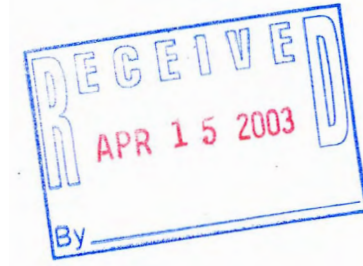


November 30, 2002

Mr. John Feeny
Southeast Region Annex
4041 North Richards Street
Milwaukee, WI 53212-0436



Dear John,

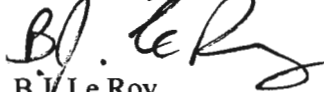
On behalf of the Village of Grafton, please find enclosed the 2001 Annual Report for the Lime Kiln Landfill in Grafton.

Electronic data for the site was sent directly to Kathy Thompson and is not included in this report. If you would like an electronic copy, please let me know and I'll forward it to you. Sampling is ongoing at the site, and I will send you a summary of this year's results shortly.

Please let me know if you have any questions or comments regarding the annual report or the monitoring results.

Sincerely,

Earth Tech, Inc.


B.J. Le Roy
Project Geologist

c. Mark Gottlieb
Joan Underwood

Telephone

920.458.8711

Facsimile

920.458.0537

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2001 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**

November 2002

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- B Calculation Sheet
- C Groundwater Monitoring Data
- D Mann-Whitney Statistical Analyses
- E Revised Monitoring Plan

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 second annual report submitted for the site, and it describes and documents site conditions and activities from January 2000 to December 2001. 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 nine sample events completed in 2000 (January, March, June, September, and December) and 2001 (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 2002.

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.

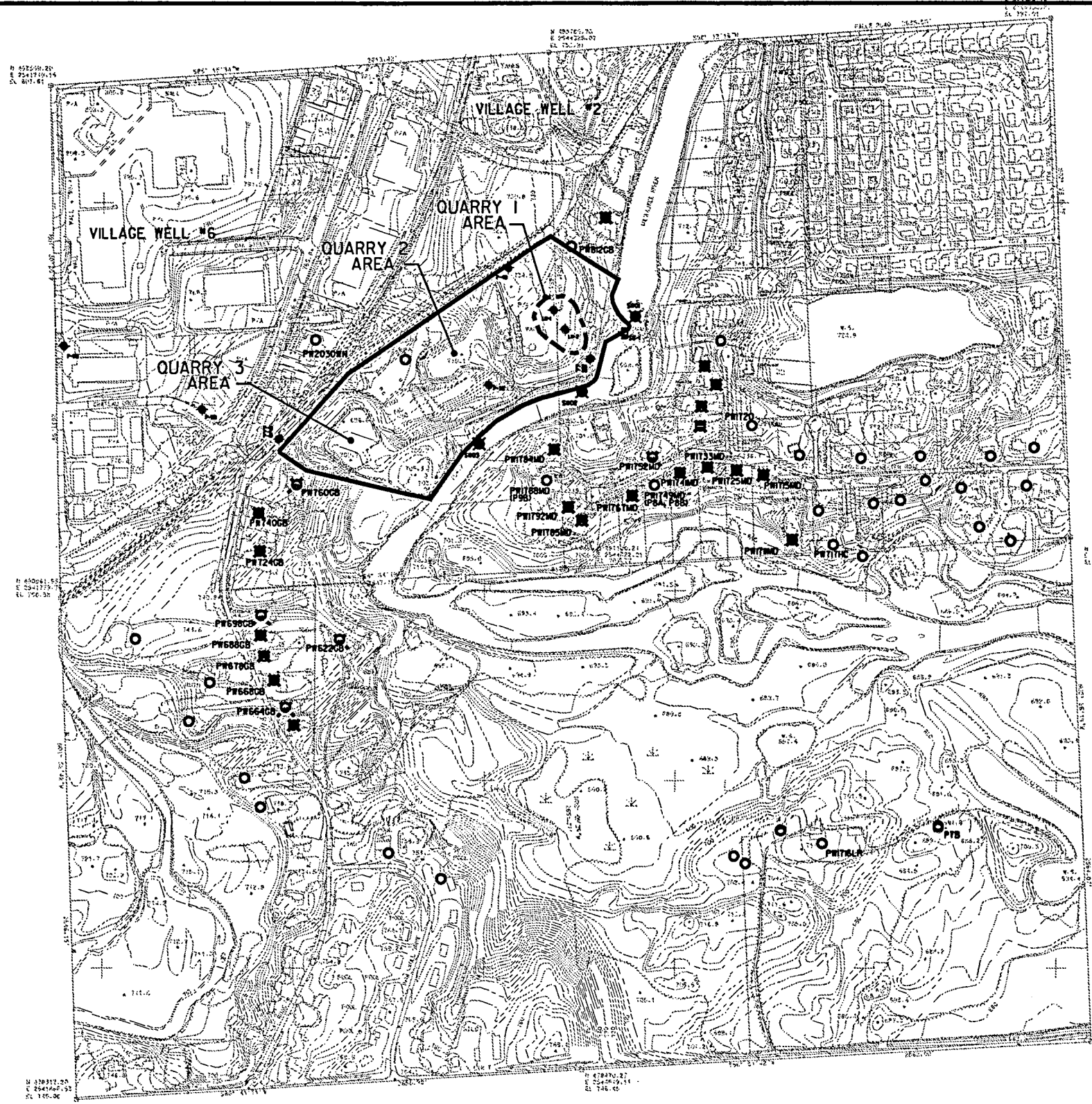
The Silurian-age dolomite aquifer is comprised of undifferentiated Racine Formation and the Romeo beds of the Racine Formation. The aquifer extends approximately 200 feet below the top of bedrock, coincident with the contact of the underlying Waukesha Formation. The Waukesha Formation is designated as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

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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
	MONITORING WELL
	LEACHATE WELL
	MONITORING WELL NEST
	STAFF GAUGE

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

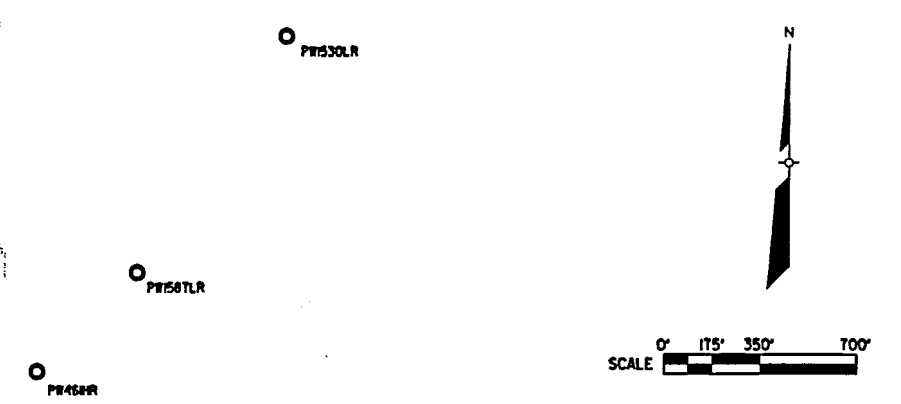


	FIGURE I EXISTING CONDITIONS
	<small>2001 ANNUAL REPORT VILLAGE OF GRAFTON GRAFTON, WISCONSIN</small>

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 for 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 eight rounds (2 years) of sampling. Groundwater sampling for this report took place between January 2000 and December 2001.

Prior submittals to the Department include the 1999 Investigation Report, sampling results through December 2001, 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 2001. 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 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 2 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, LH2, 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.

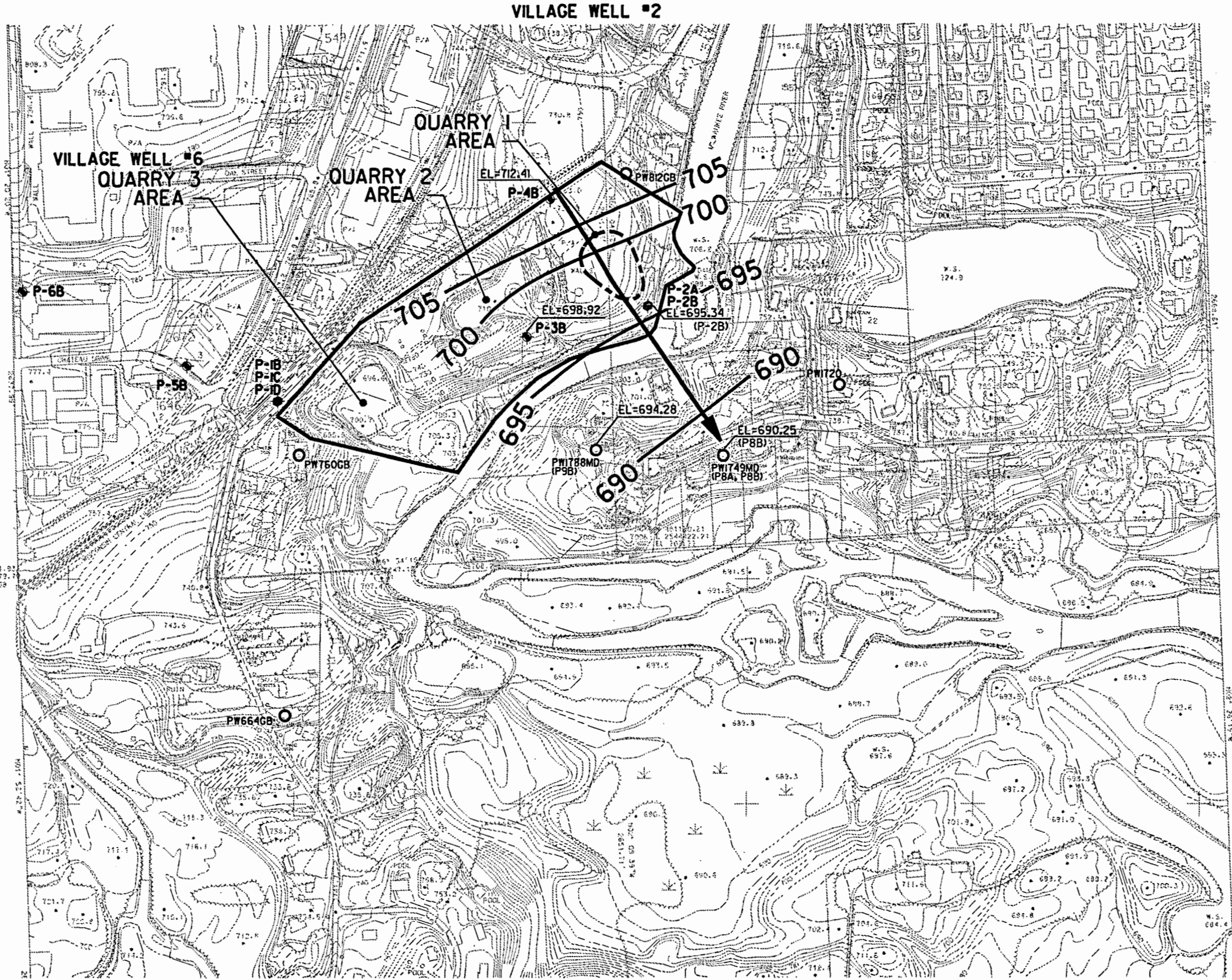
Horizontal hydraulic gradients are similar to those calculated in the investigation report, ranging from 0.018 and 0.015 feet/foot.

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 0.051 to 0.058 feet/foot downward. At the P8A/B piezometer nest, the calculated vertical gradient ranges from 0.008 to 0.017 feet/foot downward during the first three quarters, and is slightly upward during the fourth quarter monitoring event. 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 nine sample events in 2000 (January, March, June, September, and December) and 2001 (March, June, September, and December.) Wells constructed in March 2000 (P7B, P8A, P8B, P9B) were not sampled in January 2000. In order to have at least eight sample rounds for these wells, a ninth round of sampling was conducted in December 2001. 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.

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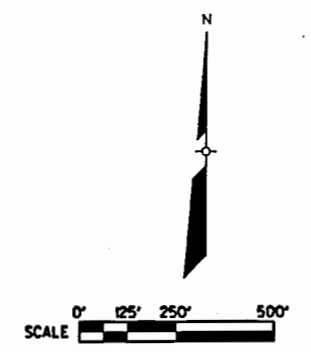


EXPLANATION

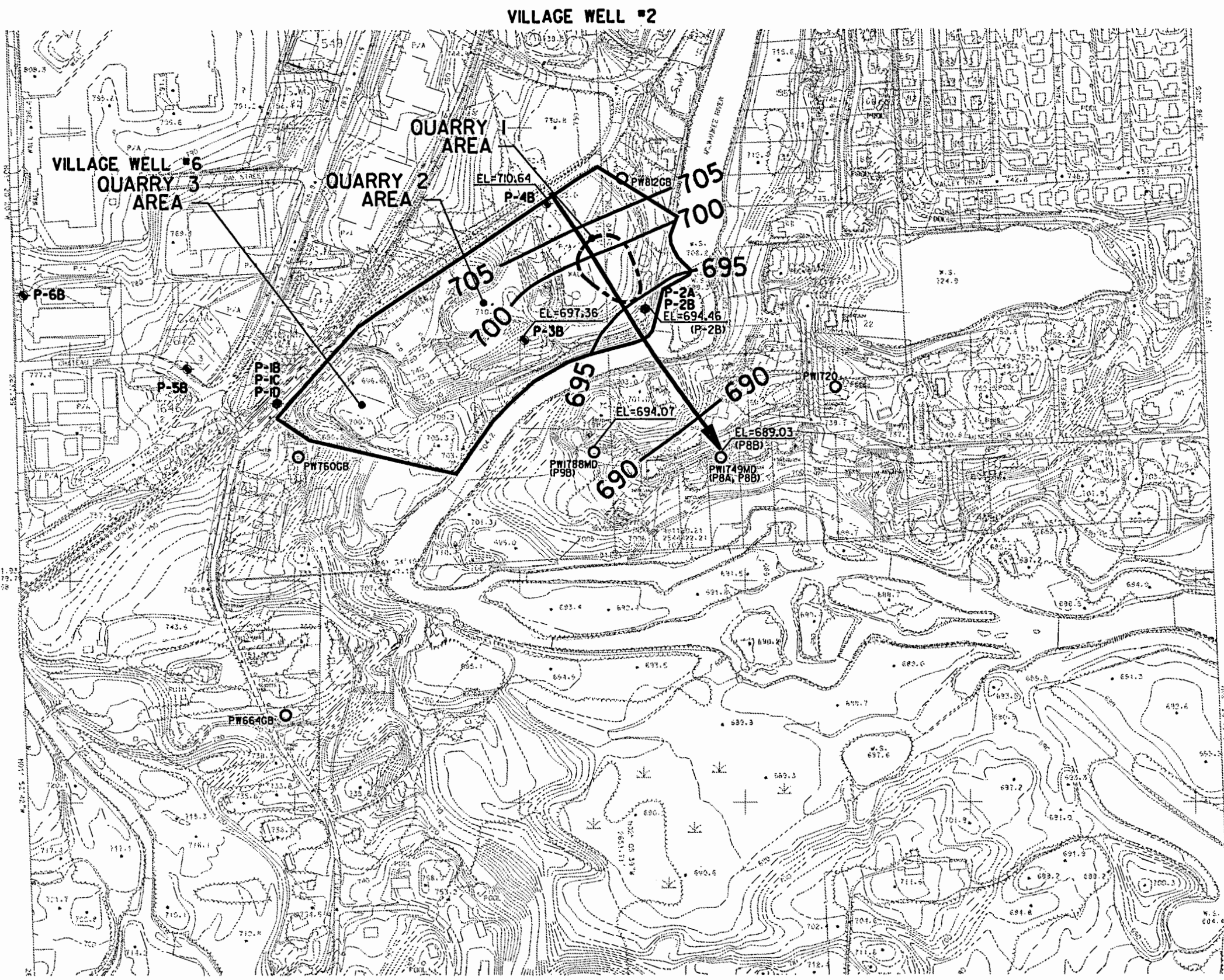
- LIME KILN PARK PROPERTY BOUNDARY
- ESTIMATED LIMITS OF WASTE (GEOPHYSICS AND GEOPROBE)
- GROUNDWATER CONTOURS (5 FOOT INTERVAL)
- GROUNDWATER FLOW DIRECTION
- LEACHATE WELL NEST WITH PIEZOMETRIC ELEVATION. DESIGNATED WELL IN PARENTHESES
- PIEZOMETER WITH PIEZOMETRIC ELEVATION
- PRIVATE WELL WITH PIEZOMETRIC ELEVATION

PW749MD (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 24, 2000.



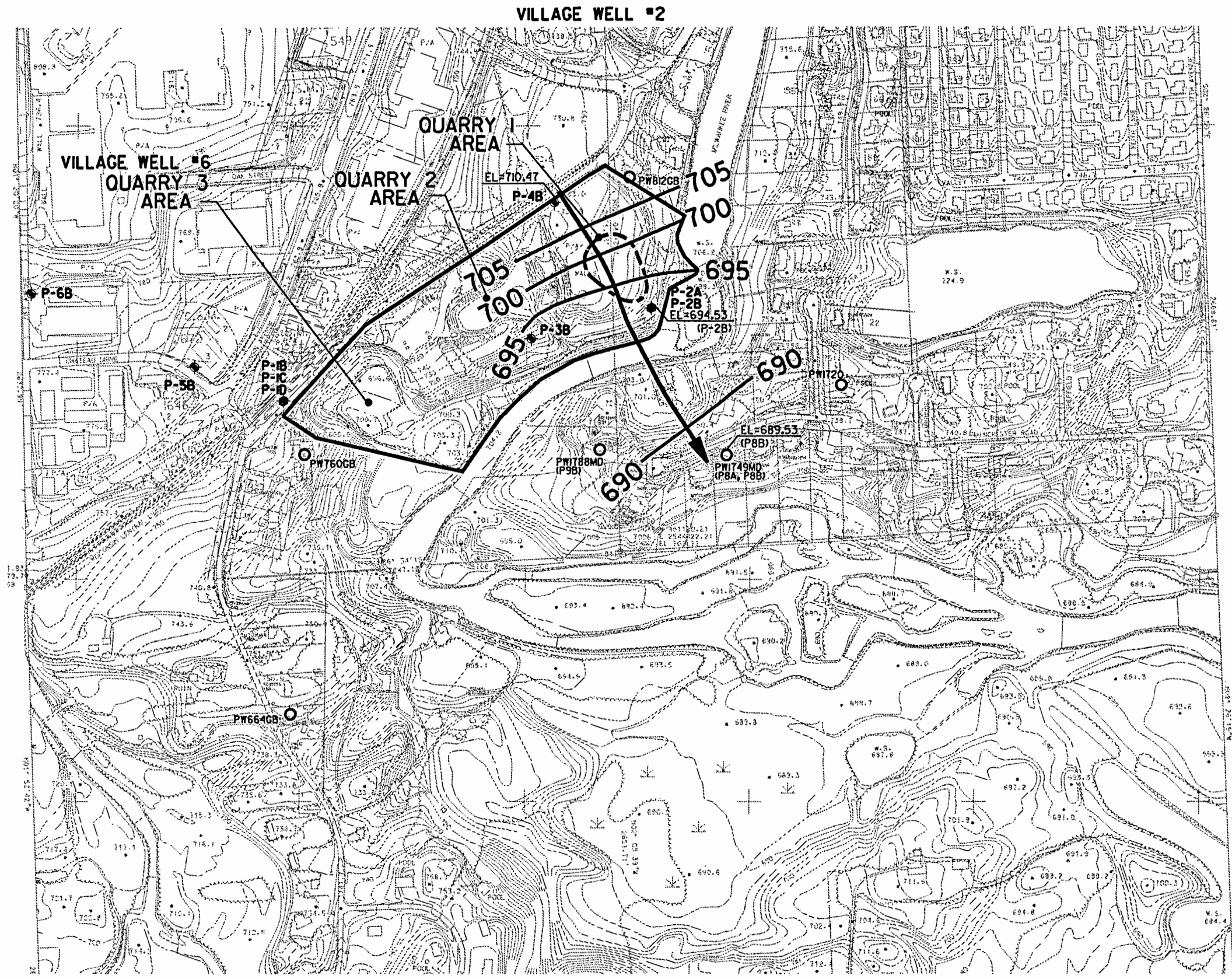
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- EXPLANATION**
- LIME KILN PARK PROPERTY BOUNDARY
 - ESTIMATED LIMITS OF WASTE (GEOPHYSICS AND GEOPROBE)
 - GROUNDWATER CONTOURS (5 FOOT INTERVAL)
 - GROUNDWATER FLOW DIRECTION
 - LEACHATE WELL NEST WITH PIEZOMETRIC ELEVATOR. DESIGNATED WELL IN PARENTHESES
 - PIEZOMETER WITH PIEZOMETRIC ELEVATOR
 - PRIVATE WELL WITH PIEZOMETRIC ELEVATOR

- 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 12, 2000.

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- EXPLANATION**
- LIME KILN PARK PROPERTY BOUNDARY
 - ESTIMATED LIMITS OF WASTE (GEOPHYSICS AND GEOPROBE)
 - 700- GROUNDWATER CONTOURS (5 FOOT INTERVAL)
 - GROUNDWATER FLOW DIRECTION
 - EL=694.58 (P-2B) LEACHATE WELL NEST WITH PIEZOMETRIC ELEVATOR, DESIGNATED WELL IN PARENTHESES
 - EL=710.47 P-4B PIEZOMETER WITH PIEZOMETRIC ELEVATOR
 - EL=689.53 (P8B) PRIVATE WELL WITH PIEZOMETRIC ELEVATOR

- 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 15, 2000.

FIGURE 5
PIEZOMETRIC CONTOUR MAP-
DECEMBER 2001
2001 ANNUAL REPORT
 VILLAGE OF GRAFTON
 GRAFTON, WISCONSIN

NOV 2002 30250

TABLE 1

**APPROVED MONITORING PLAN - 2001
VILLAGE OF GRAFTON**

Parameter List

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

Well Groups

Well List 1

LH1 - Groundwater within waste
LH2 - 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 degree of plume
P3B - Sidegradient of landfill - west side
P9B - (formerly PW1788) - Sidegradient of plume - west side

Well List 2

PW1530LR
PW1587LR
PW1716LR
PW461HR
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)

3.2.1 Monitoring Plan

Groundwater monitoring wells are shown on Figure 1, and the 2001 monitoring plan is presented in Table 1. Groundwater results from nine rounds are summarized in Tables 2 and 3. Table 2 lists compounds that were detected in monitoring plan wells, 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. A complete list of detects is included in Appendix C, and an electronic printout of 2000 through 2001 results is also 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 2000 and 2001. Cis-1,2-dichloroethene (DCE) was consistently detected below the PAL. TCE was consistently detected above the PAL and exceeded the ES in September 2000 and April 2001. Vinyl chloride was detected above the ES during the last seven monitoring events. Nitrogen was detected during five events, and was above the PAL in each event.

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, vinyl chloride, and cis-1,2-DCE have stable trends according to the Mann-Whitney test. 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.

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 TCE and stable level of vinyl chloride that are calculated by the Mann-Whitney analysis in Appendix D. Breakdown products from

TABLE 2

DETECTED VOLATILE ORGANICS AND NR 140 PUBLIC HEALTH EXCEEDANCES
JANUARY 2001 TO DECEMBER 2001
LIME KILN LANDFILL
VILLAGE OF GRAFTON

Detected Compounds ¹	Exceeded ES ²	Exceeded PAL ²
1,1,1-Trichloroethane		
1,1,2-Trichlorotrifluoroethane		
1,1-Dichloroethane		P2A ⁵
1,1-Dichloroethene		LH1 ⁵ , P8A ³ , P8B ³
Chloride	P2A	LH1
Chloroethane		
cis-1,2-Dichloroethene	LH1 ⁴ , LH2 ⁵ , P2B ⁵ , P8A ⁵ , P8B ³	P2A ⁵
Ethane		
Ethene		
Methane		
Methylene chloride		LH1, LH2, P2A, PW1716LR
Nitrogen, nitrate		P3B, P4B, P7B
Tetrachloroethene	LH1, P8A	LH2, P2A, P3B
trans-1,2-Dichloroethene		
Trichloroethene	LH1 ⁴ , LH2 ⁵ , P2A ⁵ , P2B ⁵ , P3B ⁵ , P4B ⁵ , P7B ³ , P8A ⁵ , P8B ³ , P9B ⁴	
Vinyl chloride	LH1 ⁵ , LH2 ⁵ , P2A ⁵ , P2B ⁴ , P4B ⁵ , P7B ⁵ , P8A ⁵ , P8B ³ , P9B ⁵	
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**

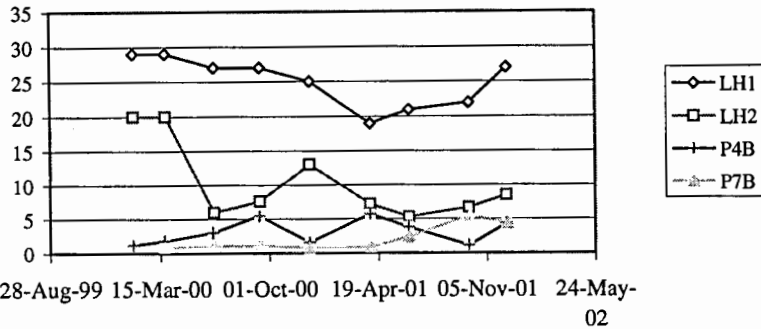
Compound Test Name	Upgradient P4B	Landfill Wells		Plume Wells				
		LH1	LH2	P2A	P2B	P8A	P8B	P7B
1,1,1-Trichloroethane		--	--	--	--	--	--	
1,1-Dichloroethane		--	--	--	↓	--	↑	
1,1-Dichloroethene		--	--		↓	↑	↑	
cis-1,2-Dichloroethene	--	↓	--	--	--	--	↑	↑
trans-1,2-Dichloroethene		--	--	--	--			
Trichloroethene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

NOTE:

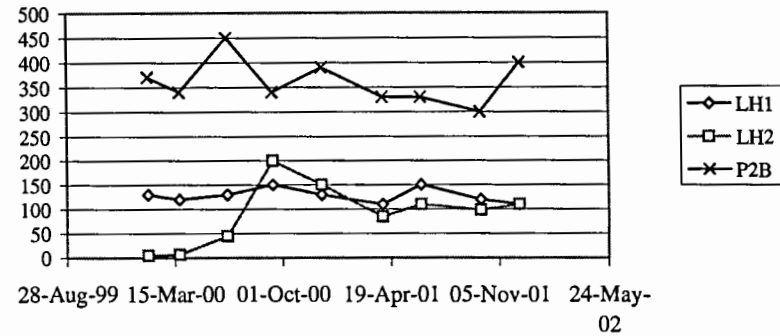
Trends determined using WDNR Mann-Whitney analysis spreadsheet.
 Results of monitoring between January 2000 and December 2001.

Key	
↑	Rising trend
↓	Falling Trend
--	Stable, detected
	Not detected
	Above PAL

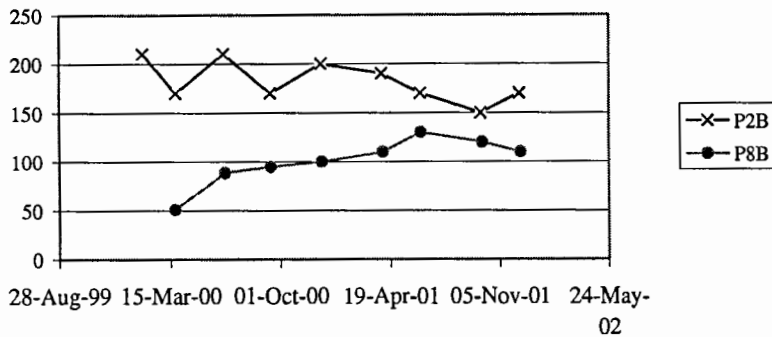
TCE - Concentration vs. Time



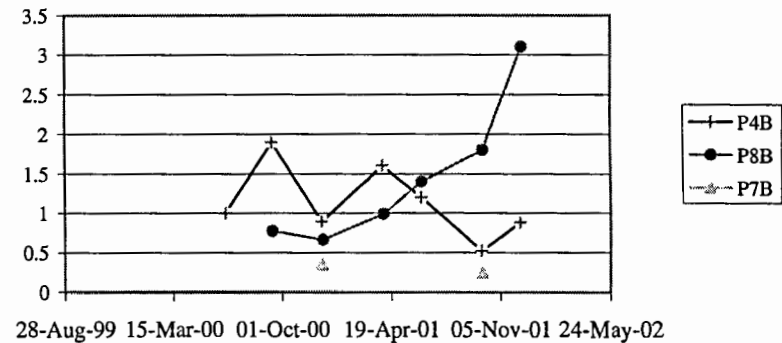
Vinyl Chloride - Concentration vs. Time



TCE - Concentration vs. Time



Vinyl Chloride - Concentration vs. Time



Concentration units are in ug/l.



Figure 6
Village of Grafton - Lime Kiln Landfill
TCE and Vinyl Chloride Concentration Vs. Time Plots
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both pathways are present at LH1, including final end products chloroethane and ethane. At LH2, the eight parameters are all stable, according to Mann-Whitney analysis. Figure 6 shows TCE and vinyl chloride trend charts over the past nine sample events. While vinyl chloride rose sharply during 2000, it stabilized in 2001 near 100 ug/l. In turn, 1,1-DCA stabilized near 15 ppb during 2001, from a previous level near 80 in 2000. The continuing presence of breakdown products suggests that natural attenuation is occurring.

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, TCE and vinyl chloride are consistently detected above the ES. Cis-1,2-DCE is sporadically detected above the PAL. At P2B, cis-1,2-DCE, TCE, and vinyl chloride are consistently detected above the ES. 1,1,1-TCA, 1,1-DCA, and trans-1,2-DCE are consistently detected at P2B and are typically below regulatory standards. Ethane, a final breakdown product of 1,1,1-TCA, is also consistently detected at P2B. 1,1-DCE was detected three times at P2B during 2000, and was not detected during four rounds in 2001.

At well P2A, concentration trends for the major chlorinated compounds are stable, with no increasing or decreasing trends, as shown in Table 3.

At well P2B, trend analysis shows that all but three compounds have stable trends. 1,1-DCA, 1,1-DCE, and vinyl chloride have decreasing trends. 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 pathways have been detected at P8A and P8B. Compound concentrations are typically lower at P8B than at P8A. TCE and cis-1,2-DCE have similar concentrations at both wells.

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 three times during 2001, though it has not been consistently detected throughout 8 quarters, and was not detected in December 2001. Similarly at P8B, cis-1,2-DCE, vinyl chloride, and TCE are detected consistently above the ES. 1,1-DCE is consistently detected above the PAL. The marker compound from the West Plume, 1,1,2-trichlorotrifluoroethane (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. No other compounds are consistently above regulatory limits at either well.

Trends as measured by the Mann-Whitney test show increasing trends of several compounds at this location, as displayed in Table 3. At P8A, only 1,1-DCE demonstrates a rising trend, while all other consistently detected compounds are stable. P8B has rising trends of TCE, cis-1,2-DCE, 1,1-DCA, 1,1-DCE, and vinyl chloride, though 1,1-DCA and 1,1-DCE are at very low levels.

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. Trend analysis shows that vinyl chloride is stable at P8A, and while increasing at P8B, it is detected at low levels. Increasing cis-1,2-DCE concentrations 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 and cis-1,2-DCE have been consistently detected during the monitoring period. Both have been consistently detected near background levels, with TCE consistently above the PAL. Vinyl chloride has been detected twice in eight rounds. Both detects are qualified since they were below the limit of detection (LOD). While TCE and cis-1,2-DCE are detected at very low levels, both have increasing trends according to the Mann-Whitney test. These trends are further demonstrated on Figure 6 for TCE and vinyl chloride.

3.2.3 Monitoring List 2 - Private and Sentinel Wells

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

Wells P3B and P9B are located west and sidegradient of the Lime Kiln Landfill plume. PCE and TCE are the only compounds consistently detected at P3B. TCE is the only compound consistently detected at P9B other than Freon-113, which is not found in the Lime Kiln Landfill 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.

At P9B, TCE is consistently detected above the PAL. Other compounds have been inconsistent at P9B. While TCE has a slight increasing trend, it was shown in the investigation report that P9B is affected by sources other than the Lime Kiln Landfill. The TCE increase at this well is not likely due to the Lime Kiln Landfill.

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

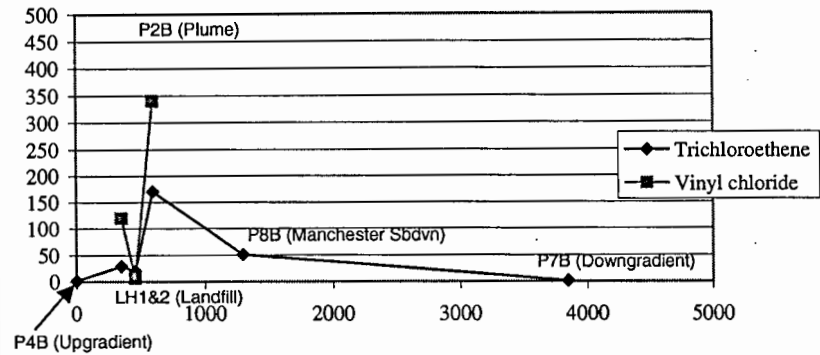
Downgradient Private Wells

Four downgradient private wells are monitored for potential plume changes. At the four wells listed in Table 1, methylene chloride and toluene were detected during one sample event and were attributed to lab contamination. The only other compound detected is chloroform, at the private well at 1716 Lakefield Road (PW1716LR.) Chloroform has been inconsistently detected, and it has not been detected above the PAL. Chloroform is not attributed to the Lime Kiln Landfill.

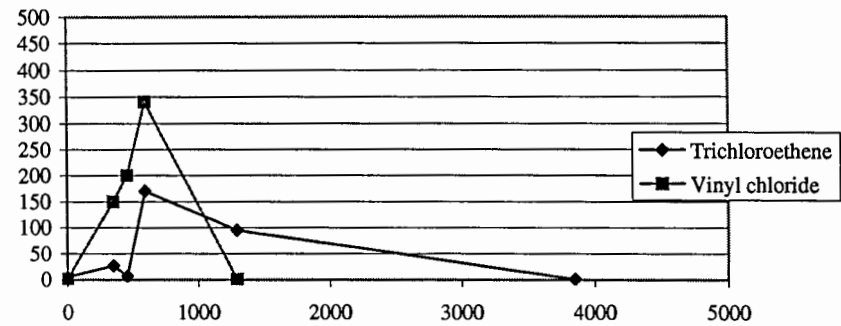
3.3 LIME KILN LANDFILL PLUME TRENDS

Concentration versus distance graphs were constructed according to WDNR natural attenuation guidance (March, 1997). TCE and vinyl chloride concentrations were plotted for each quarter on Figure 7 (two pages) at wells selected for natural attenuation analysis. These compounds were selected because they are

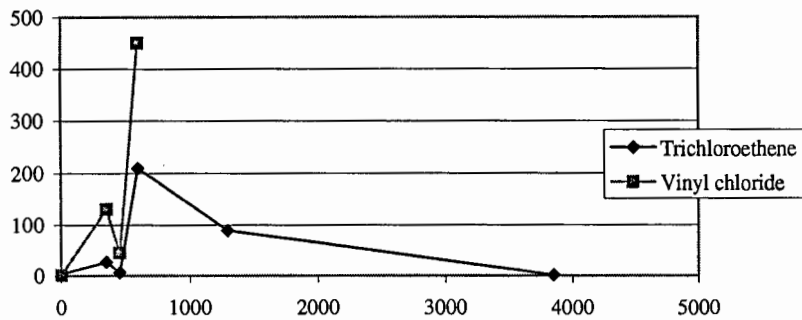
Concentration vs. Distance - March 2000



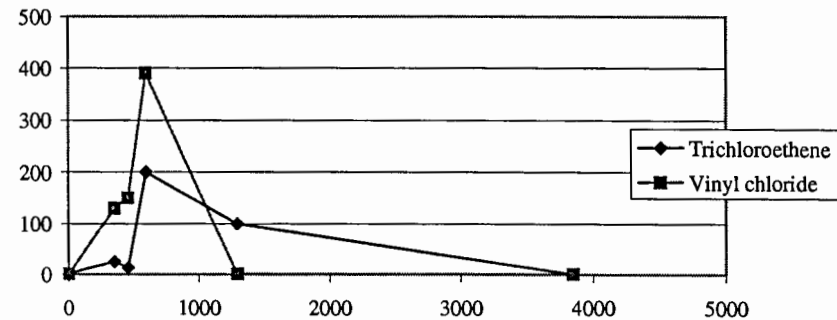
Concentration vs. Distance - September 2000



Concentration vs. Distance - June 2000



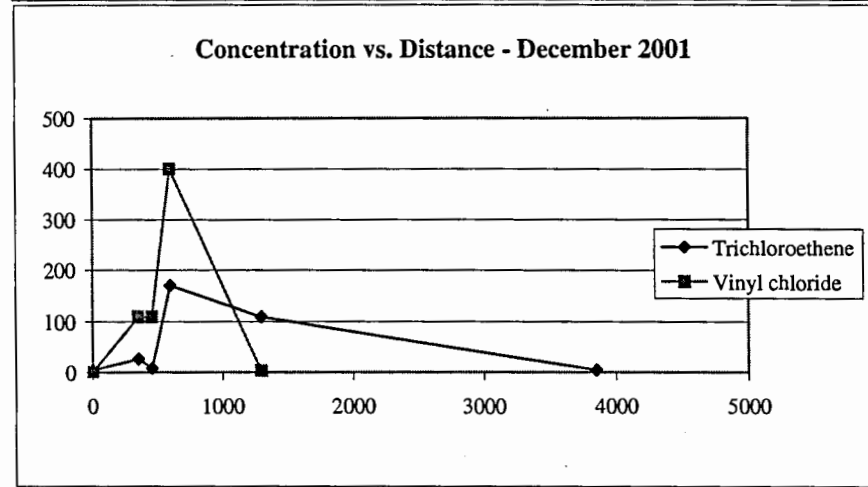
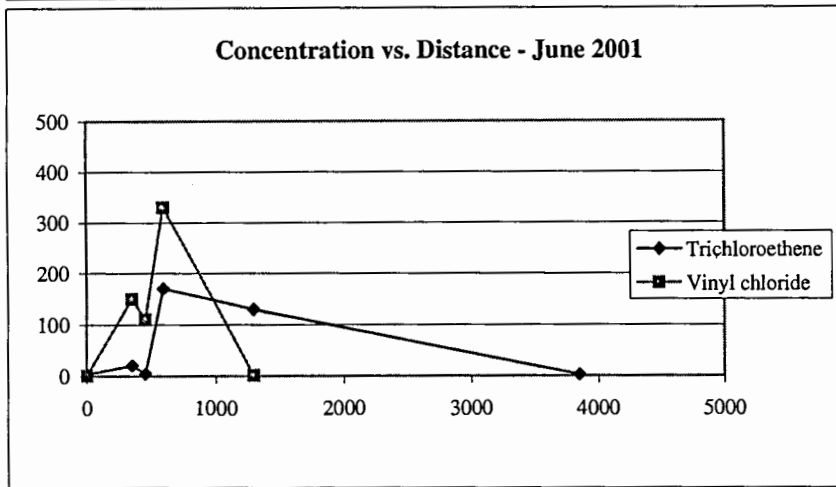
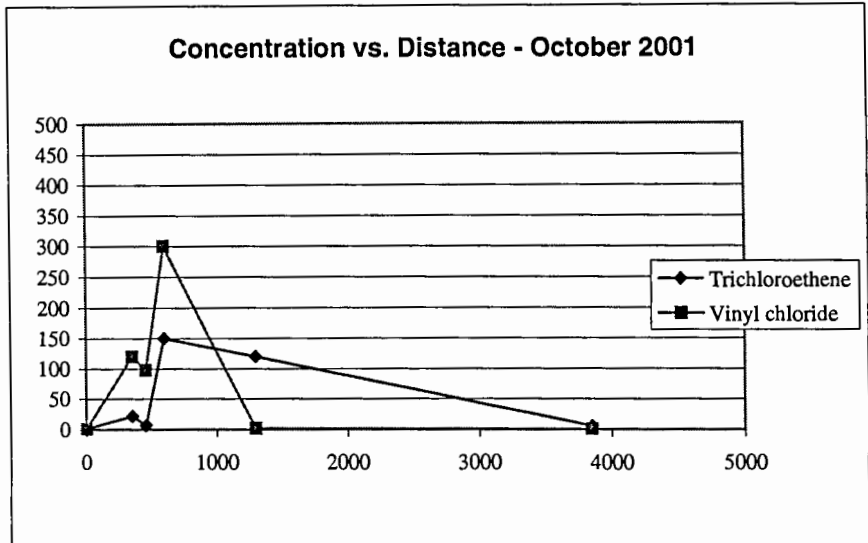
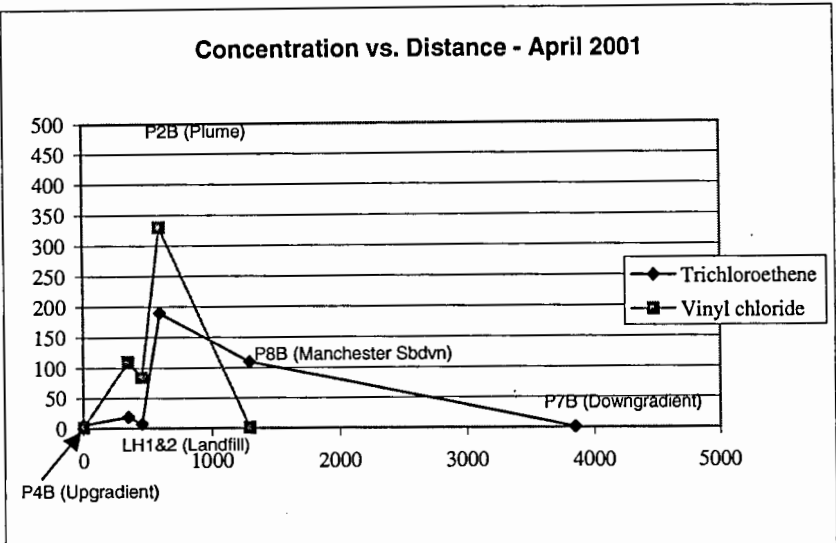
Concentration vs. Distance - December 2000



Units are in feet and ug/l.



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.



Figure 7
Village of Grafton - Lime Kiln Landfill
TCE and Vinyl Chloride Concentration Vs. Distance Plots
2001 Groundwater Monitoring Plan Annual Report
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the most commonly detected compounds within the plume, and because they represent typical plume characteristics.

Upon analysis of the eight 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 eight 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. This is expected 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 in 2000 and 2001. Values were 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.

TABLE 4

DISSOLVED OXYGEN AND OXIDATION - REDUCTION POTENTIAL 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	.79	1.13	1.3	1.88	.87	2.15
June 13, 2001	2.12	.88	.99	1.69	1.85	.89	2.03
October 2, 2001	2.19	.81	.96	1.83	2.20	1.19	2.11
December 12, 2001	1.83	.86	.95	1.61	1.66	1.11	2.09

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

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 conducive to reductive dechlorination of chlorinated solvents.

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.
- 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 wells P7B and P8B.

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.
- The following modifications are recommended to the monitoring plan which is included in Appendix E:
 - The private well at 1716 Lakefield Road should be monitored quarterly due to the increasing trends of TCE and cis-1,2-DCE at nearby monitoring well P7B.
 - Sidegradient well P-9B should be removed from the monitoring plan. It has been used to show the consistent influence of the West Plume on groundwater downgradient of the Lime Kiln Landfill, and is not contributing to monitoring the Lime Kiln Plume.
 - One leachate well is sufficient to monitor concentrations within the waste mass. LH1 should be removed from the monitoring plan.
 - Dissolved organic carbon will be sampled near the landfill for two rounds during 2002 to further evaluate the conditions needed for natural attenuation to occur.
 - Depending on the results of the organic carbon results and natural attenuation monitoring, additional sampling may be conducted to determine if the biological environment required for attenuation is present and active.

APPENDIX A

AFFECTED GROUNDWATER AREAS MAP

APPENDIX B

CALCULATION SHEET

CLIENT Village of Grafton SUBJECT Vertical Gradient Prepared By DJZ Date _____
 PROJECT Lime Kiln Park Reviewed By [Signature] Date _____
 Approved By [Signature] 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-01	697.14	711.5	22.77	690.65	-0.0346	Downward
P2B	April-01	695.34	711.5	75.44	638.56		
P8A	April-01	690.88	745.62	115.16	629.97	-0.0071	Downward
P8B	April-01	690.25	740.35	198.45	541.84		
P2A	June-01	697.07	711.5	22.77	690.43	-0.0317	Downward
P2B	June-01	695.42	711.5	75.44	638.35		
P8A	June-01	690.97	745.62	115.16	630.09	-0.0135	Downward
P8B	June-01	689.78	740.35	198.45	541.84		
P2A	October-01	696.76	711.5	22.78	690.43	-0.0442	Downward
P2B	October-01	694.46	711.5	75.43	638.35		
P8A	October-01	690.02	745.62	115.16	630.1	-0.0112	Downward
P8B	October-01	689.03	740.35	198.45	541.84		
P2A	December-01	696.77	711.5	22.78	690.43	-0.0421	Downward
P2B	December-01	694.58	711.5	75.43	638.35		
P8A	December-01	689.45	745.62	115.16	630.1	0.00091	Upward
P8B	December-01	689.53	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 2001

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	
	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
	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	
	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	
	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
	3/24/2000	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	

Well	Date	Compound	Result Units	ES	PAL	Exceedence
	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	
	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
	1/26/2000	Ethane	5.2 ug/l			
	3/24/2000	Ethane	3.7 ug/l			
	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	
	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
	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	

Well	Date	Compound	Result Units	ES	PAL	Exceedence
	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	
	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
	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
	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
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	
	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	

Well	Date	Compound	Result Units	ES	PAL	Exceedence
	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	
	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	
	10/2/2001	Chloroethane	1.7 ug/L	400	80	
	12/11/2001	Chloroethane	1.2 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
	6/21/2000	Ethane	46 ug/l			
	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	
	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
	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	

Well	Date	Compound	Result Units	ES	PAL	Exceedence
	10/2/2001	trans-1,2-Dichloroethene	3.2 ug/L	100	20	
	12/11/2001	trans-1,2-Dichloroethene	4.8 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
	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
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	
	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	
	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	
	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

Well	Date	Compound	Result Units	ES	PAL	Exceedence
	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
	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
	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	
	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	
	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	
	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
	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

Well	Date	Compound	Result Units	ES	PAL	Exceedence
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	
	3/24/2000	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	
	3/24/2000	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	
	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

Well	Date	Compound	Result Units	ES	PAL	Exceedence
	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
	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			
	1/25/2000	Ethene	6.4 ug/l			
	3/24/2000	Ethene	7.7 ug/l			
	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	
	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	
	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
	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

Well	Date	Compound	Result Units	ES	PAL	Exceedence
	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
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	
	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	
	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
	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

Well	Date	Compound	Result Units	ES	PAL	Exceedence
	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
	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
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
	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	
	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	

Well	Date	Compound	Result Units	ES	PAL	Exceedence
	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	
	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
	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
	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
	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
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	
	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	

Well	Date	Compound	Result Units	ES	PAL	Exceedence
	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
	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
	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	
	3/23/2000	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	
	3/23/2000	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
	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	

Well	Date	Compound	Result Units	ES	PAL	Exceedence
	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	
	6/14/2001	Chloroethane	0.57 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
	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	
	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
	3/23/2000	trans-1,2-Dichloroethene	1.6 ug/L	100	20	
	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	
	3/23/2000	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
	3/23/2000	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
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	

Well	Date	Compound	Result Units	ES	PAL	Exceedence
	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	
	3/23/2000	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			
	10/4/2001	1,1,2-Trichlorotrifluoroethane	3.5 ug/L			
	12/13/2001	1,1,2-Trichlorotrifluoroethane	4.2 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	
	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
	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	
	3/23/2000	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
	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	
	6/22/2000	Selenium - Dissolved	1 ug/L	50	10	
	12/15/2000	Selenium - Dissolved	0.74 ug/L	50	10	

Well	Date	Compound	Result Units	ES	PAL	Exceedence
	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	
	3/23/2000	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
	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
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	
	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	

Well	Date	Compound	Result Units	ES	PAL	Exceedence
	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	
	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	
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	
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
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)

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Site Name = Lime Kiln Park Grafton Wisconsin Wisconsin BRRTS No. = 03-72-000001 Well Number = LH-1

Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Compound	TCE	trans-1,2-DCE	cis-1,2-DCE	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)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	
1st Yr, 1st Qtr	24-Mar-00			29.00	4.90	110.00	120.00		
1st Yr, 2nd Qtr	21-Jun-00	89		27.00	5.00	120.00	130.00		
1st Yr, 3rd Qtr	13-Sep-00	84		27.00	4.80	140.00	150.00		
1st Yr, 4th Qtr	15-Dec-00	93		25.00	5.10	120.00	130.00		
2nd Yr, 1st Qtr	4-Apr-01	110		19.00	4.70	100.00	110.00		
2nd Yr, 2nd Qtr	14-Jun-01	71		21.00	5.3	120.00	150		
2nd Yr, 3rd Qtr	2-Oct-01	110		22.00	4.70	110.00	120.00		
2nd Yr, 4th Qtr	11-Dec-01	70		27.00	5.60	110.00	110.00		

Error Check, OK if Blank DATA ERR DATA ERR

DATA FROM QUARTERLY SAMPLING

U Statistic =	2.0	8.0	3.0	4.0	DATA ERR	DATA ERR
Trend at 90 % probability or more?	Decreasing	No Trend	Decreasing	No Trend	DATA ERR	DATA ERR

Data Entry By = D. Zolp Date = 21-Feb-02 Checked By = *[Signature]*

State of Wisconsin
 Department of Natural Resources
 Remediation and Redevelopment Program

Mann-Whitney U Statistical Test
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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)	Days After Prev. Rnd.	Compound	1,1,1-TCA	1,1-DCE	1,1-DCA	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)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	
1st Yr, 1st Qtr	24-Mar-00		0.00	1.60	8.60	120.00			
1st Yr, 2nd Qtr	21-Jun-00	89	0.00	1.30	4.00	130.00			
1st Yr, 3rd Qtr	13-Sep-00	84	0.00	1.50	6.20	150.00			
1st Yr, 4th Qtr	15-Dec-00	93	0.00	1.30	5.00	130.00			
2nd Yr, 1st Qtr	4-Apr-01	110	0.00	1.10	3.80	110.00			
2nd Yr, 2nd Qtr	14-Jun-01	71	0.00	1.40	4.90	150.00			
2nd Yr, 3rd Qtr	2-Oct-01	110	0.00	1.20	5.60	120.00			
2nd Yr, 4th Qtr	11-Dec-01	70	0.00	1.40	7.00	110.00			

Error Check, OK if Blank DATA ERR DATA ERR

DATA FROM QUARTERLY SAMPLING

U Statistic =	8.0	4.0	6.0	4.0	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 = D. Zolp Date = 21-Feb-02 Checked By = BJC

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. = 03-72-000001 Well Number = LH2

Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Compound	TCE	cis-1,2-DCE	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)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	
1st Yr, 1st Qtr	24-Mar-00			20.00	31.00	6.40			
1st Yr, 2nd Qtr	21-Jun-00	89		6.00	46.00	45.00			
1st Yr, 3rd Qtr	13-Sep-00	84		7.60	97.00	200.00			
1st Yr, 4th Qtr	15-Dec-00	93		13.00	94.00	150.00			
2nd Yr, 1st Qtr	4-Apr-01	110		7.20		84.00			
2nd Yr, 2nd Qtr	14-Jun-01	71		5.30	54.00	110			
2nd Yr, 3rd Qtr	2-Oct-01	110		6.70	62.00	98.00			
2nd Yr, 4th Qtr	11-Dec-01	70		8.50	73.00	110.00			

Error Check, OK if Blank DATA ERR DATA ERR DATA ERR DATA ERR
 DATA FROM QUARTERLY SAMPLING

U Statistic =	4.0	DATA ERR	8.0	DATA ERR	DATA ERR	DATA ERR
Trend at 90 % probability or more?	No Trend	DATA ERR	No Trend	DATA ERR	DATA ERR	DATA ERR

Data Entry By = D. Zolp Date = 21-Feb-02 Checked By = *RJ. E*

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 = LH2

Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Compound	1,1,1-TCA	1,1-DCE	1,1-DCA	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)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	
1st Yr, 1st Qtr	24-Mar-00			0.82	0.00	80.00	6.40		
1st Yr, 2nd Qtr	21-Jun-00	89		1.50	0.00	63.00	45.00		
1st Yr, 3rd Qtr	13-Sep-00	84		0.00	0.00	4.80	200.00		
1st Yr, 4th Qtr	15-Dec-00	93		0.00	0.88	5.10	150.00		
2nd Yr, 1st Qtr	4-Apr-01	110		0.00	0.00	4.70	84.00		
2nd Yr, 2nd Qtr	14-Jun-01	71		0.00	0.00	12.00	110.00		
2nd Yr, 3rd Qtr	2-Oct-01	110		0.00	0.00	19.00	98.00		
2nd Yr, 4th Qtr	11-Dec-01	70		0.00	0.00	14.00	110.00		

Error Check, OK if Blank DATA ERR DATA ERR
 DATA FROM QUARTERLY SAMPLING

U Statistic = 4.0 6.0 6.0 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 = D. Zolp Date = 21-Feb-02 Checked By = *B/K*

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 =	P2A	
		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)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	24-Mar-00		32.00	26.00	6.40						
1st Yr, 2nd Qtr	21-Jun-00	89	13.00	13.00	45.00						
1st Yr, 3rd Qtr	13-Sep-00	84	9.90	5.80	200.00						
1st Yr, 4th Qtr	15-Dec-00	93	6.20	3.10	150.00						
2nd Yr, 1st Qtr	4-Apr-01	110	7.70	16.00	84.00						
2nd Yr, 2nd Qtr	14-Jun-01	71	10.00	8.10	110						
2nd Yr, 3rd Qtr	2-Oct-01	110	4.60	4.80	98.00						
2nd Yr, 4th Qtr	11-Dec-01	70	27.00	36.00	110.00						
Error Check, OK if Blank						DATA ERR	DATA ERR	DATA ERR			
DATA FROM QUARTERLY SAMPLING											
U Statistic =			6.0	10.0	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 =		D. Zolp		Date =		21-Feb-02		Checked By =		R.D. E	

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 = P2A

Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Compound 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	24-Mar-00		1.20	0.00	15.00	0.00		
1st Yr, 2nd Qtr	21-Jun-00	89	3.00	0.00	55.00	1.00		
1st Yr, 3rd Qtr	13-Sep-00	84	1.10	0.00	37.00	2.50		
1st Yr, 4th Qtr	15-Dec-00	93	0.56	0.00	27.00	2.00		
2nd Yr, 1st Qtr	4-Apr-01	110	6.90	0.00	89.00	1.60		
2nd Yr, 2nd Qtr	14-Jun-01	71	1.80	0.00	40.00	1.90		
2nd Yr, 3rd Qtr	2-Oct-01	110	0.00	0.00	29.00	2.20		
2nd Yr, 4th Qtr	11-Dec-01	70	0.00	0.00	28.00	15.00		

Error Check, OK if Blank DATA ERR DATA ERR

DATA FROM QUARTERLY SAMPLING

U Statistic = 7.0 8.0 11.0 11.0 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 = D. Zolp Date = 21-Feb-02 Checked By = *RJ. Er*

State of Wisconsin
 Department of Natural Resources
 Remediation and Redevelopment Program

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Site Name =		Lime Kiln Park	Grafton	Wisconsin	Wisconsin	BRTS No. =	03-72-000001	Well Number =	P2B
Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Compound	TCE	cis-1,2-DCE	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)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	
1st Yr, 1st Qtr	24-Mar-00			170.00	470.00	340.00			
1st Yr, 2nd Qtr	21-Jun-00	89		210.00	600.00	450.00			
1st Yr, 3rd Qtr	13-Sep-00	84		170.00	490.00	340.00			
1st Yr, 4th Qtr	15-Dec-00	93		200.00	570.00	390.00			
2nd Yr, 1st Qtr	4-Apr-01	110		190.00	520.00	330.00			
2nd Yr, 2nd Qtr	14-Jun-01	71		170.00	480.00	330			
2nd Yr, 3rd Qtr	2-Oct-01	110		150.00	470.00	300.00			
2nd Yr, 4th Qtr	11-Dec-01	70		170.00	520.00	400.00			
Error Check, OK if Blank							DATA ERR	DATA ERR	DATA ERR
DATA FROM QUARTERLY SAMPLING									
U Statistic =			4.0	5.5	3.0	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 =			D. Zolp	Date =	21-Feb-02	Checked By = <i>R. Le</i>			

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.

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Site Name = Lime Kiln Park Grafton Wisconsin Wisconsin BRRTS No. = 03-72-000001 Well Number = P2B

Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Compound	1,1,1-TCA	1,1-DCE	1,1-DCA	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)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	
1st Yr, 1st Qtr	24-Mar-00			4.80	2.90	26.00	340.00		
1st Yr, 2nd Qtr	21-Jun-00	89		0.00	3.00	25.00	450.00		
1st Yr, 3rd Qtr	13-Sep-00	84		0.00	0.00	24.00	340.00		
1st Yr, 4th Qtr	15-Dec-00	93		3.20	2.20	22.00	390.00		
2nd Yr, 1st Qtr	4-Apr-01	110		0.00	0.00	19.00	330.00		
2nd Yr, 2nd Qtr	14-Jun-01	71		2.40	0.00	18.00	330.00		
2nd Yr, 3rd Qtr	2-Oct-01	110		0.00	0.00	16.00	300.00		
2nd Yr, 4th Qtr	11-Dec-01	70		0.00	0.00	18.00	400.00		

Error Check, OK if Blank DATA ERR DATA ERR

DATA FROM QUARTERLY SAMPLING

U Statistic = 5.0 2.0 0.0 3.0 DATA ERR DATA ERR

Trend at 90 % probability or more? No Trend Decreasing Decreasing Decreasing DATA ERR DATA ERR

Data Entry By = D. Zolp Date = 21-Feb-02 Checked By = *KV. Ze*

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

Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Compound	TCE	cis-1,2-DCE	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)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	
1st Yr, 1st Qtr	24-Mar-00			32.00	0.48	0.00			
1st Yr, 2nd Qtr	21-Jun-00	89		37.00	0.00	0.00			
1st Yr, 3rd Qtr	13-Sep-00	84		36.00	0.00	0.00			
1st Yr, 4th Qtr	15-Dec-00	93		38.00	0.00	0.00			
2nd Yr, 1st Qtr	4-Apr-01	110		42.00	0.43	0.00			
2nd Yr, 2nd Qtr	14-Jun-01	71		40.00	0.00	0			
2nd Yr, 3rd Qtr	2-Oct-01	110		36.00	0.00	0.00			
2nd Yr, 4th Qtr	11-Dec-01	70		0.00	0.00	0.00			

Error Check, OK if Blank DATA ERR DATA ERR DATA ERR

DATA FROM QUARTERLY SAMPLING

U Statistic = 9.5 7.5 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 = D. Zolp Date = 21-Feb-02 Checked By = *PA - CE*

State of Wisconsin
 Department of Natural Resources
 Remediation and Redevelopment Program

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Site Name = Lime Kiln Park Grafton Wisconsin Wisconsin BRRTS No. = 03-72-000001 Well Number = P3B

Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Compound	1,1,1-TCA	1,1-DCE	1,1-DCA	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)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	
1st Yr, 1st Qtr	24-Mar-00		0.00	0.00	0.00	0.00			
1st Yr, 2nd Qtr	21-Jun-00	89	0.00	0.00	0.00	0.00			
1st Yr, 3rd Qtr	13-Sep-00	84	0.00	0.00	0.00	0.00			
1st Yr, 4th Qtr	15-Dec-00	93	0.00	0.00	0.00	0.00			
2nd Yr, 1st Qtr	4-Apr-01	110	0.00	0.00	0.00	0.00			
2nd Yr, 2nd Qtr	14-Jun-01	71	0.00	0.00	0.00	0.00			
2nd Yr, 3rd Qtr	2-Oct-01	110	0.00	0.00	0.00	0.00			
2nd Yr, 4th Qtr	11-Dec-01	70	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 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 = D. Zolp Date = 21-Feb-02 Checked By = R.C.

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 Department of Natural Resources
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Site Name = Lime Kiln Park Grafton Wisconsin Wisconsin BRRTS No. = 03-72-000001 Well Number = P4B

Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Compound	TCE	cis-1,2-DCE	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)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	
1st Yr, 1st Qtr	24-Mar-00			1.80	0.66	0.00			
1st Yr, 2nd Qtr	21-Jun-00	89		3.00	2.00	1.00			
1st Yr, 3rd Qtr	13-Sep-00	84		5.50	4.20	1.90			
1st Yr, 4th Qtr	15-Dec-00	93		1.60	1.20	0.89			
2nd Yr, 1st Qtr	4-Apr-01	110		5.70	3.90	1.60			
2nd Yr, 2nd Qtr	14-Jun-01	71		3.80	2.60	1.2			
2nd Yr, 3rd Qtr	2-Oct-01	110		1.10	1.20	0.52			
2nd Yr, 4th Qtr	11-Dec-01	70		4.30	2.90	0.88			

Error Check, OK if Blank DATA ERR DATA ERR DATA ERR

DATA FROM QUARTERLY SAMPLING

U Statistic = 10.0 10.5 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 = D. Zolp Date = 21-Feb-02 Checked By = *[Signature]*

State of Wisconsin
 Department of Natural Resources
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Site Name =		Lime Kiln Park	Grafton	Wisconsin	Wisconsin	BRTS No. =	03-72-000001	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)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	24-Mar-00		0.00	0.00	0.00	0.00			
1st Yr, 2nd Qtr	21-Jun-00	89	0.00	0.00	0.00	1.00			
1st Yr, 3rd Qtr	13-Sep-00	84	0.00	0.00	0.00	1.90			
1st Yr, 4th Qtr	15-Dec-00	93	0.00	0.00	0.00	0.89			
2nd Yr, 1st Qtr	4-Apr-01	110	0.00	0.00	0.00	1.60			
2nd Yr, 2nd Qtr	14-Jun-01	71	0.00	0.00	0.00	1.20			
2nd Yr, 3rd Qtr	2-Oct-01	110	0.00	0.00	0.00	0.52			
2nd Yr, 4th Qtr	11-Dec-01	70	0.00	0.00	0.00	0.88			
Error Check, OK if Blank								DATA ERR	DATA ERR
DATA FROM QUARTERLY SAMPLING									
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 =		D. Zolp		Date =		21-Feb-02		Checked By = <i>[Signature]</i>	

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Site Name = Lime Kiln Park Grafton Wisconsin Wisconsin BRRTS No. = 03-72-000001 Well Number = P7B

Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Compound	TCE	cis-1,2-DCE	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)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	
1st Yr, 1st Qtr	24-Mar-00			0.90	0.00	0.00			
1st Yr, 2nd Qtr	21-Jun-00	89		1.00	0.00	0.00			
1st Yr, 3rd Qtr	13-Sep-00	84		1.10	0.58	0.00			
1st Yr, 4th Qtr	15-Dec-00	93		0.75	0.53	0.35			
2nd Yr, 1st Qtr	4-Apr-01	110		0.90	0.61	0.00			
2nd Yr, 2nd Qtr	14-Jun-01	71		2.40	0.88	0			
2nd Yr, 3rd Qtr	2-Oct-01	110		5.50	2.30	0.24			
2nd Yr, 4th Qtr	11-Dec-01	70		4.30	1.60	0.00			

Error Check, OK if Blank DATA ERR DATA ERR DATA ERR

DATA FROM QUARTERLY SAMPLING

U Statistic =	13.5	16.0	7.5	DATA ERR	DATA ERR	DATA ERR
Trend at 90 % probability or more?	Increasing	Increasing	No Trend	DATA ERR	DATA ERR	DATA ERR

Data Entry By = D. Zolp Date = 21-Feb-02 Checked By = *[Signature]*

State of Wisconsin
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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)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	24-Mar-00		0.00	0.00	0.00	0.00			
1st Yr, 2nd Qtr	21-Jun-00	89	0.00	0.00	0.00	0.00			
1st Yr, 3rd Qtr	13-Sep-00	84	0.00	0.00	0.00	0.00			
1st Yr, 4th Qtr	15-Dec-00	93	0.00	0.00	0.00	0.35			
2nd Yr, 1st Qtr	4-Apr-01	110	0.00	0.00	0.00	0.00			
2nd Yr, 2nd Qtr	14-Jun-01	71	0.00	0.00	0.00	0.00			
2nd Yr, 3rd Qtr	2-Oct-01	110	0.00	0.00	0.00	0.24			
2nd Yr, 4th Qtr	11-Dec-01	70	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	7.5	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 =		D. Zolp		Date =		21-Feb-02 Checked By = <i>B. J. E.</i>			

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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)	Days After Prev. Rnd.	Compound	TCE	cis-1,2-DCE	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)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	
1st Yr, 1st Qtr	24-Mar-00			69.00	120.00	37.00			
1st Yr, 2nd Qtr	21-Jun-00	89		76.00	140.00	28.00			
1st Yr, 3rd Qtr	13-Sep-00	84		88.00	150.00	11.00			
1st Yr, 4th Qtr	15-Dec-00	93		93.00	150.00	14.00			
2nd Yr, 1st Qtr	4-Apr-01	110		90.00	160.00	23.00			
2nd Yr, 2nd Qtr	14-Jun-01	71		90.00	170.00	28			
2nd Yr, 3rd Qtr	2-Oct-01	110		73.00	160.00	35.00			
2nd Yr, 4th Qtr	11-Dec-01	70		42.00	98.00	27.00			

Error Check, OK if Blank DATA ERR DATA ERR DATA ERR

DATA FROM QUARTERLY SAMPLING

U Statistic = 7.0 12.0 9.5 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 = D. Zolp Date = 21-Feb-02 Checked By = *RC*

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Site Name =		Lime Kiln Park	Grafton	Wisconsin	Wisconsin	BRRTS No. =	03-72-000001	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)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	24-Mar-00		12.00	0.00	35.00	37.00			
1st Yr, 2nd Qtr	21-Jun-00	89	10.00	0.00	38.00	28.00			
1st Yr, 3rd Qtr	13-Sep-00	84	13.00	0.00	41.00	11.00			
1st Yr, 4th Qtr	15-Dec-00	93	12.00	0.91	43.00	14.00			
2nd Yr, 1st Qtr	4-Apr-01	110	14.00	0.91	49.00	23.00			
2nd Yr, 2nd Qtr	14-Jun-01	71	15.00	0.91	52.00	28.00			
2nd Yr, 3rd Qtr	2-Oct-01	110	14.00	1.10	47.00	35.00			
2nd Yr, 4th Qtr	11-Dec-01	70	8.20	1.10	30.00	27.00			
Error Check, OK if Blank							DATA ERR	DATA ERR	
DATA FROM QUARTERLY SAMPLING									
U Statistic =			12.0	15.0	12.0	9.5	DATA ERR	DATA ERR	
Trend at 90 % probability or more?			No Trend	Increasing	No Trend	No Trend	DATA ERR	DATA ERR	
Data Entry By =		D. Zolp		Date =	21-Feb-02		Checked By = <i>BD. Ze</i>		

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Site Name = Lime Kiln Park Grafton Wisconsin Wisconsin BRRTS No. = 03-72-000001 Well Number = P8B

Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Compound	TCE	cis-1,2-DCE	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)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	
1st Yr, 1st Qtr	24-Mar-00			51.00	69.00	0.00			
1st Yr, 2nd Qtr	21-Jun-00	89		89.00	98.00	0.00			
1st Yr, 3rd Qtr	13-Sep-00	84		95.00	130.00	0.77			
1st Yr, 4th Qtr	15-Dec-00	93		100.00	130.00	0.66			
2nd Yr, 1st Qtr	4-Apr-01	110		110.00	140.00	0.99			
2nd Yr, 2nd Qtr	14-Jun-01	71		130.00	170.00	1.4			
2nd Yr, 3rd Qtr	2-Oct-01	110		120.00	180.00	1.80			
2nd Yr, 4th Qtr	11-Dec-01	70		110.00	150.00	3.10			

Error Check, OK if Blank DATA ERR DATA ERR DATA ERR

DATA FROM QUARTERLY SAMPLING

U Statistic =	16.0	16.0	16.0	DATA ERR	DATA ERR	DATA ERR
Trend at 90 % probability or more?	Increasing	Increasing	Increasing	DATA ERR	DATA ERR	DATA ERR

Data Entry By = D. Zolp Date = 21-Feb-02 Checked By = *[Signature]*

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/techr110c.pdf>

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

Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Compound	1,1,1-TCA	1,1-DCE	1,1-DCA	Vinyl Chloride	Concentration	Concentration
			Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	(leave blank if no data)	(leave blank if no data)	
1st Yr, 1st Qtr	24-Mar-00			0.00	0.00	0.00	0.00		
1st Yr, 2nd Qtr	21-Jun-00	89		1.00	0.00	0.00	0.00		
1st Yr, 3rd Qtr	13-Sep-00	84		1.10	0.00	1.00	0.77		
1st Yr, 4th Qtr	15-Dec-00	93		1.20	0.91	0.96	0.66		
2nd Yr, 1st Qtr	4-Apr-01	110		0.00	0.91	1.10	0.99		
2nd Yr, 2nd Qtr	14-Jun-01	71		1.40	0.91	1.30	1.40		
2nd Yr, 3rd Qtr	2-Oct-01	110		1.80	1.10	1.60	1.80		
2nd Yr, 4th Qtr	11-Dec-01	70		0.00	1.10	1.40	3.10		

Error Check, OK if Blank DATA ERR DATA ERR

DATA FROM QUARTERLY SAMPLING

U Statistic = 9.0 15.0 16.0 16.0 DATA ERR DATA ERR
 Trend at 90 % probability or more? No Trend Increasing Increasing Increasing DATA ERR DATA ERR

Data Entry By = D. Zolp Date = 21-Feb-02 Checked By = *[Signature]*

State of Wisconsin
 Department of Natural Resources
 Remediation and Redevelopment Program

Mann-Whitney U Statistical Test
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Site Name = Lime Kiln Park Grafton Wisconsin Wisconsin BRRTS No. = 03-72-0000001 Well Number = P9B

Event	Sampling Date (most recent last)	Days After Prev. Rnd.	Compound	TCE	cis-1,2-DCE	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)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	
1st Yr, 1st Qtr	24-Mar-00			1.20	0.00	0.00			
1st Yr, 2nd Qtr	21-Jun-00	89		2.00	0.00	0.00			
1st Yr, 3rd Qtr	13-Sep-00	84		2.80	0.41	0.00			
1st Yr, 4th Qtr	15-Dec-00	93		3.40	0.44	0.22			
2nd Yr, 1st Qtr	4-Apr-01	110		3.20	0.55	0.19			
2nd Yr, 2nd Qtr	14-Jun-01	71		0.00	0.00	0			
2nd Yr, 3rd Qtr	2-Oct-01	110		0.00	0.00	0.00			
2nd Yr, 4th Qtr	11-Dec-01	70		0.00	0.00	0.00			

Error Check, OK if Blank DATA ERR DATA ERR DATA ERR
 DATA FROM QUARTERLY SAMPLING

U Statistic = 3.0 7.0 7.5 DATA ERR DATA ERR DATA ERR
 Trend at 90 % probability or more? Decreasing No Trend No Trend DATA ERR DATA ERR DATA ERR

Data Entry By = D. Zolp Date = 21-Feb-02 Checked By = *[Signature]*

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/techr110c.pdf>

Site Name =		Lime Kiln Park	Grafton	Wisconsin	Wisconsin	BRRTS No. =	03-72-0000001	Well Number =	P9B
	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)	Concentration (leave blank if no data)
1st Yr, 1st Qtr	24-Mar-00		0.86	0.00	0.00	0.00			
1st Yr, 2nd Qtr	21-Jun-00	89	0.00	0.00	0.00	0.00			
1st Yr, 3rd Qtr	13-Sep-00	84	0.00	0.00	0.00	0.00			
1st Yr, 4th Qtr	15-Dec-00	93	0.60	0.00	0.00	0.22			
2nd Yr, 1st Qtr	4-Apr-01	110	0.00	0.00	0.00	0.19			
2nd Yr, 2nd Qtr	14-Jun-01	71	0.00	0.00	0.00	0			
2nd Yr, 3rd Qtr	2-Oct-01	110	0.00	0.00	0.00	0.00			
2nd Yr, 4th Qtr	11-Dec-01	70	0.00	0.00	0.00	0.00			
Error Check, OK if Blank								DATA ERR	DATA ERR
DATA FROM QUARTERLY SAMPLING									
U Statistic =			4.0	8.0	8.0	7.5	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 =		D. Zolp		Date =		21-Feb-02		Checked By = <i>[Signature]</i>	

APPENDIX E
REVISED MONITORING PLAN

APPENDIX E

REVISED 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

- LH2 - 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)

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