene	46	ug/L	70	7	PAL
	9/13/2000	cis-1,2-Dichloroethene	97	ug/L	70	7	ES
	12/13/2000	cis-1,2-Dichloroethene	94	ug/L	70	7	ES
	4/4/2001	cis-1,2-Dichloroethene	58	ug/L	70	7	PAL
	6/14/2001	cis-1,2-Dichloroethene	54	ug/L	70	7	PAL
	10/2/2001	cis-1,2-Dichloroethene	62	ug/L	70	7	PAL
	12/11/2001	cis-1,2-Dichloroethene	73	ug/L	70	7	ES
	3/20/2002	cis-1,2-Dichloroethene	64	ug/L	70	7	PAL
	6/13/2002	cis-1,2-Dichloroethene	38	ug/L	70	7	PAL
	6/21/2000	Ethane	46	ug/l			
	6/13/2002	Iron	890	ug/L	0.3	0.15	ES
	12/13/2000	Lead - Dissolved	5	ug/L	15	1.5	PAL
	12/13/2000	Mercury - Dissolved	0.35	ug/L	2	0.2	PAL
	9/13/2000	Methylene chloride	0.62	ug/L	5	0.5	PAL
	12/13/2000	Methylene chloride	0.62	ug/L	5	0.5	PAL
	12/11/2001	Methylene chloride	1.2	ug/L	5	0.5	PAL
	1/26/2000	Nitrogen, nitrate	0.6	mg/L	10	2	
	3/24/2000	Nitrogen, nitrate	0.42	mg/L	10	2	
	4/4/2001	Nitrogen, nitrate	0.76	mg/L	10	2	
	6/14/2001	Nitrogen, nitrate	0.65	mg/L	10	2	
	12/11/2001	Nitrogen, nitrate	1.2	mg/L	10	2	
	3/20/2002	Nitrogen, nitrate	1.2	mg/L	10	2	
	6/13/2002	Nitrogen, nitrate	0.82	mg/L	10	2	
	6/21/2000	Selenium - Dissolved	7	ug/L	50	10	
	12/13/2000	Selenium - Dissolved	3.1	ug/L	50	10	
	3/24/2000	Tetrachloroethene	0.75	ug/L	5	0.5	PAL
	12/13/2000	Tetrachloroethene	1.6	ug/L	5	0.5	PAL
	12/11/2001	Tetrachloroethene	0.76	ug/L	5	0.5	PAL
	3/20/2002	Tetrachloroethene	0.63	ug/L	5	0.5	PAL
	12/13/2000	Toluene	0.23	ug/L	1000	200	
	12/13/2000	Toluene	0.23	ug/L	1000	200	
	4/4/2001	Toluene	0.19	ug/L	1000	200	
	4/4/2001	Toluene	0.19	ug/L	1000	200	
	1/26/2000	trans-1,2-Dichloroethene	1.6	ug/L	100	20	
	3/24/2000	trans-1,2-Dichloroethene	2.3	ug/L	100	20	
	6/21/2000	trans-1,2-Dichloroethene	1	ug/L	100	20	
	9/13/2000	trans-1,2-Dichloroethene	4.4	ug/L	100	20	
	12/13/2000	trans-1,2-Dichloroethene	4.6	ug/L	100	20	
	4/4/2001	trans-1,2-Dichloroethene	3.6	ug/L	100	20	
	6/14/2001	trans-1,2-Dichloroethene	3.3	ug/L	100	20	
	10/2/2001	trans-1,2-Dichloroethene	3.2	ug/L	100	20	

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	12/11/2001	trans-1,2-Dichloroethene	4.8	ug/L	100	20	
	3/20/2002	trans-1,2-Dichloroethene	3.7	ug/L	100	20	
	6/13/2002	trans-1,2-Dichloroethene	3	ug/L	100	20	
	1/26/2000	Trichloroethene	20	ug/L	5	0.5	ES
	3/24/2000	Trichloroethene	20	ug/L	5	0.5	ES
	6/21/2000	Trichloroethene	6	ug/L	5	0.5	ES
	9/13/2000	Trichloroethene	7.6	ug/L	5	0.5	ES
	12/13/2000	Trichloroethene	13	ug/L	5	0.5	ES
	4/4/2001	Trichloroethene	7.2	ug/L	5	0.5	ES
	6/14/2001	Trichloroethene	5.3	ug/L	5	0.5	ES
	10/2/2001	Trichloroethene	6.7	ug/L	5	0.5	ES
	12/11/2001	Trichloroethene	8.5	ug/L	5	0.5	ES
	3/20/2002	Trichloroethene	8.3	ug/L	5	0.5	ES
	6/13/2002	Trichloroethene	6.3	ug/L	5	0.5	ES
	1/26/2000	Vinyl chloride	4.9	ug/L	0.2	0.02	ES
	3/24/2000	Vinyl chloride	6.4	ug/L	0.2	0.02	ES
	6/21/2000	Vinyl chloride	45	ug/L	0.2	0.02	ES
	9/13/2000	Vinyl chloride	200	ug/L	0.2	0.02	ES
	12/13/2000	Vinyl chloride	150	ug/L	0.2	0.02	ES
	4/4/2001	Vinyl chloride	84	ug/L	0.2	0.02	ES
	6/14/2001	Vinyl chloride	110	ug/L	0.2	0.02	ES
	10/2/2001	Vinyl chloride	98	ug/L	0.2	0.02	ES
	12/11/2001	Vinyl chloride	110	ug/L	0.2	0.02	ES
	3/20/2002	Vinyl chloride	96	ug/L	0.2	0.02	ES
	6/13/2002	Vinyl chloride	67	ug/L	0.2	0.02	ES
P2A							
	3/24/2000	1,1,1-Trichloroethane	1.2	ug/L	200	40	
	6/19/2000	1,1,1-Trichloroethane	3	ug/L	200	40	
	9/12/2000	1,1,1-Trichloroethane	1.1	ug/L	200	40	
	12/13/2000	1,1,1-Trichloroethane	0.56	ug/L	200	40	
	4/3/2001	1,1,1-Trichloroethane	6.9	ug/L	200	40	
	6/13/2001	1,1,1-Trichloroethane	1.8	ug/L	200	40	
	9/11/2002	1,1,1-Trichloroethane	0.65	ug/L	200	40	
	1/25/2000	1,1-Dichloroethane	24	ug/L	850	85	
	3/24/2000	1,1-Dichloroethane	15	ug/L	850	85	
	6/19/2000	1,1-Dichloroethane	55	ug/L	850	85	
	9/12/2000	1,1-Dichloroethane	37	ug/L	850	85	
	12/13/2000	1,1-Dichloroethane	27	ug/L	850	85	
	4/3/2001	1,1-Dichloroethane	89	ug/L	850	85	PAL
	6/13/2001	1,1-Dichloroethane	40	ug/L	850	85	
	10/1/2001	1,1-Dichloroethane	29	ug/L	850	85	
	12/11/2001	1,1-Dichloroethane	28	ug/L	850	85	
	3/19/2002	1,1-Dichloroethane	21	ug/L	850	85	
	6/12/2002	1,1-Dichloroethane	17	ug/L	850	85	
	9/11/2002	1,1-Dichloroethane	24	ug/L	850	85	
	12/17/2002	1,1-Dichloroethane	24	ug/L	850	85	
	1/25/2000	Alkalinity as CaCO3	480	mg/L			
	6/19/2000	Alkalinity as CaCO3	480	mg/L			
	12/13/2000	Alkalinity as CaCO3	500	mg/L			
	6/19/2000	Arsenic - Dissolved	1	ug/L	50	5	

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	12/13/2000	Arsenic - Dissolved	2.3	ug/L	50	5	
	1/25/2000	Barium - Dissolved	47	ug/L	2000	400	
	3/24/2000	Barium - Dissolved	43	ug/L	2000	400	
	6/19/2000	Barium - Dissolved	54	ug/L	2000	400	
	12/13/2000	Barium - Dissolved	54	ug/L	2000	400	
	1/25/2000	Chloride	240	mg/L	250	125	PAL
	3/24/2000	Chloride	240	mg/L	250	125	PAL
	6/19/2000	Chloride	220	mg/L	250	125	PAL
	12/13/2000	Chloride	270	mg/L	250	125	ES
	4/3/2001	Chloride	300	mg/L	250	125	ES
	6/13/2001	Chloride	420	mg/L	250	125	ES
	10/1/2001	Chloride	300	mg/L	250	125	ES
	12/11/2001	Chloride	310	mg/L	250	125	ES
	3/19/2002	Chloride	240	mg/L	250	125	PAL
	6/12/2002	Chloride	270	mg/L	250	125	ES
	9/11/2002	Chloride	310	mg/L	250	125	ES
	12/17/2002	Chloride	330	mg/L	250	125	ES
	4/3/2001	Chloroethane	2	ug/L	400	80	
	1/25/2000	Chromium - Dissolved	0.62	ug/L	100	10	
	3/24/2000	Chromium - Dissolved	0.89	ug/L	100	10	
	12/13/2000	Chromium - Dissolved	1.2	ug/L	100	10	
	1/25/2000	cis-1,2-Dichloroethene	2	ug/L	70	7	
	3/24/2000	cis-1,2-Dichloroethene	26	ug/L	70	7	PAL
	6/19/2000	cis-1,2-Dichloroethene	13	ug/L	70	7	PAL
	9/12/2000	cis-1,2-Dichloroethene	5.8	ug/L	70	7	
	12/13/2000	cis-1,2-Dichloroethene	3.1	ug/L	70	7	
	4/3/2001	cis-1,2-Dichloroethene	16	ug/L	70	7	PAL
	6/13/2001	cis-1,2-Dichloroethene	8.1	ug/L	70	7	PAL
	10/1/2001	cis-1,2-Dichloroethene	4.8	ug/L	70	7	
	12/11/2001	cis-1,2-Dichloroethene	36	ug/L	70	7	PAL
	3/19/2002	cis-1,2-Dichloroethene	1.4	ug/L	70	7	
	6/12/2002	cis-1,2-Dichloroethene	3.4	ug/L	70	7	
	9/11/2002	cis-1,2-Dichloroethene	3.6	ug/L	70	7	
	12/17/2002	cis-1,2-Dichloroethene	2	ug/L	70	7	
	6/12/2002	Iron	930	ug/L	0.3	0.15	ES
	12/13/2000	Lead - Dissolved	0.49	ug/L	15	1.5	
	12/13/2000	Methylene chloride	0.5	ug/L	5	0.5	
	6/13/2001	Methylene chloride	0.72	ug/L	5	0.5	PAL
	4/3/2001	Nitrogen, nitrate	0.52	mg/L	10	2	
	6/13/2001	Nitrogen, nitrate	0.18	mg/L	10	2	
	3/19/2002	Nitrogen, nitrate	0.21	mg/L	10	2	
	6/12/2002	Nitrogen, nitrate	0.36	mg/L	10	2	
	6/19/2000	Selenium - Dissolved	1	ug/L	50	10	
	12/13/2000	Selenium - Dissolved	1.2	ug/L	50	10	
	6/13/2001	Tetrachloroethene	1.1	ug/L	5	0.5	PAL
	1/25/2000	trans-1,2-Dichloroethene	3.5	ug/L	100	20	
	3/24/2000	trans-1,2-Dichloroethene	2.6	ug/L	100	20	
	6/19/2000	trans-1,2-Dichloroethene	3	ug/L	100	20	
	9/12/2000	trans-1,2-Dichloroethene	5.8	ug/L	100	20	
	12/13/2000	trans-1,2-Dichloroethene	5.1	ug/L	100	20	

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	4/3/2001	trans-1,2-Dichloroethene	2.1	ug/L	100	20	
	6/13/2001	trans-1,2-Dichloroethene	3	ug/L	100	20	
	10/1/2001	trans-1,2-Dichloroethene	6.1	ug/L	100	20	
	12/11/2001	trans-1,2-Dichloroethene	7.3	ug/L	100	20	
	3/19/2002	trans-1,2-Dichloroethene	1.6	ug/L	100	20	
	9/11/2002	trans-1,2-Dichloroethene	4.9	ug/L	100	20	
	12/17/2002	trans-1,2-Dichloroethene	7.8	ug/L	100	20	
	1/25/2000	Trichloroethene	3.8	ug/L	5	0.5	PAL
	3/24/2000	Trichloroethene	32	ug/L	5	0.5	ES
	6/19/2000	Trichloroethene	13	ug/L	5	0.5	ES
	9/12/2000	Trichloroethene	9.9	ug/L	5	0.5	ES
	12/13/2000	Trichloroethene	6.2	ug/L	5	0.5	ES
	4/3/2001	Trichloroethene	7.7	ug/L	5	0.5	ES
	6/13/2001	Trichloroethene	10	ug/L	5	0.5	ES
	10/1/2001	Trichloroethene	4.6	ug/L	5	0.5	PAL
	12/11/2001	Trichloroethene	27	ug/L	5	0.5	ES
	3/19/2002	Trichloroethene	8.5	ug/L	5	0.5	ES
	6/12/2002	Trichloroethene	4.2	ug/L	5	0.5	PAL
	9/11/2002	Trichloroethene	8.2	ug/L	5	0.5	ES
	12/17/2002	Trichloroethene	2.1	ug/L	5	0.5	PAL
	1/25/2000	Vinyl chloride	1.2	ug/L	0.2	0.02	ES
	6/19/2000	Vinyl chloride	1	ug/L	0.2	0.02	ES
	9/12/2000	Vinyl chloride	2.5	ug/L	0.2	0.02	ES
	12/13/2000	Vinyl chloride	2	ug/L	0.2	0.02	ES
	4/3/2001	Vinyl chloride	1.6	ug/L	0.2	0.02	ES
	6/13/2001	Vinyl chloride	1.9	ug/L	0.2	0.02	ES
	10/1/2001	Vinyl chloride	2.2	ug/L	0.2	0.02	ES
	12/11/2001	Vinyl chloride	15	ug/L	0.2	0.02	ES
	3/19/2002	Vinyl chloride	0.84	ug/L	0.2	0.02	ES
	6/12/2002	Vinyl chloride	0.93	ug/L	0.2	0.02	ES
	9/11/2002	Vinyl chloride	1.9	ug/L	0.2	0.02	ES
	12/17/2002	Vinyl chloride	1.2	ug/L	0.2	0.02	ES
P2B							
	1/25/2000	1,1,1-Trichloroethane	3.1	ug/L	200	40	
	3/24/2000	1,1,1-Trichloroethane	4.8	ug/L	200	40	
	12/13/2000	1,1,1-Trichloroethane	3.2	ug/L	200	40	
	4/3/2001	1,1,1-Trichloroethane	2.5	ug/L	200	40	
	6/13/2001	1,1,1-Trichloroethane	2.4	ug/L	200	40	
	1/25/2000	1,1-Dichloroethane	22	ug/L	850	85	
	3/24/2000	1,1-Dichloroethane	26	ug/L	850	85	
	6/19/2000	1,1-Dichloroethane	25	ug/L	850	85	
	9/12/2000	1,1-Dichloroethane	24	ug/L	850	85	
	12/13/2000	1,1-Dichloroethane	22	ug/L	850	85	
	4/3/2001	1,1-Dichloroethane	19	ug/L	850	85	
	6/13/2001	1,1-Dichloroethane	18	ug/L	850	85	
	10/1/2001	1,1-Dichloroethane	16	ug/L	850	85	
	12/11/2001	1,1-Dichloroethane	18	ug/L	850	85	
	3/19/2002	1,1-Dichloroethane	18	ug/L	850	85	
	6/12/2002	1,1-Dichloroethane	14	ug/L	850	85	
	9/11/2002	1,1-Dichloroethane	19	ug/L	850	85	

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	12/17/2002	1,1-Dichloroethane	23	ug/L	850	85	
	3/24/2000	1,1-Dichloroethene	2.9	ug/L	7	0.7	PAL
	6/19/2000	1,1-Dichloroethene	3	ug/L	7	0.7	PAL
	12/13/2000	1,1-Dichloroethene	2.2	ug/L	7	0.7	PAL
	1/25/2000	Alkalinity as CaCO3	390	mg/L			
	6/19/2000	Alkalinity as CaCO3	360	mg/L			
	12/13/2000	Alkalinity as CaCO3	390	mg/L			
	6/19/2000	Arsenic - Dissolved	1	ug/L	50	5	
	12/13/2000	Arsenic - Dissolved	1.2	ug/L	50	5	
	1/25/2000	Barium - Dissolved	77	ug/L	2000	400	
	3/24/2000	Barium - Dissolved	72	ug/L	2000	400	
	6/19/2000	Barium - Dissolved	67	ug/L	2000	400	
	12/13/2000	Barium - Dissolved	70	ug/L	2000	400	
	3/24/2000	Cadmium - Dissolved	1.1	ug/L	5	0.5	PAL
	1/25/2000	Chloride	93	mg/L	250	125	
	3/24/2000	Chloride	110	mg/L	250	125	
	6/19/2000	Chloride	97	mg/L	250	125	
	12/13/2000	Chloride	99	mg/L	250	125	
	4/3/2001	Chloride	100	mg/L	250	125	
	6/13/2001	Chloride	90	mg/L	250	125	
	10/1/2001	Chloride	88	mg/L	250	125	
	12/11/2001	Chloride	110	mg/L	250	125	
	3/19/2002	Chloride	110	mg/L	250	125	
	6/12/2002	Chloride	120	mg/L	250	125	
	9/11/2002	Chloride	140	mg/L	250	125	PAL
	12/17/2002	Chloride	140	mg/L	250	125	PAL
	3/24/2000	Chloroethane	15	ug/L	400	80	
	6/19/2000	Chloroethane	17	ug/L	400	80	
	9/12/2000	Chloroethane	14	ug/L	400	80	
	12/13/2000	Chloroethane	13	ug/L	400	80	
	4/3/2001	Chloroethane	10	ug/L	400	80	
	6/13/2001	Chloroethane	8.5	ug/L	400	80	
	10/1/2001	Chloroethane	7.9	ug/L	400	80	
	12/11/2001	Chloroethane	11	ug/L	400	80	
	3/19/2002	Chloroethane	8.3	ug/L	400	80	
	9/11/2002	Chloroethane	9.4	ug/L	400	80	
	1/25/2000	Chromium - Dissolved	1.6	ug/L	100	10	
	3/24/2000	Chromium - Dissolved	1.7	ug/L	100	10	
	12/13/2000	Chromium - Dissolved	0.64	ug/L	100	10	
	1/25/2000	cis-1,2-Dichloroethene	530	ug/L	70	7	ES
	3/24/2000	cis-1,2-Dichloroethene	470	ug/L	70	7	ES
	6/19/2000	cis-1,2-Dichloroethene	600	ug/L	70	7	ES
	9/12/2000	cis-1,2-Dichloroethene	490	ug/L	70	7	ES
	12/13/2000	cis-1,2-Dichloroethene	570	ug/L	70	7	ES
	4/3/2001	cis-1,2-Dichloroethene	520	ug/L	70	7	ES
	6/13/2001	cis-1,2-Dichloroethene	480	ug/L	70	7	ES
	10/1/2001	cis-1,2-Dichloroethene	470	ug/L	70	7	ES
	12/11/2001	cis-1,2-Dichloroethene	520	ug/L	70	7	ES
	3/19/2002	cis-1,2-Dichloroethene	520	ug/L	70	7	ES
	6/12/2002	cis-1,2-Dichloroethene	440	ug/L	70	7	ES

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	9/11/2002	cis-1,2-Dichloroethene	540	ug/L	70	7	ES
	12/17/2002	cis-1,2-Dichloroethene	540	ug/L	70	7	ES
	1/25/2000	Ethane	23	ug/l			
	3/24/2000	Ethane	24	ug/l			
	6/19/2000	Ethane	24	ug/l			
	12/13/2000	Ethane	22	ug/l			
	4/3/2001	Ethane	16	ug/l			
	6/13/2001	Ethane	12	ug/l			
	10/1/2001	Ethane	15	ug/l			
	12/11/2001	Ethane	18	ug/l			
	3/19/2002	Ethane	17	ug/l			
	6/12/2002	Ethane	11	ug/l			
	9/11/2002	Ethane	15	ug/l			
	12/17/2002	Ethane	12	ug/l			
	1/25/2000	Ethene	6.4	ug/l			
	3/24/2000	Ethene	7.7	ug/l			
	6/12/2002	Iron	190	ug/L	0.3	0.15	ES
	1/25/2000	Nitrogen, nitrate	0.15	mg/L	10	2	
	3/24/2000	Nitrogen, nitrate	0.13	mg/L	10	2	
	4/3/2001	Nitrogen, nitrate	0.2	mg/L	10	2	
	6/13/2001	Nitrogen, nitrate	0.22	mg/L	10	2	
	12/11/2001	Nitrogen, nitrate	0.17	mg/L	10	2	
	3/19/2002	Nitrogen, nitrate	0.21	mg/L	10	2	
	6/12/2002	Nitrogen, nitrate	0.24	mg/L	10	2	
	6/19/2000	Selenium - Dissolved	1	ug/L	50	10	
	12/13/2000	Selenium - Dissolved	0.62	ug/L	50	10	
	4/3/2001	Toluene	1.4	ug/L	1000	200	
	4/3/2001	Toluene	1.4	ug/L	1000	200	
	1/25/2000	trans-1,2-Dichloroethene	9.8	ug/L	100	20	
	3/24/2000	trans-1,2-Dichloroethene	12	ug/L	100	20	
	6/19/2000	trans-1,2-Dichloroethene	12	ug/L	100	20	
	9/12/2000	trans-1,2-Dichloroethene	21	ug/L	100	20	PAL
	12/13/2000	trans-1,2-Dichloroethene	15	ug/L	100	20	
	4/3/2001	trans-1,2-Dichloroethene	15	ug/L	100	20	
	6/13/2001	trans-1,2-Dichloroethene	9.8	ug/L	100	20	
	10/1/2001	trans-1,2-Dichloroethene	9.2	ug/L	100	20	
	12/11/2001	trans-1,2-Dichloroethene	13	ug/L	100	20	
	3/19/2002	trans-1,2-Dichloroethene	9.4	ug/L	100	20	
	6/12/2002	trans-1,2-Dichloroethene	11	ug/L	100	20	
	9/11/2002	trans-1,2-Dichloroethene	9.2	ug/L	100	20	
	12/17/2002	trans-1,2-Dichloroethene	7.8	ug/L	100	20	
	1/25/2000	Trichloroethene	210	ug/L	5	0.5	ES
	3/24/2000	Trichloroethene	170	ug/L	5	0.5	ES
	6/19/2000	Trichloroethene	210	ug/L	5	0.5	ES
	9/12/2000	Trichloroethene	170	ug/L	5	0.5	ES
	12/13/2000	Trichloroethene	200	ug/L	5	0.5	ES
	4/3/2001	Trichloroethene	190	ug/L	5	0.5	ES
	6/13/2001	Trichloroethene	170	ug/L	5	0.5	ES
	10/1/2001	Trichloroethene	150	ug/L	5	0.5	ES
	12/11/2001	Trichloroethene	170	ug/L	5	0.5	ES

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	3/19/2002	Trichloroethene	140	ug/L	5	0.5	ES
	6/12/2002	Trichloroethene	150	ug/L	5	0.5	ES
	9/11/2002	Trichloroethene	180	ug/L	5	0.5	ES
	12/17/2002	Trichloroethene	160	ug/L	5	0.5	ES
	1/25/2000	Vinyl chloride	370	ug/L	0.2	0.02	ES
	3/24/2000	Vinyl chloride	340	ug/L	0.2	0.02	ES
	6/19/2000	Vinyl chloride	450	ug/L	0.2	0.02	ES
	9/12/2000	Vinyl chloride	340	ug/L	0.2	0.02	ES
	12/13/2000	Vinyl chloride	390	ug/L	0.2	0.02	ES
	4/3/2001	Vinyl chloride	330	ug/L	0.2	0.02	ES
	6/13/2001	Vinyl chloride	330	ug/L	0.2	0.02	ES
	10/1/2001	Vinyl chloride	300	ug/L	0.2	0.02	ES
	12/11/2001	Vinyl chloride	400	ug/L	0.2	0.02	ES
	3/19/2002	Vinyl chloride	310	ug/L	0.2	0.02	ES
	6/12/2002	Vinyl chloride	290	ug/L	0.2	0.02	ES
	9/11/2002	Vinyl chloride	360	ug/L	0.2	0.02	ES
	12/17/2002	Vinyl chloride	390	ug/L	0.2	0.02	ES
P2BD							
	9/12/2000	1,1-Dichloroethane	23	ug/L	850	85	
	10/1/2001	1,1-Dichloroethane	16	ug/L	850	85	
	12/11/2001	1,1-Dichloroethane	28	ug/L	850	85	
	10/1/2001	Chloride	85	mg/L	250	125	
	12/11/2001	Chloride	300	mg/L	250	125	ES
	9/12/2000	Chloroethane	17	ug/L	400	80	
	10/1/2001	Chloroethane	7.9	ug/L	400	80	
	9/12/2000	cis-1,2-Dichloroethene	500	ug/L	70	7	ES
	10/1/2001	cis-1,2-Dichloroethene	440	ug/L	70	7	ES
	12/11/2001	cis-1,2-Dichloroethene	51	ug/L	70	7	PAL
	10/1/2001	Ethane	17	ug/l			
	9/12/2000	trans-1,2-Dichloroethene	14	ug/L	100	20	
	10/1/2001	trans-1,2-Dichloroethene	8.2	ug/L	100	20	
	12/11/2001	trans-1,2-Dichloroethene	7	ug/L	100	20	
	9/12/2000	Trichloroethene	170	ug/L	5	0.5	ES
	10/1/2001	Trichloroethene	130	ug/L	5	0.5	ES
	12/11/2001	Trichloroethene	31	ug/L	5	0.5	ES
	9/12/2000	Vinyl chloride	360	ug/L	0.2	0.02	ES
	10/1/2001	Vinyl chloride	290	ug/L	0.2	0.02	ES
	12/11/2001	Vinyl chloride	23	ug/L	0.2	0.02	ES
P3B							
	1/25/2000	Alkalinity as CaCO3	290	mg/L			
	6/19/2000	Alkalinity as CaCO3	260	mg/L			
	12/13/2000	Alkalinity as CaCO3	280	mg/L			
	12/13/2000	Arsenic - Dissolved	0.38	ug/L	50	5	
	1/25/2000	Barium - Dissolved	44	ug/L	2000	400	
	3/23/2000	Barium - Dissolved	45	ug/L	2000	400	
	6/19/2000	Barium - Dissolved	42	ug/L	2000	400	
	12/13/2000	Barium - Dissolved	43	ug/L	2000	400	
	1/25/2000	Chloride	21	mg/L	250	125	
	6/19/2000	Chloride	24	mg/L	250	125	
	12/13/2000	Chloride	24	mg/L	250	125	

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	4/3/2001	Chloride	25	mg/L	250	125	
	6/13/2001	Chloride	28	mg/L	250	125	
	10/1/2001	Chloride	26	mg/L	250	125	
	3/19/2002	Chloride	29	mg/L	250	125	
	9/11/2002	Chloride	31	mg/L	250	125	
	1/25/2000	Chromium - Dissolved	1	ug/L	100	10	
	3/23/2000	Chromium - Dissolved	0.56	ug/L	100	10	
	12/13/2000	Chromium - Dissolved	0.51	ug/L	100	10	
	3/23/2000	cis-1,2-Dichloroethene	0.48	ug/L	70	7	
	12/13/2000	Methylene chloride	0.4	ug/L	5	0.5	
	1/25/2000	Nitrogen, nitrate	4.6	mg/L	10	2	PAL
	6/19/2000	Nitrogen, nitrate	4	mg/L	10	2	PAL
	4/3/2001	Nitrogen, nitrate	4.3	mg/L	10	2	PAL
	6/13/2001	Nitrogen, nitrate	4.7	mg/L	10	2	PAL
	3/19/2002	Nitrogen, nitrate	4.1	mg/L	10	2	PAL
	9/11/2002	Nitrogen, nitrate	4.3	mg/L	10	2	PAL
	6/19/2000	Selenium - Dissolved	2	ug/L	50	10	
	12/13/2000	Selenium - Dissolved	1.6	ug/L	50	10	
	1/25/2000	Tetrachloroethene	1.2	ug/L	5	0.5	PAL
	3/23/2000	Tetrachloroethene	1.3	ug/L	5	0.5	PAL
	6/19/2000	Tetrachloroethene	1	ug/L	5	0.5	PAL
	9/12/2000	Tetrachloroethene	1.6	ug/L	5	0.5	PAL
	12/13/2000	Tetrachloroethene	2.2	ug/L	5	0.5	PAL
	4/3/2001	Tetrachloroethene	1.6	ug/L	5	0.5	PAL
	6/13/2001	Tetrachloroethene	2.3	ug/L	5	0.5	PAL
	10/1/2001	Tetrachloroethene	1.5	ug/L	5	0.5	PAL
	3/19/2002	Tetrachloroethene	1.7	ug/L	5	0.5	PAL
	9/11/2002	Tetrachloroethene	1.6	ug/L	5	0.5	PAL
	1/25/2000	Trichloroethene	35	ug/L	5	0.5	ES
	3/23/2000	Trichloroethene	32	ug/L	5	0.5	ES
	6/19/2000	Trichloroethene	37	ug/L	5	0.5	ES
	9/12/2000	Trichloroethene	36	ug/L	5	0.5	ES
	12/13/2000	Trichloroethene	38	ug/L	5	0.5	ES
	4/3/2001	Trichloroethene	42	ug/L	5	0.5	ES
	6/13/2001	Trichloroethene	40	ug/L	5	0.5	ES
	10/1/2001	Trichloroethene	36	ug/L	5	0.5	ES
	3/19/2002	Trichloroethene	37	ug/L	5	0.5	ES
	9/11/2002	Trichloroethene	48	ug/L	5	0.5	ES
P3BD							
	6/19/2000	Alkalinity as CaCO3	290	mg/L			
	6/19/2000	Barium - Dissolved	42	ug/L	2000	400	
	6/19/2000	Chloride	24	mg/L	250	125	
	6/13/2001	Chloride	28	mg/L	250	125	
	6/13/2001	Methylene chloride	0.42	ug/L	5	0.5	
	6/19/2000	Nitrogen, nitrate	4	mg/L	10	2	PAL
	6/13/2001	Nitrogen, nitrate	4.7	mg/L	10	2	PAL
	6/19/2000	Selenium - Dissolved	1	ug/L	50	10	
	6/19/2000	Tetrachloroethene	1	ug/L	5	0.5	PAL
	6/13/2001	Tetrachloroethene	2.5	ug/L	5	0.5	PAL
	6/19/2000	Trichloroethene	34	ug/L	5	0.5	ES

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	6/13/2001	Trichloroethene	41	ug/L	5	0.5	ES
P4B							
	1/26/2000	Alkalinity as CaCO3	350	mg/L			
	6/19/2000	Alkalinity as CaCO3	310	mg/L			
	12/13/2000	Alkalinity as CaCO3	350	mg/L			
	12/13/2000	Arsenic - Dissolved	0.62	ug/L	50	5	
	1/26/2000	Barium - Dissolved	46	ug/L	2000	400	
	3/23/2000	Barium - Dissolved	45	ug/L	2000	400	
	6/19/2000	Barium - Dissolved	44	ug/L	2000	400	
	12/13/2000	Barium - Dissolved	44	ug/L	2000	400	
	1/26/2000	Chloride	32	mg/L	250	125	
	6/19/2000	Chloride	37	mg/L	250	125	
	12/13/2000	Chloride	42	mg/L	250	125	
	4/3/2001	Chloride	49	mg/L	250	125	
	6/13/2001	Chloride	44	mg/L	250	125	
	10/2/2001	Chloride	47	mg/L	250	125	
	12/11/2001	Chloride	47	mg/L	250	125	
	3/19/2002	Chloride	42	mg/L	250	125	
	6/12/2002	Chloride	48	mg/L	250	125	
	9/11/2002	Chloride	50	mg/L	250	125	
	12/17/2002	Chloride	45	mg/L	250	125	
	1/26/2000	Chromium - Dissolved	1	ug/L	100	10	
	3/23/2000	Chromium - Dissolved	0.95	ug/L	100	10	
	12/13/2000	Chromium - Dissolved	0.73	ug/L	100	10	
	1/26/2000	cis-1,2-Dichloroethene	0.95	ug/L	70	7	
	3/23/2000	cis-1,2-Dichloroethene	0.66	ug/L	70	7	
	6/19/2000	cis-1,2-Dichloroethene	2	ug/L	70	7	
	9/12/2000	cis-1,2-Dichloroethene	4.2	ug/L	70	7	
	12/13/2000	cis-1,2-Dichloroethene	1.2	ug/L	70	7	
	4/3/2001	cis-1,2-Dichloroethene	3.9	ug/L	70	7	
	6/13/2001	cis-1,2-Dichloroethene	2.6	ug/L	70	7	
	10/2/2001	cis-1,2-Dichloroethene	1.2	ug/L	70	7	
	12/11/2001	cis-1,2-Dichloroethene	2.9	ug/L	70	7	
	3/19/2002	cis-1,2-Dichloroethene	3	ug/L	70	7	
	9/11/2002	cis-1,2-Dichloroethene	1.5	ug/L	70	7	
	12/17/2002	cis-1,2-Dichloroethene	1.7	ug/L	70	7	
	6/12/2002	Iron	170	ug/L	0.3	0.15	ES
	6/13/2001	Methylene chloride	0.51	ug/L	5	0.5	PAL
	1/26/2000	Nitrogen, nitrate	4.4	mg/L	10	2	PAL
	6/19/2000	Nitrogen, nitrate	4	mg/L	10	2	PAL
	4/3/2001	Nitrogen, nitrate	4.8	mg/L	10	2	PAL
	6/13/2001	Nitrogen, nitrate	4.7	mg/L	10	2	PAL
	12/11/2001	Nitrogen, nitrate	5	mg/L	10	2	PAL
	3/19/2002	Nitrogen, nitrate	3.9	mg/L	10	2	PAL
	6/12/2002	Nitrogen, nitrate	4.3	mg/L	10	2	PAL
	9/11/2002	Nitrogen, nitrate	4.2	mg/L	10	2	PAL
	6/19/2000	Selenium - Dissolved	2	ug/L	50	10	
	12/13/2000	Selenium - Dissolved	1.4	ug/L	50	10	
	1/26/2000	Trichloroethene	1.2	ug/L	5	0.5	PAL
	3/23/2000	Trichloroethene	1.8	ug/L	5	0.5	PAL

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	6/19/2000	Trichloroethene	3	ug/L	5	0.5	PAL
	9/12/2000	Trichloroethene	5.5	ug/L	5	0.5	ES
	12/13/2000	Trichloroethene	1.6	ug/L	5	0.5	PAL
	4/3/2001	Trichloroethene	5.7	ug/L	5	0.5	ES
	6/13/2001	Trichloroethene	3.8	ug/L	5	0.5	PAL
	10/2/2001	Trichloroethene	1.1	ug/L	5	0.5	PAL
	12/11/2001	Trichloroethene	4.3	ug/L	5	0.5	PAL
	3/19/2002	Trichloroethene	3.8	ug/L	5	0.5	PAL
	9/11/2002	Trichloroethene	2.8	ug/L	5	0.5	PAL
	12/17/2002	Trichloroethene	2.9	ug/L	5	0.5	PAL
	6/19/2000	Vinyl chloride	1	ug/L	0.2	0.02	ES
	9/12/2000	Vinyl chloride	1.9	ug/L	0.2	0.02	ES
	12/13/2000	Vinyl chloride	0.89	ug/L	0.2	0.02	ES
	4/3/2001	Vinyl chloride	1.6	ug/L	0.2	0.02	ES
	6/13/2001	Vinyl chloride	1.2	ug/L	0.2	0.02	ES
	10/2/2001	Vinyl chloride	0.52	ug/L	0.2	0.02	ES
	12/11/2001	Vinyl chloride	0.88	ug/L	0.2	0.02	ES
	3/19/2002	Vinyl chloride	0.88	ug/L	0.2	0.02	ES
	9/11/2002	Vinyl chloride	0.47	ug/L	0.2	0.02	ES
P7B							
	6/22/2000	Alkalinity as CaCO3	390	mg/L			
	12/13/2000	Alkalinity as CaCO3	390	mg/L			
	12/13/2000	Arsenic - Dissolved	0.33	ug/L	50	5	
	3/23/2000	Barium - Dissolved	83	ug/L	2000	400	
	6/22/2000	Barium - Dissolved	52	ug/L	2000	400	
	12/13/2000	Barium - Dissolved	46	ug/L	2000	400	
	6/22/2000	Chloride	6	mg/L	250	125	
	12/13/2000	Chloride	7.3	mg/L	250	125	
	4/5/2001	Chloride	7.2	mg/L	250	125	
	6/14/2001	Chloride	7.5	mg/L	250	125	
	10/4/2001	Chloride	5.8	mg/L	250	125	
	12/13/2001	Chloride	7.3	mg/L	250	125	
	3/20/2002	Chloride	6.9	mg/L	250	125	
	6/12/2002	Chloride	7.4	mg/L	250	125	
	9/12/2002	Chloride	7.3	mg/L	250	125	
	12/5/2002	Chloride	6.5	mg/L	250	125	
	12/13/2000	Chromium - Dissolved	0.37	ug/L	100	10	
	9/14/2000	cis-1,2-Dichloroethene	0.58	ug/L	70	7	
	12/13/2000	cis-1,2-Dichloroethene	0.53	ug/L	70	7	
	4/5/2001	cis-1,2-Dichloroethene	0.61	ug/L	70	7	
	6/14/2001	cis-1,2-Dichloroethene	0.88	ug/L	70	7	
	10/4/2001	cis-1,2-Dichloroethene	2.3	ug/L	70	7	
	12/13/2001	cis-1,2-Dichloroethene	1.6	ug/L	70	7	
	3/20/2002	cis-1,2-Dichloroethene	2.2	ug/L	70	7	
	6/12/2002	cis-1,2-Dichloroethene	2.5	ug/L	70	7	
	6/12/2002	Iron	200	ug/L	0.3	0.15	ES
	4/5/2001	Nitrogen, nitrate	3.3	mg/L	10	2	PAL
	6/14/2001	Nitrogen, nitrate	3.4	mg/L	10	2	PAL
	12/13/2001	Nitrogen, nitrate	3.4	mg/L	10	2	PAL
	3/20/2002	Nitrogen, nitrate	3.2	mg/L	10	2	PAL

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	6/12/2002	Nitrogen, nitrate	3.2	mg/L	10	2	PAL
	6/22/2000	Selenium - Dissolved	1	ug/L	50	10	
	12/13/2000	Selenium - Dissolved	0.98	ug/L	50	10	
	3/23/2000	Trichloroethene	0.9	ug/L	5	0.5	PAL
	6/22/2000	Trichloroethene	1	ug/L	5	0.5	PAL
	9/14/2000	Trichloroethene	1.1	ug/L	5	0.5	PAL
	12/13/2000	Trichloroethene	0.75	ug/L	5	0.5	PAL
	4/5/2001	Trichloroethene	0.9	ug/L	5	0.5	PAL
	6/14/2001	Trichloroethene	2.4	ug/L	5	0.5	PAL
	10/4/2001	Trichloroethene	5.5	ug/L	5	0.5	ES
	12/13/2001	Trichloroethene	4.3	ug/L	5	0.5	PAL
	3/20/2002	Trichloroethene	5.6	ug/L	5	0.5	ES
	6/12/2002	Trichloroethene	3.9	ug/L	5	0.5	PAL
	9/12/2002	Trichloroethene	1.9	ug/L	5	0.5	PAL
	12/13/2000	Vinyl chloride	0.35	ug/L	0.2	0.02	ES
	10/4/2001	Vinyl chloride	0.24	ug/L	0.2	0.02	ES
P8A							
	3/23/2000	1,1,1-Trichloroethane	12	ug/L	200	40	
	6/21/2000	1,1,1-Trichloroethane	10	ug/L	200	40	
	9/13/2000	1,1,1-Trichloroethane	13	ug/L	200	40	
	12/15/2000	1,1,1-Trichloroethane	12	ug/L	200	40	
	4/4/2001	1,1,1-Trichloroethane	14	ug/L	200	40	
	6/14/2001	1,1,1-Trichloroethane	15	ug/L	200	40	
	10/4/2001	1,1,1-Trichloroethane	14	ug/L	200	40	
	12/13/2001	1,1,1-Trichloroethane	8.2	ug/L	200	40	
	3/20/2002	1,1,1-Trichloroethane	13	ug/L	200	40	
	6/13/2002	1,1,1-Trichloroethane	12	ug/L	200	40	
	9/12/2002	1,1,1-Trichloroethane	14	ug/L	200	40	
	12/17/2002	1,1,1-Trichloroethane	16	ug/L	200	40	
	3/23/2000	1,1-Dichloroethane	35	ug/L	850	85	
	6/21/2000	1,1-Dichloroethane	38	ug/L	850	85	
	9/13/2000	1,1-Dichloroethane	41	ug/L	850	85	
	12/15/2000	1,1-Dichloroethane	43	ug/L	850	85	
	4/4/2001	1,1-Dichloroethane	49	ug/L	850	85	
	6/14/2001	1,1-Dichloroethane	52	ug/L	850	85	
	10/4/2001	1,1-Dichloroethane	47	ug/L	850	85	
	12/13/2001	1,1-Dichloroethane	30	ug/L	850	85	
	3/20/2002	1,1-Dichloroethane	49	ug/L	850	85	
	6/13/2002	1,1-Dichloroethane	38	ug/L	850	85	
	9/12/2002	1,1-Dichloroethane	51	ug/L	850	85	
	12/17/2002	1,1-Dichloroethane	47	ug/L	850	85	
	3/23/2000	1,1-Dichloroethene	3.9	ug/L	7	0.7	PAL
	6/21/2000	1,1-Dichloroethene	4	ug/L	7	0.7	PAL
	9/13/2000	1,1-Dichloroethene	3.7	ug/L	7	0.7	PAL
	12/15/2000	1,1-Dichloroethene	3.1	ug/L	7	0.7	PAL
	4/4/2001	1,1-Dichloroethene	3.9	ug/L	7	0.7	PAL
	6/14/2001	1,1-Dichloroethene	4.4	ug/L	7	0.7	PAL
	10/4/2001	1,1-Dichloroethene	4.2	ug/L	7	0.7	PAL
	12/13/2001	1,1-Dichloroethene	2.8	ug/L	7	0.7	PAL
	3/20/2002	1,1-Dichloroethene	4.7	ug/L	7	0.7	PAL

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	6/13/2002	1,1-Dichloroethene	3.5	ug/L	7	0.7	PAL
	9/12/2002	1,1-Dichloroethene	3.9	ug/L	7	0.7	PAL
	12/17/2002	1,1-Dichloroethene	3.5	ug/L	7	0.7	PAL
	12/13/2001	Acetone	4.5	ug/L	1000	200	
	6/21/2000	Alkalinity as CaCO3	290	mg/L			
	12/15/2000	Alkalinity as CaCO3	290	mg/L			
	12/15/2000	Arsenic - Dissolved	0.38	ug/L	50	5	
	3/23/2000	Barium - Dissolved	120	ug/L	2000	400	
	6/21/2000	Barium - Dissolved	120	ug/L	2000	400	
	12/15/2000	Barium - Dissolved	100	ug/L	2000	400	
	6/21/2000	Chloride	50	mg/L	250	125	
	12/15/2000	Chloride	49	mg/L	250	125	
	4/4/2001	Chloride	55	mg/L	250	125	
	6/14/2001	Chloride	57	mg/L	250	125	
	10/4/2001	Chloride	39	mg/L	250	125	
	12/13/2001	Chloride	38	mg/L	250	125	
	3/20/2002	Chloride	65	mg/L	250	125	
	6/13/2002	Chloride	57	mg/L	250	125	
	9/12/2002	Chloride	58	mg/L	250	125	
	12/17/2002	Chloride	55	mg/L	250	125	
	6/14/2001	Chloroethane	0.57	ug/L	400	80	
	3/20/2002	Chloroethane	0.77	ug/L	400	80	
	3/23/2000	Chromium - Dissolved	0.59	ug/L	100	10	
	12/15/2000	Chromium - Dissolved	0.39	ug/L	100	10	
	3/23/2000	cis-1,2-Dichloroethene	120	ug/L	70	7	ES
	6/21/2000	cis-1,2-Dichloroethene	140	ug/L	70	7	ES
	9/13/2000	cis-1,2-Dichloroethene	150	ug/L	70	7	ES
	12/15/2000	cis-1,2-Dichloroethene	150	ug/L	70	7	ES
	4/4/2001	cis-1,2-Dichloroethene	160	ug/L	70	7	ES
	6/14/2001	cis-1,2-Dichloroethene	170	ug/L	70	7	ES
	10/4/2001	cis-1,2-Dichloroethene	160	ug/L	70	7	ES
	12/13/2001	cis-1,2-Dichloroethene	98	ug/L	70	7	ES
	3/20/2002	cis-1,2-Dichloroethene	160	ug/L	70	7	ES
	6/13/2002	cis-1,2-Dichloroethene	130	ug/L	70	7	ES
	9/12/2002	cis-1,2-Dichloroethene	160	ug/L	70	7	ES
	12/17/2002	cis-1,2-Dichloroethene	140	ug/L	70	7	ES
	6/13/2002	Iron	130	ug/L	0.3	0.15	ES
	4/4/2001	Nitrogen, nitrate	0.82	mg/L	10	2	
	6/14/2001	Nitrogen, nitrate	0.88	mg/L	10	2	
	12/13/2001	Nitrogen, nitrate	0.65	mg/L	10	2	
	3/20/2002	Nitrogen, nitrate	0.76	mg/L	10	2	
	6/13/2002	Nitrogen, nitrate	0.77	mg/L	10	2	
	6/21/2000	Selenium - Dissolved	2	ug/L	50	10	
	12/15/2000	Selenium - Dissolved	0.49	ug/L	50	10	
	3/23/2000	Tetrachloroethene	0.53	ug/L	5	0.5	PAL
	4/4/2001	Tetrachloroethene	0.91	ug/L	5	0.5	PAL
	6/14/2001	Tetrachloroethene	1.2	ug/L	5	0.5	PAL
	10/4/2001	Tetrachloroethene	0.7	ug/L	5	0.5	PAL
	3/20/2002	Tetrachloroethene	0.6	ug/L	5	0.5	PAL
	3/23/2000	trans-1,2-Dichloroethene	1.6	ug/L	100	20	

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	6/21/2000	trans-1,2-Dichloroethene	1	ug/L	100	20	
	9/13/2000	trans-1,2-Dichloroethene	1.6	ug/L	100	20	
	12/15/2000	trans-1,2-Dichloroethene	3.5	ug/L	100	20	
	4/4/2001	trans-1,2-Dichloroethene	1.8	ug/L	100	20	
	6/14/2001	trans-1,2-Dichloroethene	1.9	ug/L	100	20	
	10/4/2001	trans-1,2-Dichloroethene	1.8	ug/L	100	20	
	12/13/2001	trans-1,2-Dichloroethene	0.93	ug/L	100	20	
	3/20/2002	trans-1,2-Dichloroethene	1.9	ug/L	100	20	
	9/12/2002	trans-1,2-Dichloroethene	1.9	ug/L	100	20	
	12/17/2002	trans-1,2-Dichloroethene	5.6	ug/L	100	20	
	3/23/2000	Trichloroethene	69	ug/L	5	0.5	ES
	6/21/2000	Trichloroethene	76	ug/L	5	0.5	ES
	9/13/2000	Trichloroethene	88	ug/L	5	0.5	ES
	12/15/2000	Trichloroethene	93	ug/L	5	0.5	ES
	4/4/2001	Trichloroethene	90	ug/L	5	0.5	ES
	6/14/2001	Trichloroethene	90	ug/L	5	0.5	ES
	10/4/2001	Trichloroethene	73	ug/L	5	0.5	ES
	12/13/2001	Trichloroethene	42	ug/L	5	0.5	ES
	3/20/2002	Trichloroethene	72	ug/L	5	0.5	ES
	6/13/2002	Trichloroethene	69	ug/L	5	0.5	ES
	9/12/2002	Trichloroethene	73	ug/L	5	0.5	ES
	12/17/2002	Trichloroethene.	79	ug/L	5	0.5	ES
	3/23/2000	Vinyl chloride	37	ug/L	0.2	0.02	ES
	6/21/2000	Vinyl chloride	28	ug/L	0.2	0.02	ES
	9/13/2000	Vinyl chloride	11	ug/L	0.2	0.02	ES
	12/15/2000	Vinyl chloride	14	ug/L	0.2	0.02	ES
	4/4/2001	Vinyl chloride	23	ug/L	0.2	0.02	ES
	6/14/2001	Vinyl chloride	28	ug/L	0.2	0.02	ES
	10/4/2001	Vinyl chloride	35	ug/L	0.2	0.02	ES
	12/13/2001	Vinyl chloride	27	ug/L	0.2	0.02	ES
	3/20/2002	Vinyl chloride	46	ug/L	0.2	0.02	ES
	6/13/2002	Vinyl chloride	33	ug/L	0.2	0.02	ES
	9/12/2002	Vinyl chloride	37	ug/L	0.2	0.02	ES
	12/17/2002	Vinyl chloride	28	ug/L	0.2	0.02	ES
P8B							
	6/22/2000	1,1,1-Trichloroethane	1	ug/L	200	40	
	9/13/2000	1,1,1-Trichloroethane	1.1	ug/L	200	40	
	12/15/2000	1,1,1-Trichloroethane	1.2	ug/L	200	40	
	4/5/2001	1,1,1-Trichloroethane	1.1	ug/L	200	40	
	6/14/2001	1,1,1-Trichloroethane	1.4	ug/L	200	40	
	10/4/2001	1,1,1-Trichloroethane	1.8	ug/L	200	40	
	3/20/2002	1,1,1-Trichloroethane	1.5	ug/L	200	40	
	6/13/2002	1,1,1-Trichloroethane	1.7	ug/L	200	40	
	9/12/2002	1,1,1-Trichloroethane	1.7	ug/L	200	40	
	3/23/2000	1,1,2-Trichlorotrifluoroethane	3.7	ug/L			
	6/22/2000	1,1,2-Trichlorotrifluoroethane	2	ug/L			
	9/13/2000	1,1,2-Trichlorotrifluoroethane	2.5	ug/L			
	12/15/2000	1,1,2-Trichlorotrifluoroethane	3.9	ug/L			
	4/5/2001	1,1,2-Trichlorotrifluoroethane	4.8	ug/L			
	6/14/2001	1,1,2-Trichlorotrifluoroethane	3.5	ug/L			

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	10/4/2001	1,1,2-Trichlorotrifluoroethane	3.5	ug/L			
	12/13/2001	1,1,2-Trichlorotrifluoroethane	4.2	ug/L			
	3/20/2002	1,1,2-Trichlorotrifluoroethane	5.9	ug/L			
	6/13/2002	1,1,2-Trichlorotrifluoroethane	4.6	ug/L			
	9/12/2002	1,1,2-Trichlorotrifluoroethane	3.1	ug/L			
	9/13/2000	1,1-Dichloroethane	1	ug/L	850	85	
	12/15/2000	1,1-Dichloroethane	0.96	ug/L	850	85	
	4/5/2001	1,1-Dichloroethane	1.1	ug/L	850	85	
	6/14/2001	1,1-Dichloroethane	1.3	ug/L	850	85	
	10/4/2001	1,1-Dichloroethane	1.6	ug/L	850	85	
	12/13/2001	1,1-Dichloroethane	1.4	ug/L	850	85	
	3/20/2002	1,1-Dichloroethane	1.6	ug/L	850	85	
	6/13/2002	1,1-Dichloroethane	1.5	ug/L	850	85	
	9/12/2002	1,1-Dichloroethane	1.8	ug/L	850	85	
	12/17/2002	1,1-Dichloroethane	2	ug/L	850	85	
	12/15/2000	1,1-Dichloroethene	0.91	ug/L	7	0.7	PAL
	4/5/2001	1,1-Dichloroethene	0.91	ug/L	7	0.7	PAL
	6/14/2001	1,1-Dichloroethene	0.91	ug/L	7	0.7	PAL
	10/4/2001	1,1-Dichloroethene	1.1	ug/L	7	0.7	PAL
	12/13/2001	1,1-Dichloroethene	1.1	ug/L	7	0.7	PAL
	3/20/2002	1,1-Dichloroethene	1.4	ug/L	7	0.7	PAL
	9/12/2002	1,1-Dichloroethene	1.3	ug/L	7	0.7	PAL
	6/22/2000	Alkalinity as CaCO3	340	mg/L			
	12/15/2000	Alkalinity as CaCO3	310	mg/L			
	12/15/2000	Arsenic - Dissolved	0.35	ug/L	50	5	
	3/23/2000	Barium - Dissolved	69	ug/L	2000	400	
	6/22/2000	Barium - Dissolved	54	ug/L	2000	400	
	12/15/2000	Barium - Dissolved	49	ug/L	2000	400	
	6/22/2000	Chloride	11	mg/L	250	125	
	12/15/2000	Chloride	15	mg/L	250	125	
	4/5/2001	Chloride	17	mg/L	250	125	
	6/14/2001	Chloride	17	mg/L	250	125	
	10/4/2001	Chloride	18	mg/L	250	125	
	12/13/2001	Chloride	19	mg/L	250	125	
	3/20/2002	Chloride	20	mg/L	250	125	
	6/13/2002	Chloride	21	mg/L	250	125	
	9/12/2002	Chloride	19	mg/L	250	125	
	12/17/2002	Chloride	19	mg/L	250	125	
	3/23/2000	Chromium - Dissolved	0.55	ug/L	100	10	
	12/15/2000	Chromium - Dissolved	0.43	ug/L	100	10	
	3/23/2000	cis-1,2-Dichloroethene	69	ug/L	70	7	PAL
	6/22/2000	cis-1,2-Dichloroethene	98	ug/L	70	7	ES
	9/13/2000	cis-1,2-Dichloroethene	130	ug/L	70	7	ES
	12/15/2000	cis-1,2-Dichloroethene	130	ug/L	70	7	ES
	4/5/2001	cis-1,2-Dichloroethene	140	ug/L	70	7	ES
	6/14/2001	cis-1,2-Dichloroethene	170	ug/L	70	7	ES
	10/4/2001	cis-1,2-Dichloroethene	180	ug/L	70	7	ES
	12/13/2001	cis-1,2-Dichloroethene	150	ug/L	70	7	ES
	3/20/2002	cis-1,2-Dichloroethene	170	ug/L	70	7	ES
	6/13/2002	cis-1,2-Dichloroethene	180	ug/L	70	7	ES

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	9/12/2002	cis-1,2-Dichloroethene	220	ug/L	70	7	ES
	12/17/2002	cis-1,2-Dichloroethene	220	ug/L	70	7	ES
	6/13/2002	Iron	450	ug/L	0.3	0.15	ES
	4/5/2001	Nitrogen, nitrate	0.7	mg/L	10	2	
	6/14/2001	Nitrogen, nitrate	0.79	mg/L	10	2	
	12/13/2001	Nitrogen, nitrate	0.77	mg/L	10	2	
	3/20/2002	Nitrogen, nitrate	0.67	mg/L	10	2	
	6/13/2002	Nitrogen, nitrate	0.88	mg/L	10	2	
	6/22/2000	Selenium - Dissolved	1	ug/L	50	10	
	12/15/2000	Selenium - Dissolved	0.74	ug/L	50	10	
	9/13/2000	trans-1,2-Dichloroethene	1.9	ug/L	100	20	
	12/15/2000	trans-1,2-Dichloroethene	1.1	ug/L	100	20	
	4/5/2001	trans-1,2-Dichloroethene	1	ug/L	100	20	
	6/14/2001	trans-1,2-Dichloroethene	4.5	ug/L	100	20	
	10/4/2001	trans-1,2-Dichloroethene	1.5	ug/L	100	20	
	12/13/2001	trans-1,2-Dichloroethene	1.2	ug/L	100	20	
	3/20/2002	trans-1,2-Dichloroethene	1.6	ug/L	100	20	
	6/13/2002	trans-1,2-Dichloroethene	2.5	ug/L	100	20	
	9/12/2002	trans-1,2-Dichloroethene	2.4	ug/L	100	20	
	3/23/2000	Trichloroethene	51	ug/L	5	0.5	ES
	6/22/2000	Trichloroethene	89	ug/L	5	0.5	ES
	9/13/2000	Trichloroethene	95	ug/L	5	0.5	ES
	12/15/2000	Trichloroethene	100	ug/L	5	0.5	ES
	4/5/2001	Trichloroethene	110	ug/L	5	0.5	ES
	6/14/2001	Trichloroethene	130	ug/L	5	0.5	ES
	10/4/2001	Trichloroethene	120	ug/L	5	0.5	ES
	12/13/2001	Trichloroethene	110	ug/L	5	0.5	ES
	3/20/2002	Trichloroethene	130	ug/L	5	0.5	ES
	6/13/2002	Trichloroethene	150	ug/L	5	0.5	ES
	9/12/2002	Trichloroethene	160	ug/L	5	0.5	ES
	12/17/2002	Trichloroethene	150	ug/L	5	0.5	ES
	9/13/2000	Vinyl chloride	0.77	ug/L	0.2	0.02	ES
	12/15/2000	Vinyl chloride	0.66	ug/L	0.2	0.02	ES
	4/5/2001	Vinyl chloride	0.99	ug/L	0.2	0.02	ES
	6/14/2001	Vinyl chloride	1.4	ug/L	0.2	0.02	ES
	10/4/2001	Vinyl chloride	1.8	ug/L	0.2	0.02	ES
	12/13/2001	Vinyl chloride	3.1	ug/L	0.2	0.02	ES
	3/20/2002	Vinyl chloride	4.4	ug/L	0.2	0.02	ES
	6/13/2002	Vinyl chloride	3.1	ug/L	0.2	0.02	ES
	9/12/2002	Vinyl chloride	8.2	ug/L	0.2	0.02	ES
	12/17/2002	Vinyl chloride	15	ug/L	0.2	0.02	ES
P8BD							
	10/4/2001	1,1,1-Trichloroethane	1.5	ug/L	200	40	
	6/14/2001	1,1,2-Trichlorotrifluoroethane	3.2	ug/L			
	10/4/2001	1,1,2-Trichlorotrifluoroethane	1.7	ug/L			
	6/14/2001	1,1-Dichloroethane	1.3	ug/L	850	85	
	10/4/2001	1,1-Dichloroethane	1.5	ug/L	850	85	
	10/4/2001	1,1-Dichloroethene	1.1	ug/L	7	0.7	PAL
	6/14/2001	Chloride	18	mg/L	250	125	
	10/4/2001	Chloride	18	mg/L	250	125	

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	6/14/2001	cis-1,2-Dichloroethene	170	ug/L	70	7	ES
	10/4/2001	cis-1,2-Dichloroethene	170	ug/L	70	7	ES
	6/14/2001	Nitrogen, nitrate	0.81	mg/L	10	2	
	6/14/2001	trans-1,2-Dichloroethene	2.5	ug/L	100	20	
	10/4/2001	trans-1,2-Dichloroethene	1.4	ug/L	100	20	
	6/14/2001	Trichloroethene	130	ug/L	5	0.5	ES
	10/4/2001	Trichloroethene	110	ug/L	5	0.5	ES
	6/14/2001	Vinyl chloride	1.3	ug/L	0.2	0.02	ES
	10/4/2001	Vinyl chloride	1.6	ug/L	0.2	0.02	ES
P9B							
	3/23/2000	1,1,1-Trichloroethane	0.86	ug/L	200	40	
	12/15/2000	1,1,1-Trichloroethane	0.6	ug/L	200	40	
	4/4/2001	1,1,1-Trichloroethane	0.51	ug/L	200	40	
	3/23/2000	1,1,2-Trichlorotrifluoroethane	8.7	ug/L			
	6/21/2000	1,1,2-Trichlorotrifluoroethane	12	ug/L			
	9/13/2000	1,1,2-Trichlorotrifluoroethane	15	ug/L			
	12/15/2000	1,1,2-Trichlorotrifluoroethane	16	ug/L			
	4/4/2001	1,1,2-Trichlorotrifluoroethane	13	ug/L			
	6/21/2000	Alkalinity as CaCO3	350	mg/L			
	12/15/2000	Alkalinity as CaCO3	340	mg/L			
	12/15/2000	Arsenic - Dissolved	0.47	ug/L	50	5	
	3/23/2000	Barium - Dissolved	98	ug/L	2000	400	
	6/21/2000	Barium - Dissolved	85	ug/L	2000	400	
	12/15/2000	Barium - Dissolved	86	ug/L	2000	400	
	6/21/2000	Chloride	42	mg/L	250	125	
	12/15/2000	Chloride	39	mg/L	250	125	
	4/4/2001	Chloride	39	mg/L	250	125	
	6/21/2000	Chromium - Dissolved	1	ug/L	100	10	
	12/15/2000	Chromium - Dissolved	0.36	ug/L	100	10	
	9/13/2000	cis-1,2-Dichloroethene	0.41	ug/L	70	7	
	12/15/2000	cis-1,2-Dichloroethene	0.44	ug/L	70	7	
	4/4/2001	cis-1,2-Dichloroethene	0.55	ug/L	70	7	
	12/15/2000	Methylene chloride	0.57	ug/L	5	0.5	PAL
	6/21/2000	Nitrogen, nitrate	1	mg/L	10	2	
	4/4/2001	Nitrogen, nitrate	1	mg/L	10	2	
	6/21/2000	Selenium - Dissolved	3	ug/L	50	10	
	12/15/2000	Selenium - Dissolved	1.4	ug/L	50	10	
	3/23/2000	Trichloroethene	1.2	ug/L	5	0.5	PAL
	6/21/2000	Trichloroethene	2	ug/L	5	0.5	PAL
	9/13/2000	Trichloroethene	2.8	ug/L	5	0.5	PAL
	12/15/2000	Trichloroethene	3.4	ug/L	5	0.5	PAL
	4/4/2001	Trichloroethene	3.2	ug/L	5	0.5	PAL
	12/15/2000	Vinyl chloride	0.22	ug/L	0.2	0.02	ES
	4/4/2001	Vinyl chloride	0.19	ug/L	0.2	0.02	PAL
P9BD							
	4/4/2001	1,1,1-Trichloroethane	0.51	ug/L	200	40	
	4/4/2001	1,1,2-Trichlorotrifluoroethane	12	ug/L			
	4/4/2001	Chloride	38	mg/L	250	125	
	4/4/2001	cis-1,2-Dichloroethene	0.47	ug/L	70	7	
	4/4/2001	Nitrogen, nitrate	1	mg/L	10	2	

Well	Date	Compound	Result	Units	ES	PAL	Exceedence
	4/4/2001	Trichloroethene	3.3	ug/L	5	0.5	PAL
PW 717 HC							
	6/12/2001	Methylene chloride	0.5	ug/L	5	0.5	
	12/5/2002	Methylene chloride	0.58	ug/L	5	0.5	PAL
PW1530LR							
	6/12/2001	Methylene chloride	0.42	ug/L	5	0.5	
PW1587LR							
	6/12/2001	Methylene chloride	0.48	ug/L	5	0.5	
	12/5/2002	Methylene chloride	0.47	ug/L	5	0.5	
PW1716LR							
	6/12/2001	Chloroform	0.45	ug/L	6	0.6	
	6/12/2001	Methylene chloride	0.64	ug/L	5	0.5	PAL
	12/5/2002	Methylene chloride	0.48	ug/L	5	0.5	
PW461HR							
	6/12/2001	Methylene chloride	0.44	ug/L	5	0.5	

"D" in well name indicates a duplicate sample.

The Exceedence column indicates the standard, either ES or PAL, if the result is above the standard.

APPENDIX D

MANN-WHITNEY STATISTICAL ANALYSES

State of Wisconsin
Department of Natural Resources
Remediation and Redevelopment Program

Mann-Whitney U Statistical Test
Form 4400-216 (5/2000)

Notice: This form is provided to consultants as an optional tool to be used to provide groundwater contaminant data required to support site closure requests under s. Comm 46.07 or s. NR 746.07, Wis. Adm. Code. Use this form or a manual method to calculate the Mann-Whitney statistic, as specified in Appendix A of ch. Comm 46 and ch. NR 746, Wis. Adm. Code.

Instructions: Provide eight (8) consecutive rounds of data for the spreadsheet to work properly. Use cells with yellow background for data entry. Use consistent units. The spreadsheet contains several error checks, and a data entry error may cause DATA ERR to be displayed. A message will be displayed when the data is not quarterly or semi-annual. Dates that are not consecutive will show an error message and will not display the test results. The spreadsheet tests the data for both increasing and decreasing trends. At a 90% confidence level, a U statistic of 3 or less indicates a decreasing trend, and a U statistic of 13 or more indicates an increasing trend. If the data does not pass either the increasing or decreasing trend test, the No Trend result will be displayed. Additional information is available at http://www.state.nj.us/dep/srp/regs/techrule/techrl10c.pdf

Site Name =	Lime Kiln Park Grafton Wisconsin		Wisconsin		BRRTS No. = 03-72-0000001		Well Number = LH-1	
	Compound	TCE	trans-1,2-DCE	cis-1,2-DCE	Vinyl Chloride			
Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	4-Apr-01		19.00	4.70	100.00	110.00		
1st Yr, 2nd Qtr	14-Jun-01	71	21.00	5.30	120.00	150.00		
1st Yr, 3rd Qtr	2-Oct-01	110	22.00	4.70	110.00	120.00		
1st Yr, 4th Qtr	11-Dec-01	70	27.00	5.60	110.00	110.00		
2nd Yr, 1st Qtr	20-Mar-02	99	21.00	4.80	99.00	140.00		
2nd Yr, 2nd Qtr	13-Jun-02	85	11.00	3.1	44.00	54		
2nd Yr, 3rd Qtr	12-Sep-02	91	21.00	4.00	97.00	100.00		
2nd Yr, 4th Qtr	17-Dec-02	96	29.00	7.00	77.00	47.00		
Error Check, OK if Blank							DATA ERR	DATA ERR
DATA FROM QUARTERLY SAMPLING								
U Statistic =			7.0	6.0	0.0	3.0	DATA ERR	DATA ERR
Trend at 90 % probability or more?			**No Trend**	**No Trend**	Decreasing	Decreasing	DATA ERR	DATA ERR

Data Entry By = BJL Date = 25-Jul-03 Checked By =

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Department of Natural Resources
Remediation and Redevelopment Program

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Site Name =	Lime Kiln Park Grafton	Wisconsin	Wisconsin	BRRTS No. = 03-72-0000001	Well Number = LW-1	
Event	Sampling Date (most recent last)	Compound Days After Prev. Rnd.	1,1,1-TCA Concentration (leave blank if no data)	1,1-DCE Concentration (leave blank if no data)	1,1-DCA Concentration (leave blank if no data)	Vinyl Chloride Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	4-Apr-01		0.00	1.10	3.80	110.00		
1st Yr, 2nd Qtr	14-Jun-01	71	0.00	1.40	4.90	150.00		
1st Yr, 3rd Qtr	2-Oct-01	110	0.00	1.20	5.60	120.00		
1st Yr, 4th Qtr	11-Dec-01	70	0.00	1.40	7.00	110.00		
2nd Yr, 1st Qtr	20-Mar-02	99	0.00	1.20	4.90	140.00		
2nd Yr, 2nd Qtr	13-Jun-02	85	0.00	0.00	25.00	54.00		
2nd Yr, 3rd Qtr	12-Sep-02	91	0.00	0.80	6.30	100.00		
2nd Yr, 4th Qtr	17-Dec-02	96	0.00	0.89	7.10	47.00		
Error Check, OK if Blank							DATA ERR	DATA ERR
DATA FROM QUARTERLY SAMPLING								
U Statistic =			8.0	1.5	12.5	3.0	DATA ERR	DATA ERR
Trend at 90 % probability or more?			**No Trend**	Decreasing	**No Trend**	Decreasing	DATA ERR	DATA ERR

Data Entry By = BJL Date = 25-Jul-03 Checked By =

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Site Name =	Lime Kiln Park Grafton Wisconsin		Wisconsin		BRRTS No. = 03-72-0000001		Well Number = P2A	
	Compound	TCE	cis-1,2-DCE	Vinyl Chloride	trans-1,2-DCE			
Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	3-Apr-01		7.70	16.00	1.60	2.10		
1st Yr, 2nd Qtr	13-Jun-01	71	10.00	8.10	1.90	3.00		
1st Yr, 3rd Qtr	1-Oct-01	110	4.60	4.80	2.20	6.10		
1st Yr, 4th Qtr	11-Dec-01	71	27.00	36.00	15.00	7.30		
2nd Yr, 1st Qtr	19-Mar-02	98	8.50	1.40	0.84	1.60		
2nd Yr, 2nd Qtr	12-Jun-02	85	4.20	3.40	0.93	0		
2nd Yr, 3rd Qtr	11-Sep-02	91	8.20	3.60	1.90	4.90		
2nd Yr, 4th Qtr	17-Dec-02	97	2.10	2.00	1.20	7.80		
Error Check, OK if Blank							DATA ERR	DATA ERR
DATA FROM QUARTERLY SAMPLING								
U Statistic =			4.0	0.0	1.5	6.0	DATA ERR	DATA ERR
Trend at 90 % probability or more?			**No Trend**	Decreasing	Decreasing	**No Trend**	DATA ERR	DATA ERR

Data Entry By = BJL Date = 25-Jul-03 Checked By =

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Site Name =	Lime Kiln Park Grafton	Wisconsin	Wisconsin	BRRTS No. = 03-72-0000001	Well Number = P2A	
	Compound	1,1,1-TCA	1,1-DCE	1,1-DCA	Vinyl Chloride	
Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	3-Apr-01		6.90	0.00	89.00	1.60		
1st Yr, 2nd Qtr	13-Jun-01	71	1.80	0.00	40.00	1.90		
1st Yr, 3rd Qtr	1-Oct-01	110	0.00	0.00	29.00	2.20		
1st Yr, 4th Qtr	11-Dec-01	71	0.00	0.00	28.00	15.00		
2nd Yr, 1st Qtr	19-Mar-02	98	0.00	0.00	21.00	0.84		
2nd Yr, 2nd Qtr	12-Jun-02	85	0.00	0.00	17.00	0.93		
2nd Yr, 3rd Qtr	11-Sep-02	91	0.65	0.00	24.00	1.90		
2nd Yr, 4th Qtr	17-Dec-02	97	0.00	0.00	24.00	1.20		
Error Check, OK if Blank							DATA ERR	DATA ERR
DATA FROM QUARTERLY SAMPLING								
U Statistic =			5.0	8.0	0.0	1.5	DATA ERR	DATA ERR
Trend at 90 % probability or more?			**No Trend**	**No Trend**	Decreasing	Decreasing	DATA ERR	DATA ERR

Data Entry By = BJL Date = 25-Jul-03 Checked By =

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Department of Natural Resources
Remediation and Redevelopment Program

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Site Name =	Lime Kiln Park Grafton Wisconsin Wisconsin	BRRTS No. =	03-72-0000001	Well Number =	P2B

		Compound	TCE	cis-1,2-DCE	Vinyl Chloride	trans-1,2-DCE		
Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	3-Apr-01		190.00	520.00	330.00	15.00		
1st Yr, 2nd Qtr	13-Jun-01	71	170.00	480.00	330.00	9.80		
1st Yr, 3rd Qtr	1-Oct-01	110	150.00	470.00	300.00	9.20		
1st Yr, 4th Qtr	11-Dec-01	71	170.00	520.00	400.00	13.00		
2nd Yr, 1st Qtr	19-Mar-02	98	140.00	520.00	310.00	9.40		
2nd Yr, 2nd Qtr	12-Jun-02	85	150.00	440.00	290	11		
2nd Yr, 3rd Qtr	11-Sep-02	91	180.00	540.00	360.00	9.20		
2nd Yr, 4th Qtr	17-Dec-02	97	160.00	540.00	390.00	7.80		
Error Check, OK if Blank							DATA ERR	DATA ERR
DATA FROM QUARTERLY SAMPLING								
U Statistic =			4.5	11.0	7.0	3.5	DATA ERR	DATA ERR
Trend at 90 % probability or more?			**No Trend**	**No Trend**	**No Trend**	**No Trend**	DATA ERR	DATA ERR

Data Entry By =	BJL	Date =	25-Sep-03	Checked By =	

State of Wisconsin
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Remediation and Redevelopment Program

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Form 4400-216 (5/2000)

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Site Name =	Lime Kiln Park Grafton Wisconsin		Wisconsin		BRRTS No. = 03-72-0000001		Well Number = P2B	
		Compound	1,1,1-TCA	1,1-DCE	1,1-DCA	Vinyl Chloride		
Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	3-Apr-01		2.50	0.00	19.00	330.00		
1st Yr, 2nd Qtr	13-Jun-01	71	2.40	0.00	18.00	330.00		
1st Yr, 3rd Qtr	1-Oct-01	110	0.00	0.00	16.00	300.00		
1st Yr, 4th Qtr	11-Dec-01	71	0.00	0.00	18.00	400.00		
2nd Yr, 1st Qtr	19-Mar-02	98	0.00	0.00	18.00	310.00		
2nd Yr, 2nd Qtr	12-Jun-02	85	0.00	0.00	14.00	290.00		
2nd Yr, 3rd Qtr	11-Sep-02	91	0.00	0.00	19.00	360.00		
2nd Yr, 4th Qtr	17-Dec-02	97	0.00	0.00	23.00	390.00		
Error Check, OK if Blank							DATA ERR	DATA ERR
DATA FROM QUARTERLY SAMPLING								
U Statistic =			4.0	8.0	9.5	7.0	DATA ERR	DATA ERR
Trend at 90 % probability or more?			**No Trend**	**No Trend**	**No Trend**	**No Trend**	DATA ERR	DATA ERR

Data Entry By = BJL Date = 25-Jul-03 Checked By =

State of Wisconsin
Department of Natural Resources
Remediation and Redevelopment Program

Mann-Whitney U Statistical Test
Form 4400-216 (5/2000)

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Site Name =	Lime Kiln Park Grafton Wisconsin Wisconsin	BRRTS No. =	03-72-0000001	Well Number = P3B

		Compound	TCE	cis-1,2-DCE	Vinyl Chloride			
Event Number	Sampling Date (most recent last)	Days After Prev. Rnd.	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1	19-Jun-00		37.00	0.00	0.00			
2	12-Sep-00	85	36.00	0.00	0.00			
3	13-Dec-00	92	38.00	0.00	0.00			
4	3-Apr-01	111	42.00	0.00	0.00			
5	13-Jun-01	71	40.00	0.00	0.00			
6	1-Oct-01	110	36.00	0.00	0.00			
7	19-Mar-02	169	37.00	0.00	0.00			
8	11-Sep-02	176	48.00	0.00	0.00			
Error Check, OK if Blank						DATA ERR	DATA ERR	DATA ERR
DATA IS NEITHER QUARTERLY OR SEMI-ANNUAL								
U Statistic =			9.0	8.0	8.0	DATA ERR	DATA ERR	DATA ERR
Trend at 90 % probability or more?			**No Trend**	**No Trend**	**No Trend**	DATA ERR	DATA ERR	DATA ERR

Data Entry By =	BJL	Date =	25-Sep-03	Checked By =	

State of Wisconsin
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Site Name =	Lime Kiln Park Grafton Wisconsin		Wisconsin		BRRTS No. = 03-72-0000001		Well Number = P3B	
	Compound	1,1,1-TCA	1,1-DCE	1,1-DCA	Vinyl Chloride			
Event Number	Sampling Date (most recent last)	Days After Prev. Rnd.	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1	19-Jun-00		0.00	0.00	0.00	0.00		
2	12-Sep-00	85	0.00	0.00	0.00	0.00		
3	13-Dec-00	92	0.00	0.00	0.00	0.00		
4	3-Apr-01	111	0.00	0.00	0.00	0.00		
5	13-Jun-01	71	0.00	0.00	0.00	0.00		
6	1-Oct-01	110	0.00	0.00	0.00	0.00		
7	19-Mar-02	169	0.00	0.00	0.00	0.00		
8	11-Sep-02	176	0.00	0.00	0.00	0.00		
Error Check, OK if Blank							DATA ERR	DATA ERR
DATA IS NEITHER QUARTERLY OR SEMI-ANNUAL								
U Statistic =			8.0	8.0	8.0	8.0	DATA ERR	DATA ERR
Trend at 90 % probability or more?			**No Trend**	**No Trend**	**No Trend**	**No Trend**	DATA ERR	DATA ERR

Data Entry By = BJL Date = 25-Jul-03 Checked By =

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Site Name =	Lime Kiln Park	Grafton	Wisconsin	Wisconsin	BRRTS No. =	03-72-0000001	Well Number = P4B

Event	Sampling Date (most recent last)	Compound Days After Prev. Rnd.	TCE Concentration (leave blank if no data)	cis-1,2-DCE Concentration (leave blank if no data)	Vinyl Chloride Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	3-Apr-01		5.70	3.90	1.60			
1st Yr, 2nd Qtr	13-Jun-01	71	3.80	2.60	1.20			
1st Yr, 3rd Qtr	2-Oct-01	111	1.10	1.20	0.52			
1st Yr, 4th Qtr	11-Dec-01	70	4.30	2.90	0.88			
2nd Yr, 1st Qtr	19-Mar-02	98	3.80	3.00	0.88			
2nd Yr, 2nd Qtr	12-Jun-02	85	0.00	0.00	0.00			
2nd Yr, 3rd Qtr	11-Sep-02	91	2.80	1.50	0.47			
2nd Yr, 4th Qtr	17-Dec-02	97	2.90	1.70	0.00			
Error Check, OK if Blank						DATA ERR	DATA ERR	DATA ERR
DATA FROM QUARTERLY SAMPLING								
U Statistic =			3.5	5.0	1.5	DATA ERR	DATA ERR	DATA ERR
Trend at 90 % probability or more?			**No Trend**	**No Trend**	Decreasing	DATA ERR	DATA ERR	DATA ERR

Data Entry By =	BJL	Date =	25-Jul-03	Checked By =	

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Site Name =	Lime Kiln Park Grafton Wisconsin		Wisconsin		BRRTS No. = 03-72-0000001		Well Number = P4B	
		Compound	1,1,1-TCA	1,1-DCE	1,1-DCA	Vinyl Chloride		
Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	3-Apr-01		0.00	0.00	0.00	1.60		
1st Yr, 2nd Qtr	13-Jun-01	71	0.00	0.00	0.00	1.20		
1st Yr, 3rd Qtr	2-Oct-01	111	0.00	0.00	0.00	0.52		
1st Yr, 4th Qtr	11-Dec-01	70	0.00	0.00	0.00	0.88		
2nd Yr, 1st Qtr	19-Mar-02	98	0.00	0.00	0.00	0.88		
2nd Yr, 2nd Qtr	12-Jun-02	85	0.00	0.00	0.00	0.00		
2nd Yr, 3rd Qtr	11-Sep-02	91	0.00	0.00	0.00	0.47		
2nd Yr, 4th Qtr	17-Dec-02	97	0.00	0.00	0.00	0.00		
Error Check, OK if Blank							DATA ERR	DATA ERR
DATA FROM QUARTERLY SAMPLING								
U Statistic =			8.0	8.0	8.0	1.5	DATA ERR	DATA ERR
Trend at 90 % probability or more?			**No Trend**	**No Trend**	**No Trend**	Decreasing	DATA ERR	DATA ERR

Data Entry By = BJL Date = 25-Jul-03 Checked By =

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Site Name =	Lime Kiln Park	Grafton	Wisconsin	Wisconsin	BRRTS No. =	03-72-0000001	Well Number = P7B	
		Compound	TCE	cis-1,2-DCE	Vinyl Chloride			
Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	5-Apr-01		0.90	0.61	0.00			
1st Yr, 2nd Qtr	14-Jun-01	70	2.40	0.88	0.00			
1st Yr, 3rd Qtr	4-Oct-01	112	5.50	2.30	0.24			
1st Yr, 4th Qtr	13-Dec-01	70	4.30	1.60	0.00			
2nd Yr, 1st Qtr	20-Mar-02	97	5.60	2.20	0.00			
2nd Yr, 2nd Qtr	12-Jun-02	84	3.90	2.50	0.00			
2nd Yr, 3rd Qtr	12-Sep-02	92	1.90	0.00	0.00			
2nd Yr, 4th Qtr	5-Dec-02	84	0.00	0.00	0.00			
Error Check, OK if Blank						DATA ERR	DATA ERR	DATA ERR
DATA FROM QUARTERLY SAMPLING								
U Statistic =			7.0	7.0	6.0	DATA ERR	DATA ERR	DATA ERR
Trend at 90 % probability or more?			**No Trend**	**No Trend**	**No Trend**	DATA ERR	DATA ERR	DATA ERR

Data Entry By =	BJL	Date =	25-Jul-03	Checked By =	

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Site Name =	Lime Kiln Park Grafton Wisconsin		Wisconsin	BRRTS No. = 03-72-0000001	Well Number = P7B	
	Compound	1,1,1-TCA	1,1-DCE	1,1-DCA	Vinyl Chloride		
Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	5-Apr-01		0.00	0.00	0.00	0.00		
1st Yr, 2nd Qtr	14-Jun-01	70	0.00	0.00	0.00	0.00		
1st Yr, 3rd Qtr	4-Oct-01	112	0.00	0.00	0.00	0.24		
1st Yr, 4th Qtr	13-Dec-01	70	0.00	0.00	0.00	0.00		
2nd Yr, 1st Qtr	20-Mar-02	97	0.00	0.00	0.00	0.00		
2nd Yr, 2nd Qtr	12-Jun-02	84	0.00	0.00	0.00	0.00		
2nd Yr, 3rd Qtr	12-Sep-02	92	0.00	0.00	0.00	0.00		
2nd Yr, 4th Qtr	5-Dec-02	84	0.00	0.00	0.00	0.00		
Error Check, OK if Blank							DATA ERR	DATA ERR
DATA FROM QUARTERLY SAMPLING								
U Statistic =			8.0	8.0	8.0	6.0	DATA ERR	DATA ERR
Trend at 90 % probability or more?			**No Trend**	**No Trend**	**No Trend**	**No Trend**	DATA ERR	DATA ERR

Data Entry By =	BJL	Date =	25-Jul-03	Checked By =	

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Site Name =	Lime Kiln Park Grafton Wisconsin		Wisconsin	BRRTS No. =	03-72-0000001	Well Number = P8A	

Event	Sampling Date (most recent last)	Compound Days After Prev. Rnd.	TCE Concentration (leave blank if no data)	cis-1,2-DCE Concentration (leave blank if no data)	Vinyl Chloride Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	5-Apr-01		90.00	160.00	23.00			
1st Yr, 2nd Qtr	14-Jun-01	70	90.00	170.00	28.00			
1st Yr, 3rd Qtr	4-Oct-01	112	73.00	160.00	35.00			
1st Yr, 4th Qtr	13-Dec-01	70	42.00	98.00	27.00			
2nd Yr, 1st Qtr	20-Mar-02	97	72.00	160.00	46.00			
2nd Yr, 2nd Qtr	13-Jun-02	85	69.00	130.00	33			
2nd Yr, 3rd Qtr	12-Sep-02	91	73.00	160.00	37.00			
2nd Yr, 4th Qtr	17-Dec-02	96	79.00	140.00	28.00			
Error Check, OK if Blank						DATA ERR	DATA ERR	DATA ERR
DATA FROM QUARTERLY SAMPLING								
U Statistic =			5.5	6.0	13.5	DATA ERR	DATA ERR	DATA ERR
Trend at 90 % probability or more?			**No Trend**	**No Trend**	**Increasing**	DATA ERR	DATA ERR	DATA ERR

Data Entry By =	BJL	Date =	25-Jul-03	Checked By =	

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Site Name =	Lime Kiln Park	Grafton	Wisconsin	Wisconsin	BRRTS No. = 03-72-0000001		Well Number = P8A	
		Compound	1,1,1-TCA	1,1-DCE	1,1-DCA	Vinyl Chloride		
Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	5-Apr-01		14.00	3.90	49.00	37.00		
1st Yr, 2nd Qtr	14-Jun-01	70	15.00	4.40	52.00	28.00		
1st Yr, 3rd Qtr	4-Oct-01	112	14.00	4.20	47.00	11.00		
1st Yr, 4th Qtr	13-Dec-01	70	8.20	2.80	30.00	14.00		
2nd Yr, 1st Qtr	20-Mar-02	97	13.00	4.70	49.00	23.00		
2nd Yr, 2nd Qtr	13-Jun-02	85	12.00	3.50	38.00	28.00		
2nd Yr, 3rd Qtr	12-Sep-02	91	14.00	3.90	51.00	35.00		
2nd Yr, 4th Qtr	17-Dec-02	96	16.00	3.50	47.00	27.00		
Error Check, OK if Blank							DATA ERR	DATA ERR
DATA FROM QUARTERLY SAMPLING								
U Statistic =			8.0	7.5	8.0	9.5	DATA ERR	DATA ERR
Trend at 90 % probability or more?			**No Trend**	**No Trend**	**No Trend**	**No Trend**	DATA ERR	DATA ERR

Data Entry By = BJL Date = 25-Jul-03 Checked By =

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Site Name =	Lime Kiln Park	Grafton	Wisconsin	Wisconsin	BRRTS No. =	03-72-0000001	Well Number = P8B

		Compound	TCE	cis-1,2-DCE	Vinyl Chloride			
Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	5-Apr-01		110.00	140.00	0.99			
1st Yr, 2nd Qtr	14-Jun-01	70	130.00	170.00	1.40			
1st Yr, 3rd Qtr	4-Oct-01	112	120.00	180.00	1.80			
1st Yr, 4th Qtr	13-Dec-01	70	110.00	150.00	3.10			
2nd Yr, 1st Qtr	20-Mar-02	97	130.00	170.00	4.40			
2nd Yr, 2nd Qtr	13-Jun-02	85	150.00	180.00	3.1			
2nd Yr, 3rd Qtr	12-Sep-02	91	160.00	220.00	8.20			
2nd Yr, 4th Qtr	17-Dec-02	96	150.00	220.00	15.00			
Error Check, OK if Blank						DATA ERR	DATA ERR	DATA ERR
DATA FROM QUARTERLY SAMPLING								
U Statistic =			15.5	14.0	15.5	DATA ERR	DATA ERR	DATA ERR
Trend at 90 % probability or more?			**Increasing**	**Increasing**	**Increasing**	DATA ERR	DATA ERR	DATA ERR

Data Entry By =	BJL	Date =	25-Jul-03	Checked By =	

State of Wisconsin
Department of Natural Resources
Remediation and Redevelopment Program

Mann-Whitney U Statistical Test
Form 4400-216 (5/2000)

Notice: This form is provided to consultants as an optional tool to be used to provide groundwater contaminant data required to support site closure requests under s. Comm 46.07 or s. NR 746.07, Wis. Adm. Code. Use this form or a manual method to calculate the Mann-Whitney statistic, as specified in Appendix A of ch. Comm 46 and ch. NR 746, Wis. Adm. Code.

Instructions: Provide eight (8) consecutive rounds of data for the spreadsheet to work properly. Use cells with yellow background for data entry. Use consistent units. The spreadsheet contains several error checks, and a data entry error may cause DATA ERR to be displayed. A message will be displayed when the data is not quarterly or semi-annual. Dates that are not consecutive will show an error message and will not display the test results. The spreadsheet tests the data for both increasing and decreasing trends. At a 90% confidence level, a U statistic of 3 or less indicates a decreasing trend, and a U statistic of 13 or more indicates an increasing trend. If the data does not pass either the increasing or decreasing trend test, the No Trend result will be displayed. Additional information is available at http://www.state.nj.us/dep/srp/regs/techrule/techrl10c.pdf

Site Name =	Lime Kiln Park Grafton	Wisconsin	Wisconsin	BRRTS No. = 03-72-0000001	Well Number = P8B	
	Compound	1,1,1-TCA	1,1-DCE	1,1-DCA	Vinyl Chloride	
Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	5-Apr-01		1.10	0.91	1.10	0.00		
1st Yr, 2nd Qtr	14-Jun-01	70	1.40	0.91	1.30	0.00		
1st Yr, 3rd Qtr	4-Oct-01	112	1.80	1.10	1.60	0.77		
1st Yr, 4th Qtr	13-Dec-01	70	0.00	1.10	1.40	0.66		
2nd Yr, 1st Qtr	20-Mar-02	97	1.50	1.40	1.60	0.99		
2nd Yr, 2nd Qtr	13-Jun-02	85	1.70	0.00	1.50	1.40		
2nd Yr, 3rd Qtr	12-Sep-02	91	1.70	1.30	1.80	1.80		
2nd Yr, 4th Qtr	17-Dec-02	96	0.00	0.00	2.00	3.10		
Error Check, OK if Blank							DATA ERR	DATA ERR
DATA FROM QUARTERLY SAMPLING								
U Statistic =			9.5	8.0	14.5	16.0	DATA ERR	DATA ERR
Trend at 90 % probability or more?			**No Trend**	**No Trend**	**Increasing**	**Increasing**	DATA ERR	DATA ERR

Data Entry By = BJL Date = 25-Jul-03 Checked By =

APPENDIX E

REVISED MONITORING PLAN

APPENDIX E

MONITORING PLAN - 2003
VILLAGE OF GRAFTON

Parameter List

Analysis A.	VOCs
Analysis B.	Natural Attenuation Parameters - Methane, Ethane, Ethene, Chloride, Nitrate, DO, ORP, Iron II
Analysis C.	Indicator Parameters - pH, Temperature, Conductivity

Well Groups

Well List 1

LH1 - Groundwater within waste
P2A - Downgradient of landfill
P2B - Downgradient of landfill
P4B - Upgradient of landfill
P7B - Downgradient of landfill
P8A - Downgradient of landfill
P8B - (formerly PW1749) - Downgradient of plume

Well List 2

PW1530LR
PW1587LR
PW461HR
PW1716LR**
P3B* - Sidegradient of landfill - west side
PW717HC (Sidegradient of plume - east side)

Monitoring Plan

Well List 1

Quarterly analysis of List A, B, C	(March, June, September, December)

Well List 2

Semi-annual analysis of List A	(June, December)
*Semi-annual analysis of List A	(March, September)
**Quarterly analysis of List A	(March, June, September, December)