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Inc. 500

SITE INVESTIGATION REPORT

DECORAH SHOPPING CENTER ANNEX
1011-1025 SOUTH MAIN STREET
WEST BEND, WISCONSIN 53095
WDNR BRRTS #: 02-87-151266
WDNR FID #: 267161400 BRR/ERP
LAND RECYCLING ACT #: F-66

April 8, 1999

PREPARED FOR:

CONTINENTAL PROPERTIES COMPANY, INC.
W133 N3560 EXECUTIVE PARKWAY
MENOMONEE FALLS,
WISCONSIN 53052

SITE INVESTIGATION REPORT

DECORAH SHOPPING CENTER ANNEX
1011-1025 SOUTH MAIN STREET
WEST BEND, WISCONSIN 53095
WDNR BRRTS #: 02-67-151266
WDNR FID #: 2671611400 BRR/ERP
LAND RECYCLING ACT #: P-65

April 8, 1999

PREPARED FOR:

CONTINENTAL PROPERTIES COMPANY, INC.
W133 N8569 EXECUTIVE PARKWAY
MENOMONEE FALLS, WISCONSIN 53052

KEY ENGINEERING GROUP, LTD.

Rachel A. Ames
Staff Hydrogeologist

Curtis M. Hoffart, CHMM
Staff Scientist

Gregory L. Johnson, CHMM, P.G., P.E.
Manager of Technical Services

NR 700 SUBMITTAL CERTIFICATIONS

"I, Gregory L. Johnson, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03(1), Wisconsin Administrative Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in Chapters NR 700 to 726, Wisconsin Administrative Code."

Signature

4/8/99
Date

"I, Gregory L. Johnson, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wisconsin Administrative Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wisconsin Administrative Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wisconsin Administrative Code."

Signature

Stamp

FILE NO. 0702007.SIR

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EXECUTIVE SUMMARY

A limited subsurface exploration (SE) was conducted at the site to determine whether two former diesel aboveground storage tanks (ASTs), the long-term operation of a dry cleaning business and potential off-site contaminant migration through a utility corridor west of the site impacted site soil or groundwater. Tetrachloroethene (PCE) was detected in site soil and groundwater in the vicinity of the on-site dry cleaning business. The SE results did not indicate the presence of subsurface impacts associated with the other potential contaminant sources.

The objective of the site investigation (SI) was to define the degree and extent of soil and groundwater impacts associated with the dry cleaning operation. The SI consisted of seven soil borings/probes, five of which were converted to groundwater monitoring wells and one of which was converted to a piezometer.

The subsurface soils encountered generally consisted of sandy silt and silty sand to approximately 24 feet below ground surface (bgs). Gray silty clay was encountered to a depth of 28 feet bgs, the maximum depth explored. The depth to groundwater at the site ranged from approximately 6 to 10 feet bgs, and groundwater elevation measurements indicated a northeast groundwater flow direction at the site.

The SI results indicated that the degree and extent of the soil and groundwater contamination apparently associated with former dry cleaning activities at the site has been sufficiently delineated. The SI conclusions are summarized as follow:

- Approximately 1,000 cubic yards of unsaturated soils are impacted with detectable concentrations of PCE.
- Based on a comparison of detected soil contaminant concentrations to calculated site specific residual contaminant levels (SSRCLs), soil contaminant concentrations likely do not represent a potential source to further groundwater impacts with the presence of a relatively impermeable site surface (i.e. asphalt).
- No groundwater contaminant concentrations were detected at NR 141 groundwater monitoring wells at concentrations exceeding NR 140 enforcement standards (ESs).
- PCE was detected at concentrations exceeding the NR 140 ES in samples collected from two temporary well points (GP-4 and GP-7); however, the concentrations appear to have a high bias based on a comparison to NR 141 monitoring well groundwater data. Therefore, groundwater analytical data collected from NR 141 monitoring wells are considered more representative of site groundwater quality.
- Based on a site conceptual model, the only reasonable potential exposure pathway from the site contaminants is the ingestion or inhalation of impacted surficial soils during potential future excavation or utility activities east of the building. However, calculated direct contact SSRCL results indicated that there is not an excess risk (1E-06) associated with this direct contact exposure pathway.

Based on these conclusions, case closure and a Voluntary Party Liability Exemption Program "Certificate of Completion" will be requested in accordance with NR 726 and NR 750, respectively. It is likely case closure will be contingent upon the maintenance of a relatively impermeable surface to maintain the applicability of the developed SSRCLs; therefore, a draft deed restriction will be included with the case closure request.

1.0 INTRODUCTION

This *Site Investigation Report (SI Report)* for the Decorah Shopping Center Annex site located in West Bend, Wisconsin was prepared and is being submitted on behalf of the Continental Properties Company, Inc. (Continental) to the Wisconsin Department of Natural Resources (WDNR) by Key Engineering Group, Ltd. (KEY). This report was prepared in accordance with Chapter NR 716 of the Wisconsin Administrative Code (WAC).

1.1 Purpose of Site Investigation

A limited subsurface exploration (SE) was performed at the site on April 18, 1997 to determine whether soil and/or groundwater impacts existed due to the former utilization of two 275-gallon diesel aboveground storage tanks (ASTs), the long-term operation of a dry cleaning business on site and potential off-site contamination migration through a utility corridor west of the site. The SE data indicated that soils and groundwater in the vicinity of the dry cleaner currently in operation in the south end of the shopping center were impacted with tetrachloroethene (PCE).

The WDNR was notified of the limited SE data by KEY in a *Notification of Soil and Groundwater Contamination* letter, dated June 9, 1997. The WDNR responded in a letter dated June 23, 1997, which directed Continental to manage the contamination in accordance with NR 700 through 728.

1.2 Objective and Scope of Site Investigation

The objective of the site investigation (SI) was to define the degree and extent of soil and groundwater impacts associated with the dry cleaning operation, which was the suspected source of the chlorinated volatile organic compound (VOC) impacts in site soil and groundwater.

The objective of the SI was met by advancing soil borings; collecting and analyzing soil samples; installing groundwater quality monitoring wells (water table observation wells) and a piezometer; collecting and analyzing groundwater samples; measuring groundwater levels within each monitoring well and the piezometer to establish the groundwater gradient and flow direction; and conducting hydraulic conductivity testing on select monitoring wells. The soil and groundwater samples were analyzed for VOCs. The sample results were compared with calculated site specific residual contaminant levels (SSRCLs) and NR 140 groundwater quality standards.

2.0 GENERAL INFORMATION

2.1 Site Investigation Contacts

Site Owner:

Continental Properties Company, Inc.
Contact: Mr. Thomas Keenan
W133 N8569 Executive Parkway
Menomonee Falls, Wisconsin 53052
Phone: (414) 502-5500
Fax: (414) 502-5522

Environmental Consultant:

Key Engineering Group, Ltd.
Contact: Mr. Curtis M. Hoffart
W66 N215 Commerce Court
Cedarburg, Wisconsin 53012
Phone: (414) 375-4750
Fax: (414) 375-9680

Drilling Contractor:

Giles Engineering & Associates, Inc. (Giles)
N8 W22350 Johnson Road
Suite A1
Waukesha, Wisconsin 53186
Phone: (414) 544-0118
Fax: (414) 549-5868

Laboratory Contractor:

Analytical Process Laboratories, Inc. (APL)
8222 West Calumet Road
Milwaukee, Wisconsin 53223
Phone: (414) 355-5800
Fax: (414) 355-3099

2.2 Site Location

The site is situated in the southwest ¼ of the northwest ¼ of Section 24, Township 11 North, Range 19 East, City of West Bend, Washington County, Wisconsin. The site, which is referenced by the street address 1011-1025 South Main Street, is located on the east side of South Main Street, on the south side of the City of West Bend. The site location is depicted on Figure 1.

2.3 Site Description

The site consists approximately of 0.9 acres. The site is occupied by one 12,800 square foot concrete block and brick building, which is utilized as a multi-tenant shopping center (strip mall). The north half of the building includes a 4,844 square foot basement. Mr. Bob's One Hour Dry Cleaning is located in the south end of the shopping center. The remainder of the site generally consists of an asphalt parking lot and asphalt drives. The site is bound to the north, south and west by commercial properties and to the east by residential properties. A site map is provided as Figure 2.

3.0 BACKGROUND INFORMATION

KEY conducted a limited SE at the site on April 18, 1997 to determine whether soil and/or groundwater impacts existed due to the former utilization of two diesel ASTs at the site, the long term operation of a dry cleaning business on-site and potential off-site contamination migration through utility corridor located west of the site in South Main Street. The SE consisted of six soil probes (GP-1 through GP-6) advanced as follows: GP-1 and GP-2 were advanced adjacent to the utility corridor in the South Main Street right-of-way (ROW); GP-3 and GP-4 were advanced east of the building in the vicinity of the suspected location of the former diesel ASTs; and GP-5 and GP-6 were advanced adjacent to the current dry cleaning operation located in the south end of the building. Temporary well points were installed at two soil probe locations (GP-2 and GP-4). The soil probe locations are depicted on Figure 2.

The SE analytical results indicated that PCE was detected in soil and groundwater near the southeast corner of the site building. The soil and groundwater sample analytical results were documented in KEY's *Site Investigation Work Plan (SI Work Plan)*, dated February 3, 1998, and are included on Figures 5 and 6, respectively.

Continental applied to the Voluntary Party Liability Exemption (VPLE) Program (formerly Contaminated Land Recycling Program) on August 4, 1997 and was accepted into the program on August 28, 1997. Active WDNR involvement was subsequently obtained prior to the SI.

4.0 SITE INVESTIGATION PROCEDURES

4.1 General

The SI involved advancing soil borings; collecting soil samples; installing, developing and sampling and slug testing groundwater monitoring wells and a piezometer; and evaluating the soil and groundwater sample analytical results. The SI was completed between March 1998 and February 1999. The SI included advancing a total of eight soil borings/probes and installing five groundwater monitoring wells and one piezometer. The locations of the soil borings/probes, monitoring wells, and the piezometer are depicted on Figure 2.

The following is a chronological summary of the SI field investigation:

- April 1, 1998: six soil borings (B-1 through B-6) were drilled and four groundwater monitoring wells (MW-1, MW-2, MW-3 and MW-4) and one piezometer (P-1) were constructed by Giles.
- April 7, 1998: KEY developed and sampled MW-1, MW-2, MW-3, MW-4 and P-1.
- April 22, 1998: KEY measured water levels in all monitoring wells and the piezometer and conducted in-situ hydraulic conductivity (slug) testing at MW-1, MW-2, MW-3, MW-4 and P-1.
- July 31, 1998: KEY purged and sampled MW-1, MW-2, MW-3, MW-4 and P-1.
- October 23, 1998: one soil probe (GP-7) was advanced east of the site on the residential property owned by Ms. Agnes Vorphal by Giles, a temporary well point was installed in the soil probe, and a groundwater sample was collected.
- February 2, 1999: one soil boring (B-7) was drilled and converted to a groundwater monitoring well (MW-5) on Ms. Vorphal's property by Giles.
- February 9, 1999: KEY developed and sampled MW-5.

4.2 Previous Site Investigation Documentation

Because the WDNR was providing active oversight under the VPLE Program, the rationale and progression of SI activities were approved by the WDNR during the field investigation. The following letter correspondence prepared by KEY document the SI activities and rationale for the progression of the activities throughout the SI:

- *Changes to Site Investigation Work Plan* letter to WDNR, March 24, 1998
- *Off-Site Access Considerations* letter to WDNR, August 10, 1998
- *Project Status Update* letter to WDNR, September 2, 1998
- *Notification of Investigative Derived Groundwater Disposal* letter to WDNR, October 12, 1998
- *Example Contractor Agreement* letter to Ms. Vorphal, October 12, 1998
- *Project Status Update* letter to WDNR, November 16, 1998

4.3 Site Investigation Methods

Soil borings; soil sampling; soil sample field screening and laboratory analysis; groundwater monitoring well and piezometer construction, development and sampling; hydraulic conductivity (slug) testing; and quality assurance/quality control were conducted in accordance with the methods described in the *SI Work Plan* (KEY, 1998). Soil borings were advanced to depths ranging from approximately 13.5 to 28 feet below ground surface (bgs). The soil boring logs, the completed borehole abandonment forms, and photoionization detector (PID) calibration sheets are included in Appendix 1. The monitoring well and piezometer construction and development forms are included in Appendix 2. Slug testing documentation is provided in Appendix 3.

As indicated in KEY's March 24, 1998 letter titled *Changes to Site Investigation Work Plan*, a Geoprobe® unit was utilized initially to collect soil and groundwater samples on Ms. Vorphal's property. Soil samples were collected in acetate lined, 2-foot long, 1.25-inch diameter stainless steel samplers using this method. Soil sample field screening, classification and laboratory submittal procedures were consistent with those documented in the *SI Work Plan*.

Giles collected a groundwater sample from the temporary well point in GP-7 with a stainless steel bailer. The groundwater sample was immediately transferred into appropriately preserved laboratory supplied containers and placed on ice. Following the collection of the groundwater sample, GP-7 was abandoned in accordance with NR 141. The GP-7 borehole abandonment form is included in Appendix 2.

4.4 Management of Investigation Derived Waste

Soil cuttings generated during the drilling activities were containerized in 55-gallon drums and stored on-site. The soil cuttings were segregated per soil boring location. Waste classification of each drum and the selected disposal option was based on whether the soil sample analytical results indicated that PCE was detected at the soil boring locations. Three drums of soil generated from soil borings where PCE was not detected were disposed of as a non-hazardous solid waste by One Step Environmental, Inc. in October 1998. Four drums generated from soil borings where PCE was detected were picked up by One Step Environmental, Inc. as hazardous waste and transported to Pollution Control Industries in East Chicago, Illinois for treatment. Monitoring well development water and purge water from sampling was also containerized in 55-gallon drums. Three drums of water were disposed of as non hazardous liquid waste by One Step Environmental, Inc. in October 1998. The water disposal method was documented in KEY's *Notification of Investigative Derived Groundwater Disposal* letter, dated October 12, 1998. Investigation derived waste disposal documentation is included in Appendix 4.

5.0 SITE INVESTIGATION RESULTS

5.1 Site Geology

Soil conditions encountered at each soil boring location are detailed on the boring logs in Appendix 1. The site geology is depicted in schematic cross-sections on Figures 3A and 3B.

The soils encountered below the asphalt pavement and base coarse consisted of light brown to black sandy silt and silty sand with varying amounts of clay to approximately 5 feet bgs. From approximately 5 to 11 feet bgs, the soils consisted of brown to gray fine to medium grained sand which was underlain by brown to gray fine silty sand and sandy silt with a little silty clay from approximately 11 to 24 feet bgs. From approximately 24 to 28 feet bgs, the maximum depth explored, gray silty clay was encountered.

The results of laboratory grain size distribution testing generally indicated that soils collected adjacent to the screens of MW-1, MW-2, MW-3 and MW-4 consisted of approximately 35 to 50 percent fine sand and 50 to 65 percent of silt and/or clay. The soils collected adjacent to the screen of P-1 consisted of approximately 20 percent sand and 80 percent silt/clay. The results of laboratory bulk density testing indicate that the bulk density of the unsaturated site soils is 1.7 or 1.8 grams per cubic centimeter. The grain size distribution and bulk density testing results are included in APL's laboratory report included in Appendix 5.

5.2 Site Hydrogeology

The depth to groundwater ranged from approximately 6 to 10 feet bgs. Groundwater elevation data is presented in Table 1 and a groundwater elevation contour map is depicted on Figure 4. Based on the groundwater elevation contour map, the site specific groundwater flow direction is toward the northeast with an average gradient of approximately 0.028 feet/foot (ft/ft).

The site specific hydraulic conductivity was determined by reducing slug test data (rising and falling head tests) using AQTESOLV software and evaluating the hydraulic conductivity test results. Applicable results were used to calculate a geometric mean hydraulic conductivity for the site. The geometric mean hydraulic conductivity was determined to be approximately 1.3E-03 centimeters per second. Slug test data is presented in Appendix 3.

5.3 Soil Sample Field Screening and Laboratory Analytical Results

The soil sample field screening and laboratory analytical results are summarized on Table 2 and depicted on Figure 5. Select soil sample and field screening results are also presented on schematic cross-section on Figures 3A and 3B. The APL laboratory reports and chain of custody forms are included in Appendix 5.

The results of field screening indicated that no PID readings greater than background levels were measured in any of the collected soil samples.

The soil sample analytical results indicated that PCE was detected in unsaturated soils at B-4 and B-5 at concentrations ranging from 31 to 212 micrograms per kilogram (µg/kg). PCE was also detected at GP-7 at 6 to 8 feet bgs (107 µg/kg). Because this soil sample was collected from the apparent soil/groundwater interface and PCE was not detected in a soil sample collected at 2 to 4 feet bgs at GP-7, this PCE concentration is likely associated with minimal groundwater impacts in the vicinity of GP-7. Several other relatively low concentrations of VOCs were detected on-site; however, none of the concentrations exceeded applicable NR 720 generic residual contaminant levels (GRCLs) for those compounds for which they are established. Benzene was detected at a concentration greater than the NR 720 GRCL near the soil/groundwater interface (6 to 8 feet bgs) at GP-7. Benzene was not detected at GP-7 at 2 to 4 feet bgs.

Total organic carbon (TOC) analytical results for soil samples collected from B-1 (1 to 3 feet bgs), B-2 (3.5 to 5.5 feet bgs) and B-3 (1 to 3 feet bgs) indicated concentrations of 18,500 milligrams per kilogram (mg/kg), 10,100 mg/kg and 66,100 mg/kg, respectively. The average TOC content was 31,567 mg/kg.

5.4 Groundwater Sample Laboratory Analytical Results

The groundwater analytical results are summarized in Table 3 and depicted on Figure 6. Select groundwater sample analytical results are presented in schematic cross-section on Figures 3A and 3B. The APL laboratory reports and chain of custody forms are included in Appendix 6.

The groundwater sample analytical results indicated that no detected PCE concentrations exceeded the NR 140 ES with the exception of the concentration detected in the groundwater sample collected from the GP-7 temporary well point (10 micrograms per liter (µg/l)). Detected PCE concentrations at MW-3, MW-4 and MW-5 (placed adjacent to the location of GP-7) exceeded the NR 140 preventive action limit (PAL).

There appears to be inconsistencies in groundwater data collected from temporary wells (soil probes) and monitoring wells constructed in accordance with NR 141. The PCE concentration detected at MW-3, located immediately downgradient from the highest PCE concentrations in soil and groundwater (GP-4), did not exceed the NR 140 ES; however, the PCE concentration detected in groundwater at GP-7, located further downgradient, exceeded the NR 140 ES. Additionally, the PCE detection at MW-5 located immediately adjacent to GP-7 did not exceed the NR 140 ES. These results suggest that the groundwater sample collection process from soil probes/temporary well points has resulted in high bias groundwater concentrations (likely due to the advancement of soil impacts to the water table during probe advancement and/or the collection of groundwater samples containing higher volumes of sediment from the probe hole than those collected from NR 141 monitoring wells).

6.0 CONCEPTUAL SITE MODEL

6.1 General

A conceptual site model was developed to evaluate the risk posed by contaminants present at the site to potential contaminant receptors in the vicinity of the site. This evaluation consisted of the characterization of contaminant sources (primary and secondary), potential contaminant transport mechanisms, exposure pathways and receptors. The conceptual site model is depicted on Figure 7.

6.2 Primary and Secondary Contaminant Sources

The primary contaminant sources at the site are former practices associated with the long-term operation of dry cleaning business at the site. The secondary contaminant sources include impacted surficial and subsurface soils and the dissolved groundwater plume.

6.2.1 Development of Site Specific Soil Standards

6.2.1.1 Groundwater Risk

Algorithm Input Parameter Selection

A SSRCL evaluation was performed for PCE in accordance with NR 720. The SSRCL evaluation documentation is provided in Appendix 7.

Soil:water partitioning is predominantly a function of the organic carbon:water partitioning coefficient (K_{oc}) for PCE and the organic carbon content (f_{oc}) of the soil. The K_{oc} value was obtained from applicable references. A site specific value for f_{oc} was determined as the average of soil sample TOC analytical results.

An equilibrium soil:water partitioning algorithm for migration to groundwater presented in Draft WDNR (NR 700) guidance was utilized for the calculation of SSRCLs. The SSRCL developed using this algorithm indicates what soil concentration in the groundwater "mixing" zone would result in an exceedance to NR 140 PALs based on site specific conditions. The dilution factor presented in NR 720.09(3)(b) was applied to this equation to account for the dilution of the contaminant in the groundwater "mixing" zone. Site specific hydraulic conductivity, gradient, and soil sample analytical data were used in calculating this dilution factor. The dilution factor was calculated using the WDNR default infiltration rate and using an assumed 1 percent of the WDNR default infiltration rate (likely more representative of site conditions). The algorithm and input parameter data are documented in Appendix 7.

Sensitivity Analysis

A sensitivity analysis was performed to determine how the algorithm results are influenced by a potential variation in input parameter values. The range of values used for the sensitivity parameters was based on applicable ranges presented in the literature or based on a typical

variation in the parameter. K_{oc}, f_{oc} and hydraulic conductivity, which based on experience are the most sensitive input parameters, were varied during the sensitivity analysis.

Evaluation Results

The results of the SSRCL evaluation, including the baseline and sensitivity analysis evaluations, are presented in Appendix 7. The evaluation results indicated that the baseline SSRCL based on existing surface conditions (reduced infiltration) exceeded all the detected PCE concentrations in soil during the SE and SI.

6.2.1.2 Direct Contact Risk

In order to further evaluate the direct contact risk, KEY developed direct contact exposure pathway SSRCLs in accordance with NR 720 using standard algorithms presented in WDNR Publication RR-519-97 (April 1997 corrected), *Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guidance*. The direct contact exposure pathway SSRCL evaluation was conducted to determine the concentrations of PCE which represent an excess human health risk due to contaminant ingestion or inhalation. Direct contact exposure pathway SSRCL results, algorithms, input data and sources and example calculations are provided in Appendix 8.

In addition to non-industrial and industrial SSRCL calculations, SSRCLs for a modified non-industrial land use classification were calculated. The modified non-industrial calculations utilized WDNR non-industrial default exposure assumptions and the target cancer risk (1E-06). *Soil Cleanup Levels for PAHs Interim Guidance* states that this procedure is acceptable "on a site specific basis for *in-situ* soil contamination" (see excerpt in Appendix 8).

It is KEY's opinion that considering the well established use of the standard target cancer risk level, that the modified non-industrial land use SSRCLs are the most appropriate for the site.

A comparison of the analytical results for soil samples collected from the ground surface to 4 feet bgs to the calculated SSRCLs indicated that the PCE concentrations detected on-site did not exceed the direct contact SSRCLs.

6.3 Transport Mechanisms

Based on the SI data, the primary transport mechanisms are the leaching of unsaturated soil impacts to groundwater and groundwater transport. Leaching and groundwater transport include vertical migration with infiltration through the unsaturated zone and lateral and vertical migration with the horizontal and vertical gradients in the saturated zone. It is likely that presence of stiff silty clay at depths greater than approximately 24 feet bgs limit the vertical migration of contaminants within the saturated zone.

The likely relatively higher permeability backfill materials within the sanitary sewer and natural gas utility trenches, which are located on the eastern portion of the site, could potentially serve as conduits for the migration contaminants.

6.4 Exposure Pathway and Receptor Characterization

Based on the SI data and site features, the only reasonable potential exposure pathway from the site contaminants was identified as the ingestion or inhalation (direct contact) of impacted surficial soils during potential future excavation or utility activities east of the building; however, calculated direct contact SSRCL results indicated that there is not an excess risk (1E-06) associated with this direct contact exposure pathway. Based on the PCE concentrations detected in site soil, volatilization or enclosed space accumulation of PCE vapors is likely not a significant exposure pathway. Additionally, because the vicinity of the site is serviced by municipal water, the piezometer groundwater sample analytical results indicated the lack of significant vertical migration of PCE (or breakdown products), and the surface water bodies closest to the site are approximately 2,000 feet from the site, potable and recreational water use are not likely significant exposure pathways. Based on previous discussions with West Bend Water Utility staff, the municipal wells closest to the site are more than 1 mile from the site.

7.0 SITE INVESTIGATION CONCLUSIONS

The primary SI conclusions are summarized as follows:

- The degree and extent of the soil and groundwater contamination apparently associated with former dry cleaning activities at the site has been sufficiently delineated.

- Approximately 1,000 cubic yards of unsaturated soils are impacted with detectable concentrations of PCE.

- Based on a comparison of detected soil contaminant concentrations to calculated SSRCLs, soil contaminant concentrations likely do not represent a potential source to further groundwater impacts with the presence of a relatively impermeable site surface (i.e. asphalt).

- No groundwater contaminant concentrations were detected at NR 141 groundwater monitoring wells at concentrations exceeding NR 140 ESs.

- PCE was detected at concentrations exceeding the NR 140 ES in samples collected from two temporary well points (GP-4 and GP-7); however, the concentrations appear to have a high bias based on a comparison to NR 141 monitoring well groundwater data. Therefore, groundwater analytical data collected from NR 141 monitoring wells are considered more representative of site groundwater quality.

- Based on a site conceptual model, the only reasonable potential exposure pathway from the site contaminants is the ingestion or inhalation of impacted surficial soils during potential future excavation or utility activities east of the building. However, calculated direct contact SSRCL results indicated that there is not an excess risk (1E-06) associated with this direct contact exposure pathway.

Based these conclusions, case closure and a VPLE Program "Certificate of Completion" will be requested in accordance with NR 726 and NR 750, respectively. It is likely case closure will be contingent upon the maintenance of a relatively impermeable surface to maintain the applicability of the developed SSRCLs; therefore, a draft deed restriction will be included with the case closure request.

8.0 GENERAL QUALIFICATIONS

Our study was performed using the degree of care and skill ordinarily exercised under similar circumstances, by environmental consultants practicing in this or similar localities. No other warranty or guarantee, expressed or implied, is made as to the conclusions and recommendations included in this report.

The findings of this report, to the best of knowledge, are valid as of the date of this study. However, changes in the conditions of a property can occur with the passage of time, whether due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation, from the broadening of knowledge or from other reasons. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control.

Specified information contained in this report has been obtained from publicly available sources and other secondary sources of information produced by entities other than KEY. Although care has been taken by Key Engineering Group, Ltd., in compiling this information, Key Engineering Group, Ltd., disclaims any and all liability for any errors, omissions or inaccuracies of the third parties in such in disclaims formation and data.

This report was prepared for Continental Properties Company, Inc. The report is the property of Continental Properties Company, Inc. and Key Engineering Group, Ltd., and cannot be used without written consent from both parties.

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TABLE 1

SUMMARY OF GROUNDWATER ELEVATION DATA

SITE INVESTIGATION REPORT

DECORAH SHOPPING CENTER ANNEX
1011-1025 South Main Street
West Bend, Wisconsin

WELL NO.	TOP OF PVC ELEVATION (feet MSL)	DATE	DEPTH TO GROUNDWATER (feet)	GROUNDWATER ELEVATION (feet MSL)
MW-1	937.97	4/22/98	7.21	930.76
		7/31/98	8.35	929.62
		2/9/99	7.90	930.07
MW-2	937.24	4/22/98	5.99	931.25
		7/31/98	6.94	930.30
		2/9/99	6.57	930.67
MW-3	936.75	4/22/98	8.75	928.00
		7/31/98	9.75	927.00
		2/9/99	9.80	926.95
MW-4	936.55	4/22/98	9.10	927.45
		7/31/98	10.05	926.50
		2/9/99	9.95	926.60
MW-5	934.23	2/9/99	8.01	926.22
P-1	936.57	4/22/98	8.57	928.00
		7/31/98	9.93	926.64
		2/9/99	10.31	926.26

Notes:
Top of PVC elevations for MW-1, MW-2, MW-3, MW-4, and P-1 were surveyed by Surveying Associates, Inc.
MW-5 was surveyed relative the existing monitoring wells
MSL - mean sea level

9.0 REFERENCES

American Society for Testing and Materials, E 1739 - 95, *Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites*, 1995.

American Society of Testing and Materials, *Standard Method for Penetration Test and Split-Barrel Sampling of Soil*, Designation D1586.

Draft Chapter NR 700, Wisconsin Department of Natural Resources, 1993.

EPA Region 9 PRG Tables, (http://www.epa.gov/region09/waste/sfund/prg).

Letter correspondence to Wisconsin Department of Natural Resources (miscelianeous), Key Engineering Group, Ltd.

Montgomery, J.H. (1996). *Groundwater Chemicals Desk Reference*, CRC Press, Inc.

Phase I Environmental Site Assessment, Key Engineering Group, Ltd., March 17, 1997.

Results of April 18, 1997 Limited Subsurface Exploration letter to Continental, Key Engineering Group, Ltd., April 30, 1997.

Site Investigation Work Plan, Key Engineering Group, Ltd., February 3, 1998.

Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons Interim Guidance, Wisconsin Department of Natural Resources, Publication RR-519-97, April 1997 (corrected).

United States Geological Survey, *West Bend, Wisconsin, 7.5 Minute Quadrangle (Topographic) Map, 1959, Photorevised 1971 and 1976.*

Wisconsin Administrative Code, Chapter NR 140, *Groundwater Quality Standards.*

Wisconsin Administrative Code, Chapter NR 141, *Monitoring Well Installation Procedures.*

Wisconsin Administrative Code, Chapters NR 700, *Investigation and Remediation of Environmental Contamination.*

TABLE 2

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

SITE INVESTIGATION REPORT

DECORAH SHOPPING CENTER ANNEX
1011-1025 South Main Street
West Bend, Wisconsin

	B-1		B-2	B-3	B-4		B-5		GP-7		GRCL
Depth (feet)	1-3	6-8	3.5-5.5	1-3	1-3	6-8	1-3	6-8	2-4	8-10	
Date	4/1/98	4/1/98	4/1/98	4/1/98	4/1/98	4/1/98	4/1/98	4/1/98	10/23/98	10/23/98	
PID (i.u.)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Detected VOCs (ug/kg)											
1,2,3-Trichlorobenzene	30	34	<25	<25	<25	<25	<25	<25	<25	<25	NE
Trimethylbenzenes	99	<50	<50	<50	<50	<50	<50	<50	<50	<50	NE
Naphthalene	51	36 (Q)	50	38 (Q)	42	<25	42	<25	<25	<25	400[1]
Xylenes	<50	35	<50	<50	<50	<50	<50	<50	<50	<50	4,100
MTBE	<25	43	<25	<25	<25	<25	<25	<25	<25	<25	NE
Tetrachloroethene	<25	<25	<25	<25	79	212	31	<25	<25	107	2864 [2]
Benzene	<25	<25	<25	<25	<25	<25	<25	<25	**28**	<25	5.5

Notes:
Bold concentrations exceed NR 720 GRCL
GRCL - NR 720 generic residual contaminant level based on the protection of groundwater
i.u. - instrument units
MTBE - methyl tert-butyl ether
NE - not established
PID - photoionization detector
Q - concentration detected between laboratory limit of quantitation and limit of detection
ug/kg - micrograms per kilogram
VOCs - volatile organic compounds
[1] - WDNR interim guidance
[2] - Site specific residual contaminant level based on the protection of groundwater

TABLE 3

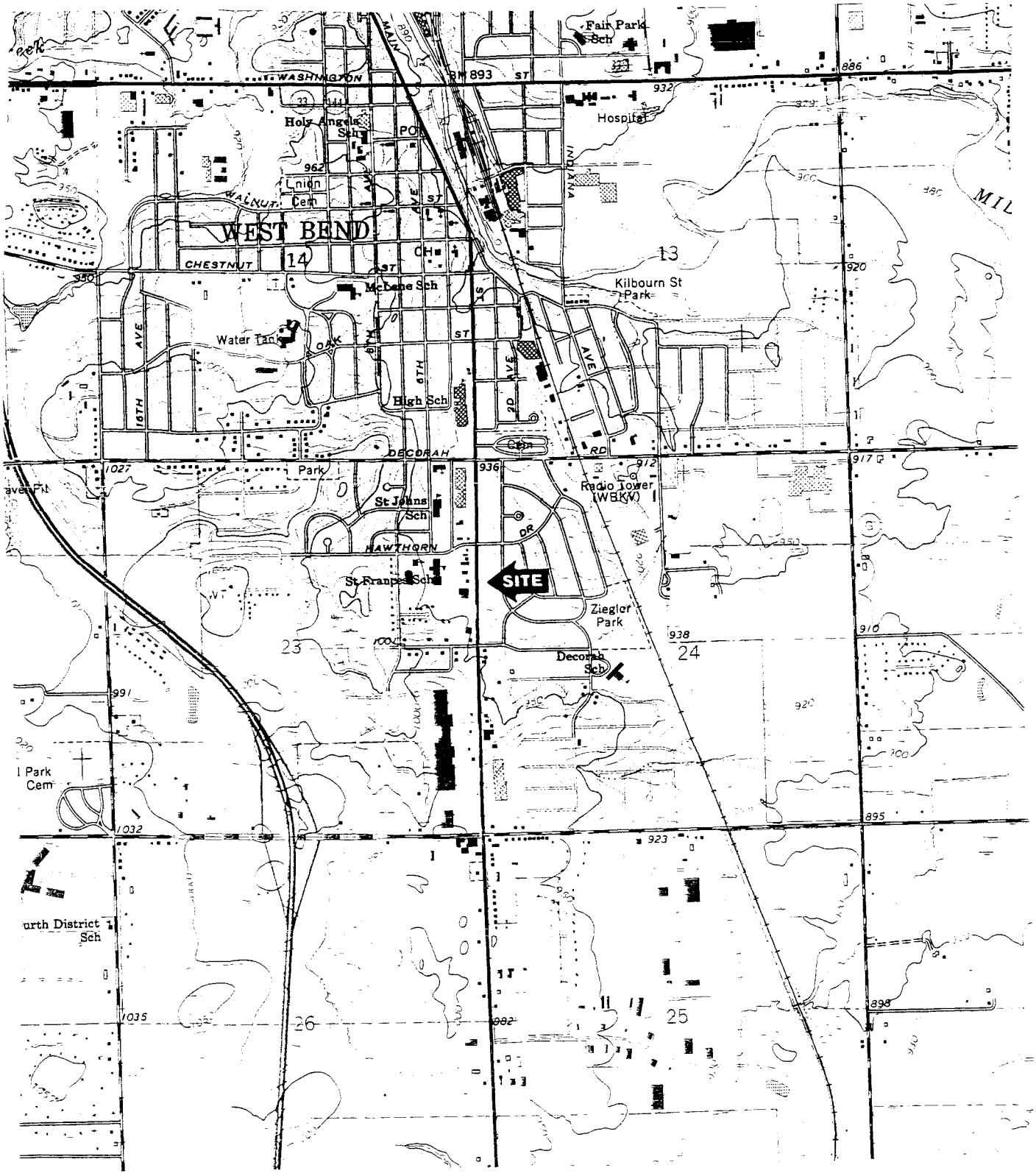
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS

SITE INVESTIGATION REPORT

DECORAH SHOPPING CENTER ANNEX
1011-1025 South Main Street
West Bend, Wisconsin

	MW-1		MW-2		MW-3		MW-3 (DUP)	MW-4		MW-4 (DUP)	MW-5	P-1		GP-7	ES	PAL
Date	4/7/98	7/31/98	4/7/98	7/31/98	4/7/98	7/31/98	4/7/98	4/7/98	7/31/98	7/31/98	2/9/99	4/7/98	7/31/98	10/23/98		
Detected VOCs (ug/l)																
Trimethylbenzenes	<0.5	<0.5	0.3 (Q)	<0.5	0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	480	96
Benzene	<0.2	<0.2	0.3 (Q)	0.2 (Q)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	5	0.5
Ethylbenzene	<0.2	<0.2	0.3 (Q)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	700	140
Xylenes	<0.6	<0.6	1.0 (Q)	<0.6	0.5 (Q)	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	620	124
MTBE	0.5 (Q)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	60	12
Isopropylbenzene	<0.2	<0.2	0.4 (Q)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NE	NE
n-Butylbenzene	<0.2	<0.2	0.4 (Q)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NE	NE
n-Propylbenzene	<0.3	<0.3	0.3 (Q)	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	NE	NE
Naphthalene	<0.5	<0.5	0.7 (Q)	<0.5	0.7 (Q)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	40	8
Tetrachloroethene	<0.3	<0.3	<0.3	<0.3	<0.3	**1.6**	<0.3	**1.9**	**0.6 (Q)**	**0.6 (Q)**	**2.5**	<0.3	<0.3	**10**	5	0.5
Trichloroethene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**0.6**	<0.2	<0.2	<0.2	5	0.5

Notes:
Bold concentrations exceed NR 140 PAL
DUP - duplicate sample
ES - NR 140 enforcement standard
MTBE - methyl tert-butyl ether
NE - not established
PAL - NR 140 preventive action limit
Q - concentration detected between laboratory limit of quantitation and limit of detection
ug/l - micrograms per liter
VOCs - volatile organic compounds
Shaded concentrations exceed NR 140 ES



N

SOURCE: *USGS West Bend, Wisconsin Quadrangle*
Topographic Map 1959
Photorevised 1971 & 1976

0 1000 2000

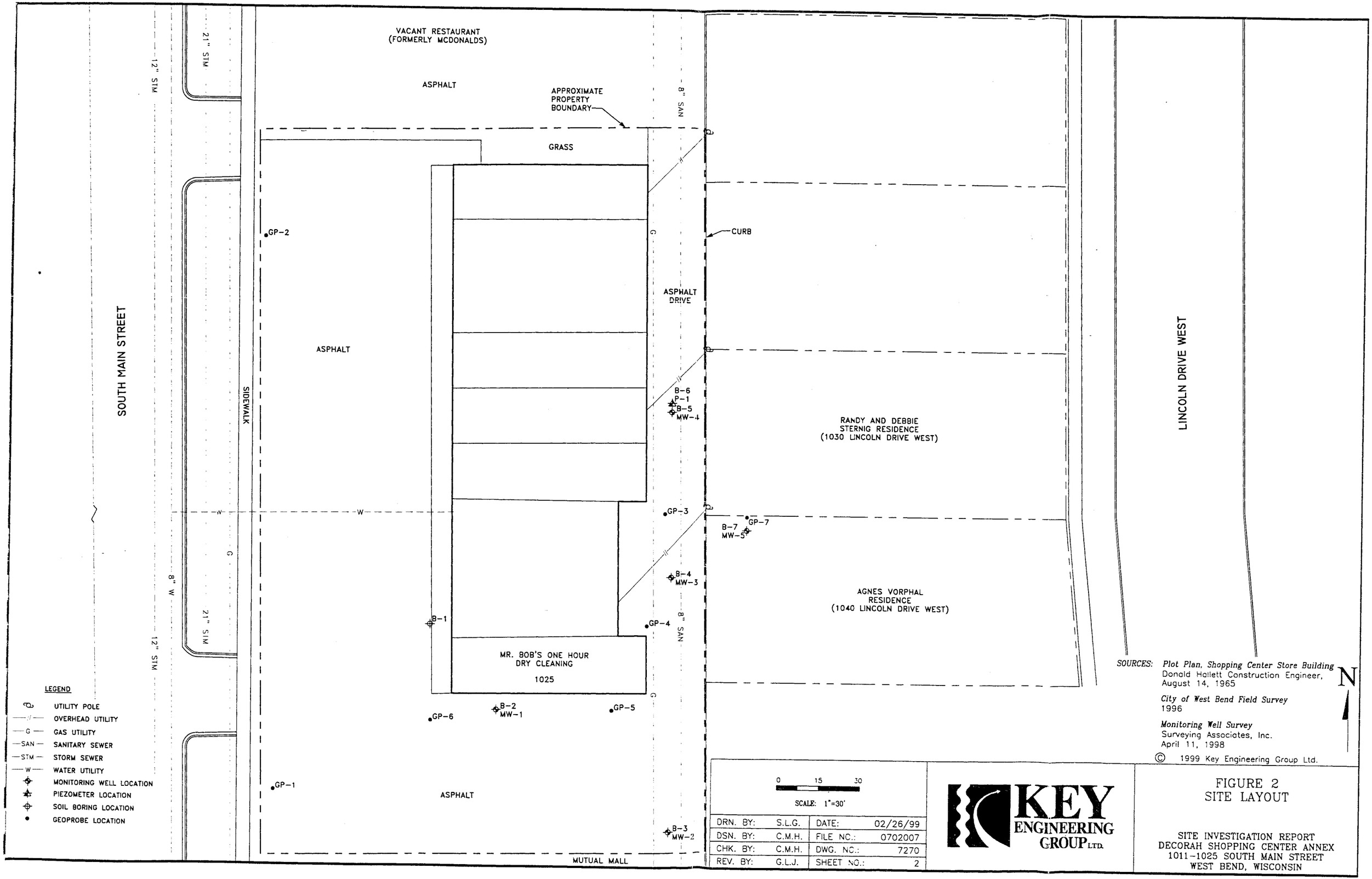
SCALE: 1"=2000'

DRN. BY:	S.L.G.	DATE:	02/24/99
DSN. BY:	C.M.H.	FILE NO.:	0702007
CHK. BY:	C.M.H.	DWG. NO.:	07020071
REV. BY:	G.L.J.	SHEET NO.:	1

KEY ENGINEERING GROUP LTD.

FIGURE 1
SITE LOCATION MAP

SITE INVESTIGATION REPORT
DECORAH SHOPPING CENTER ANNEX
1011-1025 SOUTH MAIN STREET
WEST BEND, WISCONSIN



SOURCES: *Plot Plan, Shopping Center Store Building*
Donald Hallett Construction Engineer,
August 14, 1965

City of West Bend Field Survey
1996

Monitoring Well Survey
Surveying Associates, Inc.
April 11, 1998

N

0 15 30
SCALE: 1"=30'

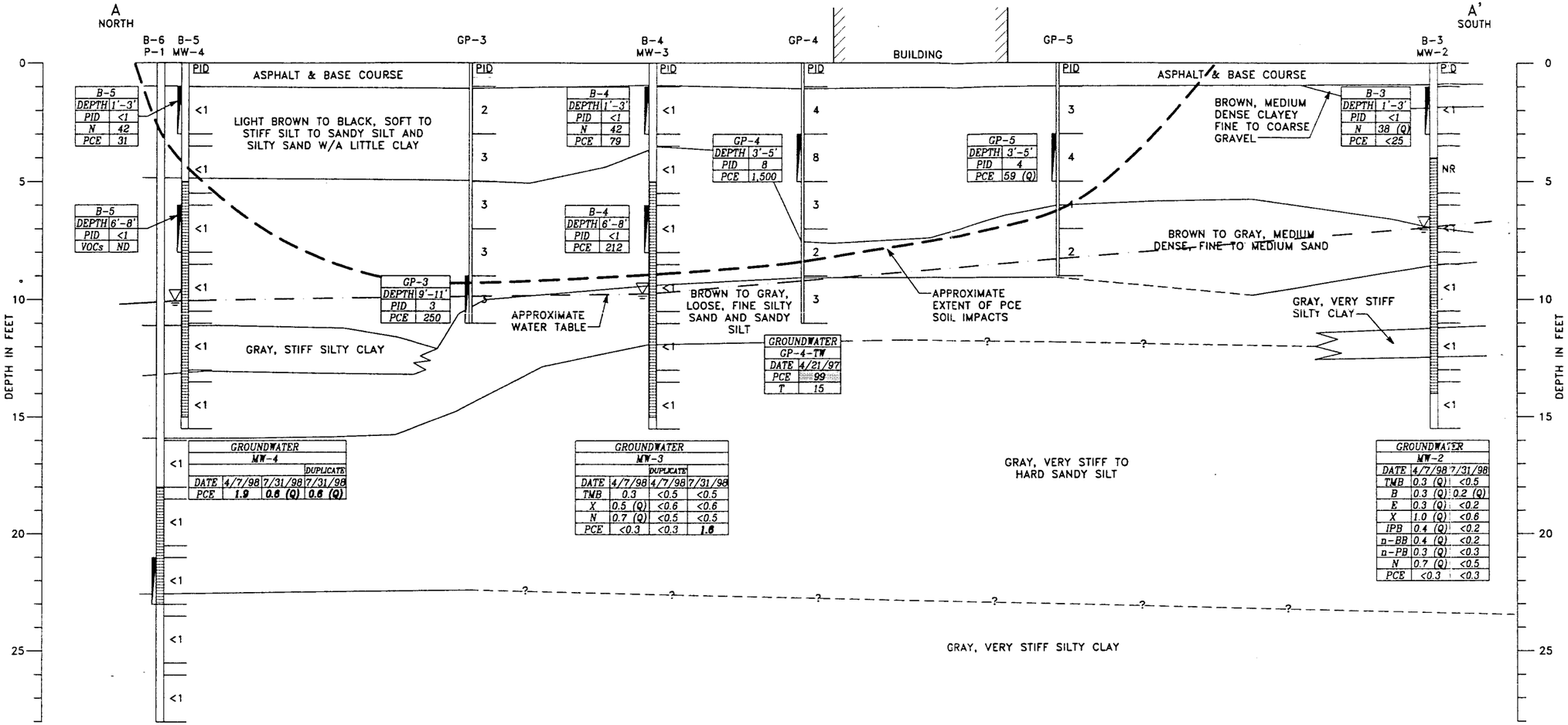
DRN. BY:	S.L.G.	DATE:	02/26/99
DSN. BY:	C.M.H.	FILE NO.:	0702007
CHK. BY:	C.M.H.	DWG. NO.:	7270
REV. BY:	G.L.J.	SHEET NO.:	2

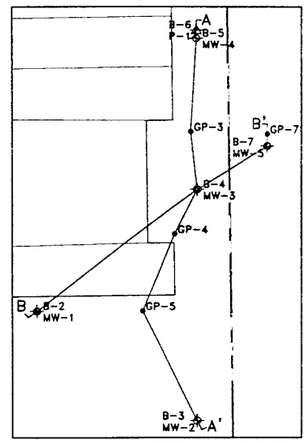
KEY ENGINEERING GROUP LTD.

FIGURE 2
SITE LAYOUT

SITE INVESTIGATION REPORT
DECORAH SHOPPING CENTER ANNEX
1011-1025 SOUTH MAIN STREET
WEST BEND, WISCONSIN

SCHEMATIC CROSS-SECTION A-A'





CROSS-SECTION LOCATION MAP

SOIL NOTES

P.I.D.: PHOTOIONIZATION DETECTOR, I.U.
I.U.: INSTRUMENT UNITS
VOCs: VOLATILE ORGANIC COMPOUNDS, ug/kg
N: NAPHTHALENE, ug/kg
PCE: TETRACHLOROETHENE, ug/kg
ug/kg: MICROGRAMS PER KILOGRAM
< : LESS THAN
ND: NOT DETECTED ABOVE LABORATORY METHOD DETECTION LIMITS
(Q): CONCENTRATION BETWEEN LIMIT OF DETECTION AND LIMIT OF QUANTITATION

GROUNDWATER NOTES

VOCs: VOLATILE ORGANIC COMPOUNDS, ug/l
TMB: TOTAL TRIMETHYLBENZENES, ug/l
B: BENZENE, ug/l
E: ETHYLBENZENE, ug/l
X: TOTAL XYLENES, ug/l
T: TOLUENE, ug/l
IPB: ISOPROPYLBENZENE, ug/l
n-BB: BUTYLBENZENE, ug/l
n-PB: PROPYLBENZENE, ug/l
N: NAPHTHALENE, ug/l
PCE: TETRACHLOROETHENE, ug/l
ug/l: MICROGRAMS PER LITER
< : LESS THAN
ND: NOT DETECTED ABOVE LABORATORY METHOD DETECTION LIMITS
(Q): CONCENTRATION BETWEEN LIMIT OF DETECTION AND LIMIT OF QUANTITATION

LEGEND

- GROUNDWATER LEVEL (7/31/98)
- SOIL SAMPLE INTERVAL
- GROUNDWATER MONITORING WELL SCREEN INTERVAL
- CONCENTRATION GREATER THAN: NR 720 GENERIC RESIDUAL CONTAMINANT LEVEL (SOIL) or NR 140 ENFORCEMENT STANDARD (GROUNDWATER)
- 5 — CONCENTRATION GREATER THAN NR 140 PREVENTIVE ACTION LIMIT (GROUNDWATER)

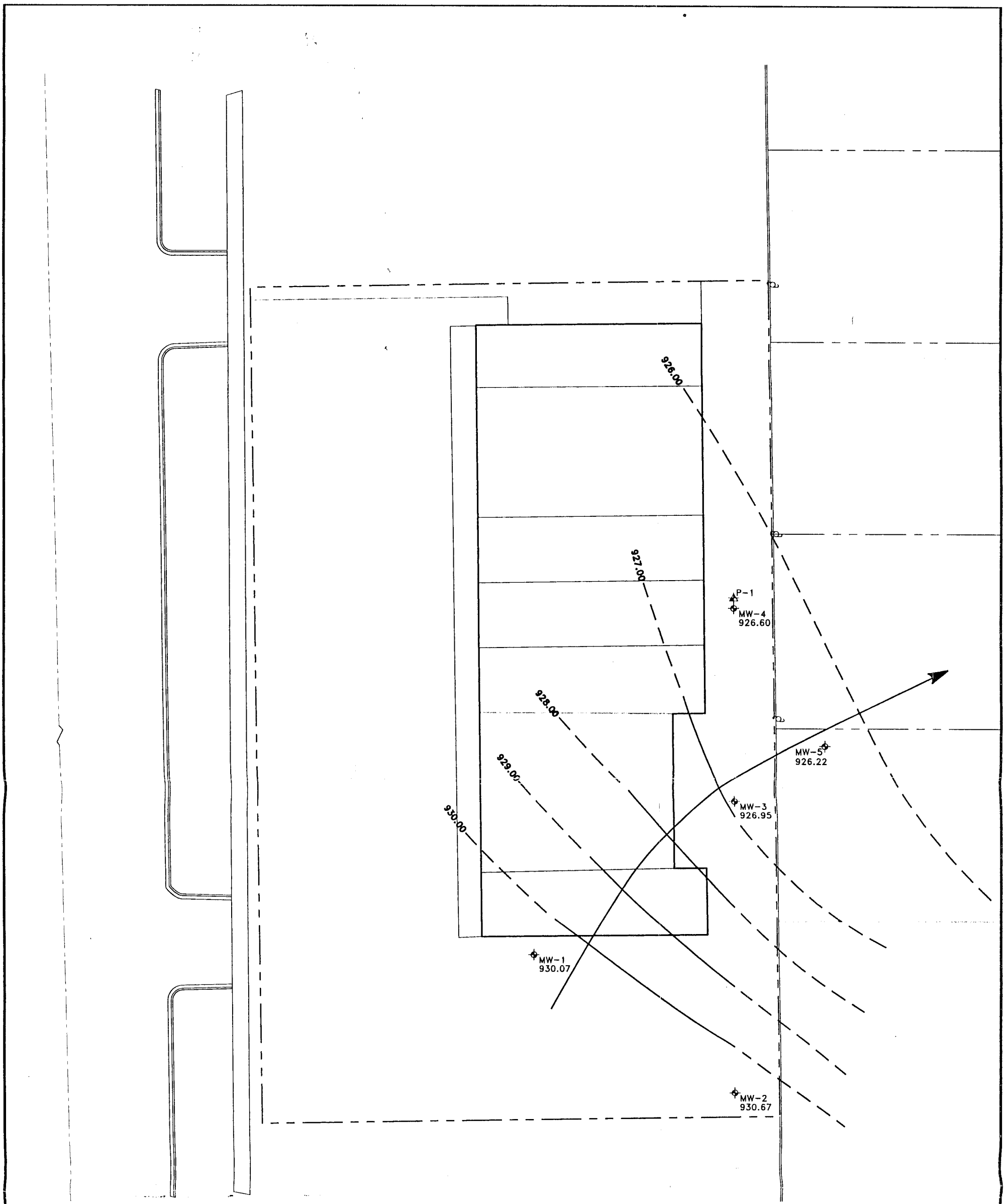
0 7.5 15 (HORIZONTAL)
0 2.5 5 (VERTICAL)
HORIZONTAL SCALE: 1"=15'
VERTICAL SCALE: 1"=5'

DRN. BY:	S.L.G.	DATE:	03/18/99
DSN. BY:	R.A.A.	FILE NO.:	0702007
CHK. BY:	C.M.H.	DWG. NO.:	07020073A
REV. BY:	G.L.J.	SHEET NO.:	3A

KEY ENGINEERING GROUP LTD.

FIGURE 3A
SCHEMATIC CROSS-SECTION A-A'

SITE INVESTIGATION REPORT
DECORAH SHOPPING CENTER ANNEX
1101-1025 SOUTH MAIN STREET
WEST BEND, WISCONSIN



SOURCES: *Plot Plan, Shopping Center Store Building*
Donald Hallett Construction Engineer,
August 14, 1965

City of West Bend Field Survey
1996

Monitoring Well Survey
Surveying Associates, Inc.
April 11, 1998

N

LEGEND

- MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- 930.07 GROUNDWATER ELEVATION (FEET, MSL) (2/9/99)
- GROUNDWATER FLOW DIRECTION
- CONTOUR INTERVAL = 1 FOOT

0 15 30

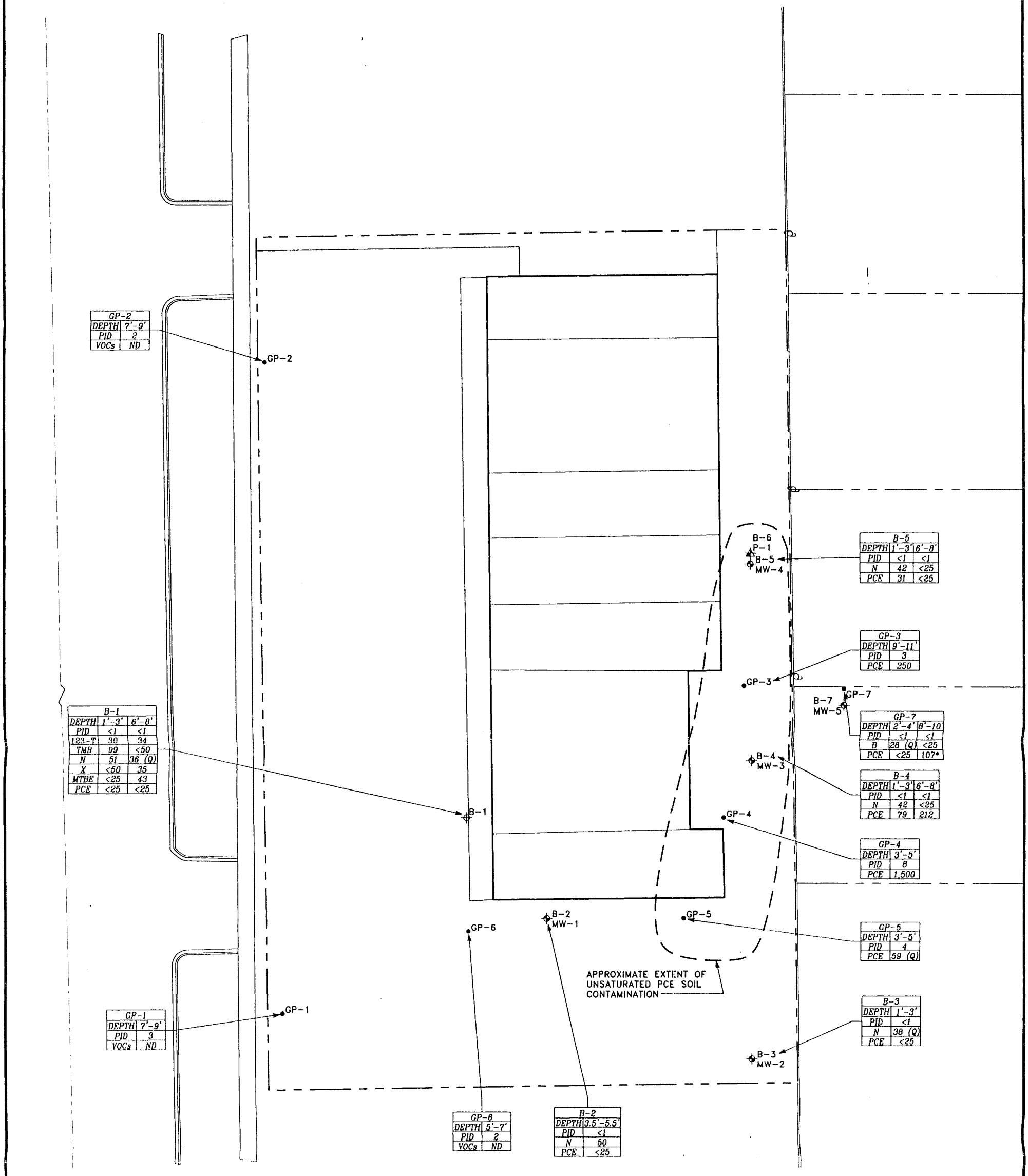
SCALE: 1"=30'

DRN. BY:	S.L.G.	DATE:	03/18/99
DSN. BY:	C.M.H.	FILE NO.:	0702007
CHK. BY:	C.M.H.	DWG. NO.:	0702007 9
REV. BY:	G.L.J.	SHEET NO.:	4

KEY ENGINEERING GROUP LTD.

FIGURE 4
GROUNDWATER ELEVATION CONTOUR MAP
FEBRUARY 9, 1999

SITE INVESTIGATION REPORT
DECORAH SHOPPING CENTER ANNEX
1011–1025 SOUTH MAIN STREET
WEST BEND, WISCONSIN



NOTES

P.I.D.: PHOTOIONIZATION DETECTOR, I.U.
I.U.: INSTRUMENT UNITS
VOCs: VOLATILE ORGANIC COMPOUNDS, ug/kg
B: BENZENE, ug/kg
123-T: 1,2,3-TRICHLOROBENZENE, ug/kg
TMB: TOTAL TRIMETHYLBENZENES, ug/kg
N: NAPHTHALENE, ug/kg
X: XYLENES, ug/kg
MTBE: METHYL TERT-BUTYL ETHER, ug/kg
PCE: TETRACHOROETHENE, ug/kg
ug/kg: MICROGRAMS PER KILOGRAM
< : LESS THAN
ND: NOT DETECTED ABOVE LABORATORY METHOD DETECTION LIMITS
(Q): CONCENTRATION BETWEEN LIMIT OF DETECTION AND LIMIT OF QUANTITATION
**: CONCENTRATION EVALUATED WITH RESPECT TO GROUNDWATER CONTAMINATION*

LEGEND

- MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- SOIL BORING LOCATION
- GEOPROBE LOCATION

SOURCES: *Plot Plan, Shopping Center Store Building*
Donald Hallett Construction Engineer,
August 14, 1965

City of West Bend Field Survey
1996

Monitoring Well Survey
Surveying Associates, Inc.
April 11, 1998

N

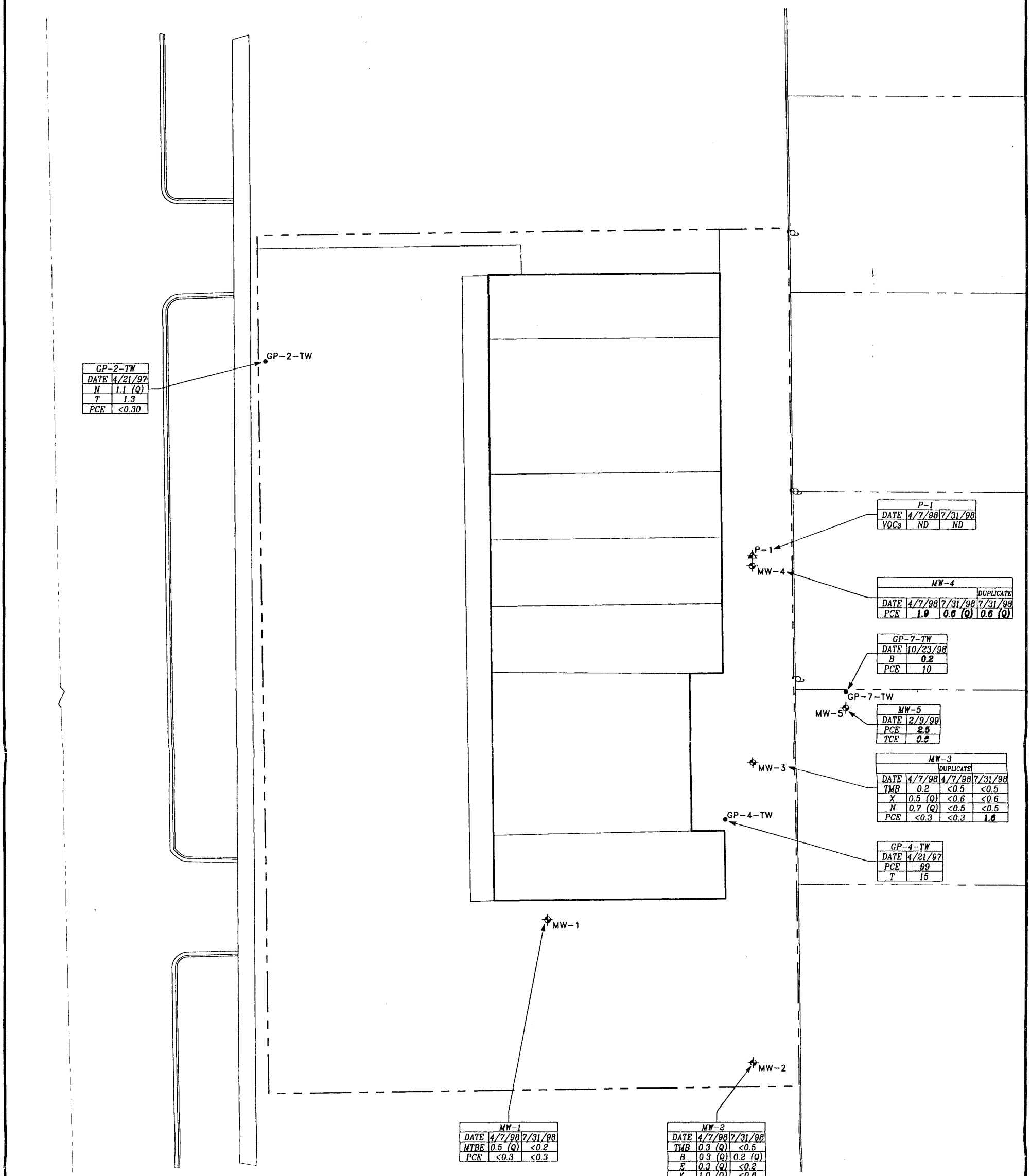
0 15 30
SCALE: 1"=30'

DRN. BY:	S.L.G.	DATE:	03/18/99
DSN. BY:	C.M.H.	FILE NO.:	0702007
CHK. BY:	C.M.H.	DWG. NO.:	07020075
REV. BY:	G.L.J.	SHEET NO.:	5

KEY ENGINEERING GROUP LTD.

FIGURE 5
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

SITE INVESTIGATION REPORT
DECORAH SHOPPING CENTER ANNEX
1011-1025 SOUTH MAIN STREET
WEST BEND, WISCONSIN



NOTES

VOCs: VOLATILE ORGANIC COMPOUNDS, ug/l
TMB: TOTAL TRIMETHYLBENZENES, ug/l
B: BENZENE, ug/l
E: ETHYLBENZENE, ug/l
X: TOTAL XYLENES, ug/l
T: TOLUENE, ug/l
MTBE: METHYL TERT-BUTYL ETHER, ug/l
IPB: ISOPROPYLBENZENE, ug/l
n-BB: n-BUTYLBENZENE, ug/l
n-PB: n-PROPYLBENZENE, ug/l
N: NAPHTHALENE, ug/l
PCE: TETRACHLOROETHENE, ug/l
TCE: TRICHLOROETHENE, ug/l
ug/l: MICROGRAMS PER LITER
< : LESS THAN
ND: NOT DETECTED ABOVE LABORATORY METHOD DETECTION LIMITS
(Q): CONCENTRATION BETWEEN LIMIT OF DETECTION AND LIMIT OF QUANTITATION

LEGEND

- MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- GEOPROBE LOCATION
- CONCENTRATION GREATER THAN NR 140 ENFORCEMENT STANDARD
- 6 CONCENTRATION GREATER THAN NR 140 PREVENTIVE ACTION LIMIT

SOURCES:
Plot Plan, Shopping Center Store Building
Donald Hallett Construction Engineer,
August 14, 1965

City of West Bend Field Survey
1996

Monitoring Well Survey
Surveying Associates, Inc.
April 11, 1998

N

0 15 30
SCALE: 1"=30'

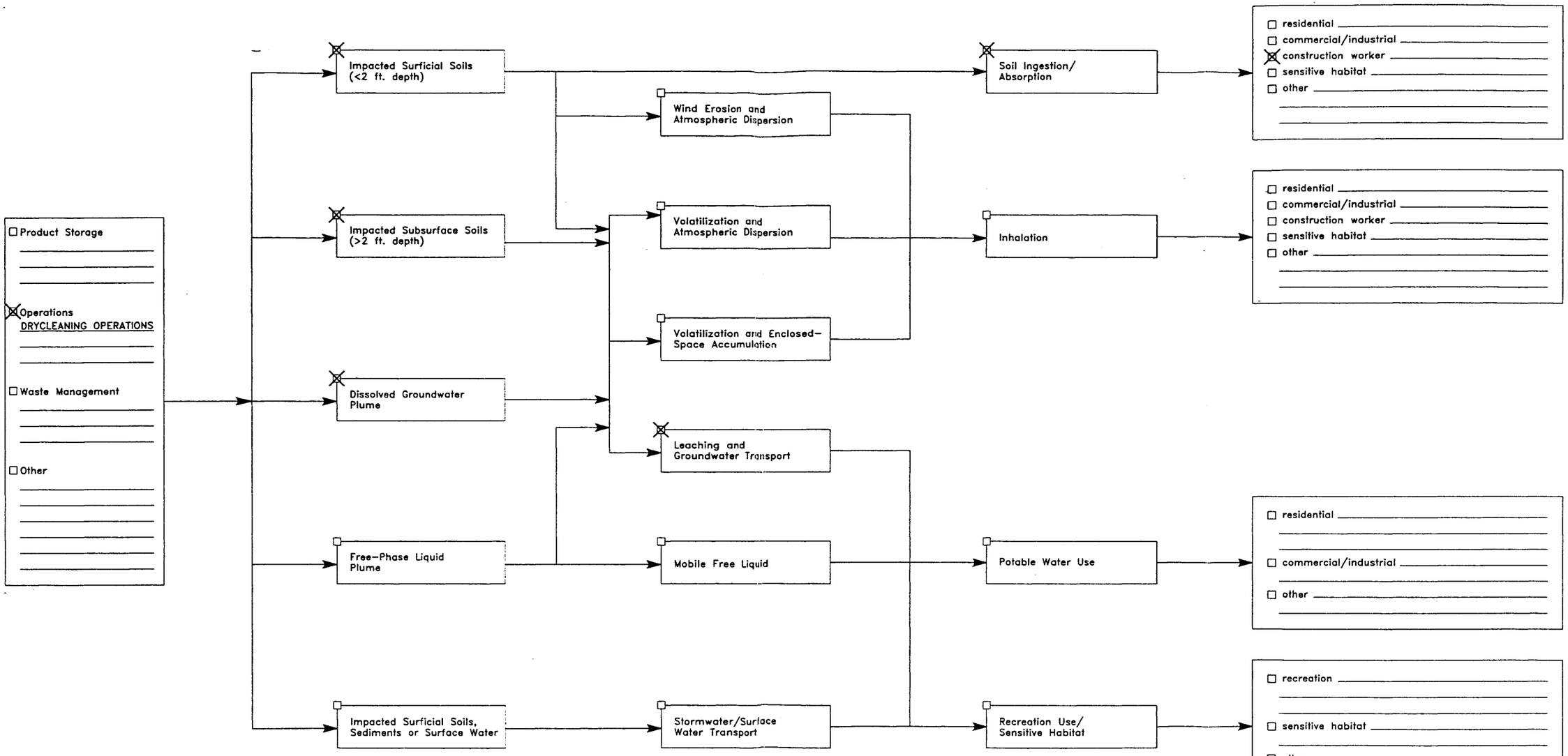
DRN. BY:	S.L.G.	DATE:	03/09/99
DSN. BY:	C.M.H.	FILE NO.:	0702007
CHK. BY:	C.M.H.	DWG. NO.:	07020076
REV. BY:	G.L.J.	SHEET NO.:	6

KEY ENGINEERING GROUP LTD.

FIGURE 6
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS

SITE INVESTIGATION REPORT
DECORAH SHOPPING CENTER ANNEX
1011–1025 SOUTH MAIN STREET
WEST BEND, WISCONSIN

PRIMARY SOURCES	SECONDARY SOURCES	TRANSPORT MECHANISMS	EXPOSURE PATHWAYS	RECEPTOR CHARACTERIZATION



SOURCE:
ASTM E1739, Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites

NO SCALE

DRN. BY:	S.L.G.	DATE:	02/26/99
DSN. BY:	C.M.H.	FILE NO.:	0702007
CHK. BY:	C.M.H.	DWG. NO.:	07020078
REV. BY:	G.L.J.	SHEET NO.:	7

KEY ENGINEERING GROUP LTD.

FIGURE 7
CONCEPTUAL SITE MODEL

SITE INVESTIGATION REPORT
DECORAH SHOPPING CENTER ANNEX
1101-1025 SOUTH MAIN STREET
WEST BEND, WISCONSIN

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Other

SOIL BORING LOG INFORMATION
Form 4400-122 7-91

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Decorah Shopping Center Annex		B-1

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Giles Engineering Associates, Inc., Jeff Anderson	4/1/98	4/1/98	HSA

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
— — —	— — — — — —		Feet	Feet	7.25 Inches

Boring Location
State Plane N, E S/C/N
SW 1/4 of NW 1/4 of Section 24 T 11 N,R 19 E
Lat o ' "
Long o ' "

Local Grid Location (If applicable)
☐ N ☐ E
Feet ☐ S Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
Washington	67	West Bend

Sample Number	Sample Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	Pocket Penetrometer
				ASPHALT										
1	18	5 4 5 5	1 2 3	Brown, loose, fine to medium SAND - black Sandy Silt, 3"	SP			<1 *	10	Moist				
2	NR		4 5	No Recovery - Shelby Tube				-		-				
			6											
3	18	7 8 8 8	7 8	Light brown, very stiff SANDY SILT - wet	ML			<1 *	16	M/W				
4	16	7 6 11 11	9 10	Light brown, medium dense, fine SAND	SP			<1	22	Wet				
				Gray, medium dense SILTY SAND	SM									
5	18	6 7	11 12					<1	15	Wet				

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Rachel Ann

Firm: KEY ENVIRONMENTAL SERVICES, INC.
W66 N215 Commerce Court Cedarburg, WI 53012
Tel: (414)375-4750 Fax: (414)375-9680

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A 7-91

Boring Number B-1 Use only as an attachment to Form 4400-122. Page 2 of 2

Sample Number	Sample Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	Pocket Penetrometer
		9 6	13											
				End of boring @ 13.5 ft. * Sample submitted for analysis										

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Other

SOIL BORING LOG INFORMATION
Form 4400-122 7-91

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Decorah Shopping Center Annex		B-2

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Giles Engineering Associates, Inc., Jeff Anderson	4/1/98	4/1/98	HSA

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
___ ___ ___	___ ___ ___ ___ ___ ___	MW-1	Feet	Feet	8.25 Inches

Boring Location
State Plane N, E S/C/N
SW 1/4 of NW 1/4 of Section 24 T 11 N,R 19 E
Lat o ' "
Long o ' "

Local Grid Location (If applicable)
☐ N ☐ E
Feet ☐ S Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
Washington	67	West Bend

Sample Number	Sample Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	Pocket Penetrometer
			0	ASPHALT										
1	NR		1	No Recovery - Shelby Tube				-		-				
			2											
			3											
2	18	3		Gray, stiff SANDY CLAY	CL			<1 *	12	Moist				
		3	4											
		6		Reddish-brown, medium dense, fine to medium SAND	SW									
		6	5											
3	6	6	6	Brown, fine to medium SAND w/trace of coarse Gravel	SW			<1	12	M/W				
		6												
			7	Brown SILTY CLAY, moist	CL									
				Wet, medium SAND	SP									
			8											
4	18			Gray SANDY SILT	ML			<1		Wet				
			9											
			10											
			11											
5	16							<1						
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Rachel Ames

Firm: KEY ENVIRONMENTAL SERVICES, INC.
W66 N215 Commerce Court Cedarburg, WI 53012
Tel: (414)375-4750 Fax: (414)375-9680

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A
7-91

Boring Number B-2 Use only as an attachment to Form 4400-122. Page 2 of 2

Sample Number	Sample Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	Pocket Penetrometer
6			13 14 15					<1						
				End of boring @ 15.5 ft. * Sample submitted for analysis										

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Other

SOIL BORING LOG INFORMATION
Form 4400-122 7-91

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Decorah Shopping Center Annex		B-3

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Giles Engineering Associates, Inc., Jeff Anderson	4/1/98	4/1/98	HSA

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
— — —	— — — — — — — —	MW-2	Feet	Feet	8.25 Inches

Boring Location
State Plane N, E S/C/N
SW 1/4 of NW 1/4 of Section 24 T 11 N.R 19 E
Lat ° ' "
Long ° ' "

Local Grid Location (If applicable)
☐ N Feet ☐ E
☐ S Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
Washington	67	West Bend

Sample Number	Sample Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	Pocket Penetrometer
			0	ASPHALT										
1	16	3 7 6 11	1 2	Brown, medium dense CLAYEY, fine to coarse GRAVEL	GC			<1 *	17	Moist				
			3	Gray, very stiff SANDY SILT w/a little Clay	ML									
2	NR		4 5	No Recovery - Shelby Tube				-		-				
			6											
3	16	6 6 7 7	7 8	Gray, medium dense, fine SILTY SAND, wet	SM			<1	14	Wet				
				Gray, medium dense, fine SAND	SP									
4	10	5 5 4 3	9 10	Gray, medium stiff SANDY SILT	ML			<1	7	Wet				
5	16	3 4	11 12	Gray, very stiff SILTY CLAY	CL			<1	19	Wet				

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Rachel Ann

Firm: KEY ENVIRONMENTAL SERVICES, INC.
W66 N215 Commerce Court Cedarburg, WI 53012
Tel: (414)375-4750 Fax: (414)375-9680

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than $10 nor more than $5,000 for each violation. Fined not less than $10 or more than $100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06. Wis. Stats.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A 7-91

Boring Number B-3 Use only as an attachment to Form 4400-122. Page 2 of 2

Sample Number	Sample Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plastic Limit	Soil Properties: P 200	Pocket Penetrometer
		11 8		Gray, very stiff SANDY SILT	ML									
			13											
6	14	13 23	14	- hard				<1	44	Wet				
		24 20												
			15											
				End of boring @ 15.5 ft.										
				* Sample submitted for analysis										

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Other

SOIL BORING LOG INFORMATION
Form 4400-122 7-91

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Decorah Shopping Center Annex		B-4

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Giles Engineering Associates, Inc., Jeff Anderson	4/1/98	4/1/98	HSA

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-3	Feet	Feet	8.25 Inches

Boring Location
State Plane N, E S/C/N
SW 1/4 of NW 1/4 of Section 24 T 11 N,R 19 E
Lat ° ' "
Long ° ' "

Local Grid Location (If applicable)
☐ N ☐ E
Feet ☐ S Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
Washington	67	West Bend

Sample Number	Sample Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	Pocket Penetrometer
			0	ASPHALT										
1	12	5 6 7 11	1 2 3	Brown, medium dense SILTY SAND	SM			<1 *	18	Moist				
2	16	1 1 1 1	4 5	Light brown to dark brown, loose, fine to medium SAND w/a little black Silt	SP			<1	2	Moist				
3	12	1 1 5 7	6 7 8					<1 *	12	Moist				
				Light brown, medium dense, medium SAND	SP									
4	20	5 7 14 20	9 10	Reddish-brown, dense, fine to medium SAND	SW			<1	34	Wet				
				Reddish-gray, hard SANDY SILT w/a 2" reddish-brown Sand lens	ML									
5	18	6 13	11 12	Gray, hard SANDY SILT	ML			<1	41	Wet				

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Rachel Amos

Firm: KEY ENVIRONMENTAL SERVICES, INC.
W66 N215 Commerce Court Cedarburg, WI 53012
Tel: (414)375-4750 Fax: (414)375-9680

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A 7-91

Boring Number B-4 Use only as an attachment to Form 4400-122. Page 2 of 2

Sample Number	Sample Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	Pocket Penetrometer
		19												
		12												
			13											
6	20	20						<1 *	65	Wet				
		22	14											
		32												
		33												
			15											
				End of boring @ 15.5 ft.										
				* Sample submitted for analysis										

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Other

SOIL BORING LOG INFORMATION
Form 4400-122 7-91

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Decorah Shopping Center Annex		B-5

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Giles Engineering Associates, Inc., Jeff Anderson	4/1/98	4/1/98	HSA

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
— — —	— — — — — —	MW-4	Feet	Feet	8.25 Inches

Boring Location
State Plane N, E S/C/N
SW 1/4 of NW 1/4 of Section 24 T 11 N R 19 E
Lat ° ' "
Long ° ' "

Local Grid Location (If applicable)
Feet ☐ N ☐ S Feet ☐ E ☐ W

County	DNR County Code	Civil Town/City or Village
Washington	67	West Bend

Sample Number	Sample Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	Pocket Penetrometer
			1	ASPHALT										
1	14	6 6 5 5	2	Brown to black, stiff SILT	ML			<1 *	10	Moist				
			3	- less than 2" fine Sand lens										
2	20	1 2 1 1	4 5	Brown to black, soft SANDY SILT	ML			<1	2	Moist				
				Brown, very loose, fine SAND	SP									
3	14	3 5 6 6	6 7 8	Brown, medium dense, fine to medium SAND	SW			<1 *	12	Moist				
4	18	3 5 9 8	9 10	Reddish-brown, medium dense, medium to coarse SAND	SW			<1	17	Wet				
				Gray, medium dense, medium to coarse SAND w/Gravel	GW									
5	24	3 3	11 12	Gray, stiff SILTY CLAY	CL			<1	14	Wet				

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm KEY ENVIRONMENTAL SERVICES, INC.
W66 N215 Commerce Court Cedarburg, WI 53012
Tel: (414)375-4750 Fax: (414)375-9680

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A 7-91

Boring Number B-5 Use only as an attachment to Form 4400-122. Page 2 of 2

Sample Number	Sample Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plastic Limit	Soil Properties: P 200	Pocket Penetrometer
		6 8	13											
6		5 4 4 6	14 15	Gray, loose SILTY fine SAND	SM			<1	10	Wet				
				End of boring @ 15.5 ft. * Sample submitted for analysis										

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Other

SOIL BORING LOG INFORMATION
Form 4400-122 7-91

Facility/Project Name	License Permit/Monitoring Number	Boring Number
Decorah Shopping Center Annex		B-6

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Giles Engineering Associates, Inc., Jeff Anderson	4/1/98	4/1/98	HSA

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
___ ___ ___	___ ___ ___ ___ ___ ___	P-1	Feet	Feet	8.25 Inches

Boring Location
State Plane N, E S/C/N
SW 1/4 of NW 1/4 of Section 24 T 11 N,R 19 E
Lat o ' "
Long o ' "

Local Grid Location (If applicable)
☐ N ☐ E
Feet ☐ S Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
Washington	67	West Bend

Sample Number	Sample Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	Pocket Penetrometer
			0	ASPHALT										
			1	Blind drilled to 16 ft. - See Soil Boring B-5 for soil descriptions										
			2											
			3											
			4											
			5											
			6											
			7											
			8											
			9											
			10											
			11											
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Rachel Amy

Firm: KEY ENVIRONMENTAL SERVICES, INC.
W66 N215 Commerce Court Cedarburg, WI 53012
Tel: (414)375-4750 Fax: (414)375-9680

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A 7-91

Boring Number B-6 Use only as an attachment to Form 4400-122. Page 2 of 2

Sample Number	Sample Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plastic Limit	Soil Properties: P 200	Pocket Penetrometer
			13											
			14											
			15											
1	18	7 7 9 11	16 17	Gray, very stiff SANDY SILT	ML			<1	20	Wet				
2	20	8 11 25 21	18 19 20	- hard				<1	46	Wet				
3	22	17 21 14 7	21 22					<1 *	21	Wet				
			23	Gray, very stiff SILTY CLAY	CL									
4	24	3 4 7 10	24 25	Gray, very stiff SILTY CLAY w/a little coarse Gravel	CL			<1	17	Wet				
5	24	5 6 7 7	26 27	- stiff				<1	14	Wet				
			28	End of boring @ 28.0 ft. * Sample submitted for analysis										

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Other

SOIL BORING LOG INFORMATION
Form 4400-122 7-91

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Decorah Shopping Center Annex		GP-7

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Giles Engineering Associates, Inc., Keith	10/23/98	10/23/98	Hand Probe

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
— — —	— — — — — — — —		Feet	Feet	1.50 Inches

Boring Location
State Plane N, E S/C/N
SW 1/4 of NW 1/4 of Section 24 T 11 N.R 19 E
Lat ° ' "
Long ° ' "

Local Grid Location (If applicable)
☐ N Feet ☐ E
☐ S Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
Washington	67	West Bend

Sample Number	Sample Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	Pocket Penetrometer
1	24		1	GRASS and TOPSOIL				<1		Moist				
				Dark brown SILTY fine SAND	SM									
2	14		2	Reddish-brown, fine SAND w/trace of Silt	SP			<1 *		Moist				
			3											
3	18		4	Light brown, fine SAND w/trace of Silt and Gravel	SP			<1		Moist				
			5											
4	20		6					<1		Moist				
			7											
5	24		8					<1 *		M/W				
			9	SILTY, fine to coarse SAND w/trace of Gravel	SW									
6	14		10	Gray, fine SANDY SILT	ML			<1		Wet				
			11											
7	12		12					<1		Wet				
			13	End of soil probe @ 13.0 ft.										
				* Sample submitted for analysis										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm KEY ENGINEERING GROUP, LTD.
W66 N215 Commerce Court Cedarburg, WI 53012
Tel: (414)375-4750 Fax: (414)375-9680

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State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Other

SOIL BORING LOG INFORMATION
Form 4400-122 7-91

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Decorah Shopping Center Annex		B-7

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Giles Engineering Associates, Inc.	2/2/99	2/2/99	HSA

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
— — —	— — — — — — — —	MW-5	Feet	Feet	8.25 Inches

Boring Location
State Plane N, E S/C/N
SW 1/4 of NW 1/4 of Section 24 T 11 N,R 19 E
Lat ° ' "
Long ° ' "

Local Grid Location (If applicable)
☐ N ☐ E
Feet ☐ S Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
Washington	67	West Bend

Sample Number	Sample Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	Pocket Penetrometer
			0	GRASS/TOPSOIL	OL									
			1.5	Blind drill to 14.5 ft.										
			3.0											
			4.5											
			6.0											
			7.5											
			9.0											
			10.5											
			12.0											
			13.5											
				End of boring @ 14.5 ft.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	KEY ENGINEERING GROUP, LTD. W66 N215 Commerce Court Cedarburg, WI 53012 Tel: (414)375-4750 Fax: (414)375-9680

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5W 11-89

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back.

(1) GENERAL INFORMATION

Well/Drillhole/Borehole Location

County: Washington

SW 1/4 of NW 1/4 of Sec. 24 ; T. 11 N; R. 19 ☒ E ☐ W

(If Applicable) Gov't Lot _____ Grid Number _____

Grid Location _____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Civil Town Name: West Bend

Street Address of Well: 1011-1025 South Main Street

City, Village: West Bend

(2) FACILITY NAME Decorah Shopping Center Annex

Original Well Owner (If Known): Continental Properties Co. Inc

Present Well Owner: Continental Properties Co. Inc

Street or Route: W133 N8569 Executive Parkway

City, State, Zip Code: Menomonee Falls, Wisconsin

Facility Well No. and/or Name (If Applicable): B-1

WI Unique Well No.:

Reason For Abandonment: Investigative boring

Date of Abandonment: 4/1/98

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On (Date) 4/1/98

☐ Monitoring Well
☐ Water Well
☐ Drillhole
☒ Borehole

Construction Report Available? ☒ Yes ☐ No

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) 13.50 Casing Diameter (ins.) N/A
(From groundsurface)

Casing Depth (Ft.) N/A

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? N/A Feet

(4) Depth to Water (Feet) _____

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☐ No	

If No, Explain _____

Was Casing Cut Off Below Surface?	☐ Yes	☐ No
Did Sealing Material Rise to Surface?	☒ Yes	☐ No
Did Material Settle After 24 Hours?	☐ Yes	☒ No
If Yes, Was Hole Retopped?	☐ Yes	☐ No

(5) Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Dump Bailer ☒ Other (Explain) Gravity

(6) Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☒ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Pellets
☐ Granular Bentonite
☐ Bentonite-Cement Grout

(7) Sealing Material Used	From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume	Mix Ratio or Mud Weight
Concrete patch	Surface	1.00	15 lbs	
CETCO Puregold	1.00	13.50	5 bags	

(8) Comments 1 bag = 50 lbs

(9) Name of Person or Firm Doing Sealing Work
KEY ENVIRONMENTAL SERVICES, INC.

Signature of Person Doing Work | Date Signed

Street or Route: W66 N215 Commerce Court | Telephone Number: (414) 375-4750

City, State, Zip Code: Cedarburg, Wisconsin 53012

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected | District/County

Reviewer/Inspector

Follow-up Necessary

DNR/COUNTY

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5W 11-89

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back.

(1) GENERAL INFORMATION

Well/Drillhole/Borehole Location

County: Washington

SW 1/4 of NW 1/4 of Sec. 24 ; T. 11 N; R. 19 ☒ E ☐ W

(If Applicable) _____ Gov't Lot _____ Grid Number

Grid Location _____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Civil Town Name: West Bend

Street Address of Well: 1040 Lincoln Drive West

City, Village: West Bend

(2) FACILITY NAME Decorah Shopping Center Annex

Original Well Owner (If Known)

Present Well Owner: Agnes Vorphal

Street or Route: 1040 Lincoln Drive West

City, State, Zip Code: West Bend, Wisconsin 53095

Facility Well No. and/or Name (If Applicable): GP-7

WI Unique Well No.

Reason For Abandonment: Investigative boring

Date of Abandonment: 10/23/98

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On (Date) 10/23/98

☐ Monitoring Well
☐ Water Well
☐ Drillhole
☒ Borehole

Construction Report Available? ☒ Yes ☐ No

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (Specify) Hand Probe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) 13.00 Casing Diameter (ins.) N/A
(From groundsurface)

Casing Depth (Ft.) N/A

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? N/A Feet

(4) Depth to Water (Feet) 9.00

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☐ No	

If No, Explain _____

Was Casing Cut Off Below Surface?	☐ Yes	☐ No
Did Sealing Material Rise to Surface?	☒ Yes	☐ No
Did Material Settle After 24 Hours?	☐ Yes	☒ No
If Yes, Was Hole Retopped?	☐ Yes	☐ No

(5) Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Dump Bailer ☒ Other (Explain) Gravity

(6) Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Pellets
☒ Granular Bentonite
☐ Bentonite-Cement Grout

(7)

Sealing Material Used	From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume	Mix Ratio or Mud Weight
Granular Bentonite	Surface	13.00	5-10 lbs	

(8) Comments _____

(9) Name of Person or Firm Doing Sealing Work
KEY ENGINEERING GROUP, LTD.

Signature of Person Doing Work: [signature] Date Signed: 2/12/99

Street or Route: W66 N215 Commerce Court Telephone Number: (414) 375-4750

City, State, Zip Code: Cedarburg, Wisconsin 53012

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected	District/County
Reviewer/Inspector	
Follow-up Necessary	

DNR/COUNTY

KEY ENVIRONMENTAL SERVICES, INC.

W66 N215 Commerce Court
Cedarburg, Wisconsin 53012
Phone No. (414) 375-4750
Fax No. (414) 375-9860

PID CALIBRATION SHEET

Site/Project Name: Decorah Shopping Center Annex Project No.: 0702007

Weather Conditions: Cloudy rainy 60°F.

Model: ☒ OVM580B ☐ MSA

Instrument Range (units): ☐ 0-20 ☐ 0-200 ☒ 0-2000

Light Source Energy (eV): ☐ 10.0 ☐ 10.6 ☒ 11.7

Serial #: #3

Field Calibration:

Reference Gas Data

GAS	REFERENCE GAS CONCENTRATION (i.u.)	BASELINE READING (i.u.)	FINAL RESPONSE READING (i.u.)
Isobutylene	100	104	29
~~Isobutylene~~	~~250~~		

Date: 4/1/98 Time: 7:00

Technician: RAA Signature: Rachel Ame

Comments:

KEY ENVIRONMENTAL SERVICES, INC.

W66 N215 Commerce Court
Cedarburg, Wisconsin 53012
Phone No. (414) 375-4750
Fax No. (414) 375-9860

PID CALIBRATION SHEET

Site/Project Name: DECORATIVE SHOPPING CENTER ANNEX Project No.: 070207

Weather Conditions: _____

Model: ☒ OVM580B ☐ MSA

Instrument Range (units): ☐ 0-20 ☐ 0-200 ☒ 0-2000

Light Source Energy (eV): ☐ 10.0 ☒ 10.6 ☐ 11.8

Serial #: 52753 - 293

Field Calibration:

Reference Gas Data

GAS	REFERENCE GAS CONCENTRATION (i.u.)	BASELINE READING (i.u.)	FINAL RESPONSE READING (i.u.)
Isobutylene	100	0.0	100.7
Isobutylene	250		

Date: 10/23/98 Time: 10:45 AM

Technician: CHRISTOPHER Signature: _____

Comments: _____

State of Wisconsin
Department of Natural Resources

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4-90

Facility/Project Name: Decorah Shopping Center Annex	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MW-1
Facility License, Permit or Monitoring Number:	Grid Origin Location: Lat. ° ' " Long. ° ' " or St. Plane _____ ft. N. _____ ft. E.	Wis. Unique Well Number / DNR Well Number:
Type of Well: Water Table Observation Well ☒11; Piezometer ☐12	Section Location of Waste/Source: SW 1/4 of NW 1/4 of Sec. 24 T. 11 N. R. 19 ☒E. ☐W.	Date Well Installed: 4/1/98
Distance Well Is From Waste/Source Boundary: ft.	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Well Installed By: (Person's Name and Firm) Rachel Ames / Key Environmental
Is Well A Point of Enforcement Std. Application? ☐ Yes ☐ No		

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or 1.0 ft.

12. USC classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☒ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☒ Yes ☐ No

14. Drilling method used: Rotary ☐ 5 0; Hollow Stem Auger ☒ 4 1; _____ Other ☐

15. Drilling fluid used: Water ☐ 0 2 Air ☐ 0 1 Drilling Mud ☐ 0 3 None ☒ 9 9

16. Drilling additives used? ☐ Yes ☒ No
Describe N/A

17. Source of water (attach analysis):
N/A

E. Bentonite seal, top _____ ft. MSL or 1.0 ft.

F. Fine sand, top _____ ft. MSL or 3.0 ft.

G. Filter pack, top _____ ft. MSL or 3.5 ft.

H. Screen joint, top _____ ft. MSL or 4.0 ft.

I. Well bottom _____ ft. MSL or 14.0 ft.

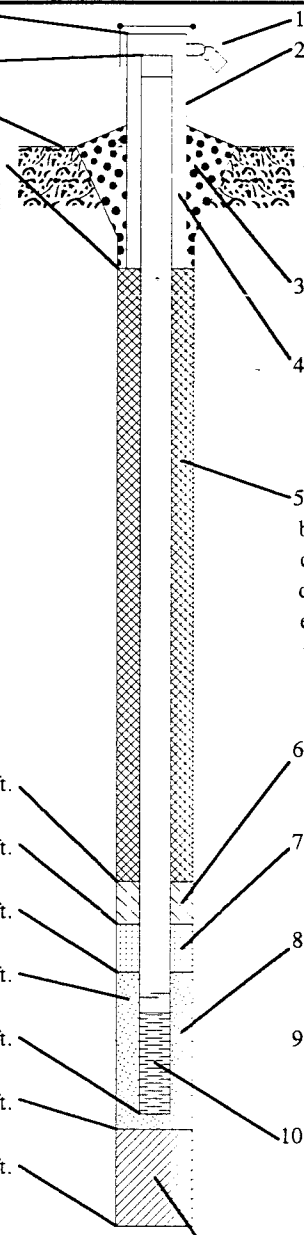
J. Filter pack, bottom _____ ft. MSL or 15.5 ft.

K. Borehole, bottom _____ ft. MSL or 15.5 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.38 in.

N. I.D. well casing 2.00 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 0 4; _____ Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 3 0; Concrete ☒ 0 1; _____ Other ☐

4. Material between well casing and protective pipe: Bentonite ☐ 3 0; Annular space seal ☐; Sand Other ☒

5. Annular space seal: a. Granular Bentonite ☐ 3 3
b. _____ Lbs/gal mud weight . . Bentonite-sand slurry ☐ 3 5
c. _____ Lbs/gal mud weight . . . Bentonite slurry ☐ 3 1
d. _____ % Bentonite . . . Bentonite-cement grout ☐ 5 0
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 0 1; Tremie pumped ☐ 0 2; Gravity ☐ 0 8

6. Bentonite seal: a. Bentonite granules ☐ 3 3
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 3 2
c. CETCO Puregold, 50 lbs Other ☐

7. Fine sand material: Manufacturer, product name and mesh size
a. Red Flint #45/55, 1/2-50 lb bag
b. Volume added _____ ft^3

8. Filter pack material: Manufacturer, product name and mesh size
a. Red Flint #30, 6-50 lb bags
b. Volume added _____ ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3; Flush threaded PVC schedule 80 ☐ 2 4; _____ Other ☐

10. Screen material: PVC
a. Screen Type: Factory cut ☒ 1 1; Continuous slot ☐ 0 1; _____ Other ☐
b. Manufacturer Diedrich
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.

11. Backfill material (below filter pack): None ☒ 1 4; _____ Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Rachel Ames

Firm: KEY ENVIRONMENTAL SERVICES, INC.
W66 N215 Commerce Court Cedarburg, WI 53012
Tel: (414) 375-4750
Fax: (414) 375-9680

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Ad. Code. In accordance with ch. 144, Wis Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than $5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than $10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4-90

Facility/Project Name: Decorah Shopping Center Annex	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MW-2
Facility License, Permit or Monitoring Number:	Grid Origin Location: Lat. ° ' " Long. ° ' " or	Wis. Unique Well Number / DNR Well Number:
Type of Well: Water Table Observation Well ☒11; Piezometer ☐12	St. Plane _____ ft. N. _____ ft. E.	Date Well Installed: 4/1/98
Distance Well Is From Waste/Source Boundary: ft.	Section Location of Waste/Source: SW 1/4 of NW 1/4 of Sec. 24 T. 11 N, R. 19 ☒E. ☐W.	Well Installed By: (Person's Name and Firm): Rachel Ames; Key Environmental
Is Well A Point of Enforcement Std. Application? ☐ Yes ☐ No	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient; d ☐ Downgradient n ☐ Not Known	

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or 1.0 ft.

12. USC classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☒ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☒ Yes ☐ No

14. Drilling method used: Rotary ☐50; Hollow Stem Auger ☒41; _____ Other ☐__

15. Drilling fluid used: Water ☐02 Air ☐01 Drilling Mud ☐03 None ☒99

16. Drilling additives used? ☐ Yes ☒ No
Describe N/A

17. Source of water (attach analysis):
N/A

E. Bentonite seal, top _____ ft. MSL or 1.0 ft.

F. Fine sand, top _____ ft. MSL or 3.0 ft.

G. Filter pack, top _____ ft. MSL or 3.5 ft.

H. Screen joint, top _____ ft. MSL or 4.0 ft.

I. Well bottom _____ ft. MSL or 14.0 ft.

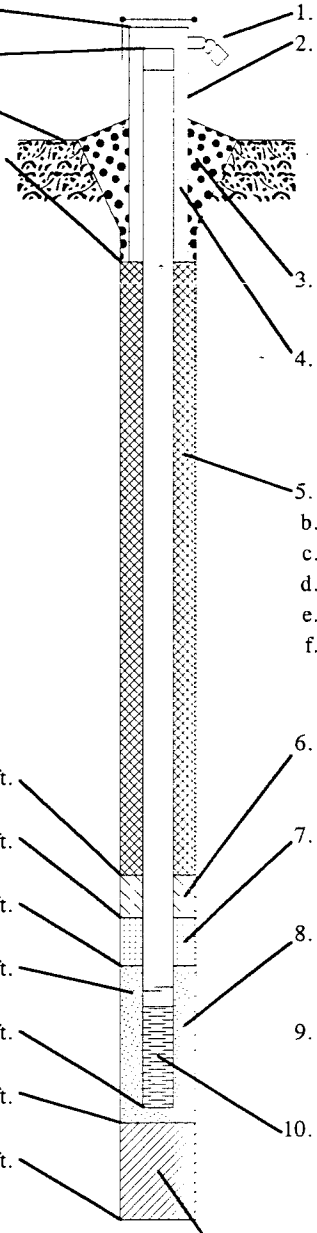
J. Filter pack, bottom _____ ft. MSL or 15.5 ft.

K. Borehole, bottom _____ ft. MSL or 15.5 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.38 in.

N. I.D. well casing 2.00 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04; _____ Other ☐__
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30; Concrete ☒ 01; _____ Other ☐__

4. Material between well casing and protective pipe:
Bentonite ☐ 30; Annular space seal ☐__; Sand Other ☒__

5. Annular space seal: a. Granular Bentonite ☐ 33
b. _____ Lbs/gal mud weight . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01; Tremie pumped ☐ 02; Gravity ☐ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☒3/8 in. ☐1/2 in. Bentonite pellets ☒ 32
c. CETCO Puregold, 50 lbs Other ☐__

7. Fine sand material: Manufacturer, product name and mesh size
a. Red Flint #45/55, 1/2-50 lb bag
b. Volume added _____ ft^3

8. Filter pack material: Manufacturer, product name and mesh size
a. Red Flint #30, 6-50 lb bags
b. Volume added _____ ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 23; Flush threaded PVC schedule 80 ☐ 24; _____ Other ☐__

10. Screen material: PVC
a. Screen Type: Factory cut ☒ 11; Continuous slot ☐ 01; _____ Other ☐__
b. Manufacturer Diedrich
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.

11. Backfill material (below filter pack): None ☒ 14; _____ Other ☐__

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Rachel Ames

Firm: KEY ENVIRONMENTAL SERVICES, INC.
W66 N215 Commerce Court Cedarburg, WI 53012
Tel: (414) 375-4750
Fax: (414) 375-9680

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State of Wisconsin
Department of Natural Resources

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4-90

Facility/Project Name: Decorah Shopping Center Annex	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MW-3
Facility License, Permit or Monitoring Number:	Grid Origin Location: Lat. ° ' " Long. ° ' " or St. Plane _____ ft. N, _____ ft. E.	Wis. Unique Well Number / DNR Well Number:
Type of Well: Water Table Observation Well ☒11; Piezometer ☐12	Section Location of Waste/Source: SW 1/4 of NW 1/4 of Sec. 24, T. 11 N, R. 19 ☒E. ☐W.	Date Well Installed: 4/1/98
Distance Well Is From Waste/Source Boundary: _____ ft.	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Well Installed By: (Person's Name and Firm) Rachel Ames / Key Environmental
Is Well A Point of Enforcement Std. Application? ☐ Yes ☐ No		

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or 1.0 ft.

12. USC classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☒ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☒ Yes ☐ No

14. Drilling method used: Rotary ☐50 Hollow Stem Auger ☒41 _____ Other ☐

15. Drilling fluid used: Water ☐02 Air ☐01 Drilling Mud ☐03 None ☒99

16. Drilling additives used? ☐ Yes ☒ No
Describe N/A

17. Source of water (attach analysis):
N/A

E. Bentonite seal, top _____ ft. MSL or 1.0 ft.

F. Fine sand, top _____ ft. MSL or 4.0 ft.

G. Filter pack, top _____ ft. MSL or 4.5 ft.

H. Screen joint, top _____ ft. MSL or 5.0 ft.

I. Well bottom _____ ft. MSL or 15.0 ft.

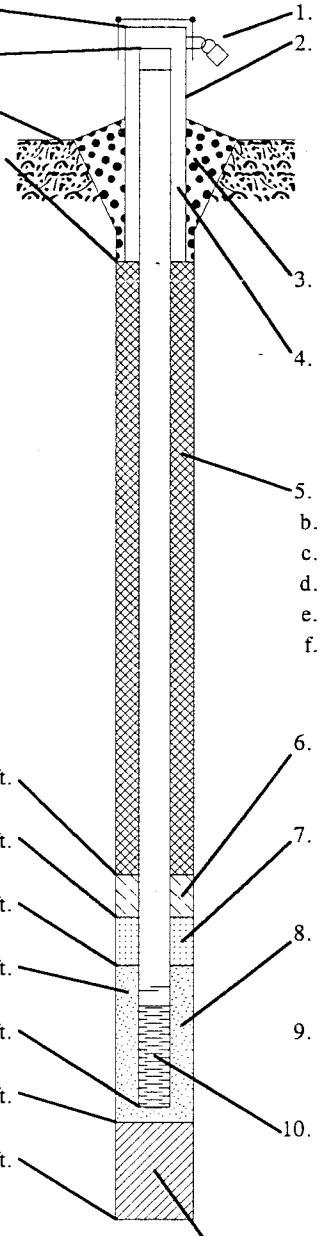
J. Filter pack, bottom _____ ft. MSL or 15.5 ft.

K. Borehole, bottom _____ ft. MSL or 15.5 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.38 in.

N. I.D. well casing 2.00 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04 _____ Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30 Concrete ☒ 01 _____ Other ☐
4. Material between well casing and protective pipe: Bentonite ☐ 30 Annular space seal ☐ Sand Other ☒
5. Annular space seal: a. Granular Bentonite ☐ 33
b. _____ Lbs/gal mud weight . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☐ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☒3/8 in. ☐1/2 in. Bentonite pellets ☒ 32
c. CETCO Puregold, 75 lbs Other ☐
7. Fine sand material: Manufacturer, product name and mesh size
a. Red Flint #45/55, 6-50 lb bags
b. Volume added _____ ft^3
8. Filter pack material: Manufacturer, product name and mesh size
a. Red Flint #30, 1/2-50 lb bag
b. Volume added _____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 Flush threaded PVC schedule 80 ☐ 24 _____ Other ☐
10. Screen material: PVC
a. Screen Type: Factory cut ☒ 11 Continuous slot ☐ 01 _____ Other ☐
b. Manufacturer Diedrich
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒ 14 _____ Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Rachel Ames

Firm: KEY ENVIRONMENTAL SERVICES, INC.
W66 N215 Commerce Court Cedarburg, WI 53012
Tel: (414) 375-4750
Fax: (414) 375-9680

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Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4-90

Facility/Project Name: Decorah Shopping Center Annex	Local Grid Location of Well: ☐N. _____ ft. ☐S. ☐E. _____ ft. ☐W.	Well Name: MW-4
Facility License, Permit or Monitoring Number:	Grid Origin Location: Lat. ° ' " Long. ° ' " or St. Plane _____ ft. N. _____ ft. E.	Wis. Unique Well Number / DNR Well Number:
Type of Well: Water Table Observation Well ☒11; Piezometer ☐12	Section Location of Waste/Source: SW 1/4 of NW 1/4 of Sec. 24 T. 11 N. R. 19 ☒E. ☐W.	Date Well Installed: 4/1/98
Distance Well Is From Waste/Source Boundary: ft.	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Well Installed By: (Person's Name and Firm): Rachel Ames / Key Environmental
Is Well A Point of Enforcement Std. Application? ☐ Yes ☐ No		

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom _____ ft. MSL or 1.0 ft.

12. USC classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☒ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

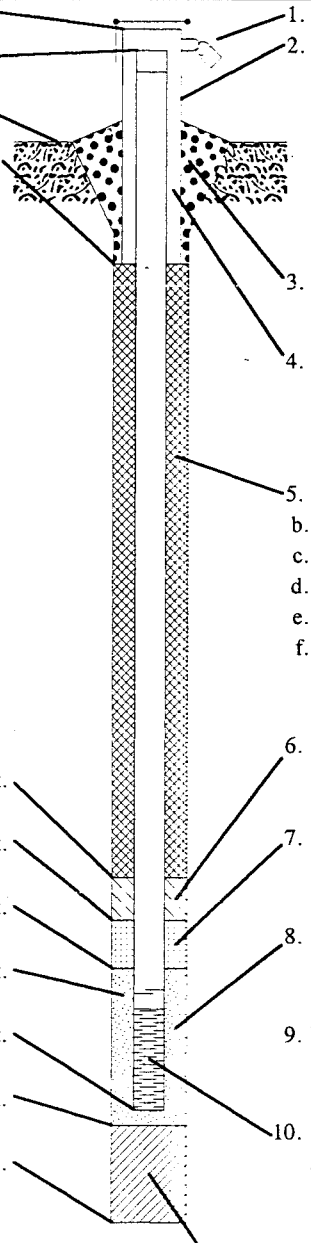
13. Sieve analysis attached? ☒ Yes ☐ No

14. Drilling method used: Rotary ☐ 5 0; Hollow Stem Auger ☒ 4 1; _____ Other ☐

15. Drilling fluid used: Water ☐ 0 2 Air ☐ 0 1 Drilling Mud ☐ 0 3 None ☒ 9 9

16. Drilling additives used? ☐ Yes ☒ No
Describe N/A

17. Source of water (attach analysis):
N/A



E. Bentonite seal, top _____ ft. MSL or 1.0 ft.
F. Fine sand, top _____ ft. MSL or 4.0 ft.
G. Filter pack, top _____ ft. MSL or 4.5 ft.
H. Screen joint, top _____ ft. MSL or 5.0 ft.
I. Well bottom _____ ft. MSL or 15.0 ft.
J. Filter pack, bottom _____ ft. MSL or 15.5 ft.
K. Borehole, bottom _____ ft. MSL or 15.5 ft.
L. Borehole, diameter 8.25 in.
M. O.D. well casing 2.38 in.
N. I.D. well casing 2.00 in.

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 0 4; _____ Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 3 0; Concrete ☒ 0 1; _____ Other ☐
4. Material between well casing and protective pipe: Bentonite ☐ 3 0; Annular space seal ☐; Sand Other ☒
5. Annular space seal: a. Granular Bentonite ☐ 3 3
b. _____ Lbs/gal mud weight . . Bentonite-sand slurry ☐ 3 5
c. _____ Lbs/gal mud weight . . . Bentonite slurry ☐ 3 1
d. _____ % Bentonite . . . Bentonite-cement grout ☐ 5 0
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 0 1; Tremie pumped ☐ 0 2; Gravity ☐ 0 8
6. Bentonite seal: a. Bentonite granules ☐ 3 3
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 3 2
c. CETCO Puregold, 75 lbs Other ☐
7. Fine sand material: Manufacturer, product name and mesh size
a. Red Flint #45/55, 1/2-50 lb bag
b. Volume added _____ ft^3
8. Filter pack material: Manufacturer, product name and mesh size
a. Red Flint #30, 7-50 lb bags
b. Volume added _____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3; Flush threaded PVC schedule 80 ☐ 2 4; _____ Other ☐
10. Screen material: PVC
a. Screen Type: Factory cut ☒ 1 1; Continuous slot ☐ 0 1; _____ Other ☐
b. Manufacturer Diedrich
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒ 1 4; _____ Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Rachel Ames
Firm: KEY ENVIRONMENTAL SERVICES, INC.
W66 N215 Commerce Court Cedarburg, WI 53012
Tel: (414) 375-4750
Fax: (414) 375-9680

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Facility/Project Name: Decorah Shopping Center Annex	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: P-1
Facility License, Permit or Monitoring Number:	Grid Origin Location: Lat. ° ' " Long. ° ' " or St. Plane _____ ft. N, _____ ft. E.	Wis. Unique Well Number / DNR Well Number:
Type of Well: Water Table Observation Well ☐11; Piezometer ☒12	Section Location of Waste/Source: SW 1/4 of NW 1/4 of Sec. 24, T. 11 N, R. 19 ☒E. ☐W.	Date Well Installed: 4/1/98
Distance Well Is From Waste/Source Boundary: ft.	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient; d ☐ Downgradient n ☐ Not Known	Well Installed By: (Person's Name and Firm): Rachel Ames; Key Environmental
Is Well A Point of Enforcement Std. Application? ☐ Yes ☐ No		

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom _____ ft. MSL or 1.0 ft.

12. USC classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☒ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☒ Yes ☐ No

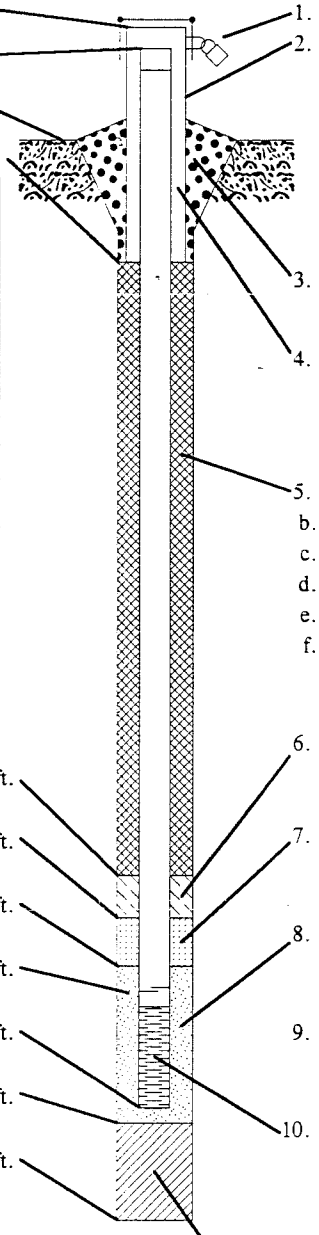
14. Drilling method used: Rotary ☐ 5 0; Hollow Stem Auger ☒ 4 1; _____ Other ☐

15. Drilling fluid used: Water ☐ 0 2 Air ☐ 0 1 Drilling Mud ☐ 0 3 None ☒ 9 9

16. Drilling additives used? ☐ Yes ☒ No
Describe N/A

17. Source of water (attach analysis):
N/A

E. Bentonite seal, top _____ ft. MSL or 1.0 ft.
F. Fine sand, top _____ ft. MSL or 16.0 ft.
G. Filter pack, top _____ ft. MSL or 17.0 ft.
H. Screen joint, top _____ ft. MSL or 18.0 ft.
I. Well bottom _____ ft. MSL or 23.0 ft.
J. Filter pack, bottom _____ ft. MSL or 28.0 ft.
K. Borehole, bottom _____ ft. MSL or 28.0 ft.
L. Borehole, diameter 8.25 in.
M. O.D. well casing 2.38 in.
N. I.D. well casing 2.00 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 0 4; _____ Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 3 0; Concrete ☐ 0 1; _____ Other ☐
4. Material between well casing and protective pipe: Bentonite ☐ 3 0; Annular space seal ☐; Sand Other ☒
5. Annular space seal: a. Granular Bentonite ☐ 3 3
b. _____ Lbs/gal mud weight . . Bentonite-sand slurry ☐ 3 5
c. _____ Lbs/gal mud weight . . . Bentonite slurry ☐ 3 1
d. _____ % Bentonite . . . Bentonite-cement grout ☐ 5 0
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 0 1; Tremie pumped ☐ 0 2; Gravity ☐ 0 8
6. Bentonite seal: a. Bentonite granules ☐ 3 3
b. ☐1/4 in. ☒3/8 in. ☐1/2 in. Bentonite pellets ☒ 3 2
c. CETCO Puregold, 6 bags Other ☐
7. Fine sand material: Manufacturer, product name and mesh size
a. Red Flint #45/55, 1-50 lb bag
b. Volume added _____ ft^3
8. Filter pack material: Manufacturer, product name and mesh size
a. Red Flint #30, 6-50 lb bags
b. Volume added _____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3; Flush threaded PVC schedule 80 ☐ 2 4; _____ Other ☐
10. Screen material: PVC
a. Screen Type: Factory cut ☒ 1 1; Continuous slot ☐ 0 1; _____ Other ☐
b. Manufacturer Diedrich
c. Slot size: 0.010 in.
d. Slotted length: 5.0 ft.
11. Backfill material (below filter pack): None ☐ 1 4; Sand Other ☒

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature _____ Firm KEY ENVIRONMENTAL SERVICES, INC. Tel: (414) 375-4750
W66 N215 Commerce Court Cedarburg, WI 53012 Fax: (414) 375-9680

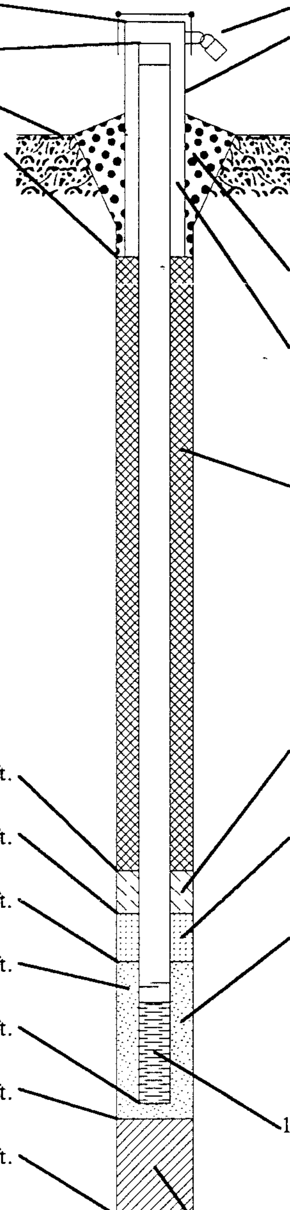
Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141,Wis. Ad. Code. In accordance with ch. 144, Wis Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than $5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than $10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ ______

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4-90

Facility/Project Name: Decorah Shopping Center Annex	Local Grid Location of Well: ______ ft. ☐ N. ☐ S. ______ ft. ☐ E. ☐ W.	Well Name: MW-5
Facility License, Permit or Monitoring Number	Grid Origin Location: Lat. ___ ° ___ ' ___ " Long. ___ ° ___ ' ___ " or St. Plane ______ ft. N, ______ ft. E.	Wis. Unique Well Number / DNR Well Number
Type of Well: Water Table Observation Well ☒ 11; Piezometer ☐ 12		Date Well Installed: 2/2/99
Distance Well Is From Waste/Source Boundary ______ ft.	Section Location of Waste/Source: SW 1/4 of NW 1/4 of Sec. 24, T. 11 N, R. 19 ☒ E. ☐ W.	Well Installed By: (Person's Name and Firm) Dave Kleber, Key Engineering Group
Is Well A Point of Enforcement Std. Application? ☒ Yes ☐ No	Location of Well Relative to Waste/Source: u ☐ Upgradient; s ☐ Sidegradient; d ☐ Downgradient; n ☐ Not Known	



A. Protective pipe, top elevation ______ ft. MSL

B. Well casing, top elevation ______ ft. MSL

C. Land surface elevation ______ ft. MSL

D. Surface seal, bottom ______ ft. MSL or 1.0 ft.

12. USC classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☒
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 5 0
Hollow Stem Auger ☒ 4 1
______ Other ☐

15. Drilling fluid used: Water ☐ 0 2 Air ☐ 0 1
Drilling Mud ☐ 0 3 None ☒ 9 9

16. Drilling additives used? ☐ Yes ☒ No

Describe ______

17. Source of water (attach analysis):
______

E. Bentonite seal, top ______ ft. MSL or 1.0 ft.

F. Fine sand, top ______ ft. MSL or 2.8 ft.

G. Filter pack, top ______ ft. MSL or 3.0 ft.

H. Screen joint, top ______ ft. MSL or 4.0 ft.

I. Well bottom ______ ft. MSL or 14.0 ft.

J. Filter pack, bottom ______ ft. MSL or 14.5 ft.

K. Borehole, bottom ______ ft. MSL or 14.5 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.30 in.

N. I.D. well casing 2.00 in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 10.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 0 4
______ Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe: ______

3. Surface seal: Bentonite ☐ 3 0
Concrete ☒ 0 1
______ Other ☐

4. Material between well casing and protective pipe:
Bentonite ☐ 3 0
Annular space seal ☐
Sand Other ☒

5. Annular space seal: a. Granular Bentonite ☐ 3 3
b. ______ Lbs/gal mud weight . . Bentonite-sand slurry ☐ 3 5
c. ______ Lbs/gal mud weight . . . Bentonite slurry ☐ 3 1
d. ______ % Bentonite . . . Bentonite-cement grout ☐ 5 0
e. ______ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 0 1
Tremie pumped ☐ 0 2
Gravity ☐ 0 8

6. Bentonite seal: a. Bentonite granules ☐ 3 3
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 3 2
c. 100 lbs Other ☐

7. Fine sand material: Manufacturer, product name and mesh size
a. Red Flint #45-55, 10 lbs
b. Volume added ______ ft^3

8. Filter pack material: Manufacturer, product name and mesh size
a. Red Flint #30, 400 lbs
b. Volume added ______ ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3
Flush threaded PVC schedule 80 ☐ 2 4
______ Other ☐

10. Screen material: PVC
a. Screen Type: Factory cut ☒ 1 1
Continuous slot ☐ 0 1
______ Other ☐
b. Manufacturer Timco
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.

11. Backfill material (below filter pack): None ☒ 1 4
______ Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [signature]

Firm KEY ENGINEERING GROUP, LTD.
W66 N215 Commerce Court Cedarburg, WI 53012
Tel: (414) 375-4750
Fax: (414) 375-9680

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State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4-90

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name	County	Well Name
Decorah Shopping Center Annex	Washington	MW-1

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	67		

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method:

surged with bailer and bailed	☐ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed, and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☒ 51
pumped slowly	☐ 50
other _____	☐

3. Time spent developing well 50 min.

4. Depth of well (from top of well casing) 13.93 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing 6.33 gal.

7. Volume of water removed from well 20.00 gal.

8. Volume of water added (if any) -- gal.

9. Source of water added N/A

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

		Before Development	After Development
11. Depth to Water (from top of well casing)	a.	7.23 ft.	7.50 ft.
Date	b.	4/7/98	4/7/98
Time	c.	9:00 ☒ a.m. ☐ p.m.	9:50 ☒ a.m. ☐ p.m.
12. Sediment in well bottom		inches	inches
13. Water clarity		Clear ☐ 10 Turbid ☒ 15 (Describe)	Clear ☒ 20 Turbid ☐ 25 (Describe)
Fill in if drilling fluids were used and well is at solid waste facility:			
14. Total suspended solids		mg/l	mg/l
15. COD		mg/l	mg/l

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: Rachel Ames

Firm: Key Environmental

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Rachel Ames

Print Initials: RAA

Firm: KEY ENVIRONMENTAL SERVICES, INC.

NOTE: Shaded areas are for DNR use only. See instructions for more information including a list of county codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4-90

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name	County	Well Name
Decorah Shopping Center Annex	Washington	MW-2
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well Number**
	67	

		Before Development	After Development
1. Can this well be purged dry?		☐ Yes ☒ No	
2. Well development method:			
surged with bailer and bailed		☐ 41	
surged with bailer and pumped		☐ 61	
surged with block and bailed		☐ 42	
surged with block and pumped		☐ 62	
surged with block, bailed, and pumped		☐ 70	
compressed air		☐ 20	
bailed only		☐ 10	
pumped only		☒ 51	
pumped slowly		☐ 50	
other _____		☐	
3. Time spent developing well		37 min.	
4. Depth of well (from top of well casing)		13.28 ft.	
5. Inside diameter of well		2.00 in.	
6. Volume of water in filter pack and well casing		6.89 gal.	
7. Volume of water removed from well		25.00 gal.	
8. Volume of water added (if any)		-- gal.	
9. Source of water added		N/A	
10. Analysis performed on water added? (If yes, attach results)		☐ Yes ☐ No	
11. Depth to Water (from top of well casing)	a.	5.99 ft.	6.09 ft.
Date	b.	4/7/98	4/7/98
Time	c.	10:20 ☒ a.m. ☐ p.m.	10:57 ☒ a.m. ☐ p.m.
12. Sediment in well bottom		inches	inches
13. Water clarity		Clear ☐ 10 Turbid ☒ 15 (Describe)	Clear ☒ 20 Turbid ☐ 25 (Describe)
Fill in if drilling fluids were used and well is at solid waste facility:			
14. Total suspended solids		mg/l	mg/l
15. COD		mg/l	mg/l

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: Rachel Ames

Firm: Key Environmental

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Rachel Ames

Print Initials: RAA

Firm: KEY ENVIRONMENTAL SERVICES, INC.

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State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4-90

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name	County	Well Name
Decorah Shopping Center Annex	Washington	MW-3
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well Number**
	67	

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☒	51
pumped slowly	☐	50
other _____	☐	

3. Time spent developing well 65 min.

4. Depth of well (from top of well casing) 14.65 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing 5.74 gal.

7. Volume of water removed from well 16.00 gal.

8. Volume of water added (if any) -- gal.

9. Source of water added N/A

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	8.91 ft.	8.95 ft.
Date b.	4/7/98	4/7/98
Time c.	11:15 ☒ a.m. ☐ p.m.	12:20 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	inches	inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe)	Clear ☒ 20 Turbid ☐ 25 (Describe)

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: Rachel Ames

Firm: Key Environmental

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Rachel Ames

Print Initials: RAA

Firm: KEY ENVIRONMENTAL SERVICES, INC.

NOTE: Shaded areas are for DNR use only. See instructions for more information including a list of county codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4-90

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name	County	Well Name
Decorah Shopping Center Annex	Washington	MW-4
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well Number**
	67	

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method:

surged with bailer and bailed	☐ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed, and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☒ 51
pumped slowly	☐ 50
other _____	☐

3. Time spent developing well 30 min.

4. Depth of well (from top of well casing) 14.54 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing 5.16 gal.

7. Volume of water removed from well 25.00 gal.

8. Volume of water added (if any) -- gal.

9. Source of water added N/A

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	9.38 ft.	9.45 ft.
Date b.	4/7/98	4/7/98
Time c.	12:40 ☐ a.m. ☒ p.m.	1:10 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	inches	inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe)	Clear ☒ 20 Turbid ☐ 25 (Describe)

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: Rachel Ames

Firm: Key Environmental

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Rachel Ames

Print Initials: RAA

Firm: KEY ENVIRONMENTAL SERVICES, INC.

NOTE: Shaded areas are for DNR use only. See instructions for more information including a list of county codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4-90

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name	County	Well Name
Decorah Shopping Center Annex	Washington	P-1
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well Number**
	67	

		Before Development	After Development
1. Can this well be purged dry?		☒ Yes ☐ No	
2. Well development method:			
surged with bailer and bailed	☐ 41		
surged with bailer and pumped	☐ 61		
surged with block and bailed	☐ 42		
surged with block and pumped	☐ 62		
surged with block, bailed, and pumped	☐ 70		
compressed air	☐ 20		
bailed only	☐ 10		
pumped only	☒ 51		
pumped slowly	☐ 50		
other _____	☐		
11. Depth to Water (from top of well casing)	a.	9.21 ft.	9.60 ft.
Date	b.	4/7/98	4/7/98
Time	c.	1:25 ☐ a.m. ☒ p.m.	2:10 ☐ a.m. ☒ p.m.
12. Sediment in well bottom		inches	inches
13. Water clarity		Clear ☐ 10 Turbid ☒ 15 (Describe)	Clear ☒ 20 Turbid ☐ 25 (Describe)
3. Time spent developing well		45 min.	
4. Depth of well (from top of well casing)		22.62 ft.	
5. Inside diameter of well		2.00 in.	
6. Volume of water in filter pack and well casing		13.41 gal.	
7. Volume of water removed from well		25.00 gal.	
8. Volume of water added (if any)		-- gal.	
9. Source of water added		N/A	
10. Analysis performed on water added? (If yes, attach results)		☐ Yes ☐ No	

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: Rachel Ames

Firm: Key Environmental

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Rachel Ames

Print Initials: RAA

Firm: KEY ENVIRONMENTAL SERVICES, INC.

NOTE: Shaded areas are for DNR use only. See instructions for more information including a list of county codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4-90

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name	County	Well Name
Decorah Shopping Center Annex	Washington	MW-5
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well Number**
	67	

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method:

surged with bailer and bailed	☐ 41
surged with bailer and pumped	☒ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed, and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
other _____	☐

3. Time spent developing well 65 min.

4. Depth of well (from top of well casing) 13.80 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing 5.36 gal.

7. Volume of water removed from well 35.00 gal.

8. Volume of water added (if any) 0.0 gal.

9. Source of water added _____

10. Analysis performed on water added? ☐ Yes ☒ No
(If yes, attach results)

		Before Development	After Development
11. Depth to Water (from top of well casing)	a.	8.01 ft.	9.22 ft.
Date	b.	2/9/99	2/9/99
Time	c.	11:45 ☒ a.m. ☐ p.m.	12:50 ☐ a.m. ☒ p.m.
12. Sediment in well bottom		0.50 inches	0.00 inches
13. Water clarity		Clear ☐ 10 Turbid ☒ 15 (Describe) Brown and silty	Clear ☒ 20 Turbid ☐ 25 (Describe)

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: Dave Kleber

Firm: Key Engineering Group

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Rachael Ames

Print Initials: RAA

Firm: KEY ENGINEERING GROUP, LTD.

NOTE: Shaded areas are for DNR use only. See instructions for more information including a list of county codes.

Key ENVIRONMENTAL SERVICES, INC.

CALCULATION SHEET

PAGE 1 OF 1
PROJECT NO. 0702007
PHASE R1
Prepared By DJK Date 5/4/98
Reviewed By CMT Date 2/23/99
Approved By _____ Date _____

CLIENT DECORAH
PROJECT DECORAH SHOPPING MALL

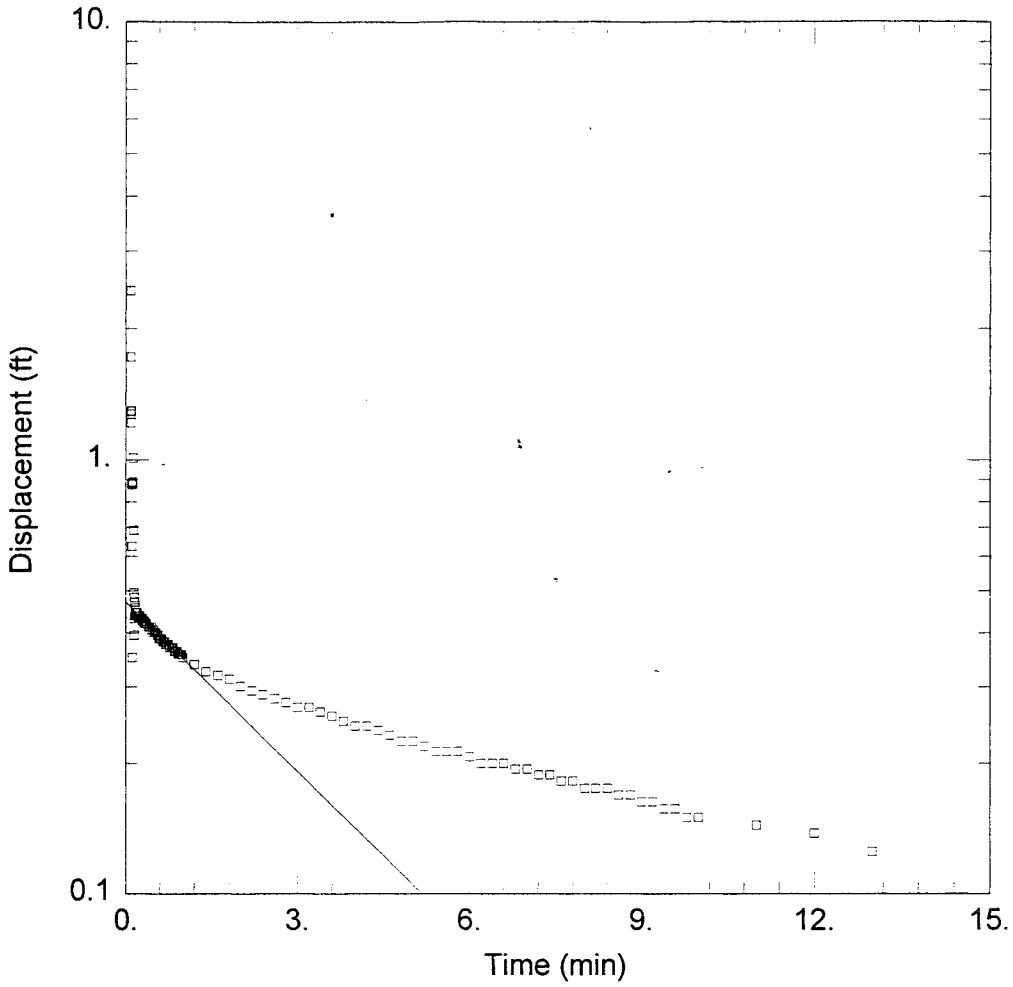
SUBJECT SLUG TEST ANALYSIS TO DETERMINE K_{SITE}

	HYDRAULIC CONDUCTIVITY, K IN cm/sec	
WELL ID	FALLING HEAD	RISING HEAD
MW-1	5.833×10^{-4}	4.222×10^{-4}
MW-2	1.070×10^{-3}	9.528×10^{-4}
MW-3	8.692×10^{-4}	4.949×10^{-4}
MW-4	1.265×10^{-2}	4.636×10^{-3}
P-1	1.986×10^{-3}	1.534×10^{-3}

GEOMETRIC MEAN, $K_{SITE} = \sqrt[10]{1.929 \times 10^{-29}}$

$K_{SITE} = 1.344 \times 10^{-3}$

$K_{SITE} = 1.3 \times 10^{-3}$ cm/sec



FALLING HEAD SLUG TEST // MW-1

Data Set: F:\DJK\SLUG\0702007\SEL0.AQT
Date: 04/30/98 Time: 14:29:52

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Test Location: West Bend, Wisconsin
Test Well: MW-1
Test Date: April 22, 1998

AQUIFER DATA

Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Initial Displacement: 2.437 ft
Water Column Height: 6.84 ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.3437 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
K = 0.0005833 cm/sec
Solution Method: Bouwer-Rice
y0 = 0.4715 ft

Data Set: F:\DJK\SLUG\0702007\SEL0.AQT
Title: Falling Head Slug Test // MW-1
Date: 04/30/98
Time: 14:39:23

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Location: West Bend, Wisconsin
Test Date: April 22, 1998
Test Well: MW-1

AQUIFER DATA

Saturated Thickness: 100 ft
Anisotropy Ratio (Kz/Kr): 1

OBSERVATION WELL DATA

Number of observation wells: 1

Observation Well No. 1: MW-1

X Location: 0 ft
Y Location: 0 ft

Observation Data

Time (min)	Displacement (ft)
0.0866	2.437
0.09	1.723
0.0933	1.29
0.0966	1.215
0.1	1.297
0.1033	1.272
0.1066	0.877
0.11	0.633
0.12	0.351
0.1233	0.883
0.1266	0.89
0.13	1.009
0.1333	0.025
0.14	0.495
0.1433	0.689
0.1466	0.432
0.15	0.395
0.1533	0.482
0.1566	0.47
0.16	0.438
0.1633	0.451
0.1666	0.457
0.17	0.445
0.1733	0.445
0.1766	0.445
0.18	0.445
0.1833	0.438

0.1866	0.445
0.19	0.445
0.1933	0.438
0.1966	0.445
0.2	0.438
0.2033	0.438
0.2066	0.438
0.21	0.438
0.2133	0.438
0.2166	0.438
0.22	0.438
0.2233	0.438
0.2266	0.432
0.23	0.438
0.2333	0.432
0.2366	0.438
0.24	0.438
0.2433	0.432
0.2466	0.432
0.25	0.432
0.2533	0.432
0.2566	0.432
0.26	0.432
0.2633	0.432
0.2666	0.432
0.27	0.432
0.2733	0.432
0.2766	0.432
0.28	0.426
0.2833	0.432
0.2866	0.432
0.29	0.426
0.2933	0.426
0.2966	0.426
0.3	0.426
0.3033	0.426
0.3066	0.426
0.31	0.426
0.3133	0.426
0.3166	0.426
0.32	0.42
0.3233	0.42
0.3266	0.426
0.33	0.426
0.3333	0.42
0.35	0.42
0.3666	0.42
0.3833	0.413
0.4	0.413
0.4166	0.413
0.4333	0.407
0.45	0.413
0.4666	0.401
0.4833	0.407
0.5	0.401
0.5166	0.401
0.5333	0.401

0.55	0.395
0.5666	0.395
0.5833	0.388
0.6	0.388
0.6166	0.388
0.6333	0.388
0.65	0.382
0.6666	0.382
0.6833	0.382
0.7	0.376
0.7166	0.376
0.7333	0.376
0.75	0.376
0.7666	0.37
0.7833	0.37
0.8	0.37
0.8166	0.37
0.8333	0.37
0.85	0.363
0.8666	0.363
0.8833	0.363
0.9	0.363
0.9166	0.357
0.9333	0.357
0.95	0.357
0.9666	0.357
0.9833	0.357
1.	0.351
1.2	0.338
1.4	0.326
1.6	0.319
1.8	0.313
2.	0.301
2.2	0.294
2.4	0.288
2.6	0.282
2.8	0.276
3.	0.269
3.2	0.269
3.4	0.263
3.6	0.257
3.8	0.25
4.	0.244
4.2	0.244
4.4	0.238
4.6	0.232
4.8	0.225
5.	0.225
5.2	0.219
5.4	0.213
5.6	0.213
5.8	0.213
6.	0.207
6.2	0.2
6.4	0.2
6.6	0.2
6.8	0.194

7.	0.194
7.2	0.188
7.4	0.188
7.6	0.182
7.8	0.182
8.	0.175
8.2	0.175
8.4	0.175
8.6	0.169
8.8	0.169
9.	0.163
9.2	0.163
9.4	0.157
9.6	0.157
9.8	0.15
10.	0.15
11.	0.144
12.	0.138
13.	0.125

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0005833	cm/sec
y0	0.4715	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.0005833	8.671E-05	cm/sec
y0	0.4715	0.02713	ft

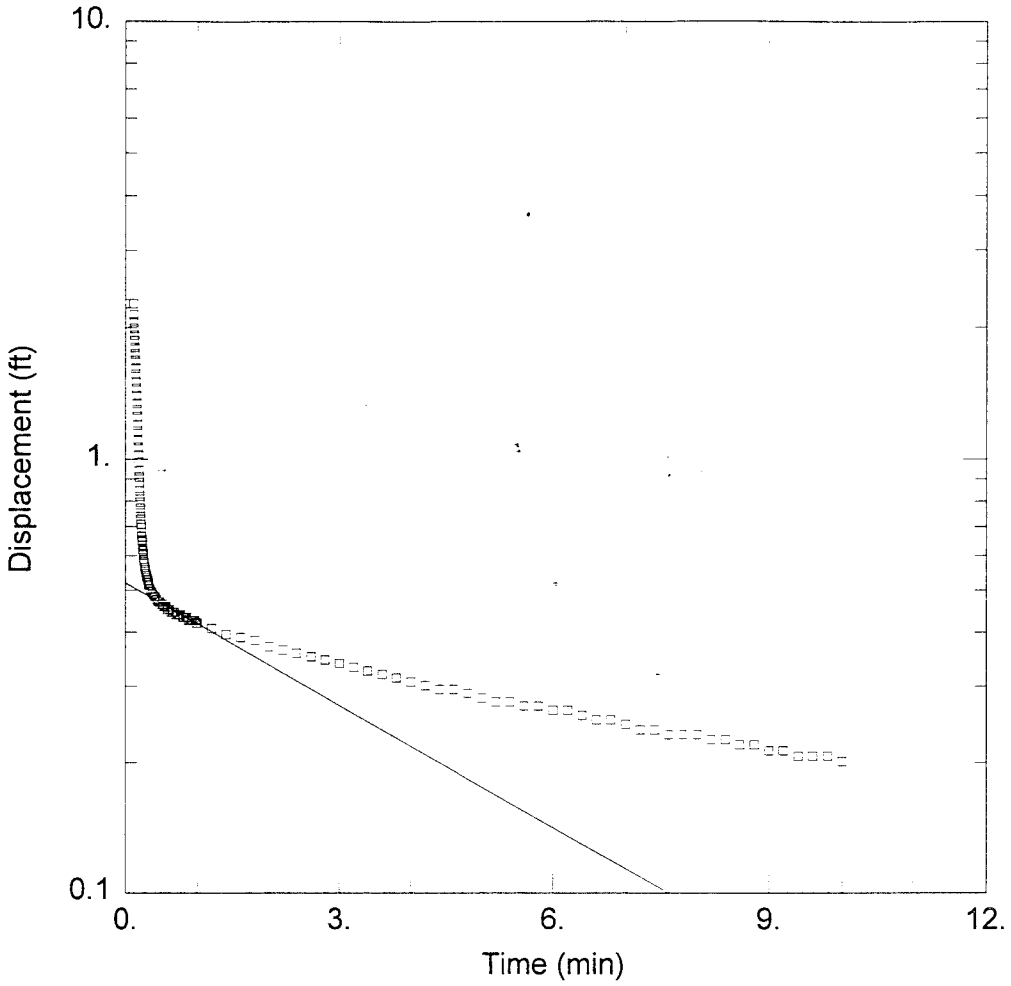
Parameter Correlations

	K	y0
K	1.00	0.51
y0	0.51	1.00

Residual Statistics

for weighted residuals

Sum of Squares .... 9.019ft^2
Variance ..... 0.05708ft^2
Std. Deviation 0.2389ft
Mean..... 0.005673ft
No. of Residuals.... 160
No. of Estimates.... 2



RISING HEAD SLUG TEST // MW-1

Data Set: F:\DJK\SLUG\0702007\SEL1.AQT
Date: 04/30/98 Time: 14:38:47

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Test Location: West Bend, Wisconsin
Test Well: MW-1
Test Date: April 22, 1998

AQUIFER DATA

Saturated Thickness: 100. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Initial Displacement: 2.268 ft Water Column Height: 6.84 ft
Casing Radius: 0.0833 ft Wellbore Radius: 0.3437 ft
Screen Length: 10. ft Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined K = 0.0004222 cm/sec
Solution Method: Bouwer-Rice y0 = 0.5202 ft

Data Set: F:\DJK\SLUG\0702007\SEL1.AQT
Title: Rising Head Slug Test // MW-1
Date: 04/30/98
Time: 14:38:55

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Location: West Bend, Wisconsin
Test Date: April 22, 1998
Test Well: MW-1

AQUIFER DATA

Saturated Thickness: 100 ft
Anisotropy Ratio (Kz/Kr): 1

OBSERVATION WELL DATA

Number of observation wells: 1

Observation Well No. 1: MW-1

X Location: 0 ft
Y Location: 0 ft

Observation Data

Time (min)	Displacement (ft)
0.1133	2.268
0.1166	2.142
0.12	2.061
0.1233	1.992
0.1266	1.923
0.13	1.867
0.1333	1.804
0.1366	1.742
0.14	1.685
0.1433	1.616
0.1466	1.566
0.15	1.504
0.1533	1.454
0.1566	1.397
0.16	1.341
0.1633	1.297
0.1666	1.253
0.17	1.197
0.1733	1.159
0.1766	1.103
0.18	1.065
0.1833	1.021
0.1866	0.984
0.19	0.94
0.1933	0.909
0.1966	0.884
0.2	0.846

0.2033	0.821
0.2066	0.796
0.21	0.771
0.2133	0.752
0.2166	0.727
0.22	0.708
0.2233	0.696
0.2266	0.677
0.23	0.664
0.2333	0.652
0.2366	0.646
0.24	0.633
0.2433	0.621
0.2466	0.614
0.25	0.608
0.2533	0.602
0.2566	0.589
0.26	0.583
0.2633	0.577
0.2666	0.577
0.27	0.564
0.2733	0.564
0.2766	0.558
0.28	0.558
0.2833	0.552
0.2866	0.545
0.29	0.545
0.2933	0.539
0.2966	0.539
0.3	0.539
0.3033	0.533
0.3066	0.533
0.31	0.527
0.3133	0.527
0.3166	0.527
0.32	0.52
0.3233	0.514
0.3266	0.52
0.33	0.514
0.3333	0.514
0.35	0.502
0.3666	0.495
0.3833	0.489
0.4	0.483
0.4166	0.483
0.4333	0.476
0.45	0.47
0.4666	0.47
0.4833	0.47
0.5	0.464
0.5166	0.464
0.5333	0.458
0.55	0.458
0.5666	0.458
0.5833	0.451
0.6	0.451
0.6166	0.451

0.6333	0.445
0.65	0.445
0.6666	0.445
0.6833	0.445
0.7	0.439
0.7166	0.439
0.7333	0.439
0.75	0.439
0.7666	0.439
0.7833	0.433
0.8	0.433
0.8166	0.433
0.8333	0.433
0.85	0.433
0.8666	0.426
0.8833	0.426
0.9	0.426
0.9166	0.426
0.9333	0.426
0.95	0.426
0.9666	0.426
0.9833	0.42
1.	0.42
1.2	0.408
1.4	0.395
1.6	0.389
1.8	0.383
2.	0.37
2.2	0.364
2.4	0.358
2.6	0.351
2.8	0.345
3.	0.339
3.2	0.332
3.4	0.326
3.6	0.32
3.8	0.314
4.	0.307
4.2	0.301
4.4	0.295
4.6	0.295
4.8	0.289
5.	0.282
5.2	0.276
5.4	0.276
5.6	0.27
5.8	0.27
6.	0.264
6.2	0.264
6.4	0.257
6.6	0.251
6.8	0.251
7.	0.245
7.2	0.238
7.4	0.238
7.6	0.232
7.8	0.232

8.	0.232
8.2	0.226
8.4	0.226
8.6	0.22
8.8	0.22
9.	0.213
9.2	0.213
9.4	0.207
9.6	0.207
9.8	0.207
10.	0.201

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0004222	cm/sec
y0	0.5202	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.01349	0.001051	cm/sec
y0	4.174	0.4126	ft

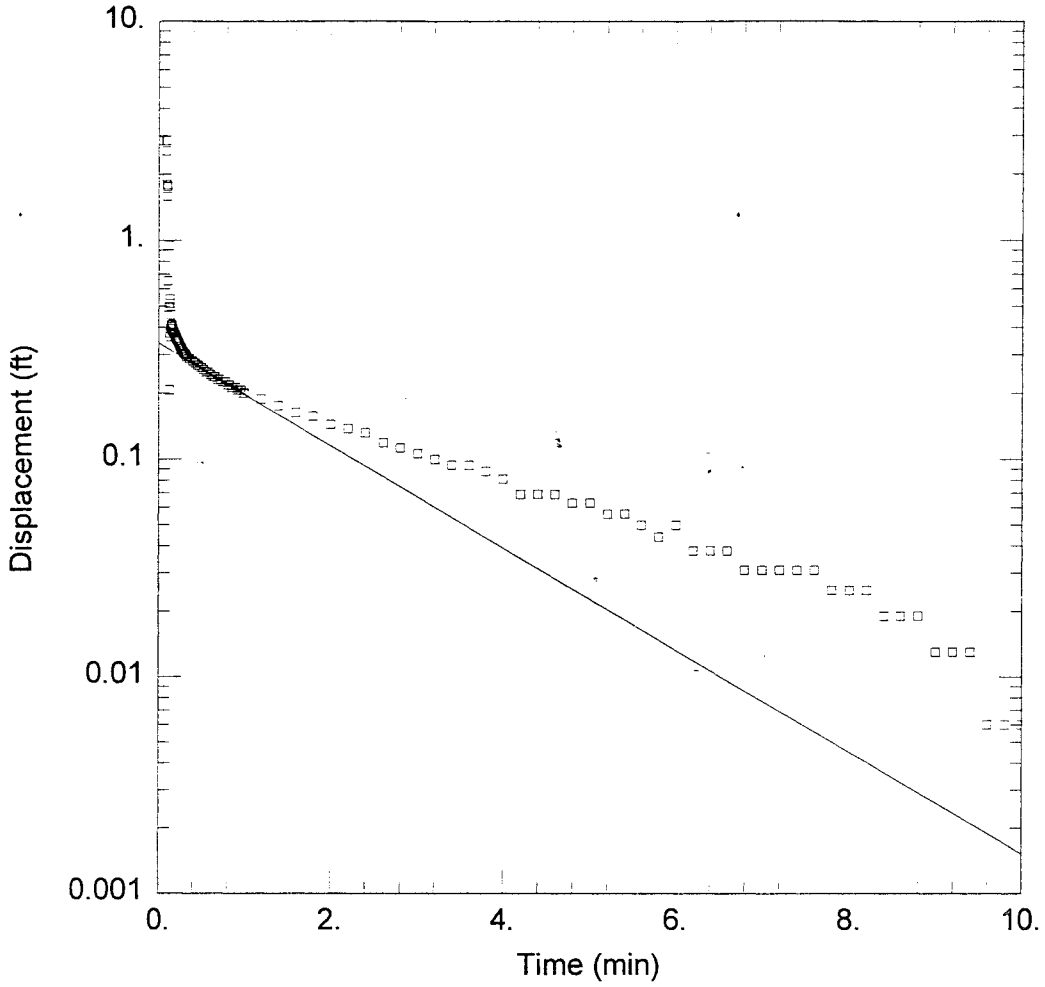
Parameter Correlations

	K	y0
K	1.00	0.95
y0	0.95	1.00

Residual Statistics

for weighted residuals

Sum of Squares .... $10.6 ft^2$
Variance ..... $0.07066 ft^2$
Std. Deviation 0.2658ft
Mean..... 0.1638ft
No. of Residuals.... 152
No. of Estimates.... 2



FALLING HEAD SLUG TEST // MW-2

Data Set: F:\DJK\SLUG\0702007\SEL2.AQT
Date: 04/30/98 Time: 14:42:22

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Test Location: West Bend, Wisconsin
Test Well: MW-2
Test Date: April 22, 1998

AQUIFER DATA

Saturated Thickness: 100. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Initial Displacement: 2.851 ft Water Column Height: 7.39 ft
Casing Radius: 0.0833 ft Wellbore Radius: 0.3437 ft
Screen Length: 10. ft Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined K = 0.00107 cm/sec
Solution Method: Bouwer-Rice y0 = 0.3402 ft

Data Set: F:\DJK\SLUG\0702007\SEL2.AQT
Title: Falling Head Slug Test // MW-2
Date: 04/30/98
Time: 14:42:32

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Location: West Bend, Wisconsin
Test Date: April 22, 1998
Test Well: MW-2

AQUIFER DATA

Saturated Thickness: 100 ft
Anisotropy Ratio (Kz/Kr): 1

OBSERVATION WELL DATA

Number of observation wells: 1

Observation Well No. 1: MW-2

X Location: 0 ft
Y Location: 0 ft

Observation Data

Time (min)	Displacement (ft)
0.0866	2.851
0.09	2.557
0.0933	1.924
0.0966	1.792
0.1	1.767
0.1033	1.585
0.1066	0.652
0.1166	0.495
0.12	0.946
0.1233	0.376
0.1266	0.207
0.13	0.514
0.1333	0.539
0.1366	0.363
0.14	0.395
0.1433	0.457
0.1466	0.407
0.15	0.395
0.1533	0.413
0.1566	0.401
0.16	0.388
0.1633	0.395
0.1666	0.388
0.17	0.382
0.1733	0.382
0.1766	0.382
0.18	0.376

0.1833	0.376
0.1866	0.37
0.19	0.37
0.1933	0.363
0.1966	0.363
0.2	0.357
0.2033	0.357
0.2066	0.357
0.21	0.351
0.2133	0.351
0.2166	0.351
0.22	0.345
0.2233	0.345
0.2266	0.345
0.23	0.338
0.2333	0.338
0.2366	0.338
0.24	0.332
0.2433	0.332
0.2466	0.332
0.25	0.326
0.2533	0.326
0.2566	0.326
0.26	0.32
0.2633	0.32
0.2666	0.32
0.27	0.32
0.2733	0.313
0.2766	0.313
0.28	0.313
0.2833	0.313
0.2866	0.307
0.29	0.307
0.2933	0.307
0.2966	0.307
0.3	0.307
0.3033	0.301
0.3066	0.301
0.31	0.301
0.3133	0.301
0.3166	0.301
0.32	0.301
0.3233	0.294
0.3266	0.294
0.33	0.294
0.3333	0.294
0.35	0.288
0.3666	0.288
0.3833	0.282
0.4	0.282
0.4166	0.276
0.4333	0.276
0.45	0.269
0.4666	0.269
0.4833	0.263
0.5	0.263
0.5166	0.257

0.5333	0.257
0.55	0.251
0.5666	0.251
0.5833	0.251
0.6	0.244
0.6166	0.244
0.6333	0.238
0.65	0.238
0.6666	0.238
0.6833	0.232
0.7	0.232
0.7166	0.232
0.7333	0.226
0.75	0.226
0.7666	0.226
0.7833	0.226
0.8	0.219
0.8166	0.219
0.8333	0.219
0.85	0.213
0.8666	0.213
0.8833	0.213
0.9	0.213
0.9166	0.207
0.9333	0.207
0.95	0.207
0.9666	0.207
0.9833	0.201
1.	0.201
1.2	0.188
1.4	0.175
1.6	0.163
1.8	0.157
2.	0.144
2.2	0.138
2.4	0.132
2.6	0.119
2.8	0.113
3.	0.106
3.2	0.1
3.4	0.094
3.6	0.094
3.8	0.088
4.	0.081
4.2	0.069
4.4	0.069
4.6	0.069
4.8	0.063
5.	0.063
5.2	0.056
5.4	0.056
5.6	0.05
5.8	0.044
6.	0.05
6.2	0.038
6.4	0.038
6.6	0.038

6.8	0.031
7.	0.031
7.2	0.031
7.4	0.031
7.6	0.031
7.8	0.025
8.	0.025
8.2	0.025
8.4	0.019
8.6	0.019
8.8	0.019
9.	0.013
9.2	0.013
9.4	0.013
9.6	0.006
9.8	0.006
10.	0.006

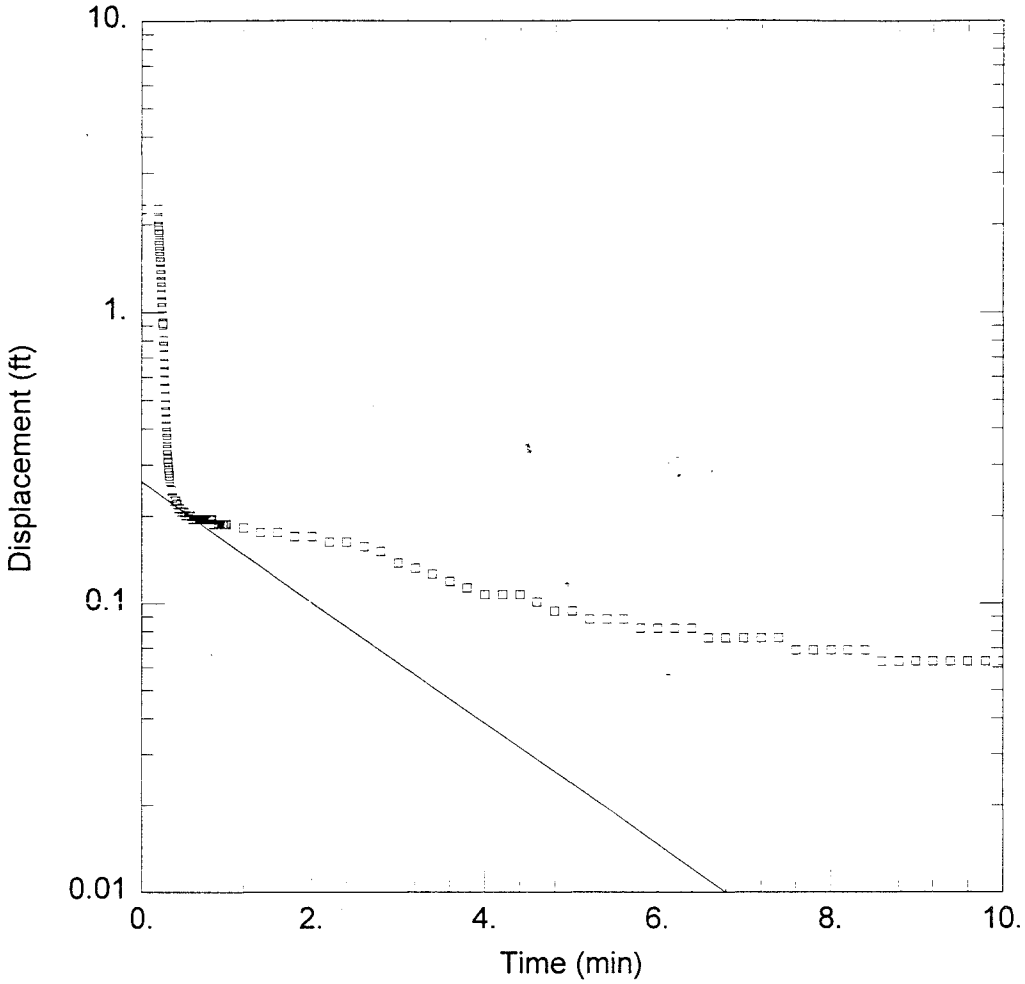
SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.00107	cm/sec
y0	0.3402	ft



RISING HEAD SLUG TEST // MW-2

Data Set: F:\DJK\SLUG\0702007\SEL3.AQT
Date: 05/04/98 Time: 10:06:01

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Test Location: West Bend, Wisconsin
Test Well: MW-2
Test Date: April 22, 1998

AQUIFER DATA

Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Initial Displacement: 2.261 ft
Water Column Height: 7.39 ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.3437 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
K = 0.0009528 cm/sec
Solution Method: Bouwer-Rice
y0 = 0.2635 ft

Data Set: F:\DJK\SLUG\0702007\SEL3.AQT
Title: Rising Head Slug Test // MW-2
Date: 05/04/98
Time: 10:06:37

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Location: West Bend, Wisconsin
Test Date: April 22, 1998
Test Well: MW-2

AQUIFER DATA

Saturated Thickness: 100 ft
Anisotropy Ratio (Kz/Kr): 1

OBSERVATION WELL DATA

Number of observation wells: 1

Observation Well No. 1: MW-2

X Location: 0 ft
Y Location: 0 ft

Observation Data

Time (min)	Displacement (ft)
0.1866	2.261
0.19	2.086
0.1933	1.98
0.1966	1.917
0.2	1.854
0.2033	1.767
0.2066	1.698
0.21	1.623
0.2133	1.554
0.2166	1.491
0.22	1.41
0.2233	1.347
0.2266	1.278
0.23	1.222
0.2333	1.153
0.2366	1.09
0.24	1.04
0.2433	0.971
0.2466	0.909
0.25	0.921
0.2533	0.802
0.2566	0.765
0.26	0.715
0.2633	0.664
0.2666	0.627
0.27	0.583
0.2733	0.552

0.2766	0.514
0.28	0.483
0.2833	0.458
0.2866	0.433
0.29	0.408
0.2933	0.389
0.2966	0.37
0.3	0.357
0.3033	0.339
0.3066	0.326
0.31	0.314
0.3133	0.307
0.3166	0.295
0.32	0.289
0.3233	0.282
0.3266	0.276
0.33	0.27
0.3333	0.264
0.35	0.245
0.3666	0.232
0.3833	0.226
0.4	0.226
0.4166	0.22
0.4333	0.213
0.45	0.213
0.4666	0.207
0.4833	0.207
0.5	0.207
0.5166	0.201
0.5333	0.201
0.55	0.201
0.5666	0.201
0.5833	0.201
0.6	0.195
0.6166	0.195
0.6333	0.195
0.65	0.195
0.6666	0.195
0.6833	0.195
0.7	0.195
0.7166	0.195
0.7333	0.195
0.75	0.195
0.7666	0.195
0.7833	0.195
0.8	0.195
0.8166	0.195
0.8333	0.195
0.85	0.188
0.8666	0.188
0.8833	0.188
0.9	0.188
0.9166	0.188
0.9333	0.188
0.95	0.188
0.9666	0.188
0.9833	0.188

1.	0.188
1.2	0.182
1.4	0.176
1.6	0.176
1.8	0.17
2.	0.17
2.2	0.163
2.4	0.163
2.6	0.157
2.8	0.151
3.	0.138
3.2	0.132
3.4	0.126
3.6	0.119
3.8	0.113
4.	0.107
4.2	0.107
4.4	0.107
4.6	0.101
4.8	0.094
5.	0.094
5.2	0.088
5.4	0.088
5.6	0.088
5.8	0.082
6.	0.082
6.2	0.082
6.4	0.082
6.6	0.076
6.8	0.076
7.	0.076
7.2	0.076
7.4	0.076
7.6	0.069
7.8	0.069
8.	0.069
8.2	0.069
8.4	0.069
8.6	0.063
8.8	0.063
9.	0.063
9.2	0.063
9.4	0.063
9.6	0.063
9.8	0.063
10.	0.063

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate

K	0.0009528	cm/sec
y0	0.2635	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.0005588	0.00116	cm/sec
y0	0.3272	4.756	ft

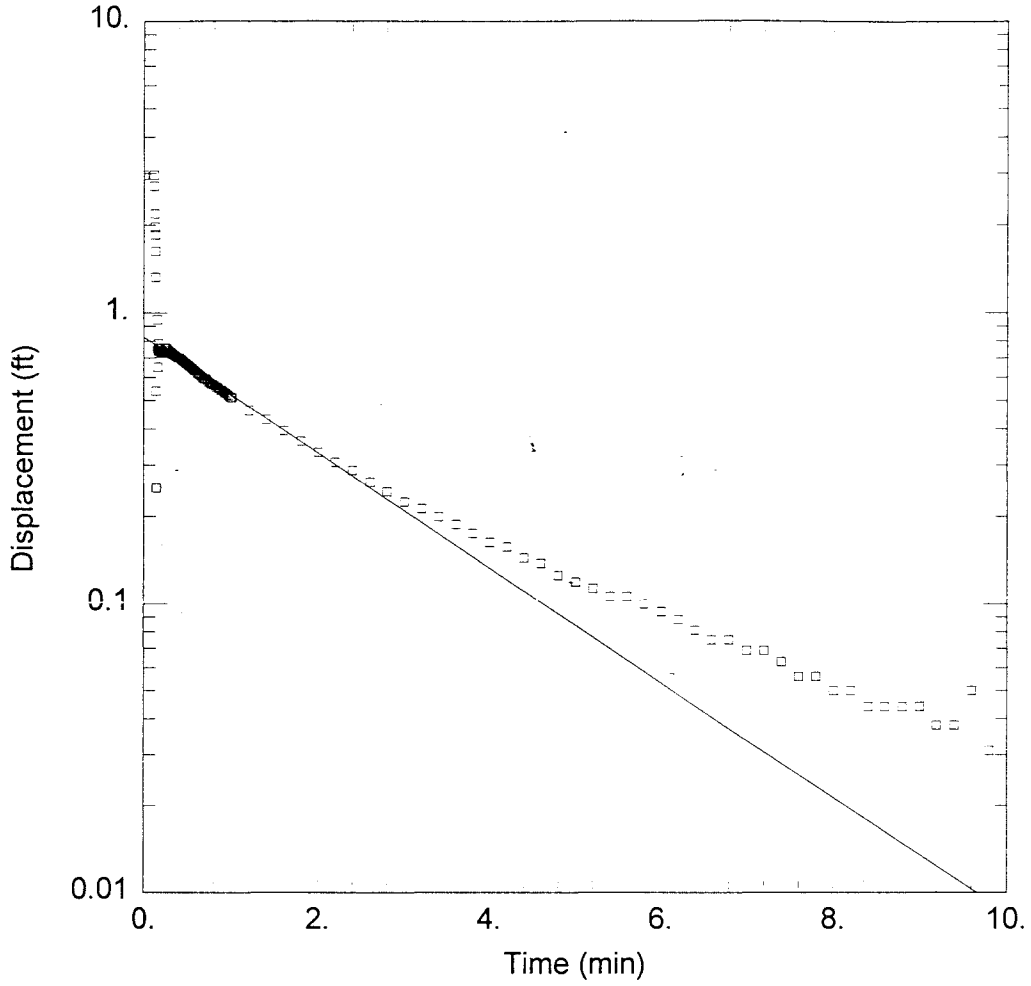
Parameter Correlations

	K	y0
K	1.00	0.99
y0	0.99	1.00

Residual Statistics

for weighted residuals

Sum of Squares .... 1.926ft^2
Variance ..... 0.01505ft^2
Std. Deviation 0.1227ft
Mean..... 0.0858ft
No. of Residuals.... 130
No. of Estimates.... 2



FALLING HEAD SLUG TEST // MW-3

Data Set: F:\DJK\SLUG\0702007\SEL4.AQT
Date: 05/04/98 Time: 09:13:40

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Test Location: West Bend, Wisconsin
Test Well: MW-3
Test Date: April 22, 1998

AQUIFER DATA

Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Initial Displacement: 2.963 ft
Water Column Height: 6.25 ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.3437 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
K = 0.0008692 cm/sec
Solution Method: Bouwer-Rice
y0 = 0.8251 ft

Data Set: F:\DJK\SLUG\0702007\SEL4.AQT
Title: Falling Head Slug Test // MW-3
Date: 05/04/98
Time: 09:13:59

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Location: West Bend, Wisconsin
Test Date: April 22, 1998
Test Well: MW-3

AQUIFER DATA

Saturated Thickness: 100 ft
Anisotropy Ratio (Kz/Kr): 1

OBSERVATION WELL DATA

Number of observation wells: 1

Observation Well No. 1: MW-3

X Location: 0 ft
Y Location: 0 ft

Observation Data

Time (min)	Displacement (ft)
0.1133	2.963
0.1166	2.713
0.12	2.186
0.1233	1.967
0.1266	1.848
0.13	1.622
0.1333	1.322
0.1366	0.539
0.14	0.251
0.1433	0.251
0.1466	0.758
0.15	0.946
0.1533	0.745
0.1566	0.651
0.16	0.752
0.1633	0.783
0.1666	0.739
0.17	0.727
0.1733	0.745
0.1766	0.752
0.18	0.739
0.1833	0.739
0.1866	0.739
0.19	0.739
0.1933	0.733
0.1966	0.733
0.2	0.733

0.2033	0.733
0.2066	0.733
0.21	0.733
0.2133	0.727
0.2166	0.727
0.22	0.727
0.2233	0.727
0.2266	0.727
0.23	0.733
0.2333	0.733
0.2366	0.739
0.24	0.739
0.2433	0.758
0.2466	0.739
0.25	0.752
0.2533	0.758
0.2566	0.752
0.26	0.745
0.2633	0.752
0.2666	0.745
0.27	0.745
0.2733	0.745
0.2766	0.739
0.28	0.739
0.2833	0.739
0.2866	0.739
0.29	0.733
0.2933	0.733
0.2966	0.733
0.3	0.733
0.3033	0.733
0.3066	0.727
0.31	0.727
0.3133	0.727
0.3166	0.727
0.32	0.72
0.3233	0.72
0.3266	0.72
0.33	0.72
0.3333	0.72
0.35	0.714
0.3666	0.708
0.3833	0.702
0.4	0.702
0.4166	0.695
0.4333	0.689
0.45	0.683
0.4666	0.676
0.4833	0.67
0.5	0.664
0.5166	0.658
0.5333	0.651
0.55	0.645
0.5666	0.639
0.5833	0.633
0.6	0.626
0.6166	0.62

0.6333	0.614
0.65	0.608
0.6666	0.601
0.6833	0.595
0.7	0.595
0.7166	0.589
0.7333	0.582
0.75	0.576
0.7666	0.57
0.7833	0.57
0.8	0.564
0.8166	0.557
0.8333	0.557
0.85	0.551
0.8666	0.545
0.8833	0.545
0.9	0.539
0.9166	0.532
0.9333	0.532
0.95	0.526
0.9666	0.52
0.9833	0.514
1.	0.514
1.2	0.464
1.4	0.432
1.6	0.395
1.8	0.363
2.	0.332
2.2	0.307
2.4	0.288
2.6	0.263
2.8	0.244
3.	0.225
3.2	0.213
3.4	0.2
3.6	0.188
3.8	0.175
4.	0.163
4.2	0.157
4.4	0.144
4.6	0.138
4.8	0.125
5.	0.119
5.2	0.113
5.4	0.106
5.6	0.106
5.8	0.1
6.	0.094
6.2	0.088
6.4	0.081
6.6	0.075
6.8	0.075
7.	0.069
7.2	0.069
7.4	0.063
7.6	0.056
7.8	0.056

8.	0.05
8.2	0.05
8.4	0.044
8.6	0.044
8.8	0.044
9.	0.044
9.2	0.038
9.4	0.038
9.6	0.05
9.8	0.031

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0008692	cm/sec
y0	0.8251	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.001513	0.0002871	cm/sec
y0	1.039	0.06338	ft

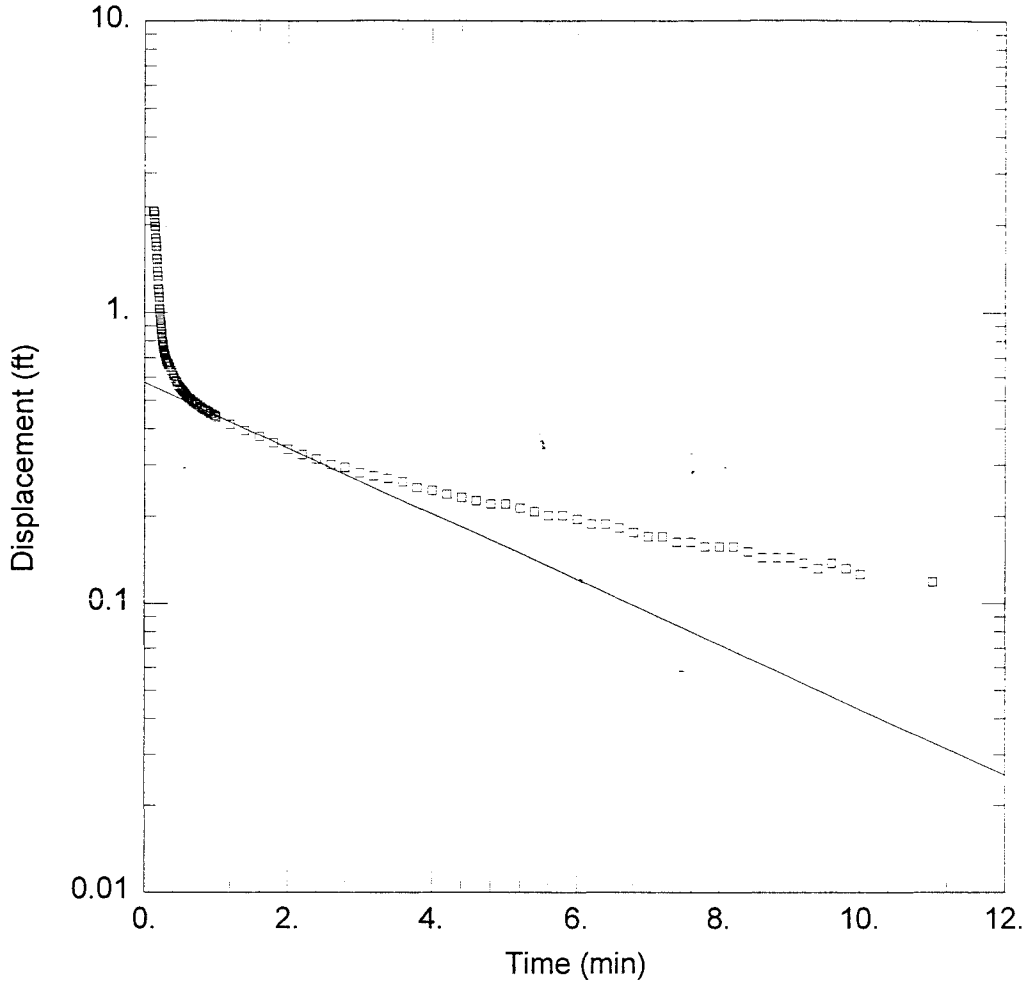
Parameter Correlations

	K	y0
K	1.00	0.80
y0	0.80	1.00

Residual Statistics

for weighted residuals

Sum of Squares .... $13.62 ft^2$
Variance ..... $0.09143 ft^2$
Std. Deviation 0.3024ft
Mean..... 0.01944ft
No. of Residuals.... 151
No. of Estimates.... 2



RISING HEAD SLUG TEST // MW-3

Data Set: F:\DJK\SLUG\0702007\SEL5.AQT
Date: 05/04/98 Time: 09:20:32

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Test Location: West Bend, Wisconsin
Test Well: MW-3
Test Date: April 22, 1998

AQUIFER DATA

Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Initial Displacement: 2.223 ft
Water Column Height: 6.28 ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.3437 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
K = 0.0004949 cm/sec
Solution Method: Bouwer-Rice
y0 = 0.5768 ft

Data Set: F:\DJK\SLUG\0702007\SEL5.AQT
Title: Rising Head Slug Test // MW-3
Date: 05/04/98
Time: 09:20:42

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Location: West Bend, Wisconsin
Test Date: April 22, 1998
Test Well: MW-3

AQUIFER DATA

Saturated Thickness: 100 ft
Anisotropy Ratio (Kz/Kr): 1

OBSERVATION WELL DATA

Number of observation wells: 1

Observation Well No. 1: MW-3

X Location: 0 ft
Y Location: 0 ft

Observation Data

Time (min)	Displacement (ft)
0.1233	2.223
0.1266	2.205
0.13	2.155
0.1333	2.098
0.1366	2.029
0.14	1.967
0.1433	1.917
0.1466	1.854
0.15	1.791
0.1533	1.741
0.1566	1.685
0.16	1.622
0.1633	1.579
0.1666	1.528
0.17	1.472
0.1733	1.422
0.1766	1.378
0.18	1.334
0.1833	1.284
0.1866	1.247
0.19	1.197
0.1933	1.172
0.1966	1.128
0.2	1.09
0.2033	1.059
0.2066	1.028
0.21	0.996

0.2133	0.971
0.2166	0.946
0.22	0.921
0.2233	0.896
0.2266	0.877
0.23	0.858
0.2333	0.846
0.2366	0.827
0.24	0.815
0.2433	0.796
0.2466	0.79
0.25	0.777
0.2533	0.765
0.2566	0.758
0.26	0.746
0.2633	0.739
0.2666	0.733
0.27	0.727
0.2733	0.721
0.2766	0.714
0.28	0.708
0.2833	0.708
0.2866	0.702
0.29	0.696
0.2933	0.689
0.2966	0.689
0.3	0.683
0.3033	0.683
0.3066	0.677
0.31	0.677
0.3133	0.671
0.3166	0.671
0.32	0.671
0.3233	0.664
0.3266	0.664
0.33	0.664
0.3333	0.664
0.35	0.652
0.3666	0.633
0.3833	0.62
0.4	0.608
0.4166	0.595
0.4333	0.583
0.45	0.577
0.4666	0.564
0.4833	0.558
0.5	0.552
0.5166	0.545
0.5333	0.539
0.55	0.533
0.5666	0.527
0.5833	0.52
0.6	0.514
0.6166	0.508
0.6333	0.508
0.65	0.502
0.6666	0.495

0.6833	0.495
0.7	0.489
0.7166	0.489
0.7333	0.483
0.75	0.483
0.7666	0.476
0.7833	0.476
0.8	0.47
0.8166	0.47
0.8333	0.464
0.85	0.464
0.8666	0.464
0.8833	0.458
0.9	0.458
0.9166	0.451
0.9333	0.451
0.95	0.451
0.9666	0.445
0.9833	0.445
1.	0.439
1.2	0.414
1.4	0.395
1.6	0.376
1.8	0.357
2.	0.339
2.2	0.326
2.4	0.314
2.6	0.301
2.8	0.295
3.	0.282
3.2	0.276
3.4	0.27
3.6	0.263
3.8	0.251
4.	0.245
4.2	0.238
4.4	0.232
4.6	0.226
4.8	0.22
5.	0.22
5.2	0.213
5.4	0.207
5.6	0.201
5.8	0.201
6.	0.195
6.2	0.188
6.4	0.188
6.6	0.182
6.8	0.176
7.	0.17
7.2	0.17
7.4	0.163
7.6	0.163
7.8	0.157
8.	0.157
8.2	0.157
8.4	0.151

8.6	0.144
8.8	0.144
9.	0.144
9.2	0.138
9.4	0.132
9.6	0.138
9.8	0.132
10.	0.126
11.	0.119

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0004949	cm/sec
y0	0.5768	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.008284	0.000657	cm/sec
y0	3.014	0.2264	ft

Parameter Correlations

	K	y0
K	1.00	0.94
y0	0.94	1.00

Residual Statistics

for weighted residuals

Sum of Squares .... $9.254 ft^2$
Variance ..... $0.06253 ft^2$
Std. Deviation 0.25ft
Mean..... 0.1171ft
No. of Residuals.... 150
No. of Estimates.... 2

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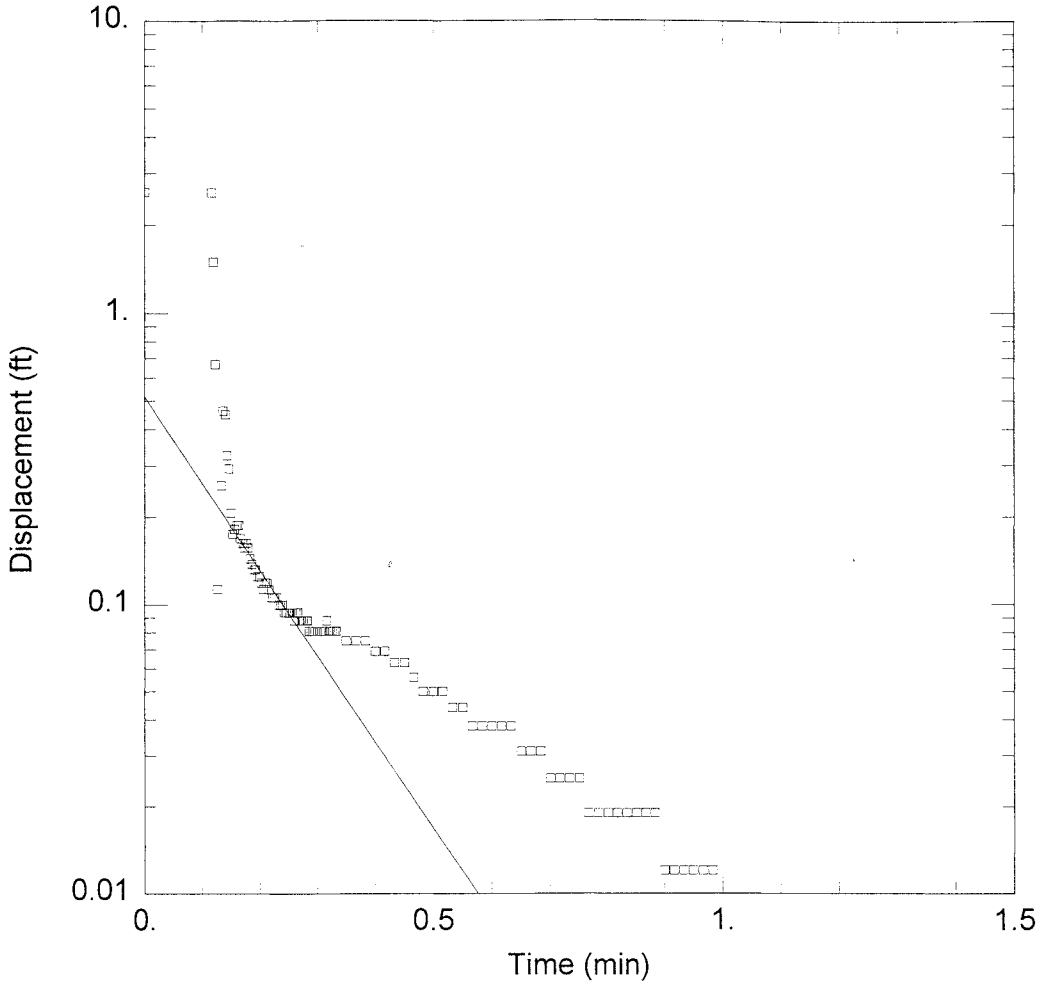


FALLING HEAD SLUG TEST // MW-4

Data Set: F:\DJK\SLUG\0702007\SEL6.AQT
Date: 05/04/98 Time: 09:29:25

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Test Location: West Bend, Wisconsin
Test Well: MW-4
Test Date: April 22, 1998

AQUIFER DATA

Saturated Thickness: 100. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Initial Displacement: 2.593 ft Water Column Height: 5.55 ft
Casing Radius: 0.0833 ft Wellbore Radius: 0.3437 ft
Screen Length: 10. ft Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined K = 0.01265 cm/sec
Solution Method: Bouwer-Rice y0 = 0.5198 ft

Data Set: F:\DJK\SLUG\0702007\SEL6.AQT
Title: Falling Head Slug Test // MW-4
Date: 05/04/98
Time: 09:29:35

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Location: West Bend, Wisconsin
Test Date: April 22, 1998
Test Well: MW-4

AQUIFER DATA

Saturated Thickness: 100 ft
Anisotropy Ratio (Kz/Kr): 1

OBSERVATION WELL DATA

Number of observation wells: 1

Observation Well No. 1: MW-4

X Location: 0 ft
Y Location: 0 ft

Observation Data

Time (min)	Displacement (ft)
0.1166	2.593
0.12	1.503
0.1233	0.67
0.1266	0.113
0.1333	0.257
0.1366	0.463
0.14	0.451
0.1433	0.326
0.1466	0.294
0.15	0.207
0.1533	0.175
0.1566	0.182
0.16	0.188
0.1633	0.188
0.1666	0.169
0.17	0.163
0.1733	0.157
0.1766	0.163
0.18	0.157
0.1833	0.144
0.1866	0.138
0.19	0.132
0.1933	0.132
0.1966	0.125
0.2	0.125
0.2033	0.119
0.2066	0.113

0.21	0.119
0.2133	0.119
0.2166	0.113
0.22	0.106
0.2233	0.106
0.2266	0.106
0.23	0.106
0.2333	0.1
0.2366	0.1
0.24	0.1
0.2433	0.094
0.2466	0.094
0.25	0.094
0.2533	0.094
0.2566	0.094
0.26	0.088
0.2633	0.094
0.2666	0.094
0.27	0.088
0.2733	0.088
0.2766	0.088
0.28	0.088
0.2833	0.088
0.2866	0.081
0.29	0.081
0.2933	0.081
0.2966	0.081
0.3	0.081
0.3033	0.081
0.3066	0.081
0.31	0.081
0.3133	0.081
0.3166	0.088
0.32	0.081
0.3233	0.081
0.3266	0.081
0.33	0.081
0.3333	0.081
0.35	0.075
0.3666	0.075
0.3833	0.075
0.4	0.069
0.4166	0.069
0.4333	0.063
0.45	0.063
0.4666	0.056
0.4833	0.05
0.5	0.05
0.5166	0.05
0.5333	0.044
0.55	0.044
0.5666	0.038
0.5833	0.038
0.6	0.038
0.6166	0.038
0.6333	0.038
0.65	0.031

0.6666	0.031
0.6833	0.031
0.7	0.025
0.7166	0.025
0.7333	0.025
0.75	0.025
0.7666	0.019
0.7833	0.019
0.8	0.019
0.8166	0.019
0.8333	0.019
0.85	0.019
0.8666	0.019
0.8833	0.019
0.9	0.012
0.9166	0.012
0.9333	0.012
0.95	0.012
0.9666	0.012
0.9833	0.012
1.	0.006
1.2	0.006
1.4	0.
1.6	0.

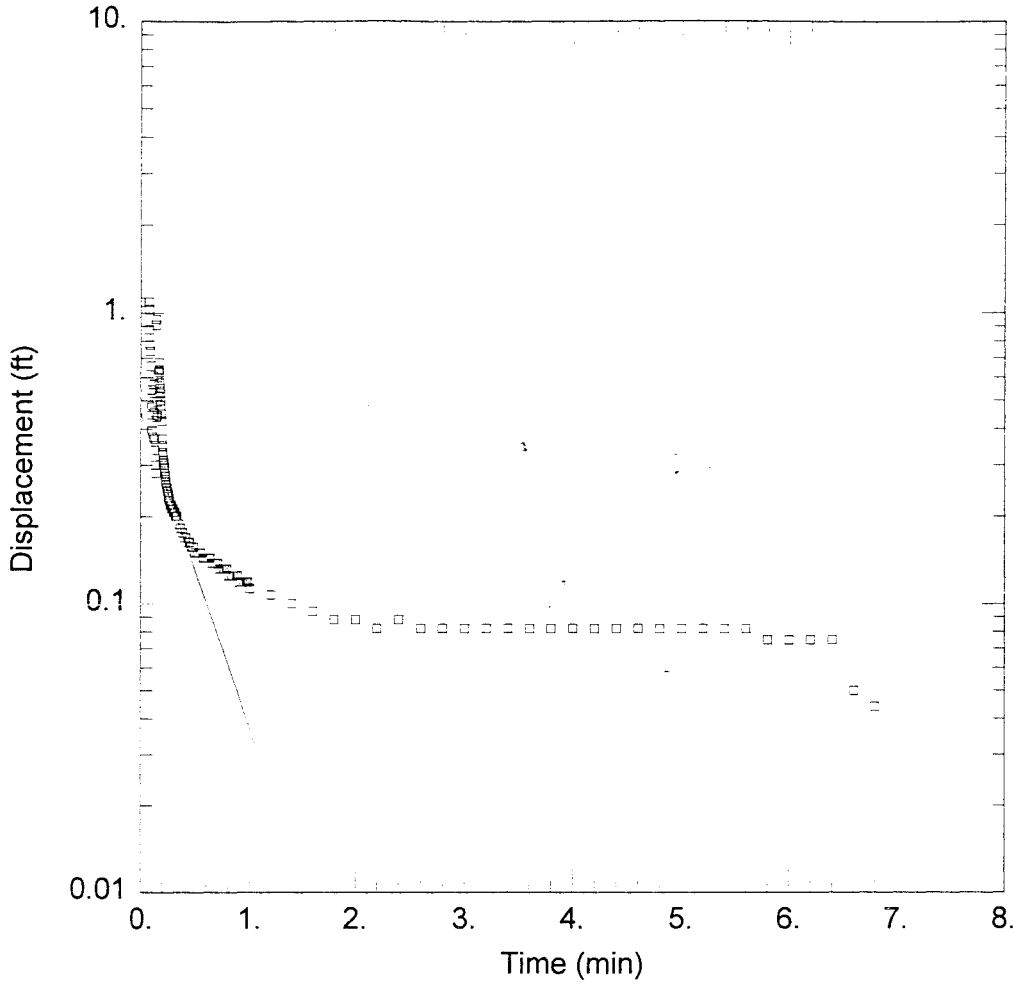
SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.01265	cm/sec
y0	0.5198	ft



RISING HEAD SLUG TEST // MW-4

Data Set: F:\DJK\SLUG\0702007\SEL7.AQT
Date: 05/04/98 Time: 09:34:19

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Test Location: West Bend, Wisconsin
Test Well: MW-4
Test Date: April 22, 1998

AQUIFER DATA

Saturated Thickness: 100. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Initial Displacement: 1.09 ft Water Column Height: 5.55 ft
Casing Radius: 0.0833 ft Wellbore Radius: 0.3437 ft
Screen Length: 10. ft Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined K = 0.004636 cm/sec
Solution Method: Bouwer-Rice y0 = 0.458 ft

0.4333	0.163
0.45	0.163
0.4666	0.157
0.4833	0.157
0.5	0.15
0.5166	0.15
0.5333	0.15
0.55	0.15
0.5666	0.144
0.5833	0.144
0.6	0.144
0.6166	0.144
0.6333	0.144
0.65	0.138
0.6666	0.138
0.6833	0.138
0.7	0.138
0.7166	0.132
0.7333	0.132
0.75	0.132
0.7666	0.132
0.7833	0.132
0.8	0.125
0.8166	0.125
0.8333	0.125
0.85	0.125
0.8666	0.125
0.8833	0.125
0.9	0.119
0.9166	0.119
0.9333	0.119
0.95	0.119
0.9666	0.119
0.9833	0.119
1.	0.113
1.2	0.107
1.4	0.1
1.6	0.094
1.8	0.088
2.	0.088
2.2	0.082
2.4	0.088
2.6	0.082
2.8	0.082
3.	0.082
3.2	0.082
3.4	0.082
3.6	0.082
3.8	0.082
4.	0.082
4.2	0.082
4.4	0.082
4.6	0.082
4.8	0.082
5.	0.082
5.2	0.082
5.4	0.082

Data Set: F:\DJK\SLUG\0702007\SEL7.AQT
Title: Rising Head Slug Test // MW-4
Date: 05/04/98
Time: 09:34:26

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Location: West Bend, Wisconsin
Test Date: April 22, 1998
Test Well: MW-4

AQUIFER DATA

Saturated Thickness: 100 ft
Anisotropy Ratio (Kz/Kr): 1

OBSERVATION WELL DATA

Number of observation wells: 1

Observation Well No. 1: MW-4

X Location: 0 ft
Y Location: 0 ft

Observation Data

Time (min)	Displacement (ft)
0.0733	1.09
0.0766	0.877
0.08	1.027
0.0833	0.777
0.0866	0.739
0.09	0.658
0.0933	0.545
0.0966	0.476
0.1	0.42
0.1033	0.395
0.1066	0.482
0.11	0.376
0.1133	0.532
0.1166	0.608
0.12	0.57
0.1233	0.457
0.1266	0.37
0.13	0.338
0.1333	0.301
0.1366	0.282
0.14	0.908
0.1433	0.952
0.1466	0.439
0.15	0.495
0.1533	0.601
0.1566	0.445
0.16	0.52

0.1633	0.639
0.1666	0.676
0.17	0.626
0.1733	0.576
0.1766	0.551
0.18	0.532
0.1833	0.501
0.1866	0.482
0.19	0.451
0.1933	0.426
0.1966	0.37
0.2	0.351
0.2033	0.332
0.2066	0.326
0.21	0.313
0.2133	0.307
0.2166	0.301
0.22	0.295
0.2233	0.282
0.2266	0.276
0.23	0.269
0.2333	0.263
0.2366	0.257
0.24	0.251
0.2433	0.251
0.2466	0.244
0.25	0.238
0.2533	0.238
0.2566	0.232
0.26	0.232
0.2633	0.226
0.2666	0.226
0.27	0.219
0.2733	0.219
0.2766	0.219
0.28	0.219
0.2833	0.219
0.2866	0.213
0.29	0.213
0.2933	0.213
0.2966	0.213
0.3	0.213
0.3033	0.207
0.3066	0.207
0.31	0.207
0.3133	0.207
0.3166	0.207
0.32	0.201
0.3233	0.201
0.3266	0.201
0.33	0.201
0.3333	0.201
0.35	0.188
0.3666	0.182
0.3833	0.176
0.4	0.169
0.4166	0.169

5.6	0.082
5.8	0.075
6.	0.075
6.2	0.075
6.4	0.075
6.6	0.05
6.8	0.044

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.004636	cm/sec
y0	0.458	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.008846	0.000707	cm/sec
y0	1.017	0.06775	ft

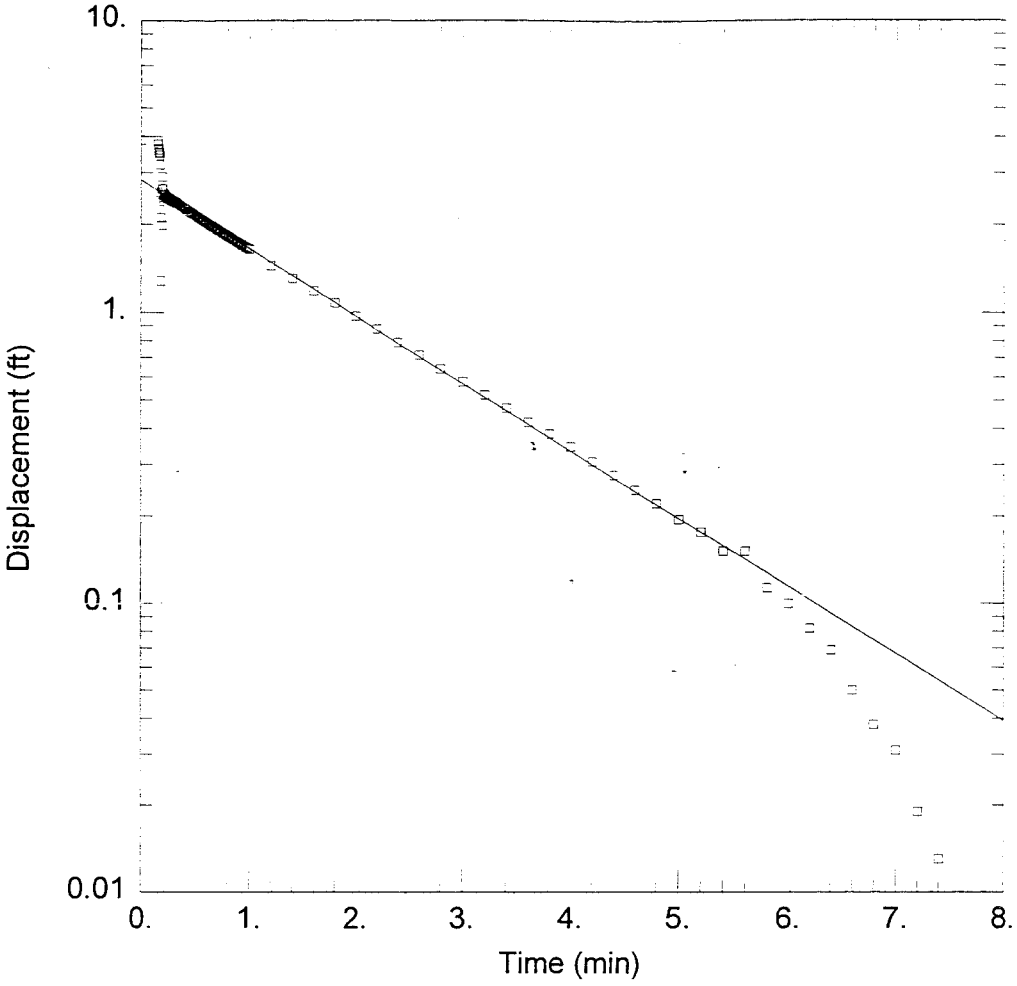
Parameter Correlations

	K	y0
K	1.00	0.90
y0	0.90	1.00

Residual Statistics

for weighted residuals

Sum of Squares .... $1.839 ft^2$
Variance ..... $0.0126 ft^2$
Std. Deviation 0.1122ft
Mean..... 0.03132ft
No. of Residuals.... 148
No. of Estimates.... 2



FALLING HEAD SLUG TEST // P-1

Data Set: F:\DJK\SLUG\0702007\SEL8.AQT
Date: 05/04/98 Time: 09:41:37

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Test Location: West Bend, Wisconsin
Test Well: P-1
Test Date: April 22, 1998

AQUIFER DATA

Saturated Thickness: 100. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Initial Displacement: 3.877 ft Water Column Height: 13.45 ft
Casing Radius: 0.0833 ft Wellbore Radius: 0.3437 ft
Screen Length: 5. ft Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined K = 0.001986 cm/sec
Solution Method: Bouwer-Rice y0 = 2.837 ft

Data Set: F:\DJK\SLUG\0702007\SEL8.AQT
Title: Falling Head Slug Test // P-1
Date: 05/04/98
Time: 09:41:49

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Location: West Bend, Wisconsin
Test Date: April 22, 1998
Test Well: P-1

AQUIFER DATA

Saturated Thickness: 100 ft
Anisotropy Ratio (Kz/Kr): 1

OBSERVATION WELL DATA

Number of observation wells: 1

Observation Well No. 1: P-1

X Location: 0 ft
Y Location: 0 ft

Observation Data

Time (min)	Displacement (ft)
0.1533	3.877
0.1566	3.77
0.16	3.607
0.1633	3.507
0.1666	3.532
0.17	3.456
0.1733	3.199
0.1766	2.572
0.18	1.28
0.1833	2.101
0.1866	2.54
0.19	1.982
0.1933	2.647
0.1966	2.904
0.2	2.641
0.2033	2.478
0.2066	2.396
0.21	2.446
0.2133	2.522
0.2166	2.54
0.22	2.509
0.2233	2.478
0.2266	2.471
0.23	2.478
0.2333	2.484
0.2366	2.478
0.24	2.471

0.2433	2.459
0.2466	2.459
0.25	2.459
0.2533	2.453
0.2566	2.446
0.26	2.446
0.2633	2.44
0.2666	2.434
0.27	2.434
0.2733	2.428
0.2766	2.421
0.28	2.421
0.2833	2.415
0.2866	2.409
0.29	2.409
0.2933	2.402
0.2966	2.402
0.3	2.396
0.3033	2.39
0.3066	2.39
0.31	2.384
0.3133	2.377
0.3166	2.377
0.32	2.371
0.3233	2.371
0.3266	2.365
0.33	2.358
0.3333	2.358
0.35	2.333
0.3666	2.315
0.3833	2.296
0.4	2.271
0.4166	2.252
0.4333	2.227
0.45	2.208
0.4666	2.189
0.4833	2.17
0.5	2.145
0.5166	2.126
0.5333	2.108
0.55	2.089
0.5666	2.07
0.5833	2.051
0.6	2.032
0.6166	2.013
0.6333	1.995
0.65	1.976
0.6666	1.963
0.6833	1.944
0.7	1.926
0.7166	1.907
0.7333	1.888
0.75	1.875
0.7666	1.857
0.7833	1.844
0.8	1.825
0.8166	1.813

0.8333	1.794
0.85	1.781
0.8666	1.763
0.8833	1.75
0.9	1.737
0.9166	1.719
0.9333	1.706
0.95	1.687
0.9666	1.675
0.9833	1.662
1.	1.65
1.2	1.449
1.4	1.311
1.6	1.185
1.8	1.079
2.	0.972
2.2	0.878
2.4	0.79
2.6	0.715
2.8	0.64
3.	0.577
3.2	0.521
3.4	0.47
3.6	0.42
3.8	0.383
4.	0.345
4.2	0.307
4.4	0.276
4.6	0.245
4.8	0.22
5.	0.194
5.2	0.176
5.4	0.151
5.6	0.151
5.8	0.113
6.	0.1
6.2	0.082
6.4	0.069
6.6	0.05
6.8	0.038
7.	0.031
7.2	0.019
7.4	0.013
7.6	0.006
7.8	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.001986	cm/sec

y0	2.837	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.002202	0.0001336	cm/sec
y0	2.95	0.05353	ft

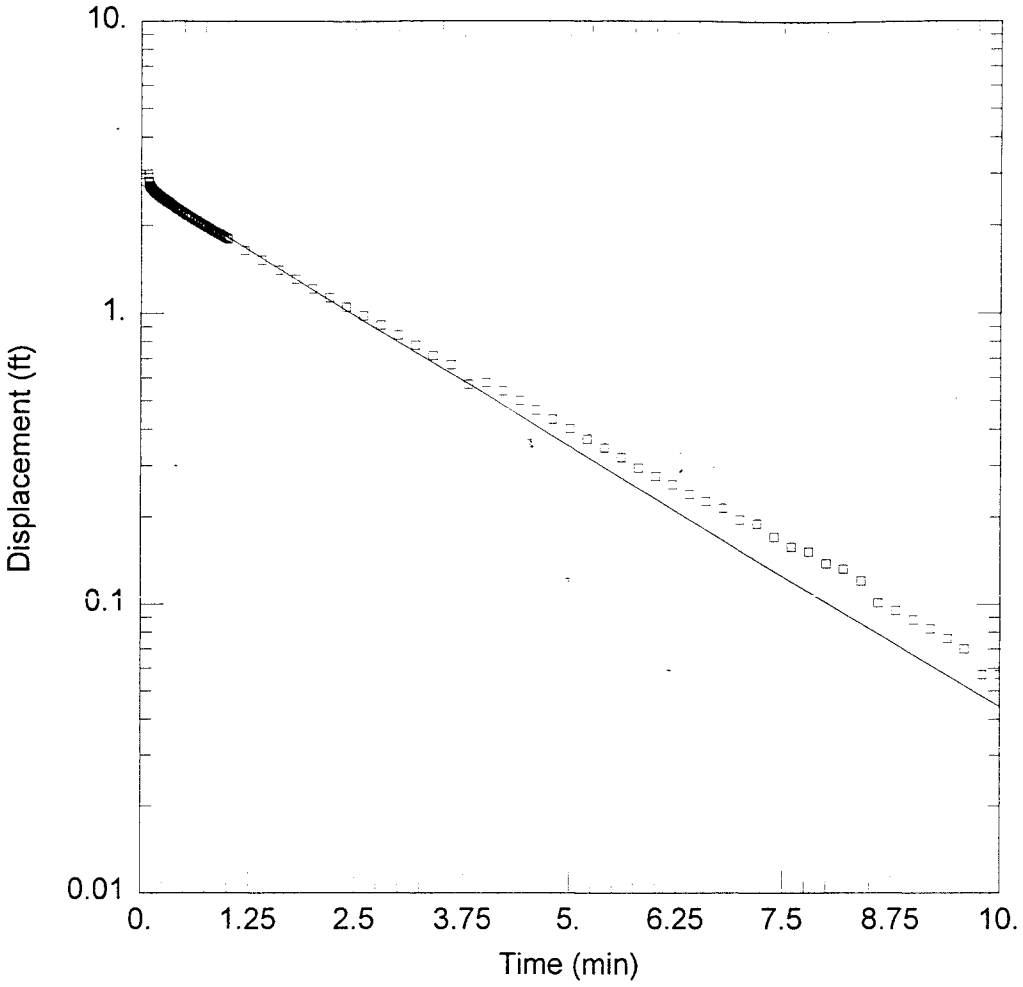
Parameter Correlations

	K	y0
K	1.00	0.77
y0	0.77	1.00

Residual Statistics

for weighted residuals

Sum of Squares .... $8.928 ft^2$
Variance ..... $0.0703 ft^2$
Std. Deviation 0.2651ft
Mean..... 0.00479ft
No. of Residuals.... 129
No. of Estimates.... 2



RISING HEAD SLUG TEST // P-1

Data Set: F:\DJK\SLUG\0702007\SEL9.AQT
Date: 05/04/98 Time: 09:44:49

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Test Location: West Bend, Wisconsin
Test Well: P-1
Test Date: April 22, 1998

AQUIFER DATA

Saturated Thickness: 100. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Initial Displacement: 2.985 ft Water Column Height: 13.45 ft
Casing Radius: 0.0833 ft Wellbore Radius: 0.3437 ft
Screen Length: 5. ft Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined K = 0.001534 cm/sec
Solution Method: Bouwer-Rice y0 = 2.753 ft

Data Set: F:\DJK\SLUG\0702007\SEL9.AQT
Title: Rising Head Slug Test // P-1
Date: 05/04/98
Time: 09:45:01

PROJECT INFORMATION

Company: Key Engineering, Inc.
Client: Decorah Mall
Project: 0702007
Location: West Bend, Wisconsin
Test Date: April 22, 1998
Test Well: P-1

AQUIFER DATA

Saturated Thickness: 100 ft
Anisotropy Ratio (Kz/Kr): 1

OBSERVATION WELL DATA

Number of observation wells: 1

Observation Well No. 1: P-1

X Location: 0 ft
Y Location: 0 ft

Observation Data

Time (min)	Displacement (ft)
0.0833	2.985
0.0866	2.816
0.09	2.728
0.0933	2.797
0.0966	2.728
0.1	2.728
0.1033	2.721
0.1066	2.703
0.11	2.715
0.1133	2.69
0.1166	2.69
0.12	2.678
0.1233	2.665
0.1266	2.659
0.13	2.653
0.1333	2.646
0.1366	2.64
0.14	2.627
0.1433	2.621
0.1466	2.615
0.15	2.602
0.1533	2.615
0.1566	2.596
0.16	2.596
0.1633	2.59
0.1666	2.59
0.17	2.577

0.1733	2.571
0.1766	2.565
0.18	2.558
0.1833	2.552
0.1866	2.552
0.19	2.546
0.1933	2.54
0.1966	2.533
0.2	2.533
0.2033	2.527
0.2066	2.521
0.21	2.521
0.2133	2.515
0.2166	2.508
0.22	2.502
0.2233	2.502
0.2266	2.496
0.23	2.49
0.2333	2.49
0.2366	2.483
0.24	2.477
0.2433	2.477
0.2466	2.471
0.25	2.471
0.2533	2.464
0.2566	2.458
0.26	2.458
0.2633	2.452
0.2666	2.446
0.27	2.446
0.2733	2.439
0.2766	2.433
0.28	2.433
0.2833	2.427
0.2866	2.421
0.29	2.421
0.2933	2.414
0.2966	2.414
0.3	2.408
0.3033	2.402
0.3066	2.402
0.31	2.396
0.3133	2.396
0.3166	2.389
0.32	2.389
0.3233	2.383
0.3266	2.377
0.33	2.377
0.3333	2.37
0.35	2.352
0.3666	2.333
0.3833	2.314
0.4	2.295
0.4166	2.276
0.4333	2.264
0.45	2.245
0.4666	2.226

0.4833	2.214
0.5	2.195
0.5166	2.176
0.5333	2.164
0.55	2.151
0.5666	2.132
0.5833	2.12
0.6	2.107
0.6166	2.088
0.6333	2.076
0.65	2.063
0.6666	2.044
0.6833	2.032
0.7	2.019
0.7166	2.007
0.7333	1.994
0.75	1.982
0.7666	1.963
0.7833	1.957
0.8	1.938
0.8166	1.925
0.8333	1.913
0.85	1.9
0.8666	1.894
0.8833	1.875
0.9	1.869
0.9166	1.856
0.9333	1.844
0.95	1.831
0.9666	1.819
0.9833	1.806
1.	1.794
1.2	1.637
1.4	1.518
1.6	1.405
1.8	1.305
2.	1.211
2.2	1.129
2.4	1.048
2.6	0.979
2.8	0.91
3.	0.841
3.2	0.778
3.4	0.715
3.6	0.665
3.8	0.571
4.	0.577
4.2	0.54
4.4	0.502
4.6	0.465
4.8	0.433
5.	0.402
5.2	0.37
5.4	0.345
5.6	0.32
5.8	0.295
6.	0.276

6.2	0.258
6.4	0.239
6.6	0.226
6.8	0.214
7.	0.195
7.2	0.189
7.4	0.17
7.6	0.157
7.8	0.151
8.	0.138
8.2	0.132
8.4	0.12
8.6	0.101
8.8	0.095
9.	0.088
9.2	0.082
9.4	0.076
9.6	0.07
9.8	0.057
10.	0.057

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.001986	cm/sec
y0	2.837	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.001534	1.553E-05	cm/sec
y0	2.753	0.006615	ft

Parameter Correlations

	K	y0
K	1.00	0.65
y0	0.65	1.00

Residual Statistics

for weighted residuals

Sum of Squares .... $0.3595 ft^2$
Variance ..... $0.002261 ft^2$
Std. Deviation 0.04755ft
Mean..... 0.005634ft
No. of Residuals.... 161

No. of Estimates.... 2

SE1000C
Environmental Logger
04/22 13:22

Unit# 02222 Test 0

Setups:	INPUT 1
Type	Level (F)
Mode	Surface
I.D.	00012
Reference	100.000
Linearity	0.080
Scale factor	19.880
Offset	-0.050
Delay mSEC	50.000

Step 0 04/22 09:33:15

Elapsed Time	INPUT 1
0.0000	100.000
0.0033	100.000
0.0066	100.000
0.0100	100.000
0.0133	100.000
0.0166	100.000
0.0200	100.000
0.0233	100.000
0.0266	100.000
0.0300	100.000
0.0333	100.000
0.0366	100.000
0.0400	100.000
0.0433	99.993
0.0466	100.000
0.0500	100.006
0.0533	100.000
0.0566	100.000
0.0600	100.006
0.0633	100.006
0.0666	100.702
0.0700	101.836
0.0733	101.384
0.0766	100.990

0.0800	101.604
0.0833	102.074
0.0866	102.437
0.0900	101.723
0.0933	101.290
0.0966	101.215
0.1000	101.297
0.1033	101.272
0.1066	100.877
0.1100	100.633
0.1133	99.899
0.1166	99.599
0.1200	100.351
0.1233	100.883
0.1266	100.890
0.1300	101.009
0.1333	100.025
0.1366	99.974
0.1400	100.495
0.1433	100.689
0.1466	100.432
0.1500	100.395
0.1533	100.482
0.1566	100.470
0.1600	100.438
0.1633	100.451
0.1666	100.457
0.1700	100.445
0.1733	100.445
0.1766	100.445
0.1800	100.445
0.1833	100.438
0.1866	100.445
0.1900	100.445
0.1933	100.438
0.1966	100.445
0.2000	100.438
0.2033	100.438
0.2066	100.438
0.2100	100.438
0.2133	100.438
0.2166	100.438
0.2200	100.438
0.2233	100.438
0.2266	100.432
0.2300	100.438
0.2333	100.432

0.2366	100.438
0.2400	100.438
0.2433	100.432
0.2466	100.432
0.2500	100.432
0.2533	100.432
0.2566	100.432
0.2600	100.432
0.2633	100.432
0.2666	100.432
0.2700	100.432
0.2733	100.432
0.2766	100.432
0.2800	100.426
0.2833	100.432
0.2866	100.432
0.2900	100.426
0.2933	100.426
0.2966	100.426
0.3000	100.426
0.3033	100.426
0.3066	100.426
0.3100	100.426
0.3133	100.426
0.3166	100.426
0.3200	100.420
0.3233	100.420
0.3266	100.426
0.3300	100.426
0.3333	100.420
0.3500	100.420
0.3666	100.420
0.3833	100.413
0.4000	100.413
0.4166	100.413
0.4333	100.407
0.4500	100.413
0.4666	100.401
0.4833	100.407
0.5000	100.401
0.5166	100.401
0.5333	100.401
0.5500	100.395
0.5666	100.395
0.5833	100.388
0.6000	100.388
0.6166	100.388

0.6333	100.388
0.6500	100.382
0.6666	100.382
0.6833	100.382
0.7000	100.376
0.7166	100.376
0.7333	100.376
0.7500	100.376
0.7666	100.370
0.7833	100.370
0.8000	100.370
0.8166	100.370
0.8333	100.370
0.8500	100.363
0.8666	100.363
0.8833	100.363
0.9000	100.363
0.9166	100.357
0.9333	100.357
0.9500	100.357
0.9666	100.357
0.9833	100.357
1.0000	100.351
1.2000	100.338
1.4000	100.326
1.6000	100.319
1.8000	100.313
2.0000	100.301
2.2000	100.294
2.4000	100.288
2.6000	100.282
2.8000	100.276
3.0000	100.269
3.2000	100.269
3.4000	100.263
3.6000	100.257
3.8000	100.250
4.0000	100.244
4.2000	100.244
4.4000	100.238
4.6000	100.232
4.8000	100.225
5.0000	100.225
5.2000	100.219
5.4000	100.213
5.6000	100.213
5.8000	100.213

6.0000	100.207
6.2000	100.200
6.4000	100.200
6.6000	100.200
6.8000	100.194
7.0000	100.194
7.2000	100.188
7.4000	100.188
7.6000	100.182
7.8000	100.182
8.0000	100.175
8.2000	100.175
8.4000	100.175
8.6000	100.169
8.8000	100.169
9.0000	100.163
9.2000	100.163
9.4000	100.157
9.6000	100.157
9.8000	100.150
10.0000	100.150
11.0000	100.144
12.0000	100.138
13.0000	100.125

SE1000C
Environmental Logger
04/22 13:26

Unit# 02222 Test 1

Setups: INPUT 1

Type	Level (F)
Mode	Surface
I.D.	00012

Reference	100.000
Linearity	0.080
Scale factor	19.880
Offset	-0.050
Delay mSEC	50.000

Step 0 04/22 09:47:08

Elapsed Time	INPUT 1
0.0000	100.000
0.0033	100.000
0.0066	100.000
0.0100	100.000
0.0133	100.000
0.0166	100.000
0.0200	100.000
0.0233	100.000
0.0266	100.000
0.0300	100.000
0.0333	99.993
0.0366	99.993
0.0400	100.000
0.0433	99.993
0.0466	99.993
0.0500	99.993
0.0533	99.993
0.0566	99.993
0.0600	99.993
0.0633	99.993
0.0666	99.668
0.0700	99.473
0.0733	99.617
0.0766	99.686

0.0800	99.204
0.0833	99.110
0.0866	99.091
0.0900	99.148
0.0933	98.872
0.0966	98.816
0.1000	98.546
0.1033	98.158
0.1066	98.164
0.1100	97.870
0.1133	97.732
0.1166	97.858
0.1200	97.939
0.1233	98.008
0.1266	98.077
0.1300	98.133
0.1333	98.196
0.1366	98.258
0.1400	98.315
0.1433	98.384
0.1466	98.434
0.1500	98.496
0.1533	98.546
0.1566	98.603
0.1600	98.659
0.1633	98.703
0.1666	98.747
0.1700	98.803
0.1733	98.841
0.1766	98.897
0.1800	98.935
0.1833	98.979
0.1866	99.016
0.1900	99.060
0.1933	99.091
0.1966	99.116
0.2000	99.154
0.2033	99.179
0.2066	99.204
0.2100	99.229
0.2133	99.248
0.2166	99.273
0.2200	99.292
0.2233	99.304
0.2266	99.323
0.2300	99.336
0.2333	99.348

0.2366	99.354
0.2400	99.367
0.2433	99.379
0.2466	99.386
0.2500	99.392
0.2533	99.398
0.2566	99.411
0.2600	99.417
0.2633	99.423
0.2666	99.423
0.2700	99.436
0.2733	99.436
0.2766	99.442
0.2800	99.442
0.2833	99.448
0.2866	99.455
0.2900	99.455
0.2933	99.461
0.2966	99.461
0.3000	99.461
0.3033	99.467
0.3066	99.467
0.3100	99.473
0.3133	99.473
0.3166	99.473
0.3200	99.480
0.3233	99.486
0.3266	99.480
0.3300	99.486
0.3333	99.486
0.3500	99.498
0.3666	99.505
0.3833	99.511
0.4000	99.517
0.4166	99.517
0.4333	99.524
0.4500	99.530
0.4666	99.530
0.4833	99.530
0.5000	99.536
0.5166	99.536
0.5333	99.542
0.5500	99.542
0.5666	99.542
0.5833	99.549
0.6000	99.549
0.6166	99.549

0.6333	99.555
0.6500	99.555
0.6666	99.555
0.6833	99.555
0.7000	99.561
0.7166	99.561
0.7333	99.561
0.7500	99.561
0.7666	99.561
0.7833	99.567
0.8000	99.567
0.8166	99.567
0.8333	99.567
0.8500	99.567
0.8666	99.574
0.8833	99.574
0.9000	99.574
0.9166	99.574
0.9333	99.574
0.9500	99.574
0.9666	99.574
0.9833	99.580
1.0000	99.580
1.2000	99.592
1.4000	99.605
1.6000	99.611
1.8000	99.617
2.0000	99.630
2.2000	99.636
2.4000	99.642
2.6000	99.649
2.8000	99.655
3.0000	99.661
3.2000	99.668
3.4000	99.674
3.6000	99.680
3.8000	99.686
4.0000	99.693
4.2000	99.699
4.4000	99.705
4.6000	99.705
4.8000	99.711
5.0000	99.718
5.2000	99.724
5.4000	99.724
5.6000	99.730
5.8000	99.730

6.0000	99.736
6.2000	99.736
6.4000	99.743
6.6000	99.749
6.8000	99.749
7.0000	99.755
7.2000	99.762
7.4000	99.762
7.6000	99.768
7.8000	99.768
8.0000	99.768
8.2000	99.774
8.4000	99.774
8.6000	99.780
8.8000	99.780
9.0000	99.787
9.2000	99.787
9.4000	99.793
9.6000	99.793
9.8000	99.793
10.0000	99.799

SE1000C
Environmental Logger
04/22 13:30

Unit# 02222 Test 2

Setups: INPUT 1

Type	Level (F)
Mode	Surface
I.D.	00012
Reference	100.000
Linearity	0.080
Scale factor	19.880
Offset	-0.050
Delay mSEC	50.000

Step 0 04/22 10:02:47

Elapsed Time	INPUT 1
0.0000	100.000
0.0033	100.006
0.0066	100.006
0.0100	100.006
0.0133	100.006
0.0166	100.006
0.0200	100.000
0.0233	100.000
0.0266	100.000
0.0300	100.000
0.0333	100.000
0.0366	100.000
0.0400	100.000
0.0433	100.006
0.0466	99.993
0.0500	100.006
0.0533	100.376
0.0566	100.727
0.0600	100.219
0.0633	100.689
0.0666	101.147
0.0700	101.184
0.0733	101.197
0.0766	101.422

0.2366	100.338
0.2400	100.332
0.2433	100.332
0.2466	100.332
0.2500	100.326
0.2533	100.326
0.2566	100.326
0.2600	100.320
0.2633	100.320
0.2666	100.320
0.2700	100.320
0.2733	100.313
0.2766	100.313
0.2800	100.313
0.2833	100.313
0.2866	100.307
0.2900	100.307
0.2933	100.307
0.2966	100.307
0.3000	100.307
0.3033	100.301
0.3066	100.301
0.3100	100.301
0.3133	100.301
0.3166	100.301
0.3200	100.301
0.3233	100.294
0.3266	100.294
0.3300	100.294
0.3333	100.294
0.3500	100.288
0.3666	100.288
0.3833	100.282
0.4000	100.282
0.4166	100.276
0.4333	100.276
0.4500	100.269
0.4666	100.269
0.4833	100.263
0.5000	100.263
0.5166	100.257
0.5333	100.257
0.5500	100.251
0.5666	100.251
0.5833	100.251
0.6000	100.244
0.6166	100.244

0.6333	100.238
0.6500	100.238
0.6666	100.238
0.6833	100.232
0.7000	100.232
0.7166	100.232
0.7333	100.226
0.7500	100.226
0.7666	100.226
0.7833	100.226
0.8000	100.219
0.8166	100.219
0.8333	100.219
0.8500	100.213
0.8666	100.213
0.8833	100.213
0.9000	100.213
0.9166	100.207
0.9333	100.207
0.9500	100.207
0.9666	100.207
0.9833	100.201
1.0000	100.201
1.2000	100.188
1.4000	100.175
1.6000	100.163
1.8000	100.157
2.0000	100.144
2.2000	100.138
2.4000	100.132
2.6000	100.119
2.8000	100.113
3.0000	100.106
3.2000	100.100
3.4000	100.094
3.6000	100.094
3.8000	100.088
4.0000	100.081
4.2000	100.069
4.4000	100.069
4.6000	100.069
4.8000	100.063
5.0000	100.063
5.2000	100.056
5.4000	100.056
5.6000	100.050
5.8000	100.044

6.0000	100.050
6.2000	100.038
6.4000	100.038
6.6000	100.038
6.8000	100.031
7.0000	100.031
7.2000	100.031
7.4000	100.031
7.6000	100.031
7.8000	100.025
8.0000	100.025
8.2000	100.025
8.4000	100.019
8.6000	100.019
8.8000	100.019
9.0000	100.013
9.2000	100.013
9.4000	100.013
9.6000	100.006
9.8000	100.006
10.0000	100.006

SE1000C
Environmental Logger
04/22 13:33

Unit# 02222 Test 3

Setups: INPUT 1

Type	Level (F)
Mode	Surface
I.D.	00012
Reference	100.000
Linearity	0.080
Scale factor	19.880
Offset	-0.050
Delay mSEC	50.000

Step 0 04/22 10:13:12

Elapsed Time	INPUT 1
0.0000	100.000
0.0033	100.006
0.0066	100.006
0.0100	100.006
0.0133	100.006
0.0166	100.006
0.0200	100.000
0.0233	100.000
0.0266	100.000
0.0300	100.000
0.0333	100.000
0.0366	100.000
0.0400	100.000
0.0433	100.000
0.0466	100.000
0.0500	100.000
0.0533	100.000
0.0566	100.000
0.0600	100.000
0.0633	100.000
0.0666	100.000
0.0700	100.000
0.0733	99.993
0.0766	99.993

0.0800	99.993
0.0833	99.993
0.0866	99.993
0.0900	99.993
0.0933	99.993
0.0966	99.993
0.1000	99.993
0.1033	99.993
0.1066	99.993
0.1100	99.993
0.1133	99.993
0.1166	99.993
0.1200	99.993
0.1233	99.993
0.1266	99.993
0.1300	99.630
0.1333	99.198
0.1366	99.217
0.1400	99.605
0.1433	99.404
0.1466	99.542
0.1500	99.436
0.1533	99.129
0.1566	99.022
0.1600	99.260
0.1633	98.985
0.1666	98.878
0.1700	98.665
0.1733	98.452
0.1766	98.421
0.1800	98.070
0.1833	98.070
0.1866	97.739
0.1900	97.914
0.1933	98.020
0.1966	98.083
0.2000	98.146
0.2033	98.233
0.2066	98.302
0.2100	98.377
0.2133	98.446
0.2166	98.509
0.2200	98.590
0.2233	98.653
0.2266	98.722
0.2300	98.778
0.2333	98.847

0.2366	98.910
0.2400	98.960
0.2433	99.029
0.2466	99.091
0.2500	99.079
0.2533	99.198
0.2566	99.235
0.2600	99.285
0.2633	99.336
0.2666	99.373
0.2700	99.417
0.2733	99.448
0.2766	99.486
0.2800	99.517
0.2833	99.542
0.2866	99.567
0.2900	99.592
0.2933	99.611
0.2966	99.630
0.3000	99.643
0.3033	99.661
0.3066	99.674
0.3100	99.686
0.3133	99.693
0.3166	99.705
0.3200	99.711
0.3233	99.718
0.3266	99.724
0.3300	99.730
0.3333	99.736
0.3500	99.755
0.3666	99.768
0.3833	99.774
0.4000	99.774
0.4166	99.780
0.4333	99.787
0.4500	99.787
0.4666	99.793
0.4833	99.793
0.5000	99.793
0.5166	99.799
0.5333	99.799
0.5500	99.799
0.5666	99.799
0.5833	99.799
0.6000	99.805
0.6166	99.805

0.6333	99.805
0.6500	99.805
0.6666	99.805
0.6833	99.805
0.7000	99.805
0.7166	99.805
0.7333	99.805
0.7500	99.805
0.7666	99.805
0.7833	99.805
0.8000	99.805
0.8166	99.805
0.8333	99.805
0.8500	99.812
0.8666	99.812
0.8833	99.812
0.9000	99.812
0.9166	99.812
0.9333	99.812
0.9500	99.812
0.9666	99.812
0.9833	99.812
1.0000	99.812
1.2000	99.818
1.4000	99.824
1.6000	99.824
1.8000	99.830
2.0000	99.830
2.2000	99.837
2.4000	99.837
2.6000	99.843
2.8000	99.849
3.0000	99.862
3.2000	99.868
3.4000	99.874
3.6000	99.881
3.8000	99.887
4.0000	99.893
4.2000	99.893
4.4000	99.893
4.6000	99.899
4.8000	99.906
5.0000	99.906
5.2000	99.912
5.4000	99.912
5.6000	99.912
5.8000	99.918

6.0000	99.918
6.2000	99.918
6.4000	99.918
6.6000	99.924
6.8000	99.924
7.0000	99.924
7.2000	99.924
7.4000	99.924
7.6000	99.931
7.8000	99.931
8.0000	99.931
8.2000	99.931
8.4000	99.931
8.6000	99.937
8.8000	99.937
9.0000	99.937
9.2000	99.937
9.4000	99.937
9.6000	99.937
9.8000	99.937
10.0000	99.937

SE1000C
Environmental Logger
04/22 13:35

Unit# 02222 Test 4

Setups: INPUT 1
---------- ---------
Type Level (F)
Mode Surface
I.D. 00012

Reference 100.000
Linearity 0.080
Scale factor 19.880
Offset -0.050
Delay mSEC 50.000

Step 0 04/22 10:32:31

Elapsed Time	INPUT 1
0.0000	100.000
0.0033	100.006
0.0066	100.006
0.0100	100.006
0.0133	100.006
0.0166	100.006
0.0200	100.006
0.0233	100.006
0.0266	100.000
0.0300	100.000
0.0333	100.000
0.0366	100.000
0.0400	100.000
0.0433	100.000
0.0466	100.000
0.0500	100.000
0.0533	100.000
0.0566	100.000
0.0600	100.000
0.0633	100.000
0.0666	100.000
0.0700	100.000
0.0733	100.000
0.0766	100.000

0.0800	100.006
0.0833	100.006
0.0866	100.006
0.0900	100.113
0.0933	100.702
0.0966	100.363
0.1000	100.570
0.1033	100.946
0.1066	101.209
0.1100	101.948
0.1133	102.963
0.1166	102.713
0.1200	102.186
0.1233	101.967
0.1266	101.848
0.1300	101.622
0.1333	101.322
0.1366	100.539
0.1400	100.251
0.1433	100.251
0.1466	100.758
0.1500	100.946
0.1533	100.745
0.1566	100.651
0.1600	100.752
0.1633	100.783
0.1666	100.739
0.1700	100.727
0.1733	100.745
0.1766	100.752
0.1800	100.739
0.1833	100.739
0.1866	100.739
0.1900	100.739
0.1933	100.733
0.1966	100.733
0.2000	100.733
0.2033	100.733
0.2066	100.733
0.2100	100.733
0.2133	100.727
0.2166	100.727
0.2200	100.727
0.2233	100.727
0.2266	100.727
0.2300	100.733
0.2333	100.733

0.2366	100.739
0.2400	100.739
0.2433	100.758
0.2466	100.739
0.2500	100.752
0.2533	100.758
0.2566	100.752
0.2600	100.745
0.2633	100.752
0.2666	100.745
0.2700	100.745
0.2733	100.745
0.2766	100.739
0.2800	100.739
0.2833	100.739
0.2866	100.739
0.2900	100.733
0.2933	100.733
0.2966	100.733
0.3000	100.733
0.3033	100.733
0.3066	100.727
0.3100	100.727
0.3133	100.727
0.3166	100.727
0.3200	100.720
0.3233	100.720
0.3266	100.720
0.3300	100.720
0.3333	100.720
0.3500	100.714
0.3666	100.708
0.3833	100.702
0.4000	100.702
0.4166	100.695
0.4333	100.689
0.4500	100.683
0.4666	100.676
0.4833	100.670
0.5000	100.664
0.5166	100.658
0.5333	100.651
0.5500	100.645
0.5666	100.639
0.5833	100.633
0.6000	100.626
0.6166	100.620

0.6333	100.614
0.6500	100.608
0.6666	100.601
0.6833	100.595
0.7000	100.595
0.7166	100.589
0.7333	100.582
0.7500	100.576
0.7666	100.570
0.7833	100.570
0.8000	100.564
0.8166	100.557
0.8333	100.557
0.8500	100.551
0.8666	100.545
0.8833	100.545
0.9000	100.539
0.9166	100.532
0.9333	100.532
0.9500	100.526
0.9666	100.520
0.9833	100.514
1.0000	100.514
1.2000	100.464
1.4000	100.432
1.6000	100.395
1.8000	100.363
2.0000	100.332
2.2000	100.307
2.4000	100.288
2.6000	100.263
2.8000	100.244
3.0000	100.225
3.2000	100.213
3.4000	100.200
3.6000	100.188
3.8000	100.175
4.0000	100.163
4.2000	100.157
4.4000	100.144
4.6000	100.138
4.8000	100.125
5.0000	100.119
5.2000	100.113
5.4000	100.106
5.6000	100.106
5.8000	100.100

6.0000	100.094
6.2000	100.088
6.4000	100.081
6.6000	100.075
6.8000	100.075
7.0000	100.069
7.2000	100.069
7.4000	100.063
7.6000	100.056
7.8000	100.056
8.0000	100.050
8.2000	100.050
8.4000	100.044
8.6000	100.044
8.8000	100.044
9.0000	100.044
9.2000	100.038
9.4000	100.038
9.6000	100.050
9.8000	100.031

SE1000C
Environmental Logger
04/22 13:41

Unit# 02222 Test 5

Setups: INPUT 1
---------- ---------
Type Level (F)
Mode Surface
I.D. 00012

Reference 100.000
Linearity 0.080
Scale factor 19.880
Offset -0.050
Delay mSEC 50.000

Step 0 04/22 10:42:36

Elapsed Time	INPUT 1
0.0000	100.000
0.0033	100.006
0.0066	100.006
0.0100	100.006
0.0133	100.000
0.0166	100.000
0.0200	100.000
0.0233	100.000
0.0266	100.000
0.0300	100.000
0.0333	100.000
0.0366	100.000
0.0400	100.000
0.0433	100.000
0.0466	100.000
0.0500	100.000
0.0533	100.000
0.0566	100.000
0.0600	100.000
0.0633	99.755
0.0666	99.329
0.0700	99.617
0.0733	100.000
0.0766	100.489

0.0800	100.370
0.0833	99.730
0.0866	99.586
0.0900	99.624
0.0933	99.304
0.0966	99.060
0.1000	98.854
0.1033	98.716
0.1066	98.434
0.1100	98.302
0.1133	98.140
0.1166	98.002
0.1200	97.845
0.1233	97.777
0.1266	97.795
0.1300	97.845
0.1333	97.902
0.1366	97.971
0.1400	98.033
0.1433	98.083
0.1466	98.146
0.1500	98.209
0.1533	98.259
0.1566	98.315
0.1600	98.378
0.1633	98.421
0.1666	98.472
0.1700	98.528
0.1733	98.578
0.1766	98.622
0.1800	98.666
0.1833	98.716
0.1866	98.753
0.1900	98.803
0.1933	98.828
0.1966	98.872
0.2000	98.910
0.2033	98.941
0.2066	98.972
0.2100	99.004
0.2133	99.029
0.2166	99.054
0.2200	99.079
0.2233	99.104
0.2266	99.123
0.2300	99.142
0.2333	99.154

0.2366	99.173
0.2400	99.185
0.2433	99.204
0.2466	99.210
0.2500	99.223
0.2533	99.235
0.2566	99.242
0.2600	99.254
0.2633	99.261
0.2666	99.267
0.2700	99.273
0.2733	99.279
0.2766	99.286
0.2800	99.292
0.2833	99.292
0.2866	99.298
0.2900	99.304
0.2933	99.311
0.2966	99.311
0.3000	99.317
0.3033	99.317
0.3066	99.323
0.3100	99.323
0.3133	99.329
0.3166	99.329
0.3200	99.329
0.3233	99.336
0.3266	99.336
0.3300	99.336
0.3333	99.336
0.3500	99.348
0.3666	99.367
0.3833	99.380
0.4000	99.392
0.4166	99.405
0.4333	99.417
0.4500	99.423
0.4666	99.436
0.4833	99.442
0.5000	99.448
0.5166	99.455
0.5333	99.461
0.5500	99.467
0.5666	99.473
0.5833	99.480
0.6000	99.486
0.6166	99.492

0.6333	99.492
0.6500	99.498
0.6666	99.505
0.6833	99.505
0.7000	99.511
0.7166	99.511
0.7333	99.517
0.7500	99.517
0.7666	99.524
0.7833	99.524
0.8000	99.530
0.8166	99.530
0.8333	99.536
0.8500	99.536
0.8666	99.536
0.8833	99.542
0.9000	99.542
0.9166	99.549
0.9333	99.549
0.9500	99.549
0.9666	99.555
0.9833	99.555
1.0000	99.561
1.2000	99.586
1.4000	99.605
1.6000	99.624
1.8000	99.643
2.0000	99.661
2.2000	99.674
2.4000	99.686
2.6000	99.699
2.8000	99.705
3.0000	99.718
3.2000	99.724
3.4000	99.730
3.6000	99.737
3.8000	99.749
4.0000	99.755
4.2000	99.762
4.4000	99.768
4.6000	99.774
4.8000	99.780
5.0000	99.780
5.2000	99.787
5.4000	99.793
5.6000	99.799
5.8000	99.799

6.0000	99.805
6.2000	99.812
6.4000	99.812
6.6000	99.818
6.8000	99.824
7.0000	99.830
7.2000	99.830
7.4000	99.837
7.6000	99.837
7.8000	99.843
8.0000	99.843
8.2000	99.843
8.4000	99.849
8.6000	99.856
8.8000	99.856
9.0000	99.856
9.2000	99.862
9.4000	99.868
9.6000	99.862
9.8000	99.868
10.0000	99.874
11.0000	99.881

SE1000C
Environmental Logger
04/22 13:44

Unit# 02222 Test 6

Setups:	INPUT 1
Type	Level (F)
Mode	Surface
I.D.	00012
Reference	100.000
Linearity	0.080
Scale factor	19.880
Offset	-0.050
Delay mSEC	50.000

Step 0 04/22 11:03:21

Elapsed Time	INPUT 1
0.0000	100.000
0.0033	100.006
0.0066	100.006
0.0100	100.006
0.0133	100.000
0.0166	100.000
0.0200	100.000
0.0233	100.000
0.0266	100.000
0.0300	100.000
0.0333	100.000
0.0366	100.000
0.0400	100.000
0.0433	100.000
0.0466	100.006
0.0500	100.000
0.0533	99.993
0.0566	99.993
0.0600	99.993
0.0633	99.987
0.0666	99.987
0.0700	99.968
0.0733	99.949
0.0766	99.962

0.0800	99.956
0.0833	99.949
0.0866	99.956
0.0900	99.968
0.0933	100.163
0.0966	100.132
0.1000	100.150
0.1033	100.244
0.1066	100.401
0.1100	100.827
0.1133	101.766
0.1166	102.593
0.1200	101.503
0.1233	100.670
0.1266	100.113
0.1300	99.937
0.1333	100.257
0.1366	100.463
0.1400	100.451
0.1433	100.326
0.1466	100.294
0.1500	100.207
0.1533	100.175
0.1566	100.182
0.1600	100.188
0.1633	100.188
0.1666	100.169
0.1700	100.163
0.1733	100.157
0.1766	100.163
0.1800	100.157
0.1833	100.144
0.1866	100.138
0.1900	100.132
0.1933	100.132
0.1966	100.125
0.2000	100.125
0.2033	100.119
0.2066	100.113
0.2100	100.119
0.2133	100.119
0.2166	100.113
0.2200	100.106
0.2233	100.106
0.2266	100.106
0.2300	100.106
0.2333	100.100

0.2366	100.100
0.2400	100.100
0.2433	100.094
0.2466	100.094
0.2500	100.094
0.2533	100.094
0.2566	100.094
0.2600	100.088
0.2633	100.094
0.2666	100.094
0.2700	100.088
0.2733	100.088
0.2766	100.088
0.2800	100.088
0.2833	100.088
0.2866	100.081
0.2900	100.081
0.2933	100.081
0.2966	100.081
0.3000	100.081
0.3033	100.081
0.3066	100.081
0.3100	100.081
0.3133	100.081
0.3166	100.088
0.3200	100.081
0.3233	100.081
0.3266	100.081
0.3300	100.081
0.3333	100.081
0.3500	100.075
0.3666	100.075
0.3833	100.075
0.4000	100.069
0.4166	100.069
0.4333	100.063
0.4500	100.063
0.4666	100.056
0.4833	100.050
0.5000	100.050
0.5166	100.050
0.5333	100.044
0.5500	100.044
0.5666	100.038
0.5833	100.038
0.6000	100.038
0.6166	100.038

0.6333	100.038
0.6500	100.031
0.6666	100.031
0.6833	100.031
0.7000	100.025
0.7166	100.025
0.7333	100.025
0.7500	100.025
0.7666	100.019
0.7833	100.019
0.8000	100.019
0.8166	100.019
0.8333	100.019
0.8500	100.019
0.8666	100.019
0.8833	100.019
0.9000	100.012
0.9166	100.012
0.9333	100.012
0.9500	100.012
0.9666	100.012
0.9833	100.012
1.0000	100.006
1.2000	100.006
1.4000	100.000
1.6000	100.000
1.8000	99.993
2.0000	99.987
2.2000	99.987
2.4000	99.993
2.6000	99.987
2.8000	99.987
3.0000	99.981
3.2000	99.981
3.4000	99.981
3.6000	99.974
3.8000	99.974
4.0000	99.974
4.2000	99.974
4.4000	99.974
4.6000	99.974
4.8000	99.974
5.0000	99.981
5.2000	99.974
5.4000	99.974
5.6000	99.993
5.8000	99.981

6.0000	99.974
6.2000	99.974
6.4000	99.968
6.6000	99.968
6.8000	99.968
7.0000	99.962
7.2000	99.968
7.4000	99.968
7.6000	99.968
7.8000	99.968
8.0000	99.968
8.2000	99.962
8.4000	99.962
8.6000	99.962
8.8000	99.962
9.0000	99.962
9.2000	99.968
9.4000	99.968
9.6000	99.962
9.8000	99.962
10.0000	99.962
11.0000	99.968

SE1000C
Environmental Logger
04/22 13:47

Unit# 02222 Test 7

Setups: INPUT 1

Type	Level (F)
Mode	Surface
I.D.	00012

Reference	100.000
Linearity	0.080
Scale factor	19.880
Offset	-0.050
Delay mSEC	50.000

Step 0 04/22 11:15:04

Elapsed Time	INPUT 1
0.0000	100.000
0.0033	100.006
0.0066	100.006
0.0100	100.006
0.0133	100.006
0.0166	100.006
0.0200	100.006
0.0233	100.006
0.0266	100.006
0.0300	100.006
0.0333	100.006
0.0366	100.006
0.0400	100.006
0.0433	99.956
0.0466	99.705
0.0500	99.730
0.0533	99.780
0.0566	99.367
0.0600	99.173
0.0633	99.242
0.0666	99.342
0.0700	98.935
0.0733	98.916
0.0766	99.129

0.0800	98.979
0.0833	99.229
0.0866	99.267
0.0900	99.348
0.0933	99.461
0.0966	99.530
0.1000	99.586
0.1033	99.611
0.1066	99.524
0.1100	99.630
0.1133	99.474
0.1166	99.398
0.1200	99.436
0.1233	99.549
0.1266	99.636
0.1300	99.668
0.1333	99.705
0.1366	99.724
0.1400	99.098
0.1433	99.054
0.1466	99.567
0.1500	99.511
0.1533	99.405
0.1566	99.561
0.1600	99.486
0.1633	99.367
0.1666	99.330
0.1700	99.380
0.1733	99.430
0.1766	99.455
0.1800	99.474
0.1833	99.505
0.1866	99.524
0.1900	99.555
0.1933	99.580
0.1966	99.636
0.2000	99.655
0.2033	99.674
0.2066	99.680
0.2100	99.693
0.2133	99.699
0.2166	99.705
0.2200	99.711
0.2233	99.724
0.2266	99.730
0.2300	99.737
0.2333	99.743

0.2366	99.749
0.2400	99.755
0.2433	99.755
0.2466	99.762
0.2500	99.768
0.2533	99.768
0.2566	99.774
0.2600	99.774
0.2633	99.780
0.2666	99.780
0.2700	99.787
0.2733	99.787
0.2766	99.787
0.2800	99.787
0.2833	99.787
0.2866	99.793
0.2900	99.793
0.2933	99.793
0.2966	99.793
0.3000	99.793
0.3033	99.799
0.3066	99.799
0.3100	99.799
0.3133	99.799
0.3166	99.799
0.3200	99.805
0.3233	99.805
0.3266	99.805
0.3300	99.805
0.3333	99.805
0.3500	99.818
0.3666	99.824
0.3833	99.830
0.4000	99.837
0.4166	99.837
0.4333	99.843
0.4500	99.843
0.4666	99.849
0.4833	99.849
0.5000	99.856
0.5166	99.856
0.5333	99.856
0.5500	99.856
0.5666	99.862
0.5833	99.862
0.6000	99.862
0.6166	99.862

0.6333	99.862
0.6500	99.868
0.6666	99.868
0.6833	99.868
0.7000	99.868
0.7166	99.874
0.7333	99.874
0.7500	99.874
0.7666	99.874
0.7833	99.874
0.8000	99.881
0.8166	99.881
0.8333	99.881
0.8500	99.881
0.8666	99.881
0.8833	99.881
0.9000	99.887
0.9166	99.887
0.9333	99.887
0.9500	99.887
0.9666	99.887
0.9833	99.887
1.0000	99.893
1.2000	99.899
1.4000	99.906
1.6000	99.912
1.8000	99.918
2.0000	99.918
2.2000	99.924
2.4000	99.918
2.6000	99.924
2.8000	99.924
3.0000	99.924
3.2000	99.924
3.4000	99.924
3.6000	99.924
3.8000	99.924
4.0000	99.924
4.2000	99.924
4.4000	99.924
4.6000	99.924
4.8000	99.924
5.0000	99.924
5.2000	99.924
5.4000	99.924
5.6000	99.924
5.8000	99.931

6.0000	99.931
6.2000	99.931
6.4000	99.931
6.6000	99.956
6.8000	99.962

SE1000C
Environmental Logger
04/22 13:50

Unit# 02222 Test 8

Setups: INPUT 1

Type	Level (F)
Mode	Surface
I.D.	00012
Reference	100.000
Linearity	0.080
Scale factor	19.880
Offset	-0.050
Delay mSEC	50.000

Step 0 04/22 11:25:48

Elapsed Time	INPUT 1
0.0000	100.000
0.0033	100.000
0.0066	100.000
0.0100	100.000
0.0133	100.000
0.0166	100.000
0.0200	100.000
0.0233	100.000
0.0266	100.000
0.0300	100.000
0.0333	100.000
0.0366	100.000
0.0400	100.000
0.0433	100.000
0.0466	100.000
0.0500	99.993
0.0533	99.993
0.0566	99.993
0.0600	100.000
0.0633	99.993
0.0666	99.993
0.0700	99.993
0.0733	99.993
0.0766	99.993

0.0800	100.000
0.0833	100.000
0.0866	99.993
0.0900	100.000
0.0933	99.993
0.0966	99.993
0.1000	100.006
0.1033	100.006
0.1066	99.993
0.1100	100.502
0.1133	101.091
0.1166	102.177
0.1200	102.678
0.1233	102.609
0.1266	102.327
0.1300	102.572
0.1333	103.180
0.1366	103.544
0.1400	103.444
0.1433	103.249
0.1466	103.538
0.1500	103.864
0.1533	103.877
0.1566	103.770
0.1600	103.607
0.1633	103.507
0.1666	103.532
0.1700	103.456
0.1733	103.199
0.1766	102.572
0.1800	101.280
0.1833	102.101
0.1866	102.540
0.1900	101.982
0.1933	102.647
0.1966	102.904
0.2000	102.641
0.2033	102.478
0.2066	102.396
0.2100	102.446
0.2133	102.522
0.2166	102.540
0.2200	102.509
0.2233	102.478
0.2266	102.471
0.2300	102.478
0.2333	102.484

0.2366	102.478
0.2400	102.471
0.2433	102.459
0.2466	102.459
0.2500	102.459
0.2533	102.453
0.2566	102.446
0.2600	102.446
0.2633	102.440
0.2666	102.434
0.2700	102.434
0.2733	102.428
0.2766	102.421
0.2800	102.421
0.2833	102.415
0.2866	102.409
0.2900	102.409
0.2933	102.402
0.2966	102.402
0.3000	102.396
0.3033	102.390
0.3066	102.390
0.3100	102.384
0.3133	102.377
0.3166	102.377
0.3200	102.371
0.3233	102.371
0.3266	102.365
0.3300	102.358
0.3333	102.358
0.3500	102.333
0.3666	102.315
0.3833	102.296
0.4000	102.271
0.4166	102.252
0.4333	102.227
0.4500	102.208
0.4666	102.189
0.4833	102.170
0.5000	102.145
0.5166	102.126
0.5333	102.108
0.5500	102.089
0.5666	102.070
0.5833	102.051
0.6000	102.032
0.6166	102.013

0.6333	101.995
0.6500	101.976
0.6666	101.963
0.6833	101.944
0.7000	101.926
0.7166	101.907
0.7333	101.888
0.7500	101.875
0.7666	101.857
0.7833	101.844
0.8000	101.825
0.8166	101.813
0.8333	101.794
0.8500	101.781
0.8666	101.763
0.8833	101.750
0.9000	101.737
0.9166	101.719
0.9333	101.706
0.9500	101.687
0.9666	101.675
0.9833	101.662
1.0000	101.650
1.2000	101.449
1.4000	101.311
1.6000	101.185
1.8000	101.079
2.0000	100.972
2.2000	100.878
2.4000	100.790
2.6000	100.715
2.8000	100.640
3.0000	100.577
3.2000	100.521
3.4000	100.470
3.6000	100.420
3.8000	100.383
4.0000	100.345
4.2000	100.307
4.4000	100.276
4.6000	100.245
4.8000	100.220
5.0000	100.194
5.2000	100.176
5.4000	100.151
5.6000	100.151
5.8000	100.113

6.0000	100.100
6.2000	100.082
6.4000	100.069
6.6000	100.050
6.8000	100.038
7.0000	100.031
7.2000	100.019
7.4000	100.013
7.6000	100.006
7.8000	100.000
8.0000	99.987
8.2000	99.981
8.4000	99.974
8.6000	99.974
8.8000	99.968
9.0000	99.962
9.2000	99.956
9.4000	99.968
9.6000	99.943
9.8000	99.937
10.0000	99.937
11.0000	99.924
12.0000	99.918
13.0000	99.912
14.0000	99.905

SE1000C
Environmental Logger
04/22 13:53

Unit# 02222 Test 9

Setups: INPUT 1

Type	Level (F)
Mode	Surface
I.D.	00012
Reference	100.000
Linearity	0.080
Scale factor	19.880
Offset	-0.050
Delay mSEC	50.000

Step 0 04/22 11:40:57

Elapsed Time	INPUT 1
0.0000	100.000
0.0033	100.006
0.0066	100.006
0.0100	100.000
0.0133	100.006
0.0166	100.006
0.0200	100.000
0.0233	100.000
0.0266	100.000
0.0300	100.000
0.0333	99.930
0.0366	99.761
0.0400	99.630
0.0433	99.968
0.0466	100.050
0.0500	99.404
0.0533	98.984
0.0566	98.796
0.0600	98.664
0.0633	98.476
0.0666	98.056
0.0700	98.407
0.0733	98.194
0.0766	97.981

0.0800	97.498
0.0833	97.015
0.0866	97.184
0.0900	97.272
0.0933	97.203
0.0966	97.272
0.1000	97.272
0.1033	97.279
0.1066	97.297
0.1100	97.285
0.1133	97.310
0.1166	97.310
0.1200	97.322
0.1233	97.335
0.1266	97.341
0.1300	97.347
0.1333	97.354
0.1366	97.360
0.1400	97.373
0.1433	97.379
0.1466	97.385
0.1500	97.398
0.1533	97.385
0.1566	97.404
0.1600	97.404
0.1633	97.410
0.1666	97.410
0.1700	97.423
0.1733	97.429
0.1766	97.435
0.1800	97.442
0.1833	97.448
0.1866	97.448
0.1900	97.454
0.1933	97.460
0.1966	97.467
0.2000	97.467
0.2033	97.473
0.2066	97.479
0.2100	97.479
0.2133	97.485
0.2166	97.492
0.2200	97.498
0.2233	97.498
0.2266	97.504
0.2300	97.510
0.2333	97.510

0.2366	97.517
0.2400	97.523
0.2433	97.523
0.2466	97.529
0.2500	97.529
0.2533	97.536
0.2566	97.542
0.2600	97.542
0.2633	97.548
0.2666	97.554
0.2700	97.554
0.2733	97.561
0.2766	97.567
0.2800	97.567
0.2833	97.573
0.2866	97.579
0.2900	97.579
0.2933	97.586
0.2966	97.586
0.3000	97.592
0.3033	97.598
0.3066	97.598
0.3100	97.604
0.3133	97.604
0.3166	97.611
0.3200	97.611
0.3233	97.617
0.3266	97.623
0.3300	97.623
0.3333	97.630
0.3500	97.648
0.3666	97.667
0.3833	97.686
0.4000	97.705
0.4166	97.724
0.4333	97.736
0.4500	97.755
0.4666	97.774
0.4833	97.786
0.5000	97.805
0.5166	97.824
0.5333	97.836
0.5500	97.849
0.5666	97.868
0.5833	97.880
0.6000	97.893
0.6166	97.912

0.6333	97.924
0.6500	97.937
0.6666	97.956
0.6833	97.968
0.7000	97.981
0.7166	97.993
0.7333	98.006
0.7500	98.018
0.7666	98.037
0.7833	98.043
0.8000	98.062
0.8166	98.075
0.8333	98.087
0.8500	98.100
0.8666	98.106
0.8833	98.125
0.9000	98.131
0.9166	98.144
0.9333	98.156
0.9500	98.169
0.9666	98.181
0.9833	98.194
1.0000	98.206
1.2000	98.363
1.4000	98.482
1.6000	98.595
1.8000	98.695
2.0000	98.789
2.2000	98.871
2.4000	98.952
2.6000	99.021
2.8000	99.090
3.0000	99.159
3.2000	99.222
3.4000	99.285
3.6000	99.335
3.8000	99.429
4.0000	99.423
4.2000	99.460
4.4000	99.498
4.6000	99.535
4.8000	99.567
5.0000	99.598
5.2000	99.630
5.4000	99.655
5.6000	99.680
5.8000	99.705

6.0000	99.724
6.2000	99.742
6.4000	99.761
6.6000	99.774
6.8000	99.786
7.0000	99.805
7.2000	99.811
7.4000	99.830
7.6000	99.843
7.8000	99.849
8.0000	99.862
8.2000	99.868
8.4000	99.880
8.6000	99.899
8.8000	99.905
9.0000	99.912
9.2000	99.918
9.4000	99.924
9.6000	99.930
9.8000	99.943
10.0000	99.943

ONE STEP
ENVIRONMENTAL, INC.

WI office:
133 E. Main • P.O. Box 248
Port Washington, WI 53074
414-284-8950 • FAX 414-284-8951

IL office:
913 Knottingham Dr. • Suite 1-A
Schaumburg, IL 60193
~~708-894-5746 • FAX 708-894-6089~~

Mr. Curt Hoffart
Key Engineering Group
W66 N215 Commerce Ct.
Cedarburg, WI 53012

November 13, 1998

Enclosed please find your manifest copy from the waste shipped on October 27, 1998 from Decorah Shopping Center, West Bend.

Please keep the copy for your files, or send on to the generator.

Should you have any questions, please call me at (414) 284-8950 or 1-800-280-8950.

Respectfully,

ONE STEP ENVIRONMENTAL, INC.

Mark W. Wildhagen

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. W I D 9 8 1 0 9 3 8 2 6

Manifest Document No. 0 3 8 5 4

2. Page 1 of 1

03854

GENERATOR

3. Generator's Name and Mailing Address
Decorah Shopping Center Annex
1011-1025 S. Main St. West Bend WI 53095

4. Generator's Phone (414) 502-5500 Thomas Keenan

5. Transporter 1 Company Name: Advanced Waste Carriers, Inc.

6. US EPA ID Number: W I 0 0 0 0 8 1 5 3 8 1

7. Transporter 2 Company Name:

8. US EPA ID Number:

9. Designated Facility Name and Site Address
STABILIZATION SYSTEMS, INC.
3801K WEST McKINLEY AVE.
MILWAUKEE, WI 53208

10. US EPA ID Number:

A. Transporter's Phone 800-842-9792
B. Transporter's Phone
C. Facility's Phone 414-342-1852

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Waste Non-Hazardous Solid, Non-Regulated Material	3	D M	2,100	P
b. Waste Non-Hazardous Liquid, Non-Regulated Material	2	D M	110	G
c.				
d.				

D. Additional Descriptions for Materials Listed Above
A. SSI # 981850 Soil
B. SSI # 981849 Water

E. Handling Codes for Wastes Listed Above
P = Pound
G = Gallons

15. Special Handling Instructions and Additional Information

Bill to: One Step Environmental

Accross From A&W (Paradise East to Main Marsh)

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: X Susan Sekeres — Signature: X Susan Sekeres — Month 10 Day 27 Year 98

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: R. Kiehler — Signature: R. Kiehler — Month 10 Day 27 Year 98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month — Day — Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Robert M. Brun Jr. — Signature — Month 10 Day 27 Year 98

WHITE - Original Return to Generator • CANARY - Transporter #1 • PINK - Transporter #2 • BLUE - Generator's Copy • GOLD - T/S/D/F Copy

ONE STEP
ENVIRONMENTAL, INC.

WI office:
133 E. Main • P.O. Box 248
Port Washington, WI 53074
414-284-8950 • FAX 414-284-8951

IL office:
913 Knottingham Dr. • Suite 1-A
Schaumburg, IL 60193
708-894-5746 • FAX 708-894-6089

Mr. Curt Hoffart
Key Engineering Group
W66 N215 Commerce Ct.
Cedarburg, WI 53012

November 25, 1998

Enclosed please find your manifest copies from the waste shipped on October 13, 1998 from Decorah Shopping Center, West Bend.

Please keep the copy for your files, or send on to the generator.

Should you have any questions, please call me at (414) 284-8950 or 1-800-280-8950.

Respectfully,

ONE STEP ENVIRONMENTAL, INC.

Mark W. Wildhagen

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF SOLID AND HAZARDOUS WASTE MANAGEMENT
P.O. Box 7035
Indianapolis, IN 46207-7035

PLEASE PRINT OR TYPE (Form designed for use on elite *(12-pitch)* typewriter.) Form Approved: OMB No. 2050-0039. Expires 9-30-98

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's U.S. EPA ID Number: [illegible]
Manifest Document No.: [illegible]
2. Page 1 of 1
Information in the shaded areas is not required by Federal Law, but items D, F, H, I and K are required by State Law.

3. Generator's Name and Mailing Address
Cocoran Shopping Center Annex
1011-1025 S. Main St. West Bend WI 53095
4. Generator's Telephone Number (41[illegible]) 5[illegible]-5500 Thomas [illegible]

A. State Manifest Document Number: INA1273330
B. State Generator's ID

5. Transporter 1 Company Name: [illegible] Carriers, Inc.
6. U.S. EPA ID Number: [illegible]
C. State Transporter's ID
D. Transporter's Phone 800-[illegible]-9792

7. Transporter 2 Company Name
8. U.S. EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Pollution Control Industries
4343 Kennedy Ave
East Chicago IN 46312
10. U.S. EPA ID Number: IND000646943
G. State Facility's ID
H. Facility's Phone 219-397-3951

11. U.S. DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol.	I. Waste No.
a. Hazardous Waste Solid, N.O.S., 9, NA3077, PGIII (Tetrachloroethylene) (D039) Guide # 171	4	DM	2800	P	D039
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
A. # 130213 Hazardous Soil

K. Handling Codes for Wastes Listed Above
P = Pound S01

15. Special Handling Instructions and Additional Information
24 Hour emergency contact # 800-842-4792 Emergency response guide on [illegible]
Bill to: [illegible]

16. **GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.**

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
[illegible] Agent	[signature]	10	13	98

17. Transporter 1 - Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Joe Walsh	[signature]	10	13	98

18. Transporter 2 - Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest *(except as noted in Item 19)*.

Printed/Typed Name	Signature	Month	Day	Year
Todd Weaver	Todd Weaver	10	14	98

GENERATOR / TRANSPORTER / FACILITY

In case of a spill, call the Indiana Office of Environmental Response at 317/233-7745 *(day or night)* and the National Response Center at 800/424-8802 or 202/426-2675.

INA 1273330

EPA Form 8700-22 Previous editions are obsolete
State Form 45273 (R / 6-97)

PCI

CERTIFICATE

This certificate is to verify that the waste specified is handled in accordance with all local, state and federal regulations as follows:

Manifest: INA1273330
Generator: DECORAH SHOPPING CENTER

Section	Waste Stream	Handling Type
A	130213	Treated

Facility Name: Pollution Control Industries
Facility Address: 4343 Kennedy Avenue
East Chicago, IN 46312
Facility EPA ID: IND000646943

Signature: T. R. McGillis
Typed Name: Thomas R. McGillis

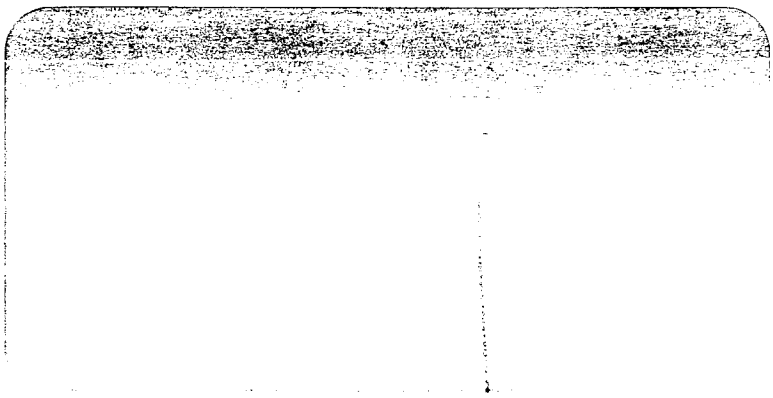
Title: Materials Manager
Date: 11/01/98

I-105032

Pollution Control Industries
4343 Kennedy Avenue, East Chicago, IN 46312
(219)397-3951 FAX: (219)397-6411
www.pollutioncontrol.com

ANALYTICAL PROCESS LABS, INC.

8222 W. Calumet Road
Milwaukee, WI 53223



DECORAH SHOPPING CT
0702007

Chain of Custody

980178

Crm 4/2/98

NOVA Environmental Laboratory 8222 W. Calumet Road • Milwaukee, WI 53223
800-236-3909 (414) 355-5800 FAX: (414) 355-3099

CHAIN OF CUSTODY
______ Page 1 of 2

CLIENT INFORMATION	
Project Manager:	Curt Hoffert
Company:	Key Environmental
Mailing Address:	W166 N815 Commerce Ct
City, State, Zip:	Cedarburg WI 53012
Phone: 414-375-1750	FAX: 375-9680

REPORTING / INVOICING INFORMATION	
Project I.D.:	~~070800~~ 070207
Pricing/Quote Reference:	
Person to be Invoiced:	☐ Client ☐ Property Owner
Mail Invoice to:	☐ Client ☐ Property Owner
Mail Lab Reports to:	☐ Client ☐ Property Owner

PROPERTY OWNER INFORMATION	
Property Owner:	Decorah Shopping Center Ass
Owner's Company:	
Street Address:	
City, State, Zip:	
Phone:	FAX:

TURNAROUND
☒ NORMAL (about 2 weeks for non-TCLP samples)
☐ **RUSH** Date report needed: ______
NOTE: Call to confirm that we can provide the desired Rush processing **before shipping samples!**

SPECIAL NEEDS / INSTRUCTIONS

SAMPLE CHARACTERISTICS
☐ NON-HAZARDOUS
☐ Possibly Hazardous; *use special handling*
NOTE: Left-over, hazardous samples will be returned to you for proper disposal.

SAMPLE RECEIVING RECORDS
Samples received "on ice" ☐
Temperature (if not "on ice") ____°C
Samples intact / not leaking ☐

Enter "Preservation/Filtration Codes": E

A. HCl
B. HNO_3
C. NaOH
D. H_2SO_4
E. Methanol
F. Field Filtered

ANALYSIS NEEDED: VOC (8260), Composite, Bulk Density, TOC, % solids

LAB I.D.	SAMPLE (Field) I.D.	Additional SAMPLE or SAMPLING INFORMATION (optional) PID	DATE	TIME	Matrix *	VOC (8260)	Composite	Bulk Density	TOC	% solids							Total	40mL	250mL	500mL	1 L	Other
9514	B-1	1.0-3.0 <1		8:30		X			X	X												
9529	B-1	3.5-5.5 —	4/1/98	8:31	S			X														
9522	Blank	Trip —		8:37	—	X																
9523	Blank	MEOH —		8:39	—	X																
9517	B-1	6.0-8.0 <1		9:00	—	X				X												
9524	B-2	13.5-15.5 <1		10:01	S		X															
9543 ver ~~9515~~	B-2	1.0-3.0 —		10:06	S			X														
9515	B-2	3.5-5.5 <1		10:10	S	X			X	X												
9516	B-3 (*)	1.0-3.0 <1		11:12	S	X			X	X												
9530	B-3	3.5-5.5 —		11:00	S			X														

* Soil **(S)** Surface Water **(SW)** Groundwater **(GW)** *WASTES: Waste, Solid **(WS)** Waste, Liquid **(WL)** Waste, TCLP **(TCLP)*** If applicable: Composite **(C)** or Grab **(G)**

Relinquished by (signature):	Date / Time:	Received by (signature):	Relinquished by (signature):	Date / Time:	Received by (signature):
Rachel Ame	4/2/98 3:30P	[signature]			
Relinquished by (signature):	Date / Time:	Received by (signature):	Relinquished by (signature):	Date / Time:	Received by (signature):

CLIENT COPY: Pink **COPY FOR REPORT: Yellow** LAB FILE COPY: White

B-3, 1-3 - prepared 2 VOC - samples when received to accept limit

980178

NOVA ☆ Environmental Laboratory
8222 W. Calumet Road • Milwaukee, WI 53223
800-236-3909 (414) 355-5800 FAX: (414) 355-3099

CHAIN OF CUSTODY

_____ Page 2 of 2

CLIENT INFORMATION	
Project Manager:	Curt Huffaker
Company:	Key Environmental
Mailing Address:	W66 N015 Commerce
City, State, Zip:	Cedarburg, WI 53012
Phone:	414/375-4756 FAX: 375-9680

REPORTING / INVOICING INFORMATION		
Project I.D.:	070900 7	
Pricing/Quote Reference:		
Person to be Invoiced:	☐ Client	☐ Property Owner
Mail Invoice to:	☐ Client	☐ Property Owner
Mail Lab Reports to:	☐ Client	☐ Property Owner

PROPERTY OWNER INFORMATION	
Property Owner:	
Owner's Company:	Decorah Shopping Center Assoc.
Street Address:	
City, State, Zip:	
Phone:	FAX:

TURNAROUND
X NORMAL (about 2 weeks for non-TCLP samples)
☐ ***RUSH*** *Date report needed:* _____
NOTE: Call to confirm** that we can provide the desired Rush processing **before shipping samples!

SPECIAL NEEDS / INSTRUCTIONS

SAMPLE CHARACTERISTICS
☐ NON-HAZARDOUS
☐ Possibly Hazardous; *use special handling*
NOTE: Left-over, hazardous samples will be returned to you for proper disposal.

SAMPLE RECEIVING RECORDS
Samples received "on ice" ☐
Temperature (if not "on ice") ____°C
Samples intact / not leaking ☐

Enter "Preservation/Filtration Codes":
A. HCl
B. HNO_3
C. NaOH
D. H_2SO_4
E. Methanol
F. Field Filtered

LAB I.D.	SAMPLE (Field) I.D.	Additional SAMPLE or SAMPLING INFORMATION (optional)	DATE	TIME	Matrix *	ANALYSIS NEEDED										CONTAINERS / SAMPLE					
																Total	40mL	250mL	500mL	1 L	Other
9525	B-3	13.5-15.5	4/1/98	11:16	S					X											
9518	B-5	1-3 <1		10:30	S	X	X														
9519	C-5	6.0-6.0 <1		12:34	S	X	X														
9526	B-5	13.5-15.5 <1		12:38	S					X											
9527	B-6	21.0-23.0 <1		2:10	S					X											
9520	B-4	1.0-3.0 <1		3:48	S	X	X														
9521	B-4	6-8 <1		3:51	S	X	X														
9528	B-4	13.5-15.5 <1		3:54	S					X											

* Soil **(S)** Surface Water **(SW)** Groundwater **(GW)** *WASTES: Waste, Solid **(WS)** Waste, Liquid **(WL)** Waste, TCLP **(TCLP)*** If applicable: Composite **(C)** or Grab **(G)**

Relinquished by (signature):	Date / Time:	Received by (signature):
Rachel Ames	4/2/98 3:30	
Relinquished by (signature):	Date / Time:	Received by (signature):

Relinquished by (signature):	Date / Time:	Received by (signature):
Relinquished by (signature):	Date / Time:	Received by (signature):

CLIENT COPY: Pink **COPY FOR REPORT: Yellow** LAB FILE COPY: White

Organic Report

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER: 980178
DATE REPORTED: 08-Apr-98
DATE RECEIVED: 03-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Ctr.

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Units	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis
Sample Number: 9514	*Percent Solid:*	*86.3 %*	*QC Batch Number: 980471*			*Sample analyzed within 5 Day(s) from collection.*				
Client ID: B-1, 1-3'	Sample Description:	PID<1				*Collection:*	*4/1/98*	*Time:*	*08:30*	
1,1,1-Trichloroethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
1,1,2,2-Tetrachloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
1,1,2-Trichloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
1,1-Dichloroethane	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
1,1-Dichloroethene	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
1,2,3-Trichlorobenzene	30	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,2,4-Trichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
1,2,4-Trimethylbenzene	99	ug/kg	25	60	7	1.0		8260	srh	4/6/98
1,2-Dibromo-3-chloropropan	<25*	ug/kg	25	60	15	1.0		8260	srh	4/6/98
1,2-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,2-Dichloroethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,2-Dichloropropane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
1,3,5-Trimethylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
1,3-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,3-Dichloropropane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,4-Dichlorobenzene	25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
2,2-Dichloropropane	25*	ug/kg	25	60	10	1.0		8260	srh	4/6/98
2-Chlorotoluene	25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
4-Chlorotoluene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Benzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Bromobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Bromodichloromethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Carbon tetrachloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Chlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Chloroethane	29	ug/kg	25	60	29	1.0		8260	srh	4/6/98
Chloroform	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
Chloromethane	<25*	ug/kg	25	60	19	1.0		8260	srh	4/6/98
cis-1,2-Dichloroethene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Dibromochloromethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Dichlorodifluoromethane	25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Ethylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Hexachlorobutadiene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Isopropyl Ether	25*	ug/kg	25	60	8	1.0		8260	srh	4/6/98
Isopropylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
m&p-xylene	25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Methylene chloride	<25*	ug/kg	25	60	19	1.0		8260	srh	4/6/98
MTBE	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
n-Butylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
n-Propylbenzene	25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98

* *According to LUST Release News, October 1994 Volume 4, Number 5, ; Laboratories are not required to report sample results that are below 25 ug/kg, but are required to report their actual MDL on the report.*

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER: 980178
DATE REPORTED: 08-Apr-98
DATE RECEIVED: 03-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Ctr.

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg, WI 53012

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Units	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis
Naphthalene	51	ug/kg	25	60	11	1.0		8260	srh	4.6.98
o-xylene	<25*	ug/kg	25	60	4	1.0		8260	srh	4.6.98
p-Isopropyltoluene	<25*	ug/kg	25	60	5	1.0		8260	srh	4.6.98
sec-Butylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	4.6.98
tert-Butylbenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4.6.98
Tetrachloroethene	<25*	ug/kg	25	60	7	1.0		8260	srh	4.6.98
Toluene	<25*	ug/kg	25	60	8	1.0		8260	srh	4.6.98
trans-1,2-Dichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4.6.98
Trichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4.6.98
Trichlorofluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	4.6.98
Vinyl chloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4.6.98

Sample Number: 9515 *Percent Solid: 87.4%* *QC Batch Number: 980471* *Sample analyzed within 5 Day(s) from collection.*
Client ID: B-2, 3.5-5.5' Sample Description: PID<1 *Collection: 4/1/98* *Time: 10:10*

1,1,1-Trichloroethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4.6.98
1,1,2,2-Tetrachloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	4.6.98
1,1,2-Trichloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	4.6.98
1,1-Dichloroethane	<25*	ug/kg	25	60	4	1.0		8260	srh	4.6.98
1,1-Dichloroethene	<25*	ug/kg	25	60	9	1.0		8260	srh	4.6.98
1,2,3-Trichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4.6.98
1,2,4-Trichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4.6.98
1,2,4-Trimethylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	4.6.98
1,2-Dibromo-3-chloropropan	<25*	ug/kg	25	60	15	1.0		8260	srh	4.6.98
1,2-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4.6.98
1,2-Dichloroethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4.6.98
1,2-Dichloropropane	<25*	ug/kg	25	60	6	1.0		8260	srh	4.6.98
1,3,5-Trimethylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4.6.98
1,3-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4.6.98
1,3-Dichloropropane	<25*	ug/kg	25	60	5	1.0		8260	srh	4.6.98
1,4-Dichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4.6.98
2,2-Dichloropropane	<25*	ug/kg	25	60	10	1.0		8260	srh	4.6.98
2-Chlorotoluene	<25*	ug/kg	25	60	4	1.0		8260	srh	4.6.98
4-Chlorotoluene	<25*	ug/kg	25	60	6	1.0		8260	srh	4.6.98
Benzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4.6.98
Bromobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4.6.98
Bromodichloromethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4.6.98
Carbon tetrachloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4.6.98
Chlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4.6.98
Chloroethane	<29	ug/kg	25	60	29	1.0		8260	srh	4.6.98
Chloroform	<25*	ug/kg	25	60	7	1.0		8260	srh	4.6.98
Chloromethane	<25*	ug/kg	25	60	19	1.0		8260	srh	4.6.98

* *According to LUST Release News, October 1994 Volume 4, Number 5, ; Laboratories are not required to report sample results that are below 25 ug/kg, but are required to report their actual MDL on the report.*

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER: 980178
DATE REPORTED: 08-Apr-98
DATE RECEIVED: 03-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Ctr.

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg, WI 53012

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Units	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis
cis-1,2-Dichloroethene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Dibromochloromethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Dichlorodifluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Ethylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Hexachlorobutadiene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Isopropyl Ether	<25*	ug/kg	25	60	8	1.0		8260	srh	4/6/98
Isopropylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
m&p-xylene	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Methylene chloride	<25*	ug/kg	25	60	19	1.0		8260	srh	4/6/98
MTBE	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
n-Butylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
n-Propylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Naphthalene	50	ug/kg	25	60	11	1.0		8260	srh	4/6/98
o-xylene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
p-Isopropyltoluene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
sec-Butylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
tert-Butylbenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Tetrachloroethene	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
Toluene	<25*	ug/kg	25	60	8	1.0		8260	srh	4/6/98
trans-1,2-Dichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Trichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Trichlorofluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Vinyl chloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98

Sample Number: 9516 *Percent Solid: 87.7%* *QC Batch Number: 980471* *Sample analyzed within 5 Day(s) from collection.*
Client ID: B-3, 1-3' Sample Description: PID<1 *Collection: 4/1/98* *Time: 11:12*

1,1,1-Trichloroethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
1,1,2,2-Tetrachloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
1,1,2-Trichloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
1,1-Dichloroethane	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
1,1-Dichloroethene	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
1,2,3-Trichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,2,4-Trichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
1,2,4-Trimethylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
1,2-Dibromo-3-chloropropan	<25*	ug/kg	25	60	15	1.0		8260	srh	4/6/98
1,2-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,2-Dichloroethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,2-Dichloropropane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
1,3,5-Trimethylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
1,3-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,3-Dichloropropane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98

* *According to LUST Release News, October 1994 Volume 4, Number 5, ; Laboratories are not required to report sample results that are below 25 ug/kg, but are required to report their actual MDL on the report.*

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER: 980178
DATE REPORTED: 08-Apr-98
DATE RECEIVED: 03-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Ctr.

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg, WI 53012

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Units	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis
1,4-Dichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
2,2-Dichloropropane	<25*	ug/kg	25	60	10	1.0		8260	srh	4/6/98
2-Chlorotoluene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
4-Chlorotoluene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Benzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Bromobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Bromodichloromethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Carbon tetrachloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Chlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Chloroethane	<29	ug/kg	25	60	29	1.0		8260	srh	4/6/98
Chloroform	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
Chloromethane	<25*	ug/kg	25	60	19	1.0		8260	srh	4/6/98
cis-1,2-Dichloroethene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Dibromochloromethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Dichlorodifluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Ethylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Hexachlorobutadiene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Isopropyl Ether	<25*	ug/kg	25	60	8	1.0		8260	srh	4/6/98
Isopropylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
m&p-xylene	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Methylene chloride	<25*	ug/kg	25	60	19	1.0		8260	srh	4/6/98
MTBE	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
n-Butylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
n-Propylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Naphthalene	38	ug/kg	25	60	11	1.0	J	8260	srh	4/6/98
o-xylene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
p-Isopropyltoluene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
sec-Butylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
tert-Butylbenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Tetrachloroethene	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
Toluene	<25*	ug/kg	25	60	8	1.0		8260	srh	4/6/98
trans-1,2-Dichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Trichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Trichlorofluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Vinyl chloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98

Sample Number: 9517 *Percent Solid: 86.6%* *QC Batch Number: 980471* *Sample analyzed within 5 Days; from collection.*
Client ID: B-1, 6-8' Sample Description: PID<1 *Collection: 4/1/98* *Time: 09:00*

1,1,1-Trichloroethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
1,1,2,2-Tetrachloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
1,1,2-Trichloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98

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APL Environmental
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Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER: 980178
DATE REPORTED: 08-Apr-98
DATE RECEIVED: 03-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Ctr.

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Units	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis
1,1-Dichloroethane	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
1,1-Dichloroethene	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
1,2,3-Trichlorobenzene	34	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,2,4-Trichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
1,2,4-Trimethylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
1,2-Dibromo-3-chloropropan	<25*	ug/kg	25	60	15	1.0		8260	srh	4/6/98
1,2-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,2-Dichloroethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,2-Dichloropropane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
1,3,5-Trimethylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
1,3-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,3-Dichloropropane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,4-Dichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
2,2-Dichloropropane	<25*	ug/kg	25	60	10	1.0		8260	srh	4/6/98
2-Chlorotoluene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
4-Chlorotoluene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Benzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Bromobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Bromodichloromethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Carbon tetrachloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Chlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Chloroethane	<29	ug/kg	25	60	29	1.0		8260	srh	4/6/98
Chloroform	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
Chloromethane	<25*	ug/kg	25	60	19	1.0		8260	srh	4/6/98
cis-1,2-Dichloroethene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Dibromochloromethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Dichlorodifluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Ethylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Hexachlorobutadiene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Isopropyl Ether	<25*	ug/kg	25	60	8	1.0		8260	srh	4/6/98
Isopropylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
m&p-xylene	35	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Methylene chloride	<25*	ug/kg	25	60	19	1.0		8260	srh	4/6/98
MTBE	43	ug/kg	25	60	5	1.0		8260	srh	4/6/98
n-Butylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
n-Propylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Naphthalene	36	ug/kg	25	60	11	1.0	J	8260	srh	4/6/98
o-xylene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
p-Isopropyltoluene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
sec-Butylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
tert-Butylbenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Tetrachloroethene	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98

* *According to LUST Release News, October 1994 Volume 4, Number 5. ; Laboratories are not required to report sample results that are below 25 ug/kg, but are required to report their actual MDL on the report.*

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER: 980178
DATE REPORTED: 08-Apr-98
DATE RECEIVED: 03-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Ctr.

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Units	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis
Toluene	<25*	ug/kg	25	60	8	1.0		8260	srh	4/6/98
trans-1,2-Dichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Trichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Trichlorofluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Vinyl chloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98

Sample Number: 9518 *Percent Solid: 88.8%* *QC Batch Number: 980471* *Sample analyzed within 3 Day(s) from collection.*
Client ID: B-5, 1-3' Sample Description: PID<1 *Collection: 4/1/98* *Time: 12:54*

1,1,1-Trichloroethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
1,1,2,2-Tetrachloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
1,1,2-Trichloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
1,1-Dichloroethane	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
1,1-Dichloroethene	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
1,2,3-Trichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,2,4-Trichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
1,2,4-Trimethylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
1,2-Dibromo-3-chloropropan	<25*	ug/kg	25	60	15	1.0		8260	srh	4/6/98
1,2-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,2-Dichloroethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,2-Dichloropropane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
1,3,5-Trimethylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
1,3-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,3-Dichloropropane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,4-Dichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
2,2-Dichloropropane	<25*	ug/kg	25	60	10	1.0		8260	srh	4/6/98
2-Chlorotoluene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
4-Chlorotoluene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Benzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Bromobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Bromodichloromethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Carbon tetrachloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Chlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Chloroethane	<29	ug/kg	25	60	29	1.0		8260	srh	4/6/98
Chloroform	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
Chloromethane	<25*	ug/kg	25	60	19	1.0		8260	srh	4/6/98
cis-1,2-Dichloroethene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Dibromochloromethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Dichlorodifluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Ethylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Hexachlorobutadiene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Isopropyl Ether	<25*	ug/kg	25	60	8	1.0		8260	srh	4/6/98

* *According to LUST Release News, October 1994 Volume 4, Number 5, ; Laboratories are not required to report sample results that are below 25 ug/kg, but are required to report their actual MDL on the report.*

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg, WI 53012

INVOICE NUMBER: 980178
DATE REPORTED: 08-Apr-98
DATE RECEIVED: 03-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Ctr.

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Units	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis
Isopropylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
m&p-xylene	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Methylene chloride	<25*	ug/kg	25	60	19	1.0		8260	srh	4/6/98
MTBE	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
n-Butylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
n-Propylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Naphthalene	42	ug/kg	25	60	11	1.0		8260	srh	4/6/98
o-xylene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
p-Isopropyltoluene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
sec-Butylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
tert-Butylbenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Tetrachloroethene	31	ug/kg	25	60	7	1.0		8260	srh	4/6/98
Toluene	<25*	ug/kg	25	60	8	1.0		8260	srh	4/6/98
trans-1,2-Dichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Trichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Trichlorofluoromethane	25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Vinyl chloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98

Sample Number: 9519 *Percent Solid: 92.4%* *QC Batch Number: 980476* *Sample analyzed within 6 Days From collection.*
Client ID: B-5, 6-8' Sample Description: PID<1 *Collection: 4/1/98* *Time: 12:34*

1,1,1-Trichloroethane	<25*	ug/kg	25	60	6	1.0	8260	srh	4/7/98
1,1,2,2-Tetrachloroethane	<25*	ug/kg	25	60	7	1.0	8260	srh	4/7/98
1,1,2-Trichloroethane	<25*	ug/kg	25	60	7	1.0	8260	srh	4/7/98
1,1-Dichloroethane	<25*	ug/kg	25	60	4	1.0	8260	srh	4/7/98
1,1-Dichloroethene	<25*	ug/kg	25	60	9	1.0	8260	srh	4/7/98
1,2,3-Trichlorobenzene	<25*	ug/kg	25	60	5	1.0	8260	srh	4/7/98
1,2,4-Trichlorobenzene	<25*	ug/kg	25	60	4	1.0	8260	srh	4/7/98
1,2,4-Trimethylbenzene	25*	ug/kg	25	60	7	1.0	8260	srh	4/7/98
1,2-Dibromo-3-chloropropan	25*	ug/kg	25	60	15	1.0	8260	srh	4/7/98
1,2-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0	8260	srh	4/7/98
1,2-Dichloroethane	<25*	ug/kg	25	60	5	1.0	8260	srh	4/7/98
1,2-Dichloropropane	<25*	ug/kg	25	60	6	1.0	8260	srh	4/7/98
1,3,5-Trimethylbenzene	<25*	ug/kg	25	60	6	1.0	8260	srh	4/7/98
1,3-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0	8260	srh	4/7/98
1,3-Dichloropropane	<25*	ug/kg	25	60	5	1.0	8260	srh	4/7/98
1,4-Dichlorobenzene	<25*	ug/kg	25	60	4	1.0	8260	srh	4/7/98
2,2-Dichloropropane	<25*	ug/kg	25	60	10	1.0	8260	srh	4/7/98
2-Chlorotoluene	<25*	ug/kg	25	60	4	1.0	8260	srh	4/7/98
4-Chlorotoluene	<25*	ug/kg	25	60	6	1.0	8260	srh	4/7/98
Benzene	25*	ug/kg	25	60	5	1.0	8260	srh	4/7/98
Bromobenzene	<25*	ug/kg	25	60	5	1.0	8260	srh	4/7/98

* *According to LUST Release News, October 1994 Volume 4, Number 5, : Laboratories are not required to report sample results that are below 25 ug/kg, but are required to report their actual MDL on the report.*

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER: 980178
DATE REPORTED: 08-Apr-98
DATE RECEIVED: 03-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Ctr.

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Units	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis
Bromodichloromethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4.7.98
Carbon tetrachloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4.7.98
Chlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4.7.98
Chloroethane	<29	ug/kg	25	60	29	1.0		8260	srh	4.7.98
Chloroform	<25*	ug/kg	25	60	7	1.0		8260	srh	4.7.98
Chloromethane	<25*	ug/kg	25	60	19	1.0		8260	srh	4.7.98
cis-1.2-Dichloroethene	<25*	ug/kg	25	60	5	1.0		8260	srh	4.7.98
Dibromochloromethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4.7.98
Dichlorodifluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	4.7.98
Ethylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4.7.98
Hexachlorobutadiene	<25*	ug/kg	25	60	6	1.0		8260	srh	4.7.98
Isopropyl Ether	<25*	ug/kg	25	60	8	1.0		8260	srh	4.7.98
Isopropylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4.7.98
m&p-xylene	<25*	ug/kg	25	60	9	1.0		8260	srh	4.7.98
Methylene chloride	<25*	ug/kg	25	60	19	1.0		8260	srh	4.7.98
MTBE	<25*	ug/kg	25	60	5	1.0		8260	srh	4.7.98
n-Butylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4.7.98
n-Propylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4.7.98
Naphthalene	<25*	ug/kg	25	60	11	1.0		8260	srh	4.7.98
o-xylene	<25*	ug/kg	25	60	4	1.0		8260	srh	4.7.98
p-Isopropyltoluene	<25*	ug/kg	25	60	5	1.0		8260	srh	4.7.98
sec-Butylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	4.7.98
tert-Butylbenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4.7.98
Tetrachloroethene	<25*	ug/kg	25	60	7	1.0		8260	srh	4.7.98
Toluene	<25*	ug/kg	25	60	8	1.0		8260	srh	4.7.98
trans-1.2-Dichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4.7.98
Trichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4.7.98
Trichlorofluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	4.7.98
Vinyl chloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4.7.98

Sample Number: 9520 *Percent Solid: 88.8%* *QC Batch Number: 980476* *Sample analyzed within 6 Day(s) from collection.*
Client ID: **B-4, 1-3'** Sample Description: **PID<1** *Collection: 4/1/98* *Time: 15:48*

1.1.1-Trichloroethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4.7.98
1.1.2.2-Tetrachloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	4.7.98
1.1.2-Trichloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	4.7.98
1.1-Dichloroethane	<25*	ug/kg	25	60	4	1.0		8260	srh	4.7.98
1.1-Dichloroethene	<25*	ug/kg	25	60	9	1.0		8260	srh	4.7.98
1.2.3-Trichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4.7.98
1.2.4-Trichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4.7.98
1.2.4-Trimethylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	4.7.98
1.2-Dibromo-3-chloropropan	<25*	ug/kg	25	60	15	1.0		8260	srh	4.7.98

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APL Environmental
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ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER: 980178
DATE REPORTED: 08-Apr-98
DATE RECEIVED: 03-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Ctr.

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg, WI 53012

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Units	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis
1,2-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7.98
1,2-Dichloroethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7.98
1,2-Dichloropropane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/7.98
1,3,5-Trimethylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/7.98
1,3-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7.98
1,3-Dichloropropane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7.98
1,4-Dichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/7.98
2,2-Dichloropropane	<25*	ug/kg	25	60	10	1.0		8260	srh	4/7.98
2-Chlorotoluene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/7.98
4-Chlorotoluene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/7.98
Benzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7.98
Bromobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7.98
Bromodichloromethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/7.98
Carbon tetrachloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7.98
Chlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7.98
Chloroethane	<29	ug/kg	25	60	29	1.0		8260	srh	4/7.98
Chloroform	<25*	ug/kg	25	60	7	1.0		8260	srh	4/7.98
Chloromethane	<25*	ug/kg	25	60	19	1.0		8260	srh	4/7.98
cis-1,2-Dichloroethene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7.98
Dibromochloromethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7.98
Dichlorodifluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	4/7.98
Ethylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/7.98
Hexachlorobutadiene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/7.98
Isopropyl Ether	<25*	ug/kg	25	60	8	1.0		8260	srh	4/7.98
Isopropylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/7.98
m&p-xylene	<25*	ug/kg	25	60	9	1.0		8260	srh	4/7.98
Methylene chloride	<25*	ug/kg	25	60	19	1.0		8260	srh	4/7.98
MTBE	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7.98
n-Butylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/7.98
n-Propylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/7.98
Naphthalene	42	ug/kg	25	60	11	1.0		8260	srh	4/7.98
o-xylene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/7.98
p-Isopropyltoluene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7.98
sec-Butylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	4/7.98
tert-Butylbenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7.98
Tetrachloroethene	79	ug/kg	25	60	7	1.0		8260	srh	4/7.98
Toluene	<25*	ug/kg	25	60	8	1.0		8260	srh	4/7.98
trans-1,2-Dichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/7.98
Trichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/7.98
Trichlorofluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	4/7.98
Vinyl chloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7.98

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APL Environmental
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Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER: 980178
DATE REPORTED: 08-Apr-98
DATE RECEIVED: 03-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Ctr.

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Units	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis
Sample Number: 9521	*Percent Solid:*	*89.4%*	*QC Batch Number: 980476*			*Sample analyzed within*	*6*	*Day(s) from collection.*		
Client ID: B-4, 6-8'	Sample Description:	PID<1				*Collection:*	*4/1/98*	*Time:*	*15:51*	
1,1,1-Trichloroethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/7/98
1,1,2,2-Tetrachloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	4/7/98
1,1,2-Trichloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	4/7/98
1,1-Dichloroethane	<25*	ug/kg	25	60	4	1.0		8260	srh	4/7/98
1,1-Dichloroethene	<25*	ug/kg	25	60	9	1.0		8260	srh	4/7/98
1,2,3-Trichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7/98
1,2,4-Trichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/7/98
1,2,4-Trimethylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	4/7/98
1,2-Dibromo-3-chloropropan	<25*	ug/kg	25	60	15	1.0		8260	srh	4/7/98
1,2-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7/98
1,2-Dichloroethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7/98
1,2-Dichloropropane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/7/98
1,3,5-Trimethylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/7/98
1,3-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7/98
1,3-Dichloropropane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7/98
1,4-Dichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/7/98
2,2-Dichloropropane	<25*	ug/kg	25	60	10	1.0		8260	srh	4/7/98
2-Chlorotoluene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/7/98
4-Chlorotoluene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/7/98
Benzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7/98
Bromobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7/98
Bromodichloromethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/7/98
Carbon tetrachloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7/98
Chlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7/98
Chloroethane	<29	ug/kg	25	60	29	1.0		8260	srh	4/7/98
Chloroform	<25*	ug/kg	25	60	7	1.0		8260	srh	4/7/98
Chloromethane	<25*	ug/kg	25	60	19	1.0		8260	srh	4/7/98
cis-1,2-Dichloroethene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7/98
Dibromochloromethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7/98
Dichlorodifluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	4/7/98
Ethylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/7/98
Hexachlorobutadiene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/7/98
Isopropyl Ether	<25*	ug/kg	25	60	8	1.0		8260	srh	4/7/98
Isopropylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/7/98
m&p-xylene	<25*	ug/kg	25	60	9	1.0		8260	srh	4/7/98
Methylene chloride	<25*	ug/kg	25	60	19	1.0		8260	srh	4/7/98
MTBE	<25*	ug/kg	25	60	5	1.0		8260	srh	4/7/98
n-Butylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/7/98
n-Propylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/7/98

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APL Environmental
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ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER: 980178
DATE REPORTED: 08-Apr-98
DATE RECEIVED: 03-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Ctr.

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Units	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis
Naphthalene	<25*	ug/kg	25	60	11	1.0		8260	srh	4.7 98
o-xylene	<25*	ug/kg	25	60	4	1.0		8260	srh	4.7 98
p-Isopropyltoluene	<25*	ug/kg	25	60	5	1.0		8260	srh	4.7 98
sec-Butylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	4.7 98
tert-Butylbenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4.7 98
Tetrachloroethene	212	ug/kg	25	60	7	1.0		8260	srh	4.7 98
Toluene	<25*	ug/kg	25	60	8	1.0		8260	srh	4.7 98
trans-1,2-Dichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4.7 98
Trichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4.7 98
Trichlorofluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	4.7 98
Vinyl chloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4.7 98

Sample Number: 9522 *Percent Solid:* 100% *QC Batch Number:* 980471 *Sample analyzed within* 5 *Day(s) from collection.*
Client ID: **Trip Blank** Sample Description: *Collection:* 4/1/98 *Time:* 08:37

1,1,1-Trichloroethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4 6 98
1,1,2,2-Tetrachloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	4 6 98
1,1,2-Trichloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	4 6 98
1,1-Dichloroethane	<25*	ug/kg	25	60	4	1.0		8260	srh	4 6 98
1,1-Dichloroethene	<25*	ug/kg	25	60	9	1.0		8260	srh	4 6 98
1,2,3-Trichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4 6 98
1,2,4-Trichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4 6 98
1,2,4-Trimethylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	4 6 98
1,2-Dibromo-3-chloropropan	<25*	ug/kg	25	60	15	1.0		8260	srh	4 6 98
1,2-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4 6 98
1,2-Dichloroethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4 6 98
1,2-Dichloropropane	<25*	ug/kg	25	60	6	1.0		8260	srh	4 6 98
1,3,5-Trimethylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4 6 98
1,3-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4 6 98
1,3-Dichloropropane	<25*	ug/kg	25	60	5	1.0		8260	srh	4 6 98
1,4-Dichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4 6 98
2,2-Dichloropropane	<25*	ug/kg	25	60	10	1.0		8260	srh	4 6 98
2-Chlorotoluene	<25*	ug/kg	25	60	4	1.0		8260	srh	4 6 98
4-Chlorotoluene	<25*	ug/kg	25	60	6	1.0		8260	srh	4 6 98
Benzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4 6 98
Bromobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4 6 98
Bromodichloromethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4 6 98
Carbon tetrachloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4 6 98
Chlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4 6 98
Chloroethane	<29	ug/kg	25	60	29	1.0		8260	srh	4 6 98
Chloroform	<25*	ug/kg	25	60	7	1.0		8260	srh	4 6 98
Chloromethane	<25*	ug/kg	25	60	19	1.0		8260	srh	4 6 98

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ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER: 980178
DATE REPORTED: 08-Apr-98
DATE RECEIVED: 03-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Ctr.

Curt Hoffart
Key Environmental Services. Inc.
W66 N215 Commerce Court
Cedarburg . WI 53012

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Units	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis
cis-1,2-Dichloroethene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Dibromochloromethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Dichlorodifluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Ethylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Hexachlorobutadiene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Isopropyl Ether	<25*	ug/kg	25	60	8	1.0		8260	srh	4/6/98
Isopropylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
m&p-xylene	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Methylene chloride	<25*	ug/kg	25	60	19	1.0		8260	srh	4/6/98
MTBE	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
n-Butylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
n-Propylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Naphthalene	<25*	ug/kg	25	60	11	1.0		8260	srh	4/6/98
o-xylene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
p-Isopropyltoluene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
sec-Butylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
tert-Butylbenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Tetrachloroethene	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
Toluene	<25*	ug/kg	25	60	8	1.0		8260	srh	4/6/98
trans-1,2-Dichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Trichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Trichlorofluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Vinyl chloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98

Sample Number: **9523** *Percent Solid: 100%* *QC Batch Number: 980471* *Sample analyzed within 5 Day(s) from collection.*
Client ID: **MEOH Blank** Sample Description: *Collection: 4/1/98* *Time: 08:39*

1,1,1-Trichloroethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
1,1,2,2-Tetrachloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
1,1,2-Trichloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
1,1-Dichloroethane	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
1,1-Dichloroethene	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
1,2,3-Trichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,2,4-Trichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
1,2,4-Trimethylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
1,2-Dibromo-3-chloropropan	<25*	ug/kg	25	60	15	1.0		8260	srh	4/6/98
1,2-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,2-Dichloroethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,2-Dichloropropane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
1,3,5-Trimethylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
1,3-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
1,3-Dichloropropane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98

* *According to LUST Release News, October 1994 Volume 4, Number 5, ; Laboratories are not required to report sample results that are below 25 ug/kg, but are required to report their actual MDL on the report.*

APL Environmental
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Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER: 980178
DATE REPORTED: 08-Apr-98
DATE RECEIVED: 03-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Ctr.

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Units	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis
1,4-Dichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
2,2-Dichloropropane	<25*	ug/kg	25	60	10	1.0		8260	srh	4/6/98
2-Chlorotoluene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
4-Chlorotoluene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Benzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Bromobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Bromodichloromethane	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Carbon tetrachloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Chlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Chloroethane	<29	ug/kg	25	60	29	1.0		8260	srh	4/6/98
Chloroform	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
Chloromethane	<25*	ug/kg	25	60	19	1.0		8260	srh	4/6/98
cis-1,2-Dichloroethene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Dibromochloromethane	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Dichlorodifluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Ethylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Hexachlorobutadiene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Isopropyl Ether	<25*	ug/kg	25	60	8	1.0		8260	srh	4/6/98
Isopropylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
m&p-xylene	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Methylene chloride	<25*	ug/kg	25	60	19	1.0		8260	srh	4/6/98
MTBE	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
n-Butylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
n-Propylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	4/6/98
Naphthalene	<25*	ug/kg	25	60	11	1.0		8260	srh	4/6/98
o-xylene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
p-Isopropyltoluene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
sec-Butylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
tert-Butylbenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98
Tetrachloroethene	<25*	ug/kg	25	60	7	1.0		8260	srh	4/6/98
Toluene	<25*	ug/kg	25	60	8	1.0		8260	srh	4/6/98
trans-1,2-Dichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Trichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	4/6/98
Trichlorofluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	4/6/98
Vinyl chloride	<25*	ug/kg	25	60	5	1.0		8260	srh	4/6/98

* *According to LUST Release News, October 1994 Volume 4, Number 5. ; Laboratories are not required to report sample results that are below 25 ug/kg, but are required to report their actual MDL on the report.*

APL Environmental
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ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER:	980178
DATE REPORTED:	08-Apr-98
DATE RECEIVED:	03-Apr-98
SAMPLE TEMP (C):	Rec On Ice
PROJECT ID:	0702007
PROJECT NAME:	Decorah Shopping Ctr.

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Units	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis

Approved By: _____ **Date:** 4/13/98
James Chang, Ph.D. , Lab Director

*** Special LUST Format for Methanol - Preserved Soil PVOCs or VOCs, (Release News, July and October 1994)**

NOVA Lab LOD = where the LOD has been determined in accordance with 40 CFR, Part 136, Appendix B.
LUST LOD = LUST program PVOC/VOC LOD of 25 ug/kg (wet weight basis)
LUST LOQ = LUST program PVOC/VOC LOQ of 60 ug/kg (wet weight basis)
RQ : Run Qualifier: "J" = Results between LOD and LOQ "L" = Samples less than 20 g, "B" = Showed in Blank sample.

Rounding Rules: Three significant figures were used for concentrations above 99 ug/L, two significant figures for concentrations between 1-99 ug L, and one significant figure for lower concentrations.
DNR Analytical Detection Limit Guidance, April 1995.

* *According to LUST Release News, October 1994 Volume 4, Number 5, ; Laboratories are not required to report sample results that are below 25 ug/kg, but are required to report their actual MDL on the report.*

APL Environmental
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ORGANIC REPORT

WDNR# 241340550
INVOICE NUMBER: 980178
DATE REPORTED: 17-Apr-98
DATE RECEIVED: 03-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Ctr

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Test	Result	Units	LOD	LOQ	Dil	RQ	Method	Analyst	Date Ext.	Date Anal.
Nova Sample Number: 9514		QC Batch Number:					Collection: 4/1.98			Time: 08:30
Client ID: B-1. 1-3'		%Solid: *86.3*					Sample Description: PID<1			
Total Organic Carbon	13500	mg/kg	0.1	0	1		9060	2412		4/17/98
Nova Sample Number: 9515		QC Batch Number:					Collection: 4/1.98			Time: 10:10
Client ID: B-2. 3.5-5.5'		%Solid: *87.4*					Sample Description: PID<1			
Total Organic Carbon	10100	mg/kg	0.1	0	1		9060	2412		4/17/98
Nova Sample Number: 9516		QC Batch Number:					Collection: 4/1.98			Time: 11:12
Client ID: B-3. 1-3'		%Solid: *87.7*					Sample Description: PID<1			
Total Organic Carbon	66100	mg/kg	0.1	0	1		9060	2412		4/17/98

Approved By: _____ **Date:** 4/17/98
James Chang, Ph.D., Lab Director

NOVA Lab LOD = where the LOD has been determined in accordance with 40 CFR, Part 136, Appendix B.
LUST LOD = LUST program PVOC/VOC LOD of 25 ug/kg (wet weight basis)
LUST LOQ = LUST program PVOC/VOC LOQ of 60 ug/kg (wet weight basis)
RQ : Run Qualifier: "J" = Results between LOD and LOQ "L" = Sample less than 20 g, "B" = Showed in Blank sample.

Rounding Rules: Three significant figures were used for concentrations above 99 ug/L, two significant figures for concentrations between 1-99 ug/L, and one significant figure for lower concentrations.
DNR Analytical Detection Limit Guidance, April 1995.

Inorganic Report

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
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INORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER 980178
DATE REPORTED: 17-Apr-98
DATE RECEIVED: 03-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Ct

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Test	Result	Units	RQ	LOD	LOQ	Method	Analyst	Date Anal	QC#	Comments
Nova Sample Number: 9514										
Client ID: **B-1, 1-3'**								Collection: 4/1/98		Time: 08:30
								Sample Description: PID<1		
Solids, Total Percent	**86**	**%**	**#**			SM 2540	jmb	4/6/98	98045	
Nova Sample Number: 9515										
Client ID: **B-2, 3.5-5.5'**								Collection: 4/1/98		Time: 10:10
								Sample Description: PID<1		
Solids, Total Percent	**87**	**%**	**#**			SM 2540	jmb	4/6/98	98045	
Nova Sample Number: 9516										
Client ID: **B-3, 1-3'**								Collection: 4/1/98		Time: 11:12
								Sample Description: PID<1		
Solids, Total Percent	**88**	**%**	**#**			SM 2540	jmb	4/6/98	98045	
Nova Sample Number: 9517										
Client ID: **B-1, 6-8'**								Collection: 4/1/98		Time: 09:00
								Sample Description: PID<1		
Solids, Total Percent	**87**	**%**	**#**			SM 2540	jmb	4/6/98	98045	
Nova Sample Number: 9518										
Client ID: **B-5, 1-3'**								Collection: 4/1/98		Time: 12:34
								Sample Description: PID<1		
Solids, Total Percent	**89**	**%**	**#**			SM 2540	jmb	4/6/98	98045	
Nova Sample Number: 9519										
Client ID: **B-5, 6-8'**								Collection: 4/1/98		Time: 12:34
								Sample Description: PID<1		
Solids, Total Percent	**92**	**%**	**#**			SM 2540	jmb	4/6/98	98045	
Nova Sample Number: 9520										
Client ID: **B-4, 1-3'**								Collection: 4/1/98		Time: 15:48
								Sample Description: PID<1		
Solids, Total Percent	**89**	**%**	**#**			SM 2540	jmb	4/6/98	98045	
Nova Sample Number: 9521										
Client ID: **B-4, 6-8'**								Collection: 4/1/98		Time: 15:51
								Sample Description: PID<1		
Solids, Total Percent	**89**	**%**	**#**			SM 2540	jmb	4/6/98	98045	

"J" = Results between LOD and LOQ "#" = no LOD or LOQ required.

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INORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER 980178
DATE REPORTED: 17-Apr-98
DATE RECEIVED: 03-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Ct

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Test	Result	Units	RQ	LOD	LOQ	Method	Analyst	Date Anal	QC#	Comments
Nova Sample Number: 9522										
Client ID: **Trip Blank**								Collection: 4/1/98		Time: 08:37
								Sample Description:		
Solids, Total Percent	**100**	**%**	**#**			SM 2540	jmb	4/6/98	*980457*	
Nova Sample Number: 9523										
Client ID: **MEOH Blank**								Collection: 4/1/98		Time: 08:39
								Sample Description:		
Solids, Total Percent	**100**	**%**	**#**			SM 2540	jmb	4/6/98	*980457*	
Nova Sample Number: 9524										
Client ID: **B-2, 13.5-15.5'**								Collection: 4/1/98		Time: 10:01
								Sample Description: PID <1		
Grain size analysis	**done**		**#**			Grain size	jb	4/9/98	*980499*	
Solids, Total Percent	**83**	**%**	**#**			SM 2540	jmb	4/6/98	*980457*	
Nova Sample Number: 9525										
Client ID: **B-3, 13.5-15.5'**								Collection: 4/1/98		Time: 11:16
								Sample Description: PID <1		
Grain size analysis	**done**		**#**			Grain size	jb	4/9/98	*980499*	
Solids, Total Percent	**87**	**%**	**#**			SM 2540	jmb	4/6/98	*980457*	
Nova Sample Number: 9526										
Client ID: **B-5, 13.5-15.5'**								Collection: 4/1/98		Time: 12:38
								Sample Description: PID <1		
Grain size analysis	**done**		**#**			Grain size	jb	4/9/98	*980499*	
Solids, Total Percent	**86**	**%**	**#**			SM 2540	jmb	4/6/98	*980457*	
Nova Sample Number: 9527										
Client ID: **B-6, 21- 23'**								Collection: 4/1/98		Time: 14:00
								Sample Description: PID <1		
Grain size analysis	**done**		**#**			Grain size	jb	4/9/98	*980499*	
Solids, Total Percent	**85**	**%**	**#**			SM 2540	jmb	4/6/98	*980457*	
Nova Sample Number: 9528										
Client ID: **B-4, 13.5 - 15.5'**								Collection: 4/1/98		Time: 15:54
								Sample Description: PID <1		
Grain size analysis	**done**		**#**			Grain size	jb	4/9/98	*980499*	
Solids, Total Percent	**84**	**%**	**#**			SM 2540	jmb	4/6/98	*980457*	

"J" = Results between LOD and LOQ "#" = no LOD or LOQ required.

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INORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER 980178
DATE REPORTED: 17-Apr-98
DATE RECEIVED: 03-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Ct

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Test	Result	Units	RQ	LOD	LOQ	Method	Analyst	Date Anal	QC#	Comments
Nova Sample Number: 9529										
Client ID: **B-1, 3.5 - 5.5'**								Collection: 4/1/98		Time: 08:31
								Sample Description:		
Bulk Density	1.7	g/cm3	#			ASTM	sp	4/6/98	*980469*	
Solids, Total Percent	93	%	#			SM 2540	jmb	4/6/98	*980457*	
Nova Sample Number: 9530										
Client ID: **B-3, 3.5 - 5.5'**								Collection: 4/1/98		Time: 11:00
								Sample Description:		
Bulk Density	1.8	g/cm3	#			ASTM	sp	4/6/98	*980469*	
Solids, Total Percent	93	%	#			SM 2540	jmb	4/6/98	*980457*	
Nova Sample Number: 9543										
Client ID: **B-2, 1-3'**								Collection: 4/1/98		Time: 10:00
								Sample Description:		
Bulk Density	1.7	g/cm3	#			ASTM	sp	4/6/98	*980469*	
Solids, Total Percent	89	%	#			SM 2540	jmb	4/6/98	*980457*	

Approved By: _____ **Date:** 4/17/98
James Chang, Ph.D., Lab Director

MDL: Method Detection Limit determined by 40CFR Part 136 Appendix B
LOQ = 10 (S) x Dilution Facor, where "S" is the Standard Deviation from the MDL Study
LOD = 3.143 (S) x Dilution Facor, where "S" is the Standard Deviation from the MDL Study

Rounding Rules: Three significant figures were used for concentrations above 99 ug/L, two significant figures for concentrations between 1-99 ug/L, and one significant figure for lower concentrations.
DNR Analytical Detection Limit Guidance, April 1995.

GRAIN SIZE ANALYSIS (E 276)

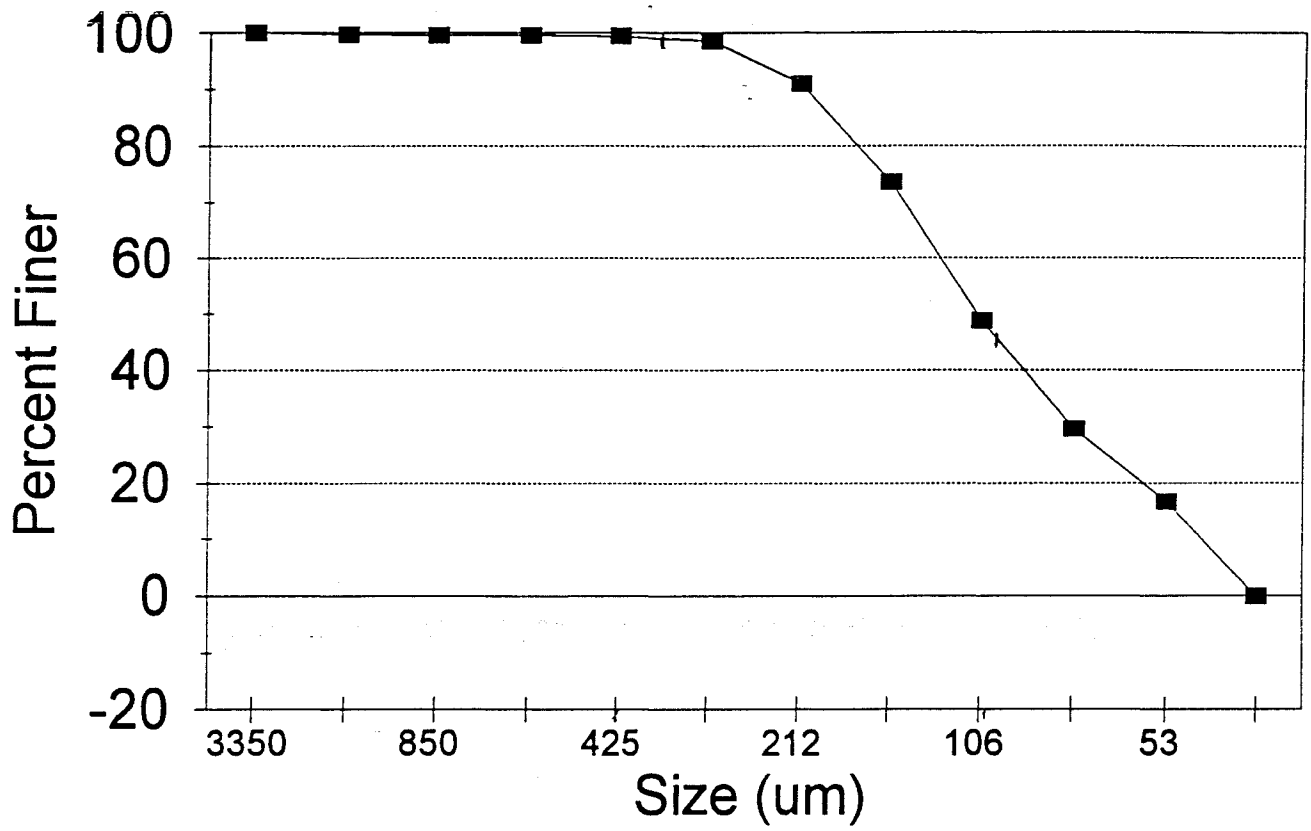
Sample #	9524

B-2 13.5 - 15.5

Container	Container & Wet Sample	Wet Sample	Container & Dry Sample	Dry Sample
75.24	124.62	49.38	116.33	41.09

Sieve #	Size (um)	Sample Amount 41.09	Percent Of Total	Percent Cummulation	Percent Finer
6	3350	0.00	0.000	0.000	100.00
12	1700	0.12	0.292	0.292	99.71
20	850	0.03	0.073	0.365	99.63
30	600	0.03	0.073	0.438	99.56
40	425	0.05	0.122	0.560	99.44
50	300	0.37	0.900	1.460	98.54
70	212	3.08	7.496	8.956	91.04
100	150	7.18	17.474	26.430	73.57
140	106	10.17	24.751	51.180	48.82
200	75	7.89	19.202	70.382	29.62
270	53	5.34	12.996	83.378	16.62
Catch	<53	6.91	16.817	100.195	-0.19
Amount	Collected:	41.17			

Grain Size 9524



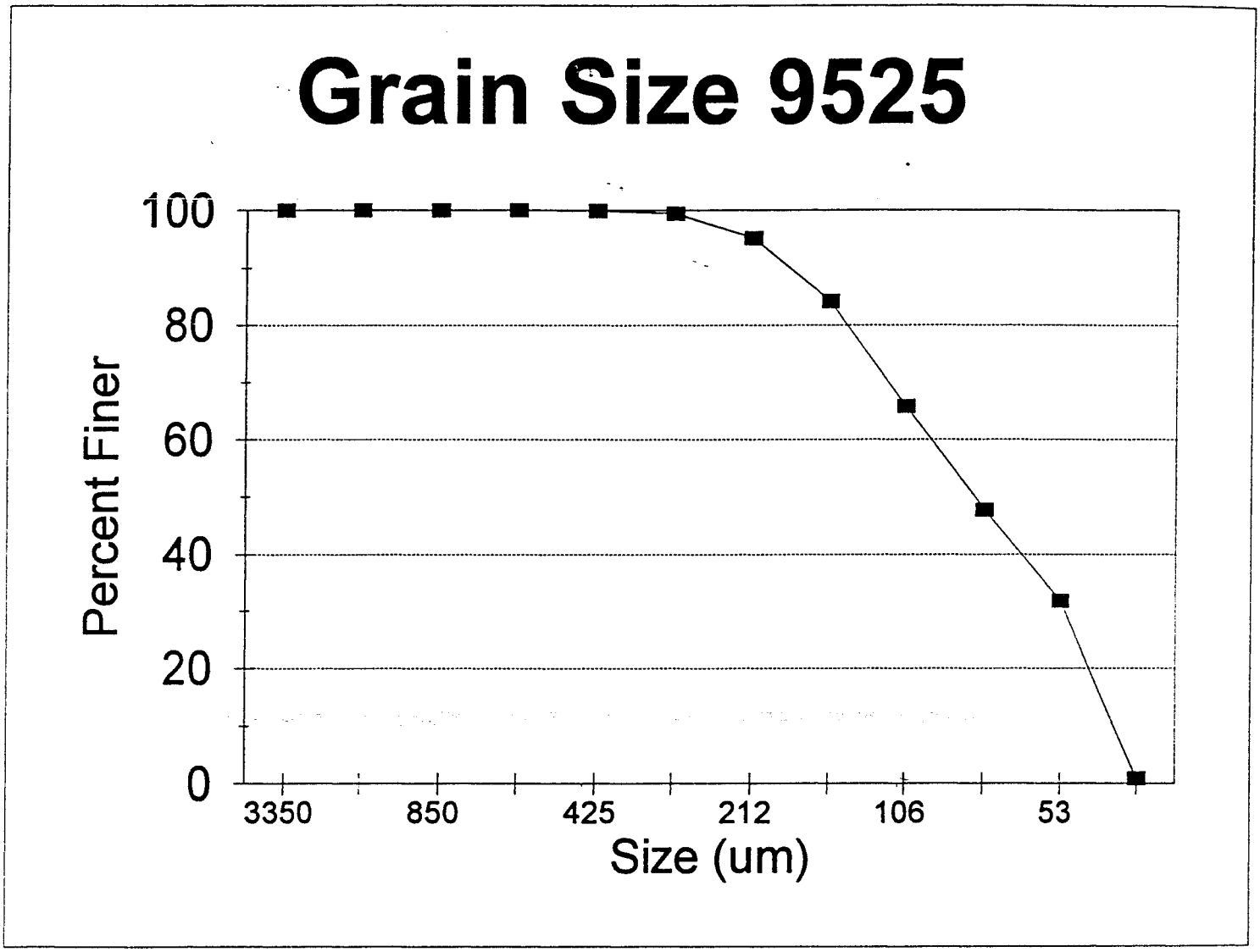
GRAIN SIZE ANALYSIS (E 276)

Sample #	9525

B-3 13.5-15.5

Container	Container & Wet Sample	Wet Sample	Container & Dry Sample	Dry Sample
73.27	94.02	20.75	91.43	18.16

Sieve #	Size (um)	Sample Amount 18.16	Percent Of Total	Percent Cummulation	Percent Finer
6	3350	0.00	0.000	0.000	100.00
12	1700	0.00	0.000	0.000	100.00
20	850	0.00	0.000	0.000	100.00
30	600	0.00	0.000	0.000	100.00
40	425	0.01	0.055	0.055	99.94
50	300	0.10	0.551	0.606	99.39
70	212	0.77	4.240	4.846	95.15
100	150	1.99	10.958	15.804	84.20
140	106	3.33	18.337	34.141	65.86
200	75	3.30	18.172	52.313	47.69
270	53	2.89	15.914	68.227	31.77
Catch	<53	5.61	30.892	99.119	0.88
Amount	Collected:	18.00			


Grain Size 9525
Percent Finer
100
80
60
40
20
0
3350
850
425
212
106
53
Size (um)

GRAIN SIZE ANALYSIS (E 276)

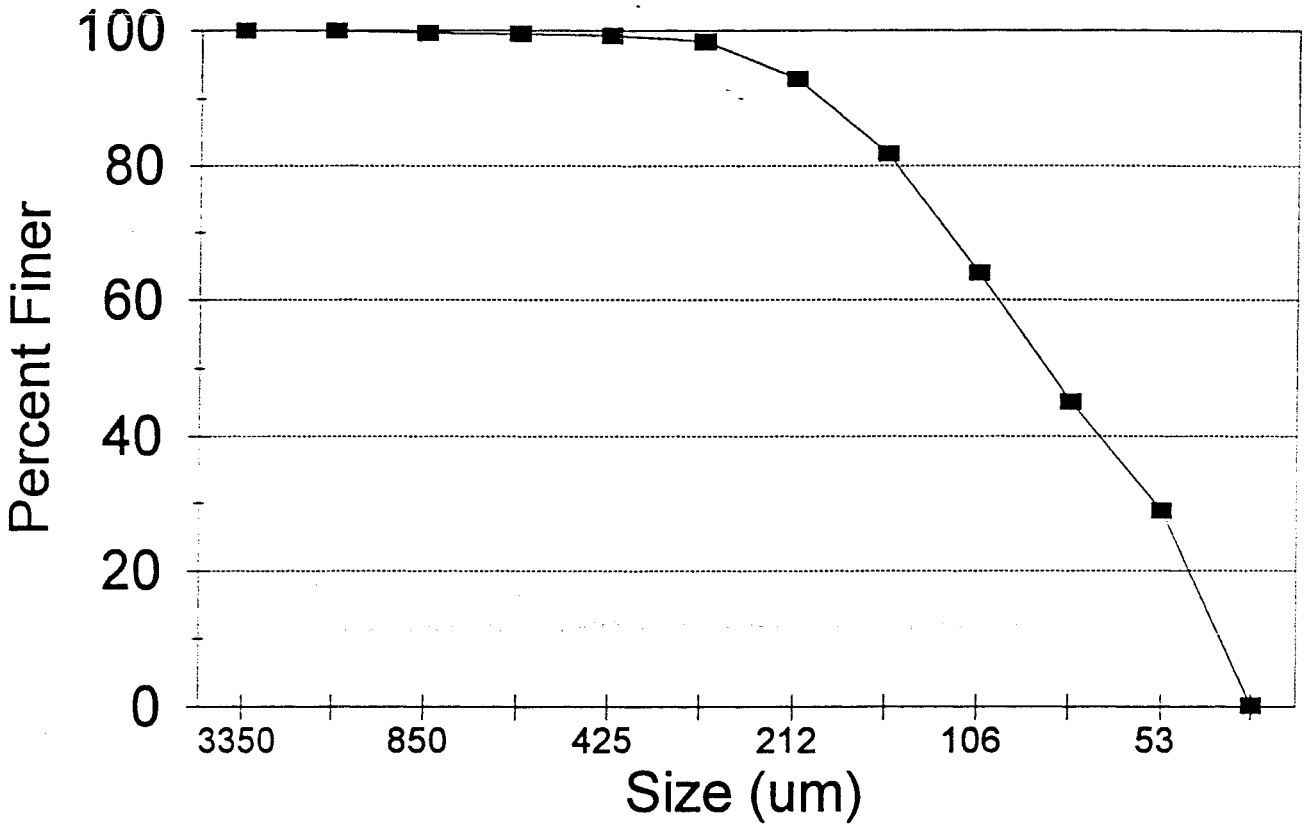
Sample #	9526

0-5 13.5 - 15.5

Container	Container & Wet Sample	Wet Sample	Container & Dry Sample	Dry Sample
78.94	128.47	49.53	122.36	43.42

Sieve #	Size (um)	Sample Amount 43.42	Percent Of Total	Percent Cummulation	Percent Finer
6	3350	0.00	0.000	0.000	100.00
12	1700	0.00	0.000	0.000	100.00
20	850	0.14	0.322	0.322	99.68
30	600	0.07	0.161	0.484	99.52
40	425	0.10	0.230	0.714	99.29
50	300	0.36	0.829	1.543	98.46
70	212	2.40	5.527	7.070	92.93
100	150	4.81	11.078	18.148	81.85
140	106	7.71	17.757	35.905	64.09
200	75	8.27	19.047	54.952	45.05
270	53	7.03	16.191	71.142	28.86
Catch	<53	12.41	28.581	99.724	0.28
Amount	Collected:	43.30			

Grain Size 9526



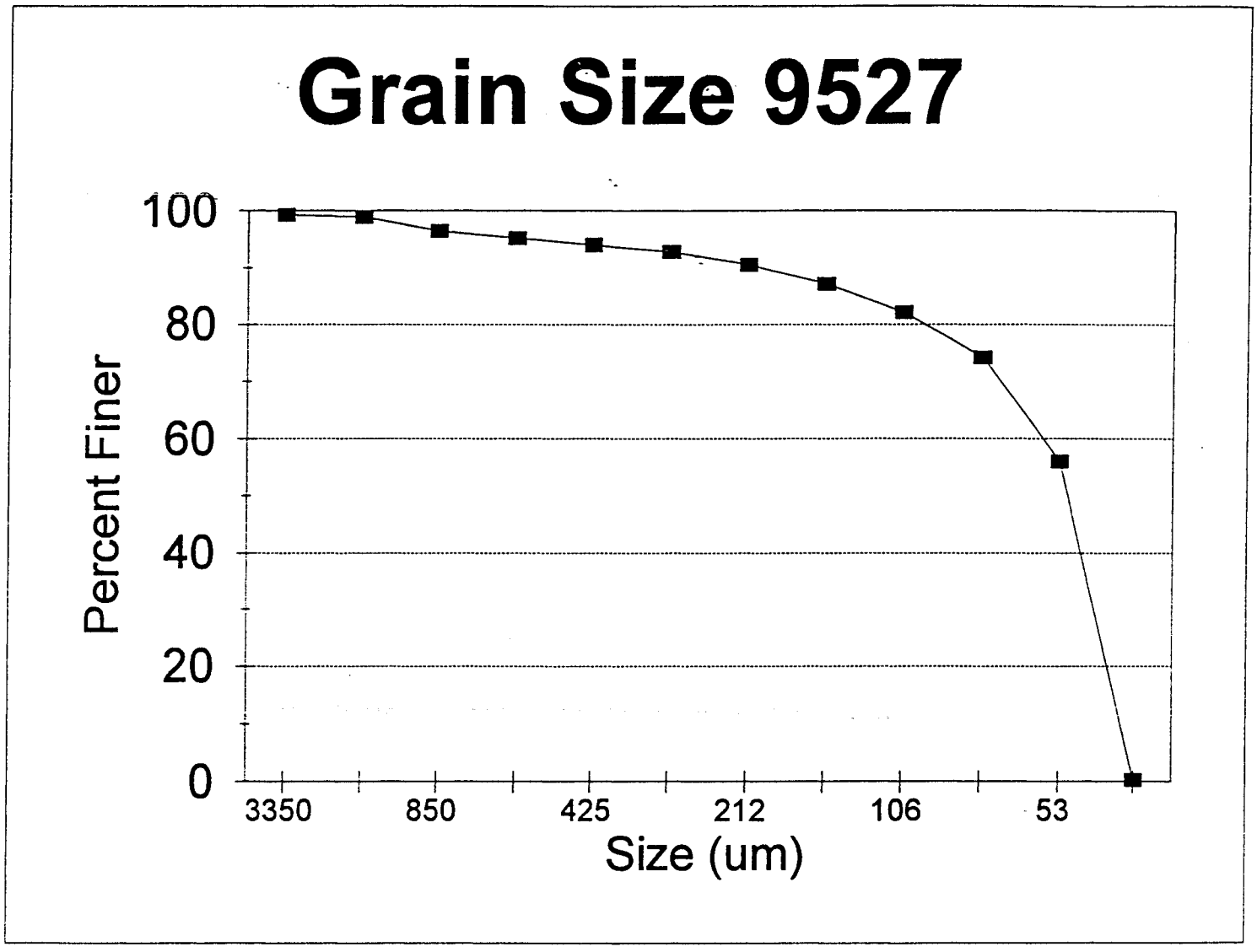
GRAIN SIZE ANALYSIS (E 276)

Sample #	9527

B-6 21-23

Container	Container & Wet Sample	Wet Sample	Container & Dry Sample	Dry Sample
94.86	144.29	49.43	136.77	41.91

Sieve #	Size (um)	Sample Amount 41.91	Percent Of Total	Percent Cummulation	Percent Finer
6	3350	0.30	0.716	0.716	99.28
12	1700	0.18	0.429	1.145	98.85
20	850	1.05	2.505	3.651	96.35
30	600	0.51	1.217	4.868	95.13
40	425	0.47	1.121	5.989	94.01
50	300	0.49	1.169	7.158	92.84
70	212	0.98	2.338	9.497	90.50
100	150	1.43	3.412	12.909	87.09
140	106	2.11	5.035	17.943	82.06
200	75	3.29	7.850	25.793	74.21
270	53	7.60	18.134	43.927	56.07
Catch	<53	23.37	55.762	99.690	0.31
Amount	Collected:	41.78			


Grain Size 9527
Percent Finer
100
80
60
40
20
0
3350
850
425
212
106
53
Size (um)

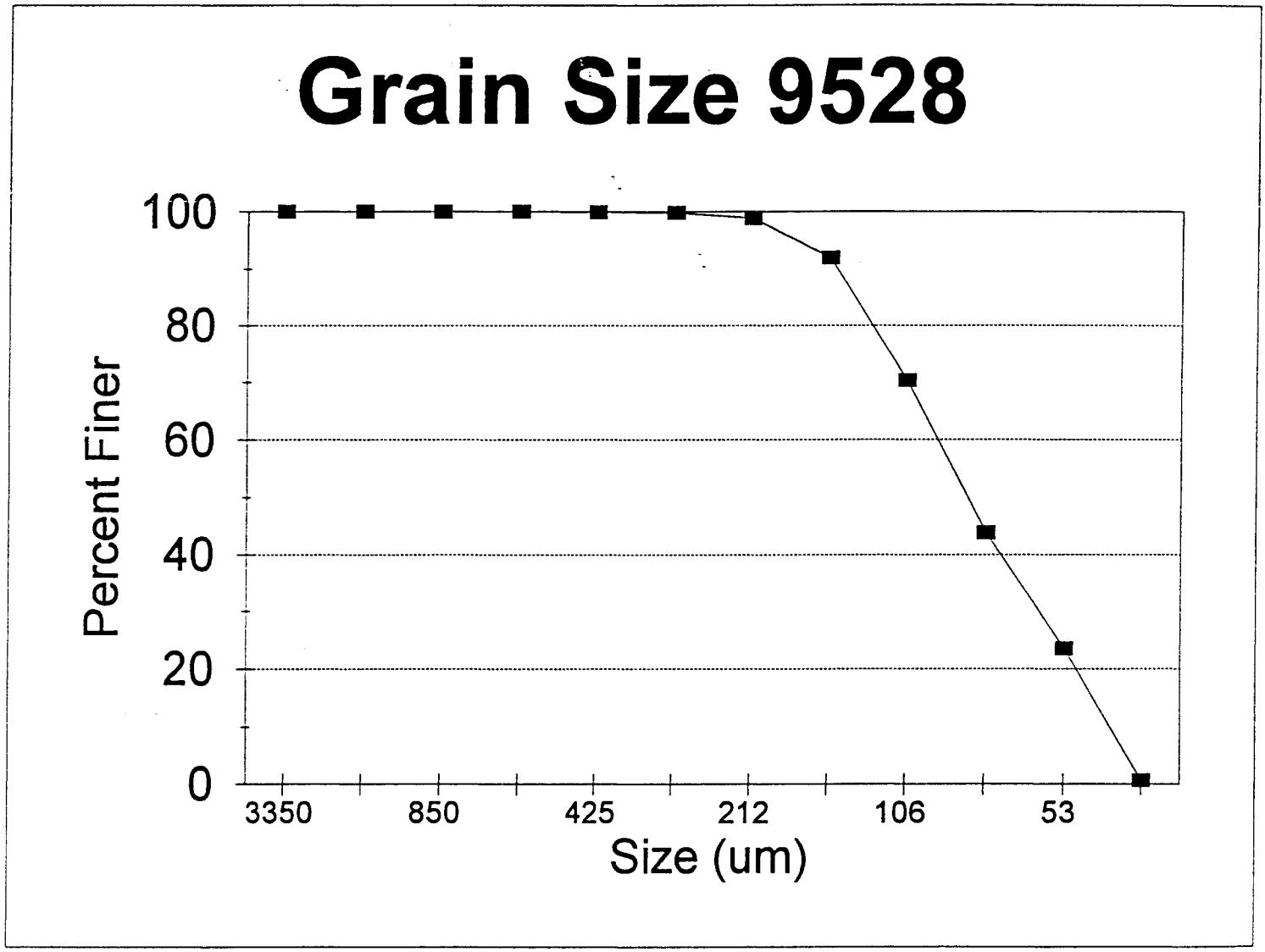
GRAIN SIZE ANALYSIS (E 276)

Sample #	9528

B-4 13.5 - 15.5

Container	Container & Wet Sample	Wet Sample	Container & Dry Sample	Dry Sample
72.39	121.95	49.56	113.01	40.62

Sieve #	Size (um)	Sample Amount 40.62	Percent Of Total	Percent Cummulation	Percent Finer
6	3350	0.00	0.000	0.000	100.00
12	1700	0.00	0.000	0.000	100.00
20	850	0.00	0.000	0.000	100.00
30	600	0.01	0.025	0.025	99.98
40	425	0.03	0.074	0.098	99.90
50	300	0.04	0.098	0.197	99.80
70	212	0.34	0.837	1.034	98.97
100	150	2.86	7.041	8.075	91.93
140	106	8.74	21.516	29.591	70.41
200	75	10.81	26.613	56.204	43.80
270	53	8.21	20.212	76.416	23.58
Catch	<53	9.32	22.944	99.360	0.64
Amount	Collected:	40.36			


Grain Size 9528
100
80
60
40
20
0
Percent Finer
3350
850
425
212
106
53
Size (um)

KEY ENVIRONMENTAL SERVICES, INC.

W66 N215 Commerce Court
Cedarburg, Wisconsin 53012
Phone No. (414) 375-4750
Fax No. (414) 375-9680

ANALYTICAL DATA CHECK-IN FORM

KEY Project Name: DECORAH STAMPING CENTER ANNEX KEY Project No.: 0702007

Project Manager: CURT HOFFART

Lab Name: APL ENVIRONMENTAL Lab Project No.: 0702007

Sample Matrix: Soil ☒ Water ☐ Other: _____

Soil Sample IDs:

B-1 1.0 - 3.0	B-2 3.5 - 5.5
B-1 3.5 - 5.5	B-3 1.0 - 3.0
BLANK - TRIP	B-3 3.5 - 5.5
BLANK - MeOH	B-3 13.5 - 15
B-1 6.0 - 8.0	B-5 1 - 3
B-2 13.5 - 15.5	B-5 6.0 - 8.0
B-2 1.0 - 3.0	B-5 13.5 - 15.5

B-6 21-23
B-4 1.0-3
B-4 6-8
B-4 13.5-15

Water Sample IDs:

Do the following items correspond to the chain of custody document:

Project Name and Number:	Yes ☒	No ☐
Date of Collection:	Yes ☒	No ☐
Sample ID Number(s):	Yes ☒	No ☐
Sample Type (Matrix):	Yes ☒	No ☐
Analysis Type and Method No.:	Yes ☒	No ☐
Correct Units per Method:	Yes ☒	No ☐

Compare each sample date of collection to lab sheet extraction and analysis date. Have appropriate holding times for each method been met? Yes ☒ No ☐

Is the chain of custody properly completed? Yes ☐ No ☒ (1)

Comments: (1) FINAL LABORATORY REPORT NOT INCLUDED ON CD

Data Check-in Performed by: [signature] Date: 4/21/98

Note: This form is to be completed for each lab submittal and attached to the original lab data.

KEY ENVIRONMENTAL SERVICES, INC.

W66 N215 Commerce Court
Cedarburg, Wisconsin 53012
Phone No. (414) 375-4750
Fax No. (414) 375-9680

ANALYTICAL DATA CHECK-IN FORM

KEY Project Name: DEGRAH SENIOR CENTER KEY Project No.: 0702007

Project Manager: CURT HOFFART

Lab Name: APL ENVIRONMENTAL Lab Project No.: 12754-56

Sample Matrix: Soil ☒ Water ☐ Other: _____

Soil Sample IDs:

GP-7 2-4'	
GP-7 8'-10'	
MEOH BLANK	

Water Sample IDs:

Do the following items correspond to the chain of custody document:

Project Name and Number:	Yes ☒	No ☐
Date of Collection:	Yes ☒	No ☐
Sample ID Number(s):	Yes ☒	No ☐
Sample Type (Matrix):	Yes ☒	No ☐
Analysis Type and Method No.:	Yes ☒	No ☐
Correct Units per Method:	Yes ☒	No ☐

Compare each sample date of collection to lab sheet extraction and analysis date. Have appropriate holding times for each method been met? Yes ☒ No ☐

Is the chain of custody properly completed? Yes ☒ No ☐

Comments: _____

Data Check-in Performed by: _____ Date: 11/16/98

Note: This form is to be completed for each lab submittal and attached to the original lab data.

APL Environmental

8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

Project Name: DECORAH SHOPPING CENTER ANNEX

Project ID: 0702007

Project Manager: CURT HOFFART
Company: KEY ENGINEERING
Address: W66 N215 Commerce Ct
City/State/Zip: CEDARBURG WI 53012
Phone: 414-375-4750 Fax: 375-9680

Samples received "On Ice" | Temperature: ___C | Sample intact/not leaking

A. HCl B. HNO3 C. NaOH D. H2SO4 E. Methanol F. Filtered G. None H. Others

100

Test Required	Matrix	Preservation / Filtration Code
01 VOC (8260)	SOIL	E
02		
03		
04		
05		
06		
07		
08		
09		
10		
11		
12		
13		
14		
15		

Additional Information:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Collection Time	10:30	11:00															
Collection Date	10/23/98	10/23/98															
Sample ID	GP-7 2-4'	GP-7 8-10'	METH BLANK														
Lab ID	12754	12755	12756														

COC# 980861

Relinquished By:	Date/Time	Received By:
[signature]	10/26/98	[signature]
[signature]	10/26/98 1:45	[signature]

Special Instructions:
APL QUOTE # 9805033

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3

ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER: 980861
DATE REPORTED: 03-Nov-98
DATE RECEIVED: 26-Oct-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Center

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Unit	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis
Sample Number: **12754**	*Percent Solid:*	*97.1 %*	*QC Batch Number: 982254*			*Sample analyzed within 10 Day(s) from collection.*				
Client ID: **GP-7**	Sample Description:	**Depth 2-4'**				*Collection:*	*10/23/98*	*Time:*	*10:30*	
1,1,1-Trichloroethane	<25*	**ug/kg**	25	60	6	1.0		8260	srh	11/2/98
1,1,2,2-Tetrachloroethane	<25*	**ug/kg**	25	60	7	1.0		8260	srh	11/2/98
1,1,2-Trichloroethane	<25*	**ug/kg**	25	60	7	1.0		8260	srh	11/2/98
1,1-Dichloroethane	<25*	**ug/kg**	25	60	4	1.0		8260	srh	11/2/98
1,1-Dichloroethene	<25*	**ug/kg**	25	60	9	1.0		8260	srh	11/2/98
1,2,3-Trichlorobenzene	<25*	**ug/kg**	25	60	5	1.0		8260	srh	11/2/98
1,2,4-Trichlorobenzene	<25*	**ug/kg**	25	60	4	1.0		8260	srh	11/2/98
1,2,4-Trimethylbenzene	<25*	**ug/kg**	25	60	7	1.0		8260	srh	11/2/98
1,2-Dibromo-3-chloropropan	<25*	**ug/kg**	25	60	15	1.0		8260	srh	11/2/98
1,2-Dichlorobenzene	<25*	**ug/kg**	25	60	5	1.0		8260	srh	11/2/98
1,2-Dichloroethane	<25*	**ug/kg**	25	60	5	1.0		8260	srh	11/2/98
1,2-Dichloropropane	<25*	**ug/kg**	25	60	6	1.0		8260	srh	11/2/98
1,3,5-Trimethylbenzene	<25*	**ug/kg**	25	60	6	1.0		8260	srh	11/2/98
1,3-Dichlorobenzene	<25*	**ug/kg**	25	60	5	1.0		8260	srh	11/2/98
1,3-Dichloropropane	<25*	**ug/kg**	25	60	5	1.0		8260	srh	11/2/98
1,4-Dichlorobenzene	<25*	**ug/kg**	25	60	4	1.0		8260	srh	11/2/98
2,2-Dichloropropane	<25*	**ug/kg**	25	60	10	1.0		8260	srh	11/2/98
2-Chlorotoluene	<25*	**ug/kg**	25	60	4	1.0		8260	srh	11/2/98
4-Chlorotoluene	<25*	**ug/kg**	25	60	6	1.0		8260	srh	11/2/98
Benzene	**28**	**ug/kg**	25	60	5	1.0		8260	srh	11/2/98
Bromobenzene	<25*	**ug/kg**	25	60	5	1.0		8260	srh	11/2/98
Bromodichloromethane	<25*	**ug/kg**	25	60	6	1.0		8260	srh	11/2/98
Carbon tetrachloride	<25*	**ug/kg**	25	60	5	1.0		8260	srh	11/2/98
Chlorobenzene	<25*	**ug/kg**	25	60	5	1.0		8260	srh	11/2/98
Chloroethane	<29	**ug/kg**	25	60	29	1.0		8260	srh	11/2/98
Chloroform	<25*	**ug/kg**	25	60	7	1.0		8260	srh	11/2/98
Chloromethane	<25*	**ug/kg**	25	60	19	1.0		8260	srh	11/2/98
cis-1,2-Dichloroethene	<25*	**ug/kg**	25	60	5	1.0		8260	srh	11/2/98
Dibromochloromethane	<25*	**ug/kg**	25	60	5	1.0		8260	srh	11/2/98
Dichlorodifluoromethane	<25*	**ug/kg**	25	60	9	1.0		8260	srh	11/2/98
Ethylbenzene	<25*	**ug/kg**	25	60	4	1.0		8260	srh	11/2/98
Hexachlorobutadiene	<25*	**ug/kg**	25	60	6	1.0		8260	srh	11/2/98
Isopropyl Ether	<25*	**ug/kg**	25	60	8	1.0		8260	srh	11/2/98
Isopropylbenzene	<25*	**ug/kg**	25	60	4	1.0		8260	srh	11/2/98
m&p-xylene	<25*	**ug/kg**	25	60	9	1.0		8260	srh	11/2/98
Methylene chloride	<25*	**ug/kg**	25	60	19	1.0		8260	srh	11/2/98
MTBE	<25*	**ug/kg**	25	60	5	1.0		8260	srh	11/2/98
n-Butylbenzene	<25*	**ug/kg**	25	60	6	1.0		8260	srh	11/2/98
n-Propylbenzene	<25*	**ug/kg**	25	60	6	1.0		8260	srh	11/2/98

According to LUST Release News, October 1994 Volume 4, Number 5, : Laboratories are not required to report sample results that are below 25 ug/kg, but are required to report their actual MDL on the report.

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3

ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER: 980861
DATE REPORTED: 03-Nov-98
DATE RECEIVED: 26-Oct-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Center

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Unit	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis
Naphthalene	<25*	ug/kg	25	60	11	1.0		8260	srh	11/2/98
o-xylene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
p-Isopropyltoluene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
sec-Butylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	11/2/98
tert-Butylbenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
Tetrachloroethene	<25*	ug/kg	25	60	7	1.0		8260	srh	11/2/98
Toluene	<25*	ug/kg	25	60	8	1.0		8260	srh	11/2/98
trans-1,2-Dichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
Trichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
Trichlorofluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	11/2/98
Vinyl chloride	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98

Sample Number: **12755** *Percent Solid: 90.3 %* *QC Batch Number: 982254* *Sample analyzed within 10 Day(s) from collection.*
Client ID: **GP-7** Sample Description: **Depth 8-10'** *Collection: 10/23/98* *Time: 11:00*

1,1,1-Trichloroethane	<25*	ug/kg	25	60	6	1.0		8260	srh	11/2/98
1,1,2,2-Tetrachloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	11/2/98
1,1,2-Trichloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	11/2/98
1,1-Dichloroethane	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
1,1-Dichloroethene	<25*	ug/kg	25	60	9	1.0		8260	srh	11/2/98
1,2,3-Trichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
1,2,4-Trichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
1,2,4-Trimethylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	11/2/98
1,2-Dibromo-3-chloropropan	<25*	ug/kg	25	60	15	1.0		8260	srh	11/2/98
1,2-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
1,2-Dichloroethane	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
1,2-Dichloropropane	<25*	ug/kg	25	60	6	1.0		8260	srh	11/2/98
1,3,5-Trimethylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	11/2/98
1,3-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
1,3-Dichloropropane	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
1,4-Dichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
2,2-Dichloropropane	<25*	ug/kg	25	60	10	1.0		8260	srh	11/2/98
2-Chlorotoluene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
4-Chlorotoluene	<25*	ug/kg	25	60	6	1.0		8260	srh	11/2/98
Benzene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
Bromobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
Bromodichloromethane	<25*	ug/kg	25	60	6	1.0		8260	srh	11/2/98
Carbon tetrachloride	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
Chlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
Chloroethane	<29	ug/kg	25	60	29	1.0		8260	srh	11/2/98
Chloroform	<25*	ug/kg	25	60	7	1.0		8260	srh	11/2/98
Chloromethane	<25*	ug/kg	25	60	19	1.0		8260	srh	11/2/98

According to LUST Release News, October 1994 Volume 4, Number 5. ; Laboratories are not required to report sample results that are below 25 ug/kg, but are required to report their actual MDL on the report.

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3

ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER: 980861
DATE REPORTED: 03-Nov-98
DATE RECEIVED: 26-Oct-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Center

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Unit	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis
cis-1,2-Dichloroethene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
Dibromochloromethane	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
Dichlorodifluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	11/2/98
Ethylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
Hexachlorobutadiene	<25*	ug/kg	25	60	6	1.0		8260	srh	11/2/98
Isopropyl Ether	<25*	ug/kg	25	60	8	1.0		8260	srh	11/2/98
Isopropylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
m&p-xylene	<25*	ug/kg	25	60	9	1.0		8260	srh	11/2/98
Methylene chloride	<25*	ug/kg	25	60	19	1.0		8260	srh	11/2/98
MTBE	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
n-Butylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	11/2/98
n-Propylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	11/2/98
Naphthalene	<25*	ug/kg	25	60	11	1.0		8260	srh	11/2/98
o-xylene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
p-Isopropyltoluene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
sec-Butylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	11/2/98
tert-Butylbenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
Tetrachloroethene	107	ug/kg	25	60	7	1.0		8260	srh	11/2/98
Toluene	<25*	ug/kg	25	60	8	1.0		8260	srh	11/2/98
trans-1,2-Dichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
Trichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
Trichlorofluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	11/2/98
Vinyl chloride	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98

Sample Number: **12756** *Percent Solid: 100 %* *QC Batch Number: 982254* *Sample analyzed within Day(s) from collection.*
Client ID: **MeOH Blank** Sample Description: *Collection: Time:*

1,1,1-Trichloroethane	<25*	ug/kg	25	60	6	1.0		8260	srh	11/2/98
1,1,2,2-Tetrachloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	11/2/98
1,1,2-Trichloroethane	<25*	ug/kg	25	60	7	1.0		8260	srh	11/2/98
1,1-Dichloroethane	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
1,1-Dichloroethene	<25*	ug/kg	25	60	9	1.0		8260	srh	11/2/98
1,2,3-Trichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
1,2,4-Trichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
1,2,4-Trimethylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	11/2/98
1,2-Dibromo-3-chloropropan	<25*	ug/kg	25	60	15	1.0		8260	srh	11/2/98
1,2-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
1,2-Dichloroethane	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
1,2-Dichloropropane	<25*	ug/kg	25	60	6	1.0		8260	srh	11/2/98
1,3,5-Trimethylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	11/2/98
1,3-Dichlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
1,3-Dichloropropane	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98

According to LUST Release News, October 1994 Volume 4, Number 5, ; Laboratories are not required to report sample results that are below 25 ug/kg, but are required to report their actual MDL on the report.

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3

ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER: 980861
DATE REPORTED: 03-Nov-98
DATE RECEIVED: 26-Oct-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Center

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Unit	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis
1,4-Dichlorobenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
2,2-Dichloropropane	<25*	ug/kg	25	60	10	1.0		8260	srh	11/2/98
2-Chlorotoluene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
4-Chlorotoluene	<25*	ug/kg	25	60	6	1.0		8260	srh	11/2/98
Benzene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
Bromobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
Bromodichloromethane	<25*	ug/kg	25	60	6	1.0		8260	srh	11/2/98
Carbon tetrachloride	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
Chlorobenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
Chloroethane	<29	ug/kg	25	60	29	1.0		8260	srh	11/2/98
Chloroform	<25*	ug/kg	25	60	7	1.0		8260	srh	11/2/98
Chloromethane	<25*	ug/kg	25	60	19	1.0		8260	srh	11/2/98
cis-1,2-Dichloroethene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
Dibromochloromethane	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
Dichlorodifluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	11/2/98
Ethylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
Hexachlorobutadiene	<25*	ug/kg	25	60	6	1.0		8260	srh	11/2/98
Isopropyl Ether	<25*	ug/kg	25	60	8	1.0		8260	srh	11/2/98
Isopropylbenzene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
m&p-xylene	<25*	ug/kg	25	60	9	1.0		8260	srh	11/2/98
Methylene chloride	<25*	ug/kg	25	60	19	1.0		8260	srh	11/2/98
MTBE	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
n-Butylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	11/2/98
n-Propylbenzene	<25*	ug/kg	25	60	6	1.0		8260	srh	11/2/98
Naphthalene	<25*	ug/kg	25	60	11	1.0		8260	srh	11/2/98
o-xylene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
p-Isopropyltoluene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
sec-Butylbenzene	<25*	ug/kg	25	60	7	1.0		8260	srh	11/2/98
tert-Butylbenzene	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98
Tetrachloroethene	<25*	ug/kg	25	60	7	1.0		8260	srh	11/2/98
Toluene	<25*	ug/kg	25	60	8	1.0		8260	srh	11/2/98
trans-1,2-Dichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
Trichloroethene	<25*	ug/kg	25	60	4	1.0		8260	srh	11/2/98
Trichlorofluoromethane	<25*	ug/kg	25	60	9	1.0		8260	srh	11/2/98
Vinyl chloride	<25*	ug/kg	25	60	5	1.0		8260	srh	11/2/98

According to LUST Release News, October 1994 Volume 4, Number 5. : Laboratories are not required to report sample results that are below 25 ug/kg, but are required to report their actual MDL on the report.

KEY ENVIRONMENTAL SERVICES, INC.

W66 N215 Commerce Court
Cedarburg, Wisconsin 53012
Phone No. (414) 375-4750
Fax No. (414) 375-9680

ANALYTICAL DATA CHECK-IN FORM

KEY Project Name: Deccann Shopping Center Annex KEY Project No.: 6702007

Project Manager: Curt Heffant

Lab Name: En Chem, Inc. Lab Project No.: 6702007 RT

Sample Matrix: Soil ☐ Water ☒ Other: ______

Soil Sample IDs:

Water Sample IDs:

MW-1	DUP
MW-2	FB-2
MW-3	
MW-4	
P-1	
FB-1	
TB	

Do the following items correspond to the chain of custody document:

Project Name and Number:	Yes ☒	No ☐
Date of Collection:	Yes ☒	No ☐
Sample ID Number(s):	Yes ☒	No ☐
Sample Type (Matrix):	Yes ☐	No ☐ not identified
Analysis Type and Method No.:	Yes ☒	No ☐
Correct Units per Method:	Yes ☒	No ☐

Compare each sample date of collection to lab sheet extraction and analysis date. Have appropriate holding times for each method been met? Yes ☒ No ☐

Is the chain of custody properly completed? Yes ☐ No ☒ (1)

Comments: (1) Final laboratory receipt not indicated on COC

Data Check-in Performed by: [signature] Date: 4/21/98

Note: This form is to be completed for each lab submittal and attached to the original lab data.

F:\PROJECTS\FORMS\FIELD\DTACHK.WPD

980196

Curt 4/7/98

NOVA Environmental Laboratory
8222 W. Calumet Road • Milwaukee, WI 53223
800-236-3909 (414) 355-5800 FAX: (414) 355-3099

CHAIN OF CUSTODY

_____ Page 1 of 1

CLIENT INFORMATION	
Project Manager:	Curt Hoffart
Company:	Key Environmental
Mailing Address:	3616 N 91st Commerce Ct
City, State, Zip:	Cedarburg, WI 53012
Phone: 414-375-4956	FAX: 414-375-9680

REPORTING / INVOICING INFORMATION		
Project I.D.:	070200.7 RI	
Pricing/Quote Reference:		
Person to be Invoiced:	☐ Client	☐ Property Owner
Mail Invoice to:	☐ Client	☐ Property Owner
Mail Lab Reports to:	☐ Client	☐ Property Owner

PROPERTY OWNER INFORMATION	
Property Owner:	
Owner's Company:	Decorah Shopping Center
Street Address:	
City, State, Zip:	
Phone:	FAX:

TURNAROUND

☒ NORMAL (about 2 weeks for non-TCLP samples)
☐ ***RUSH*** *Date report needed:* _____
NOTE: Call to confirm *that we can provide the desired Rush processing* ***before shipping samples!***

SPECIAL NEEDS / INSTRUCTIONS

SAMPLE CHARACTERISTICS

☒ NON-HAZARDOUS
☐ Possibly Hazardous; *use special handling*
NOTE: Left-over, hazardous samples will be returned to you for proper disposal.

SAMPLE RECEIVING RECORDS

Samples received "on ice" ☐
Temperature (if not "on ice") ____ °C
Samples intact / not leaking ☐

Enter "Preservation/Filtration Codes":

A. HCl
B. HNO_3
C. NaOH
D. H_2SO_4
E. Methanol
F. Field Filtered

LAB I.D.	SAMPLE (Field) I.D.	Additional SAMPLE or SAMPLING INFORMATION (optional)	DATE	TIME	Matrix *	ANALYSIS NEEDED: VOCs (8260)	CONTAINERS / SAMPLE: Total	40mL	250mL	500mL	1 L	Other
9597	MW-1		4/7/98	1:12	GW	X	4					
9598	MW-2			1:48		X	3					
9599	MW-3			3:10		X	3					
9600	MW-4			2:26		X	3					
9601	P-1			5:00		X	3					
9603	FB-1	Field blank-1 (Pump)		12:24		X	2					
9604	TB	Trip blank		—		X	2					
9602	DUP	Duplicate		—		X	3					
~~9605~~	FB-2	Field blank-2 (bailer)		1:43		X	2					

TOC 11

* Soil **(S)** Surface Water **(SW)** Groundwater **(GW)** *WASTES: Waste, Solid* ***(WS)*** *Waste, Liquid* ***(WL)*** *Waste, TCLP* ***(TCLP)*** If applicable: Composite **(C)** or Grab **(G)**

Relinquished by (signature):	Date / Time:	Received by (signature):
Rachel Ames	4/8/98 11:15am	
Relinquished by (signature):	Date / Time:	Received by (signature):
	4/8/98 11:15am	

Relinquished by (signature):	Date / Time:	Received by (signature):
Relinquished by (signature):	Date / Time:	Received by (signature):

CLIENT COPY: Pink COPY FOR REPORT: Yellow LAB FILE COPY: White

MW-1 - thought one vial had an area bubble and filled a total 9 vials

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980196**
DATE REPORTED: 14-Apr-98
DATE RECEIVED: 08-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RJ
PROJECT NAME: Decorah Shopping C

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
Sample Number: **9597**			QC Prep Batch Number:		980500		*Sample analyzed within*	*3 Day(s) from collection.*		
Client ID: **MW-1**	Sample Description:						*Collection:*	*4/7/98*	*Time:*	*15:12*
1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	4/9/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	4/9/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	4/9/98
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	4/9/98
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	4/9/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	4/9/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	4/9/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	4/9/98
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	4/9/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	4/9/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	4/9/98
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	4/9/98
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	4/9/98
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	4/9/98
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	4/9/98
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	4/9/98
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	4/9/98
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	4/9/98
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	4/9/98
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	4/9/98
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	4/9/98
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	4/9/98
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	4/9/98
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	4/9/98
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	4/9/98
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	4/9/98
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	4/9/98
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	4/9/98
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	4/9/98
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	4/9/98
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	4/9/98
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	4/9/98
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	4/9/98
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	4/9/98
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	4/9/98

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980196**
DATE REPORTED: 14-Apr-98
DATE RECEIVED: 08-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RJ
PROJECT NAME: Decorah Shopping C

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	4/9/98
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	4/9/98
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	4/9/98
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	4/9/98
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	4/9/98
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	4/9/98
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	4/9/98
Methyl-t-butyl ether	0.5	ug/l	0.2	0.7	12	1	J	8260	srh	4/9/98
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	4/9/98
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	4/9/98
Naphthalene	< 0.5	ug/l	0.5	1.5	8	1		8260	srh	4/9/98
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	4/9/98
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	4/9/98
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	4/9/98
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
Tetrachloroethene	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	4/9/98
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	4/9/98
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	4/9/98
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	4/9/98
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	4/9/98
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	4/9/98
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	4/9/98

Sample Number: **9598** QC Prep Batch Number: 980500 *Sample analyzed within 2 Day(s) from collection.*
Client ID: **MW-2** Sample Description: *Collection: 4/7/98 Time: 15:10*

1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	4/9/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	4/9/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	4/9/98
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	4/9/98
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	4/9/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	4/9/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	4/9/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	4/9/98
1,2,4-Trimethylbenzene	0.3	ug/l	0.3	0.9	ns	1	J	8260	srh	4/9/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	4/9/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	4/9/98
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	4/9/98

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980196**
DATE REPORTED: 14-Apr-98
DATE RECEIVED: 08-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RJ
PROJECT NAME: Decorah Shopping C

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
1,2-Dichloropropane	<0.2	ug/l	0.2	0.7	0.5	1		8260	srh	4/9/98
1,3,5-Trimethylbenzene	<0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
1,3-Dichlorobenzene	<0.2	ug/l	0.2	0.6	125	1		8260	srh	4/9/98
1,3-Dichloropropane	<0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
1,4-Dichlorobenzene	<0.2	ug/l	0.2	0.5	15	1		8260	srh	4/9/98
12Dibromo-3-chloropropan	<0.6	ug/l	0.6	1.9	0.02	1		8260	srh	4/9/98
2,2-Dichloropropane	<0.4	ug/l	0.4	1.3	ns	1		8260	srh	4/9/98
2-Butanone (MEK)	<1.4	ug/l	1.4	4.4	90	1		8260	srh	4/9/98
2-Chloroethyl Vinyl Ether	<0.3	ug/l	0.3	0.9	ns	1		8260	srh	4/9/98
2-Chlorotoluene	<0.2	ug/l	0.2	0.5	ns	1		8260	srh	4/9/98
4-Chlorotoluene	<0.3	ug/l	0.3	0.8	ns	1		8260	srh	4/9/98
4-Methyl-2-Pentanone	<0.8	ug/l	0.8	2.7	50	1		8260	srh	4/9/98
Acetone	<1.6	ug/l	1.6	4.9	200	1		8260	srh	4/9/98
Benzene	0.3	ug/l	0.2	0.6	0.5	1	J	8260	srh	4/9/98
Bromobenzene	<0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
Bromochloromethane	<0.3	ug/l	0.3	1.1	ns	1		8260	srh	4/9/98
Bromodichloromethane	<0.3	ug/l	0.3	0.8	0.06	1		8260	srh	4/9/98
Bromoform	<0.5	ug/l	0.5	1.5	0.44	1		8260	srh	4/9/98
Bromomethane	<0.2	ug/l	0.2	0.7	1	1		8260	srh	4/9/98
Carbon tetrachloride	<0.2	ug/l	0.2	0.7	0.5	1		8260	srh	4/9/98
Chlorobenzene	<0.2	ug/l	0.2	0.6	20	1		8260	srh	4/9/98
Chloroethane	<1.2	ug/l	1.2	3.7	80	1		8260	srh	4/9/98
Chloroform	<0.3	ug/l	0.3	0.9	0.6	1		8260	srh	4/9/98
Chloromethane	<0.8	ug/l	0.8	2.4	0.3	1		8260	srh	4/9/98
cis-1,2-Dichloroethene	<0.2	ug/l	0.2	0.6	7	1		8260	srh	4/9/98
cis-1,3-Dichloropropene	<0.2	ug/l	0.2	0.8	0.02	1		8260	srh	4/9/98
Dibromochloromethane	<0.2	ug/l	0.2	0.7	6	1		8260	srh	4/9/98
Dibromomethane	<0.4	ug/l	0.4	1.1	ns	1		8260	srh	4/9/98
Dichlorodifluoromethane	<0.4	ug/l	0.4	1.1	200	1		8260	srh	4/9/98
Ethylbenzene	0.3	ug/l	0.2	0.5	140	1	J	8260	srh	4/9/98
Hexachlorobutadiene	<0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
Isopropyl Ether	<0.3	ug/l	0.3	1	ns	1		8260	srh	4/9/98
Isopropylbenzene	0.4	ug/l	0.2	0.5	ns	1	J	8260	srh	4/9/98
m&p-xylene	0.7	ug/l	0.4	1.1	124	1	J	8260	srh	4/9/98
Methyl-t-butyl ether	<0.2	ug/l	0.2	0.7	12	1		8260	srh	4/9/98
Methylene chloride	<0.8	ug/l	0.8	2.4	0.5	1		8260	srh	4/9/98
n-Butylbenzene	0.4	ug/l	0.2	0.7	ns	1	J	8260	srh	4/9/98
n-Propylbenzene	0.3	ug/l	0.3	0.8	ns	1	J	8260	srh	4/9/98
Naphthalene	0.7	ug/l	0.5	1.5	8	1	J	8260	srh	4/9/98
o-xylene	0.3	ug/l	0.2	0.6	124	1	J	8260	srh	4/9/98
p-Isopropyltoluene	<0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
sec-Butylbenzene	<0.3	ug/l	0.3	1	ns	1		8260	srh	4/9/98
Styrene	<0.2	ug/l	0.2	0.7	10	1		8260	srh	4/9/98

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980196**
DATE REPORTED: 14-Apr-98
DATE RECEIVED: 08-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RJ
PROJECT NAME: Decorah Shopping C

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
Tetrachloroethene	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	4/9/98
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	4/9/98
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	4/9/98
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	4/9/98
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	4/9/98
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	4/9/98
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	4/9/98

Sample Number: **9599** QC Prep Batch Number: 980500 *Sample analyzed within 2 Day(s) from collection.*
Client ID: **MW-3** Sample Description: *Collection: 4/7/98 Time: 15:10*

1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	4/9/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	4/9/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	4/9/98
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	4/9/98
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	4/9/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	4/9/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	4/9/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	4/9/98
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	4/9/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	4/9/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	4/9/98
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	4/9/98
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	4/9/98
1,3,5-Trimethylbenzene	0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	4/9/98
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	4/9/98
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	4/9/98
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	4/9/98
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	4/9/98
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	4/9/98
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	4/9/98
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	4/9/98
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	4/9/98
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	4/9/98
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	4/9/98
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	4/9/98
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	4/9/98

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980196**
DATE REPORTED: 14-Apr-98
DATE RECEIVED: 08-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RJ
PROJECT NAME: Decorah Shopping C

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	4/9/98
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	4/9/98
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	4/9/98
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	4/9/98
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	4/9/98
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	4/9/98
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	4/9/98
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	4/9/98
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	4/9/98
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	4/9/98
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	4/9/98
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	4/9/98
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	4/9/98
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	4/9/98
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	4/9/98
m&p-xylene	0.5	ug/l	0.4	1.1	124	1	J	8260	srh	4/9/98
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	4/9/98
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	4/9/98
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	4/9/98
Naphthalene	0.7	ug/l	0.5	1.5	8	1	J	8260	srh	4/9/98
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	4/9/98
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	4/9/98
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	4/9/98
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
Tetrachloroethene	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	4/9/98
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	4/9/98
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	4/9/98
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	4/9/98
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	4/9/98
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	4/9/98
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	4/9/98

Sample Number: **9600** QC Prep Batch Number: 980517 *Sample analyzed within 6 Day(s) from collection.*
Client ID: **MW-4** Sample Description: *Collection: 4/7/98 Time: 14:26*

1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/13/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	4/13/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	4/13/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	4/13/98
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	4/13/98

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8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980196**
DATE REPORTED: 14-Apr-98
DATE RECEIVED: 08-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RJ
PROJECT NAME: Decorah Shopping C

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	4 13/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	4 13/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4 13/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	4 13/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	4 13/98
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	4 13/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	4 13/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	4 13/98
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	4 13/98
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	4 13/98
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4 13/98
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	4 13/98
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4 13/98
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	4 13/98
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	4 13/98
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	4 13/98
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	4 13/98
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	4 13/98
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	4 13/98
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	4 13/98
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	4 13/98
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	4 13/98
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	4 13/98
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4 13/98
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	4 13/98
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	4 13/98
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	4 13/98
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	4 13/98
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	4 13/98
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	4 13/98
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	4 13/98
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	4 13/98
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	4 13/98
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	4 13/98
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	4 13/98
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	4 13/98
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	4 13/98
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	4 13/98
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	4 13/98
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4 13/98
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	4 13/98
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	4 13/98
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	4 13/98

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: 980196
DATE REPORTED: 14-Apr-98
DATE RECEIVED: 08-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RJ
PROJECT NAME: Decorah Shopping C

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	4/13/98
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	4/13/98
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/13/98
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	4/13/98
Naphthalene	< 0.5	ug/l	0.5	1.5	8	1		8260	srh	4/13/98
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	4/13/98
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/13/98
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	4/13/98
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	4/13/98
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/13/98
Tetrachloroethene	1.9	ug/l	0.3	0.9	0.5	1		8260	srh	4/13/98
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	4/13/98
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	4/13/98
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	4/13/98
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	4/13/98
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	4/13/98
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	4/13/98

Sample Number: **9601** QC Prep Batch Number: 980517 *Sample analyzed within 6 Day(s) from collection.*
Client ID: **P-1** Sample Description: *Collection: 4/7/98 Time: 15:00*

1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/13/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	4/13/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	4/13/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	4/13/98
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	4/13/98
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	4/13/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	4/13/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/13/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	4/13/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	4/13/98
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	4/13/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	4/13/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	4/13/98
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	4/13/98
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	4/13/98
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/13/98
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	4/13/98
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/13/98
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	4/13/98
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	4/13/98
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	4/13/98
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	4/13/98

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980196**
DATE REPORTED: 14-Apr-98
DATE RECEIVED: 08-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RJ
PROJECT NAME: Decorah Shopping C

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	4/13/98
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	4/13/98
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	4/13/98
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	4/13/98
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	4/13/98
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	4/13/98
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/13/98
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	4/13/98
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	4/13/98
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	4/13/98
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	4/13/98
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	4/13/98
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	4/13/98
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	4/13/98
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	4/13/98
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	4/13/98
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	4/13/98
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	4/13/98
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	4/13/98
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	4/13/98
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	4/13/98
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	4/13/98
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/13/98
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	4/13/98
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	4/13/98
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	4/13/98
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	4/13/98
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	4/13/98
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/13/98
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	4/13/98
Naphthalene	< 0.5	ug/l	0.5	1.5	8	1		8260	srh	4/13/98
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	4/13/98
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/13/98
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	4/13/98
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	4/13/98
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/13/98
Tetrachloroethene	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	4/13/98
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	4/13/98
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	4/13/98
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	4/13/98
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	4/13/98
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	4/13/98
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	4/13/98

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980196**
DATE REPORTED: 14-Apr-98
DATE RECEIVED: 08-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RJ
PROJECT NAME: Decorah Shopping C

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
Sample Number: **9602**			QC Prep Batch Number:		980517		*Sample analyzed within*	*6 Day(s) from collection.*		
Client ID: **Dup**	Sample Description:		**Duplicate**				*Collection:*	*4/7/98*	*Time:*	
1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/13/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	4/13/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	4/13/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	4/13/98
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	4/13/98
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	4/13/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	4/13/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/13/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	4/13/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	4/13/98
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	4/13/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	4/13/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	4/13/98
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	4/13/98
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	4/13/98
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/13/98
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	4/13/98
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/13/98
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	4/13/98
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	4/13/98
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	4/13/98
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	4/13/98
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	4/13/98
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	4/13/98
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	4/13/98
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	4/13/98
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	4/13/98
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	4/13/98
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/13/98
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	4/13/98
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	4/13/98
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	4/13/98
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	4/13/98
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	4/13/98
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	4/13/98
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	4/13/98
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	4/13/98
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	4/13/98
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	4/13/98

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980196**
DATE REPORTED: 14-Apr-98
DATE RECEIVED: 08-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RJ
PROJECT NAME: Decorah Shopping C

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	4/13/98
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	4/13/98
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	4/13/98
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	4/13/98
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	4/13/98
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/13/98
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	4/13/98
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	4/13/98
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	4/13/98
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	4/13/98
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	4/13/98
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/13/98
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	4/13/98
Naphthalene	< 0.5	ug/l	0.5	1.5	8	1		8260	srh	4/13/98
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	4/13/98
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/13/98
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	4/13/98
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	4/13/98
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/13/98
Tetrachloroethene	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	4/13/98
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	4/13/98
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	4/13/98
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	4/13/98
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	4/13/98
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	4/13/98
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	4/13/98

Sample Number: **9603** QC Prep Batch Number: 980500 *Sample analyzed within 2 Day(s) from collection.*
Client ID: **FB-1** Sample Description: **Field Blank - 1 (Pump)** *Collection: 4/7/98 Time: 12:24*

1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	4/9/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	4/9/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	4/9/98
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	4/9/98
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	4/9/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	4/9/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	4/9/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	4/9/98
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	4/9/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	4/9/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	4/9/98

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER:	**980196**
DATE REPORTED:	14-Apr-98
DATE RECEIVED:	08-Apr-98
SAMPLE TEMP (C):	Rec On Ice
PROJECT ID:	0702007 RJ
PROJECT NAME:	Decorah Shopping C

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	4/9/98
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	4/9/98
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	4/9/98
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	4/9/98
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	4/9/98
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	4/9/98
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	4/9/98
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	4/9/98
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	4/9/98
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	4/9/98
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	4/9/98
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	4/9/98
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	4/9/98
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	4/9/98
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	4/9/98
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	4/9/98
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	4/9/98
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	4/9/98
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	4/9/98
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	4/9/98
Chloroform	1.7	ug/l	0.3	0.9	0.6	1		8260	srh	4/9/98
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	4/9/98
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	4/9/98
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	4/9/98
Dibromochloromethane	0.8	ug/l	0.2	0.7	6	1		8260	srh	4/9/98
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	4/9/98
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	4/9/98
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	4/9/98
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	4/9/98
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	4/9/98
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	4/9/98
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	4/9/98
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	4/9/98
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	4/9/98
Naphthalene	< 0.5	ug/l	0.5	1.5	8	1		8260	srh	4/9/98
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	4/9/98
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	4/9/98

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980196**
DATE REPORTED: 14-Apr-98
DATE RECEIVED: 08-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RJ
PROJECT NAME: Decorah Shopping C

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	4/9/98
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
Tetrachloroethene	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	4/9/98
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	4/9/98
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	4/9/98
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	4/9/98
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	4/9/98
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	4/9/98
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	4/9/98

Sample Number: **9604** QC Prep Batch Number: 980300 *Sample analyzed within 2 Day(s) from collection.*
Client ID: **TB** Sample Description: **Trip Blank** *Collection: 4/7/98 Time:*

1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	4/9/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	4/9/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	4/9/98
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	4/9/98
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	4/9/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	4/9/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	4/9/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	4/9/98
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	4/9/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	4/9/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	4/9/98
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	4/9/98
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	4/9/98
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	4/9/98
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	4/9/98
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	4/9/98
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	4/9/98
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	4/9/98
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	4/9/98
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	4/9/98
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	4/9/98
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	4/9/98
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	4/9/98
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	4/9/98
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	4/9/98

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980196**
DATE REPORTED: 14-Apr-98
DATE RECEIVED: 08-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RJ
PROJECT NAME: Decorah Shopping C

Curt Hoffart
Key Environmental Services. Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	4/9/98
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	4/9/98
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	4/9/98
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	4/9/98
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	4/9/98
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	4/9/98
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	4/9/98
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	4/9/98
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	4/9/98
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	4/9/98
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	4/9/98
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	4/9/98
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	4/9/98
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	4/9/98
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	4/9/98
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	4/9/98
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	4/9/98
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	4/9/98
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	4/9/98
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	4/9/98
Naphthalene	< 0.5	ug/l	0.5	1.5	8	1		8260	srh	4/9/98
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	4/9/98
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	4/9/98
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	4/9/98
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
Tetrachloroethene	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	4/9/98
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	4/9/98
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	4/9/98
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	4/9/98
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	4/9/98
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	4/9/98
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	4/9/98

Sample Number: **9611** QC Prep Batch Number: 980500 *Sample analyzed within 2 Day(s) from collection.*
Client ID: **FB-2** Sample Description: **Field Blank -2 (bailer)** *Collection: 4/7/98 Time: 13:43*

1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	4/9/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	4/9/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	4/9/98

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Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: 980196
DATE REPORTED: 14-Apr-98
DATE RECEIVED: 08-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RI
PROJECT NAME: Decorah Shopping C

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	4/9/98
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	4/9/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	4/9/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	4/9/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	4/9/98
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	4/9/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	4/9/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	4/9/98
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	4/9/98
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	4/9/98
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	4/9/98
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	4/9/98
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	4/9/98
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	4/9/98
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	4/9/98
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	4/9/98
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	4/9/98
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	4/9/98
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	4/9/98
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	4/9/98
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	4/9/98
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4/9/98
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	4/9/98
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	4/9/98
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	4/9/98
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	4/9/98
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	4/9/98
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	4/9/98
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	4/9/98
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	4/9/98
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	4/9/98
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	4/9/98
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	4/9/98
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	4/9/98
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	4/9/98
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	4/9/98
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	4/9/98
Hexachlorobutadiene	0.2	ug/l	0.2	0.7	ns	1		8260	srh	4/9/98
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	4/9/98
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	4/9/98

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980196**
DATE REPORTED: 14-Apr-98
DATE RECEIVED: 08-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RI
PROJECT NAME: Decorah Shopping C

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	4 9 98
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	4 9 98
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	4 9 98
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	4 9 98
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	4 9 98
Naphthalene	0.5	ug/l	0.5	1.5	8	1	J	8260	srh	4 9 98
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	4 9 98
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4 9 98
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	4 9 98
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	4 9 98
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	4 9 98
Tetrachloroethene	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	4 9 98
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	4 9 98
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	4 9 98
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	4 9 98
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	4 9 98
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	4 9 98
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	4 9 98

Approved By: _____ **Date:** 4 /14 /98
James Chang, Ph.D. , Lab Director

MDL: Method Detection Limit determined by 40CFR Part 136 Appendix B *"e" = Estimate value, over calibration range .*
LOQ = 10 (S) x Dilution Factor, where "S" is the Standard Deviation from the MDL Study
LOD = 3.143 (S) x Dilution Factor, where "S" is the Standard Deviation from the MDL Study
PAL: Preventive Action Limit. NR 140.10 Public health related groundwater standards. "ns" = not specified
RQ : Run Qualifier: "J" = Results between LOD and LOQ. "RR" = Re-extract Rerun sample, "B" = Showed in Blank sample.

Rounding Rules: Three significant figures were used for concentrations above 99 ug/L, two significant figures for concentrations between 1-99 ug/L, and one significant figure for lower concentrations.
DNR Analytical Detection Limit Guidance, April 1995.

KEY ENVIRONMENTAL SERVICES, INC.

W66 N215 Commerce Court
Cedarburg, Wisconsin 53012
Phone No. (414) 375-4750
Fax No. (414) 375-9680

ANALYTICAL DATA CHECK-IN FORM

KEY Project Name: OCCONNA SHOPPING CENTER KEY Project No.: 0702007

Project Manager: CURT HOFFART

Lab Name: APL ENVIRONMENTAL Lab Project No.: 11351-58

Sample Matrix: Soil ☐ Water ☒ ; Other: _____

Soil Sample IDs:

Water Sample IDs:

MW-1	DUP
MW-2	
MW-3	
MW-4	
P-1	
FB	
TB	

Do the following items correspond to the chain of custody document:

Project Name and Number:	Yes ☒	No ☐
Date of Collection:	Yes ☒	No ☐
Sample ID Number(s):	Yes ☒	No ☐
Sample Type (Matrix):	Yes ☒	No ☐
Analysis Type and Method No.:	Yes ☒	No ☐
Correct Units per Method:	Yes ☒	No ☐

Compare each sample date of collection to lab sheet extraction and analysis date. Have appropriate holding times for each method been met? Yes ☒ No ☐

Is the chain of custody properly completed? Yes ☒ [1] No ☐

Comments: [1] FINAL LAB RECEIPT ON C.O.C. NOT INDICATED

Data Check-in Performed by: CMH Date: 8/20/98

Note: This form is to be completed for each lab submittal and attached to the original lab data.

APL#980580

NOVA Environmental Laboratory
8222 W. Calumet Road • Milwaukee, WI 53223
800-236-3909 (414) 355-5800 FAX: (414) 355-3099

CHAIN OF CUSTODY

_____ Page 1 of 1

CLIENT INFORMATION	
Project Manager:	CURT HOFFART
Company:	KEY ENGINEERING GROUP LTD
Mailing Address:	W66 N215 COMMERCE CT
City, State, Zip:	CEDARBURG WI 53012
Phone: 414-375-4750	FAX:

REPORTING / INVOICING INFORMATION		
Project I.D.:	070207 RI-T2	
Pricing/Quote Reference:		
Person to be Invoiced:	☐ Client	☐ Property Owner
Mail Invoice to:	☐ Client	☐ Property Owner
Mail Lab Reports to:	☐ Client	☐ Property Owner

PROPERTY OWNER INFORMATION	
Property Owner:	
Owner's Company:	DECORAH SHOPPING CENTER
Street Address:	1011-1025 S. MAIN ST
City, State, Zip:	WEST BEND, WI
Phone:	FAX:

TURNAROUND

☒ NORMAL (about 2 weeks for non-TCLP samples)
☐ ***RUSH*** *Date report needed:* _____
NOTE: Call to confirm *that we can provide the desired Rush processing* ***before shipping samples!***

SPECIAL NEEDS / INSTRUCTIONS

SAMPLE CHARACTERISTICS

☒ NON-HAZARDOUS
☐ Possibly Hazardous; *use special handling*
NOTE: Left-over, hazardous samples will be returned to you for proper disposal.

SAMPLE RECEIVING RECORDS

Samples received "on ice" ☐
Temperature (if not "on ice") ____°C
Samples intact / not leaking ☐

Enter "Preservation/Filtration Codes":

VOC (8260) A

A. HCl
B. HNO_3
C. NaOH
D. H_2SO_4
E. Methanol
F. Field Filtered

LAB I.D.	SAMPLE (Field) I.D.	Additional SAMPLE or SAMPLING INFORMATION (optional)	DATE	TIME	Matrix *	ANALYSIS NEEDED	CONTAINERS / SAMPLE Total	40mL	250mL	500mL	1 L	Other
11351	MW-1	MONITORING WELL	7/31/98	1:00	GW	X	2					
11352	MW-2		7/31/98	1:05	GW	X	2					
11353	MW-3		7/31/98	1:15	GW	X	2					
11354	MW-4		7/31/98	2:00	GW	X	2					
11355	P-1		7/31/98	2:10	GW	X	2					
11356	FB	FIELD BLANK	7/31/98	11:25	DI	X	2					
11357	TB	TRIP BLANK	7/31/98	LAB	DI	X	2					
11358	DUP	Duplicate	~~7/31/98~~									

* Soil **(S)** Surface Water **(SW)** Groundwater **(GW)** *WASTES: Waste, Solid **(WS)** Waste, Liquid **(WL)** Waste, TCLP **(TCLP)*** If applicable: Composite **(C)** or Grab **(G)**

Relinquished by (signature):	Date / Time:	Received by (signature):
Relinquished by (signature):	Date / Time:	Received by (signature):

Relinquished by (signature):	Date / Time:	Received by (signature):
Relinquished by (signature):	Date / Time:	Received by (signature):

CLIENT COPY: Pink **COPY FOR REPORT: Yellow** LAB FILE COPY: White

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: 980580
DATE REPORTED: 12-Aug-98
DATE RECEIVED: 03-Aug-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RI-T2
PROJECT NAME: DECORAH (SHOPPI

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
Sample Number: **11351**			QC Prep Batch Number:		981427		*Sample analyzed within*	*10 Day(s)*	*from collection.*	
Client ID: **MW-1**	Sample Description:		**Monitoring Well**				*Collection:*	*7/31/98*	*Time:*	*15:00*
1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	8/10/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	8/10/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	8/10/98
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	8/10/98
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	8/10/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	8/10/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	8/10/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	8/10/98
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	8/10/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	8/10/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	8/10/98
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	8/10/98
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	8/10/98
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	8/10/98
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	8/10/98
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	8/10/98
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	8/10/98
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	8/10/98
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	8/10/98
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	8/10/98
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	8/10/98
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	8/10/98
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	8/10/98
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	8/10/98
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	8/10/98
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	8/10/98
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	8/10/98
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	8/10/98
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	8/10/98
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	8/10/98
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	8/10/98
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	8/10/98
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	8/10/98
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	8/10/98
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	8/10/98

APL Environmental
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ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980580**
DATE REPORTED: 12-Aug-98
DATE RECEIVED: 03-Aug-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RI-T2
PROJECT NAME: DECORAH (SHOPPI

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	8/10/98
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	8/10/98
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	8/10/98
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	8/10/98
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	8/10/98
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	8/10/98
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	8/10/98
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	8/10/98
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	8/10/98
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	8/10/98
Naphthalene	< 0.5	ug/l	0.5	1.5	8	1		8260	srh	8/10/98
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	8/10/98
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	8/10/98
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	8/10/98
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
Tetrachloroethene	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	8/10/98
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	8/10/98
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	8/10/98
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	8/10/98
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	8/10/98
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	8/10/98
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	8/10/98

Sample Number: **11352** QC Prep Batch Number: 981427 *Sample analyzed within 10 Day(s) from collection.*
Client ID: **MW-2** Sample Description: **Monitoring Well** *Collection: 7/31/98 Time: 13:05*

1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	8/10/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	8/10/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	8/10/98
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	8/10/98
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	8/10/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	8/10/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	8/10/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	8/10/98
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	8/10/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	8/10/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	8/10/98
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	8/10/98

APL Environmental
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ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980580**
DATE REPORTED: 12-Aug-98
DATE RECEIVED: 03-Aug-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RI-T2
PROJECT NAME: DECORAH (SHOPPI

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	8/10/98
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	8/10/98
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	8/10/98
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	8/10/98
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	8/10/98
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	8/10/98
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	8/10/98
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	8/10/98
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	8/10/98
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	8/10/98
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	8/10/98
Benzene	0.2	ug/l	0.2	0.6	0.5	1	J	8260	srh	8/10/98
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	8/10/98
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	8/10/98
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	8/10/98
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	8/10/98
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	8/10/98
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	8/10/98
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	8/10/98
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	8/10/98
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	8/10/98
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	8/10/98
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	8/10/98
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	8/10/98
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	8/10/98
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	8/10/98
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	8/10/98
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	8/10/98
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	8/10/98
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	8/10/98
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	8/10/98
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	8/10/98
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	8/10/98
Naphthalene	< 0.5	ug/l	0.5	1.5	8	1		8260	srh	8/10/98
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	8/10/98
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	8/10/98
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	8/10/98

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8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980580**
DATE REPORTED: 12-Aug-98
DATE RECEIVED: 03-Aug-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RI-T2
PROJECT NAME: DECORAH (SHOPPI

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8 10/98
Tetrachloroethene	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	8 10/98
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	8 10/98
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	8 10/98
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	8 10/98
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	8 10/98
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	8 10/98
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	8 10/98

Sample Number: **11353** QC Prep Batch Number: 981427 *Sample analyzed within 10 Day(s) from collection.*
Client ID: **MW-3** Sample Description: **Monitoring Well** *Collection: 7/31/98 Time: 13:15*

1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8 10/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	8 10/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	8 10/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	8 10/98
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	8 10/98
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	8 10/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	8 10/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8 10/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	8 10/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	8 10/98
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	8 10/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	8 10/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	8 10/98
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	8 10/98
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	8 10/98
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8 10/98
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	8 10/98
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8 10/98
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	8 10/98
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	8 10/98
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	8 10/98
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	8 10/98
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	8 10/98
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	8 10/98
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	8 10/98
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	8 10/98
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	8 10/98
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	8 10/98
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8 10/98
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	8 10/98
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	8 10/98

APL Environmental
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ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980580**
DATE REPORTED: 12-Aug-98
DATE RECEIVED: 03-Aug-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RI-T2
PROJECT NAME: DECORAH (SHOPPI

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	8/10/98
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	8/10/98
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	8/10/98
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	8/10/98
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	8/10/98
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	8/10/98
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	8/10/98
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	8/10/98
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	8/10/98
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	8/10/98
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	8/10/98
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	8/10/98
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	8/10/98
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	8/10/98
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	8/10/98
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	8/10/98
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	8/10/98
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	8/10/98
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	8/10/98
Naphthalene	< 0.5	ug/l	0.5	1.5	8	1		8260	srh	8/10/98
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	8/10/98
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	8/10/98
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	8/10/98
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
Tetrachloroethene	1.6	ug/l	0.3	0.9	0.5	1		8260	srh	8/10/98
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	8/10/98
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	8/10/98
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	8/10/98
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	8/10/98
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	8/10/98
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	8/10/98

Sample Number: **11354** QC Prep Batch Number: 981427 *Sample analyzed within 10 Day(s) from collection.*
Client ID: **MW-4** Sample Description: **Monitoring Well** *Collection: 7/31/98 Time: 14:00*

1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	8/10/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	8/10/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	8/10/98
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	8/10/98

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ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980580**
DATE REPORTED: 12-Aug-98
DATE RECEIVED: 03-Aug-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RI-T2
PROJECT NAME: DECORAH (SHOPPI

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	8 10/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	8 10/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8 10/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	8 10/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	8 10/98
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	8 10/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	8 10/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	8 10/98
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	8 10/98
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	8 10/98
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8 10/98
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	8 10/98
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8 10/98
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	8 10/98
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	8 10/98
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	8 10/98
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	8 10/98
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	8 10/98
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	8 10/98
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	8 10/98
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	8 10/98
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	8 10/98
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	8 10/98
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8 10/98
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	8 10/98
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	8 10/98
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	8 10/98
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	8 10/98
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	8 10/98
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	8 10/98
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	8 10/98
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	8 10/98
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	8 10/98
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	8 10/98
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	8 10/98
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	8 10/98
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	8 10/98
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	8 10/98
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	8 10/98
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8 10/98
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	8 10/98
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	8 10/98
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	8 10/98

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ORGANIC REPORT

WDNR# 241340550

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DATE REPORTED: 12-Aug-98
DATE RECEIVED: 03-Aug-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RI-T2
PROJECT NAME: DECORAH (SHOPPI

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	8/10/98
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	8/10/98
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	8/10/98
Naphthalene	< 0.5	ug/l	0.5	1.5	8	1		8260	srh	8/10/98
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	8/10/98
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	8/10/98
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	8/10/98
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
Tetrachloroethene	0.6	ug/l	0.3	0.9	0.5	1	J	8260	srh	8/10/98
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	8/10/98
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	8/10/98
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	8/10/98
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	8/10/98
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	8/10/98
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	8/10/98

Sample Number: **11355** QC Prep Batch Number: 981427 *Sample analyzed within 10 Day(s) from collection.*
Client ID: **P-1** Sample Description: **Monitoring Well** *Collection: 7/31/98 Time 14:10*

1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	8/10/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	8/10/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	8/10/98
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	8/10/98
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	8/10/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	8/10/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	8/10/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	8/10/98
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	8/10/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	8/10/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	8/10/98
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	8/10/98
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	8/10/98
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	8/10/98
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	8/10/98
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	8/10/98
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	8/10/98
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	8/10/98

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ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980580**
DATE REPORTED: 12-Aug-98
DATE RECEIVED: 03-Aug-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RI-T2
PROJECT NAME: DECORAH (SHOPPI

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	8 10/98
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	8 10/98
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	8 10/98
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	8 10/98
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	8 10/98
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	8 10/98
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8 10/98
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	8 10/98
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	8 10/98
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	8 10/98
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	8 10/98
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	8 10/98
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	8 10/98
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	8 10/98
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	8 10/98
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	8 10/98
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	8 10/98
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	8 10/98
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	8 10/98
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	8 10/98
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	8 10/98
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	8 10/98
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8 10/98
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	8 10/98
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	8 10/98
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	8 10/98
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	8 10/98
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	8 10/98
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8 10/98
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	8 10/98
Naphthalene	< 0.5	ug/l	0.5	1.5	8	1		8260	srh	8 10/98
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	8 10/98
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8 10/98
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	8 10/98
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	8 10/98
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8 10/98
Tetrachloroethene	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	8 10/98
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	8 10/98
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	8 10/98
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	8 10/98
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	8 10/98
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	8 10/98
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	8 10/98

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980580**
DATE REPORTED: 12-Aug-98
DATE RECEIVED: 03-Aug-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RI-T2
PROJECT NAME: DECORAH (SHOPPI

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
Sample Number: **11356**			QC Prep Batch Number:		981427		*Sample analyzed within*	*10 Day(s)*	*from collection.*	
Client ID: **FB**	Sample Description:		**Field Blank**				*Collection:*	*7/31/98*	*Time:*	*11:25*
1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	8/10/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	8/10/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	8/10/98
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	8/10/98
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	8/10/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	8/10/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	8/10/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	8/10/98
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	8/10/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	8/10/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	8/10/98
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	8/10/98
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	8/10/98
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	8/10/98
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	8/10/98
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	8/10/98
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	8/10/98
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	8/10/98
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	8/10/98
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	8/10/98
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	8/10/98
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	8/10/98
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	8/10/98
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	8/10/98
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	8/10/98
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	8/10/98
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	8/10/98
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	8/10/98
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	8/10/98
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	8/10/98
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	8/10/98
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	8/10/98
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	8/10/98
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	8/10/98

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980580**
DATE REPORTED: 12-Aug-98
DATE RECEIVED: 03-Aug-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RI-T2
PROJECT NAME: DECORAH (SHOPPI

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	8/10/98
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	8/10/98
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	8/10/98
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	8/10/98
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	8/10/98
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	8/10/98
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	8/10/98
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	8/10/98
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	8/10/98
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	8/10/98
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	8/10/98
Naphthalene	< 0.5	ug/l	0.5	1.5	8	1		8260	srh	8/10/98
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	8/10/98
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	8/10/98
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	8/10/98
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
Tetrachloroethene	0.5	ug/l	0.3	0.9	0.5	1	J	8260	srh	8/10/98
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	8/10/98
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	8/10/98
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	8/10/98
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	8/10/98
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	8/10/98
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	8/10/98

Sample Number: **11357** QC Prep Batch Number: 981427 *Sample analyzed within 10 Day(s) from collection.*
Client ID: **TB** Sample Description: **Trip Blank** *Collection: 7/31/98 Time:*

1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	8/10/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	8/10/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	8/10/98
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	8/10/98
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	8/10/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	8/10/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	8/10/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	8/10/98
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	8/10/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	8/10/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	8/10/98

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980580**
DATE REPORTED: 12-Aug-98
DATE RECEIVED: 03-Aug-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RI-T2
PROJECT NAME: DECORAH (SHOPPI

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	8/10/98
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	8/10/98
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	8/10/98
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	8/10/98
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	8/10/98
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	8/10/98
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	8/10/98
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	8/10/98
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	8/10/98
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	8/10/98
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	8/10/98
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	8/10/98
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	8/10/98
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	8/10/98
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	8/10/98
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	8/10/98
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	8/10/98
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	8/10/98
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	8/10/98
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	8/10/98
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	8/10/98
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	8/10/98
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	8/10/98
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	8/10/98
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	8/10/98
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	8/10/98
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	8/10/98
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	8/10/98
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	8/10/98
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	8/10/98
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	8/10/98
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	8/10/98
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	8/10/98
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	8/10/98
Naphthalene	< 0.5	ug/l	0.5	1.5	8	1		8260	srh	8/10/98
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	8/10/98
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	8/10/98

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980580**
DATE REPORTED: 12-Aug-98
DATE RECEIVED: 03-Aug-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007 RI-T2
PROJECT NAME: DECORAH (SHOPPI

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	8/10/98
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
Tetrachloroethene	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	8/10/98
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	8/10/98
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	8/10/98
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	8/10/98
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	8/10/98
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	8/10/98
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	8/10/98

Sample Number: **11358** QC Prep Batch Number: 981427 *Sample analyzed within 10 Day(s) from collection.*
Client ID: **DUP** Sample Description: **Duplicate** *Collection: 7/31/98 Time:*

1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	8/10/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	8/10/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	8/10/98
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	8/10/98
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	8/10/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	8/10/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	8/10/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	8/10/98
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	8/10/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	8/10/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	8/10/98
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	8/10/98
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	8/10/98
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	8/10/98
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	8/10/98
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	8/10/98
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	8/10/98
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	8/10/98
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	8/10/98
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	8/10/98
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	8/10/98
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	8/10/98
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	8/10/98
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	8/10/98
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	8/10/98
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	8/10/98
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	8/10/98

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER:	**980580**
DATE REPORTED:	12-Aug-98
DATE RECEIVED:	03-Aug-98
SAMPLE TEMP (C):	Rec On Ice
PROJECT ID:	0702007 RI-T2
PROJECT NAME:	DECORAH (SHOPPI

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal

Approved By: _____ **Date:** 8/12/98
James Chang, Ph.D., Lab Director

MDL: Method Detection Limit determined by 40CFR Part 136 Appendix B *"e" = Estimate value, over calibration range .*
LOQ = 10 (S) x Dilution Factor, where "S" is the Standard Deviation from the MDL Study
LOD = 3.143 (S) x Dilution Factor, where "S" is the Standard Deviation from the MDL Study
PAL: Preventive Action Limit, NR 140.10 Public health related groundwater standards. "ns" = not specified
RQ : Run Qualifier: "J" = Results between LOD and LOQ. "RR" = Re-extract Rerun sample. "B" = Showed in Blank sample.

Rounding Rules: Three significant figures were used for concentrations above 99 ug/L, two significant figures for concentrations between 1-99 ug/L, and one significant figure for lower concentrations.
DNR Analytical Detection Limit Guidance, April 1995.

KEY ENVIRONMENTAL SERVICES, INC.

W66 N215 Commerce Court
Cedarburg, Wisconsin 53012
Phone No. (414) 375-4750
Fax No. (414) 375-9680

ANALYTICAL DATA CHECK-IN FORM

KEY Project Name: DELORAH SHOPPING CENTER KEY Project No.: 070207

Project Manager: CURT HOFFART

Lab Name: APL ENVIRONMENTAL Lab Project No.: 12752-53

Sample Matrix: Soil ☐ Water ☒ Other: _____

Soil Sample IDs:

Water Sample IDs:

GP-7-TW	
TRIP BLANK	

Do the following items correspond to the chain of custody document:

Project Name and Number:	Yes ☒	No ☐
Date of Collection:	Yes ☒	No ☐
Sample ID Number(s):	Yes ☒	No ☐
Sample Type (Matrix):	Yes ☒	No ☐
Analysis Type and Method No.:	Yes ☒	No ☐
Correct Units per Method:	Yes ☒	No ☐

Compare each sample date of collection to lab sheet extraction and analysis date. Have appropriate holding times for each method been met? Yes ☒ No ☐

Is the chain of custody properly completed? Yes ☐ * No ☐

Comments: * NO FINAL LAB RECEIPT INDICATED ON COC

Data Check-in Performed by: _____ Date: _____

Note: This form is to be completed for each lab submittal and attached to the original lab data.

APL Environmental

8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

Project Name: OCONOMOWOC SHOPPING CENTER ANNEX
Project ID: 0702007

Project Manager: CURT HOFFART
Company: KEY ENGINEERING
Address: W66 N215 Commerce Ct
City/State/Zip: CEDARBURG WI 53012
Phone: 414-375-4750 Fax: 375-9680

Samples received "On Ice" Temperature: ___C Sample intact/not leaking

A. HCl B. HNO3 C. NaOH D. H2SO4 E. Methanol F. Filtered G. None H. Others

100 Preservation / Filtration Code

	Test Required	Matrix																	Preservation / Filtration Code
01	VOC (8260)	GW	X	X															A
02	~~TRIP BLANK~~																		
03																			
04																			
05																			
06																			
07																			
08																			
09																			
10																			
11																			
12																			
13																			
14																			
15																			

Additional Information:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Collection Time	11:30																
Collection Date	10/23/08																
Sample ID	GP-7-TW	TRIP BLANK															
Lab ID	12752	12753															

COC# 98086

Relinquished By:	Date/Time	Received By:
	10/24/08	

Special Instructions:
APL QUOTE # 980303

APL Environmental

8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

Project Name: OECORAH SHOPPING CENTER ANNEX

Project ID: 0702007

Project Manager: CURT HOFFART
Company: KEY ENGINEERING
Address: W66 N215 Commerce Ct
City/State/Zip: CEDARBURG WI 53012
Phone: 414-375-4750 Fax: 375-9680

Samples received "On Ice" Temperature: ____C Sample intact/not leaking

A. HCl E. Methanol 100
B. HNO3 F. Filtered
C. NaOH G. None
D. H2SO4 H. Others

Preservation / Filtration Code

	Test Required	Matrix	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Preservation / Filtration Code
01	VOC (8260)	GW	X	X																A
02	~~TRIP BLCK~~																			
03																				
04																				
05																				
06																				
07																				
08																				
09																				
10																				
11																				
12																				
13																				
14																				
15																				

Additional Information:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Collection Time	11:30																
Collection Date	10/23/98																
Sample ID	GP-7-TW	TRIP BLANK															
Lab ID	12752	12753															

COC# 98086

Relinquished By:	Date/Time	Received By:
[signature]	10/26/98	Animesh Patel

Special Instructions:
APL QUOTE # 9803033

APL Environmental

8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

Project Name: DECORAH STORING CENTER ANNEX
Project ID: 0702007

Project Manager: CURT HOFFART
Company: KEY ENGINEERING
Address: W66 N215 Commerce Ct
City/State/Zip: CEDARBURG WI 53012
Phone: 414-375-4750 Fax: 375-9680

Samples received "On Ice" Temperature: ___C Sample intact/not leaking

A. HCl E. Methanol
B. HNO3 F. Filtered
C. NaOH G. None
D. H2SO4 H. Others

100 Preservation / Filtration Code

Test Required	Matrix																		Preservation / Filtration Code
01 VOC (8260)	GW	X	X																A
02 TRIP BLANK																			
03																			
04																			
05																			
06																			
07																			
08																			
09																			
10																			
11																			
12																			
13																			
14																			
15																			

Additional Information:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Collection Time	11:30																
Collection Date	10/23/98																
Sample ID	GP-7-TW	TRIP BLANK															
Lab ID	12752	12753															

COC# 98061

Relinquished By:	Date/Time	Received By:
	10/26/98	

Special Instructions:
APL QUOTE # 9803033

APL Environmental

8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

Project Name: DEERFIELD SHOPPING CENTER ANNEX

Project ID: 0702007

Project Manager: CURT HOFFART
Company: KEY ENGINEERING
Address: W66 N215 Commerce Ct
City/State/Zip CEDARBURG WI 53012
Phone: 414-375-4750 **Fax:** 375-9680

Samples received "On Ice" | Temperature: ____C | Sample intact/not leaking

A. HCl B. HNO3 C. NaOH D. H2SO4 E. Methanol F. Filtered G. None H. Others

100 Preservation / Filtration Code

	Test Required	Matrix																	Preservation / Filtration Code
01	VOC (8260)	GW	X	X															A
02	~~TRIP BLANK~~																		
03																			
04																			
05																			
06																			
07																			
08																			
09																			
10																			
11																			
12																			
13																			
14																			
15																			

Additional Information:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Collection Time	11:30																
Collection Date	10/23/08																
Sample ID	GP-7-TW	TRIP BLANK															
Lab ID	127752	127753															

COC# 98086

Relinquished By:	Date/Time	Received By:
	10/24/08	

Special Instructions:

APL QUOTE # 9803033

APL Environmental

8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

Project Name:	DECORAH STORING CENTER ANNEX
Project ID:	0702007

Project Manager:	CURT HOFFART
Company:	KEY ENGINEERING
Address:	W66 N215 Commerce Ct
City/State/Zip	CEDARBURG WI 53012
Phone:	375-4750
Fax:	375-9680

4/4-

Samples received "On Ice" Temperature: ___C Sample intact/not leaking

A. HCl E. Methanol
B. HNO3 F. Filtered
C. NaOH G. None
D. H2SO4 H. Others

100 Preservation / Filtration Code

	Test Required	Matrix																	Preservation / Filtration Code
01	VOC (8260)	GW	X	X															A
02	~~TRIP BLANK~~																		
03																			
04																			
05																			
06																			
07																			
08																			
09																			
10																			
11																			
12																			
13																			
14																			
15																			

Additional Information:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Collection Time	11:30																
Collection Date	10/23/08																
Sample ID	GP-7-TW	TRIP BLANK															
Lab ID	12752	12753															

COC# 98086

Relinquished By:	Date/Time	Received By:
	10/24/08	

Special Instructions:

APL QUOTE # 980303

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980861**
DATE REPORTED: 04-Nov-98
DATE RECEIVED: 26-Oct-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping C

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
Sample Number: **12752**			QC Prep Batch Number:	**982278**			*Sample analyzed within*	*11 Day(s)*	*from collection.*	
Client ID: **GP-7**	Sample Description:						*Collection:*	*10/23/98*	*Time:*	*11:30*
1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	11/3/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	11/3/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	11/3/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	11/3/98
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	11/3/98
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	11/3/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	11/3/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	11/3/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	11/3/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	11/3/98
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	11/3/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	11/3/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	11/3/98
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	11/3/98
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	11/3/98
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	11/3/98
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	11/3/98
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	11/3/98
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	11/3/98
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	11/3/98
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	11/3/98
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	11/3/98
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	11/3/98
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	11/3/98
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	11/3/98
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	11/3/98
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	11/3/98
Benzene	0.2	ug/l	0.2	0.6	0.5	1		8260	srh	11/3/98
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	11/3/98
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	11/3/98
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	11/3/98
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	11/3/98
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	11/3/98
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	11/3/98
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	11/3/98
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	11/3/98
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	11/3/98
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	11/3/98
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	11/3/98
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	11/3/98

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
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ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980861**
DATE REPORTED: 04-Nov-98
DATE RECEIVED: 26-Oct-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping C

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	11/3/98
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	11/3/98
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	11/3/98
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	11/3/98
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	11/3/98
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	11/3/98
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	11/3/98
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	11/3/98
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	11/3/98
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	11/3/98
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	11/3/98
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	11/3/98
Naphthalene	< 0.5	ug/l	0.5	1.5	8	1		8260	srh	11/3/98
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	11/3/98
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	11/3/98
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	11/3/98
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	11/3/98
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	11/3/98
Tetrachloroethene	10	ug/l	0.3	0.9	0.5	1		8260	srh	11/3/98
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	11/3/98
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	11/3/98
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	11/3/98
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	11/3/98
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	11/3/98
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	11/3/98

Sample Number: **12753** QC Prep Batch Number: 982278 *Sample analyzed within 11 Day(s) from collection.*
Client ID: **Trip Blank** Sample Description: *Collection: 10/23/98 Time:*

1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	11/3/98
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	11/3/98
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	11/3/98
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	11/3/98
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	11/3/98
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	11/3/98
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	11/3/98
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	11/3/98
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	11/3/98
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	11/3/98
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	11/3/98
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	11/3/98
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	11/3/98
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	11/3/98

APL Environmental
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Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980861**
DATE REPORTED: 04-Nov-98
DATE RECEIVED: 26-Oct-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping C

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	11/3/98
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	11/3/98
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	11/3/98
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	11/3/98
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	11/3/98
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	11/3/98
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	11/3/98
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	11/3/98
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	11/3/98
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	11/3/98
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	11/3/98
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	11/3/98
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	11/3/98
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	11/3/98
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	11/3/98
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	11/3/98
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	11/3/98
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	11/3/98
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	11/3/98
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	11/3/98
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	11/3/98
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	11/3/98
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	11/3/98
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	11/3/98
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	11/3/98
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	11/3/98
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	11/3/98
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	11/3/98
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	11/3/98
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	11/3/98
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	11/3/98
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	11/3/98
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	11/3/98
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	11/3/98
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	11/3/98
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	11/3/98
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	11/3/98
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	11/3/98
Naphthalene	< 0.5	ug/l	0.5	1.5	8	1		8260	srh	11/3/98
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	11/3/98
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	11/3/98
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	11/3/98
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	11/3/98

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Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **980861**
DATE REPORTED: 04-Nov-98
DATE RECEIVED: 26-Oct-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping C

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
tert-Butylbenzene	< 0.2	**ug/l**	0.2	0.6	ns	1		8260	srh	11/3/98
Tetrachloroethene	< 0.3	**ug/l**	0.3	0.9	0.5	1		8260	srh	11/3/98
Toluene	< 0.3	**ug/l**	0.3	1	68.6	1		8260	srh	11/3/98
trans-1,2-Dichloroethene	< 0.2	**ug/l**	0.2	0.5	20	1		8260	srh	11/3/98
trans-1,3-Dichloropropene	< 0.2	**ug/l**	0.2	0.6	0.02	1		8260	srh	11/3/98
Trichloroethene	< 0.2	**ug/l**	0.2	0.5	0.5	1		8260	srh	11/3/98
Trichlorofluoromethane	< 0.3	**ug/l**	0.3	1.1	ns	1		8260	srh	11/3/98
Vinyl chloride	< 0.2	**ug/l**	0.2	0.7	0.02	1		8260	srh	11/3/98

Approved By: _____ **Date:** 11/5/98
James Chang, Ph.D. . Lab Director

MDL: Method Detection Limit determined by 40CFR Part 136 Appendix B *"e" = Estimate value. over calibration range .*
LOQ = 10 (S) x Dilution Factor, where "S" is the Standard Deviation from the MDL Study
LOD = 3.143 (S) x Dilution Factor, where "S" is the Standard Deviation from the MDL Study
PAL: Preventive Action Limit, NR 140.10 Public health related groundwater standards. "ns" = not specified
RQ : Run Qualifier: "J" = Results between LOD and LOQ. "RR" = Re-extract Rerun sample, "B" = Showed in Blank sample.

Rounding Rules: Three significant figures were used for concentrations above 99 ug/L, two significant figures for concentrations between 1-99 ug/L, and one significant figure for lower concentrations.
DNR Analytical Detection Limit Guidance. April 1995.

APL Environmental
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Phone: (414) 355-5800 Fax: (414) 355-3

ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER:	980861
DATE REPORTED:	03-Nov-98
DATE RECEIVED:	26-Oct-98
SAMPLE TEMP (C):	Rec On Ice
PROJECT ID:	0702007
PROJECT NAME:	Decorah Shopping Center

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Dry Weight and Dilution Factor Corrected

Compound	LUST Result	Unit	LUST LOD	LUST LOQ	NOVA LOD	Dilution Factor	RQ	Method	Analyst	Date of Analysis

Approved By: _____ **Date:** 11/5/98
James Chang, Ph.D. , Lab Director

Special LUST Format for Methanol - Preserved Soil PVOCs or VOCs, (Release News, July and October 1994

NOVA Lab LOD = where the LOD has been determined in accordance with 40 CFR, Part 136, Appendix B.

LUST LOD = LUST program PVOC/VOC LOD of 25 ug/kg (wet weight basis)

LUST LOQ = LUST program PVOC/VOC LOQ of 60 ug/kg (wet weight basis)

RQ : Run Qualifier: "J" = Results between LOD and LOQ "L" = Samples less than 20 g. "B" = Showed in Blank sample.

Rounding Rules: Three significant figures were used for concentrations above 99 ug/L, two significant figures for concentrations between 1-99 ug/L, and one significant figure for lower concentrations.
DNR Analytical Detection Limit Guidance, April 1995.

According to LUST Release News, October 1994 Volume 4, Number 5. : Laboratories are not required to report sample results that are below 25 ug/kg, but are required to report their actual MDL on the report.

KEY ENGINEERING GROUP, LTD.

W66 N215 Commerce Court
Cedarburg, Wisconsin 53012
Phone No. (414) 375-4750
Fax No. (414) 375-9680

ANALYTICAL DATA CHECK-IN FORM

KEY Project Name: OCCUPAN SHOPPING CENTER ANNEX KEY Project No.: 0702007

Project Manager: CURT HOFFART

Lab Name: APL ENVIRONMENTAL Lab Project No.: _____

Sample Matrix: Soil ☐ Water ☒ Other: _____

Soil Sample IDs:

Water Sample IDs:

MW-5	
TRIP	
FIELD	

Do the following items correspond to the chain of custody document:

Project Name and Number:	Yes ☒	No ☐
Date of Collection:	Yes ☒	No ☐
Sample ID Number(s):	Yes ☒	No ☐
Sample Type (Matrix):	Yes ☒	No ☐
Analysis Type and Method No.:	Yes ☒	No ☐
Correct Units per Method:	Yes ☒	No ☐

Compare each sample date of collection to lab sheet extraction and analysis date. Have appropriate holding times for each method been met? Yes ☒ No ☐

Is the chain of custody properly completed? * Yes ☐ No ☐

Comments: * FINAL LAB RECEIPT NOT INDICATED ON COC.

Data Check-in Performed by: _____ Date: 2/25/99

Note: This form is to be completed for each lab submittal and attached to the original lab data.

APL Environmental

8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

Project Name: DECORAH ANNEX

Project ID: 0702007

Project Manager: CURT HOFFART
Company: KEY ENGINEERING GP
Address: W66 N215 COMMERCE C
City/State/Zip: CEDARBURG WI 53012
Phone: 414-375-4750 Fax: 375-9680

Samples received "On Ice" Temperature: ____C Sample intact/not leaking

A. HCl E. Methanol
B. HNO3 F. Filtered
C. NaOH G. None
D. H2SO4 H. Others

100

Preservation / Filtration Code

	Test Required	Matrix	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Preservation / Filtration Code
01	VOC (8260)	GW	X	X	X															A
02																				
03																				
04																				
05																				
06																				
07																				
08																				
09																				
10																				
11																				
12																				
13																				
14																				
15																				

Additional Information:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Collection Time	1:55	2:00	1:50														
Collection Date	2/9/99	→	→														
Sample ID	MW-5	TRIP	FIELD														
Lab ID	14022	14023	14024														

COC#

Relinquished By:	Date/Time	Received By:
David [signature]	2/10/99 9:50AM	Ulrich Cassel

Special Instructions:

APL Environmental
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Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: 990099
DATE REPORTED: 18-Feb-99
DATE RECEIVED: 10-Feb-99
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Annex

Curt Hoffart
Key Engineering Group, LTD.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
Sample Number: **14022**		QC Prep Batch Number: 990293					*Sample analyzed within*	*8*	*Day(s) from collection.*	
Client ID: **MW-5**	Sample Description:						*Collection:*	*2/9/99*	*Time:*	*15:55*
1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	2/17/99
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	2/17/99
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	2/17/99
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	2/17/99
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	2/17/99
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	2/17/99
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	2/17/99
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	2/17/99
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	2/17/99
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	2/17/99
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	2/17/99
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	2/17/99
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	2/17/99
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	2/17/99
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	2/17/99
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	2/17/99
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	2/17/99
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	2/17/99
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	2/17/99
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	2/17/99
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	2/17/99
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	2/17/99
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	2/17/99
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	2/17/99
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	2/17/99
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	2/17/99
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	2/17/99
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	2/17/99
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	2/17/99
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	2/17/99
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	2/17/99
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	2/17/99
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	2/17/99
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	2/17/99
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	2/17/99
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	2/17/99
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	2/17/99
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	2/17/99
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	2/17/99
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	2/17/99

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8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: 990099
DATE REPORTED: 18-Feb-99
DATE RECEIVED: 10-Feb-99
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Annex

Curt Hoffart
Key Engineering Group, LTD.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	2/17/99
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	2/17/99
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	2/17/99
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	2/17/99
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	2/17/99
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	2/17/99
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	2/17/99
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	2/17/99
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	2/17/99
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	2/17/99
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	2/17/99
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	2/17/99
Naphthalene	< 0.5	ug/l	0.5	1.5	8	1		8260	srh	2/17/99
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	2/17/99
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	2/17/99
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	2/17/99
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	2/17/99
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	2/17/99
Tetrachloroethene	2.5	ug/l	0.3	0.9	0.5	1		8260	srh	2/17/99
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	2/17/99
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	2/17/99
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	2/17/99
Trichloroethene	0.6	ug/l	0.2	0.5	0.5	1		8260	srh	2/17/99
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	2/17/99
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	2/17/99

Sample Number: **14023** QC Prep Batch Number: 990293 *Sample analyzed within 8 Day(s) from collection.*
Client ID: **trip blank** Sample Description: *Collection: 2/9/99 Time: 14:00*

1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	2/17/99
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	2/17/99
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	2/17/99
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	2/17/99
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	2/17/99
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	2/17/99
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	2/17/99
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	2/17/99
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	2/17/99
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	2/17/99
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	2/17/99
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	2/17/99
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	2/17/99
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	2/17/99

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8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: 990099
DATE REPORTED: 18-Feb-99
DATE RECEIVED: 10-Feb-99
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Annex

Curt Hoffart
Key Engineering Group, LTD.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	2/17/99
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	2/17/99
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	2/17/99
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	2/17/99
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	2/17/99
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	2/17/99
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	2/17/99
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	2/17/99
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	2/17/99
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	2/17/99
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	2/17/99
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	2/17/99
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	2/17/99
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	2/17/99
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	2/17/99
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	2/17/99
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	2/17/99
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	2/17/99
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	2/17/99
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	2/17/99
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	2/17/99
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	2/17/99
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	2/17/99
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	2/17/99
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	2/17/99
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	2/17/99
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	2/17/99
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	2/17/99
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	2/17/99
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	2/17/99
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	2/17/99
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	2/17/99
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	2/17/99
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	2/17/99
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	2/17/99
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	2/17/99
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	2/17/99
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	2/17/99
Naphthalene	< 0.5	ug/l	0.5	1.5	8	1		8260	srh	2/17/99
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	2/17/99
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	2/17/99
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	2/17/99
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	2/17/99

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8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **990099**
DATE REPORTED: 18-Feb-99
DATE RECEIVED: 10-Feb-99
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Annex

Curt Hoffart
Key Engineering Group, LTD.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	2/17/99
Tetrachloroethene	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	2/17/99
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	2/17/99
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	2/17/99
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	2/17/99
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	2/17/99
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	2/17/99
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	2/17/99

Sample Number: **14024** QC Prep Batch Number: 990293 *Sample analyzed within 8 Day(s) from collection.*
Client ID: **field blank** Sample Description: *Collection: 2/9/99 Time: 13:50*

1,1,1,2-Tetrachloroethane	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	2/17/99
1,1,1-Trichloroethane	< 0.2	ug/l	0.2	0.7	40	1		8260	srh	2/17/99
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.9	0.02	1		8260	srh	2/17/99
1,1,2-Trichloroethane	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	2/17/99
1,1-Dichloroethane	< 0.2	ug/l	0.2	0.5	85	1		8260	srh	2/17/99
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.1	0.7	1		8260	srh	2/17/99
1,1-Dichloropropene	< 0.5	ug/l	0.5	1.6	ns	1		8260	srh	2/17/99
1,2,3-Trichlorobenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	2/17/99
1,2,3-Trichloropropane	< 0.6	ug/l	0.6	1.9	ns	1		8260	srh	2/17/99
1,2,4-Trichlorobenzene	< 0.2	ug/l	0.2	0.5	14	1		8260	srh	2/17/99
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	2/17/99
1,2-Dibromoethane	< 0.2	ug/l	0.2	0.8	0.005	1		8260	srh	2/17/99
1,2-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	60	1		8260	srh	2/17/99
1,2-Dichloroethane	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	2/17/99
1,2-Dichloropropane	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	2/17/99
1,3,5-Trimethylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	2/17/99
1,3-Dichlorobenzene	< 0.2	ug/l	0.2	0.6	125	1		8260	srh	2/17/99
1,3-Dichloropropane	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	2/17/99
1,4-Dichlorobenzene	< 0.2	ug/l	0.2	0.5	15	1		8260	srh	2/17/99
12Dibromo-3-chloropropan	< 0.6	ug/l	0.6	1.9	0.02	1		8260	srh	2/17/99
2,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	ns	1		8260	srh	2/17/99
2-Butanone (MEK)	< 1.4	ug/l	1.4	4.4	90	1		8260	srh	2/17/99
2-Chloroethyl Vinyl Ether	< 0.3	ug/l	0.3	0.9	ns	1		8260	srh	2/17/99
2-Chlorotoluene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	2/17/99
4-Chlorotoluene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	2/17/99
4-Methyl-2-Pentanone	< 0.8	ug/l	0.8	2.7	50	1		8260	srh	2/17/99
Acetone	< 1.6	ug/l	1.6	4.9	200	1		8260	srh	2/17/99
Benzene	< 0.2	ug/l	0.2	0.6	0.5	1		8260	srh	2/17/99
Bromobenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	2/17/99
Bromochloromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	2/17/99
Bromodichloromethane	< 0.3	ug/l	0.3	0.8	0.06	1		8260	srh	2/17/99

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8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER: **990099**
DATE REPORTED: 18-Feb-99
DATE RECEIVED: 10-Feb-99
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Annex

Curt Hoffart
Key Engineering Group, LTD.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal
Bromoform	< 0.5	ug/l	0.5	1.5	0.44	1		8260	srh	2/17/99
Bromomethane	< 0.2	ug/l	0.2	0.7	1	1		8260	srh	2/17/99
Carbon tetrachloride	< 0.2	ug/l	0.2	0.7	0.5	1		8260	srh	2/17/99
Chlorobenzene	< 0.2	ug/l	0.2	0.6	20	1		8260	srh	2/17/99
Chloroethane	< 1.2	ug/l	1.2	3.7	80	1		8260	srh	2/17/99
Chloroform	< 0.3	ug/l	0.3	0.9	0.6	1		8260	srh	2/17/99
Chloromethane	< 0.8	ug/l	0.8	2.4	0.3	1		8260	srh	2/17/99
cis-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.6	7	1		8260	srh	2/17/99
cis-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.8	0.02	1		8260	srh	2/17/99
Dibromochloromethane	< 0.2	ug/l	0.2	0.7	6	1		8260	srh	2/17/99
Dibromomethane	< 0.4	ug/l	0.4	1.1	ns	1		8260	srh	2/17/99
Dichlorodifluoromethane	< 0.4	ug/l	0.4	1.1	200	1		8260	srh	2/17/99
Ethylbenzene	< 0.2	ug/l	0.2	0.5	140	1		8260	srh	2/17/99
Hexachlorobutadiene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	2/17/99
Isopropyl Ether	< 0.3	ug/l	0.3	1	ns	1		8260	srh	2/17/99
Isopropylbenzene	< 0.2	ug/l	0.2	0.5	ns	1		8260	srh	2/17/99
m&p-xylene	< 0.4	ug/l	0.4	1.1	124	1		8260	srh	2/17/99
Methyl-t-butyl ether	< 0.2	ug/l	0.2	0.7	12	1		8260	srh	2/17/99
Methylene chloride	< 0.8	ug/l	0.8	2.4	0.5	1		8260	srh	2/17/99
n-Butylbenzene	< 0.2	ug/l	0.2	0.7	ns	1		8260	srh	2/17/99
n-Propylbenzene	< 0.3	ug/l	0.3	0.8	ns	1		8260	srh	2/17/99
Naphthalene	< 0.5	ug/l	0.5	1.5	8	1		8260	srh	2/17/99
o-xylene	< 0.2	ug/l	0.2	0.6	124	1		8260	srh	2/17/99
p-Isopropyltoluene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	2/17/99
sec-Butylbenzene	< 0.3	ug/l	0.3	1	ns	1		8260	srh	2/17/99
Styrene	< 0.2	ug/l	0.2	0.7	10	1		8260	srh	2/17/99
tert-Butylbenzene	< 0.2	ug/l	0.2	0.6	ns	1		8260	srh	2/17/99
Tetrachloroethene	< 0.3	ug/l	0.3	0.9	0.5	1		8260	srh	2/17/99
Toluene	< 0.3	ug/l	0.3	1	68.6	1		8260	srh	2/17/99
trans-1,2-Dichloroethene	< 0.2	ug/l	0.2	0.5	20	1		8260	srh	2/17/99
trans-1,3-Dichloropropene	< 0.2	ug/l	0.2	0.6	0.02	1		8260	srh	2/17/99
Trichloroethene	< 0.2	ug/l	0.2	0.5	0.5	1		8260	srh	2/17/99
Trichlorofluoromethane	< 0.3	ug/l	0.3	1.1	ns	1		8260	srh	2/17/99
Vinyl chloride	< 0.2	ug/l	0.2	0.7	0.02	1		8260	srh	2/17/99

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8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

BATCH NUMBER:	**990099**
DATE REPORTED:	18-Feb-99
DATE RECEIVED:	10-Feb-99
SAMPLE TEMP (C):	Rec On Ice
PROJECT ID:	0702007
PROJECT NAME:	Decorah Annex

Curt Hoffart
Key Engineering Group, LTD.
W66 N215 Commerce Court
Cedarburg , WI 53012

Compound	Result	Units	LOD	LOQ	PAL	Dil	RQ	Method	Analyst	Date Anal

Approved By: _____ **Date:** 2/18/99
James Chang, Ph.D. , Lab Director

MDL: Method Detection Limit determined by 40CFR Part 136 Appendix B *"e" = Estimate value, over calibration range .*
LOQ = 10 (S) x Dilution Factor, where "S" is the Standard Deviation from the MDL Study
LOD = 3.143 (S) x Dilution Factor, where "S" is the Standard Deviation from the MDL Study
PAL: Preventive Action Limit, NR 140.10 Public health related groundwater standards. "ns" = not specified
RQ : Run Qualifier; "J" = Results between LOD and LOQ. "RR" = Re-extract Rerun sample, "B" = Showed in Blank sample.

Rounding Rules: Three significant figures were used for concentrations above 99 ug/L, two significant figures for concentrations between 1-99 ug/L, and one significant figure for lower concentrations.
DNR Analytical Detection Limit Guidance, April 1995.

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CALCULATION SHEET

PAGE 2 OF 2
PROJECT NO. 0702007
PHASE RI

CLIENT CONTINENTAL PROPERTIES
SUBJECT SSRCL CALCS
PROJECT DEBORAH ANNEX

Prepared By CMH Date 3/3/99
Reviewed By _____ Date _____
Approved By _____ Date _____

SSRCL Sensitivity Analysis

Selected Sensitivity Parameters and Variation:

Parameter	Variation
K	± 1 order of magnitude
K_{oc}	Low and high range of literature values
f_{oc}	± 1 order of magnitude

* See attached spreadsheet table for sensitivity analysis parameters and results

BASELINE AND SENSITIVITY ANALYSIS INPUT AND RESULTS
EQUILIBRIUM SOIL:WATER PARTITIONING EQUATION FOR MIGRATION TO GROUNDWATER
SITE SPECIFIC RCL EVALUATION

DECORAH SHOPPING CENTER ANNEX

k (cm/sec)	I (ft/ft)	d (cm)	Reduced Infiltration R (cm/day)	Default Infiltration R (cm/day)	L (cm)	Under Pavement DF	Default Infiltration DF	Koc (ml/g)	foc	p (g/cc)	G (g/cc)	PAL (ug/l)	Reduced Infiltration SSRCL (ug/kg)	Default Infiltration SSRCL (ug/kg)
Baseline Result:														
Tetrachloroethene														
1.30E-03	0.049	152.4	7.00E-04	0.07	2440	492.078	5.911	347	0.03	1.7	2.65	0.5	2864	34
Hydraulic Conductivity Sensitivity Analysis (variation of one order of magnitude from baseline):														
Tetrachloroethene														
1.30E-02	0.049	152.4	7.00E-04	0.07	2440	4911.778	50.108	347	0.03	1.7	2.65	0.5	28586	292
1.30E-04	0.049	152.4	7.00E-04	0.07	2440	50.108	1.491	347	0.03	1.7	2.65	0.5	292	9
Koc Sensitivity Analysis (low and high of range of available literature values):														
Tetrachloroethene														
1.30E-03	0.049	152.4	7.00E-04	0.07	2440	492.078	5.911	178	0.03	1.7	2.65	0.5	1616	19
1.30E-03	0.049	152.4	7.00E-04	0.07	2440	492.078	5.911	977	0.03	1.7	2.65	0.5	7514	90
foc Sensitivity Analysis (variation of one order of magnitude from baseline):														
Tetrachloroethene														
1.30E-03	0.049	152.4	7.00E-04	0.07	2440	492.078	5.911	347	0.3	1.7	2.65	0.5	25915	311
1.30E-03	0.049	152.4	7.00E-04	0.07	2440	492.078	5.911	347	0.003	1.7	2.65	0.5	559	7

2.87 at 25 °C (Warner et al., 1987)
59.2 at 37 °C (Sato and Nakajima, 1979)
14.6 at 20 °C (Roberts et al., 1985)
24.5 at 30 °C (Jeffers et al., 1989)
8.46, 11.1, 14.1, 17.1 and 24.5 at 10, 15, 20, 25 and 30 °C, respectively (Ashworth et al., 1988)
3.85, 5.19, 6.27, 10.07 and 14.72 at 2.0, 6.0, 10.0, 18.2 and 25.0 °C, respectively (Dewulf et al., 1995)

Interfacial tension with water (dyn/cm at 20 °C):
47.48 (Demond and Lindner, 1993)

Ionization potential (eV):
9.32 (NIOSH, 1994)
9.71 (Yoshida et al., 1983)

Bioconcentration factor, log BCF:
1.69 (bluegill sunfish, Veith et al., 1980)

Soil sorption coefficient, log K_{oc}:
2.42 (Abdul et al., 1987)
2.322 (silt loam soil, Chiou et al., 1979)
2.25, 2.31, 2.54 (various Norwegian soils, Seip et al., 1986)
2.63 (Catlin soil, Roy et al., 1985)
2.65 (silty clay), 2.55, 2.99 (coarse sand) (Pavlostathis and Mathavan, 1992)

K_{OC} = 178 TO 977
TYPICAL = 347

Octanol/water partition coefficient, log K_{ow}:
2.10 (Banerjee et al., 1980)
2.53 (Veith et al., 1980)

Solubility in organics:
Miscible with many other organic solvents (Keith and Walters, 1992).

Solubility in water:
150 mg/L at 20 °C (Pearson and McConnell, 1975)
2,200 mg/L at 20 °C (Chiou et al., 1977)
485 mg/L at 25 °C (Banerjee et al., 1980)
149 mg/L at 20 °C (Munz and Roberts, 1987)
240 mg/L at 23-24 °C (Broholm and Feenstra, 1995)
2.78×10^{-5} at 25 °C (mole fraction, Li et al., 1993)

Vapor density:
6.78 g/L at 25 °C, 5.72 (air = 1)

(MONTGOMERY, J.H., 1996)

APL Environmental
8222 W. Calumet Rd., Milwaukee, WI 53223
Phone: (414) 355-5800 Fax: (414) 355-3099

ORGANIC REPORT

WDNR# 241340550

INVOICE NUMBER: 980178
DATE REPORTED: 17-Apr-98
DATE RECEIVED: 03-Apr-98
SAMPLE TEMP (C): Rec On Ice
PROJECT ID: 0702007
PROJECT NAME: Decorah Shopping Ctr

Curt Hoffart
Key Environmental Services, Inc.
W66 N215 Commerce Court
Cedarburg , WI 53012

Test	Result	Units	LOD	LOQ	Dil	RQ	Method	Analyst	Date Ext.	Date Anal.
Nova Sample Number: 9514		QC Batch Number:					Collection: 4/1/98		Time: 08:30	
Client ID: B-1, 1-3'		%Solid: 86.3					Sample Description: PID<1			
Total Organic Carbon	**18500**	**mg/kg**	0.1	0	1		9060	2412		4/17/98
Nova Sample Number: 9515		QC Batch Number:					Collection: 4/1/98		Time: 10:10	
Client ID: B-2, 3.5-5.5'		%Solid: 87.4					Sample Description: PID<1			
Total Organic Carbon	**10100**	**mg/kg**	0.1	0	1		9060	2412		4/17/98
Nova Sample Number: 9516		QC Batch Number:					Collection: 4/1/98		Time: 11:12	
Client ID: B-3, 1-3'		%Solid: 87.7					Sample Description: PID<1			
Total Organic Carbon	**66100**	**mg/kg**	0.1	0	1		9060	2412		4/17/98

AVE = 0.03 %

Approved By: _____ **Date:** 4/17/98
James Chang, Ph.D., Lab Director

NOVA Lab LOD = where the LOD has been determined in accordance with 40 CFR, Part 136, Appendix B.
LUST LOD = LUST program PVOC/VOC LOD of 25 ug/kg (wet weight basis)
LUST LOQ = LUST program PVOC/VOC LOQ of 60 ug/kg (wet weight basis)
RQ : Run Qualifier: "J" = Results between LOD and LOQ "L" = Sample less than 20 g, "B" = Showed in Blank sample.

Rounding Rules: Three significant figures were used for concentrations above 99 ug/L, two significant figures for concentrations between 1-99 ug L, and one significant figure for lower concentrations.
DNR Analytical Detection Limit Guidance, April 1995.

(b) The RCL for soil based on protection of groundwater shall be developed using the groundwater enforcement standard (ES) established in ch. NR 140 or the requirements in s. NR 722.09(2)(a)2.b. when there is no ES.

(3) DETERMINE GROUNDWATER PATHWAY-SPECIFIC RCLG. Responsible parties shall use the RCLG in Table 2 as the pathway-specific soil quality standard for protection of groundwater, when there is a RCLG for a substance established in Table 2. When there is no RCLG established in Table 2 for a substance, responsible parties shall develop a site-specific RCLG for the protection of groundwater, using the following procedures:

(a) The RCLG for organic compounds shall be determined using the following soil:water partitioning equation, assuming a soil organic carbon fraction of 1.00×10^{-3} g/g, a soil dry bulk density of 1.65 g/cm^3, and a soil particle density of 2.65 g/cm^3:

$$C_s = [(K_{oc} \times f_{oc}) + D_b^{-1} + (D_b / D_p)] C_{PAL}$$

Where:

C_s = Measured contaminant concentration in soil on a dry weight basis (μg/kg),

K_{oc} = Organic carbon:water partitioning coefficient for the contaminant (l/kg) approved by the department,

f_{oc} = Soil organic carbon fraction (g/g),

D_b = Dry bulk density of the soil (g/cm^3),

D_p = Density of the soil particles (g/cm^3), and

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CALCULATION SHEET

PAGE 1 OF 1
PROJECT NO. 0702007
PHASE II

CLIENT Continental Properties
PROJECT Decorah Annex

SUBJECT SSRCL Calcs.

Prepared By CMH Date 3/5/99
Reviewed By RAA Date 3/8/99
Approved By GLT Date 3/8/99

SITE SPECIFIC NR 720 RESIDUAL CONTAMINANT LEVEL (SSRCL) EVALUATION BASED ON DIRECT CONTACT EXPOSURE

Algorithm for Ingestion of Carcinogenic Contaminants in Non-Industrial Soil

$$SSRCL\ (mg/kg) = \frac{TR * AT * 365\ d/yr}{SFo * 10^{-6}\ kg/mg * EF * IFs}$$

Algorithm for Ingestion of Carcinogenic Contaminants in Industrial Soil

$$SSRCL\ (mg/kg) = \frac{TR * BWa * AT * 365\ d/yr}{SFo * 10^{-6}\ kg/mg * EF * ED * IRa}$$

Algorithm for Inhalation of Carcinogenic Contaminants in Non-Industrial Soil

$$SSRCL\ (mg/kg) = \frac{TR * BWa * AT * 365\ d/yr}{SFi * EF * ED * IR * [(\frac{1}{VF}) + (Cp * 10^{-9}\ kg/\mu g)]}$$

Algorithm for Inhalation of Carcinogenic Contaminants in Industrial Soil

$$SSRCL\ (mg/kg) = \frac{TR * BWa * AT * 365\ d/yr}{SFi * EF * ED * IRw * [(\frac{1}{VF}) + (Cp * 10^{-9}\ kg/\mu g)]}$$

*Default exposure assumptions, contaminant-specific properties, and site-specific properties are provided in the attached WDNR interim guidance and literature excerpts and on the attached spreadsheet.

Example Calculation for Tetrachloroethene (PCE):

Algorithm for Ingestion of Carcinogenic Contaminants in Non-Industrial (Modified) Soil

$$SSRCL\ (mg/kg) = \frac{TR * AT * 365\ d/yr}{SFo * 10^{-6}\ kg/mg * EF * IFs}$$

TR	=Target Cancer Risk Level (unitless)	1E-06
AT	=Average Time (year)	70
SFo_{PCE}	=Oral Cancer Slope Factor (1/mg/kg-day)	5.2E-02
EF	=Exposure Frequency (day/year)	350
IFs	=Age Adjusted Soil Ingestion Factor (mg-yr/kg-day)	114

$$SSRCL\ (mg/kg) = \frac{1E-06 * 70\ year * 365\ days/year}{5.2E-02\ kg-day/mg * 10^{-6}\ kg/mg * 350\ days/year * 114\ mg-yr/kg-day} = 12.3\ mg/kg$$

* See attached spreadsheet for results

TABLE 1

SSRCLs Based on Direct Contact

Decorah Shopping Center Annex

Toxicity and Chemical/Physical Data:

	RfDo	Rfc	SFo	SFi	Koc	Da	H	Dw	DA	VF
PCE	NA	NA	5.2E-02	2.0E-03	347	7.20E-02	7.50E-01	8.20E-06	2.32E-04	7.25E+03

Site-Specific or WDNR Guidance Default Soil Data:

Bulk Density (g/cm3)	1.7	Site Specific
Moisture Content	0.15	Default
Air-Filled Porosity	0.28	Default
Porosity	0.43	Default
Organic Carbon Content	0.03	Site Specific
IFs	1E+02	

Direct Contact SSRCL (mg/kg):

	Non-Industrial		Modified Non-Industrial		Industrial	
Target Cancer Risk Level	1E-07		1E-06		1E-06	
	Ingestion	Inhalation	Ingestion	Inhalation	Ingestion	Inhalation
PCE	1	3	12	31	55	43

Notes:

1. Algorithms and default input parameter values are from WDNR Publication RR-519-97, April 1997 Corrected, *Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guidance.*

2. Toxicity and Chemical/Physical Data are from EPA Region 9 PRG Tables (http://www.epa.gov/region09/waste/sfund/prg) (supporting documentation attached)

3. See Appendix 7 for Koc reference.

RfDo: Oral Reference Dose (mg/kg-d)
Rfc: Reference Concentration (mg/m3)
SFo: Oral Cancer Slope Factor (1/mg/kg-d)
SFi: Inhalation Cancer Slope Factor (1/mg/kg-d)
Koc: Organic Carbon:Water Partitioning Coefficient (L/kg)
Da: Air Diffusion Coefficient (cm2/s)
H: Henry's Law Coefficient (unitless)
Dw: Water Diffusion Coefficient (cm2/s)
DA: Apparent Diffusivity (cm2/s)
VF: Volatilization Factor (kg/m3)

EPA United States Environmental Protection Agency

Waste Programs

PRG Tables: Toxicity Values: St - Th

R9 PRG Home | Introduction | R9 PRGs
Pathway Specific PRG | Toxicity Values | Phys-Chem Values

CAS No.	CONTAMINANT	TOXICITY VALUES								VOC	Skin abs. soils
		SFo 1/(mg/kg-d)		RfDo (mg/kg-d)		SFi 1/(mg/kg-d)		RfDi (mg/kg-d)			
100-42-5	Styrene			2.0E-01	i			2.9E-01	i	1	0.10
88671-89-0	Systhane			2.5E-02	i			2.5E-02	r	0	0.10
1746-01-6	2,3,7,8-TCDD (dioxin)	1.5E+05	h			1.5E+05	h			0	0.03
34014-18-1	Tebuthiuron			7.0E-02	i			7.0E-02	r	0	0.10
3383-96-8	Temephos			2.0E-02	h			2.0E-02	r	0	0.10
5902-51-2	Terbacil			1.3E-02	i			1.3E-02	r	0	0.10
13071-79-9	Terbufos			2.5E-05	h			2.5E-05	r	0	0.10
886-50-0	Terbutryn			1.0E-03	i			1.0E-03	r	0	0.10
95-94-3	1,2,4,5-Tetrachlorobenzene			3.0E-04	i			3.0E-04	r	0	0.10
630-20-6	1,1,1,2-Tetrachloroethane	2.6E-02	i	3.0E-02	i	2.6E-02	i	3.0E-02	r	1	0.10
79-34-5	1,1,2,2-Tetrachloroethane	2.0E-01	i			2.0E-01	i			1	0.10
127-18-4	**Tetrachloroethylene (PCE)**	5.2E-02	n	1.0E-02	i	2.0E-03	n	**1.1E-01**	n	1	0.10
58-90-2	2,3,4,6-Tetrachlorophenol			3.0E-02	i			3.0E-02	r	0	0.10
5216-25-1	p,a,a,a-Tetrachlorotoluene	2.0E+01	h			2.0E+01	r			0	0.10
961-11-5	Tetrachlorovinphos	2.4E-02	h	3.0E-02	i	2.4E-02	r	3.0E-02	r	0	0.10
3689-24-5	Tetraethyldithio pyrophosphate			5.0E-04	i			5.0E-04	r	0	0.10
109-99-9	**Tetrahydrofuran**			**8.6E-02**	r			**8.6E-02**	n	0	0.10
1314-32-5	Thallic oxide			7.0E-05	h					0	0.01
563-68-8	Thallium acetate			9.0E-05	i					0	0.01
6533-73-9	Thallium carbonate			8.0E-05	i					0	0.01
7791-12-0	Thallium chloride			8.0E-05	i					0	0.01
10102-45-1	Thallium nitrate			9.0E-05	i					0	0.01
12039-52-0	Thallium selenite			9.0E-05	x					0	0.01
7446-18-6	Thallium sulfate			8.0E-05	i					0	0.01
28249-77-6	Thiobencarb			1.0E-02	i			1.0E-02	r	0	0.10
N/A	**Thiocyanate**			**1.0E-01**	n			**1.0E-01**	r	0	0.10

EPA United States Environmental Protection Agency

Waste Programs

Region 9

PRG Tables: Physical Chemical Values: T - Z

R9 PRG Home | Introduction | R9 PRGs
Pathway Specific PRG | Toxicity Values | Phys-Chem Values

CAS No.	CONTAMINANT	MW (g/mol)	H (atm-m3/mol)	H' (dimensionless)	Di,a	Di,w	Koc
630-20-6	1,1,1,2-Tetrachloroethane	1.68E+02	3.5E-04	1.4E-02	7.1E-02	7.9E-06	7.9E+01
79-34-5	1,1,2,2-Tetrachloroethane	1.68E+02	3.5E-04	1.4E-02	7.1E-02	7.9E-06	7.9E+01
127-18-4	Tetrachloroethylene (PCE)	1.66E+02	1.8E-02	7.5E-01	7.2E-02	8.2E-06	2.7E+02
108-88-3	Toluene	9.20E+01	6.6E-03	2.7E-01	8.7E-02	8.6E-06	1.4E+02
120-82-1	1,2,4-Trichlorobenzene	1.81E+02	1.4E-03	5.8E-02	3.0E-02	8.2E-06	1.7E+03
71-55-6	1,1,1-Trichloroethane	1.33E+02	1.7E-02	7.1E-01	7.8E-02	8.8E-06	1.4E+02
79-00-5	1,1,2-Trichloroethane	1.33E+02	9.1E-04	3.7E-02	7.8E-02	8.8E-06	7.5E+01
79-01-6	Trichloroethylene (TCE)	1.31E+02	1.0E-02	4.2E-01	7.9E-02	9.1E-06	9.4E+01
75-69-4	Trichlorofluoromethane	1.37E+02	9.7E-02	4.0E+00	8.7E-02	1.3E-05	1.6E+02
598-77-6	1,1,2-Trichloropropane	1.47E+02	2.9E-02	1.2E+00	4.0E-02	9.3E-06	5.1E+01
96-18-4	1,2,3-Trichloropropane	1.47E+02	2.8E-02	1.1E+00	7.1E-02	7.9E-06	5.1E+01
96-19-5	1,2,3-Trichloropropene SURROGATE = 1,2,3-Trichloropropane	MW < 200	2.8E-02	1.1E+00	7.1E-02	7.9E-06	5.1E+01
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.87E+02	5.2E-01	2.1E+01	2.9E-02	8.1E-06	1.6E+02
121-44-8	Triethylamine SURROGATE = Dimethylamine	MW < 200	9.0E-05	3.7E-03	1.2E-01	1.3E-05	2.2E+00
95-63-6	1,2,4-Trimethylbenzene	1.20E+02	5.7E-03	2.3E-01	7.5E-02	7.10E-06	3.7E+03
108-67-8	1,3,5-Trimethylbenzene	1.20E+02	7.7E-03	3.2E-01	7.5E-02	7.10E-06	8.2E+02
108-05-4	Vinyl acetate	8.60E+01	5.1E-04	2.1E-02	8.5E-02	9.2E-06	5.3E+00
593-60-2	Vinyl bromide (bromoethene) SURROGATE = Bromomethane	MW < 200	6.2E-03	2.6E-01	1.0E-01	1.2E-05	1.3E+02
75-01-4	Vinyl chloride	6.30E+01	2.7E-02	1.1E+00	1.1E-01	1.2E-06	1.9E+01
108-38-3	m-Xylene	1.06E+02	7.3E-03	3.0E-01	7.0E-02	7.8E-06	2.0E+02
95-47-6	o-Xylene	1.06E+02	5.2E-03	2.1E-01	8.7E-02	1.0E-05	2.4E+02
106-42-3	p-Xylene	1.06E+02	7.7E-03	3.1E-01	7.7E-02	8.4E-06	3.1E+02

Key:

i=IRIS
h=HEAST
n=NCEA
x=WITHDRAWN
o=Other EPA DOCUMENTS
r=ROUTE EXTRAPOLATION
ca=CANCER PRG
nc=NONCANCER PRG

Attachment B

Risk-Based Algorithms for RCLs Based on Direct Contact

The risk-based algorithms used in developing the suggested generic residual contaminant levels (RCLs) for the PAHs are provided below. They are the same algorithms used in the development of generic RCLs in Table 2 of ch. NR 720, Wis. Adm. Code, with the addition of consideration of inhalation of volatiles for the inhalation pathway. These algorithms back-calculate a soil concentration (RCL) from a target risk level (for carcinogens) or hazard quotient (for noncarcinogens). They are based on the methodology presented in RAGS HHEM, Part B (U.S. EPA, 1991) and updates to those methods presented in U.S. EPA (1996).

The default target hazard quotients for noncarcinogens and target excess cancer risk levels for carcinogens provided are those used for individual compounds in the development of generic RCLs in Table 2 of ch. NR 720, Wis. Adm. Code. The basis of these values for the non-industrial (residential) exposure scenarios is analogous to the derivation of preventive action limits (PALs) for groundwater. They are determined as a percentage of the target hazard quotient or target excess cancer risk used for the industrial exposure scenario; 20% for the noncarcinogens and class D carcinogens, and 10% for carcinogens. This effectively results in a target hazard quotient of 0.2 for noncarcinogens and a target excess cancer risk of 1×10^{-7} for carcinogens. For the PAHs that are class D carcinogens where a cancer endpoint was used in developing the suggested generic RCLs, an excess target cancer risk of 2×10^{-7} was used. These target levels can be modified on a site-specific basis for *in situ* soil contamination to a hazard quotient of one (1) and an excess cancer risk of 1×10^{-6} as provided in s. NR 720.19(5)(a), Wis. Adm. Code.

Risk-Based Algorithms for Soil Ingestion

The default exposure factors used for direct ingestion of contaminated soil are those specified in s. NR 720.19(5)(c), Wis. Adm. Code. The values for non-industrial (residential) exposure are the same as the default values used by U.S. EPA in the soil screening level methodology (U.S. EPA, 1996).

Algorithm for Ingestion of Noncarcinogenic Contaminants in Non-Industrial (Residential) Soil Based on Childhood Exposure

$$\text{Residual Contaminant Level (mg/kg)} = \frac{\text{THQ} \times \text{BWc} \times \text{AT} \times 365\ \text{d/yr}}{1/\text{RfDo} \times 10^{-6}\ \text{kg/mg} \times \text{EF} \times \text{ED} \times \text{IRc}} \qquad (1)$$

Parameter/Definition (units)	Default
THQ/target hazard quotient (unitless)	0.2
BWc/average body weight for child (kg)	15
AT/averaging time (yr) *	6
RfDo/oral reference dose (mg/kg-d)	chemical-specific
EF/exposure frequency (d/yr)	350

Parameter/Definition (units)	Default
ED/exposure duration (yr)	6
IRc/soil ingestion rate for child (mg/d)	200

[a] For noncarcinogens, averaging time is equal to exposure duration.

Algorithm for Ingestion of Noncarcinogenic Contaminants in Industrial Soil

$$\text{Residual Contaminant Level (mg/kg)} = \frac{\text{THQ} \times \text{BWa} \times \text{AT} \times 365\ \text{d/yr}}{1/\text{RfDo} \times 10^{-6}\ \text{kg/mg} \times \text{EF} \times \text{ED} \times \text{IRa}} \quad (2)$$

Parameter/Definition (units)	Default
THQ/target hazard quotient (unitless)	1
BWa/average body weight for adult (kg)	70
AT/averaging time (yr) [a]	25
RfDo/oral reference dose (mg/kg-d)	chemical-specific
EF/exposure frequency (d/yr)	250
ED/exposure duration (yr)	25
IRa/soil ingestion rate for adult (mg/d)	100

[a] For noncarcinogens, averaging time is equal to exposure duration.

Algorithm for Ingestion of Carcinogenic Contaminants in Non-Industrial (Residential) Soil

$$\text{Residual Contaminant Level (mg/kg)} = \frac{\text{TR} \times \text{AT} \times 365\ \text{d/yr}}{\text{SFo} \times 10^{-6}\ \text{kg/mg} \times \text{EF} \times \text{IFs}} \quad (3)$$

where

$$\text{IFs} = \frac{\text{IRc} \times \text{EDc}}{\text{BWc}} + \frac{\text{IRa} \times \text{EDa}}{\text{BWa}} \quad (4)$$

Parameter/Definition (units)	Default
TR/target cancer risk level (unitless)	1×10^{-7}
AT/averaging time (yr)	70
SFo/oral cancer slope factor $(mg/kg\text{-}d)^{-1}$	chemical-specific
EF/exposure frequency (d/yr)	350

Parameter/Definition (units)	Default
IFs/age-adjusted soil ingestion factor (mg-yr/kg-d)	114
IRc/ingestion rate of soil age 1-6 (mg/d)	200
EDc/exposure duration during ages 1-6 (yr)	6
BWc/average body weight from ages 1-6 (kg)	15
IRa/ingestion rate of soil age 7-31 (mg/d)	100
EDa/exposure duration during ages 7-31 (yr)	24
BWa/average body weight from ages 7-31 (kg)	70

Algorithm for Ingestion of Carcinogenic Contaminants in Industrial Soil

$$\text{Residual Contaminant Level (mg/kg)} = \frac{TR \times BWa \times AT \times 365\ d/yr}{SFo \times 10^{-6}\ kg/mg \times EF \times ED \times IRa} \qquad (5)$$

Parameter/Definition (units)	Default
TR/target cancer risk level (unitless)	1×10^{-6}
BWa/average body weight for adult (kg)	70
AT/averaging time (yr)	70
SFo/oral cancer slope factor $(mg/kg\text{-}d)^{-1}$	chemical-specific
EF/exposure frequency (d/yr)	250
ED/exposure duration (yr)	25
IRa/soil ingestion rate for adult (mg/d)	100

Risk-Based Algorithms for Inhalation Exposure

The algorithms for the inhalation pathway include consideration of inhalation of volatiles and inhalation of particulate matter. The default exposure factors used for the inhalation pathway are those specified in s. NR 720.19(5)(c), Wis. Adm. Code. The values for non-industrial exposure are the same as the default values used by U.S. EPA in the soil screening level methodology (U.S. EPA, 1996), with the exception of the particulate emission factor (PEF). The soil-to-air volatilization factor is described below.

The algorithms for industrial exposure include a correction factor to adjust the inhalation rate to 24 m^3/d as specified in s. NR 720.19(5)(c), Wis. Adm. Code. Also, the algorithms for inhalation of carcinogenic contaminants are written in terms of the inhalation cancer slope factor (CFS) rather than the inhalation unit risk factor (URF) since only CFS_is were available for the PAHs. The algorithms should be appropriately modified if used with URFs (see U.S. EPA, 1996).

Algorithm for Inhalation of Noncarcinogenic Contaminants from Non-Industrial (Residential) Soil

$$\text{Residual Contaminant Level (mg/kg)} = \frac{\text{THQ} \times \text{AT} \times 365\ \text{d/yr}}{\frac{1}{\text{RfC}} \times \text{EF} \times \text{ED} \times \left[\left(\frac{1}{\text{VF}}\right) + \left(\text{Cp} \times 10^{-9}\ \text{kg/}\mu\text{g}\right)\right]} \quad (6)$$

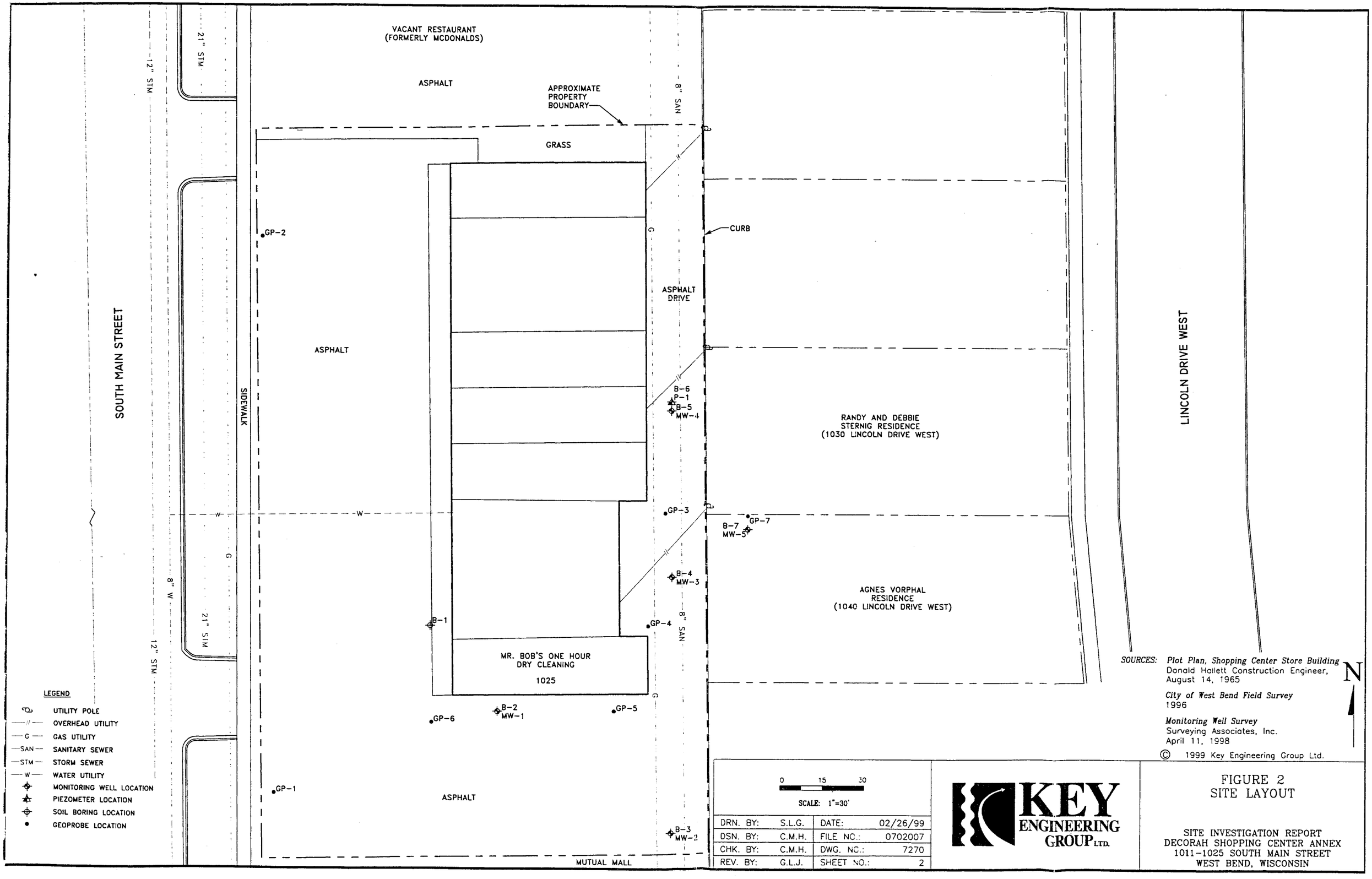
Parameter/Definition (units)	Default
THQ/target hazard quotient (unitless)	0.2
AT/averaging time (yr) [a]	30
RfC/reference concentration (mg/m^3)	chemical specific
EF/exposure frequency (d/yr)	350
ED/exposure duration (yr)	30
VF/volatilization factor (kg/m^3)	chemical specific
Cp/concentration of particulates less than 10 µm in air ($\mu g/m^3$) [b]	1.4

[a] For noncarcinogens, averaging time is equal to exposure duration.
[b] The quantity $Cp \times 10^{-9}$ kg/µg is equivalent to the term 1/PEF in U.S. EPA (1996)

Algorithm for Inhalation of Noncarcinogenic Contaminants from Industrial Soil

$$\text{Residual Contaminant Level (mg/kg)} = \frac{\text{THQ} \times \text{AT} \times 365\ \text{d/yr}}{\frac{1}{\text{RfC}} \times \text{EF} \times \text{ED} \times \text{IRc} \times \left[\left(\frac{1}{\text{VF}}\right) + \left(\text{Cp} \times 10^{-9}\ \text{kg/}\mu\text{g}\right)\right]} \quad (7)$$

Parameter/Definition (units)	Default
THQ/target hazard quotient (unitless)	1
AT/averaging time (yr) [a]	25
RfC/reference concentration (mg/m^3)	chemical specific
EF/exposure frequency (d/yr)	250
ED/exposure duration (yr)	25
IRc/inhalation rate correction for adult laborer (unitless)	1.2
VF/volatilization factor (kg/m^3)	chemical specific



SOURCES: *Plot Plan, Shopping Center Store Building*
Donald Hallett Construction Engineer,
August 14, 1965

City of West Bend Field Survey
1996

Monitoring Well Survey
Surveying Associates, Inc.
April 11, 1998

0 15 30

SCALE: 1"=30'

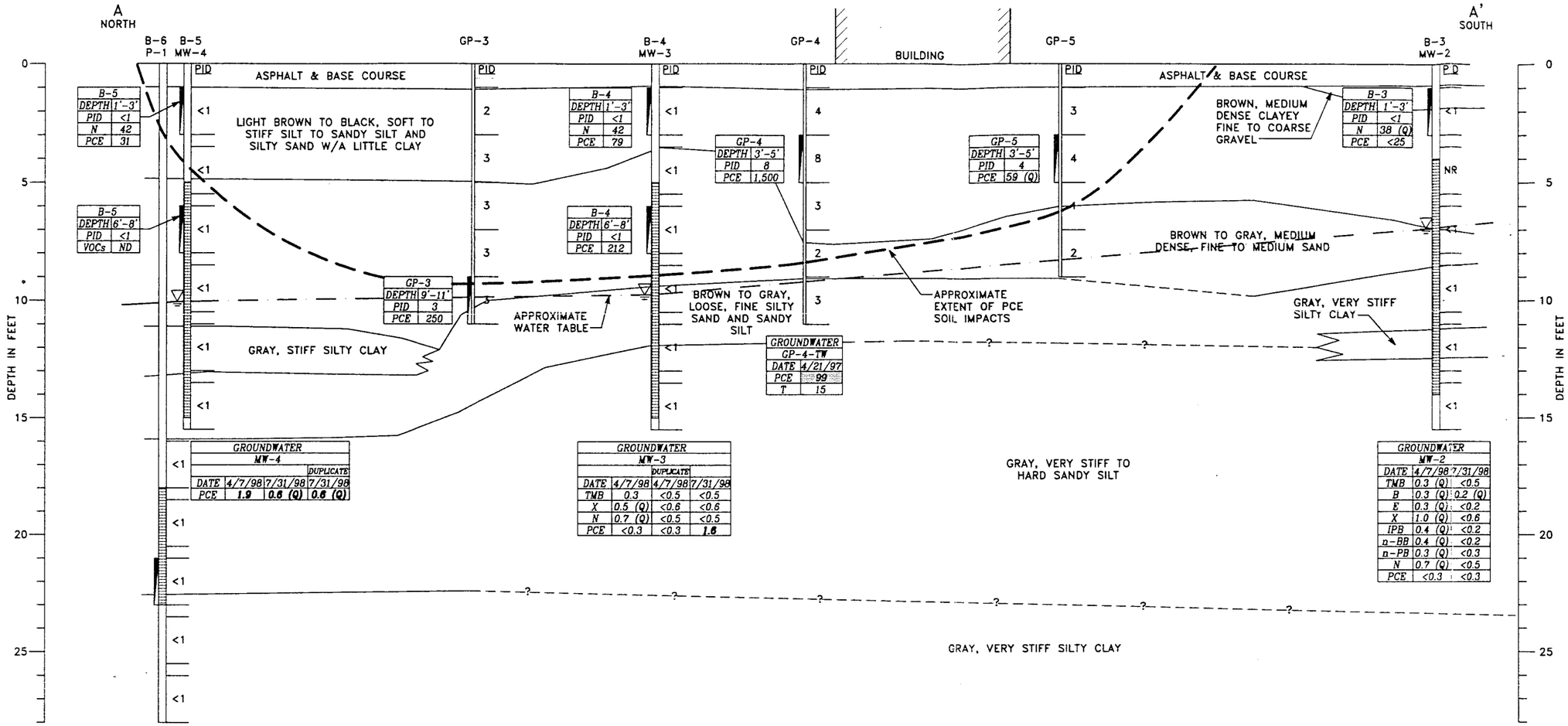
DRN. BY:	S.L.G.	DATE:	02/26/99
DSN. BY:	C.M.H.	FILE NO.:	0702007
CHK. BY:	C.M.H.	DWG. NO.:	7270
REV. BY:	G.L.J.	SHEET NO.:	2

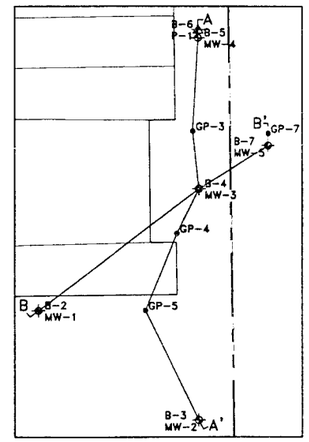
KEY ENGINEERING GROUP LTD.

FIGURE 2
SITE LAYOUT

SITE INVESTIGATION REPORT
DECORAH SHOPPING CENTER ANNEX
1011-1025 SOUTH MAIN STREET
WEST BEND, WISCONSIN

SCHEMATIC CROSS-SECTION A-A'





CROSS-SECTION LOCATION MAP

SOIL NOTES

P.I.D.: PHOTOIONIZATION DETECTOR, I.U.
I.U.: INSTRUMENT UNITS
VOCs: VOLATILE ORGANIC COMPOUNDS, ug/kg
N: NAPHTHALENE, ug/kg
PCE: TETRACHLOROETHENE, ug/kg
ug/kg: MICROGRAMS PER KILOGRAM
< : LESS THAN
ND: NOT DETECTED ABOVE LABORATORY METHOD DETECTION LIMITS
(Q): CONCENTRATION BETWEEN LIMIT OF DETECTION AND LIMIT OF QUANTITATION

GROUNDWATER NOTES

VOCs: VOLATILE ORGANIC COMPOUNDS, ug/l
TMB: TOTAL TRIMETHYLBENZENES, ug/l
B: BENZENE, ug/l
E: ETHYLBENZENE, ug/l
X: TOTAL XYLENES, ug/l
T: TOLUENE, ug/l
IPB: ISOPROPYLBENZENE, ug/l
n-BB: BUTYLBENZENE, ug/l
n-PB: PROPYLBENZENE, ug/l
N: NAPHTHALENE, ug/l
PCE: TETRACHLOROETHENE, ug/l
ug/l: MICROGRAMS PER LITER
< : LESS THAN
ND: NOT DETECTED ABOVE LABORATORY METHOD DETECTION LIMITS
(Q): CONCENTRATION BETWEEN LIMIT OF DETECTION AND LIMIT OF QUANTITATION

LEGEND

- GROUNDWATER LEVEL (7/31/98)
- SOIL SAMPLE INTERVAL
- GROUNDWATER MONITORING WELL SCREEN INTERVAL
- CONCENTRATION GREATER THAN: NR 720 GENERIC RESIDUAL CONTAMINANT LEVEL (SOIL) or NR 140 ENFORCEMENT STANDARD (GROUNDWATER)
- 5 — CONCENTRATION GREATER THAN NR 140 PREVENTIVE ACTION LIMIT (GROUNDWATER)

0 7.5 15 (HORIZONTAL)
0 2.5 5 (VERTICAL)
HORIZONTAL SCALE: 1"=15'
VERTICAL SCALE: 1"=5'

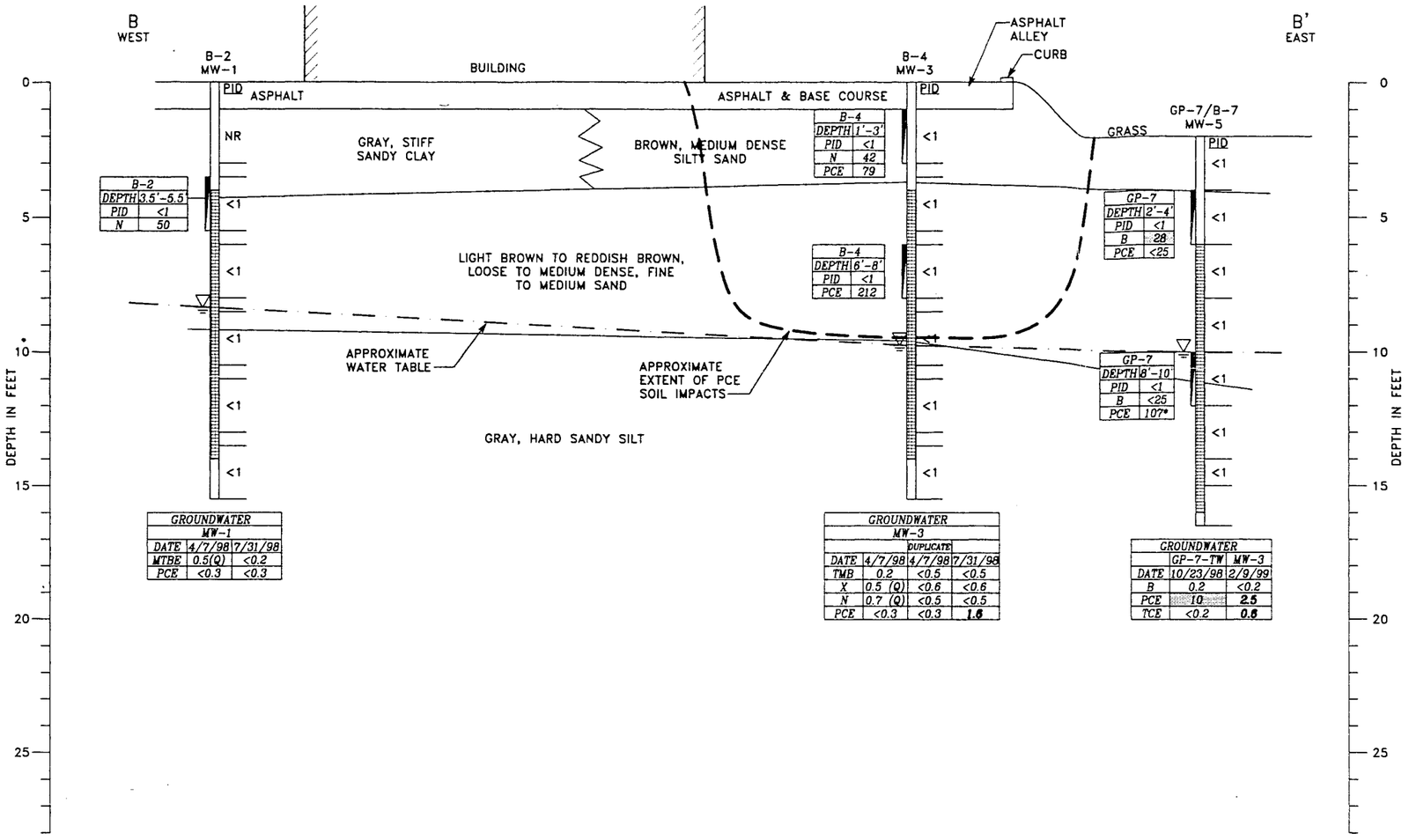
DRN. BY:	S.L.G.	DATE:	03/18/99
DSN. BY:	R.A.A.	FILE NO.:	0702007
CHK. BY:	C.M.H.	DWG. NO.:	07020073A
REV. BY:	G.L.J.	SHEET NO.:	3A

KEY ENGINEERING GROUP LTD.

FIGURE 3A
SCHEMATIC CROSS-SECTION A-A'

SITE INVESTIGATION REPORT
DECORAH SHOPPING CENTER ANNEX
1101-1025 SOUTH MAIN STREET
WEST BEND, WISCONSIN

SCHEMATIC CROSS-SECTION B-B'



B-2	
DEPTH	3.5'-5.5'
PID	<1
N	50

B-4	
DEPTH	1'-3'
PID	<1
N	42
PCE	79

B-4	
DEPTH	6'-8'
PID	<1
PCE	212

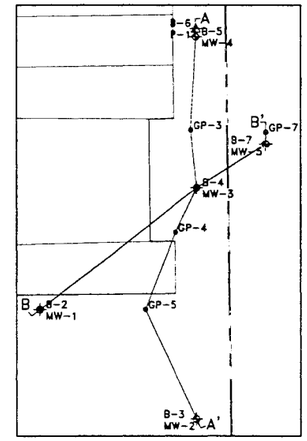
GP-7	
DEPTH	2'-4'
PID	<1
B	28
PCE	<25

GP-7	
DEPTH	6'-10'
PID	<1
B	<25
PCE	107*

GROUNDWATER MW-1		
DATE	4/7/98	7/31/98
MTBE	0.5(Q)	<0.2
PCE	<0.3	<0.3

GROUNDWATER MW-3			
		DUPLICATE	
DATE	4/7/98	4/7/98	7/31/98
TMB	0.2	<0.5	<0.5
X	0.5 (Q)	<0.6	<0.6
N	0.7 (Q)	<0.5	<0.5
PCE	<0.3	<0.3	1.6

GROUNDWATER		
	GP-7-TW	MW-3
DATE	10/23/98	2/9/99
B	0.2	<0.2
PCE	10	2.5
TCE	<0.2	0.8



CROSS-SECTION LOCATION MAP

LEGEND

- GROUNDWATER LEVEL (7/31/98)
- SOIL SAMPLE INTERVAL
- GROUNDWATER MONITORING WELL SCREEN INTERVAL
- CONCENTRATION GREATER THAN: NR 720 GENERIC RESIDUAL CONTAMINANT LEVEL (SOIL) or NR 140 ENFORCEMENT STANDARD (GROUNDWATER)
- 5 CONCENTRATION GREATER THAN NR 140 PREVENTIVE ACTION LIMIT (GROUNDWATER)

SOIL NOTES

P.I.D.: PHOTOIONIZATION DETECTOR, I.U.
I.U.: INSTRUMENT UNITS
B: BENZENE, ug/kg
N: NAPHTHALENE, ug/kg
PCE: TETRACHLOROETHENE, ug/kg
ug/kg: MICROGRAMS PER KILOGRAM
< : LESS THAN
*: CONCENTRATION EVALUATED WITH RESPECT TO GROUNDWATER CONTAMINATION

GROUNDWATER NOTES

B: BENZENE, ug/l
TMB: TOTAL TRIMETHYLBENZENES, ug/l
X: TOTAL XYLENES, ug/l
MTBE: METHYL TERT-BUTYL ETHER, ug/l
N: NAPHTHALENE, ug/l
PCE: TETRACHLOROETHENE, ug/l
TCE: TRICHLOROETHENE, ug/l
ug/l: MICROGRAMS PER LITER
< : LESS THAN
(Q): CONCENTRATION BETWEEN LIMIT OF DETECTION AND LIMIT OF QUANTITATION
TW : TEMPORARY WELL

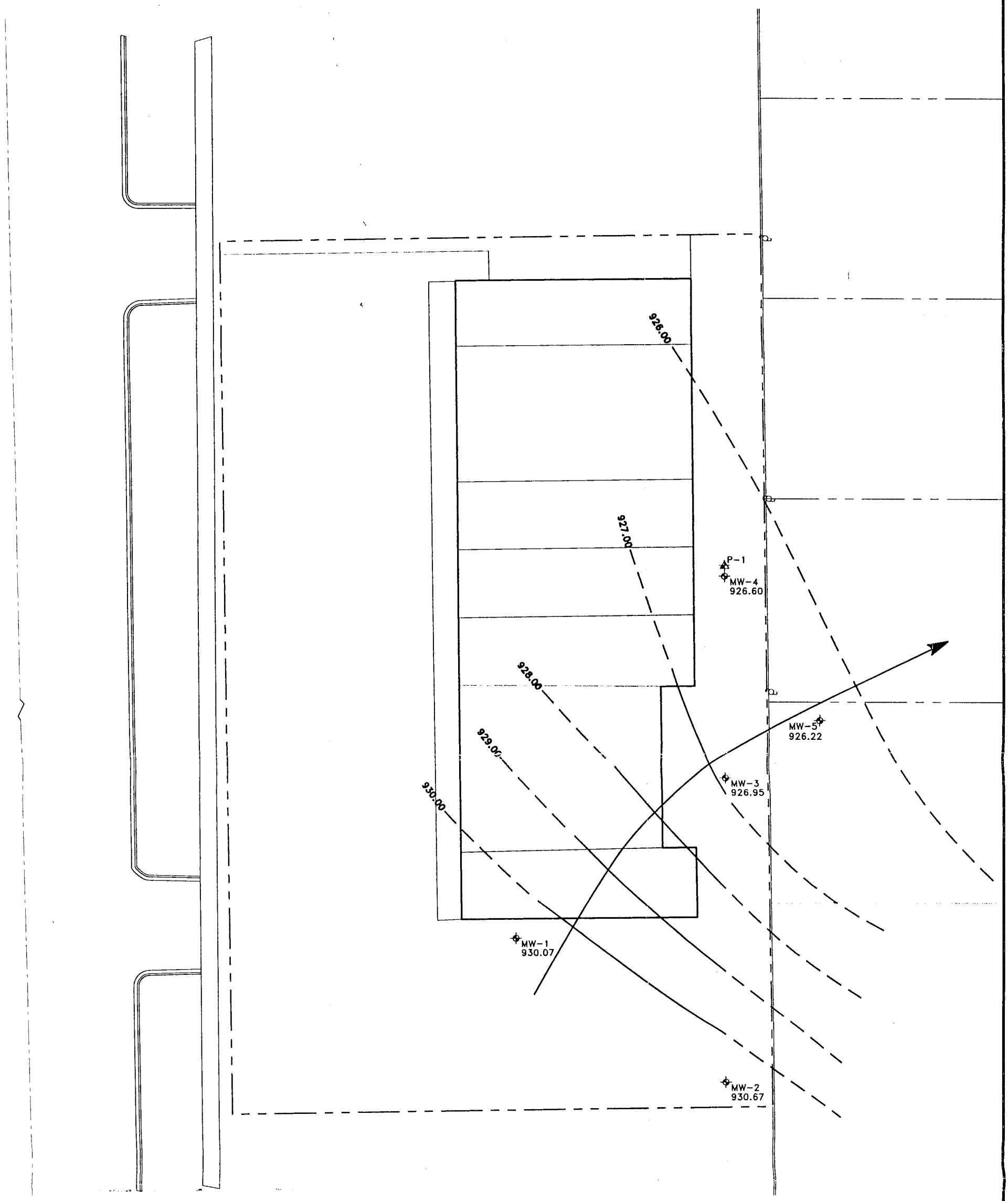
0 7.5 15 (HORIZONTAL)
0 2.5 5 (VERTICAL)
HORIZONTAL SCALE: 1"=15'
VERTICAL SCALE: 1"=5'

DRN. BY:	S.L.G.	DATE:	03/09/99
DSN. BY:	R.A.A.	FILE NO.:	0702007
CHK. BY:	C.M.H.	DWG. NO.:	07020073B
REV. BY:	G.L.J.	SHEET NO.:	3B

KEY ENGINEERING GROUP LTD.

FIGURE 3B
SCHEMATIC CROSS-SECTION B-B'

SITE INVESTIGATION REPORT
DECORAH SHOPPING CENTER ANNEX
1101-1025 SOUTH MAIN STREET
WEST BEND, WISCONSIN



SOURCES: *Plot Plan, Shopping Center Store Building*
Donald Hallett Construction Engineer,
August 14, 1965

City of West Bend Field Survey
1996

Monitoring Well Survey
Surveying Associates, Inc.
April 11, 1998

N

LEGEND

- MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- 930.07 GROUNDWATER ELEVATION (FEET, MSL) (2/9/99)
- GROUNDWATER FLOW DIRECTION
- CONTOUR INTERVAL = 1 FOOT

0 15 30

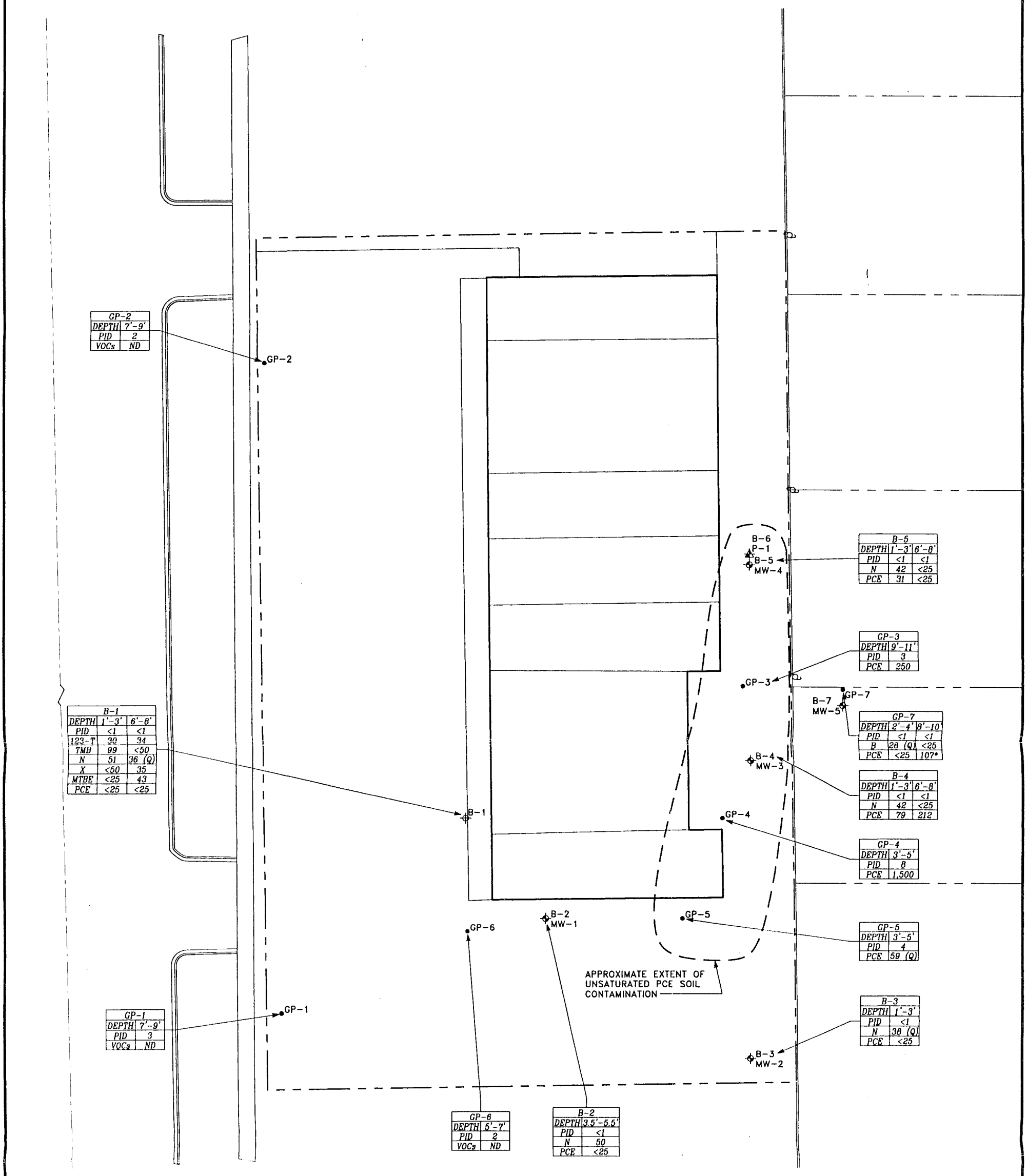
SCALE: 1"=30'

DRN. BY:	S.L.G.	DATE:	03/18/99
DSN. BY:	C.M.H.	FILE NO.:	0702007
CHK. BY:	C.M.H.	DWG. NO.:	0/020079
REV. BY:	G.L.J.	SHEET NO.:	4

KEY ENGINEERING GROUP LTD.

FIGURE 4
GROUNDWATER ELEVATION CONTOUR MAP
FEBRUARY 9, 1999

SITE INVESTIGATION REPORT
DECORAH SHOPPING CENTER ANNEX
1011-1025 SOUTH MAIN STREET
WEST BEND, WISCONSIN



NOTES

P.I.D.: PHOTOIONIZATION DETECTOR, I.U.
I.U.: INSTRUMENT UNITS
VOCs: VOLATILE ORGANIC COMPOUNDS, ug/kg
B: BENZENE, ug/kg
123-T: 1,2,3-TRICHLOROBENZENE, ug/kg
TMB: TOTAL TRIMETHYLBENZENES, ug/kg
N: NAPHTHALENE, ug/kg
X: XYLENES, ug/kg
MTBE: METHYL TERT-BUTYL ETHER, ug/kg
PCE: TETRACHOROETHENE, ug/kg
ug/kg: MICROGRAMS PER KILOGRAM
< : LESS THAN
ND: NOT DETECTED ABOVE LABORATORY METHOD DETECTION LIMITS
(Q): CONCENTRATION BETWEEN LIMIT OF DETECTION AND LIMIT OF QUANTITATION
*: CONCENTRATION EVALUATED WITH RESPECT TO GROUNDWATER CONTAMINATION

LEGEND

- MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- SOIL BORING LOCATION
- GEOPROBE LOCATION

SOURCES: *Plot Plan, Shopping Center Store Building*
Donald Hallett Construction Engineer,
August 14, 1965

City of West Bend Field Survey
1996

Monitoring Well Survey
Surveying Associates, Inc.
April 11, 1998

N

0 15 30
SCALE: 1"=30'

DRN. BY:	S.L.G.	DATE:	03/18/99
DSN. BY:	C.M.H.	FILE NO.:	0702007
CHK. BY:	C.M.H.	DWG. NO.:	07020075
REV. BY:	G.L.J.	SHEET NO.:	5

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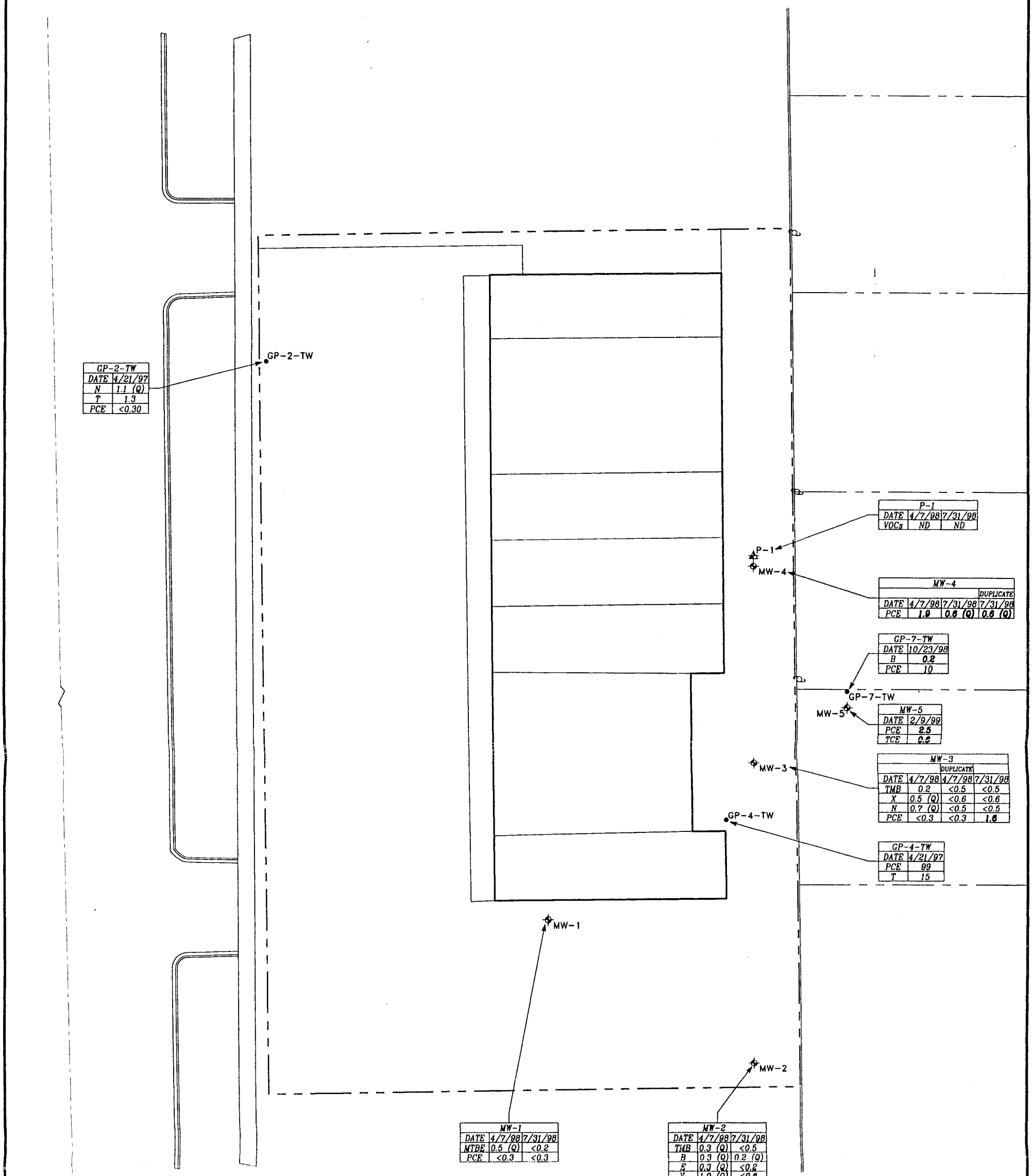
FIGURE 5
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

SITE INVESTIGATION REPORT
DECORAH SHOPPING CENTER ANNEX
1011-1025 SOUTH MAIN STREET
WEST BEND, WISCONSIN



NOTES

VOCs: VOLATILE ORGANIC COMPOUNDS, ug/l
TMB: TOTAL TRIMETHYLBENZENES, ug/l
B: BENZENE, ug/l
E: ETHYLBENZENE, ug/l
X: TOTAL XYLENES, ug/l
T: TOLUENE, ug/l
MTBE: METHYL TERT-BUTYL ETHER, ug/l
IPB: ISOPROPYLBENZENE, ug/l
n-BB: n-BUTYLBENZENE, ug/l
n-PB: n-PROPYLBENZENE, ug/l
N: NAPHTHALENE, ug/l
PCE: TETRACHLOROETHENE, ug/l
TCE: TRICHLOROETHENE, ug/l
ug/l: MICROGRAMS PER LITER
< : LESS THAN
ND: NOT DETECTED ABOVE LABORATORY METHOD DETECTION LIMITS
(Q): CONCENTRATION BETWEEN LIMIT OF DETECTION AND LIMIT OF QUANTITATION

LEGEND

- MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- GEOPROBE LOCATION
- CONCENTRATION GREATER THAN NR 140 ENFORCEMENT STANDARD
- 5 CONCENTRATION GREATER THAN NR 140 PREVENTIVE ACTION LIMIT

SOURCES: *Plot Plan, Shopping Center Store Building* Donald Hallett Construction Engineer, August 14, 1965

City of West Bend Field Survey 1996

Monitoring Well Survey Surveying Associates, Inc. April 11, 1998

N

0 15 30

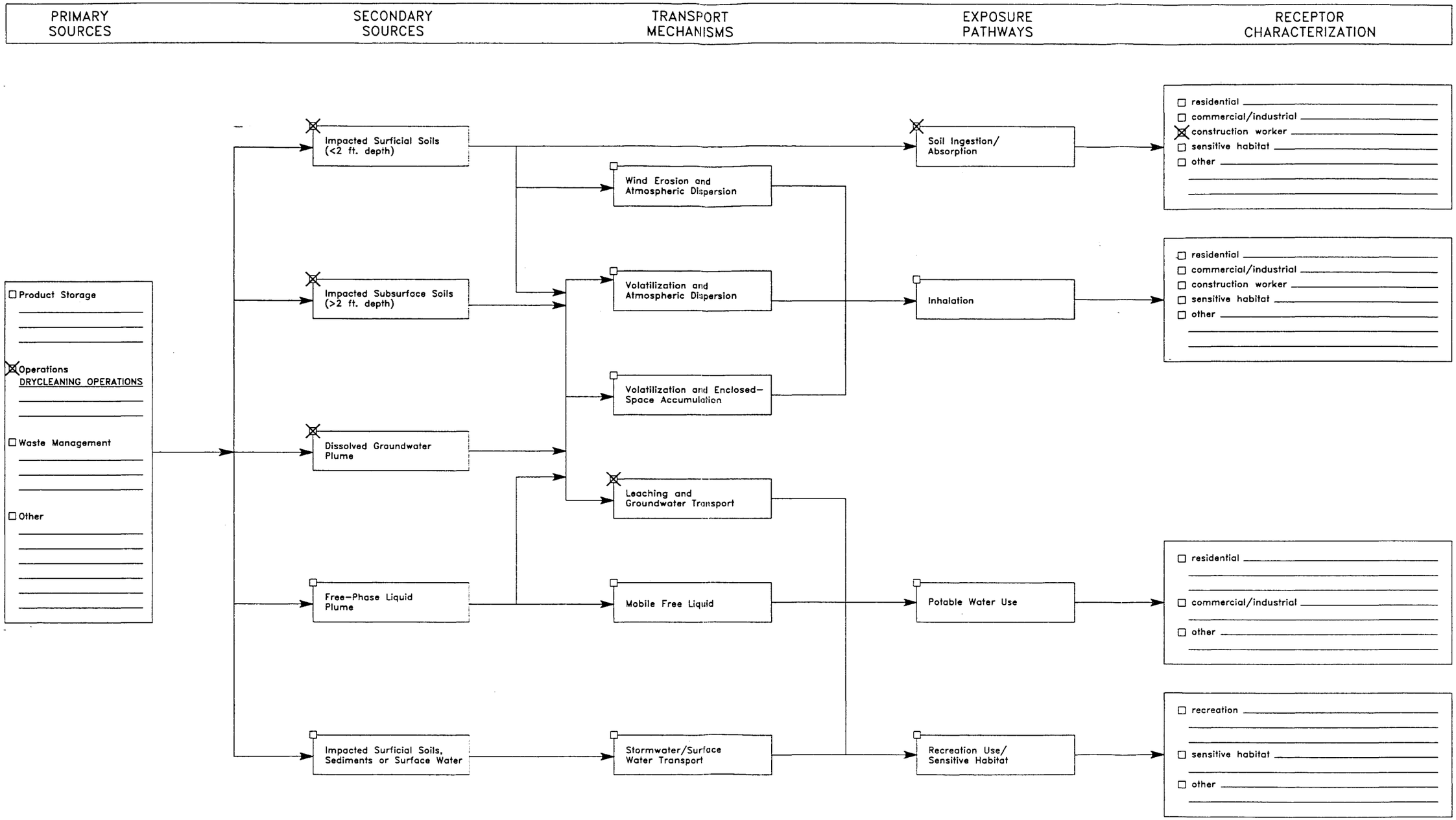
SCALE: 1"=30'

DRN. BY:	S.L.G.	DATE:	03/09/99
DSN. BY:	C.M.H.	FILE NO.:	0702007
CHK. BY:	C.M.H.	DWG. NO.:	07020076
REV. BY:	G.L.J.	SHEET NO.:	6

KEY ENGINEERING GROUP LTD.

FIGURE 6
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS

SITE INVESTIGATION REPORT
DECORAH SHOPPING CENTER ANNEX
1011–1025 SOUTH MAIN STREET
WEST BEND, WISCONSIN



SOURCE:
ASTM E1739, Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites

NO SCALE

DRN. BY:	S.L.G.	DATE:	02/26/99
DSN. BY:	C.M.H.	FILE NO.:	0702007
CHK. BY:	C.M.H.	DWG. NO.:	07020078
REV. BY:	G.L.J.	SHEET NO.:	7

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FIGURE 7
CONCEPTUAL SITE MODEL

SITE INVESTIGATION REPORT
DECORAH SHOPPING CENTER ANNEX
1101-1025 SOUTH MAIN STREET
WEST BEND, WISCONSIN