

SITE INVESTIGATION REPORT

for

BROWN'S OF TWO RIVERS 1400 WASHINGTON STREET TWO RIVERS, WISCONSIN

PECFA CLAIM NUMBER: 54241-3089-00 BRRTS ID# 03-36-223946

PREPARED FOR

MR. KENTON LANGMAN BROWN'S OF TWO RIVERS 1400 WASHINGTON STREET TWO RIVERS, WISCONSIN 54241

February 28, 2000



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February 28, 2000

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Mr. James Reyburn Wisconsin Department of Natural Resources Northeast Region Box 10448 Green Bay, Wisconsin 54307-0448

Mr. Reyburn:

RE: Site Investigation Report for Brown's of Two Rivers, 1400 Washington Street, Two Rivers, Wisconsin 54241 BRRTS# 03-36-223946 PECFA Claim Number: 54241-3089-00

Enclosed is a copy of the Site Investigation Report (SIR) for the above-referenced site. One 500-gallon waste oil underground storage tank (UST) was previously abandoned by removal at this site. Soil and groundwater contamination was detected during a Phase II investigation. Near the waste oil UST, soil contamination was detected at a depth of 7-9 feet below grade (fbg) and groundwater contamination was detected in trace amounts. Soil and groundwater contamination was also detected at the east edge and southeast corner of the property. Here, contamination ranges from depths of 7.5-17 fbg for soil and 13-15 fbg for water. This contamination appears to be gasoline, rather than waste oil.

It appears that the gasoline contamination covers a much larger area of the property, and is more concentrated on the east edge and southeast corner of the property.

The groundwater contamination at this site appears to cover a much larger area than the soil contamination associated with the waste oil UST. The soil contamination around the waste oil UST appears stable and limited. Groundwater contamination also seems to be more significant near the east edge and southeast corner of the property, and only trace amounts exist near the waste oil UST. The contamination related to the waste oil UST is minimal in comparison with the contamination discovered at the southeast corner of the property.

Please review this report and comment as appropriate, as soon as possible, so that GHD can evaluate a remedial alternative for this site.

Please call Tim Ott at 920-849-9797 if you have any questions or comments.

Best regards, GHD.Ine. mothy Z CH

Timothy L. Ott Project Scientist

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SITE INVESTIGATION REPORT

for

BROWN'S OF TWO RIVERS

Located at 1400 Washington Street Two Rivers, Wisconsin 54241

Prepared for: Mr. Kenton Langman Brown's of Two Rivers 1400 Washington Street Two Rivers, Wisconsin 54241

February 28, 2000

I, Susan M. Lawrenz, hereby certify that I am a Hydrogeologist as that term is defined in s. NR 712.03(1), Wis. Adm. Code, and a registered Professional Geologist in the State of Wisconsin in accordance with the requirements of Ch. A-E 10, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in Ch. A-E 8, Wis. Adm. 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, Wis. Adm. Code.

I, Stephen W. Dvorak, hereby certify that I am a registered Professional Engineer in the State of Wisconsin in accordance with the requirements of Ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in Ch. A-E 8, Wis. Adm. 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, Wis. Adm. Code.

P.G. Number

Senior Hydrogeologist

President

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EXECUTIVE SUMMARY

The Brown's of Two Rivers site in Two Rivers, Wisconsin, was formerly Ohde's Motors until 1950. In 1950, the property was sold and became Hermachek Motors. After being owned by Hermachek Motors, the property was subsequently owned by Erdman's Motor Company. In 1969, the property became Brown's of Two Rivers, which it is today. It now operates as a wholesale distributor of automotive accessories. *Figure 1, Appendix D*, shows the location of the site on a USGS topographic map. One 500-gallon waste oil Underground Storage Tank (UST) installed circa 1940 was used for storage. This UST was abandoned by removal in 1987. *Table 1, Appendix E*, summarizes the UST contents and capacity. No figures or other information could be found regarding the tank location or who removed it.

In May of 1999, GHD, Inc. (GHD) was hired by Mr. Kenton Langman to conduct a Phase II subsurface investigation on this property for any petroleum-related constituents. GHD performed six soil borings on May 26 & 27, 1999 in the estimated tank bed area, at property boundaries, and other various locations on site. The borings were advanced to depths of 7 to 11 fbg at the estimated water table interface. Samples were collected and tested for Gasoline Range Organics (GRO), Diesel Range Organics (DRO), Volatile Organic Compounds (VOCs), Petroleum Volatile Organic Compounds (PVOCs), and lead at EN CHEM, Inc., a state certified laboratory. Sample results are listed in *Table 5, Appendix E*.

Results showed petroleum contamination above Residual Contaminant Levels (RCLs) in three of the six borings; BA-B3, BA-B4, and BA-B6. On July 14, 1999, the Wisconsin Department of Natural Resources (WDNR) notified Brown's of Two Rivers of their responsibility to investigate and remediate this contamination. This prompted a follow up site investigation.

In August of 1999, GHD was hired to conduct the site investigation to determine the degree and extent of petroleum contamination. Drilling activities were conducted in December of 1999 by Environmental Drilling Services, Inc. (EDS) of De Pere, Wisconsin. Five monitoring wells were installed, as contaminated soils were encountered in contact with the groundwater interface. These wells were developed and sampled on December 15, 1999. A second round of groundwater samples was collected from these monitoring wells on January 12, 2000.

This Site Investigation Report documents these site activities. Soil and groundwater contamination has been identified at this site. Approximately 50 tons of contaminated soil remains on-site near the former waste oil tank bed and only a trace amount of groundwater contamination was detected in the UST tank bed vicinity. This little amount of contamination seems to be somewhat stationary and of little concern. There is contamination on site that is of substantial concern. Significant amounts of soil and groundwater contamination have been identified at the east edge and southeast corner of the property. There are at least four possible off-site sources for this contamination. These sources are listed in *Appendix G*. The degree and extent of contamination resulting from of the waste oil tank system has been defined sufficiently. It appears that gasoline or diesel groundwater contamination is migrating on-site from potential upgradient sources.

1.0 INTRODUCTION

GHD, Inc., (GHD) has prepared this Underground Storage Tank (UST) Site Investigation Report (SIR) for the Brown's of Two Rivers site. This report pertains to the site located at 1400 Washington Street in Two Rivers, Wisconsin. The site will be referred to in this report as the "Brown's" or, simply, the site.

The principal author of this report was Mr. Timothy L. Ott.

1.1 Purpose of the Report

The information herein describes the site history, degree and extent of contamination, regional and site geology and hydrogeology, and the field and laboratory results from soil and groundwater sampling. It also discusses the nature of the contamination, where it is now, and where it is moving.

This SIR documents the results of the site investigation, including:

- An overview consisting of the background material included in the *Site Investigation Work Plan* (GHD, September 1999), and information concerning the site history and operations as obtained from Brown's.
- A description of site-specific geologic and hydrogeologic factors as defined during the site investigation, including local aquifers, their size, use, and potential for cross-contamination.
- An assessment of potential spill pathways, including building foundations, utility conduits, surface runoff, and road base material.
- An identification of receptors of contamination, including location and susceptibility of the potential receptors. Potential receptors identified at this site are groundwater and the neighboring West Twin River.
- An assessment of potential health risks to individuals and to the community that may occur from the product release.
- A presentation of the technical information obtained during the on-site fieldwork, including the methods used to obtain the data, results of the investigation, analytical results from the soil and groundwater samples, quality control measures used, and conclusions of the investigation.

1.2 Report Organization

This report addresses all points on the Leaking Underground Storage Tank (LUST) Site Investigation (SI) Checklist. The order of the report is not the same as the SI Checklist, but the main headings on the checklist were used, where appropriate, to make this report easy to review. Background information, such as the site history and the incident of contamination, is discussed first. This is followed by a description

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of the regional and site-specific geology and hydrogeology, field techniques and sampling results. Next is a discussion of the risk assessment of potential receptors and conduits associated with this site. SECTION 8.0 NATURE AND EXTENT OF CONTAMINATION, discusses the degree and extent of contamination along with mass calculations of the contaminants present at this site. This SIR concludes with the limits of this report.

Proper documentation, in the form of Wisconsin Department of Natural Resources (WDNR) forms, field notes, laboratory analytical results, and chains of custody, has been completed and maintained in our records. Copies of the WDNR forms are included in *Appendix A*. Soil and groundwater laboratory analytical reports and chains of custody are included in *Appendices B and C*, respectively. *Appendix D* comprises all figures and *Appendix E* comprises all tabulated data referenced in this report. *Appendix F* contains the Wisconsin Geological & Natural History Survey (WGNHS) well construction forms. *Appendix G* contains documentation on other potential petroleum contamination source area.

2.0 BACKGROUND

This section of the report covers information requested in Section II, Part A, of the SI Checklist. The information is organized by site information and existing conditions, site operating history, tank removal activities, and cause of contamination.

2.1 Site Information and Existing Conditions

Mr. Kenton Langman is the site contact. His contact information is listed below.

Mr. Kenton Langman Brown's of Two Rivers 1400 Washington Street Two Rivers, Wisconsin 54241

The site of contamination is Brown's of Two Rivers, located at 1400 Washington Street, in Two Rivers, Wisconsin. The site is within the NW ¹/₄ of the SE ¹/₄ of Section 1, Township 19 North, Range 24 East, within the Town of Two Rivers in Manitowoc County. *Figure 1 – Site Location Map, Appendix D*, is a regional view of the site location based upon the *Two Rivers 7.5 Minute Quadrangle Map* (USGS, 1978).

Figure 2 – Site Layout Map, Appendix D, is a drawing, at a scale of one inch equals thirty feet, showing the specific property, the present building configuration at the site and the location of the removed UST. The site was formerly Ohde's Motors until 1950 at which time it became Hermachek Motors. It was also Erdman's Motor Company before becoming Brown's of Two Rivers in 1969. Since 1969 the site has operated as a wholesale distributor of automotive accessories.

2.2 Site Operations History

The property contained one 500-gallon waste oil UST. The tank was installed circa 1940 and removed in 1987. No figures or other information could be found regarding the tank location or who removed it. *Table 1, Appendix E,* illustrates the capacity and contents of the UST that was located at this site.

2.3 Tank Removal Activities

The UST system was located on the north side in the approximate middle of the main building. Other than being removed in 1987, no other pertinent information could be found.

2.4 Cause of Existing Contamination

It is hard to tell exactly how the release from the waste oil UST system may have occurred due to the lack of information. It appears that the contamination would have come from leaks from the tank itself, since no soil contamination was found from 0 to 7 feet below grade (fbg) in the waste oil tank vicinity. However, there is more contamination on site than just waste oil related contamination. Measureable amounts of soil and groundwater contamination were detected during drilling events on the east edge and southeast corner of the property. This contamination seems to be unrelated to the waste oil UST system. The contamination appears to be migrating onto the property from the east, under State Trunk Highway (STH) 42. Several possible off-site sources have been identified. This information is discussed under Sections 5,6 & 7.

2.5 Site Investigation Activities

The work described in the *Site Investigation Work Plan* (GHD, September 1999) has been completed. Five soil borings and groundwater monitoring wells were installed at the site to help define the degree and extent of soil contamination and possible groundwater contamination as requested by the WDNR. Soil and groundwater samples were collected and analyzed by a state-certified laboratory. SECTIONS 4.0 through 8.0, below, discuss the site investigation results for this LUST site.

3.0 GEOLOGIC AND HYDROLOGIC SETTING

The following section describes the regional and site-specific geology and hydrogeology. The information pertains to Section II, Part B, of the SI Checklist. Regional information was collected from *Water Resources of Wisconsin–Lake Michigan Basin, Hydrogeologic Investigations Atlas HA-432* (Skinner and Borman, 1973), the Two Rivers, *Wisconsin, 7.5 Minute Topographic Quadrangle Map* (USGS, 1978), the *Glacial Deposits of Wisconsin, MAP 10* (Hadley and Pelham, 1976), the map *Depth to Bedrock in Wisconsin* (Trotta and Cotter, 1973), *Bedrock Geology Map of Wisconsin* (Mudrey, Brown and Greenberg, 1982). Site-specific information was gathered from the soil borings and monitoring wells installed as part of the site investigation. *Appendix A* contains the WDNR documentation forms.

3.1 Regional Geology

The map *Depth to Bedrock in Wisconsin* indicates a depth to bedrock of between 50 and 100 fbg at the site. Well constructor's reports from the WGNHS confirm this estimate showing that bedrock is found at approximately 85 to 100 feet for wells within a one-quarter mile radius of the site. Well logs are presented in *Appendix F*.

The *Bedrock Geologic Map of Wisconsin* indicates surficial bedrock to be the Silurian-age Niagara dolomite formation, which underlies eastern Wisconsin, east of Lake Winnebago. This is corroborated by the well constructor's reports, which identify the bedrock as "limestone."

The Silurian-age formation is 670 feet thick or more in this area. Older, deeper layers of Ordovician dolomites and shales continue for nearly 330 feet before Ordovician and Cambrian sandstone formations are found with a combined thickness of 510 feet, and finally by the Precambrian crystalline basement bedrock.

3.2 Site Geology

The Brown's site is situated in an area with gently sloping hills. The elevation of the site is approximately 590 feet above mean sea level. The glacial map describes the surficial deposits as glaciolacustrine silts, sands, and clay till with terminal end moraines.

Figure 3 - Soil Boring and Monitoring Well Locations Map, Appendix D, depicts the locations of the soil boring and monitoring wells installed during the field investigation. Table 2, Appendix E, describes these locations. Soil sampling to depths ranging from 0 to 19.5 fbg confirmed the presence of sandy glaciolacustrine deposits over the entire area at the site

Figure 4 - Geologic Cross-Section Locator Map, Appendix D, shows the location of the geologic cross sections. The vertical depiction of the subsurface strata is depicted in Figures 5 - Geologic Cross-Section A-A' and Figure 6 - Geologic Cross-Section B-B', Appendix D, respectively. Appendix A contains the WDNR documentation and the boring logs used to draw this cross section.

3.3 Regional Hydrogeology

The Two Rivers area lies within the Lake Michigan drainage basin. The surface water and glacial till groundwater aquifer flow are controlled by topography and drainage. The rivers in this area all flow toward Lake Michigan. The groundwater in the Niagara and other sedimentary bedrock aquifers also generally flow east to Lake Michigan. The city of Two Rivers draws its potable water supply from Lake Michigan, but there is virtually no risk of contamination affecting this water supply

3.4 Site Hydrogeology

The depth to the shallow water table at the site has been between about 13 and 15 fbg. The groundwater monitoring wells were surveyed to within 0.01 foot to determine the flow direction at this site. Groundwater flow is southwest toward the West Twin River, which flows south and then east into Lake Michigan. Hydraulic conductivity of the silty sand is estimated at 1×10^{-5} cm/sec. All monitoring wells can be easily bailed dry. *Figure 7 - Groundwater Flow Map – January 2000, Appendix D*, represents the groundwater configuration at the site. *Table 3, Appendix E*, summarizes the groundwater elevation data.

4.0 FIELD ACTIVITIES

GHD has followed the current WDNR guidelines pertaining to conducting and reporting of UST Site Investigations as outlined in the following documents:

- Soil Sampling Requirements for LUST Site Investigations and Excavations, March 1991.
- LUST Analytical Guidance, July 1993.
- Groundwater Sampling Field Manual, 1996.

The types of investigations performed, types of samples collected, sample handling methods, analytical methods, and decontamination methods are discussed below for each sample type.

4.1 Soil Vapor and Soil Sampling

Five soil borings were advanced to depths of 9 to 19.5 fbg. *Figure 3, Appendix D*, shows the site layout of the soil borings. *Table 2, Appendix E*, describes the locations of these borings.

A drilling rig was used to explore soil conditions at the site. At locations surrounding the former LUST location, soil samples were collected by advancing a 24-inch split spoon into the ground to collect a minimally disturbed soil sample at the total depth desired (between 2 and 19.5 fbg).

All samples were split longitudinally. One half of the sample was tested for headspace and the other half was placed into soil sampling jars. The jars were placed in a cooler immediately following collection and description. The jar headspace method used is described in an extract of a portion of Attachment 2, *Field Instrument Techniques*, from *Closure Assessments for Underground Storage Tanks* (WDNR, September 1990).

One to three samples per boring were submitted to a state-certified analytical laboratory, for analysis. Since waste oil was the suspected contamination on site, the soil samples were analyzed for diesel range organics (DRO), volatile organic compounds (VOCs), Polynuclear Aromatic Hydrocarbons (PAHs), lead, cadmium, and petroleum volatile organic compounds (PVOCs).

Boring logs were prepared describing all soils according to the Unified Soil Classification System. Characteristics, such as soil structure, voids, layering, lenses, odor, staining, mottling, and moisture content were noted on the soil boring logs. Each soil boring that was not converted into a monitoring well was backfilled with bentonite upon completion. WDNR boring logs and borehole abandonment forms are provided for each boring as part of the WDNR documentation in *Appendix A*.

Decontamination was performed to minimize cross-contamination between soil samples and individual borings. All sampling equipment was decontaminated after each sample by washing with soap and water and by using a double rinse with clear tap water. Clean split spoons were used at each new sample location.

4.2 Groundwater Sampling

During the soil boring activities, five monitoring wells were installed in the five soil boreholes to monitor and define the horizontal extent of groundwater contamination according to procedures outlined in Ch. NR 141, Wisconsin Administrative Code. On December 15, 1999, the monitoring wells were developed by hand bailing and groundwater samples were collected. Well construction and development forms WDNR 4400-113A and -113B are included in *Appendix A*. All samples were submitted to Northern Lake Service (NLS), a state-certified laboratory, for analysis of VOCs, DRO, lead, cadmium, and natural attenuation parameters. A second round of water samples was collected from these five monitoring wells on January 18, 2000. These samples were submitted for analysis of PVOCs, naphthalene, PAHs, sulfates, alkalinity, ammonia, nitrate-nitrite, and total kjeldahl nitrogen.

Groundwater sampling and decontamination procedures followed guidelines suggested in the WDNR *Groundwater Sampling Field Manual* (1996). Field measurements of dissolved oxygen (DO), pH, temperature, conductivity, and iron were also obtained during GHD sampling events.

4.3 Waste Management

Waste soils and water was generated during the SI activities. Soil cuttings from the five borings were collected and stored in 55-gallon drums. Each boring's cuttings were put in a separate drum and labeled clean or dirty. Clean and dirty water requiring disposal was also generated during development and purging of the monitoring wells. Clean water was dumped on site and dirty water was containerized in 55-gallon drums. Drums containing contaminated soil and groundwater will be properly disposed of by GHD and the property owner.

5.0 RESULTS

As mentioned above, NLS was used to analyze the samples at this site; pertinent information follows:

EN CHEM, Inc. (Wisconsin Certification Number: 405132750) 1795 Industrial Drive Green Bay, WI 54302 920-469-2436 (GHD submitted soil samples to EN CHEM from Phase II investigatory search.) Northern Lake Service, Inc. (Wisconsin Certification Number: 4721026460) 400 North Lake Avenue Crandon, WI 54520 715-478-2777

Contact Person: Mr. Steve Crupi (GHD submitted soil and groundwater samples to NLS.)

Laboratory analytical results are tabulated in *Appendix E*, and discussed in the following sections on soil and groundwater. One field blank and one trip blank were taken and analyzed for every ten or fewer water samples. The laboratory reports received from NLS are included in *Appendices B and C*.

5.1 Soil Vapor

Table 4, Appendix E, tabulates the soil headspace results. High readings were encountered. These readings were associated with the soils near the east border and southeast corner of the property. A reading as high as 1,854 instrument units was recorded in BA-MW11 along the east edge of the property. However, none of the high headspace readings were related to the waste oil UST system on site.

5.2 Soil

Soil samples collected for laboratory analysis were selected based upon the water table elevation and the field observations of the soil samples. The first sample selected for analysis was either that which was directly above the water table, or the sample with the most petroleum odor (as determined by ambient odors). The second sample analyzed was the first apparently "clean" sample below the lowest contaminated horizon based upon field olfactory observations and PID results. These samples were analyzed to determine the vertical extent of contamination. GHD also sampled the top 2 feet for cadmium and lead in each boring. *Table 4, Appendix E*, indicates those samples selected for laboratory analysis. *Table 5, Appendix F*, summarizes the soil analytical results for these samples. Laboratory reports and chains of custody for all soil samples are included in *Appendix B*.

5.3 Groundwater

Five monitoring wells were installed in soil boreholes to evaluate groundwater contamination and hydrogeologic characteristics at the site. Water level measurements from the monitoring wells document

the presence of the water table within 13 to 15 fbg. Two rounds of water samples were collected and analyzed by NLS. Analytical results are summarized in *Table 6, Appendix E*. The laboratory reports and chains of custody for all groundwater samples are included in *Appendix C*.

5.4 Drummed Soil

Drums containing contaminated soil will be picked up and disposed of properly by a waste disposal company. Any soil or water deemed to be free of identified contamination will be disposed of as clean.

5.5 Natural Attenuation Groundwater Results

Two rounds of natural attenuation samples were analyzed for sulfates, alkalinity, total Kjeldahl nitrogen, (TKN), nitrates+nitrites (N+N), nitrogen as ammonia, DO, pH, conductivity, and total iron in each well. Alkalinity, conductivity, total iron, and nitrogen concentration differences across the site are inconclusive. DO concentrations are elevated downgradient of the groundwater plume near the waste oil UST, suggesting that this portion of the plume has not migrated much past the former tank excavation in this direction. Sulfate concentrations are low on the east and elevated at the groundwater plume's downgradient edge, suggesting that some anaerobic sulfide degradation processes are occurring in the major groundwater plume area.

6.0 RISK ASSESSMENT

The following sections address the health and safety risks as outlined in Section II, Part C, of the SI Checklist. Many of the health and safety risks are not pertinent to this site. Based upon the depth to groundwater, GHD postulates that there is a low potential for vapors to emanate to the ground surface at the source area. No free product was measured in any monitoring wells or observed during the site investigation fieldwork. Bedrock was not encountered during the site investigation. To date, GHD has no knowledge of potable wells or neighboring water bodies being affected by the soil and groundwater plume.

6.1 Vapor Migration Pathways in the Subsurface

A small amount of petroleum related vapor was detected in the soil near the UST system. Almost all of the petroleum vapors were detected in the subsurface environment near the east edge and southeast corner of the property. Due to groundwater being detected at 13 to 15 fbg, it is unlikely that the vapors will migrate to the surface. There are six underground utility lines located near the estimated plume area. There are gas and fiber optic lines that run north and south under STH 42 near the east property boundary and the gas line also runs east and west on the north side of the building. Three electrical lines run east and west along the north side of the main building. One more electrical line runs north and south from the light pole thru the parking lot area. It is unlikely that petroleum vapors would travel along these utilities due to the shallow burial depth relative to the groundwater depth. There is also a buried petroleum pipeline that runs east and west on the adjacent property and north and south on the west end of Brown's property. Little is known about this pipeline and it's possible that it may serve as a pathway for vapor migration.

6.2 **Receptors and Conduits**

Groundwater flows southwest, which is toward the West Twin River. It is possible that contamination could reach this river. There are considerable amounts of contamination that appear to be moving southwest onto the adjacent property, towards the petroleum pipeline, and possibly to the river.

WGNHS was contacted regarding the potable wells located in the vicinity of the Brown's site. The WGNHS well logs indicate that the bedrock is likely not affected by the contamination because the bedrock is relatively deep between 85 and 100 fbg.

6.3 Health Risks

The soil and groundwater contamination does not appear to be affecting any private potable wells. The soil vapors do not appear to be migrating to the surface or to any utility corridors. No free product or extremely high concentrations of groundwater contamination were detected. Bedrock was not encountered during the site investigation. Based on WGNHS well construction reports, bedrock is at approximately 85 to 100 fbg. It is unlikely that the contamination present on-site poses any risk to human exposure via soil, groundwater or vapor migration.

7.0 NATURE AND EXTENT OF CONTAMINATION

7.1 Soil Contamination

Laboratory analytical reports of the soil samples identified soil contamination at the Brown's of Two Rivers Site in Two Rivers, Wisconsin. Soil contamination was detected to a maximum depth of 9 fbg near the waste oil system in the soil sample from BA-B6. This boring was performed in the former tank bed on the north side of the building. NR 720 residual contaminant level (RCL) exceedances for GRO at 200 ppm, DRO at 1,300 ppm, benzene at 130 ppb, and total xylenes at 8,400 were detected in this boring. The waste oil related contamination seems to only be in the immediate vicinity of the former UST location. There is very little soil contamination that is leaching to the groundwater at 13-15 fbg. The soil contaminant concentrations are much greater than the contaminant concentrations in the groundwater.

Elevated levels of petroleum contamination were also detected in the soil borings on the east edge and southeast corner of the property. This contamination seems to be unrelated to the waste oil tank system. Samples from BA-B3, -B4, -MW8, and -MW11 all had RCL exceedances. Exceedances were as high as 360 ppm GRO in BA-B3 at 9-11 fbg; 1,500 ppm DRO, 4,000 ppb ethylbenzene, and 54,000 ppb total xylenes in BA-B4 at 9-11 fbg; and 530 ppb benzene and 9,400 ppb toluene in BA-MW8 at 12.5-14.5 fbg. This soil contamination appears to be coming from one or multiple off-site sources. These possible off-site sources are shown in *Appendix G. Figures 8, 9, & 11, Appendix D*, depict the isoconcentrations in soil of DRO, methyl tert-butyl ether (MTBE), and trimethylbenzenes, respectively. *Table 5, Appendix E*, summarizes all soil analytical data.

The highest concentrations of soil contamination were detected at borings BA-MW11, -B4, and -MW8. From the isoconcentration maps and the groundwater flow map, it appears that the contamination is moving under STH 42 from the neighboring property or properties. The area of soil contamination is defined by clean soil in borings BA-B1 and BA-MW7 to the west of the plume. The plume seems to extend to the adjacent property to the south, Brown's Travel. *Figure 5 - Geologic Cross Section A-A', Appendix D,* depicts the vertical depth of soil contamination for the UST system and *Figure 6 - Geologic Cross-Section B-B', Appendix D,* depicts the vertical depth of both soil and groundwater contamination located on the east edge and southeast corner of the property.

7.2 Groundwater Contamination

During the site investigation, two rounds of groundwater samples were collected from the five monitoring wells (BA-MW7, -MW8, -MW9, -MW10, and -MW11). One round of sampling was conducted on December 15, 1999, just after drilling activities, and the second event was performed on January 18, 2000.

Laboratory analytical results from groundwater sampling detected NR 140 Enforcement Standard (ES) exceedances in BA-MW8 for benzene, toluene, total xylenes, and naphthalene in both sampling events. Preventative Action Limit (PAL) exceedances were also detected for ethylbenzene, total trimethylbenzenes, and MTBE in BA-MW8 for both sampling events. BA-MW11 had ES exceedances for benzene, toluene, total xylenes, and naphthalene during both sampling events and had an ES exceedance for total trimethylbenzenes for just the first sampling event. PAL exceedances were also detected in BA-MW11 for

ethylbenzene and MTBE during both sampling events and a PAL exceedance was detected for total trimethylbenzenes in BA-MW11 for the second sampling event. ES exceedances were as high as 140 ppb benzene and 2,000 ppb toluene in BA-MW 8 and as high as 499 ppb total trimethylbenzenes, 2,550 ppb total xylenes, and 240 ppb naphthalene in BA-MW11. These high levels were all observed during the first sampling event. The isoconcentrations of trimethylbenzenes in groundwater are illustrated in *Figure 10, Appendix D. Table 6, Appendix E*, summarizes the groundwater analytical results and the measured field parameters from both rounds of groundwater sampling. Additional information needs to be collected upgradient of the Brown's of Two Rivers site to calculate biodegredation rates. Investigation at potential source areas, upgradient of these source areas, and at the potential downgradient leading edge of the plume is needed. Without information on background concentrations of the natural attenuation parameters, estimates of biodegredation rates and average linear velocities of groundwater flow rates are speculative.

7.3 Quantification of Contamination

The contamination relating to the waste oil UST system is defined as being confined to a relatively small area and contained in the soil, not the groundwater. Mass calculations for DRO soil contamination were done and are shown in *Table 7, Appendix E*. This table calculates that only about 50 tons of contaminated soil exist related to the waste oil UST system. These 50 tons of soil contain about 0.082 kilograms of contaminants.

This table was prepared using the soil analytical results and AutoSketch for Windows. The data was contoured based on interpolation of the analytical results. The area of soil contamination was then calculated using the AutoSketch "measure area" function. Areas were divided into sections with "equal depth" of contamination. The volume of soil within these areas were calculated by multiplying the area by the estimated depth. The area is calculated by AutoSketch and estimated depth is obtained from *Figure 5 - Geologic Cross Section A-A'*, *Appendix D*. The mass of contaminants within each area was calculated by multiplying the volume of soil by the mean concentration of contaminants within the area.

The primary concern at this site is the contamination that is migrating onto this site and the adjacent site to the south, Brown's Travel, from underneath STH 42. There is no source identified for this contamination and the plume is not defined. *Figures 9 & 11, Appendix D*, show the isoconcentrations of MTBE and trimethylbenzenes in the soil, respectively. *Figure 10, Appendix D*, shows the isoconcentrations of trimethylbenzenes in groundwater. These three figures show the contamination migrating onto the property from under STH 42. *Figure 12, Appendix D*, shows potential sources in the area that may be associated with this migrating groundwater plume.

7.4 Conclusions

The waste oil UST system at the Brown's of Two Rivers site has significant soil contamination from 7-9 fbg, which is above the vadose zone, but does not significantly affect the water quality at this site. There is approximately 30.8 cubic yards or 50 tons of soil contamination present at the site related to the waste oil UST. This soil contamination is stable, contained in a relatively small area, and doesn't pose an immediate threat to the health and safety at this site or it's surroundings.

Site Investigation Report

The majority of contamination on site is located on the east edge and southeast corner of the property. This contamination appears to be migrating on-site from under STH 42. Contamination also appears to be migrating south to the adjacent property, Brown's Travel. There is both significant soil and groundwater contamination located in this area of the site. Multiple possible sources exist, upgradient, across STH 42 from Brown's of Two Rivers. These sources are listed in Appendix G of this report.

GHD is recommeding that the waste oil UST case be closed. The area of soil contamination is limited to the UST vicinity. Groundwater contamination appears minimal at the UST area, but appears to be part of a larger petroleum contaminated groundwater plume.

In regards to the off-site contaminant plume migrating onto our client's property, we presume, on behalf of our client, that the WDNR will request further investigation of the point source of this groundwater contaminant plume.

8.0 DISCLAIMER AND LIMITATIONS OF RELIABILITY ON FINDINGS

The findings and conclusions reached in this report are based upon the data obtained in the site investigation. Methods used in collecting and analyzing the data were consistent with currently accepted technical standards, and the interpretation and evaluation of the data were completed using currently accepted professional methods and procedures.

Environmental investigations, such as this one, are limited by the constraints of time and cost. Selected soil and groundwater samples are collected from relatively widespread areas, and the data from these relatively discrete samples are necessarily extrapolated to areas not tested or explored. These extrapolations of known data into unknown areas are essential in completing the investigation under the given time and cost constraints, but can, at times, lead to misinterpretation. Although preparation of this report involved using professional judgment and currently accepted professional standards to make the extrapolations, no warranty is stated or implied as to the geotechnical or environmental condition of soil or groundwater in areas not directly tested in this investigation.

Environmental conditions of soil and groundwater are dynamic and change with time. For example, petroleum-contaminated soil infiltrated by precipitation can become dissolved and transported through natural processes into groundwater, and then migrate with the local groundwater flow. For this reason, the reliability of the findings and conclusions reached in this report is most accurate for the time that the investigative sampling was completed. Due to the dynamic nature of natural systems, the reliability of the findings and conclusions reached in this report diminishes with the passing of time.

9.0 **BIBLIOGRAPHY**

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APPENDIX A

WDNR DOCUMENTATION

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SOIL BORING LOG INFORMATION

Form 4400-122

Rev. 5-97

Route To: V

Watershed/Wastewater

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

Signature -	S.O.L	Firm GHD, Inc. 820 West Main Street Chilton, WI 53014	Tel: 920-849-9797 Fax: 920-849-9160

SOIL BORING LOG INFORMATION

Form 4400-122

Rev. 5-97

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Signature Firm GHD, Inc. Tel: 920-849-9797 820 West Main Street Chilton, WI 53014 Fax: 920-849-9160

SOIL BORING LOG INFORMATION

Form 4400-122

Rev. 5-97

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Signatur Curve Land Firm GHD, Inc. Tel: 920-849-9797 820 West Main Street Chilton, WI 53014 Fax: 920-849-9160

SOIL BORING LOG INFORMATION

Form 4400-122

Rev. 5-97

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

Signatu

 Firm
 GHD, Inc.
 Tel: 920-849-9797

 820 West Main Street Chilton, WI 53014
 Fax: 920-849-9160

SOIL BORING LOG INFORMATION

Form 4400-122

Rev. 5-97

Route To:	Watershed/Wastewater	
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Remediation/Redevelopment \boxtimes

Waste Management
Other

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Facilit	y/Projec	t Nam	с 				icense	Permit	/Monito	oring N	lumber		Boring	g Numb	er				
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I hereb	w certif	fy that	the info	rmation on this form is	true and correct to the	hect	ofmv	knowl	edre										

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

Signature	G out	Firm GHD, Inc.	Tel: 920-849-9797
Timoth	d-att	820 West Main Street Chilton, WI 53014	Fax: 920-849-9160

Borin	g Numb	ær	BA-	-B5 Use only as an attachment to Form 4400-	122.			Page 2 of 2					2	
San	nple									Soil	Prope	erties		
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SOIL BORING LOG INFORMATION

Form 4400-122

Rev. 5-97

Route To: W

Watershed/Wastewater

Waste Management
Other

					Page 1 of 1												
Facilit	/Projec	rt Nam	e			License	/Permit	/Monito	oring N	lumber	_	Boring	, Numb	er	-		
Bro	wn's o	fTwo	o Rive	rs										BA	<u>-B6</u>		
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Bria	n - GI	HD, I	nc.				5/26	/1999				5/26/	1999		G	eoprobe	
WI Un	ique W	ell No.		DNR Well ID No.	Common Well Name	Final Static Water Level Surface Elevation						tion	n Borehole Diameter				
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I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature) LI	CP MI	L Firm	GHD, Inc.	Tel: 920-849-9797
ton	oth	7.111		820 West Main Street Chilton, WI 53014	Fax: 920-849-9160
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SOIL BORING LOG INFORMATION

Form 4400-122

Rev. 5-97

Remediation/Redevelopment

Waste Management
Other

		Page 1 of 2								2			
Facility/Project Name	Lic	cense/Perm	t/Monitor	ring N	umber		Boring Number						
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									-	Drining Medica			
Brian - Environmental Drilling Services		12/2	4/1999				12/14/	(1999		4	1/4 HSA		
WI Unique Well No. DNR Well ID No. Common	Well Name Fi	nal Static W	ater Leve	el	Surfac	ce Elevation Bore					chole Diameter		
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State Plane 790,943 N, 2,638,443 E S/	©N	Lat	<u> </u>	· 						icaoic)			
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Facility ID County	Cou	nty Code	Civil To	own/C	ity/ or	Village					<u>, , , , , , , , , , , , , , , , , , , </u>		
<u>03-36-223946</u> Manitowoc	36	····	Two	Kiver	S	T	<u> </u>	Deres					
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I hereby certify that the information on this form is true and co	orrect to the best of	of my know	edge.										

Signature Concellence (Firm GHD, Inc. Tel: 920-849-9797 820 West Main Street Chilton, WI 53014 Fax: 920-849-9160

Borin	g Numt	ær	BA-	BA-MW7 Use only as an attachment to Form 4400-122. Page 2 of 2									2	
Number and Type	Length Att. & d Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	uscs	Graphic Log	Wcll Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity sail.	P 200	RQD/ Conuncats
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			19	Well installed to 19' and sampled to 17' on 12/14/99.										

SOIL BORING LOG INFORMATION Rev. 5-97

Form 4400-122

Route To:

Watershed/Wastewater Remediation/Redevelopment \boxtimes

Waste Management 🗌 Other 🗌

						·				Page 1 of 2								
Facilit	y/Projec	t Nan				License	/Permit	/Monito	umber		Boring Number BA-MW8							
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Bria	ın - En	viror	imenta	l Drilling Services		12/14/1999						12/14/	1999		4	1/4 HSA		
WI Un	ique W	ell No	•	DNR Well ID No.	Common Well Name	Final St	atic Wa	ater Leve	el	Surfac	e Eleva	vation Bor				rehole Diameter		
	PIO	338			BA-MW8	83	.3 Fe	et MSI	<u></u>		97.7]	7 Feet MSL				8.0 Inches		
Boring	, Locati	on or l	Local G	rid Origin (Check	if estimated: $[X]$)	Lat		0	•	**	Local	Grid Lo	cation	icable)	— •			
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03-3	36-223	946		Manitowoc		36		Two	River	S								
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um ^N	eng Seco	Blow	Dept				SD	Grap 0	Well	PID/	Strer	Cont	Limi	Plast Inde:	P 20	N M M		
32	24		<u> </u>	Top 3" Asphalt 9"	silty fine sand, orga	anic ,	FILL		ৰ্ম হি	0		moist						
GRAB			Ē	1' gravel w/fines			FILL		30									
S.	-		-1	· · · · · · · · · · · · · · · · · · ·				\otimes	× ×	i								
			F	SILTY FINE SAN	ND, organic													
L			-2				SM											
33	24	2	F	FINE SAND ligh	t brown no fines n	noist				0		moist				а. 1917 — А.		
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- · F			-5								1		}					
34 SS //	24 17	1	F	FINE SAND, ora	ngish/brown, no fine	es,				0		moist			İ.			
W		2	E	moist														
IV		2	Ę											}]			
Į I			F,															
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35	24	2	F.	FINE SAND, ligh	nt brown, no fines, n	noist	SP			0		moist						
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L			E											ł				
36 L	24	2	-10	FINE SAND ligh	nt brown no fines n	noist				39.3		moist	1		ļ			
ss	10	2	F															
X		3	En							1								
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L	1		-12						E E									
I here	by certi	fy that	the info	ormation on this form is	true and correct to the b	est of my	knowl	edge.										
0:					IT'imm													

Signature S G O A	Firm	GHD, Inc.	Tel: 920-849-9797
Converter I-10th		820 West Main Street Chilton, WI 53014	Fax: 920-849-916

Boring Number BA-MW8 Use only as an attachment to Form 4400-122. Page 2 of 2									2					
San	ple									Soil	Prop	erties		
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
37 SS	24 NR	2 2 2 2	-13	SILTY FINE SAND, strong petro odor, wet-sat'd	• •			1,187		wet/ sat'd				
38 SS	24 19	3 4 4 3	-15 -16 -17	SILTY FINE SAND, petro odor, brown, non-plastic, sat'd	SM			76.1		sat'd				
39 SS	24 19	1 1 1 1	-18	SILTY FINE SAND, brown, non-plastic, sat'd Well installed to 19' and sampled to 19.5'				0		sat'd				
				on 12/14/99.										

SOIL BORING LOG INFORMATION

Form 4400-122

Rev. 5-97

Route To:

Watershed/Wastewater

Waste Management
Other

			_									Page 1 of 2						
Facility	/Projec	t Nam	e			License	/Permi	/Monito	oring N	lumber		Boring	, Numb	er	1.00			
Broy	wn's o	f Two	o Rive	rs										BA	-MV	-IVIW9		
Boring	Drilled	1 By (F	irm nai	ne and name of crew chi	ei)	Date Di	riling S	started		Da	ue Dull	ing Co	mpletec	1		Drilling Method		
Bria	n - En	viron	menta	I Drilling Services			12/1	4/1999	9			12/14/	/1999		4	1/4 HSA		
WI Un	ique W	ell No.		DNR Well ID No.	Common Well Name	Final Static Water Level Surface					e Eleva	ition		Bc	rehole	Diameter		
	PIO	335			BA-MW9	84	4.7 Fe	et MS	L		97.2	7.2 Feet MSL				8.0 Inches		
Boring Location or Local Grid Origin (Check if estimated: 🗵)								0	•	"	Local	ocal Grid Location (If applica						
State I	Plane	-	- 791, -	,023 N, 2,638,476	E S/C/N	Lat.	,	 o				N				Ε		
NW	1/4	of SE	5 1/	4 of Section 1,	<u>T 19 N, R 24 E</u>	Lon	g		For an IC	Nul de	Villasi	10 Fee			57	Feet 🗵 W		
- Faciny	(D) 6-223	946		Manitowoo	ľ	County C 36	ode	TWO	Divo	.ity/ or	vmage	;						
			· · · · · ·	Maintowoc	1	50	T	1 00	Kivei	<u> </u>	1	Soil	Prop	ortios				
 	ipie			Soil/R	ock Description						}	1 301	1100					
	E &	nts	હું	And Ger	logic Origin For						Ne					10		
'pe	ered At	Cou	I I	Facl	h Major Unit		s	.2	E E	g	th	er er		lity		lent		
d T b	scov ngt	MO	pth		i major onat		sc	aph	ell agr	D/F	mp	oisti	mit	astic	200			
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			<u> </u>	EINE SILTV SAN	ID wet come black			F							1			
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GRAB			F															
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			E												Į			
L			L 12					<u> .</u>							1			

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

Signature Counting Z. Chf Firm GHD, Inc. Tel: 920-849-9797 820 West Main Street Chilton, WI 53014 Fax: 920-849-9160
Borin	g Numł	ær	BA-	-MW9	Use only as an	attachment	to Form 4400	-122.						Pa	ge 2	of	2
Sar	nple												Soil	Prop	erties		
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43	⊥ ∝ 24	В	<u> </u>	FINE SAN	D w/fines		n-plastic	<u> </u>	02			U N	∑ Ŭ sat'd		르크	<u> </u>	Ŭ ^w
GRAB				sat'd, petro	odor	510 wii, 110	n-piastie,				10.0		Juit				
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			-14														
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SOIL BORING LOG INFORMATION

Form 4400-122

Rev. 5-97

Route To: Watershed/Wastewater

Remediation/Redevelopment

Waste Management

				·····			,								Pag	ge l	of	2	
Facility/	(Projec	t Nam	e - 19:				1	License/	Permit	/Monit	oring N	lumber		Boring	g Numb	er DA	አለጥ	V10	
Boring	n's o	I I W	o Kive	IS ne and name of	crew chi	ef)		Date Dr	illing S	started		D	te Drill	ing Co	moleter	<u>D</u> P	Drill	ing Method	
aornig i					VIUT VIII	,										-	2		
Briar	1 - En	viror	imenta	l Drilling Se	rvices				12/1	4/199	9			12/14/	/1999		4	I/4 HSA	
WI Unio	que W	ell No		DNR Well ID	No.	Common Well Nan	ne li	Final St	atic Wa	ater Lev	/el	Surfac	æ Eleva	tion		Bo	rehole	Diameter	
	PIO	336		rid Origin	(Charles)	BA-MW10		84	.5 Fe	et MS	L	<u> </u>	96.8 I	Feet N	1SL	(16 '	8.0	Inches	
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Facility	ID			County	-,		Co	ounty Co	ode	Civil	Fown/C	City/ or	Village						
03-30	5-223	946	····-	Mani	towoc		3	6		Two	Rive	rs							
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I hereby certify that the information on this form is true and correct to the best of my knowledge.

SignatureFirmGHD, Inc.Tel: 920-849-9797Cany Thy20 West Main Street Chilton, WI 53014Fax: 920-849-9160

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completions of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Boring Number	r E	3A-]	MW10 Use only as an attachment to Form 440)-122.			,			Pa	ge 2	of	2
Number and Type Length Att. & Recovered (in)	Blow Counts	Depth In Fect	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity sailta	P 200	RQD/ Comments
46 SS 24 24		13 14	FINE SAND, light brown, no fines, sat'd				0		sat'd				
47 SS 24 24		15 16 17	FINE SAND, light brown, no fines, sat'd				0		- sat'd	2 			
			Well installed and sampled to 17' on 12/14/99.										

SOIL BORING LOG INFORMATION

Form 4400-122

Rev. 5-97

Route To: Watershed/Wastewater

Remediation/Redevelopment

Waste Management
Other

<u></u>													Pa	ge l	of	2
Facility	Facility/Project Name						/Permit	/Moni	toring N	lumber		Boring	g Numb	er	እጠ	1711
Boring	Wn's O	I IW	o Kive	rs ne and name of crew chi	ef)	Data D	illing	tarted		- (D)	te Drill	ing Co	moleter	B/		VII ling Method
Doring	Juna	, ny (1	1111 1141	ne and hame of crew cill		Date Di	ming 3	maricu				ing Co	mpietet			ing menou
Bria	n - En	viror	imenta	l Drilling Services			12/1	4/199	99			12/14/	/1999		4	1/4 HSA
WI Un	ique W	ell No	•	DNR Well ID No.	Common Well Name	Final St	atic Wa	ater Le	vel	Surfac	e Eleva	tion		В	orehole	Diameter
	PIO	337			BA-MW11	84	1.4 Fe	et MS	SL		97.8	Feet N	1SL		8.0	Inches
Boring State I	Locatio	on or I	Local G	10 Origin (Check) 985 N 2 638 528	F = S(CVN)	Lat.		•	+	"	Local	Grid Lo	cation	(If app.	licable)	— •
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Facility	y ID			County	(¢	County C	ode	Civil	Town/C	ity/ or	Village			· ··· ·		
	6-223	946	·····	Manitowoc		36		Two	Rive	<u>s</u> .					<u></u>	
Sam	nple								1			Soil	Prop	erțies I	<u>,</u>	
	æ (ij	its	set	Soil/Ro	ck Description						2					
<u>н</u> 8	Att	Count	In Fe	And Geo	logic Origin For		S	ں ا	ε	0	h h	8 -		Ŋ		cents
And T	ngth	ow (pth	Eaci	i Major Unit		sc	aphi	ell og	D/FI	engl	Distu	nit	istic lex	00) da un
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50 GRAB	24		E	1 op 6" Concrete th	ien fine sand w/fine	€S, ∕	FILL			U		moist	l			
m				_6" Gravel	013		FILL	\propto	X D							
Ŭ				FINE SAND, w/fi	nes, blackish/brown	n,										
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	w certif	v that	the info	rmation on this form is t	rue and correct to the be	est of my	knowle					<u>.</u>	<u> </u>	L		<u></u>

Signature GHD, Inc. Tel: 920-849-9797 820 West Main Street Chilton, WI 53014 Tel: 920-849-9797 Fax: 920-849-9160

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completions of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

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Borin	g Numł	ær	BA-	-MW11 Use only as an attachment to Form 4400-	122.						Pa	ge 2	of	2
Type Type	igth Att. & d	w Counts	oth In Fect	Soil/Rock Description And Geologic Origin For Each Major Unit	CS	phic	gram	VFID	npressive	isture tent	Prop	erties x	00	D/ nments
and	Len Rec	Blo	Del		u s	L Gra	Dia	DId	Stre	C Moi	Lig Lig	Plas Inde	P 2(RQI
55 SS	24 24	2 1 1 1	-13	FINE SAND, w/fines, brown, petro odor, super sat'd				358		super sat'd				
56 SS	24 12	1 0 1 1	-15	FINE SAND, w/fines, brown, petro odor, super sat'd	- - - -			1,593		super sat'd				
57 SS	24 22	1 2 1 2	-18	FINE SAND, w/fines, brown, super sat'd				0		super sat'd				
L_				Well installed to 17' and sampled to 19.5' on 12/14/99.										
					- -									
						l	1							

State of Wisconsin Department of Natural Resources Route To:	Watershed/Wastewater	Waste Mana	gement 🗀	MONITORING WELL CONST Form 4400-113A Rev. 6-	RUCTION
Facility/Project Name	Local Grid Location of Well		· · · · ·	Well Name	
Brown's of Two Pivers	$90 \rightarrow \Box N.$	90 o E	JE.	BA-MW7	
Facility License, Permit or Monitoring No.	Grid Origin Location	(Check if	estimated: 🔀)	Wis, Unique Well No, DNR Well	Number
	I at "	Long	· " " "	PIO 330	
Facility ID	700.042		01	Date Well Installed	
02 26 222046	St. Plane ft. N	2,038,445	ft. E. S/C/N	12/14/1000	
U3-30-223940	Section Location of Waste/Sou	irce	ন দ	Well Installed By: (Person's Nam	e and Firm)
Well Code 11/mm	<u>NW 1/4 of SE 1/4 of Sec</u>	<u> </u>	<u>v, r24</u> 🗖 W	Terson's run	0 шіц і піп)
Distance Well Is From Waste/Source	Location of Well Relative to W	Vaste/Source		Brian	
Boundary 84 ft.	d 🖾 Downgradient n [□ Sidegradient □ Not Known		Environmental Drilling Ser	vices
A. Protective pipe, top elevation)6.49 ft. MSL		Cap and lock?	. Y	es 🗆 No
B. Well casing, top elevation	<u>96.04</u> ft. MSL		Protective cover p a. Inside diameter	ipe:	<u>9.0</u> in.
C. Land surface elevation	96.5 ft. MSL		b. Length:		<u> 1.0 ft</u> .
	1.0	The state of the second	c. Material:	Stee	1 🖸 04
D. Surface seal, bottom ft. MSI	or ft.	1 A A A A A		Othe	π 🖸 🛄
12. USC classification of soil near screen:	marian .	ALANC	d. Additional prot	ection?	es 🖂 No
GP GM GC GW S			If yes, describe		
SM S SC ML MH C	го сној 📲	$ \setminus \setminus$	Surface cool:	Bentonit	e 🗆 30
Bedrock L			Surface sear.	Concret	c 🖸 01
13. Sieve analysis attached?				Othe	x 🗆 💻
14. Drilling method used: Rota	ry 🗆 50 🛞	4 .	Material between	well casing and protective pipe:	
Hollow Stem Aug	er 🛛 <u>41</u>			Bentonit	e 🖂 30
Oth	er 🗆 🛄 🛛 🖗			Othe	x 🖸 💴
		5.	Annular space sea	al: a. Granular Bentonit	ie 🖂 33
15. Drilling fluid used: Water 02 A	.ir □01	b.	Lbs/gal m	ud weight Bentonite-sand slurr	у 🛛 35
Drilling Mud 0 3 Nor	ne ⊠99	с.	Lbs/gal m	ud weight Bentonite slurr	y 🗆 31
		d.	% Bentor	ite Bentonite-cement grou	ıt 🛛 50
16. Drilling additives used? \Box Yes		е.	Ft ³	volume added for any of the above	:
		f.	How installed	: Tremi	ie 🗖 01
				Tremie pumpe	d 🗖 02
17. Source of water (attach analysis):				Gravit	y 🛛 08
	🛛 🕅	6.	Bentonite seal:	a. Bentonite granule	s 🗵 33
			b. 🗆 1/4 in. 🗔	3/8 in. 🗆 1/2 in. Bentonite pellet	ts 🛛 <u>32</u>
E. Bentonite seal, top95.5 ft. MSL	or <u>1.0</u> ft.		c	Othe	er 🖸 🛄
		7. 📓	Fine sand materia	I: Manufacturer, product name and	d mesh size
F. Fine sand, top 89.5 ft. MSL	or <u>7.0</u> ft.		a	N/A	
			b. Volume added	ft ³	
G. Filter pack, top89.5 ft. MSL	or -1.0 ft.	8.	Filter pack materi	al: Manufacturer, product name an	nd mesh size
07.6			aB;	adger Mining Corp. 45/55	22
H. Screen joint, top $\frac{87.5}{1.5}$ ft. MSL	or <u>9.0</u> ft.		b. Volume added	<u> </u>	
		9.	Well casing:	Flush threaded PVC schedule 4	0 🖾 23
I. Well bottom ft. MSL	or <u>19.0</u> ft.	目(Flush threaded PVC schedule 8	0 🛛 24
77.0				Othe	ər 🗆 🔤
J. Filter pack, bottom ft. MSL	or <u>19.5</u> ft.	E <u>10.</u>	Screen material:	Schedule 40, PVC Flush Threade	<u>d</u>
77 0			a. Screen Type:	Factory c	ut 🖾 11
K. Borehole, bottom ft. MSL	, or <u>19.5</u> ft.			Continuous sl	ot 🗆 01
			••••••••••••••••••••••••••••••••••••••	Othe	er 🗆 🖳
L. Borehole, diameter <u>8.0</u> in.			b. Manufacturer	Johnson	0.010
		\backslash	c. Slot size:		-0.010 in.
M. O.D. well casing 2.37 in.		\mathbf{N}	d. Slotted length:		<u>10.0</u> ft.
		` 11.	Backfill material	(below filter pack): Nor	ıc ⊠ 14
N. I.D. well casing 2.04 in.			<u> </u>	Oth	er 📋 🎬
			····		<u> </u>
I hereby certify that the information on this fo	rm is true and correct to the best	t of my knowledge.			
Signature Di C DATO	GHD, I	nc.		Tel: 92	20-849-9797
Please complete both Forms 200-103 A and 200	113B and return to the appropriate	DNR office and human	L WI 53014	Fax: 92	20-849-9100 81 283 289
T terre complete cost i cimp Jaco Fi Jr and 4400		with online and ould		accorreports is required by 6115, 100, 20	ولرتابة ولتكانه وعاد

Please complete both Forms 400-113A and 400-113B and return to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and condut involved. Personnally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin Department of Natural Resources <u>Route To:</u>	Watershed/Wastew Remediation/Redev	ater 🔲 elopment 🖾	Waste Manageme	nt 🗖	MONITORING WEI Form 4400-113A	L CONSTRUCTION Rev. 6-97
Facility/Project Name	Local Grid Location	of Well			Well Name	
Brown's of Two Rivers	135 ft.	□N5	ft = ft = Ft		BA-I	VIW8
Facility License, Permit or Monitoring No.	Grid Origin Location	1	(Check if estin	nated: 🖂)	Wis. Unique Well No.	DNR Well Number
	Lat	Long	• • •	or	PIO 338	
Facility ID	St Plane 790.89	8 a n 2	2.638.482 A F	S OVN	Date Well Installed	L
03-36-223946	Section Location of	Waste/Source	11. 15.	3/011	12/14	/1999
Type of Well	NW 14 0 SE		T 19 M B	24 🛛 E	Well Installed By: (Pe	rson's Name and Firm)
Well Code 11/mw	<u>I ww 1/4 of SE</u>	1/4 of Sec	_, IN, K.	U W	Br	ian
Distance Well Is From Waste/Source	u 🗌 Upgradient	$s \square Side$	egradient			
Boundary 126 ft.	d 🖾 Downgradie	nt n 🗆 Not	Known		Environmental 1	Drilling Services
A. Protective pipe, top elevation	7.62 ft. MSL		1. Cap :	and lock?	· · · · · · · · · · · · · · · · · · ·	🛛 Yes 🗆 No
D Well against the abouting	714 9 100		2. Prote	ctive cover p	ipe:	
B. Well casing, top elevation	<u>7.14</u> ft. MSL		a. Ins	side diameter:		<u>9.0</u> in.
C. Land surface elevation	<u>97.7</u> ft. MSL 🔨		b. Le	ngth:		<u> 1.0 ft</u> .
D. Surface seel bottom 967 A MSI	an 10 a 😿		C. Ma	aterial:		Steel 🖸 04
						Other 🛛 📖
12. USC classification of soil near screen:	20		A A A A A A A A A A A A A A A A A A A	Iditional prote	ection?	🛛 Yes 🗵 No
GP GM GC GW S			<u> </u>	yes, describe:		
Bedrock			3. Surfa	ice seal:		Bentonite 🛛 30
12 Sieve analysis attached?	NINA					Concrete 🛛 01
						Uther LI
14. Drilling method used: Rotar	y □50		4. Mate	rial between	well casing and protect	ive pipe:
Hollow Stem Aug	er ⊠41					Bentonite 1 30
Oth	x ⊔⊒⊒					
15 Dilling Suidwood, Wester ED0.2	in 1710.1			ilar space sea	l: a. Granul	ar Bentonite 🖂 33
Drilling Mud CO 3 Nor			b	Lbs/gal m	ud weight Bentonite	s-sand slurry 🔲 3.5
			C	Lbs/gal m	ud weight Ber	itonite slurry 🔲 3 I
16. Drilling additives used? Yes	🖾 No		d	% Benton	ite Bentonite-	cement grout [] 50
			e		volume added for any c	Tramia C 0 I
Describe			1. F	low instaned.	Τ	
17. Source of water (attach analysis):	ł				110	Gravity 51 08
			(Dent		. Danta	
			o bent	onite seal: $11/4$ in \Box	a. Dento 1/2 in Bon	tonite granules \square 3.3
E Dentenite and ten 967 A MCI	10 0			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	/8 III. ∐ 1/2 III. Den	Other \Box
E. Bentonite seat, top It. MSL	or n. \	$\mathbf{X} \otimes \mathbf{X}$	7 Fine	sand material	· Manufacturer produ	ct name and mesh size
E Fine cond ton 90.7 A MCI		$\setminus \otimes \otimes$		Sand materia	N/A	
r. File said, top	01 11. <	\smallsetminus		olume added	f	<u></u>
G Filter pack top 90.7 ft MSL	or 7.0 ft .		8 Filter	r nack materi	al Manufacturer prod	, uct name and mesh size
	01 AL <	\sim YH H		Ba	dger Mining Corp. 45/	55
H Screen joint ton 88.7 ft MSI	or 9.0 ft -			olume added	6 bags f	+ ³
			9 Well	casing:	Flush threaded PVC	schedule 40 🖂 23
L Well bottom 78.7 ft MSL	or 19.0 ft >			ousnig.	Flush threaded PVC	schedule $80 \square 24$
	· · · · ·					Other \Box
J. Filter nack, bottom 78.2 ft MSL	or 19.5 ft.~	、 / 創 、		en material·	Schedule 40, PVC Flu	sh Threaded
			a. S	creen Type:		Factory cut [3] 1 1
K. Borehole, bottom78.2 ft. MSL	or 19.5 ft.				Co	π tinuous slot \Box 0 1
		∕ /i				Other 🗆
L. Borehole, diameter <u>8.0</u> in			b. N	lanufacturer	Johnson	
			c. Si	lot size:		<u>0.010</u> in.
M. O.D. well casing <u>2.37</u> in			d. S	lotted length:		<u>10.0</u> ft.
· · · · · · · · · · · · · · · · · · ·			11. Back	dill material	(below filter pack):	None 🖂 14
N. I.D. well casing 2.04 in.					-	Other 🗖 📃
•						
I hereby certify that the information on this for	rm is true and correct	to the best of my	knowledge.			
Signature & CI CI	All Firm	GHD, Inc.				Tel: 920-849-9797

Please complete both Forms 4469-113A and 4400-113B and return to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and condut involved. Personnally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin Department of Natural Resources <u>Route To:</u>	Watershed/Wastewater 🔲 Remediation/Redevelopment 🖂	Waste Management 🗌 Other 🔲	MONITORING WELL CONSTRUCTION Form 4400-113A Rev. 6-97
Facility/Project Name	Local Grid Location of Well		Well Name
Brown's of Two Rivers	10 ft. $\square N$.	57 ft. ΘW	BA-MW9
Facility License, Permit or Monitoring No.	Grid Origin Location	(Check if estimated: 🖂)	Wis. Unique Well No. DNR Well Number
	Lat Lon	g ' ' or	PIO 335
Facility ID	St Plane 791,023 ft N	2,638,476 ft E SACYN	Date Well Installed
03-36-223946	Section Location of Waste/Source		12/14/1999
Type of Well	NW 1/4 - 5 SF 1/4 - 5 Sec. 1	T 19 N D 24 CT	Well Installed By: (Person's Name and Firm
Well Code 11/mw	Location of Well Relative to Waste	N, RW	Brian
Distance Well Is From Waste/Source Boundary 0 ft.	u Upgradient s Sic d Downgradient n No	degradient ot Known	Environmental Drilling Services
A. Protective pipe, top elevation	07.17 ft. MSL	I. Cap and lock?	🖸 Yes 🗆 No
B. Well casing, top elevation	<u>26.51</u> ft. MSL	2. Protective cover p a. Inside diameter	bipe: .:
C. Land surface elevation	<u>97.2</u> ft. MSL	b. Length:	<u> 1.0 </u>
D. G	10 0	c. Material:	Steel 🖸 04
			Other 🗆 🛄
12. USC classification of soil near screen:	State in the second	d. Additional prot	tection?
GP GM GC GW S		If yes, describe	
Bedrock		3. Surface seal:	Bentonite 📋 3 0
13 Sieve analysis attached? Ves			
14. Drilling method used: Kota		4. Material between	well casing and protective pipe. Bentanita \mathbb{N} 3.0
Honow Stein Aug			Other D
		· · ·	
15 Drilling fluid used: Water $\Box 0.2$ A	.ir 🗆 0.1	5. Annular space set	al: a. Granular Bentonite 🖾 3.3
Drilling Mud 0 0 3 Nor		bLbs/gai n	and weight Bentonite-sand slurry [] 35
		d % Bentor	nite Bentonite-compation of 50
16. Drilling additives used?	🖾 No 🛛 🛞	$e Ft^3$	volume added for any of the above
		f. How installed	
Describe	📓 🕅		Tremie pumped 🔲 02
17. Source of water (attach analysis):			Gravity 🖂 08
		6. Bentonite seal:	a. Bentonite granules 🖂 3 3
		∮ / b. □1/4 in. □	$3/8$ in. $\Box 1/2$ in. Bentonite pellets $\Box 32$
E. Bentonite seal, top96.2 ft. MSL	or <u>1.0</u> ft.	c	Other 🗆 🔔
		7. Fine sand materia	al: Manufacturer, product name and mesh size
F. Fine sand, top94.2 ft. MSL	or <u>3.0</u> ft.	a	<u>N/A</u>
04.2 · · · · · ·		b. Volume added	ft ²
G. Filter pack, top $-\frac{94.2}{100}$ ft. MSL	or ft.	8. Filter pack mater	al: Manufacturer, product name and mesh size
93.2 0 MSI	40.0		6 hogg o ³
H. Screen joint, top It. MSL		b. Volume added	$\underbrace{\text{Obags}}_{\text{FL}} \text{ ft}^{-1}$
Well bottom 83.2 A MSI	or 14.0 e.	9. well casing:	Flush threaded PVC schedule $40 \square 23$
			Other
J. Filter pack, bottom 82.2 ft. MSL	or <u>15.0</u> ft.	10. Screen material:	Schedule 40, PVC Flush Threaded
K Borshole bottom 82.2 ft MSI	or 15.0 ft -	a. Screen Type:	Factory cut 🖾 1 1
K. Borenoic, bottom It. MSE	61 <u> </u>		Other
I Borehole diameter 8.0 in		b Manufacturer	Johnson
E. Forenoie, manieter III.		c. Slot size:	
M. O.D. well casing 2.37 in		d. Slotted length	<u>10.0</u> E
		11. Backfill material	(below filter pack): None 1 4
N. I.D. well casing <u>2.04</u> in.			Other 🗆 📃
I hereby certify that the information on this fo	rm is true and correct to the best of m	v knowledge.	
Signature - / / / / / /	Firm GHD Inc	<u></u>	Tel. 020-840-9797
tomath I Mitt	820 West Mair	a Street Chilton, WI 53014	Fax: 920-849-916
Please complete both Forms 4400-113A and 4400-	-113B and return to the appropriate DNR	office and bureau. Completion of t	hese reports is required by chs. 160, 281, 283, 289,

Please complete both Forms 4400-113 A and 4400-113B and return to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and condut involved. Personnally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin Department of Natural Resources <u>Route To:</u>	Watershed/Wastewater 🔲 Remediation/Redevelopment 🖂	Waste Management	MONITORING WELL CONSTRUCTION Form 4400-113A Rev. 6-97
Facility/Project Name	Local Grid Location of Well		Well Name
Brown's of Two Rivers	<u>ft.</u> 🖸 S	<u>83ft. 🕁 🛱 .</u>	BA-MW10
Facility License, Permit or Monitoring No.	Grid Origin Location	(Check if estimated: 🖂)	Wis. Unique Well No. DNR Well Number
	Lat Lo	ong or	PIO 336
Facility ID	St. Plane ft. N,	<u>2,638,450</u> ft. E. S/C/N	Date Well Installed
03-36-223946	Section Location of Waste/Source		12/14/1999
Type of Well	NW 1/4 of _SE 1/4 of Sec	<u>1 T. 19 N.R. 24 \Box W</u>	Well installed By: (Person's Name and Firm)
Well Code 11/mw	Location of Well Relative to Wast	te/Source	Brian
Boundary 22 A	u 🗵 Upgradient s 🗆	Sidegradient	Environmental Drilling Services
A. Protective pipe, top elevation	6.77 ft. MSL	1. Cap and lock?	∑ Yes □ No
B. Well casing, top elevation9	26.32 ft. MSL	2. Protective cover j a. Inside diameter	pipe:
C. Land surface elevation	96.8 ft. MSL	b. Length:	<u> 1.0 ft</u> .
95 8 0 1 1 1	1.0 0 3.45.44	c. Material:	Steel 🖸 0.4
D. Surface seal, bottom it. MSL	or <u>1.0</u> ft.		Other 🗆 🔄
12. USC classification of soil near screen:	man to	d. Additional prot	tection?
GP GM GC GW SV		If yes, describe	
		3. Surface seal:	Bentonite 🔲 3 0
13 Sieve analysis attached?			Concrete 🖸 01
14. Drilling method used: Rotar		4. Material between	Rentonita II 30
Hollow Stem Aug			Other \Box
Uu		6 1	
15. Drilling fluid used: Water □02 A	ir □01	b I bs/gal r	al: a. Granular bentonite 3.5
Drilling Mud 03 Nor	ne 🖂 9 9	c Lbs/gal n	nud weight \therefore Bentonite shurry \square 31
		d% Benton	nite Bentonite-cement grout [] 50
16. Drilling additives used?	⊠ No	eFt ³	volume added for any of the above
		f. How installed	l: Tremie 🗆 01
Describe		8	Tremie pumped 🔲 02
17. Source of water (attach analysis):			Gravity 🖸 08
		6. Bentonite seal:	a. Bentonite granules 🗵 33
		b. $\Box 1/4$ in. \Box	$3/8$ in. $\Box 1/2$ in. Bentonite pellets $\Box 32$
E. Bentonite seal, top95.8 ft. MSL	or <u>1.0</u> ft.	C	Other
		7. Fine sand materia	al: Manufacturer, product name and mesh size
F. Fine sand, top91.8 ft. MSL	or 3.0 ft.		N/A
C Eliterate 918 e MCI	50 0	B. Volume added	II
G. Filter pack, top It. MSL	or it.	o. Phier pack mater	adger Mining Corp. 45/55
H. Screen joint, top 89.8 ft, MSL	or 7.0 ft	ab. Volume added	6 bags fr ³
		9. Well casing:	Flush threaded PVC schedule 40 🖸 23
I. Well bottom 79.8 ft. MSL	or <u>17.0</u> ft.	1	Flush threaded PVC schedule 80 🔲 2.4
		hL	Other 🗆 🔄
J. Filter pack, bottom79.3 ft. MSL	or <u>17.5</u> ft.	10. Screen material:	Schedule 40, PVC Flush Threaded
		a. Screen Type:	Factory cut 🖾 11
K. Borehole, bottom ft. MSL	or -17.5 ft.		Continuous slot 🗆 0 1
		×	Other
L. Borehole, diameter $\frac{8.0}{10}$ in.		b. Manufacturer	<u> </u>
M O D well as in 237		c. Slot size; d. Slottad landt	. <u>100 a</u>
M. U.D. well casing 2.57 in.		u. Stoticu iengin	(helow filter nack): None 🗔 1.4
N LD well casing 2.04 :-			Other
In i.i., wen casing III.			
I hereby certify that the information on this fo	rm is true and correct to the best of	my knowledge.	······································
Signature	Firm GHD Inc	· <u>····································</u>	Tel: 920-849-9797
throthen L. Utt	820 West M	ain Street Chilton, WI 53014	Fax: 920-849-9160

Please complete both Forms 4400-113A and 4400-113B and return to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and condut involved. Personnally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin Department of Natural Resources <u>Route To:</u>	Watershed/W Remediation	/astewater □ Redevelopment ⊠	Waste Man Other □	agement 🔲	MONITORING WELL CONSTRUCTION Form 4400-113A Rev. 6-97
Facility/Project Name	Local Grid Lo	cation of Well			[Well Name
Brown's of Two Rivers	48	$\Pi N.$	5 ft	E.	BA-MW11
Facility License, Permit or Monitoring No.	Grid Origin Lo	cation	(Check	if estimated: $[X]$)	Wis, Unique Well No. IDNR Well Number
	L at °	' " To	°	· · · · · · · · · · · · · · · · · · ·	PIO 337
Facility ID	Lat		ng		Date Well Installed
	St. Plane	<u>90,985</u> ft. N, _	2,638,528	ft. E. S/O/N	
<u>03-36-223946</u>	Section Locati	on of Waste/Source		5 1	12/14/1999
lype of well	<u>NW</u> 1/4 of	SE 1/4 of Sec.	I T. 19	N.R. 24	(Well installed By: (Person's Name and Firm)
Well Code 11/mw	Location of W	ell Relative to Wast	e/Source		Brian
Distance Well Is From Waste/Source	u 🗆 Upgra	dient s 🖸 S	idegradient		
Boundary 64 ft.	d 🛛 Down	gradient n 🗆 N	lot Known		Environmental Drilling Services
A. Protective pipe, top elevation9	7.80 ft. MSL		⊐ ¶1.	. Cap and lock?	🖾 Yes 🗆 No
P. Well assing top elevation	741 e MSI			. Protective cover p	pipe:
b. wen casing, top elevation	The INCOL			a. Inside diameter	$\frac{9.0}{10}$ in.
C. Land surface elevation	<u>97.8</u> ft. MSL			b. Length:	<u> 1.0 </u>
D.C	10 0	TTO TO	1. 19 19	c. Material:	Steel 🖸 04
D. Surface seal, bottom it. MSL	or <u>1.0</u> ft		N AGE IS	·····	Other 🛛 📖
12. USC classification of soil near screen:		march:	A A CONTRACT	d. Additional prot	tection? 🗆 Yes 🗵 No
GP GM GC GW SV			X	If yes, describe	
SM SC SC ML MH CI	L CH		$\exists \setminus \setminus$		Bentonite 🗇 30
Bedrock			∭ \ ` 3.	. Surface seal:	Concrete 🖂 01
13. Sieve analysis attached?	🖸 No				Other 🗆
Lt Drilling method used: Retar	~ [] 5.0		S NA	Material between	well casing and protective pipe:
Hellow Stem Aug	y [] 50 		× .	. Material between	Bentonite 51 3.0
Hollow Stem Auge	лы(+). m		8		
One			8		
			St5.	. Annular space sea	al: a. Granular Bentonite 🖸 33
15. Drilling fluid used: Water $\Box 02$ A			💥 b)Lbs/gal n	uud weight Bentonite-sand slurry 🔲 35
Drilling Mud LU3 Non	ie ⊠99		× ×	cLbs/gal n	nud weight Bentonite slurry 🔲 3 1
16 Deilling additions used? Di Ver	EN No.		8 d	 Bentor 	hite Bentonite-cement grout \Box 50
16. Drining additives used?	E NO		🛞 e	eFt ³	volume added for any of the above
			× [8	f. How installed	: Tremie 🗆 01
Describe			8		Tremie pumped 🔲 02
17. Source of water (attach analysis):			8		Gravity 🖾 08
			8 6	Bentonite seal	a Bentonite granules [3] 3.3
			× /	$h \square 1/4$ in \square	$3/8$ in $\Box 1/2$ in Bentonite pellets $\Box 3/2$
E Bontonito coal ton 96.8 A MSI	or 1.0	↔	፟ /	с.	
E. Dentonite sear, top It. MSE	01	"`\ 🛞	8 / 7	Fine sand materia	al: Manufacturer, product name and mesh size
978 G MGI	5.0		፟ / /"	. I me sand materie	N/A
F. Fine sand, top 22.6 ft. MSL	or	$\mathbf{n} \searrow \bigotimes$	፠/ /	a	
	5.0		×/ .	b. Volume added	It
G. Filter pack, top $-\frac{92.6}{10}$ ft. MSL	or		× /8	. Filter pack mater	ial: Manufacturer, product name and mesh size
	7.0		1 /	aB	adger Mining Corp. 45/55
H. Screen joint, top90.8 ft. MSL	or/.0	ft.		b. Volume added	<u> 6 bags </u>
			9.	. Well casing:	Flush threaded PVC schedule 40 🖂 23
I. Well bottom	or <u>17.0</u>	ft. 🔪 🛛 🗐	1		Flush threaded PVC schedule 80 🛛 24
			\checkmark		Other 🗆 📖
J. Filter pack, bottom78.3 ft. MSL	or <u>19.5</u>	ft [2]	10	. Screen material:	Schedule 40, PVC Flush Threaded
				a. Screen Type:	Factory cut 🗵 1 1
K. Borehole, bottom78.3 ft. MSL	or <u>19.5</u>	ft. \		31	Continuous slot \Box 0 1
					Other \Box
I Borehole diameter 8.0 in			X	h Manufacturer	Johnson
2. 20101010, unuffotor III.			\mathbf{i}	c. Slot eize	0.010 in
MOD well easing 237 :				d Slotted langth	. <u> </u>
m, $0.D$, went casing <u>2.5</u> m.			\searrow	Backfill material	(below filter pack): None 🔽 14
204			11.	. Duckini material	
N. I.D. well casing 2.04 in.					
These sector states and the sector states of the sector states and			1 1 1 1		<u> </u>
i nercoy certify that the information on this for	m is true and c	orrect to the best of i	ny knowledge.	······································	
Signature II. MAIL		GHD, Inc.			Tel: 920-849-9797
TUMORA X UT		820 West Ma	in Street Chilto	on, WI 53014	Fax: 920-849-9160

Please complete both Fortige 4400-113A and 4400-113B and return to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and condut involved. Personnally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 6-97

Route To: Watershed/	Wastewat	er 🗌	Wa	iste Management [
Remediation	n/Redevel	opment 🖂	Oth	ner 🗖			
Facility/Project Name		County			We	ell Name	
Brown's of Two Rivers		M	Iani	towoc		BA-	MW7
Facility License, Permit or Monitoring Number		County Code	Wi	s. Unique Well Nu	mber	DNR Well	Number
		36		PIO 3	39		
······································			1	····			
1. Can this well be purged dry?	🖾 Yes	i 🗆 No			Bef	ore Development	After Development
			11.	Depth to Water			
2. Well development method:				(from top of	a.	13.21 ft.	Dry ft.
surged with bailer and bailed	⊠ 4	1		well casing)			
surged with bailer and pumped		1 .					
surged with block and bailed	□ 4	2	1	Date	b.	12/15/1999	12/15/1999
surged with block and pumped	□ 6	2					
surged with block, bailed, and pumped	07	0					
compressed air	2	0		Time	C.	01:00 pm	04:00 pm
bailed only		0	Į				
pumped only	D 5	1	12.	Sediment in well		0.0 inches	inches
pumped slowly		0		bottom			
other		<u> </u>	13.	Water clarity	Cle	ar 🗌 10	Clear 🔲 20
					Tur	bid 🖾 15	Turbid 🖾 25
3. Time spent developing well		30 min.			(Des	scribe)	(Describe)
					<u></u>	urbid	Turbid
4. Depth of well (from top of well casing)	1	.9.1 ft.					
5. Inside diameter of well	2	2.00 in.					
			ļ			<u> </u>	
6. Volume of water in filter pack and well							
casing		4.4 gal.					
			Fil	l in if drilling fluid	s were	used and well is at so	lid waste facility:
7. Volume of water removed from well		2.0 gal.					
		U	14	. Total suspended		mg/l	mg/l
8. Volume of water added (if any)		0.0 gal.		solids			
		Ū					
9. Source of water added			15	. COD		mg/l	mg/l
			16.	Well developed by	: Perso	on's Name and Firm	
10. Analysis performed on water added?	🗆 Ye	5 🛛 No		Tim Of	•		
(If yes, attach results)				inn Ot	•		
				GHD, I	nc.		

17. Additional comments on development:

Facility Address or Owner/Responsible Party Address	I hereby certify that the above information is true and correct to the best of my
Name: Mr. Raymond Brown	knowledge.
Firm: Brown's of Two Rivers	Signature: Linothy Latt
Street: 1400 Washington Street	Print Name: Timothy L. Off
City/State/Zip: Two Rivers, WI 54241	Firm: <u>GHD, Inc.</u>

MONITORING	WELL DEVELOPMENT	
Form 4400-113B	Rev. 6-97	

Form 4400-113B

Route To; Watershed/	Wastewat	er 🗍	Wa	iste Management []				
Remediatio	n/Redevel	opment 🗵	Oth	ner 🗖					
Facility/Project Name		County			We	ll Name			
Brown's of Two Rivers		M	lani	towoc			BA-	-MW8	
Facility License, Permit or Monitoring Number		County Code	Wi	s. Unique Well Nu	mber		DNR Weil	l Number	
		36		PIO 33	38				<u> </u>
1. Can this well be purged dry?	🗆 Yes	S 🖾 No	111	Depth to Water	Befo	ore Deve	lopment	After Develo	opment
 Well development method: surged with bailer and bailed surged with bailer and pumped surged with block and bailed surged with block and pumped 	⊠ 4 □ 6 □ 4	1 1 2 2		(from top of well casing) Date	a. b.	12/15/	14.34 ft. /1999	12/15/1	Dry ft.
surged with block, bailed, and pumped compressed air bailed only pumped only pumped slowly other		0 0 0 1 0	12.	Time Scdiment in well bottom Water clarity	c. Clea	01:3 0.0	0 pm 0 inches 0	04:30 Clear 🗆 20) pm inches
3. Time spent developing well		30 min.			Turi (Des <u>Tu</u>	bid ⊠ 1 cribe) 1rbid	5	Turbid ⊠ 25 (Describe) Turbid	
4. Depth of well (from top of well casing)	1	8.6 ft.			<u></u>	·		. <u></u>	·
5. Inside diameter of well	2	2.00 in.							
6. Volume of water in filter pack and well casing		3.2 gal.		1 in 16 d inter Octo					
7. Volume of water removed from well		2.5 gal.	14.	. Total suspended	s were	used and v	mg/l	ind waste factifity:	mg/l
8. Volume of water added (if any)		0.0 gal.		solids			U		-
9. Source of water added			15.	COD			mg/l		mg/l
10. Analysis performed on water added? (If yes, attach results)	C Yes	5 🗆 No	16.	Well developed by Tim Ott GHD, I	: Perso	on's Name	and Firm		

17. Additional comments on development:

Facility Address or Owner/Responsible Party Address	I hereby certify that the above information is true and correct to the best of my					
Name: Mr. Raymond Brown	knowledge.					
Firm: Brown's of Two Rivers	Signature: Chrothy I. att					
Street: 1400 Washington Street	Print Name: Timothy L. Ott					
City/State/Zip: Two Rivers, WI 54241	Firm: <u>GHD, Inc.</u>					

MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 6-97

Route To: Watershed/V	Vastewat	ter [Wa	ste Management [
Remediation	/Redeve	elopr	nent 🖂	Oth	ier 🔲					
Facility/Project Name			ounty			We	ell Name			
Brown's of Two Rivers			Ma		towoc	BA-			-MW9	
Facility License, Permit or Monitoring Number		C	ounty Code	Wi	s. Unique Well Nu	mber		DNR Well	Number	-
			36		PIO 3	35				
1. Can this well be purged dry?	🗵 Ye	es	□ No	11.	Depth to Water	Bef	ore Deve	elopment	After Develo	pment
2. Well development method: surged with bailer and bailed surged with bailer and pumped surged with block and bailed		41 61 42			(from top of well casing) Date	а. b.	12/15	12.49 ft. /1999	12/15/1	Dry ft. 999
surged with block and pumped surged with block, bailed, and pumped		52 70			Time		11.0	10 nm	02.00	
compressed air bailed only pumped only pumped slowly other		20 10 51 50		12.	Sediment in well bottom Water clarity	c. Cle	0.	0 inches	02:00 Clear □ 2.0	inches
3. Time spent developing well		1	5 min.		ŗ	Tur (De T	rbid 🖸 1 scribe) urbid	. 5	Turbid 🖸 25 (Describe) Turbid	
4. Depth of well (from top of well casing)		14.	4 ft.						<u>~ · · · · · · · · · · · · · · · · · · ·</u>	
5. Inside diameter of well	:	2.0	0 in.					·····		
6. Volume of water in filter pack and well casing		1.	4 gal.	Fil	l in if drilling fluid		used and y	well is at so		
7. Volume of water removed from well		0.	5 gal.	14	Total suspended		used and	mg/l	nia wasto raonny.	mg/l
8. Volume of water added (if any)		0.	0 gal.		solids			8		
9. Source of water added				15.	COD			mg/l		mg/l
10. Analysis performed on water added?		es	□ No	16.	Well developed by	: Pers	on's Name	and Firm		
(If yes, attach results)					Tim Ot GHD, I	t inc.				

17. Additional comments on development:

Facility Address or Owner/Responsible Party Address	I hereby certify that the above information is true and correct to the best of my
Name: Mr. Raymond Brown	knowledge.
Firm: Brown's of Two Rivers	Signature: Timokhy Gett
Street: 1400 Washington Street	Print Name: Timothy L. Off
City/State/Zip:Two Rivers, WI 54241	Firm: <u>GHD, Inc.</u>

MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 6-97

Route To: Watershed/Wastewater			Waste Management 🗌					
Remediation	/Redevel	opment 🖂	Other 🗌					
Facility/Project Name		County		Well Name				
Brown's of Two Rivers		Manitowoc			BA-I	MW10		
Facility License, Permit or Monitoring Number		County Code Wis. Unique Well Numb			DNR Well	Number		
		36	PIO 3	36				
				D	D 1			
1. Can this well be purged dry?		NO	11 Depth to Water	Beloi	re Development	After Development		
2 Wall development method:			(from top of		10.28	D 0		
2. well development method:	5 •	1	well casing)	а.	12.38 ft.	Dry n.		
surged with baller and balled	4	1						
surged with basier and pumped		1	Date	ъ	12/15/1999	12/15/1999		
surged with block and balled		2	Date	υ.	12/13/1999	12/13/1999		
surged with block and pumped		2						
surged with block, balled, and pulliped		0	Time	6	11-30 nm	02·30 pm		
compressed air		0	TIMÇ	U.	11.50 pm	02.50 pm		
		1	12 Sediment in well		0.0 inches	inches		
pumped only		1	bottom		0.0 menes	menes		
pumped slowly		V	13 Water clarity	Clear		Clear II 20		
other			15. Water clarity	Turbi	id 🖾 15	Turbid 🖾 25		
		20		(Desci	ribe)	(Describe)		
3. Time spent developing well		30 min.		(2000) T		Turkid		
4. Depth of well (from top of well casing)	1	5.4 ft.		<u> </u>				
5. Inside diameter of well	2	.00 in.		<u></u>		<u></u>		
6. Volume of water in filter pack and well					····			
casing		2.3 gal.		· •••••	······			
			Fill in if drilling fluid	s were u	sed and well is at so	lid waste facility:		
7. Volume of water removed from well		1.0 gal.				·		
		•	14. Total suspended		mg/l	mg/l		
8. Volume of water added (if any)		0.0 gal.	solids					
9. Source of water added			15. COD		mg/l	mg/l		
			16. Well developed by	: Person	's Name and Firm	<u> </u>		
10. Analysis performed on water added?	□ Yes	🗆 No	Tim Ott	;				
(11 yes, attach results)			GHD, I	nc.				

17. Additional comments on development:

Facility Address or Owner/Responsible Party Address	I hereby certify that the above information is true and correct to the best of my				
Name: Mr. Raymond Brown	kliowicige.				
Firm: Brown's of Two Rivers	Signature: Tomothy L CH				
Street: 1400 Washington Street	Print Name: Timothy L. Off				
City/State/Zip: Two Rivers, WI 54241	Firm: <u>GHD, Inc.</u>				

MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 6-97

Route To: Watershed/	Vastewate	er 🗋	Wa	ste Management 🗌]			
Remediation	/Redevel	opment 🖾	Oth	er 🗖		•		
Facility/Project Name		County	Well Name			1 Name		
Brown's of Two Rivers		I N	Ianit	towoc		BA-N	vfW11	
Facility License, Permit or Monitoring Number		County Code	Wis	s. Unique Well Nu	mber	DNR Well	Number	
		36		PIO 3	37			
			1	·········	·			
1. Can this well be purged dry?	🗆 Yes	🗆 No			Befo	re Development	After Development	
			11.	Depth to Water				
2. Well development method:				(from top of	a.	13.47 ft.	Dry ft.	
surged with bailer and bailed	⊠ 4	1		well casing)			,	
surged with bailer and pumped		1						
surged with block and bailed	□ 4	2		Date	b.	12/15/1999	12/15/1999	
surged with block and pumped	6	2						
surged with block, bailed, and pumped	D 7	0						
compressed air	□ 2	0		Time	с.	12:30 pm	03:00 pm	
bailed only		0						
pumped only	5	1	12.	Sediment in well		0.0 inches	inches	
pumped slowly		0		bottom				
other		<u> </u>	13.	Water clarity	Clea	r 🗖 10	Clear 🔲 20	
					Turt	oid 🖂 15	Turbid 🖾 25	
3. Time spent developing well		30 min.			(Des	cribe)	(Describe)	
					Tu	rbid	Turbid	
4. Depth of well (from top of well casing)	1	6.6 ft.	1		-			
5. Inside diameter of well	2	2.00 in.						
							<u></u>	
6. Volume of water in filter pack and well							.	
casing		2.3 gal.						
			Fil	l in if drilling fluid	s were	used and well is at sol	lid waste facility:	
7. Volume of water removed from well		2.0 gal.						
		9	14.	Total suspended		mg/l	mg/l	
8. Volume of water added (if any)		0.0 gal.		solids				
		e						
9. Source of water added			15.	COD		mg/l	mg/l	
			16.	Well developed by	: Perso	n's Name and Firm		
10. Analysis performed on water added?	🛛 Yes	5 🗆 No	1	Tim Ott	•			
(If yes, attach results)								
			<u> </u>	GHD, I	nc.			

17. Additional comments on development:

Facility Address or Owner/Responsible Party Address	I hereby certify that the above information is true and correct to the best of my					
Name: Mr. Raymond Brown	knowledge.					
Firm: Brown's of Two Rivers	Signature: Throthy Laft					
Street: 1400 Washington Street	Print Name: Timothy L. Off					
City/State/Zip: Two Rivers, WI 54241	Firm: <u>GHD, Inc.</u>					

(1) GENERAL INFORMATION		(2) FACILI	TY NAME	Brown's of Two	Rivers	······	
Well/Drillhole/Borehole County		Original W	ell Owner (If I	(nown)			
Location Manitowoc		Brown's	of Two Ri	vers			
	Present Wel	1 Owner					
<u>NW</u> $1/4 \text{ of } \underline{SE}$ $1/4 \text{ of Sec. } \underline{1}$; T. <u>19</u>	Brown's of Two Rivers						
(If Applicable)		Street or Ro	ute				
Gov't Lot	Grid Number	1400 W	ashington S	Street			
Grid Location		City, State,	Zip Code				
134_ft [] N. 🖾 S16	7 _{ft} 🗋 E. 🖾 W.	Two Ri	vers. WI 54	241			
Civil Town Name		Facility We	I No. and/or M	Name (If Applicab	le) WI Unique	Well No.	
Two Rivers		BA-B1		• ••			
Street Address of Well		Reason For	Abandonmen				
1400 Washington Street		Test Bo	rina				
City, Village		Date of Aba	ndonment				
Two Divora		05/26/0	5				
WELL/DRILLHOLF/BORFHOLF INFORMATION		05/20/9	9				
		(4) Denth to	Water (Fred)	10.0	······································		
(3) Original Well/Drillhole/Borehole Construction Co	mpleted On	(+) Depin to	water (reet)				
(Date)		Pump &	Piping Remo	ved?		Applicable	
	.	Liner(s)	Removed?			Applicable	
Monitoring Well Construction	n Report Available?	Screen I	Removed?		es 📙 No 🖾 Not	Applicable	
Water Well	es Ll No	Casing l	Left in Place?		es 🖄 No		
Drillhole		If No, E	xplain <u>INC</u>	Casing		<u> </u>	
⊠ Borehole						<u> </u>	
		Was Ca	sing Cut Off E	Below Surfaœ?	🗌 Yes 🖾 No		
Construction Type:		Did Sea	ling Material	Rise to Surface?	🛛 Yes 🔲 No		
Drilled Driven (Sandpoint)	Dug	Did Ma	terial Settle A	fter 24 Hours?	🗌 Yes 🖾 No		
Other (Specify)		If Yes. V	Was Hole Reto	opped?	Yes No		
······································							
Formation Type		(5) Require	d Method of P	lacing Sealing Ma	aterial		
Inconsolidated Formation	adrock	Conductor Pipe - Gravity Conductor Pipe - Pumped					
ES Officialisofidated Politiation	ecti ock	L Dump Bailer L Other (Explain)					
Total Well Depth (ft) Casing Dian	neter (in.)	(6) Sealing Materials For monitoring wells and					
(From groundsurface) Casing Dept	h (ft.) <u>n/a</u>	Neat Cement Grout monitoring well boreholes only					
			d-Cement (Co	ncrete) Grout	6	•	
Lower Drillhole Diameter (in.) $\frac{n/a}{a}$			crete		Bentonite Pellets		
			v-Sand Slurry		Granular Benton	ite	
Was Well Annular Space Grouted?			tonite Sand S	1	Bentonita Cemer	nt Grout	
If Yes. To What Depth? n/a	Feet		noine-sanu s			it Giour	
			pped Bentomi				
(7) Sealing Material Used		From (Ft.)	To (Ft.)	Sacks Sealant	Mix Ratio or Mud	Weight	
	·····						
Asphalt		Surface	0.5				
		Suitace	0.5				
Gronular Pontonita		0.5	11.0	1 6			
Granulai Bentonite	······································	0.5	11.0	I bag			
(8) Comments							
	······································						
(9) Name of Person or Firm Doing Sealing Work			FO	DR DNR OR COL	INTY USE ONLY		
GHD, Inc.			Received/Insp	ected	District/County		
Signature of Person Doing Work Date Signed							
Timoth 7. 64 102/28/00			wer/Inspector		Complying	Work	
Street or Route	Telephone Number	1 1			Noncomply	ing Work	
820 West Main Street	920-849-9797	Follow	v-up Necessar	y			
City, State, Zip Code		1		-			
Chilton WI 53014							
		Ĵ					

(1) GENERAL INFORMATION		(2) FACILITY NAME Brown's of Two Rivers				
Well/Drillhole/Borehole County		Original Well Owner (If Known)				
Location Manitowoc	Brown's	of Two Riv	vers	····		
	ΣE	Present Well	Owner			
<u>NW 1/4 of SE 1/4 of Sec. 1 ; T. 19</u>	<u>N; R_24 U W</u>	Brown's	of Two Riv	vers		
(If Applicable)		Street or Ro	ute			
Gov't Lot	Grid Number	1400 W	ashington S	treet		
Grid Location		City, State, 2	Zip Code			
$- \underbrace{46 \text{ ft. } N. \boxtimes S., 221}_{2}$	<u>_ft. [] E. 🗵 W.</u>	Two Riv	vers, WI 54	241		
Civil Town Name		Facility Well	No. and/or N	lame (If Applicab	le) WI Unique Well No.	
Two Rivers		BA-B2			·	
Street Address of Well		Reason For	Abandonment			
1400 Washington Street	<u></u>	Test Bor	ing			
City, Village		Date of Abai	ndonment			
Two Rivers		05/26/99)			
WELL/DRILLHOLE/BOREHOLE INFORMATION				0.0		
(3) Original Well/Drillhole/Borehole Construction Con	npleted On	(4) Depth to	Water (Feet)	9.0	F	
(Date)		Pump &	Piping Remo	ved? 🗌 Ye	es 🗌 No 🖄 Not Applicable	
		Liner(s)	Removed?		es 🛄 No 🖄 Not Applicable	
Monitoring Well Construction	Report Available?	Screen F	lemoved?		es [] No [X] Not Applicable	
Water Well	es 🗋 No	Casing I	eft in Place?		es 🖾 No	
L Drillhole		If No, E:	xplain <u>100</u>	Casing		
∐× Borehole						
		Was Cas	ing Cut Off B	elow Surface?	Yes 🖄 No	
Construction Type:	-	Did Seal	ing Material I	Rise to Surface?	Yes I No	
Drilled Driven (Sandpoint)	L] Dug	Did Material Settle After 24 Hours?				
Other (Specify)		If Yes, Was Hole Retopped?				
		(5) Required Method of Placing Sealing Material				
Formation Type:		Conductor Pipe - Gravity Conductor Pipe - Pumped				
Unconsolidated Formation	edrock	Dump Bailer Other (Explain)				
Total Well Depth (ft) Casing Diam	eter (in)	(6) Sealing Materials For monitoring wells and				
(From groundsurface) Casing Dentil	n(ft.) n/a	Next Cement Grout monitoring well horeholes only				
(· · · · · · · · · · · · · · · · · · ·	· · · ·		d-Cement (Co	ncrete) Grout	monitoring wen obtencies only	
Lower Drillhole Diameter (in.) n/a			crete		Bentonite Pellets	
(, <u></u>			-Sand Slurry		Granular Bentonite	
Was Well Annular Space Grouted?	No Unknown		tonite-Sand S	hirry	Bentonite-Cement Grout	
If Yes, To What Depth? n/a	Feet		nped Bentonit	e		
(7)				r		
(7) Sealing Material Used		From (Ft.)	To (Ft.)	Sacks Sealant	Mix Ratio or Mud Weight	
Topsoil		Surface	2.0			
Granular Bentonite		2.0	10.0	1 bag		
······································				3		
······································						
	<u></u>					
				l		
(8) Comments						
(0) Name of Berron or Firm Doing Sealing Work		100	E/		NTV LICE ONLY	
(y) Ivaine of Person or Pirm Doing Sealing Work			Pl Parained/Terrer	an izen UN COL	District/Courses	
Signature of Person Doing Work		(werren nisp	A100	District County		
Signalure of Let Signed			met/lptmanta-			
Street or Route	Telephone Number	- Incrie	new mappener		Complying Work	
820 West Main Street	020 840 0707	Ealler	winn Nonaece-	v	I Noncombining work	
City State Zin Code	320-049-9191		, m unitedi	л		
Children WII 52014						
Chilton, WI 53014	J .					

(1) GENERAL INFORMATION	(2) FACILITY NAME Brown's of Two Rivers				
Well/Drillhole/Borehole County	Original Well Owner (If Known)				
Location Manitowoc	Brown's of Two Rivers				
	Present Well Owner				
$\underline{NW} 1/4 \text{ of } \underline{SE} 1/4 \text{ of } \underline{Sec.} \underline{1} ; \underline{T} \underline{19} N; \underline{R} \underline{24} \underline{1} W$	Brown's of Two Rivers				
(If Applicable)	Street or Route				
Grid Location Gov't Lot Grid Number	1400 Washington Street				
	Two Pivora WI 54241				
Civil Town Name	Facility Well No. and/or Name (If Applicable) WI Unique Well No.				
Two Rivers	BA-B3				
Street Address of Well	Reason For Abandonment				
1400 Washington Street	Test Boring				
City, Village	Date of Abandonment				
Two Rivers	05/26/99				
WELL/DRILLHOLE/BOREHOLE INFORMATION	10.0				
(3) Original Well/Drillhole/Borehole Construction Completed On	(4) Depth to Water (Feet) 10.0				
(Date)	Pump & Piping Removed? Yes No Not Applicable				
Monitoring Well Construction Report Available?	Screen Removed?				
Water Well	Casing Left in Place? \Box Yes \boxtimes No				
Drillhole	If No, Explain No Casing				
Borehole					
	Was Casing Cut Off Below Surface? 🔲 Yes 🖾 No				
Construction Type:	Did Sealing Material Rise to Surface? Yes D No				
Drilled Driven (Sandpoint) Dug	Did Material Settle After 24 Hours?				
Other (Specify)	If Yes, Was Hole Retopped?				
Formation Trend	(5) Required Method of Placing Sealing Material				
Formation Type:	Conductor Pipe - Gravity Conductor Pipe - Pumped				
S Onconsolidated Portitation Dedifock	Dump Bailer Dther (Explain)				
Total Well Depth (ft) Casing Diameter (in.)	(6) Sealing Materials For monitoring wells and				
(From groundsurface) Casing Depth (ft.) <u>IVa</u>	Neat Cement Grout monitoring well borcholes only				
Lourse Drillholo Diameter (in) D/A	Sand-Cement (Concrete) Grout				
	Clay Sand Slume				
Was Well Annular Space Grouted? 🔲 Yes 🖾 No 🗌 Unknown	Bentonite-Sand Shurry				
If Yes, To What Depth? <u>n/a</u> Feet	Chipped Bentonite				
(7)					
Sealing Material Used	From (Ft.) To (Ft.) Sacks Sealant Mix Ratio or Mud Weight				
Asphalt	Surface 0.5				
Granular Portonita					
	0.5 11.0 1 bag				
(8) Comments					
(9) Name of Person or Firm Doing Sealing Work	(10) FOR DNR OR COUNTY USE ONLY				
GHD, Inc.	Date Received/Inspected District/County				
Signature of Person Doing Work Date Signed					
Tomothy 2- (Utt 02/28/00	Reviewer/Inspector Complying Work				
Street or Koute σ Telephone Number	Noncomplying Work				
620 west Main Street 920-849-9797 City State Zin Code 920-849-9797	- renow-up vecessary				
Chilton WI 53014					

(1) GENERAL INFORMATION		(2) FACILI	FY NAME	Brown's of Two	Rivers			
Well/Drillhole/Borehole County		Original We	ell Owner (If K	(nown)				
Location Manitowoc		Brown's	of Two Riv	vers				
	×Ε	Present Well	l Owner					
<u>NW</u> 1/4 of <u>SE</u> 1/4 of Sec. <u>1</u> ; T. <u>19</u>	N; R. 24 W	Brown's	of Two Riv	vers				
(If Applicable)		Street or Ro	ute					
Gov't Lot	Grid Number	1400 W	ashington S	treet				
Grid Location	· · · · · · · · · · · · · · · · · · ·	City, State, 2	Zip Code					
<u>87_ft.</u> N. 🖂 S., <u>2</u>	4_ft. □ E. ⊠ W.	Two Riv	vers, WI 54	241				
Civil Town Name		Facility Wel	I No. and/or N	lame (If Applicab	le) WI Unique Well No.			
Two Rivers		BA-B4						
Street Address of Well		Reason For	Abandonment	· · · · · · · · · · · · · · · · · · ·				
1400 Washington Street		Test Boring						
City, Village		Date of Abandonment						
Two Rivers		05/26/99)					
WELL/DRILLHOLE/BOREHOLE INFORMATION								
(3) Original Well/Drillhole/Borehole Construction Co	ompleted On	(4) Depth to	Water (Feet)	10.0				
(Date)		Pump &	Piping Remo	ved? 🗌 Y	es 🗌 No 🖾 Not Applicable			
	·····	Liner(s)	Removed?	□ Y	es 🗌 No 🖾 Not Applicable			
Monitoring Well Construction	on Report Available?	Screen F	lemoved?	Y	es 🗌 No 🖾 Not Applicable			
Water Well	Yes 🗌 No	Casing I	Left in Place?	□ Y	es 🗵 No			
Drillhole		If No. E	xplain <u>No</u>	Casing				
Borehole			-					
		Was Cas	sing Cut Off B	elow Surface?	Yes No			
Construction Type:		Did Seal	ling Material I	Rise to Surface?	Yes No			
Drilled Driven (Sandpoint)	Dug	Did Mat	erial Settle Af	ter 24 Hours?	Yes No			
C Other (Specify)								
	· · · · · · · · · · · · · · · · · · ·							
Formation Type:		(5) Required	d Method of P	lacing Sealing Ma	nterial			
Inconsolidated Formation	Redrock		ductor Pipe -	Gravity L	Conductor Pipe - Pumped			
	Deditor		np Bailer		Other (Explain)			
Total Well Depth (ft) Casing Dia	meter (in.)	(6) Sealing	Materials		For monitoring wells and			
(From groundsurface) Casing Dep	th (ft.) $\frac{n/a}{2}$	📙 Nea	t Cement Gro	ut	monitoring well boreholes only			
[-		Sand-Cement (Concrete) Grout						
Lower Drillhole Diameter (in.) $\frac{n/a}{a}$			crete		Bentonite Pellets			
			y-Sand Slurry		Granular Bentonite			
Was Well Annular Space Grouted?	No 📙 Unknown	Ben 📙	tonite-Sand S	lurry	Bentonite-Cement Grout			
If Yes, To What Depth? <u>ID a</u>	Feet		pped Bentonit	e				
(7)								
Sealing Material Used		From (Ft.)	To (Ft.)	Sacks Sealant	Mix Ratio or Mud Weight			
	······································							
Asphalt		Surface	0.5					
	······································							
Granular Bentonite		0.5	11.0	l bag				
	····							
(8) Comments				·				
(9) Name of Person or Firm Doing Sealing Work		(10)	FC	OR DNR OR COL	INTY USE ONLY			
GHD, Inc.		Date I	Received/Inspo	ected	District/Connty			
Signature of Person Doing Work	Date Signed]						
Cineth I. Ott	02/23/W	Revie	wer/Inspector		Complying Work			
Street or Route	Telephone Number]			Noncomplying Work			
820 West Main Street 920-849-9797 Follow-up Necessary								
City, State, Zip Code]	•					
Chilton, WI 53014								
		-						

(1) GENERAL INFORMATION		(2) FACILI	TY NAME	Brown's of Two	Rivers		
Well/Drillhole/Borehole County		Original We	ell Owner (If H	(nown)			
Location Manitowoc		Brown's	of Two Ri	vers			
	×Ε	Present Wel	1 Owner	- · · · · · · · · · · · · · · · · · · ·			
<u>NW</u> 1/4 of <u>SE</u> 1/4 of Sec. <u>1</u> ; T. <u>19</u>	N; R <u>24</u> \Box W	Brown's	of Two Ri	vers			
(If Applicable)		Street or Ro	ute				
Gov't Lot	Grid Number	1400 W	ashington S	treet			
Grid Location		City, State,	Zip Code				
11 ft $\square N \boxtimes S$ 11		Two Riv	vers. WI 54	241			
Civil Town Name		Facility Wel	I No. and/or N	ame (If Applicab	le) WI Unique	Well No.	
Two Rivers		BA-B5			ŕ .		
Street Address of Well		Reason For	Abandonment				
1400 Washington Street		Test Bo	ring				
City, Village		Date of Aba	ndonment				
Two Rivers		05/27/94	3				
WELL/DRILLHOLE/BOREHOLE INFORMATION	······································						
(3) Original Well/Drillbale/Borabale Construction Co	mulated On	(4) Depth to	Water (Feet)	10.5			
(3) Oliginal web/Difinitole/Borenole Collstruction Co	impleted On	Pumn &	Pining Remo	ved?	es 🗌 No 🖾 Not	Applicable	
(Date)	······	I iner(s)	Removed?		es 🗌 No 🖾 Not	Applicable	
Monitoring Well Construction	n Deport Available?	Screen I	Removed?		es 🗌 No 🖾 Not	Applicable	
		Cocing 1	aft in Diago?			Аррисанс	
			ventain No	Casing			
			xpiani <u></u>	<u></u>	······································		
Borenoic							
O second s		was Ca	sing Cut Off E	elow Surface?			
Construction Type:		Did Sea	ling Material	Rise to Surface?			
Drilled Driven (Sandpoint)	L Dug	Did Mat	ierial Settle Al	ter 24 Hours?			
L Other (Specify) If Yes, Was Hole Retopped? L Yes L No							
		(5) Require	d Method of P	lacing Sealing Ma	aterial		
Formation Type:		🛛 🖾 Con	ductor Pipe -	Gravity	Conductor Pipe - Pump	ed	
\bowtie Unconsolidated Formation	ledrock		np Bailer		Other (Explain)		
Total Well Depth (ft) Casing Dian	peter (in)	(6) Sealing	Materials		For monitoring well	e and	
(From groundsurface) Casing Dept	h(ft) n/a		t Cement Gro	•••	monitoring well bor	eboles only	
(d-Cement (Co	norota) Grout	monitoring wen out	choics only	
Lower Drillhole Diameter (in) n/a			u-cement (Co		Bantonita Ballata		
			Sand Slurer		Granular Benton	ita	
Was Well Appular Space Grouted?	No Unknown		y-Salid Sturry	·			
If Yes To What Depth? n/a	Feet		tomic-sand S	lurry		nt Grout	
			ppeu Bentonit				
(7) Sealing Material Used		From (Ft)	To (Ft)	Sacks Sealant	Mix Ratio or Mud	Weight	
	·	110111 (11.)	10(11)				
Paastana		Surface	15				
		Surface	1.5				
Cremular Pontonita		1.5	11.5	1			
Granular Bentome		1.5	11.5	I bag			
(8) Comments							
	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·					
(9) Name of Person or Firm Doing Sealing Work		(10)	FC	DR DNR OR COL	INTY USE ONLY		
GHD, Inc.	<u></u>	Date I	Received/Inspe	cted	District/County		
Signature of Person Doing Work	Date Signed]					
Conothy Z. Ult	02/28/00	Revie	wer/Inspector		Complying	Work	
Street or Route	Telephone Number]			Noncomphy	ing Work	
820 West Main Street	920-849-9797	Folley	v-up Necessar	9			
City, State, Zip Code]					
Chilton, WI 53014							

(1) GENERAL INFORMATION		(2) FACILI	ΓY NAME	Brown's of Two	Rivers					
Well/Drillhole/Borehole County		Original We	ll Owner (If K	(nown)						
Location Manitowoc		Brown's	of Two Riv	vers						
	×ε	Present Wel	Owner							
<u>NW</u> $1/4 \text{ of } \underline{SE}$ $1/4 \text{ of Sec. } 1$; T. <u>19</u>	N.R. <u>24</u> 🗌 W	Brown's	of Two Riv	vers						
(If Applicable)		Street or Ro	ute							
Gov't Lot	Grid Number	1400 W	ashington S	treet						
Grid Location		City, State, 2	Zip Code							
<u>12 ft.</u> N. 🖂 S., <u>59</u>	_ft. 🗌 E. 🖾 W.	Two Riv	ers, WI 54	241						
Civil Town Name		Facility Wel	l No. and/or N	lame (If Applicab	ole) WI	Unique Well No.				
Two Rivers		BA-B6								
Street Address of Well	······································	Reason For Abandonment								
1400 Washington Street		Test Boring								
City, Village		Date of Abandonment								
Two Rivers		05/27/99								
WELL/DRILLHOLE/BOREHOLE INFORMATION										
(3) Original Well/Drillhole/Borehole Construction Cor	npleted On	(4) Depth to	Water (Feet)	8.0						
(Date)		Pump &	Piping Remo	ved? 🗌 Y	es 🗌 No 🛛	Not Applicable				
(500)		Liner(s)	Removed?	🗌 Y	es 🗌 No 🛛	Not Applicable				
Monitoring Well Construction	Report Available?	Screen F	Removed?	🗆 Y	es 🗌 No 🛛	Not Applicable				
🗌 Water Well 🛛 🖾 Ye	es 🔲 No	Casing I	Left in Place?	🗆 Y	es 🗵 No	••				
Drillhole		If No, E	xplain <u>No</u>	Casing						
Borehole										
		Was Cas	sing Cut Off B	elow Surface?	🗌 Yes 🛛	🛛 No				
Construction Type:		Did Seal	ling Material I	Rise to Surface?	🛛 Yes 🛛] No				
Drilled Driven (Sandpoint)	Dug	Did Mat	erial Settle Af	ter 24 Hours?	🗌 Yes 🛛	🛛 No				
Other (Specify)		If Yes, V	Was Hole Reto	pped?	🗌 Yes 🛛	No				
		(6) Deciving	d Mathad of D	lasing Casting M						
Formation Type:		(5) Require	ductor Ding		alenal Conductor Dina	Dummad				
Unconsolidated Formation	edrock		ductor Pipe -	Gravity	Conductor Pipe	- Pumpea				
			np Baller		Other (Explain)) 				
Total Well Depth (ft) Casing Diam	eter (in.) $\frac{n/2}{n}$	(6) Sealing	Materials		For monitori	ng wells and				
(From groundsurface) Casing Deptr	i (ff.) <u>IVA</u>	Neat Cement Grout monitoring well boreholes only								
$r = r^{m}$			d-Cement (Co	ncrete) Grout	, —					
Lower Drilhole Diameter (In.) <u>104</u>			crete		Bentonite	e Pellets				
			y-Sand Slurry		Granular	Bentonite				
If Vac. To What Depth?	NO UNKNOWN	Ben	tonite-Sand Si	lurry		e-Cement Grout				
	Feel		pped Bentonit	e						
(7) Sealing Material Used		From (Et)	To (Et)	Sacks Sealant	Mix Patio	or Mud Weight				
	·	1 ioiii (i i.)	10(11.)	Sacks Scalam	Witx Ratio					
Passtone		Surface	1 0							
	<u></u>	Suitace	1.0		L					
Granular Bontonita		10	0.0	1 box						
	······································	1.0	9.0	1 Uag						
						·····				
					l					
(8) Comments										
	<u></u>	j								
(9) Name of Person of Firm Doing Sealing Work		(10)	FC	M DNK OR COL	JNIY USE ON	X				
GHD, Inc.		Date	<eccived inspe<="" td=""><td>cted</td><td>District/Co</td><td>ounty</td></eccived>	cted	District/Co	ounty				
Signature of Person Doing Work	Date Signed									
tompthy 2 Ult	02/28/0	Revie	wer/inspector		Cor	nplying Work				
	Lelepsone Number					complying Work				
820 West Main Street	920-849-9797	rollor	v-up Necessar	7						
City, State, Zip Code					<u> </u>					
Chilton, WI 53014		J ·								

APPENDIX B

SOIL LABORATORY ANALYTICAL REPORTS AND CHAINS OF CUSTODY



4

NORTHERN LAKE SERVICE, INC.

Analytical Laboratory and Environmental Services

400 North Lake Avenue • Crandon, WI 54520-1298 Tel: (715) 478-2777 • Fax: (715) 478-3060

^{NO.} 101399

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD Underground Storage Tank Projects Wisconsin Lab Cert. No. 721026460

RETURN THIS FORM WITH SAMPLES.				ENTER	OTHER PARA	METERS-C	НЕСК ВЕ	LOW IF FI	ELD FILTERED
CLIENT 21	PROJECT TITLE	<u></u>		7 [77		T T	1	$\Gamma T T$
Breen Dello G40 2m	Brown's Aluth	<u>ت</u>			_//_	-/-/		_//	
ADDRESS	PROJECT NO.		NO.	V /			/	/ /	
		<u>725(</u>	<u></u>	- / - 2		/ /		/ /	
		10ne	RUG SAGAT	1]]					
	1,M ()++	(<u>7,0);</u>		J.Y.			' /		'/
LAB. NO: SAMPLE ID D	ATE TIME TYPE	GRO PVOC DRO	VOC 8021 PAH	<u>JJ</u>			_/		
$(\alpha, \alpha) = (\alpha, \alpha)$	w/00 17:59 Soil								
									-
6.1 MW (13.5-14.5-)	+1'16 - - - - - - - - -	×	+ X + X + -						{
1 1 Phy 8 (0-21)	1 11:50		<u> </u>	- × 	<u> · </u>				
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	12:20								
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21195 BA MW4 (0.2)	9:12.			X	<u> </u>				
$\mathbb{Z} \mathbb{H} \mathbb{G} \mathbb{G} \mathbb{G} \mathbb{G} \mathbb{G} \mathbb{G} \mathbb{G} G$	4:18								
$\beta = 10^{10}$ ρ_{10} ρ_{10} ρ_{10} ρ_{10} ρ_{10} ρ_{10}	9.25			Y					
2219 21 mwn (10-17)	4:53								
$m_{10} = B(1 - m_{10}) (1) \leq -14 \leq 1$	10:00								
COLLECTED BY (signatures)	CI	USTODY SEAL NO. (IF ANY	() DATE/TIME		REPORT T	0			
		2	114/GA Sia	<u>n</u>	II GHE), Inc			
RELINQUISHED BY (signature) REC	EIVED BY (signature)	,	/ DATE/TIME		200	1.0	Mr.		
RELINQUISHED BY (signature) REC	EIVED BY (signature)	u	DATE/TIME			$-\infty$	TICA	10.51	
•					Chil	101	1007	·	
DISPATCHED BY (signature) MET	HOD OF TRANSPORT		DATE/TIME		1	- -	2-34		
Spand H Di	whene Express		12/11.199][· · ·			
(RECEIVED AT NLS BY (signature)	DATE/TIME	CONDITION		EMP.	INVOICE T	0			7
MA CHARTER	1111789 12:30	1 Chinhale							
SEALINHACH COUSEAL #	REMARKS & OTHER INFORMATION		t name of the		1 20	ne			
SAMPLE TYPE GW=proundwater, WW=waste water, DW=drinking	i water. S=soil				-11				
MEORTANT 1. TO MEET REGULATORY REQUIREMENTS, THIS	FORM MUST BE COMPLETED IN DE	ETAIL AND INCLUDED IN TI	HE SHIPPER CONTAIN	ING THE SAM	IPLES DESCR	IBED.	· · · · · · · · · · · · · · · · · · ·		
2. PLEASE USE ONE LINE PER SAMPLE, NOT PER 3. RETURN THIS FORM WITH SAMPLES - CLIENT	H BOTTLE. MAY KEEP PINK COPY.		CUSTO	MER COPY	,				
4. PARTIES COLLECTING SAMPLE, LISTED AS RE	PORT TO AND LISTED AS INVOICE T	TO AGREE TO STANDARD	TERMS & CONDITIONS	S ON REVERS	SE.				



NORTHERN LAKE SERVICE, INC.

Analytical Laboratory and Environmental Services

400 North Lake Avenue • Crandon, WI 54520-1298 Tel: (715) 478-2777 • Fax: (715) 478-3060

^{NO.} 101400

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD Underground Storage Tank Projects Wisconsin Lab Cert. No. 721026460

RETURN THIS FORM WITH SAMPLES.									E٨	ITER C	THER	PARAM	METER	S-CHE	CK BE	LOWI	F FIEL	D FILTERED
CLIENT	PROJECT TITLE		•						77	7	1	7	1	1	1	7	-7	77
Browns Auto 40 GIAD Inc	Browns	Auto							↓/─	-/	-	-/	\neg	-/-	1	-/-		_//
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		0.000				1 100	<u>////</u>	$\overline{1}$	j) ($\langle \rangle$	/	/	/	/	/			/
LAB. NO. SAMPLE ID	DATE TIME	TYPE	GRO	PVOC	DRO	8021	PAH	$\sqrt{}$	<u>وم الأ</u>	9	/		/		/		/	/
$\mathcal{R}_{\mathcal{O}} = \mathcal{M}_{\mathcal{O}} = $	12/14/99 10:35	Soil						x	X									
201 20-minte (10-12')	10:58	}			x	X												
BA - M(N)II (DS - 145')	11:05			-]
195-BA-MONI / 17.5-19.5)	1):1/-			Y	X													1
		Y													·	-		
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From 14-			000100		(10/10	1274	. <	Ser.									
RELINQUISHED BY (signature)	RECEIVED BY (signature)					DA	TE/TIME		<u>) (()</u>		6	off()	1nc					;
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RELINQUISHED BY (signature)	RECEIVED BY (signature)					DA	TE/TIME				C	b/t	ion.	, 6	<u>JF</u>			
DISPATCHED BY (signature)	METHOD OF TRANSPORT	г			· · · · · · · · · · · · · · · · · · ·	DA	TE/TIME						5	3014				
Frid (14)	Dinham's Ex	OVESS_			/	2/16	1.54							01				
RECEIVED AT NLS BY (signature)	DATE/TIME		· C	ONDITION	1			TE	MP.		INVO	DICE TO	о С					
Anai anaig	1 + 2/12/99-	12:00		On.	Lac		er giligent					5.						
			~	$\sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{i$	۰. ۱۰۰	-4						$\cup i i$		-				
SAMPLE TYPE GW=groundwater, WW=waste water, DW=c	rinking water, S=soil]							
	. THIS FORM MUST BE CO				ED IN TH	E SHIPF	PER CON		NG TH	E SAM	IL PLES [DESCR	IBED.					ł
2. PLEASE USE ONE LINE PER SAMPLE, N	DT PER BOTTLE.	ov					CUS	NOT	1ER C	OPY								
4. <u>NHATHE</u> S COLLENTING STATE , LISTIC		D A S INH UIC			HPARD T	га нс &	CUND	⊞ONS	<u></u>	₩ER≌								

NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services 400 North Lake Avenue - Crandon, WI 54520 Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

PAGE: 1 NLS PROJECT# 52107

Client: GHD, Inc Attn: Susan Lawrenz 820 W. Main St. PO Box 69 Chilton, WI 53014					NLS CUST	# 60346	6
Project Description: Brown's Auto							
Sample ID: Soil, BA-MW7 0-2' NLS#: Ref. Line 1 of COC 101399 Description: Soil, BA-MW7 Collected: 12/14/99 Received: 12/17/99 Reported: 01/07	221190 7/00						
Parameter	Result	Units	LOD	LOQ	Method	Analyzed 1	Lab
Cadmium, tot. as Cd Lead, tot. as Pb Solids, total on solids Metals digestion - total (soil/sludge) ICP	ND ND 91.6 yes	mg/Kg DWB mg/Kg DWB %	0.21 3.4 0.10	0.74 12	SW846 6010 SW846 6010 ASTM D2216 SW846 3050	01/04/00 01/04/00 12/20/99 12/20/99	721026460 721026460 721026460 721026460
Sample ID: Soil, BA-MW7 12.5-14.5 Ref. Line 2 of COC 101399 Description: Soil, BA-MW7 Collected: 12/14/99 Received: 12/17/99 Reported: 01/07	NLS#: 221191 7/00						
Parameter	Result	Units	LOD	LOQ	Method	Analyzed I	Lab
Solids, total on solids VOCs (soils) by EPA 8021 PAHs (solid) by SW846 8310 Organics Extraction for PAHs DRO (solid) Organics Extraction (DRO)	78.4 see attached see attached yes ND Additional Comm yes	۶ mg/Kg DWB ments: spike-82%,	0.10 2.6 duplicate-76%	8.5 , surrogat	ASTM D2216 SW846 8021 SW846 8310 SW846 3500 WI MOD DRO Ce-89% WI MOD DRO	12/20/99 7 12/27/99 7 12/28/99 7 12/21/99 7 01/03/00 7	721026460 721026460 721026460 721026460 721026460 721026460

NORTHERN LAKE SERVICE, INC. WIS. LAB CERT. NO. 721026460 Analytical Laboratory and Environmental Services 400 North Lake Avenue - Crandon, WI 54520 Tel:(715)478-2777 Fax:(715)478-3060 ANALYTICAL REPORT PAGE: 2 NLS PROJECT# 52107 NLS CUST# GHD, Inc 60346 Client: Attn: Susan Lawrenz 820 W. Main St. PO Box 69 Chilton, WI 53014 Project Description: Brown's Auto Sample ID: Soil, BA-MW8 0-2' N. Ref. Line 3 of COC 101399 Description: Soil, BA-MW8 NLS#: 221192 Collected: 12/14/99 Received: 12/17/99 Reported: 01/07/00 Result Units LOD Analyzed Lab LOQ Method Parameter

Cadmium, tot. as Cd< 0.56 >Lead, tot. as Pb10Solids, total on solids87.1Metals digestion - total (soil/sludge) ICPyes

Sample ID: Soil, BA-MW8 12.5-14.5 NLS#: 221193 Ref. Line 4 of COC 101399 Description: Soil, BA-MW8 Collected: 12/14/99 Received: 12/17/99 Reported: 01/07/00

Parameter	Result	Units	LOD	LOQ	Method	Analyzed Lab
Solids, total on solids VOCs (soils) by EPA 8021	85.1 see attached	%	0.10	s present	ASTM D2216 SW846 8021	12/20/99 721026460 12/28/99 721026460
PAHs (solid) by SW846 8310 Organics Extraction for PAHs DRO (solid)	see attached yes 74	mg/Kg_DWB	2.6	8.5	SW846 8310 SW846 3500 WI MOD DRO	01/03/00 721026460 12/21/99 721026460 01/03/00 721026460
Organics Extraction (DRO)	Peaks present bef yes	ore the DRO quantita	tion window	, surrogat w.	e-83% WI MOD DRO	12/22/99 721026460

mg/Kg DWB

mg/Kg DWB

8

0.18

2.9

0.10

0.62

10

SW846 6010 01/04/00 721026460

SW846 6010 01/04/00 721026460

ASTM D2216 12/20/99 721026460

SW846 3050 12/20/99 721026460

NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services 400 North Lake Avenue - Crandon, WI 54520 Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

.

ANALYTICAL REPORT

PAGE: 3 NLS PROJECT# 52107

- 1

Client:	GHD, Inc Attn: Susan Lawrenz 820 W. Main St. PO Box 69 Chilton, WI 53014					NLS CUST	ŧ 6034	16
Project Description	: Brown's Auto							
Sample ID: Soil, BP Ref. Line 5 of COC 101399 Collected: 12/14/99 Recei	L-MW8 17.5-19.5 NL Description: Soil, BA-MW8 ved: 12/17/99 Reported: 01/07/00	S#: 221194)			-			
Parameter		Result	Units	LOD	LOQ	Method	Analyzed	Lab
Solids, total on solid PVOCs (solid) by EPA & DRO (solid)	s 020 (MeOH)	77.4 see attached ND Additional Comm	% mg/Kg DWB ments: spike-82%.	0.10 2.6 duplicate-76%	8.5 , surrogate	ASTM D2216 WI MOD GRO WI MOD DRO a-94%	12/20/99 12/22/99 01/03/00	721026460 721026460 721026460
Organics Extraction (I	PRO)	yes	,	<u>_</u>	,	WI MOD DRO	12/22/99	721026460
Sample ID: Soil, BA Ref. Line 6 of COC 101399 Collected: 12/14/99 Recei		21195)						
Parameter		Result	Units	LOD	LOQ	Method	Analyzed	Lab
Cadmium, tot. as Cd Lead, tot. as Pb Solids, total on solid Metals digestion - tot	s al (soil/sludge) ICP	ND < 3.6 > 94.8 yes	mg/Kg DWB mg/Kg DWB %	0.20 3.4 0.10	0.72 12	SW846 6010 SW846 6010 ASTM D2216 SW846 3050	01/04/00 01/04/00 12/21/99 12/20/99	721026460 721026460 721026460 721026460 721026460

NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services 400 North Lake Avenue - Crandon, WI 54520 Tel:(715)478-2777 Fax:(715)478-3060

ANALYTICAL REPORT

WIS. LAB CERT. NO. 721026460

.

PAGE: 4 NLS PROJECT# 52107 NLS CUST#

60346

Client:	GHD, Inc Attn: Susan Lawrenz 820 W. Main St. PO Box 69 Chilton, WI 53014	
Project Descrip	cion: Brown's Auto	
Sample ID: Soil Ref. Line 7 of COC 1013	, BA-MW9 12-14' NLS#: 221196 99 Description: Soil, BA-MW9	

Collected: 12/14/99	Received: 12/17/99	Reported: 01/07/00							
Parameter			Result	Units	LOD	LOQ	Method	Analyzed	Lab
Solids, total on VOCs (soils) by 1	solids EPA 8021		82.5 see attached	25	. 0.10		ASTM D2216 SW846 8021	12/21/99 12/27/99	721026460 721026460
			Additional C surrogate val	comments: Unident ue is due to samp	ified hydrocarbo le matrix.	ons present	. High		
Organics Extract:	SW846 8310 ion for PAHs		see attached ves				SW846 8310 SW846 3500	12/28/99	721026460
DRO (solid)			26 Additional C	mg/Kg DWB comments: spike-8	2.6 2%, duplicate-76	8.5 5%, surrogat	WI MOD DRO	01/03/00	721026460
			Surrogate rec to insufficie	overy was outside nt sample.	QC limits. San	mple could r	not be reana	lyzed due	
Organics Extract:	ion (DRO)		yes				WI MOD DRO	12/22/99	721026460
Sample ID: Soi	1, BA-MW10 0-2'	NLS#: 2	21197	·····			<u>, , , , , , , , , , , , , , , , , , , </u>		
Collected: 12/14/99	Received: 12/17/99	Reported: 01/07/00							

Parameter	Result	Units	LOD ·	LOQ	Method	Analyzed Lab
Cadmium, tot. as Cd Lead, tot. as Pb Solids, total on solids Metals digestion - total (soil/sludge) ICP	ND 18 83.6 yes	mg/Kg DWB mg/Kg DWB %	0.22 3.6 0.10	0.76 13	SW846 6010 SW846 6010 ASTM D2216 SW846 3050	01/04/00 721026460 01/04/00 721026460 12/21/99 721026460 12/25/99 721026460

NORTHERN LAKE SERV Analytical Laboratory and Enviro 400 North Lake Avenue - Crando	ICE, INC. onmental Services n, W1 54520	WIS. LAB CERT. NO. 721026460						
Tel:(715)478-2777 Fax:(715)478-3	3060	ANALYTICAL F	REPORT		PAGE: 5	NLS PROJECT#)7
Client:	GHD, Inc Attn: Susan Lawrenz 820 W. Main St. PO Box 69 Chilton, WI 53014					NLS CUST	# 603 4	16
Project Description	: Brown's Auto							
Sample ID: Soil, BA Ref. Line 9 of COC 101399 (Collected: 12/14/99 Receiv	-MW10 10-12' NLS#: Description: Soil, BA-MW10 ed: 12/17/99 Reported: 01/07/00	221198						
Parameter		Result	Units	LOD	LOQ	Method	Analyzed	Lab
Solids, total on solids VOCs (soils) by EPA 802 DRO (solid)	3 21	81.2 see attached ND	% mg/Kg DWB	0.10 2.6	8.5	ASTM D2216 SW846 8021 WI MOD DRO	12/21/99 12/27/99 01/03/00	721026460 721026460 721026460
Organics Extraction (D)	20)	Additional Comme yes	ents: spike-82%, du	iplicate-76	s, surrogat	WI MOD DRO	12/22/99	721026460
Sample ID: Soil, BA Ref.Line 10 of COC 101399 Collected: 12/14/99 Receiv	-MW10 12.5-14.5 NI Description: Soil, BA-MW10 ed: 12/17/99 Reported: 01/07/00	s#: 221199				· · · · · · · · · · · · · · · · · · ·		
Parameter		Result	Units	LOD	LOQ	Method	Analyzed	Lab
Solids, total on solids PAHs (solid) by SW846 & Organics Extraction for	3310 7 PAHs	77.4 see attached yes	¥	0.10		ASTM D2216 SW846 8310 SW846 3500	12/21/99 12/28/99 12/21/99	721026460 721026460 721026460
		······			<u></u>			

NORTHERN LAKE SERV Analytical Laboratory and Envir 400 North Lake Avenue - Crando	ICE, INC. onmental Services m. WI 54520				WIS. LAB CERT. NO. 721026460				
Tel:(715)478-2777 Fax:(715)478-3060		ANALYTICAL	ANALYTICAL REPORT			NLS PROJECT# 52107			
Client:	GHD, Inc Attn: Susan Lawrenz 820 W. Main St. PO Box 69 Chilton, WI 53014					NLS CUST	\$ 60346		
Project Description	: Brown's Auto								
Sample ID: Soil, BA Ref. Line 1 of COC 101400 Collected: 12/14/99 Receiv	-MW11 0-2' NLS#: Description: Soil, BA-MW11 red: 12/17/99 Reported: 01/07/00	221200				********			
Parameter		Result	Units	LOD	LOQ	Method	Analyzed Lab		
Cadmium, tot. as Cd Lead, tot. as Pb Solids, total on solid Metals digestion - tot	s al (soil/sludge) ICP	1.7 < 4.0 > 80.3 yes	mg/Kg DWB mg/Kg DWB %	0.24 3.9 0.10	0.84 14	SW846 6010 SW846 6010 ASTM D2216 SW846 3050	01/04/00 721026460 01/07/00 721026460 12/21/99 721026460 12/25/99 721026460		
Sample ID: Soil, BA Ref. Line 2 of COC 101400 Collected: 12/14/99 Receiv	-MW11 10-12' NLS# Description: Soil, BA-MW11 red: 12/17/99 Reported: 01/07/00	: 221201)					· · · · · · · · · · · · · · · · · · ·		
Parameter		Result	Units	LOD	LOQ	Method	Analyzed Lab		
Solids, total on solid VOCs (soils) by EPA 80	s 21	88.3 see attached	%	0.10	6 . DMO6 . DMO0 . DMO0 DMO0 DMO0 DMO0 DMO0 DMO0 DMOMODMODMOMODMOMODMOMODMOMOMODMOMODMOMODMOMODMOMODMOMODMOMODMOMODMOMODMOMODMOMODMOMODMOMODMOMODMODMOMDMODMDMODMDDMDDMDDDDDDDDDDDDD	ASTM D2216 SW846 8021	12/21/99 721026460 12/27/99 721026460		
DRO (solid)		140 Additional Comm	mg/Kg DWB ents: spike-82%, dup	2.6 2icate-76%	8.5 , surrogat	WI MOD DRO e-47%	01/03/00 721026460		
Organics Extraction (D	RO)	Peaks present be yes	tore the DRO quantita	ation windo	ω.	WI MOD DRO	12/22/99 721026460		

NORTHERN LAKE SEF Analytical Laboratory and Env 400 North Lake Avenue - Crar	AVICE, INC. vironmental Services idon, WI 54520	WIS. LAB CERT. NO. 721026460						
Tel:(715)478-2777 Fax:(715)478-3060		ANALYTICAL REPORT			PAGE: 7	NLS PROJI	ECT# 52107	
Client:	GHD, Inc Attn: Susan Lawrenz 820 W. Main St. PO Box 69 Chilton, WI 53014					NLS CUST	# 60346	
Project Descriptio	on: Brown's Auto			•				
Sample ID: Soil, F Ref.Line 3 of COC 101400 Collected: 12/14/99 Rec	BA-MW11 12.5-14.5' Description: Soil, BA-MW11 eived: 12/17/99 Reported: 01/07/0	NLS#: 221202 0						
Parameter		Result	Units	LOD	LOQ	Method	Analyzed Lab	
Solids, total on sol: PAHs (solid) by SW846 Organics Extraction b	ids 5 8310 for PAHs	77.4 see attached yes	8	0.10		ASTM D2216 SW846 8310 SW846 3500	12/21/99 721026460 01/03/00 721026460 12/21/99 721026460	
Sample ID: Soil, BA-MW11 17.5-19.5 NLS#: 221203 Ref. Line 4 of COC 101400 Description: Soil, BA-MW11 Collected: 12/14/99 Received: 12/17/99 Reported: 01/07/00					· · · · · · · · · · · · · · · · · · ·			
Parameter		Result	Units	LOD	LOQ	Method	Analyzed Lab	
Solids, total on soli PVOCs (solid) by EPA	ids 8020 (MeOH)	79.7 see attached	% ments. Unidentif	0.10	Is present	ASTM D2216 WI MOD GRO	12/21/99 721026460 12/27/99 721026460	
DRO (solid)		ND Ndditional Con	mg/Kg DWB	2.6 duplicate 769	8.5	WI MOD DRO	01/03/00 721026460	
Organics Extraction (DRO)		yes			•, surroyat	WI MOD DRO	12/22/99 721026460	

Values in brackets represent results greater than the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than the LOQ are considered to be in the region of "Certain Quantitation".

LOD = Limit of Detection DWB = Dry Weight Basis LOQ = Limit of Quantitation NA = Not Applicable ND = Not Detected %DWB = (mg/kg DWB)/10000

Reviewed by:

Authorized by: R. T. Krueger Laboratory Manager ANALYTICAL RESULTS: VOC's by EPA 8021 - Methanol Extract (CXB) Page: 1

Customer: GHD, Inc Project Description: Brown's Auto Northern Lake Service Project Number: 52107

Northern Lake Service Project Number: 52107					
-	105	14.5			
Analyte	221191 Soil, BA-MW7 U.	DILUTION	LOD	LOQ	
Name	ug/kg	FACTOR	ug/kg	ug/kg	
Benzene	ND	1	5.4	19	
Bromobenzene	ND	1	9.5	33	
Bromochloromethane	ND	1	5.5	17	
Bromodichloromethane	ND	1	5.6	19	
Bromoform	ND	1	17	56	
Bromomethane	ND	1	23	72	
n-Butylbenzene	ND	1	6.5	22	
sec-Butylbenzene	ND	1	5.5	18	
tert-Butylbenzene	ND	1	6.1	19	
Carbon Tetrachloride	ND	1	14	47	
Chlorobenzene	ND	1	5.6	19	
Chloroethane	ND	1	11	40	
Chloroform	ND	1	5.9	20	
Chloromethane	ND	1	18	61	
2-Chlorotoluene		1	5.3	18	
4-Chlorotoluene	ND	1	5.7	18	
Dibromochioromethane		1	5.0	10	
1,2-Dibromo-3-Chioropropane	ЦИ	1	5.3	18	
1,2-Dibromoetnane	ND	1	15	42	
Dibromomethane	ND	1	15	40	
1,2-Dichlorobenzene	ND	1	5.6	19	
1,3-Dichiorobenzene	ND	1	5.6	19	
1,4-Dichiorobenzene	ND	1	5.5	19	
Dichiorodifiuoromethane		1	5.4	19	
1,1-Dichioroechane	ND	1	0.3	22	
1,2-Dichioroethane	ND	1	5.5	18	
1,1-Dichioroethene	ND	1	7.1	24	
cis-1,2-Dichloroethene	ND	1	6.3 5.3	22	
Lighterenergy	ND	1	5.3	10	
1,2-Dichleropropane	ND	1	10	36	
1,3-Dichioropropane	ND	1	21	73	
1 Dichleropropane	ND	1	5 4	19	
ain 1 3 Dichleropropone	ND	1	69	24	
trang 1 3 Dichloropropono	ND	1	77	23	
Ethylhopeopo	ND	1	59	20	
Lengthenzene Newachlorobutadiene	ND	1	10	36	
Teenverylbongene	ND	1	5 7	19	
n Isopropultoluene	ND	1	11	37	
P-Isopiopyitoidene	ND	1	7 9	27	
Nanhthalono	ND	1	10	36	
naphchalene n-Bronylbenzene	ND	1	5.1	18	
ortho_Yulene/Styrene	ND	1	12	40	
1 1 1 2-Tetrachloroethane	ND	1	6.2	21	
1,1,2.7 Tetrachloroethane	ND	1	5.1	18	
Tetrachloroethene	ND	1	5.4	19	
Toluene	ND	1	5.9	20	
1.2.3-Trichlorobenzene	ND	1	10	35	
1.2.4-Trichlorobenzene	ND	1	6.8	24	
1 1 1-Trichloroethane	ND	1	6.9	24	
1 1 2-Trichloroethane	ND	1	6.2	20	
Trichloroethene	ND	1	5.2	18	
Trichlorofluoromethane	ND	1	6.0	21	
1 2 3-Trichloropropage	ND	1	11	35	
1.2.4-Trimethylbenzene	ND	1	5.3	18	
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Customer: GHD, Inc Project Description: Brown's Auto Northern Lake Service Project Number: 52107

Analyte	221191 Soil, BA-MW7	DILUTION	LOD	LOQ
Name	<u>ug/kg</u>	FACTOR	ug/kg	ug/kg
1,3,5-Trimethylbenzene	ND	1	5.9	20
Vinyl chloride	ND	1	6.1	21
meta, para-Xylene	ND	1	11	39
MTBE	ND	1	11	37
Isopropylether	ND	1	6.5	22
Surrogate Recovery on 2-Bromochlorobenzene	(PID) = 112 %			
Surrogate Recovery on 2-Bromochlorobenzene	$(\text{HECD}) = 110 \$			

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Northern	Lake	Service	Project	Number:	52107

Customer: GHD, Inc	-			
Project Description: Brown's Auto		6		
Northern Lake Service Project Number: 52107		14.		
	100	ว้		
Analyte	221193 Soil, BA-MW8	DILUTION	LOD	LOQ
Name	ug/kg	FACTOR	<u>ug/kg</u>	ug/kg
Benzene	< 530 >	50	270	930
Bromobenzene	ND	50	480	1600
Bromochloromethane	ND	50	270	870
Bromodichloromethane	ND	50	280	970
Bromoform	ND	50	870	2800
Bromomethane	ND	50	1100	3600
n_Butylbenzene	12000	50	330	1100
and Butylbenzene	6200	50	270	920
set-Butylbergere	1800	50	300	970
Cert-Butyrbenzene	ND	50	680	2400
Carbon Tetrachioride	NB	50	280	2400
Chlorobenzene	ND	50	570	2000
Chloroethane	ND	50	200	2000
Chloroform	ND	50	290	2000
Chloromethane	ND	50	910	3000
2-Chlorotoluene	DM	50	270	920
4-Chlorotoluene	ND .	50	290	910
Dibromochloromethane	ND	50	250	800
1,2-Dibromo-3-Chloropropane	ND	50	270	920
1,2-Dibromoethane	ND	50	660	2100
Dibromomethane	ND	50	750	2400
1,2-Dichlorobenzene	ND	50	280	960
1,3-Dichlorobenzene	ND	50	280	970
1,4-Dichlorobenzene	ND	50	280	960
Dichlorodifluoromethane	ND	50	270	930
1,1-Dichloroethane	ND	50	310	1100
1,2-Dichloroethane	ND	50	280	880
1,1-Dichloroethene	ND	50	350	1200
cis-1,2-Dichloroethene	ND	50	320	1100
trans-1.2-Dichloroethene	ND	50	270	920
1.2-Dichloropropane	ND	50	310	1100
1.3-Dichloropropane	ND	50	520	1800
2 2-Dichloropropane	ND	50	1100	3600
1 1-Dichloropropene	ND	50	270	930
cig.1.2-Dichloropropene	ND	50	340	1200
trang 1 3-Dichloropropene	ND	50	390	1300
	8000	50	290	1000
Luyibenzene	ND	50	520	1800
Hexachiorobuladiene	4300	50	260	910
Isopropyidenzene	4500	50	540	1900
p-isopropyitoluene	1900	50	200	1400
Methylene chloride	ND	50	520	1900
Naphthalene	5800	50	520	1800
n-Propylbenzene	2900	50	260	890
ortho-Xylene/Styrene	7200	50	590	2000
1,1,1,2-Tetrachloroethane	ND	50	310	1100
1,1,2,2-Tetrachloroethane	ND	50	250	880
Tetrachloroethene	ND	50	270	940
Toluene	9400	50	290	1000
1,2,3-Trichlorobenzene	ND	50	510	1800
1,2,4-Trichlorobenzene	ND	50	340	1200
1,1,1-Trichloroethane	ND	50	340	1200
1.1.2-Trichloroethane	ND	50	310	980
Trichloroethene	ND	50	260	900
Trichlorofluoromethane	ND	50	300	1000
1.2.3-Trichloropropane	ND	50	550	1800
1.2.4-Trimethylbenzene	17000	50	270	920
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Customer: GHD, Inc Project Description: Brown's Auto Northern Lake Service Project Number: 52107

Analyte	221193 Soil, BA-MW8	DILUTION	LOD	LOQ
Name	ug/kg	FACTOR	ug/kg	<u>ug/kg</u>
1,3,5-Trimethylbenzene	12000	50	290	1000
Vinyl chloride	ND	50	300	1100
meta,para-Xylene	27000	50	560	1900
MTBE	ND	50	540	1900
Isopropylether	4700	50	320	1100
Surrogate Recovery on 2-Bromochlorobenzene	(PID) = 82.0 %			
Surrogate Recovery on 2-Bromochlorobenzene	(HECD) = 101 %			

Customer: GHD, Inc Project Description: Brown's Auto Northern Lake Service Project Number: 52107

Northern Lake Service Project Number: 52107		<u>ы п</u>		
·	201105 0-41 D. 112/1	~) DILIMION	100	100
Analyte	221196 SO11, BA-MW9	DILUTION		100
Name	ud/kg	FACTOR	<u>ug/kg</u>	
Benzene	ND	1	D.4	19
Bromobenzene		1	5.5	17
Bromochioromethane	ND	1	5.5	19
Bromodichioromethane	ND	1	17	56
Bromolorm	ND	1	22	72
Bromomethane	ND	1	65	22
n-Butyibenzene	160	1	5 5	18
sec-sucyidenzene	100 NTD	1	6 1	19
Carbon Motrachlorida	ND	1	14	47
	ND	1	5 6	19
Chloroethane	ND	1	11	40
Chloroform	NTD	1	5.9	20
Chloromethane	ND	1	18	61
2-Chlorotoluene	ND	1	5.3	18
A-Chlorotoluene	ND	1	5.7	18
Dibromochloromethane	NTD	1	5.0	16
1.2-Dibromo-3-Chloropropage	ND	1	5.3	18
1.2-Dibromoethane	ND	1	13	42
Dibromomethane	ND	1	15	48
1.2-Dichlorobenzene	ND	1	5.6	19
1. 3-Dichlorobenzene	ND	1	5.6	19
1.4-Dichlorobenzene	ND	1	5.5	19
Dichlorodifluoromethane	ND	1	5.4	19
1,1-Dichloroethane	ND	1	6.3	22
1,2-Dichloroethane	ND	1	5.5	18
1,1-Dichloroethene	ND	1	7.1	24
cis-1,2-Dichloroethene	ND	1	6.3	22
trans-1,2-Dichloroethene	ND	1	5.3	18
1,2-Dichloropropane	ND	1	6.3	22
1,3-Dichloropropane	ND	1	10	36
2,2-Dichloropropane	ND	1	21	73
1,1-Dichloropropene	ND	1	5.4	19
cis-1,3-Dichloropropene	ND	1	6.9	24
trans-1,3-Dichloropropene	ND	1	7.7	27
Ethylbenzene	< 18 >	1	5.9	20
Hexachlorobutadiene	ND	1	10	36
Isopropylbenzene	< 7.6 >	1	5.2	18
p-Isopropyltoluene	ND	1	11	37
Methylene chloride	ND	1	7.9	27
Naphthalene	200	1	10	36
n-Propylbenzene	560	1	5.1	18
ortho-Xylene/Styrene	ND	1	12	40
1,1,1,2-Tetrachloroethane	ND	1	6.2	21
1,1,2,2-Tetrachloroethane	ND	1	5.1	18
Tetrachloroethene	ND	1	5.4	19
Toluene	< 19 >	1	5.9	20
1,2,3-Trichlorobenzene	ND	1	10	35
1,2,4-Trichlorobenzene	ND	1	6.8	24
1,1,1-Trichloroethane	ND	1	6.9	24
1,1,2-Trichloroethane	ND	1	6.2	20
Trichloroethene	ND	1	5.2	18
Trichlorofluoromethane	ND	1	6.0	21
1,2,3-Trichloropropane	ND	1	11	35
1,2,4-Trimethylbenzene	920	1	5.3	18
Customer: GHD, Inc Project Description: Brown's Auto Northern Lake Service Project Number: 52107

Analyte	221196 Soil, BA-MW9	DILUTION	LOD	LOQ
Name	<u>ug/kg</u>	FACTOR	ug/kg	ug/kg
1,3,5-Trimethylbenzene	560	1	5.9	20
Vinyl chloride	ND	1	6.1	21
meta, para-Xylene	ND	1	11	39
MTBE	ND	1	11	37
Isopropylether	ND	1	6.5	22
Surrogate Recovery on 2-Bromochlorobenzene	(PID) = 171 %			
Surrogate Recovery on 2-Bromochlorobenzene	(HECD) = 109 %			

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Customer: GHD, Inc Project Description: Brown's Auto Northern Lake Service Project Number: 52107

Northern Lake Service Project Number: 52107		12)		
Analyte	221198 Soil, BA-MW10	DILUTION	LOD	LOQ
Name	ug/kg	FACTOR	ug/kg	ug/kg
Benzene	ND	1	5.4	19
Bromobenzene	ND	1	9.5	33
Bromochloromethane	ND	1	5.5	17
Bromodichloromethane	ND	1	5.6	19
Bromoform	ND	1	17	56
Bromomethane	ND	1	23	72
n-But vi benzene	ND	1	6.5	22
sec_Butylbenzene	ND	1	5.5	18
tert-Butylbenzene	ND	1	6.1	19
Carbon Tetrachloride	ND	1	14	47
Chlorobenzene	ND	1	5.6	19
Chloroethane	ND	1	11	40
Chloroform	ND	-	59	20
Chloromothane	ND	1	18	61 61
2 Chlorotoluene	ND	1	53	18
2-Chiorotoluene	ND	1	5.5	18
A-Chiorocolucide	ND	1	5.7	16
Dibromochioromechane	ND	1	5.0	10
1,2-Dibromo-3-Chioropropane	ND	1	12	10
1,2-Dibromoethane	ND	1	15	12
	ND	1	15	40
1,2-Dichlorobenzene	ND	1	5.6	19
1, 3-Dichlorobenzene	ND	1	5.5	19
1,4-Dichlorobenzene Disblorodifluoromothano	ND	1	5.0	19
1 1 Digbloreethane	ND	1	5.1	22 .
1,1-Dichloroethane	ND	1	55	10
1,2-Dichloroethane	ND	1	7 1	24
ria 1.2 Dichloroethone	ND	1	6.1	43 22
trang 1 2 Dichleroothene	ND	1	5.3	10
		1		10
1,2-Dichloropropane	ND	1	10	22
1,3-Dichloropropane	ND	1	10	30
2,2-Dichloropropane	ND	1	21	10
1,1-Dichloropropene	ND	· 1	5.4	19
CIB-1, 3-Dichloropropene	ND	1	0.9	24
trans-1, 3-Dichloropropene	ND	1	7.7	27
Ethylbenzene	ND	1	5.9	20
Hexachiorobuladiene	ND	1	10	30
Isopropylbenzene	ND ND	1	5.2	10
p-Isopropyltoluene		1	11	37
Methylene chloride	ND	1	7.9	27
Naphthalene	ND	1	10	36
n-Propylbenzene	ND	1	5.1	18
ortho-Xylene/Styrene	ND	1	12	40
1,1,1,2-Tetrachloroethane	ND	1	6.2	21
1,1,2,2-Tetrachloroethane	ND	1	5.1	18
Tetrachloroethene	ND	1	5.4	19
Toluene	ND	1	5.9	20
1,2,3-Trichlorobenzene	ND	1	10	35
1,2,4-Trichlorobenzene	ND	1	6.8	24
1,1,1-Trichloroethane	ND	1	6.9	24
1,1,2-Trichloroethane	ND	1	6.2	20
Trichloroethene	ND	1	5.2	18
Trichlorofluoromethane	ND	1	6.0	21
1,2,3-Trichloropropane	ND	1	11	35
1,2,4-Trimethylbenzene	ND	1	5.3	18

Page: 8

Customer: GHD, Inc
Project Description: Brown's Auto
Northern Lake Service Project Number: 52107

Analyte	221198 Soil, BA-MW10	DILUTION	LOD	LOQ
Name	ug/kg	FACTOR	ug/kg	<u>ug/kg</u>
1,3,5-Trimethylbenzene	ND	1	5.9	20
Vinyl chloride	ND	1	6.1	21
meta,para-Xylene	ND	1	11	39
MTBE	ND	1	11	37
Isopropylether	ND	1	6.5	22
Surrogate Recovery on 2-Bromochlorobenzene	(PID) = 109 %			
Surrogate Recovery on 2-Bromochlorobenzene	(HECD) = 113 %		•	

Customer: GHD, Inc Project Description: Brown's Auto Northern Lake Service Project Number: 52107

Northern Lake Service Project Number: 52107	(c)									
N		DITITION		100						
Analyte	221201 SOII, BA-MMIL	FACTOR	ug/kg	ug/kg						
	ND	50	270	930						
Bromobenzene	ND	50	480	1600						
Bromochloromethane	ND	50	270	870						
Bromodichloromethane	ND	50	280	970						
Bromoform	ND	50	870	2800						
Bromomethane	ND	50	1100	3600						
n-Butvlbenzene	12000	50	330	1100						
sec-Butylbenzene	2700	50	270	920						
tert-Butylbenzene	1500	50	300	970						
Carbon Tetrachloride	ND	50	680	2400						
Chlorobenzene	ND	50	280	970						
Chloroethane	ND	50	570	2000						
Chloroform	ND	50	290	1000						
Chloromethane	ND	50	910	3000						
2-Chlorotoluene	ND	50	270	920						
4-Chlorotoluene	ND	50	290	910						
Dibromochloromethane	ND	50	250	800						
1,2-Dibromo-3-Chloropropane	ND	50	270	920						
1,2-Dibromoethane	ND	50	660	2100						
Dibromomethane	ND	50	750	2400						
1,2-Dichlorobenzene	ND	50	280	960						
1,3-Dichlorobenzene	ND	50	280	970						
1,4-Dichlorobenzene	ND	50	280	960						
Dichlorodifluoromethane	ND	50	270	930						
1,1-Dichloroethane	ND	50	310	1100						
1,2-Dichloroethane	ND	50	280	880						
1,1-Dichloroethene	ND	50	350	1200						
cis-1,2-Dichloroethene	ND	50	320	1100						
trans-1,2-Dichloroethene	ND	50	270	920						
1,2-Dichloropropane	ND	50	310	1100						
1,3-Dichloropropane	ND	50	520	1800						
2,2-Dichloropropane	ND	50	1100	3600						
1,1-Dichloropropene	ND	50	270	930						
cis-1,3-Dichloropropene	ND	50	340	1200						
trans-1,3-Dichloropropene	ND	50	390	1300						
Ethylbenzene	9700	50	290	1000						
Hexachlorobutadiene	ND	50	520	1800						
Isopropylbenzene	4200	50	260	910						
p-Isopropyltoluene	2100	50	540	1900						
Methylene chloride	ND	50	390	1400						
Naphthalene	9700	50	520	1800						
n-Propylbenzene	3200	50	260	890						
ortho-Xylene/Styrene	6100	50	590	2000						
1,1,1,2-Tetrachloroethane	ND	50	310	1100						
1,1,2,2-Tetrachloroethane	ND	50	250	880						
Tetrachloroethene	ND	50	270	940						
Toluene	5500	50	290	1000						
1,2,3-Trichlorobenzene	UN ND	50	510	1200						
1,2,4-TT1CD10roDenzene		50	240	1200						
1,1,1-Trichloroethane		50	210	1200						
1,1,2-Trichioroethane		50	210	900						
Trichloroethene		50	200	1000						
		50	550	1800						
1,2,3-Trichioropropane	21000	50	270	920						
1,2,4-Trimetnylbenzene	21000	50	270	520						

Customer: GHD, Inc Project Description: Brown's Auto Northern Lake Service Project Number: 52107

Analyte	221201 Soil, BA-MW11	DILUTION	LOD	LOQ
Name	ug/kg	FACTOR	ug/kg	<u>ug/kg</u>
1,3,5-Trimethylbenzene	11000	50	290	1000
Vinyl chloride	ND	50	300	1100
meta,para-Xylene	28000	50	560	1900
MTBE	ND	50	540	1900
Isopropylether	ND	50	320	1100
Surrogate Recovery on 2-Bromochlorobenzene	(PID) = 98.0 %			
Surrogate Recovery on 2-Bromochlorobenzene	$(\text{HECD}) = 107 \ \text{\%}$			

Customer: GHD, Inc		N		
Project Description: Brown's Auto				
Northern Lake Service Project Number: 52107		6.1ª		
	12	,/		
Analyte	221191 Soil, BA-MW7	DILUTION	LOD	LOQ
Name	ug/kg	FACTOR	ug/kg	ug/kg
Acenaphthene	ND	1	1.5	5.0
Acenaphthylene	ND	1	2.0	6.5
Anthracene	ND	1	1.4	4.6
Benzo (a) anthracene	ND	1	1.4	4.8
Benzo (a) pyrene	ND	1	1.4	4.6
Benzo (b) fluoranthene	ND	1	1.5	5.1
Benzo (g,h,i) perylene	ND	1	1.9	6.2
Benzo (k) fluoranthene	ND	1	1.7	5.6
Chrysene	ND	1	1.7	5.6
Dibenzo (a,h) anthracene	ND	1	1.0	3.3
Fluoranthene	ND	1	1.6	5.5
Fluorene	ND	1	1.7	5.7
Indeno (1,2,3-cd) pyrene	ND	1	2.7	9.1
Methyl-1-Naphthalene	ND	1	2.1	6.9
Methyl-2-Naphthalene	ND	1	1.8	5.9
Naphthalene	ND	1	1.7	5.7
Phenanthrene	ND	1	1.6	5.4
Pyrene	ND	1	1.8	6.0
Surrogate Recovery on P-Terphenyl = 50.0 %		~		
		14.5)		
Analyte	221193 Soil, BA-MW8 1	DILUTION	LOD	LOQ
Name	ug/kg	FACTOR	ug/kg	ug/kg
Acenaphthene	140	25	38	130
Acenaphthylene	ND	25	51	160
Anthracene	ND	1	1.4	4.6
Benzo (a) anthracene	ND	1	1.4	4.8
Benzo (a) pyrene	< 2.1 >	1	1.4	4.6
Benzo (b) fluoranthene	< 4.8 >	1	1.5	5.1
Benzo (q,h,i) perylene	< 5.3 >	1	1.9	6.2
Benzo (k) fluoranthene	ND	1	1.7	5.6
Chrysene	< 2.5 >	1	1.7	5.6
Dibenzo (a.h) anthracene	ND	1	1.0	3.3
Fluoranthene	6.3	1	1.6	5.5
Fluorene	ND	25	43	140
Indeno (1.2.3-cd) pyrene	< 5.8 >	1	2.7	9.1
Methyl-l-Naphthalene	580	25	52	170
Methyl-2-Naphthalene	1000	25	44	150
Naphthalene	830	25	42	140
Dhenanthrene	24	1	1.6	5.4
Durana		1	1.8	6.0
Surrogate Recovery on P-Ternheny] = 68 0 %		-	1.0	0.0
purrogace vecovery on reactionerst = 00.0 4				

Customer: GHD, Inc

Project 1	Descri	iption: 1	Brown's A	Auto	
Northern	Lake	Service	Project	Number:	52107

Analyte 221196 Soil, BA-MM9 DILUTION LOD LOQ Name ug/kg mg/kg ug/kg ug/kg ug/kg Acenaphthene ND 1 1.5 5.0 Acenaphthylene ND 1 1.4 4.6 Benzo (a) anthracene ND 1 1.4 4.6 Benzo (a) anthracene ND 1 1.4 4.6 Benzo (a) pyrene 2.2 1 1.9 6.2 Benzo (g, h, i) perylene 22 1 1.9 6.2 Benzo (a, h) anthracene 11 1 1.0 3.3 Fluorene 1 1.7 5.6 Dibenzo (a, h) anthracene 1 1.7 5.6 Pluorene 14 1 1.6 5.5 Fluorene 10 1 2.7 9.1 Methyl-1-Naphthalene 160 1 1.8 5.9 Methyl-2-Naphthalene 26 1 1.6 5.4 Pyrene 22 199 Soil, BA-MWIO DILUTION LOD LOO			(4)		
Nameug/kgFACTORug/kgug/kgAcenaphthyleneND11.55.0AcenaphthyleneND11.55.0AnthraceneND11.44.6Benzo (a) anthraceneND11.44.6Benzo (a) pyrene< 3.5 >11.44.6Benzo (b fluorantheneND11.44.6Benzo (k) fluorantheneND11.55.1Benzo (k) fluoranthene2211.96.2Benzo (k) fluoranthene1111.75.6Chrysene1111.65.5Pluoranthene1411.65.7Pluoranthene9.311.75.7Indeno (1,2,3-cd) pyrene1012.16.9Methyl-2-Naphthalene16011.85.9Naphthalene2211.65.4Pyrene2211.65.4Surrogate Recovery on P-Terphenyl = 61.0 *ND11.65.4AnalyteUg/kgVFACTORUg/kgUg/kgND11.44.6Benzo (a) anthraceneND11.44.6Benzo (a) anthraceneND11.44.6Benzo (a) anthraceneND11.44.6Benzo (a) anthraceneND11.44.6Benzo (a) anthraceneND11.44.6Benzo	Analyte	221196 Soil, BA-MW9	DILUTION	LOD	LOQ
Acenaphthene ND 1 1.5 5.0 Acenaphthylene ND 1 2.0 6.5 Anthracene ND 1 1.4 4.6 Benzo (a) anthracene ND 1 1.4 4.6 Benzo (a) apyrene <3.5 > 1 1.4 4.6 Benzo (a) pyrene <3.5 > 1 1.4 4.6 Benzo (a) pyrene <22	Name	ug/kg	FACTOR	uq/kq	uq/kq
Acenaphthylene ND 1 2.0 6.5 Anthracene ND 1 1.4 4.6 Benzo (a) anthracene ND 1 1.4 4.8 Benzo (a) pyrene < 3.5 > 1 1.4 4.6 Benzo (b) fluoranthene ND 1 1.5 5.1 Benzo (c) fluoranthene 22 1 1.9 6.2 Benzo (a, h) anthracene 17 1 1.7 5.6 Dibenzo (a, h) anthracene 11 1 1.0 3.3 Fluorene 9.3 1 1.7 5.7 Indeno (1,2,3-cd) pyrene 13 1 2.7 9.1 Methyl-2-Naphthalene 160 1 1.8 5.9 Naphthalene 26 1 1.6 5.4 Pyrene 22 1 1.5 5.0 Surrogate Recovery on P-Terphenyl = 61.0 % ND 1 1.6 5.4 Pyrene 22 1 1.6 5.4	Acenaphthene	ND	1	1.5	5.0
Anthracene ND 1 1.4 4.6 Benzo (a) anthracene ND 1 1.4 4.8 Benzo (a) pyrene (3.5 > 1 1.4 4.6 Benzo (b) fluoranthene ND 1 1.5 5.1 Benzo (k) fluoranthene 22 1 1.9 6.2 Benzo (k) fluoranthene (1.8 > 1 1.7 5.6 Chrysene 17 1 1.7 5.6 Dibenzo (a,h) anthracene 11 1 1.0 3.3 Fluoranthene 14 1 1.6 5.5 Fluorene 9.3 1 1.7 5.7 Indeno (1,2,3-cd) pyrene 13 1 2.7 9.1 Methyl-1-Naphthalene 160 1 1.8 5.9 Naphthalene 26 1 1.6 5.4 Pyrene 24 1 1.6 5.0 Acenaphthene ND 1 1.4 4.6 Benzo (a) anthracene ND 1 1.4 4.6 Benzo (a) pyrene <td>Acenaphthylene</td> <td>ND</td> <td>1</td> <td>2.0</td> <td>6.5</td>	Acenaphthylene	ND	1	2.0	6.5
Benzo (a) anthraceneND11.44.8Benzo (a) pyrene< 3.5 >11.44.6Benzo (b) fluorantheneND11.55.1Benzo (g,h,i) perylene2211.96.2Benzo (k) fluoranthene2211.75.6Chrysene1711.75.6Dibenzo (a, h) anthracene1411.65.5Fluoranthene1411.65.5Fluoranthene1312.79.1Methyl-1-Naphthalene1012.16.9Methyl-1-Naphthalene16011.85.9Name2611.65.4Pyrene2411.86.0Surrogate Recovery on P-Terphenyl = 61.0 *ND11.44.6Benzo (a) anthraceneND11.44.6Benzo (a) anthraceneND11.44.6Benzo (b) fluorantheneND11.44.6Benzo (b) fluorantheneND11.44.6Benzo (b) fluorantheneND11.44.6Benzo (b) fluorantheneND11.44.6Benzo (b) fluorantheneND11.65.1Benzo (b) fluorantheneND11.96.2Benzo (b) fluorantheneND11.65.6ChryseneND11.65.6Dibenzo (a,h) anthraceneND11.6<	Anthracene	ND	1	1.4	4.6
Benzo (a) pyrene< $3.5 >$ 11.44.6Benzo (b) fluorantheneND11.55.1Benzo (g,h,i) perylene2211.96.2Benzo (k) fluoranthene<1.8 >11.75.6Chrysene1711.75.6Dibenzo (a, h) anthracene1111.03.3Fluoranthene1411.65.5Fluoranthene9.311.75.7Indeno (1, 2, 3-cd) pyrene1312.79.1Methyl-1-Naphthalene16011.85.9Maphthalene16011.85.9Naphthalene2611.65.4Pyrene2411.86.0Surrogate Recovery on P-Terphenyl = 61.0 %ND11.44.6Benzo (a) anthraceneND11.44.6Benzo (a) anthraceneND11.44.6Benzo (a) anthraceneND11.44.6Benzo (a) pyreneND11.44.6Benzo (a) pyreneND11.44.6Benzo (b) fluorantheneND11.44.6Benzo (b) fluorantheneND11.44.6Benzo (c) (b) fluorantheneND11.75.6ChryseneND11.65.5Dibenzo (a,h) anthraceneND11.75.6ChryseneND11.65.5<	Benzo (a) anthracene	ND	1	1.4	4.8
Benzo (b) fluoranthene ND 1 1.5 5.1 Benzo (g,h,i) perylene 22 1 1.9 6.2 Benzo (k) fluoranthene 22 1 1.9 6.2 Chrysene 17 1 1.7 5.6 Dibenzo (a,h) anthracene 17 1 1.7 5.6 Pluoranthene 14 1 1.6 5.5 Pluorene 9.3 1 1.7 5.7 Indeno (1,2,3-cd) pyrene 13 1 2.7 9.1 Methyl-1-Naphthalene 100 1 2.1 6.9 Methyl-2-Naphthalene 52 1 1.7 5.7 Phenanthrene 26 1 1.6 5.4 Pyrene 26 1 1.6 5.0 Surrogate Recovery on P-Terphenyl = 61.0 % ND 1 1.4 4.6 Mame 221199 Soil, BA-MNIO PACTOR ug/kg ug/kg ug/kg Acenaphthene ND 1 1.4<	Benzo (a) pyrene	< 3.5 >	1	1.4	4.6
Benzo (g,h,i) perylene2211.96.2Benzo (k) fluoranthene<1.8 >11.75.6Chrysene1711.75.6Dibenzo (a,h) anthracene1111.03.3Fluoranthene1411.65.5Fluoranthene9.311.75.7Indeno (1,2,3-cd) pyrene1312.79.1Methyl-2-Naphthalene16011.85.9Naphthalene16011.85.9Naphthalene2411.86.0Surrogate Recovery on P-Terphenyl = 61.0 %ND12.06.5Analyte221199 Soil, BA-MWIOFACTORug/kgug/kgAcenaphthyleneND11.44.6Benzo (a) anthraceneND11.44.6Benzo (a) pyreneND11.44.6Benzo (a) pyreneND11.44.6Benzo (b) fluorantheneND11.96.2Benzo (a) hi) peryleneND11.75.6ChryseneND11.75.6Dibenzo (a,h) anthraceneND11.75.6PhorantheneND11.75.6PreseneND11.75.6ChryseneND11.75.6Dibenzo (a,h) anthraceneND11.65.5PhorantheneND11.03.3Ph	Benzo (b) fluoranthene	ND	1	1.5	5.1
Benzo (k) fluoranthene< 1.8 >11.75.6Chrysene1711.75.6Dibenzo (a,h) anthracene1111.03.3Fluoranthene1411.65.5Fluoranthene1411.65.5Fluoranthene1312.79.1Methyl-1-Naphthalene1012.16.9Methyl-2-Naphthalene16011.85.9Naphthalene2611.65.4Pyrene2411.86.0Surrogate Recovery on P-Terphenyl = 61.0 %ND11.0DLOONameND12.06.5Analyte221199 Soil, BA-MW10FACTORug/kgug/kgMameND11.44.6Benzo (a) anthraceneND11.44.6Benzo (b) fluorantheneND11.96.2Benzo (k) fluorantheneND11.96.2Benzo (k) fluorantheneND11.75.6ChryseneND11.75.6Dibenzo (a,h) anthraceneND11.75.6PriveneND11.75.6Dibenzo (a,h) anthraceneND11.75.6PiborantheneND11.03.3FiluorantheneND11.03.3FiluorantheneND11.03.3FiluorantheneND	Benzo (g,h,i) pervlene	22	1	1.9	6.2
Chrysene 17 1 1.7 5.6 Dibenzo (a, h) anthracene 11 1 1.0 3.3 Fluoranthene 14 1 1.6 5.5 Fluorene 9.3 1 1.7 5.7 Indeno (1, 2, 3-cd) pyrene 13 1 2.7 9.1 Methyl-1-Naphthalene 10 1 2.1 6.9 Methyl-2-Naphthalene 160 1 1.8 5.9 Naphthalene 22 1 1.7 5.7 Phenanthrene 26 1 1.6 5.4 Pyrene 24 1 1.8 6.0 Surrogate Recovery on P-Terphenyl = 61.0 % 24 DILUTION LOD LOQ Name ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg Acenaphthylene ND 1 1.4 4.6 6 6 5 6 5 6 Acenaphthylene ND 1 1.4 4.6 6 6 5 6 6 5	Benzo (k) fluoranthene	< 1.8 >	1	1.7	5.6
Dibenzo (a,h) anthracene 11 1 1.0 3.3 Fluoranthene 14 1 1.6 5.5 Fluorene 9.3 1 1.7 5.7 Indeno (1,2,3-cd) pyrene 13 1 2.7 9.1 Methyl-1-Naphthalene 100 1 2.1 6.9 Methyl-2-Naphthalene 160 1 1.8 5.9 Naphthalene 26 1 1.6 5.4 Pyrene 24 1 1.8 6.0 Surrogate Recovery on P-Terphenyl = 61.0 % ND 1 1.5 5.0 Acenaphthene ND 1 1.4 4.6 Benzo (a) anthracene ND 1 1.4 4.6 Benzo (a) pyrene ND 1 1.4 4.6 Benzo (a) pyrene ND 1 1.9 6.2 Benzo (a) pyrene ND 1 1.4 4.6 Benzo (a) pyrene ND 1 1.4 4.6 Benzo (b) fluoranthene ND 1 1.4 4.6 <td< td=""><td>Chrysene</td><td>17</td><td>1</td><td>1.7</td><td>5.6</td></td<>	Chrysene	17	1	1.7	5.6
Fluoranthene 14 1 1.6 5.5 Fluoranthene 9.3 1 1.7 5.7 Indeno (1,2,3-cd) pyrene 13 1 2.7 9.1 Methyl-1-Naphthalene 110 1 2.1 6.9 Methyl-2-Naphthalene 160 1 1.8 5.9 Naphthalene 221 1 1.6 5.4 Pyrene 24 1 1.8 6.0 Surrogate Recovery on P-Terphenyl = 61.0 % ND 1 1.5 5.0 Analyte 221199 Soil, BA-MWI0 FACTOR ug/kg ug/kg ug/kg Name ug/kg ND 1 1.5 5.0 Acenaphthene ND 1 1.4 4.6 Benzo (a) anthracene ND 1 1.4 4.6 Benzo (a) pyrene ND 1 1.4 4.6 Benzo (a) pyrene ND 1 1.4 4.6 Benzo (b) fluoranthene ND 1 1.9 6.2 Benzo (k) fluoranthene ND 1 1.7 </td <td>Dibenzo (a.b) anthracene</td> <td>11</td> <td>1</td> <td>1.0</td> <td>3.3</td>	Dibenzo (a.b) anthracene	11	1	1.0	3.3
Fluorene 9.3 1 1.7 5.7 Indeno (1,2,3-cd) pyrene 13 1 2.7 9.1 Methyl-1-Naphthalene 100 1 2.1 6.9 Methyl-2-Naphthalene 160 1 1.8 5.9 Naphthalene 52 1 1.7 5.7 Phenanthrene 26 1 1.6 5.4 Pyrene 24 1 1.8 6.0 Surrogate Recovery on P-Terphenyl = 61.0 % 7 1.8 6.0 Name ug/kg Ug/kg Ug/kg Ug/kg Ug/kg Acenaphthene ND 1 1.4 4.6 Acenaphthylene ND 1 1.4 4.6 Benzo (a) anthracene ND 1 1.4 4.6 Benzo (a) pyrene ND 1 1.4 4.6 Benzo (b) fluoranthene ND 1 1.4 4.6 Benzo (c) (b, fluoranthene ND 1 1.9 6.2 Benzo (k) fluoranthene ND 1 1.7 5.6	Fluoranthene	14	1	1.6	5.5
Indeno (1,2,3-cd) pyrene 13 1 2.7 9.1 Methyl-1-Naphthalene 110 1 2.1 6.9 Methyl-2-Naphthalene 160 1 1.8 5.9 Naphthalene 52 1 1.7 5.7 Phenanthrene 26 1 1.6 5.4 Pyrene 24 1 1.8 6.0 Surrogate Recovery on P-Terphenyl = 61.0 % 24 1 1.8 6.0 Analyte 221199 Soil, BA-MW10 DILUTION LOD LOQ Name ug/kg U/L FACTOR Ug/kg Ug/kg Acenaphthene ND 1 1.5 5.0 Acenaphthylene ND 1 1.4 4.6 Benzo (a) anthracene ND 1 1.4 4.6 Benzo (a) pyrene ND 1 1.4 4.6 Benzo (a) pyrene ND 1 1.5 5.1 Benzo (a) fluoranthene ND 1 1.9 6.2 Benzo (k) fluoranthene ND 1 1.0 <td< td=""><td>Fluorene</td><td>9.3</td><td>1</td><td>1.7</td><td>5.7</td></td<>	Fluorene	9.3	1	1.7	5.7
Methyl-1-Naphthalene 110 1 2.1 6.9 Methyl-2-Naphthalene 160 1 1.8 5.9 Naphthalene 52 1 1.7 5.7 Phenanthrene 26 1 1.6 5.4 Pyrene 24 1 1.8 6.0 Surrogate Recovery on P-Terphenyl = 61.0 % 24 1 1.8 6.0 Name ug/kg V/ FACTOR ug/kg ug/kg Acenaphthene ND 1 1.5 5.0 Acenaphthylene ND 1 1.4 4.6 Benzo (a) anthracene ND 1 1.4 4.6 Benzo (b) fluoranthene ND 1 1.4 4.6 Benzo (c) (fluoranthene ND 1 1.9 6.2 Benzo (k) fluoranthene ND 1 1.7 5.6 Chrysene ND 1 1.7 5.6 Dibenzo (a,h) anthracene ND 1 1.0 3.3	Indeno (1 2 3-cd) pyrene	13	1	2.7	9.1
Methyl -2 - Naphthalene16011.85.9Naphthalene5211.75.7Phenanthrene2611.65.4Pyrene2411.86.0Surrogate Recovery on P-Terphenyl = 61.0 %221199 Soil, BA-MW10 $M_{\rm DILUTION}$ LODLOQNameug/kg $M_{\rm Recovery}$ $M_{\rm Rec$	Methyl-1-Naphthalene	110	1	2.1	6.9
Naphthalene 52 1 1.7 5.7 Phenanthrene 26 1 1.6 5.4 Pyrene 24 1 1.8 6.0 Surrogate Recovery on P-Terphenyl = 61.0 % 24 1 1.8 6.0 Analyte 221199 Soil, BA-MWIO DILUTION LOD LOQ Name ug/kg ug/kg ug/kg ug/kg Acenaphthene ND 1 1.5 5.0 Acenaphthylene ND 1 1.4 4.6 Benzo (a) anthracene ND 1 1.4 4.6 Benzo (b) fluoranthene ND 1 1.4 4.6 Benzo (g,h,i) perylene ND 1 1.9 6.2 Benzo (k) fluoranthene ND 1 1.7 5.6 Chrysene ND 1 1.7 5.6 Dibenzo (a,h) anthracene ND 1 1.0 3.3 Fluoranthene ND 1 1.6 5.5	Methyl-2-Naphthalene	160	1	1.8	5.9
Name2611.65.4Pyrene2411.86.0Surrogate Recovery on P-Terphenyl = 61.0 %221199 Soil, BA-MW10 M DILUTIONLODLOQName221199 Soil, BA-MW10 M DILUTIONLODLOQAnalyte221199 Soil, BA-MW10 M DILUTIONLODLOQNameug/kgug/kg M M 11.55.0AcenaphtheneND11.55.011.65.4AcenaphtyleneND11.44.661Benzo (a) anthraceneND11.44.66Benzo (b) fluorantheneND11.55.11Benzo (g,h,i) peryleneND11.96.26.2Benzo (k) fluorantheneND11.75.61Dibenzo (a,h) anthraceneND11.03.31FluorantheneND11.03.35.51	Naphthalene	52	1	1.7	5.7
Pyrene2411.86.0Surrogate Recovery on P-Terphenyl = 61.0 %221199 Soil, BA-MW10 GDILUTIONLODLOQNameug/kgug/kg Ug/kg Ug/kg Ug/kg Ug/kg Ug/kg Ug/kg AcenaphtheneND11.55.0AcenaphthyleneND12.06.5AnthraceneND11.44.6Benzo (a) anthraceneND11.44.6Benzo (b) fluorantheneND11.55.1Benzo (b) fluorantheneND11.96.2Benzo (k) fluorantheneND11.75.6ChryseneND11.03.3FluorantheneND11.03.3FluorantheneND11.03.3FluorantheneND11.65.5	Phenanthrepe	26	1	1.6	5.4
Surrogate Recovery on P-Terphenyl = 61.0 %Analyte221199 Soil, BA-MW10 GruphDILUTIONLODLOQNameug/kg Ug/kg Ug/kg Ug/kg ug/kg ug/kg ug/kg AcenaphtheneND11.55.0AcenaphthyleneND12.06.5AnthraceneND11.44.6Benzo (a) anthraceneND11.44.6Benzo (a) pyreneND11.44.6Benzo (b) fluorantheneND11.55.1Benzo (g,h,i) peryleneND11.75.6ChryseneND11.75.6Dibenzo (a,h) anthraceneND11.03.3FluorantheneND11.65.5	Durene	24	1	1.8	6.0
Analyte221199 Soil, BA-MW10DILUTIONLODLOQNameug/kgug/kgug/kgug/kgug/kgAcenaphtheneND11.55.0AcenaphthyleneND12.06.5AnthraceneND11.44.6Benzo (a) anthraceneND11.44.8Benzo (a) pyreneND11.44.6Benzo (b) fluorantheneND11.55.1Benzo (g, h, i) peryleneND11.96.2Benzo (k) fluorantheneND11.75.6ChryseneND11.75.6Dibenzo (a, h) anthraceneND11.03.3FluorantheneND11.03.3	Surrogate Recovery on P-Terphenyl = 61.0 %		~		
Analyte221199 Soil, BA-MW10 with DILUTIONLODLOQNameug/kg yg/kg yg/kg yg/kg yg/kg AcenaphtheneND11.55.0AcenaphtheneND12.06.5AnthraceneND11.44.6Benzo (a) anthraceneND11.44.6Benzo (a) pyreneND11.44.6Benzo (b) fluorantheneND11.55.1Benzo (g,h,i) peryleneND11.96.2Benzo (k) fluorantheneND11.75.6ChryseneND11.75.6Dibenzo (a, h) anthraceneND11.03.3FluorantheneND11.65.5			(4)		
Name ug/kg Y FACTOR ug/kg ug/kg Acenaphthene ND 1 1.5 5.0 Acenaphthylene ND 1 1.5 5.0 Acenaphthylene ND 1 2.0 6.5 Anthracene ND 1 1.4 4.6 Benzo (a) anthracene ND 1 1.4 4.6 Benzo (a) pyrene ND 1 1.4 4.6 Benzo (b) fluoranthene ND 1 1.5 5.1 Benzo (g,h,i) perylene ND 1 1.9 6.2 Benzo (k) fluoranthene ND 1 1.7 5.6 Chrysene ND 1 1.7 5.6 Dibenzo (a, h) anthracene ND 1 1.0 3.3 Fluoranthene ND 1 1.6 5.5	Analyte	221199 Soil, BA-MW10	DILUTION	LOD	LOQ
Acenaphthene ND 1 1.5 5.0 Acenaphthylene ND 1 2.0 6.5 Anthracene ND 1 1.4 4.6 Benzo (a) anthracene ND 1 1.4 4.8 Benzo (b) fluoranthene ND 1 1.4 4.6 Benzo (b) fluoranthene ND 1 1.5 5.1 Benzo (g,h,i) perylene ND 1 1.9 6.2 Benzo (k) fluoranthene ND 1 1.7 5.6 Chrysene ND 1 1.7 5.6 Dibenzo (a,h) anthracene ND 1 1.0 3.3 Fluoranthene ND 1 1.6 5.5	Name	ug/kg	FACTOR	uq/kq	uq/kq
Acenaphthylene ND 1 2.0 6.5 Anthracene ND 1 1.4 4.6 Benzo (a) anthracene ND 1 1.4 4.8 Benzo (a) pyrene ND 1 1.4 4.6 Benzo (a) pyrene ND 1 1.4 4.6 Benzo (b) fluoranthene ND 1 1.5 5.1 Benzo (g,h,i) perylene ND 1 1.9 6.2 Benzo (k) fluoranthene ND 1 1.7 5.6 Chrysene ND 1 1.7 5.6 Dibenzo (a,h) anthracene ND 1 1.0 3.3 Fluoranthene ND 1 1.6 5.5	Acenaphthene	ND	1	1.5	5.0
Anthracene ND 1 1.4 4.6 Benzo (a) anthracene ND 1 1.4 4.8 Benzo (a) pyrene ND 1 1.4 4.6 Benzo (a) pyrene ND 1 1.4 4.6 Benzo (b) fluoranthene ND 1 1.4 4.6 Benzo (c,h,i) perylene ND 1 1.5 5.1 Benzo (g,h,i) perylene ND 1 1.9 6.2 Benzo (k) fluoranthene ND 1 1.7 5.6 Chrysene ND 1 1.7 5.6 Dibenzo (a,h) anthracene ND 1 1.0 3.3 Fluoranthene ND 1 1.6 5.5	Acenaphthylene	ND	1	2.0	6.5
Benzo (a) anthracene ND 1 1.4 4.8 Benzo (a) pyrene ND 1 1.4 4.6 Benzo (b) fluoranthene ND 1 1.5 5.1 Benzo (g,h,i) perylene ND 1 1.9 6.2 Benzo (k) fluoranthene ND 1 1.7 5.6 Chrysene ND 1 1.7 5.6 Dibenzo (a,h) anthracene ND 1 1.0 3.3 Fluoranthene ND 1 1.6 5.5	Anthracene	ND	1	1.4	4.6
Benzo (a) pyrene ND 1 1.4 4.6 Benzo (b) fluoranthene ND 1 1.5 5.1 Benzo (g,h,i) perylene ND 1 1.9 6.2 Benzo (k) fluoranthene ND 1 1.7 5.6 Chrysene ND 1 1.7 5.6 Dibenzo (a,h) anthracene ND 1 1.0 3.3 Fluoranthene ND 1 1.6 5.5	Benzo (a) anthracene	ND	1	1.4	4.8
Benzo (b) fluoranthene ND 1 1.5 5.1 Benzo (g,h,i) perylene ND 1 1.9 6.2 Benzo (k) fluoranthene ND 1 1.7 5.6 Chrysene ND 1 1.7 5.6 Dibenzo (a,h) anthracene ND 1 1.0 3.3 Fluoranthene ND 1 1.6 5.5	Benzo (a) pyrene	ND	1	1.4	4.6
Benzo (g,h,i) perylene ND 1 1.9 6.2 Benzo (k) fluoranthene ND 1 1.7 5.6 Chrysene ND 1 1.7 5.6 Dibenzo (a,h) anthracene ND 1 1.0 3.3 Fluoranthene ND 1 1.6 5.5	Benzo (b) fluoranthene	ND	1	1.5	5.1
Benzo (k) fluoranthene ND 1 1.7 5.6 Chrysene ND 1 1.7 5.6 Dibenzo (a,h) anthracene ND 1 1.7 5.6 Fluoranthene ND 1 1.0 3.3 Fluoranthene ND 1 1.6 5.5	Benzo'(g,h,i) pervlene	ND	1	1.9	6.2
Chrysene ND 1 1.7 5.6 Dibenzo (a,h) anthracene ND 1 1.0 3.3 Fluoranthene ND 1 1.6 5.5	Benzo (k) fluoranthene	ND	1	1.7	5.6
Dibenzo (a,h) anthracene ND 1 1.0 3.3 Fluoranthene ND 1 1.6 5.5	Chrysene	ND	1	1.7	5.6
Fluoranthene ND 1 1.6 5.5	Dibenzo (a.h) anthracene	ND	1	1.0	3.3
	Fluoranthene	ND	1 .	1.6	5.5
Fluorene ND 1 1.7 5.7	Fluorene	ND	1	1.7	5.7
Indeno (1.2.3-cd) pyrene ND 1 2.7 9.1	Indeno (1.2.3-cd) pyrene	ND	1	2.7	9.1
Methyl-1-Maphthalene ND 1 2.1 6.9	Methyl-1-Naphthalene	ND	1	2.1	6.9
Methyl-2-Naphthalene ND 1 1.8 5.9	Methyl-2-Naphthalene	ND	1	1.8	5.9
Naphtalene ND 1 1.7 5.7	Naphthalene	ND	1	1.7	5.7
Phenanthrene ND 1 1.6 5.4	Phenanthrene	ND	1	1.6	5.4
Pyrene ND 1 1.8 6.0	Pyrene	ND	1	1.8	6.0
Surroqate Recovery on P-Terphenyl = 39.0 %			_	-	

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Customer: GHD, Inc Project Description: Brown's Auto Northern Lake Service Project Number: 52107

Project Description: Brown's Auto		-										
Northern Lake Service Project Number: 52107	્રુ											
Analyte	221202 Soil, BA-MW11	S DILUTION	LOD	LOQ								
Name	ug/kg (N	FACTOR	<u>ug/kg</u>	<u>ug/kg</u>								
Acenaphthene		1	1.5	5.0								
Acenaphthylene	41	1	2.0	6.5								
Anthracene	ND	1	1.4	4.6								
Benzo (a) anthracene	ND	1	1.4	4.8								
Benzo (a) pyrene	ND	1	1.4	4.6								
Benzo (b) fluoranthene	ND	1	1.5	5.1								
Benzo (g,h,i) perylene	ND	1	1.9	6.2								
Benzo (k) fluoranthene	ND	1	1.7	5.6								
Chrysene	ND	1	1.7	5.6								
Dibenzo (a,h) anthracene	ND	1	1.0	3.3								
Fluoranthene	ND	1	1.6	5.5								
Fluorene	7.9	1	1.7	5.7								
Indeno (1,2,3-cd) pyrene	ND	1	2.7	9.1								
Methvl-1-Naphthalene	200	1	2.1	6.9								
Methyl-2-Naphthalene	420	10	18	59								
Naphthalene	570	10	17	57								
Phenanthrene	< 2.5 >	1	1.6	5.4								
Pyrene	ND	1	1.8	6.0								
Surrogate Recovery on P-Terphenyl = 51.0 %												

ANALYTICAL RESULTS: WISCONSIN DNR MODIFIED GRO METHOD

Page: 1

Customer: GHD, Inc Project Description: Brown's Auto Northern Lake Service Project Number: 52107

Northern Lake Service Project Number: 52107	1-1-	19.5)		
Analyte	221194 Soil, BA-MW8	DILUTION	LOD	LOQ
Name	ug/Kg	FACTOR	ug/Kg	ug/Kg
MTBE	ND	1	21	73
Benzene	ND	1	24	84
Toluene	ND	1	18	56
Ethylbenzene	ND	1	24	81
M/P-xylene	180	1	47	150
0-xylene	ND	1	23	79
1,3,5-Trimethylbenzene	ND	1	25	86
1,2,4-Trimethylbenzene	ND	1	24	84
Surrogate Recovery on 1,2,3-Trichlorobenzene = 88	.0 %			
	1.75	- 19.5)		
Analyte	221203 Soil, BA-MW1	DILUTION	LOD	LOQ
Name	<u>ug/Kg</u>	FACTOR	ug/Kg	<u>ug/Kg</u>
MTBE	ND	4	85	290
Benzene	ND	4	98	340
Toluene	440	4	70	220
Ethylbenzene	740	4	94	320
M/P-xylene	1700	4	190	600
0-xylene	710	4	92	320
1,3,5-Trimethylbenzene	370	4	99	340
1,2,4-Trimethylbenzene	1100	4	97	330
Surrogate Recovery on 1,2,3-Trichlorobenzene = 95	.0 %			

	Company Nam Branch or Loci	ie: G. H.D.	$I_{nc.}$			E	Jar V		HE	EM	92	1241 Greer 0-469-24 FAX	Bellevu 1 Bay, W 136 • 1-8 920-469	e St., Suite I 54302 800-736-24 9-8827	e 9 136	608-2	525 Madisor 232-3300 FAX: 60	Science Driv 1, WI 53711 • 1-888-536 8-233-0502	ve [1428 N. 4 Superi 715-392-584 FAX 7	hth Street, Suite 122 pr. WI 54880 • 1-800-837-8238 15-392-5843
	Project Contac Telephone: Project Numbe	t <u>Сого</u> у (7э0) 849-979 т				СН)F		ST	OD	Y	<u>}</u>	3	552	37	Ма	Page P.O. # ill Report To	Qu : <u>Core</u>	ot ote # Y_Brick]
	Project Name: Project State: Sampled By (F Regulatory Pro		PRE	SERVA	ATION () <u>E</u>		<u> </u> ë	<u> </u> 		T <u>a</u>			Address:	P.D.	Lox Lox	69 04e			
	NPDES/WP Other NR720 Confirm (En Chem will FIELD ID		- AN			080	ano		and a		FIELD	Mail Ir	Addres	55: 5:5	Santa Aded Aried	C A FOR LAE COMMENT	LABORATORY USE ONLY				
11162	5235 1358 9697 0486 9410 9235	BA-B3 9 BA-B2 BA-B1	<u> '-11'</u> 8'-10' 9'-11'	DATE 5/24/19	11.30	×	X X X	X X X X	X X	X X X	X			SCREEN			BOTTLES 1 - 5 0 - 1 - 2 5 0 - 1 - 5 0 1 - 5 0 1 - 5 0	V > 52 35 	<u>८</u> (358 9(17 २२४)	0 4116 6486 4410	<u>NUMBER</u> <u>()の)</u>
	4507 9337 1821 1153 9179 1616 5007	BA - BG -	9'-11' 9.5'-11:5' 1'-9`	5/27/71 5/27/71	2:30 11:45 11:45		X X 	× × ×	× × X	× × ×									425. 1159 784-42 161	4 7507 8 7621 4 6 9179	004 605 006
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																		· · · · · · · · · · · · · · · · · · ·		······································	;
	<u>*Pre</u> A=None B= D=HN03 E= G=NaOH O	<u>:servation Code</u> =HCL C=H2SO4 =EnCore F=Methanol** =Other (Indicate)	Relinguished B Relinguished B		<u>ele</u>	<u>:</u>	- 	Date	Time:	÷:30	Receive	ed By:						Date/Time: Date/Time:		En Chem Projection Sample Receipt	293
	**If not using I Indicate volun mark the appr	En Chem's methanol, ne of methanol added and ropriate samples.	Relinquished B	y. 				Date	Time:		Receive	d By:	Ma-5				1776	Date/Time:	0	Wet/Metals) Custody Seal	μn



Collection

Date

- Analytical Report -

Sample No.

Project Name : BROWN'S AUTO

Project Number :

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WI DNR LAB ID: 405132750

Client: GHD INC

Report Date : 6/14/99

Field ID

Sample No. Field ID 893048-001 BA-B1 9-11' Collection Date 5/26/99

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this final report is authorized by Laboratory management, as is verified by the following signature.

Signature

10/14/20

Date



Project Name :	BROWN'S AUTO		
Project Number :		Client :	GHD INC
Field ID :	BA-B1 9-11'	Report Date :	6/14/99
Lab Sample Number :	893048-001	Collection Date :	5/26/99
WI DNR LAB ID :	405132750	Matrix Type :	SOIL

Organic Results

SPECIAL VOLATILE LIST	Prep Met	Prep Method: SW846 5030B			Analyst: RJN			
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Tetrachloroethene	< 25	25	60		ug/kg		6/8/99	SW846 8260B
4-Bromofluorobenzene	88				%Recov		6/8/99	SW846 8260B
Dibromofluoromethane	95				%Recov		6/8/99	SW846 8260B
Toluene-d8	93				%Recov		6/8/99	SW846 8260B



Project Name : BROWN'S AUTO

.

Project Number :

WI DNR LAB ID: 405132750

Client: GHD INC

Report Date: 6/3/99

Sample No.	Field ID	Collection Date	Sample No.	Field ID	Collection Date
892793-001	BA-B3 9-11'	5/26/99			
892793-002	BA-B2 8-10'	5/26/99			
-892793-003	BA-B1 9-11'	5/26/99			
892793-004	BA-B4 9-11'	5/26/99			
892793-005	BA-B5 9.5-11.5'	5/27/99			
892793-006	BA-B6 7-9'	5/27/99			

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this final report is authorized by Laboratory management, as is verified by the following signature.

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Approval Signature

6/3/99

Date

I	EM	1795 Industrial D Green Bay, WI 54 920-469-2 800-7-ENCH Fax: 920-469-8	rive 302 436 EM 827
	TestGroupID:	Comment:	
	8260+-S-ME	Elevated detection limit due to the presence of a hydrocarbon pattern.	
	GRO-S-ME	Sample exhibits hydrocarbon pattern resembling gasoline. Late peaks were present outside of window.	
r	DRO-S	Early peaks present outside of window of analysis.	
•	GRO-S-ME	Sample exhibits hydrocarbon pattern resembling gasoline. Early and late peaks were present outside of window.	

 892793-006
 GRO-S-ME
 Sample exhibits hydrocarbon pattern resembling diesel fuel or extremely weathered gasoline.

 BA-B6 7-9'
 DRO-S
 Hump was present late in chromatogram.

Early peaks present outside of window of analysis.

Lab#:

892793-001

BA-B3 9-11'

892793-002

BA-B2 8-10' 892793-004

BA-B4 9-11'

DRO-S



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- Analytical Report -

Project Name :	BROWN'S AUTO
Project Number :	
Field ID :	BA-B3 9-11'
Lab Sample Number :	892793-001
WI DNR LAB ID :	405132750

Client :	GHD INC
Report Date :	6/2/99
Collection Date :	5/26/99
Matrix Type :	SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analys
Solids, percent	80.5				%		5/28/99	SM2540G	SM2540G	NJS
			Orga	anic R	esult	s				
						Preser	vation Date :	5/28/99		
DIESEL RANGE ORGANICS -	SOIL		Pre	p Metho	d: WiM	IOD DRO	Prep Date	: 5/28/99	Analyst: DJB	
Analyte	Result	LOD	D LOQ EQL Units (Code	Analysis Date	Analysis Method	5 	
DIESEL RANGE ORGANICS	< 5.2				5.2	mg/kg		5/28/99	Wi MOD	DRO
Blank spike	88				50	%Recov	,	5/28/99	Wi MOD	DRO
Blank spike duplicate	101				50.0	%Recov	,	5/28/99	Wi MOD	DRO
Blank	< 5.0				5.0 ·	mg/kg		5/28/99	Wi MOD	DRO

Organic Results

EPA 8260 VOLATILE LIST - SOIL/METHANOL			Prep Meth	od: SW8	46 5030B	Prep Date:	5/28/99	Analyst: RJN	
Analyte	R	esult	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Benzene	<	200	200	480		ug/kg		6/1/99	SW846 8260B
Bromobenzene	<	200	200	480		ug/kg		6/1/99	SW846 8260B
Bromochloromethane	<	200	200	480		ug/kg		6/1/99	SW846 8260B
Bromodichloromethane	<	200	200	480		ug/kg		6/1/99	SW846 8260B
Bromoform	<	200	200	480		ug/kg		6/1/99	SW846 8260B
Bromomethane	<	200	200	480		ug/kg		6/1/99	SW846 8260B
s-Butylbenzene		680	250	600		ug/kg		6/1/99	SW846 8260B
t-Butylbenzene	<	200	200	480		ug/kg		6/1/99	SW846 8260B
n-Butylbenzene	<	200	200	480		ug/kg		6/1/99	SW846 8260B
Carbon tetrachloride	· <	200	200	480		ug/kg		6/1/99	SW846 8260B
Chloroform	<	200	200	480		ug/kg		6/1/99	SW846 8260B
Chlorobenzene	<	200	200	480		ug/kg		6/1/99	SW846 8260B
Chlorodibromomethane	<	200 .	200	480		ug/kg		6/1/99	SW846 8260B
Chloroethane	<	200	200	480		ug/kg		6/1/99	SW846 8260B
Chloromethane	<	200	200	480		ug/kg		6/1/99	SW846 8260B
2-Chlorotoluene	<	200	200	480		ug/kg		6/1/99	SW846 8260B



1795 Industrial Drive Green Bay, WI 54302 920-469-2436 800-7-ENCHEM FAX: 920-469-8827

- Analytical Report -

Project Name : BROWN'S AUTO

Project Number : Field ID : BA-B3 9-11' Lab Sample Number : 892793-001

WI DNR LAB ID: 405132750

Client : GHD INC Report Date : 6/2/99 Collection Date : 5/26/99 Matrix Type : SOIL

4-Chlorotoluene	<	200	200	480	ug/kg		6/1/99	SW846 8260B
1,2-Dibromo-3-chloropropane	<	200	200	480	ug/kg		6/1/99	SW846 8260B
1,2-Dibromoethane	<	200	200	480	ug/kg		6/1/99	SW846 8260B
Dibromomethane	<	200	200	480	ug/kg		6/1/99	SW846 8260B
1,3-Dichlorobenzene	<	200	200	480	ug/kg		6/1/99	SW846 8260B
1,4-Dichlorobenzene	<	200	200	480	ug/kg		6/1/99	SW846 8260B
1,2-Dichloroethane	<	200	200	480	ug/kg		6/1/99	SW846 8260B
1,2-Dichlorobenzene	<	200	200	480	ug/kg		6/1/99	SW846 8260B
1,1-Dichloroethene	<	200	200	480	ug/kg		6/1/99	SW846 8260B
cis-1,2-Dichloroethene	<	200	200	480	ug/kg		6/1/99	SW846 8260B
Dichlorodifluoromethane	<	200	200	480	ug/kg		6/1/99	SW846 8260B
trans-1,2-Dichloroethene	<	200	200	480	ug/kg		6/1/99	SW846 8260B
1,2-Dichloropropane	<	200	200	480	ug/kg		6/1/99	SW846 8260B
1,1-Dichloroethane	<	200	200	480	ug/kg		6/1/99	SW846 8260B
1,3-Dichloropropane	<	200	200	480	ug/kg		6/1/99	SW846 8260B
2,2-Dichloropropane	<	200	200	480	ug/kg		6/1/99	SW846 8260B
1,1-Dichloropropene	<	200	200	480	ug/kg		6/1/99	SW846 8260B
cis-1,3-Dichloropropene	<	200	200	480	ug/kg		6/1/99	SW846 8260B
trans-1,3-Dichloropropene	<	200	200	480	ug/kg		6/1/99	SW846 8260B
Diisopropyl ether	<	200	200	480	ug/kg		6/1/99	SW846 8260B
Ethylbenzene		1000	250	600	ug/kg		6/1/99	SW846 8260B
Fluorotrichloromethane	<	200	200	480	ug/kg		6/1/99	SW846 8260B
Hexachlorobutadiene	<	200	200	480	ug/kg		6/1/99	SW846 8260B
Isopropylbenzene		580	250	600	ug/kg	Q	6/1/99	SW846 8260B
p-Isopropyltoluene		2900	250	600	ug/kg		6/1/99	SW846 8260B
Methylene chloride	<	200	200	480	ug/kg		6/1/99	SW846 8260B
Methyl-tert-butyl-ether	<	200	200	480	ug/kg		6/1/99	SW846 8260B
Naphthalene		1200	250	600	ug/kg		6/1/99	SW846 8260B
n-Propylbenzene		1200	250	600	ug/kg		6/1/99	SW846 8260B
Styrene	<	200	200	480	ug/kg		6/1/99	SW846 8260B
1,1,2,2-Tetrachloroethane	<	200	200	480	ug/kg		6/1/99	SW846 8260B
1,1,1,2-Tetrachloroethane	<	200	200	480	ug/kg		6/1/99	SW846 8260B
Tetrachloroethene	<	200	200	480	ug/kg		6/1/99	SW846 8260B
Toluene	<	200	200	480	ug/kg		6/1/99	SW846 8260B
1,2,3-Trichlorobenzene	<	200	200	480	ug/kg		6/1/99	SW846 8260B
1,2,4-Trichlorobenzene	<	200	200	480	ug/kg		6/1/99	SW846 8260B



Project Name :	BRC	WN'S AUTO					
Project Number :					Client: GHD I	NC	
Field ID :	BA-	B3 9-11'			Report Date: 6/2/99		
Lab Sample Number :	8927	793-001			Collection Date : 5/26/99	Ð	
WI DNR LAB ID :	4051	132750			Matrix Type: SOIL		
1,1,1-Trichloroethane	< · :	200	200	480	ug/kg	6/1/99	SW846 8260B
1,1,2-Trichloroethane	< :	200	200	480	ug/kg	6/1/99	SW846 8260B
1,2,4-Trimethylbenzene		7400	250	600	ug/kg	6/1/99	· · SW846 8260B
Trichloroethene	< :	200	200	480	ug/kg	6/1/99	SW846 8260B
1,2,3-Trichloropropane	< :	200	200	480	ug/kg	6/1/99	SW846 8260B
1,3,5-Trimethylbenzene		4200	250	600	ug/kg	6/1/99	SW846 8260B
Vinyl chloride	< :	200	200	480	ug/kg	6/1/99	SW846 8260B
Xylenes, -m, -p	4	4800	250	600	ug/kg	6/1/99	SW846 8260B
Xylene, -o	< :	200	200	480	ug/kg	6/1/99	SW846 8260B
4-Bromofluorobenzene		115			%Recov	6/1/99	SW846 8260B
Dibromofluoromethane	ł	83			%Recov	6/1/99	SW846 8260B
Toluene-d8		103			%Recov	6/1/99	SW846 8260B

Organic Results

GASOLINE RANGE ORGANICS - SOIL/METHANOL			Prep Met	Prep Method: Wi MOD GRO			5/28/99 A	Analyst: PMS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	360			12	mg/kg		5/31/99	Wi MOD GRO
Blank Spike	104			1.00	%Recov		5/31/99	Wi MOD GRO
Blank Spike Duplicate	104			1.00	%Recov		5/31/99	Wi MOD GRO
Blank	< 2.5			2.5	mg/kg		5/31/99	Wi MOD GRO



1795 Industrial Drive Green Bay, WI 54302 920-469-2436 800-7-ENCHEM Fax: 920-469-8827

- Analytical Report -

Project Name :	BROWN'S AUTO
Project Number :	
Field ID :	BA-B2 8-10'
Lab Sample Number :	892793-002
WI DNR LAB ID :	405132750

Client : GHD INC Report Date : 6/2/99 Collection Date : 5/26/99 Matrix Type : SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analys
Lead	< 4.3	4.3	14		mg/kg		6/1/99	SW846 3051	SW846 7421	MWM
Solids, percent	78.1				%		5/28/99	SM2540G	SM2540G	NJS

Organic Results

						Preserva	ation Date :	5/28/99	
DIESEL RANGE ORGANICS - SOIL			Prep Method: Wi MOD DRO Prep Date:			5/28/99	Analyst: DJB		
Analyte	F	lesult	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS		54			4.9	mg/kg		5/28/99	Wi MOD DRO
Blank spike		88			50	%Recov		5/28/99	WI MOD DRO
Blank spike duplicate		101			50.0	%Recov		5/28/99	WI MOD DRO
Blank	<	5.0			5.0	mg/kg		5/28/99	Wi MOD DRO

Organic Results

GASOLINE RANGE ORGANICS - SOIL/METHANOL			Prep Met	hod: Wil	MOD GRO	Prep Date:	: 5/28/99	Analyst: PMS	
Analyte	F	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	<	3.2			3.2	mg/kg		6/1/99	Wi MOD GRO
Blank Spike		104			1.00	%Recov		6/1/99	WI MOD GRO
Blank Spike Duplicate		104			1.00	%Recov		6/1/99	Wi MOD GRO
Blank	<	2.5			2.5	mg/kg		6/1/99	Wi MOD GRO

Organic Results

PVOC - METHANOL PRESERVED SOIL

PVOC - METHANOL PRESERVED SOIL				Prep Method: SVV846 5030B			Prep Date:	5/28/99	Analyst: PMS
Analyte	. F	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
a,a,a-Trifluorotoluene		103				%Recov		6/1/99	MOD 8021B
Benzene	<	25	25	60		ug/kg		6/1/99	MOD 8021B
Ethylbenzene	<	25	25	60		ug/kg		6/1/99	MOD 8021B
Methyl-tert-butyl-ether	<	25	25	60		ug/kg		6/1/99	MOD 8021B
Toluene	<	25	25	60		ug/kg		6/1/99	MOD 8021B
1,3,5-Trimethylbenzene	<	25	25	60		ug/kg		6/1/99	MOD 8021B



Project Nam	e: BROWN'S AU	то					
Project Numbe	er:			Client : GH	ID INC		
Field II	D: BA-B2 8-10'	3A-B2 8-10' Report Date : 6/2/99					
Lab Sample Numbe	er: 892793-002	892793-002 Collection Date : 5/26/99					
WI DNR LAB I	D: 405132750			Matrix Type : SC	DIL		
1,2,4-Trimethylbenzene	< 25	25	60	ug/kg	6/1/99	MOD 8021B	
Xylenes, -m, -p	< 25	25	60	ug/kg	6/1/99	MOD 8021B	
Xylene, -o	< 25 · ·	25	60	ug/kg	6/1/99	MOD 8021B	



Blank Spike Duplicate

Blank

WI MOD GRO

Wi MOD GRO

5/31/99

5/31/99

- Analytical Report -

Client: GHD INC

Project Name : BROWN'S AUTO	
Project Number :	Client: GHD IN
Field ID: BA-B1 9-11	Report Date: 6/1/99
Lab Sample Number: 892793-003	Collection Date: 5/26/99
WI DNR LAB ID: 405132750	Matrix Type: SOIL

104

< 2.5

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analys
Solids, percent	80.3				%		5/28/99	SM2540G	SM2540G	NJS
			Orga	nic F	Result	S				
						Preserv	vation Date :	5/28/99		
DIESEL RANGE ORGANICS -	SOIL		Prep	Metho	d: Wi M	IOD DRO	Prep Date	: 5/28/99	Analyst: DJE	3
Analyte	Result	LOD	LC	Q	EQL	Units	Code	Analysis Date	Analysi Metho	is d
DIESEL RANGE ORGANICS	< 4.8				4.8	mg/kg		5/28/99	Wi MOE	DRO
Blank spike	88				50	%Recov		5/28/99	Wi MOE	DRO
Blank spike duplicate	101				50.0	%Recov		5/28/99	Wi MOE	DRO
Blank	< 5.0				5.0	mg/kg		5/28/99	Wi MOE	DRO
			Orga	nic F	Result	s				
GASOLINE RANGE ORGANIC	CS - SOIL/METH	HANOL	Prep	o Metho	od: WiM	IOD GRO	Prep Date	: 5/28/99	Analyst: PM	S
Analyte	Result	LOD	LC	Q	EQL	Units	Code	Analysis Date	Analysi Metho	is d
Gasoline Range Organics	< 3.1				3.1	mg/kg		5/31/99	Wi MOE	GRO
Blank Spike	104				1.00	%Recov		5/31/99	Wi MOE) GRO

Organic Results

1.00

2.5

%Recov

mg/kg

PVOC - METHANOL PRESERVED SOIL Prep Method: SW846 5030B Prep Date: 5/28/99 Analyst: PMS Analysis Analysis Result LOD LOQ EQL Units Analyte Code Date Method a,a,a-Trifluorotoluene 103 %Recov 5/31/99 MOD 8021B Benzene 60 25 25 5/31/99 MOD 8021B < ug/kg Ethylbenzene 25 5/31/99 < 25 60 MOD 8021B ug/kg Methyl-tert-butyl-ether < 25 25 60 ug/kg 5/31/99 MOD 8021B Toluene 25 25 60 < ug/kg 5/31/99 MOD 8021B 1,3,5-Trimethylbenzene < 25 25 60 ug/kg 5/31/99 MOD 8021B 1,2,4-Trimethylbenzene < 25 25 60 5/31/99 MOD 8021B ug/kg



Project Name	: BROWN'S AU	то					
Project Number	r:			Client: G	HD INC		
Field ID	: BA-B1 9-11'		Report Date: 6/1/99				
Lab Sample Number	r: 892793-003		Collection Date: 5/26/99				
WI DNR LAB ID): 405132750			Matrix Type: S	OIL		
Xylenes, -m, -p	< 25	25	60	ug/kg	5/31/99	MOD 8021B	
Xylene, -o	< 25	25	60	ug/kg	5/31/99	MOD 8021B	



1,2,4-Trimethylbenzene

32000

- Analytical Report -

Project Name :	BROWN'S AUTO
Project Number :	
Field ID :	BA-B4 9-11'
Lab Sample Number :	892793-004
WI DNR LAB ID :	405132750

Client : GHD INC Report Date : 6/1/99 Collection Date : 5/26/99 Matrix Type : SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL Units	Code	Analysis Date	Prep Method	Analysis Method	Analys
Solids, percent	84.5			%		5/28/99	SM2540G	SM2540G	NJS
			Organ	ic Result	s				
			_		Preserv	vation Date :	5/28/99		
DIESEL RANGE ORGANICS	- SOIL		Prep N	lethod: Wi N	IOD DRO	Prep Date	: 5/28/99	Analyst: DJI	3
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analys Metho	is d
DIESEL RANGE ORGANICS	250			11	mg/kg	_	5/28/99	Wi MOI	D DRO
Blank spike	88			50	%Recov		5/28/99	Wi MOI	D DRO
Blank spike duplicate	101			50.0	%Recov		5/28/99	Wi MOI	D DRO
Blank	< 5.0			5.0	mg/kg		5/28/99	Wi MOI	D DRO
			Organ	ic Result	ts				
GASOLINE RANGE ORGANICS - SOIL/METHANO		IANOL	Prep Method: Wi MOD GRO			Prep Date	: 5/28/99	Analyst: PM	S
Analyte	Result	LOD	LOC	EQL	Units	Code	Analysis Date	Analys Metho	is d
Gasoline Range Organics	1500			59	mg/kg		5/31/99	Wi MOI	D GRO
Blank Spike	104			1.00	%Recov		5/31/99	Wi MOI	D GRO
Blank Spike Duplicate	104			1.00	%Recov		5/31/99	Wi MOI) GRO
Blank	< 2.5			2.5	mg/kg		5/31/99	Wi MOI	D GRO
			Organ	ic Result	ts				
PVOC - METHANOL PRESER	RVED SOIL		Prep I	Method: SW	846 5030B	Prep Date	: 5/28/99	Analyst: PM	S
Analyte	Result	LOD		EQL	Units	Code	Analysis Date	Analys Metho	is Id
a,a,a-Trifluorotoluene	95				%Recov		5/31/99	MOD 8	3021B
Benzene	< 500	500	120	0	ug/kg		5/31/99	MOD 8	3021B
Ethylbenzene	14000	590	140	0	ug/kg		5/31/99	MOD 8	3021B
Methyl-tert-butyl-ether	670	590	140	0	ug/kg	Q	5/31/99	MOD 8	3021B
Toluene	8600	590	140	0	ug/kg		5/31/99	MOD	3021B
1,3,5-Trimethylbenzene	14000	590	140	0	ug/kg		5/31/99	MOD 8	3021B

All soil results are reported on a dry weight basis unless otherwise noted.

ug/kg

5/31/99

MOD 8021B

1400



Project Name :	BROWN'S AUTO)				
Project Number :				Client :	GHD INC	
Field ID :	BA-B4 9-11'	Report Date: 6/1/99				
Lab Sample Number :	892793-004	793-004 Collection Date : 5/26/99				
WI DNR LAB ID :	405132750			Matrix Type :	SOIL	
Xylenes, -m, -p	39000	590	1400	ug/kg	5/31/99	MOD 8021B
Xylene, -o	15000	590	1400	ug/kg	5/31/99	MOD 8021B



1,3,5-Trimethylbenzene

1,2,4-Trimethylbenzene

< 25

< 25

MOD 8021B

MOD 8021B

5/31/99

5/31/99

- Analytical Report -

Client: GHD INC

Project Name : BROWN'S AUTO	
Project Number :	Client: GHD IN
Field ID: BA-B5 9.5-11.5'	Report Date: 6/1/99
Lab Sample Number: 892793-005	Collection Date: 5/27/99
WI DNR LAB ID: 405132750	Matrix Type: SOIL

Inorganic Results

Test		Result	LOD	LOQ	EQL	- Units	Code	Analysis Date	Prep Method	Analysis Method	Analys
Solids, percent		81.7				%		5/28/99	SM2540G	SM2540G	NJS
				Org	anic	Result	ts				
							Preserv	vation Date :	5/28/99		
DIESEL RANGE ORGANICS -	SOIL			Pre	ep Meth	nod: Wi M	IOD DRO	Prep Date	: 5/28/99	Analyst: DJI	В
Analyte	R	esult	LOD	L	.00	EQL	Units	Code	Analysis Date	Analys Metho	is od
DIESEL RANGE ORGANICS	<	4.6				4.6	mg/kg		5/28/99	Wi MO	D DRO
Blank spike		88				50	%Recov		5/28/99	Wi MO	D DRO
Blank spike duplicate		101				50.0	%Recov		5/28/99	Wi MO	D DRO
Blank	<	5.0				5.0	mg/kg		5/28/99	Wi MO	D DRO
				Org	anic	Result	ts				
GASOLINE RANGE ORGANIC	cs - s	OIL/MET	HANOL	Pre	ep Meth	nod: Wil	MOD GRO	Prep Date	: 5/28/99	Analyst: PM	IS
Analyte	R	esult	LOD	L	.0Q	EQL	Units	Code	Analysis Date	Analys Metho	ais od
Gasoline Range Organics	<	3.1				3.1	mg/kg		5/31/99	Wi MO	D GRO
Blank Spike		104				1.00	%Recov		5/31/99	Wi MO	D GRO
Blank Spike Duplicate		104				1.00	%Recov		5/31/99	Wi MO	D GRO
Blank	<	2.5				2.5	mg/kg		5/31/99	Wi MO	D GRO
				Org	anic	Result	ts				
PVOC - METHANOL PRESER	VED	SOIL		Pr	ep Metł	nod: SW	846 5030B	Prep Date	: 5/28/99	Analyst: PN	IS
Analyte	R	esult	LOD) L	.0Q	EQL	Units	Code	Analysis Date	Analys Metho	is od
a,a,a-Trifluorotoluene		103				<u>,</u>	%Recov		5/31/99	MOD	8021B
Benzene	<	25	25		60		ug/kg		5/31/99	MOD	8021B
Ethylbenzene	<	25	25		60		ug/kg		5/31/99	MOD	8021B
Methyl-tert-butyl-ether	<	25	25		60		ug/kg		5/31/99	MOD	8021B
Toluene	<	25	25		60		ug/kg		5/31/99	MOD	8021B

All soil results are reported on a dry weight basis unless otherwise noted.

ug/kg

ug/kg

60

60

25



Project Name :	BROWN'S AL	ΟΤΙ							
Project Number :				Client: GH	D INC				
Field ID :	BA-B5 9.5-11	1.5'		Report Date: 6/1/	99				
Lab Sample Number :	892793-005		Collection Date: 5/27/99						
WI DNR LAB ID :	405132750			Matrix Type: SO	IL				
Xylenes, -m, -p	< 25	25	60	ug/kg	5/31/99	MOD 8021B			
Xylene, -o	< 25	25	60	ug/kg	5/31/99	MOD 8021B			



Project Name :	BROWN'S AUTO
Project Number :	
Field ID :	BA-B6 7-9'
Lab Sample Number :	892793-006
WI DNR LAB ID :	405132750

Client: GHD INC Report Date: 6/1/99 Collection Date: 5/27/99 Matrix Type: SOIL

-

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analys
Solids, percent	84.4				%		5/28/99	SM2540G	SM2540G	NJS
			Orga	nic R	esult	S				
			-			Preserv	vation Date :	5/28/99		
DIESEL RANGE ORGANICS -	SOIL		Pre	p Method	d: WiM		Prep Date	: 5/28/99	Analyst: DJ	3
Analyte	Result	LOD	LC	DQ	EQL	Units	Code	Analysis Date	Analys Metho	is od
DIESEL RANGE ORGANICS	13000				670	mg/kg		5/29/99	Wi MO	D DRO
Blank spike	88				50	%Recov		5/29/99	Wi MO	D DRO
Blank spike duplicate	101				50.0	%Recov		5/29/99	Wi MO	D DRO
Blank	< 5.0				5.0	mg/kg		5/29/99	Wi MO	D DRO
			Orga	anic R	esult	S	•			
GASOLINE RANGE ORGANIC	S - SOIL/METH	IANOL	Pre	p Methoo	d: Win	10D GRO	Prep Date	: 5/28/99	Analyst: PM	S
Analyte	Result	LOD	Ļ	DQ	EQL	Units	Code	Analysis Date	Analys Metho	is d
Gasoline Range Organics	200		· · ·		15	mg/kg		5/31/99	Wi MO	O GRO
Blank Spike	104				1.00	%Recov		5/31/99	Wi MO	D GRO
Blank Spike Duplicate	104				1.00	%Recov		5/31/99	Wi MO	D GRO
Blank	< 2.5				2.5	mg/kg		5/31/99	Wi MO) gro
			Orga	anic R	esult	s				
PVOC - METHANOL PRESER	VED SOIL		Pre	p Metho	d: SW8	346 5030B	Prep Date	: 5/28/99	Analyst: PN	S
Analyte	Result	LOD	L	oq	EQL	Units	Code	Analysis Date	Analys Metho	is d
a,a,a-Trifluorotoluene	106					%Recov		5/31/99	MOD	3021B
Benzene	< 130	130	3	810		ug/kg		5/31/99	MOD	3021B
Ethylbenzene	930	150	3	860		ug/kg		5/31/99	MOD	3021B
Methyl-tert-butyl-ether	< 130	130	3	310		ug/kg		5/31/99	MOD	3021B
Toluene	200	150	3	860		ug/kg	Q	5/31/99	MOD	3021B
1,3,5-Trimethylbenzene	7700	150	3	860		ug/kg		5/31/99	MOD	3021B
1,2,4-Trimethylbenzene	17000	150	. 3	860		ug/kg		5/31/99	MOD	3021B



Project Name :	BROWN'S AUT	O				
Project Number :				Client : Gl	HD INC	
Field ID :	BA-B6 7-9'			Report Date: 6/	1/99	
Lab Sample Number :	892793-006			Collection Date: 5/	27/99	
WI DNR LAB ID :	405132750			Matrix Type : So	DIL	
Xylenes, -m, -p	4700	150	360	ug/kg	5/31/99	MOD 8021B
Xylene, -o	3700	150	360	ug/kg	5/31/99	MOD 8021B

APPENDIX C

GROUNDWATER LABORATORY ANALYTICAL REPORTS AND CHAINS OF CUSTODY



NORTHERN LAKE SERVICE, INC.

Analytical Laboratory and Environmental Services

400 North Lake Avenue • Crandon, WI 54520-1298 Tel: (715) 478-2777 • Fax: (715) 478-3060

^{NO.} 101430

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD Underground Storage Tank Projects Wisconsin Lab Cert. No. 721026460

	RETURN	THIS	FORM	WITH	SAMPLES.
--	--------	------	------	------	----------

RETURN THIS	S FORM WITH SAMPLES.										ENT	TER O	THER	PARAN	IETER	S-CHE	CK BEI	-OW IF	FIELD	FILTERED
CLIENT			PROJECT TITLE		1							/	/	/	/	1/2	1	1	/	/ /
Brou	ns Auto 70 (OHD Inc.	Brown	5 rla	10						\vdash	1	1	-/	1		1.	-	/	1-1
ADDRESS	1 21	1	PROJECT NO.			QUOT	ATION NO	Э.			V	/	/	/	13	1	1	1	/ /	/ /
820	() Willing					98	861			/	/	5	· /	1	11	1		/	/	/
CITY	STATE	ZIP	CONTACT	t		PHON		10 0	1-20-	/	. /	5/	5	T	XX	SI	1	/		/
Chill	us, Wi	52014	Lina Ot	1		1921	<u>y</u> a	97 ·)	1711	\neg	¥ .	11	E -	1	$\langle \rangle$	è!	S	/	/	/
NLS LAB. NO.	SAMPLE ID	DAT	DLLECTION E TIME	SAMPLE TYPE	GRO	PVOC	DRO	VOC 8021	PAH	1~	109	11	13	TR	1.T	13	7			/
23101	BA- MACT	2/15	99 4:00	GW			×	X		X	X	X	X	X	-X	X				
THER	B-1-MWS	/ / //	4.30					1 .												
mate	EA . MW9		2:30					_				-	-		-					
之间文小	Ep mu lo		Ø.00											_						
2711-5	Br MWII		3.00	\downarrow						¥	V	\downarrow	V	\rightarrow	\downarrow	\downarrow				
21181	Trip Blank						\checkmark	1												
	ý																			
- La Maria																				
A The Part																				
COLLECTED	BY (signatures)				CUSTODY	Y SEAL NO.	(IF ANY)	DA	TE/TIME				REP	ORT T	0					
DELINOLISU		PECEI	ED BY (ciapature)				15/9	9	S'OU)			G	HD,	1.11	•				
necinquish	ED BT (signature)	heder	CD DT (Signature)					DA					9	2τ	U	, vrY	4.73	SL.		
RELINQUISH	ED BY (signature)	RECEI	/ED BY (signature)			a para di seconda di s		DA	TE/TIME				l Cl	1.14	Gri,	l^	<u>p</u> .			
DISPATCHED	BY (signature)	METHO	D OF TRANSPOR	Т				DA	TE/TIME							53C	14			
E-en	1: CH		Luini E	press			12	116/0	99											
RECEIVED A	T NES BY (signature)	DA	TE/TIME	1			- ()			TEN	1P.		INVC	DICE TO	C					
SEAL INTACT	HACT? SEAL#								treat - di	1.64		$\langle z_{n} \rangle$	110.0							
	E GW=groundwater WW=waste	water DW-drinking w	ater S=soil			i i i i i i i i i i i i i i i i i i i			and the second	ر				. J.A .	mc_					
•	- groundhator, min-waste	mator, Dri-drinking w																		
PORTANT.	1. TO MEET REGULATORY REG	QUIREMENTS, THIS F	ORM MUST BE CO	MPLETED IN	DETAIL AN		ED IN TH	E SHIPP	ER CON	TAININ	IG THE	SAME		ESCR	IBED]	
1	2. PLEASE USE ONE LINE PER	SAMPLE, NOT PER E	OTTLE.						CUST	rom	ER CO	OPY		20011						
	U. HEIONN THISTONN WITH C	JAINI LLO - ULILINI MIA	I NEEF FINN GO	1.																

4. PARTIES COLLECTING SAMPLE, LISTED AS REPORT TO AND LISTED AS INVOICE TO AGREE TO STANDARD TERMS & CONDITIONS ON REVERSE.

NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services 400 North Lake Avenue - Crandon, WI 54520 Tel:(715)478-2777 Fax:(715)478-3060

ANALYTICAL REPORT

WIS. LAB CERT. NO. 721026460

PAGE: 1 NLS PROJECT# 52109 NLS CUST#

60346

Client:	GHD, Inc
	Attn: Susan Lawrenz
	820 W. Main St.
	PO Box 69
	Chilton, WI 53014

Project Description: Brown's Auto

Sample ID: BA-MW7 NLS#: 2213 Ref. Line 1 of COC 101430 Description: BA-MW7 NLS#: 221184 Collected: 12/15/99 Received: 12/17/99 Reported: 01/07/00

Parameter	Result	Units	LOD	LOQ	Method	Analyzed Lab
Alkalinity, tot. as CaCO3 (unfiltered)	430	mq/L	11	39	EPA 310.1	12/23/99 721026460
Cadmium, dis. as Cd by ICP	ND	ug/L	0.21	0.74	SW846 6010	01/06/00 721026460
Lead, dis. as Pb by ICP	ND	ug/L	1.4	5.1	SW846 6010	01/06/00 721026460
Nitrogen, ammonia as N (unfiltered)	0.11	mg/L	0.019	0.062	EPA 350.1	12/20/99 721026460
Nitrogen, NO2 + NO3 as N (unfiltered)	9.6	mg/L	0.30	1.1	EPA 353.2	12/21/99 721026460
Nitrogen, Kjeldahl as N (unfiltered)	1.0	mg/L	0.064	0.22	EPA 351.2	12/29/99 721026460
Sulfate, as SO4 (unfiltered)	67	mg/L	5.0	5.0	SW846 9056	12/23/99 721026460
VOCs (water) by EPA 8021	see attached				SW846 8021	12/23/99 721026460
DRO (water)	ND	mg/L	0.029	0.094	WI MOD DRO	01/03/00 721026460
	Additional Commen	nts: spike-93%, dup	licate-81%,	surrogate	e-100%	
Organics Extraction (DRO)	yes			-	WI MOD DRO	12/21/99 721026460

NORTHERN LAKE SEF Analytical Laboratory and En 400 North Lake Avenue - Cras	RVICE, INC. vironmental Services ndon, WI 54520		WIS. LAB CERT. NO. 721026460						
Tel:(715)478-2777 Fax:(715)4	78-3060	ANALYTI	ANALYTICAL REPORT			NLS PROJI	ECT# 52109		
Client:	GHD, Inc Attn: Susan Lawrenz 820 W. Main St. PO Box 69 Chilton, WI 53014					NLS CUST	# 60346		
Project Descriptio	on: Brown's Auto			•					
Sample ID: BA-MW8 Ref. Line 2 of COC 101430 Collected: 12/15/99 Rec	NLS#: 221185 Description: BA-MW8 eived: 12/17/99 Reported: 01/07/0	0	·						
Parameter		Result	Units	LOD	LOQ	Method	Analyzed Lab		
Alkalinity, tot. as Cadmium, dis. as Cd Lead, dis. as Pb by Nitrogen, ammonia as Nitrogen, NO2 + NO3 Nitrogen, Kjeldahl a Sulfate, as SO4 (unf VOCs (water) by EPA DRO (water)	CaCO3 (unfiltered) by ICP ICP N (unfiltered) as N (unfiltered) s N (unfiltered) iltered) B021	540 ND ND 0.97 0.39 2.8 7.3 see attache Additional limits for 2.8 Additional Peaks prese	mg/L ug/L ug/L mg/L mg/L mg/L mg/L d Comments: Check stan Naphthalene at 123%. mg/L Comments: spike-93% int before the DRO quar	11 0.21 1.4 0.019 0.030 0.26 5.0 ndard recovery 0.029 , duplicate-83 ntitation wing	39 0.74 5.1 0.062 0.11 0.89 5.0 Y was outsi 0.094 1%, surroga dow.	EPA 310.1 SW846 6010 SW846 6010 EPA 350.1 EPA 353.2 EPA 351.2 SW846 9056 SW846 8021 de QC WI MOD DRO te-98%	12/23/99 721026460 01/06/00 721026460 01/06/00 721026460 12/20/99 721026460 12/21/99 721026460 12/23/99 721026460 12/23/99 721026460 12/23/99 721026460		
Organics Extraction	(DRO)	yes	quu			WI MOD DRO	12/21/99 721026460		

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NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services 400 North Lake Avenue - Crandon, WI 54520 Tel:(715)478-2777 Fax:(715)478-3060

ANALYTICAL REPORT

WIS. LAB CERT. NO. 721026460

.

PAGE: 3 NLS PROJECT# 52109

NLS CUST# 60346

Client:	GHD, Inc Attn: Susan Lawrenz 820 W. Main St. PO Box 69
	Chilton, WI 53014

Project Description: Brown's Auto

Sample ID: BA-MW9 NLS#: 221186 Ref. Line 3 of COC 101430 Description: BA-MW9 Collected: 12/15/99 Received: 12/17/99

Parameter	Result	Units	LOD	LOQ	Method	Analyzed Lab
Alkalinity, tot. as CaCO3 (unfiltered)	370	mg/L	11	39	EPA 310.1	12/23/99 721026460
Cadmium, dis. as Cd by ICP	< 0.24 >	ug/L	0.21	0.74	SW846 6010	01/06/00 721026460
Lead, dis. as Pb by ICP	ND	ug/L	1.4	5.1	SW846 6010	01/06/00 721026460
Nitrogen, ammonia as N (unfiltered)	0.19	mg/L	0.019	0.062	EPA 350.1	12/20/99 721026460
Nitrogen, NO2 + NO3 as N (unfiltered)	28	mg/L	0.60	2.2	EPA 353.2	12/21/99 721026460
Nitrogen, Kjeldahl as N (unfiltered)	1.4	mg/L	0.064	0.22	EPA 351.2	12/29/99 721026460
Sulfate, as SO4 (unfiltered)	61	mg/L	5.0	5.0	SW846 9056	12/23/99 721026460
VOCs (water) by EPA 8021	see attached	-			SW846 8021	12/23/99 721026460
•	Additional Comme	nts: Check standard	recovery	was outsid	e 0C	
	limits for Naphth	alene at 123%.	-		-	
DRO (water)	0.80	mg/L	0.029	0.094	WI MOD DRO	01/03/00 721026460
	Additional Comme	nts: spike-93%, dup	licate-81%	, surrogat	e-100%	
Organics Extraction (DRO)	yes			-	WI MOD DRO	12/21/99 721026460

NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services 400 North Lake Avenue - Crandon, WI 54520	WIS. LAB CERT. NO. 721026460					6460
Tel:(715)478-2777 Fax:(715)478-3060	ANALYTICAL REPORT			PAGE: 4	NLS PROJ	ECT# 52109
Client: GHD, Inc Attn: Susan Lawrenz 820 W. Main St. PO Box 69 Chilton, WI 53014					NLS CUST	# 60346
Project Description: Brown's Auto						
Sample ID: BA-MW10 NLS#: 221187 Ref. Line 4 of COC 101430 Description: BA-MW10 Collected: 12/15/99 Received: 12/17/99 Reported: 01/07/	00					
Parameter	Result	Units	LOD	LOQ	Method	Analyzed Lab
Alkalinity, tot. as CaCO3 (unfiltered) Cadmium, dis. as Cd by ICP Lead, dis. as Pb by ICP Nitrogen, ammonia as N (unfiltered) Nitrogen, NO2 + NO3 as N (unfiltered) Nitrogen, Kjeldahl as N (unfiltered) Sulfate, as SO4 (unfiltered) VOCs (water) by EPA 8021 DRO (water)	300 ND ND 0.21 15 7.8 57 see attached < 0.084 > Additional Co	mg/L ug/L ug/L mg/L mg/L mg/L mg/L mg/L spike-93%	11 0.21 1.4 0.019 0.30 0.26 5.0 0.029 , duplicate-81	39 0.74 5.1 0.062 1.1 0.89 5.0 0.094 %, surroga	EPA 310.1 SW846 6010 SW846 6010 EPA 350.1 EPA 353.2 EPA 351.2 SW846 9056 SW846 8021 WI MOD DRO te-94% WI MOD DRO	12/23/99 721026460 01/06/00 721026460 01/06/00 721026460 12/21/99 721026460 12/21/99 721026460 12/29/99 721026460 12/23/99 721026460 01/03/00 721026460
Organics Exclusion (DRO)	уса				HI HOD DRO	12/21/33 /21020400

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NORTHERN LAKE SERV Analytical Laboratory and Envir 400 North Lake Avenue - Crando	ICE, INC. onmental Services n, WI 54520			WIS. LAB CERT. NO. 721026460			
Tel:(715)478-2777 Fax:(715)478-	3060	ANALYTICA	ANALYTICAL REPORT		PAGE: 5		3CT# 52109
Client:	GHD, Inc Attn: Susan Lawrenz 820 W. Main St. PO Box 69 Chilton, WI 53014					NLS CUST‡	\$ 60346
Project Description	: Brown's Auto						
Sample ID: BA-MW11 Ref. Line 5 of COC 101430 Collected: 12/15/99 Receiv	NLS#: 221188 Description: BA-MW11 red: 12/17/99 Reported: 01/07/00	0					
Parameter		Result	Units	LOD	LOQ	Method	Analyzed Lab
Alkalinity, tot. as C Cadmium, dis. as Cd b Lead, dis. as Pb by I Nitrogen, ammonia as N Nitrogen, NO2 + NO3 as Nitrogen, Kjeldahl as Sulfate, as SO4 (unfil VOCS (water) by EPA 80	aCO3 (unfiltered) y ICP CP (unfiltered) N (unfiltered) N (unfiltered) tered) 21	360 ND ND 0.35 ND 1.6 7.3 see attached Additional C limits for Na	mg/L ug/L ug/L mg/L mg/L mg/L mg/L comments: Check st phthalene at 123%.	11 0.21 1.4 0.019 0.030 0.064 5.0 andard recovery	39 0.74 5.1 0.062 0.11 0.22 5.0 was outsi	EPA 310.1 SW846 6010 SW846 6010 EPA 350.1 EPA 353.2 EPA 351.2 SW846 9056 SW846 8021 de QC	12/23/99 721026460 01/06/00 721026460 01/06/00 721026460 12/21/99 721026460 12/21/99 721026460 12/29/99 721026460 12/23/99 721026460 12/23/99 721026460
DRO (water)		1.4 Additional C	mg/L comments: spike-93	%, duplicate-818	0.094 %, surroga	wi MOD DRO te-90%	01/03/00 721026460
Organics Extraction (D	RO)	yes	perore rue nko du	antitation wind	JM •	WI MOD DRO	12/21/99 721026460

NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services 400 North Lake Avenue - Crandon, WI 54520 Tel:(715)478-2777 Fax:(715)478-3060		ANALYTICAL REPORT			WIS. LAB CERT. NO. 721026460 PAGE: 6 NLS PROJECT# 52109				
Client:	GHD, Inc Attn: Susan Lawrenz 820 W. Main St. PO Box 69 Chilton, WI 53014					NLS CUST#	ŧ 6034	6	
Project Description:	Brown's Auto								
Sample ID: Trip Blan Ref. Line 6 of COC 101430 D Collected: 12/15/99 Receive	hk NLS#: 221189 Description: Trip Blank ed: 12/17/99 Reported: 01/07/00								
Parameter		Result	Units	LOD	LOQ	Method	Analyzed	Lab	
VOCs (water) by EPA 802	1	see attached				SW846 8021	12/23/99	721026460	
Values in brackets repr Results greater than th	esent results greater than le LOQ are considered to be	the LOD but les	ss than the LOQ and of "Certain Quantita	are within a tion".	region of "I	Less-Certain	Quantitat	ion".	
LOD = Limit of Detectio DWB = Dry Weight Basis	n LOQ = Limit of NA = Not Applic	Quantitation able	ND = Not Detected %DWB = (mg/kg DWB)	/10000					
			Atum R. (Lugn	Authorized	d by:			
			Reviewed by:		R. T. Ki Laboratory	rueger Y Manager			

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB) Page: 1

Customer: GHD, Inc Project Description: Brown's Auto Northern Lake Service Project Number: 52109

Analyte	221184 BA-MW7	DILUTION	LOD	LOQ
Name	<u>ug/L</u>	FACTOR	ug/L	<u>ug/L</u>
Benzene	ND	1	0.24	0.84
Bromobenzene	ND	1	0.21	0.72
Bromochloromethane	ND	1	0.25	0.85
Bromodichloromethane	ND	1	0.26	0.91
Bromoform	ND	1	0.18	0.61
Bromomethane	ND	1	0.52	1.8
n-Butylbenzene	ND	1	0.34	1.2
sec-Butylbenzene	ND .	1	0.28	0.96
tert-Butylbenzene	ND	1	0.28	0.95
Carbon Tetrachloride	ND	1	0.75	2.6
Chlorobenzene	ND	1	0.22	0.77
Chloroethane	ND	1	0.24	0.82
Chloroform	ND	1	0.30	1.0
Chloromethane	ND	1	0.50	1.7
2-Chlorotoluene	ND	1	0.25	0.86
4-Chlorotoluene	ND	1	0.25	0.88
Dibromochloromethane	ND	1	0.23	0.80
1,2-Dibromo-3-Chloropropane	ND	1	0.17	0.60
1,2-Dibromoethane	ND	1	0.22	0.76
Dibromomethane	ND	1	0.21	0.73
1,2-Dichlorobenzene	ND	1	0.26	0.89
1,3-Dichlorobenzene	ND .	1	0.29	0.99
1,4-Dichlorobenzene	ND	1	0.30	1.0
Dichlorodifluoromethane	ND	1	0.28	0.96
1,1-Dichloroethane	ND	1	0.28	0.97
1,2-Dichloroethane	ND	1	0.27	0.92
1,1-Dichloroethene	ND	1	0.27	0.93
cis-1,2-Dichloroethene	ND	1	0.27	0.92
trans-1,2-Dichloroethene	ND	1	0.29	1.0
1,2-Dichloropropane	ND	1	0.28	0.95
1,3-Dichloropropane	ND	1	0.59	2.0
2,2-Dichloropropane	ND	1	0.73	2.5
1,1-Dichloropropene	ND	1	0.24	0.82
cis-1,3-Dichloropropene	ND	1	0.27	0.92
trans-1,3-Dichloropropene	ND	1	0.28	0.95
Ethylbenzene	ND	1	0.26	0.88
Hexachlorobutadiene	ND	1	0.38	1.3
Isopropylbenzene	ND ·	1	0.25	0.87
p-Isopropyltoluene	ND	1	0.56	1.9
Methylene chloride	ND	1	0.27	0.94
Naphthalene	ND	1	0.25	0.86
n-Propylbenzene	ND	1	0.27	0.93
ortho-Xylene/Styrene	ND	1	0.47	1.6
1,1,1,2-Tetrachloroethane	ND	1	0.29	1.0
1,1,2,2-Tetrachloroethane	ND	.1	0.23	0.79
Tetrachloroethene	ND	1	0.25	0.86
Toluene	< 0.28 >	1	0.24	0.82
1,2,3-Trichlorobenzene	ND	1	0.38	1.3
1,2,4-Trichlorobenzene	ND	1	0.30	1.1
1,1,1-Trichloroethane	ND	1	0.32	1.1
1,1,2-Trichloroethane	ND	1	0.27	0.94
Trichloroethene	ND	1	0.23	0.79
Trichlorofluoromethane	ND	1	0.32	1.1
1,2,3-Trichloropropane	ND	1	0.46	1.6
1,2,4-Trimethylbenzene	ND	1	0.27	0.92
Analyte	221184 BA-MW7	DILUTION	LOD	LOQ
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Name	<u>ug/L</u>	FACTOR	ug/L	<u>ug/L</u>
1,3,5-Trimethylbenzene	ND	1	0.27	0.93
Vinyl chloride	ND	1	0.19	0.66
meta,para-Xylene	ND	1	0.50	1.7
MTBE	1.8	1	0.42	1.5
Isopropylether	ND	1	0.20	0.70
Surrogate Recovery on 2-Bromochlorobenzene-PID = 1	03 %			
Surrogate Recovery on 2-Bromochlorobenzene-HECD =	102 %			

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB) Page: 3

Customer: GHD, Inc Project Description: Brown's Auto Northern Lake Service Project Number: 52109

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Analyte	221185 BA-MW8	DILUTION	LOD	roð
Name	ug/L	FACTOR	ug/L	ug/L
Benzene	140	50	12	42
Bromobenzene	ND	50	10	36
Bromochloromethane	ND	50	12	42
Bromodichloromethane	ND	50	13	46
Bromoform	ND	50	8.9	31
Bromomethane	ND	50	26	91
n-Butvlbenzene	ND	50	17	59
sec-Butylbenzene	ND	50	14	48
tert-Butylbenzene	ND	50	14	48
Carbon Tetrachloride	ND	50	38	130
Chlorobenzene	ND	50	11	38
Chloroethane	NT	50	12	41
Chloroform	NTO	50	15	52
Chloromethane	ND	50	25	86
	ND	50	13	42
	ND	50	10	44
4-Chlorocoluene	ND	50	13	44
Dibromochioromethane	ND	50	12	40
1,2-Dibromo-3-Chioropropane		50	8.7	30
1,2-Dibromoethane	ND	50	11	38
Dibromomethane	ND	50	11	37
1,2-Dichlorobenzene	ND	50	13	45
1,3-Dichlorobenzene	ND	50	14	49
1,4-Dichlorobenzene	ND	50	15	52
Dichlorodifluoromethane	ND	50	14	48
1,1-Dichloroethane	ND .	50	14	49
1,2-Dichloroethane	ND	50	13	46
1,1-Dichloroethene	ND	50	14	47
cis-1,2-Dichloroethene	ND	50	13	46
trans-1,2-Dichloroethene	ND	50	15	50
1,2-Dichloropropane	ND	50	14	47
1.3-Dichloropropane	ND	50	30	100
2.2-Dichloropropane	ND	50	36	130
1.1-Dichloropropene	ND	50	12	41
cis-1.3-Dichloropropene	ND	50	13	46
trang-1 3-Dichloropropene	ND	50	14	48
Ethylbenzene	430	50	13	44
Hevenhlerebutediene	ND	50	19	66
Teamonulbonsono	ND	50	12	43
Tsopropyrbenzene		50	10	15 07
p-isopropyitoiuene	ND	50	20	37 47
Methylene chioride	ND	50	19	47
Naphthalene	180	50	12	43
n-Propylbenzene	< 14 >	50	13	46
ortho-Xylene/Styrene	260	50	24	82
1,1,1,2-Tetrachloroethane	ND	50	15	51
1,1,2,2-Tetrachloroethane	ND	50	11	39
Tetrachloroethene	ND	50	12	43
Toluene	2000	200	48	160
1,2,3-Trichlorobenzene	ND	50	19	65
1,2,4-Trichlorobenzene	ND	50	15	53
1.1.1-Trichloroethane	ND	50	16	55
1.1.2-Trichloroethane	ND	50	14	47
Trichloroethene	ND	50	11	40
Trichlorofluoromethane	ND	50	16	56
1 2 3-Trichloropropage	ND	50	23	80
1.2.4 Twinsthulbenzene	300	50	13	46
T'T'A-TLIMECHAIDEHSENE	200			

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB) Page: 4

Customer: GHD, Inc Project Description: Brown's Auto Northern Lake Service Project Number: 52109

221185 BA-MW8	DILUTION	LOD	LOQ
ug/L	FACTOR	ug/L	ug/L
59	50	14	47
ND	50	9.6	33
1200	50	25	86
ND	50	21	73
< 35 >	50	10	35
ene-PID = 115 %			
	221185 BA-MW8 <u>ug/L</u> 59 ND 1200 ND < 35 > ene-PID = 115 %	221185 BA-MW8 DILUTION ug/L FACTOR 59 50 ND 50 1200 50 ND 50 < 35 > 50 ene-PID = 115 %	221185 BA-MW8 DILUTION LOD <u>ug/L</u> <u>FACTOR</u> <u>ug/L</u> 59 50 14 ND 50 9.6 1200 50 25 ND 50 21 < 35 > 50 10 ene-PID = 115 %

Surrogate Recovery on 2-Bromochlorobenzene-HECD = 112 \$

Analyte	22	21186 BA-MW9	DILUTION	LOD	LOQ
Name	u	g/L	FACTOR	ug/L	ug/L
Benzene		ND	1	0.24	0.84
Bromobenzene		ND	1	0.21	0.72
Bromochloromethane		ND	1	0.25	0.85
Bromodichloromethane		ND	1	0.26	0.91
Bromoform		ND	1	0.18	0.61
Bromomethane		ND	1	0.52	1.8
n-Butylbenzene		1.7	1	0.34	1.2
sec-Butylbenzene		ND	1	0.28	0.96
tert-Butylbenzene		ND	1	0.28	0.95
Carbon Tetrachloride		ND	1	0.75	2.6
Chlorobenzene		ND	1	0.22	0.77
Chloroethane		ND	1	0.24	0.82
Chloroform		ND	1	0.30	1.0
Chloromethane		ND	1	0.50	1.7
2-Chlorotoluene		ND	1	0.25	0.86
4-Chlorotoluene		ND	1	0.25	0.88
Dibromochloromethane		ND	1	0.23	0.80
1,2-Dibromo-3-Chloropropane		ND	1	0.17	0.60
1.2-Dibromoethane		ND	1	0.22	0.76
Dibromomethane		ND	1	0.21	0.73
1.2-Dichlorobenzene		ND	1	0.26	0.89
1.3-Dichlorobenzene		ND	1	0.29	0.99
1.4-Dichlorobenzene		ND	1	0.30	1.0
Dichlorodifluoromethane		ND	1	0.28	0.96
1.1-Dichloroethane		ND	1	0.28	0.97
1.2-Dichloroethane		ND	1	0.27	0.92
1.1-Dichloroethene		ND	1	0.27	0.93
cis-1.2-Dichloroethene		ND	1	0.27	0.92
trans-1.2-Dichloroethene		ND	1	0.29	1.0
1.2-Dichloropropane		ND	1	0.28	0.95
1.3-Dichloropropane		ND	1	0.59	2.0
2.2-Dichloropropane		ND	1	0.73	2.5
1.1-Dichloropropene		ND	1	0.24	0.82
cis-1.3-Dichloropropene		ND	1	0.27	0.92
trans-1.3-Dichloropropene		ND	1	0.28	0.95
Ethylbenzene		ND	1	0.26	0.88
Hexachlorobutadiene		ND	1	0.38	1.3
Isonropylbenzene		ND	1	0.25	0.87
p-Isopropyltoluene		ND	1	0.56	1.9
Methylene chloride		ND	1	0.27	0.94
Naphthalene		2.1	1	0.25	0.86
n-Propylbenzene		ND	1	0.27	0.93
ortho-Xvlene/Stvrene		2.7	1	0.47	1.6
1 1 1 2-Tetrachloroethane		ND	1	0.29	1.0
1 1 2 2-Tetrachloroethane		ND	1	0.23	0.79
Tetrachloroethene		ND	1	0.25	0.86
Toluene	<	0.63 >	1	0.24	0.82
1.2.3-Trichlorobenzene		ND	1	0.38	1.3
1.2.4-Trichlorobenzene		ND	1	0.30	1.1
1 1 1-Trichloroethane		ND	1	0.32	1.1
1 1 2-Trichloroethane		ND	1	0.27	0.94
Trichloroethene		ND	1	0.23	0.79
Trichlorofluoromethane		ND	1	0.32	1.1
1.2.3-Trichloropropage		ND	1	0.46	1.6
1.2.4-Trimethylbenzene		4.2	1	0.27	0.92

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB) Page: 6

Customer: GHD, Inc Project Description: Brown's Auto Northern Lake Service Project Number: 52109

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Analyte	221186 BA-MW9	DILUTION	LOD	100
Name	uq/L	FACTOR	ug/L	ug/L
1,3,5-Trimethylbenzene	2.3	1	0.27	0.93
Vinyl chloride	ND	1	0.19	0.66
meta,para-Xylene	2.8	1	0.50	1.7
MTBE	ND	1	0.42	1.5
Isopropylether	ND	1	0.20	0.70
Surrogate Recovery on 2-Bromochlorobenzene	-PID = 109 %			
Contraction Contraction Contraction Contraction	1000 101 8			

Surrogate Recovery on 2-Bromochlorobenzene-HECD = 104 %

Analyte	221187 BA-MW10 .	DILUTION	LOD	LOQ
Name	ug/L	FACTOR	ug/L	ug/L
Benzene	ND	1	0.24	0.84
Bromobenzene	ND	1	0.21	0.72
Bromochloromethane	ND	1	0.25	0.85
Bromodichloromethane	ND	1	0.26	0.91
Bromoform	ND	1	0.18	0.61
Bromomethane	ND	1	0.52	1.8
n-Butvlbenzene	ND	1	0.34	1.2
sec-But vi benzene	ND	1	0.28	0.96
tert-Butylbenzene	ND	1	0.28	0.95
Carbon Tetrachloride	ND	1	0.75	2.6
Chlorobenzene	ND	1	0.22	0.77
Chloroethane	ND	1	0.24	0.82
Chloroform	ND	1	0.30	1.0
Chloromethane	ND	1	0.50	1.7
2-Chlorotoluene	ND	1	0.25	0.86
A-Chlorotoluene	ND	1	0.25	0 88
Dibromochloromethane	ND	1	0.23	0.80
1. 2-Dibromo-2-Chloropropage	ND	1	0.17	0.00
1,2-Dibromostone	ND	1	0.22	0.00
1,2-Dibiomoethane	ND	1	0.22	0.70
Dipiohlerebengene	ND	1	0.21	0.75
1,2-Dichlorobenzene	ND	1	0.20	0.09
1, 3-Dichlorobenzene	ND	1	0.25	1 0
1,4*Dichlorobenzene	ND	1	0.30	1.0
	ND	1	0.20	0.90
1, 2 Dichlorosthane	ND	1	0.20	0.57
1,2-Dichlorosthone	ND	1	0.27	0.92
1, 1-Dichloroethene	ND	1	0.27	0.93
Cis-1,2-Dichloroethene	ND	1	0.27	0.92
trans-1,2-Dichloroethene	ND	1	0.29	1.0
1,2-Dichloropropane	ND	1	0.28	0.95
1, 3-Dichloropropane	ND	1	0.59	2.0
2,2-Dichloropropane	ND	1	0.73	2.5
1,1-Dichloropropene	ND	1	0.24	0.82
cis-1,3-Dichloropropene	ND	1	0.27	0.92
trans-1,3-Dichloropropene	ND	1	0.28	0.95
Ethylbenzene	ND	1	0.26	0.88
Hexachlorobutadiene	ND	1	0.38	1.3
Isopropylbenzene	ND	1	0.25	0.87
p-Isopropyltoluene	ND	1	0.56	1.9
Methylene chloride	ND	1	0.27	0.94
Naphthalene	ND	1	0.25	0.86
n-Propylbenzene	ND	1	0.27	0.93
ortho-Xylene/Styrene	ND	1	0.47	1.6
1,1,1,2-Tetrachloroethane	ND	1	0.29	1.0
1,1,2,2-Tetrachloroethane	ND	1	0.23	0.79
Tetrachloroethene	ND	1	0.25	0.86
Toluene	< 0.30 >	1	0.24	0.82
1,2,3-Trichlorobenzene	ND	1	0.38	1.3
1,2,4-Trichlorobenzene	ND	1	0.30	1.1
1.1.1-Trichloroethane	ND	1	0.32	1.1
1.1.2-Trichloroethane	ND	1	0.27	0.94
Trichloroethene	ND	1	0.23	0.79
Trichlorofluoromethane	ND	1	0.32	1.1
1.2.3-Trichloropropane	ND	1	0.46	1.6
1.2.4-Trimethylbenzene	ND	1	0.27	0.92

Analyte	221187 BA-MW10	DILUTION	LOD	LOQ
Name	ug/L	FACTOR	<u>ug/L</u>	ug/L
1,3,5-Trimethylbenzene	ND	1	0.27	0.93
Vinyl chloride	ND	1	0.19	0.66
meta,para Xylene	ND	1	0.50	1.7
MTBE	ND	1	0.42	1.5
Isopropylether	ND	1	0.20	0.70
Surrogate Recovery on 2-Bromochlorobenze	ne-PID = 102 %			

Surrogate Recovery on 2-Bromochlorobenzene-HECD = 103 %

Analyte	221188 BA-MW11	DILUTION	LOD	LOQ
Name	ug/L	FACTOR	ug/L	ug/L
Benzene	ND	50	12	42
Bromobenzene	ND	50	10	36
Bromochloromethane	ND	50	12	42
Bromodichloromethane	ND	50	13	46
Bromoform	ND	50	8.9	31
Bromomethane	ND	50	26	91
n-Butylbenzene	ND	50	17	59
sec-Butvlbenzene	ND	50	14	48
tert-Butylbenzene	ND	50	14	48
Carbon Tetrachloride	ND	50	38	130
Chlorobenzene	ND	50	11	38
Chloroethane	ND	50	12	41
Chloroform	ND	50	15	52
Chloromethane	ND	50	25	86
2-Chlorotoluene	NTD	50	13	43
4-Chlorotoluene	NTO	50	13	44
Dibromochloromothane	ND	50	12	40
1. 2-Dibromo, 2-Chloropropane	ND	50	87	30
1.2-Dibromoethane	ND	50	11	38
1,2-Dibromomethane	ND	50	11	20
1.2 Dichlorobongono	ND	50	12	16
1,2-Dichlorobenzene	ND	50	14	10
1, 3-Dichlorobenzene	ND	50	14	4.2 50
T,4-Dichlorobenzene Dichlorodifluoromethane	ND	50	13	32
1 1 Dighloroothane	ND	50	14	40
1, 1-Dichloroethane	ND	50	14	47
1,2-Dichioroethane	ND	50	13	40
r, 1-Dichloroethene	ND	50	14	47
cis-1,2-Dichloroethene	ND ND	50	13	46
trans-1,2-Dichloroethene	ND ND	50	15	50 .
1,2-Dichloropropane	ND	50	14	47
1, 3-Dichloropropane	ND ND	50	30	100
2,2-Dichloropropane		50	36	130
1,1-Dichloropropene	ND	50	12	41
cis-1, 3-Dichloropropene	ND	50	13	46
trans-1, 3-Dichloropropene		50	14	48
Ethylbenzene	640	50	13	44
Hexachlorobutadiene	ND	50	19	66
Isopropylbenzene	< 26 >	50	13	43
p-Isopropyltoluene	ND	50	28	97
Methylene chloride	ND	50	14	47
Naphthalene	240	50	12	43
n-Propylbenzene	< 35 >	50	13	46
ortho-Xylene/Styrene	550	50	24	82
1,1,1,2-Tetrachloroethane	ND	50	15	51
1,1,2,2-Tetrachloroethane	ND	50	11	39
Tetrachloroethene	ND	50	12	43
Toluene	380	50	12	41
1,2,3-Trichlorobenzene	ND	50	19	65
1,2,4-Trichlorobenzene	ND	50	15	53
1,1,1-Trichloroethane	ND	50	16	5 5
1,1,2-Trichloroethane	ND	50	14	47
Trichloroethene	ND	50	11	40
Trichlorofluoromethane	ND	50	16	56
1,2,3-Trichloropropane	ND	50	23	80
1,2,4-Trimethylbenzene	410	50	13	46

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB) Page: 10

Customer: GHD, Inc Project Description: Brown's Auto Northern Lake Service Project Number: 52109

Analyte	221188 BA-MW11	DILUTION	LOD	LOQ
Name	ug/L	FACTOR	ug/L	ug/L
1,3,5-Trimethylbenzene	89	50	14	47
Vinyl chloride	ND	50	9.6	33
meta,para-Xylene	2000	50	25	86
MTBE	ND	50	21	73
Isopropylether	44	50	10	35
Surrogate Recovery on 2-Bromochlorobenzene-	PID = 109 %			

Surrogate Recovery on 2-Bromochlorobenzene-HECD = 114 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB) Page: 11

Customer: GHD, Inc Project Description: Brown's Auto Northern Lake Service Project Number: 52109

Analyte	221189 Trip Blank	DILUTION	LOD	LOQ
Name	<u>ug/L</u>	FACTOR	ug/L	ug/L
Benzene	ND	1	0.24	0.84
Bromobenzene	ND	1	0.21	0.72
Bromochloromethane	ND	1	0.25	0.85
Bromodichloromethane	ND	1	0.26	0.91
Bromoform	ND	1	0.18	0.61
Bromomethane	ND	1	0.52	1.8
n-Butylbenzene	ND	1	0.34	1.2
sec-Butylbenzene	ND	1	0.28	0.96
tert-Butylbenzene	ND	1	0.28	0.95
Carbon Tetrachloride	ND	1	0.75	2.6
Chlorobenzene	ND	1	0.22	0.77
Chloroethane	ND	1	0.24	0.82
Chloroform	ND	1	0.30	1.0
Chloromethane	ND	1	0.50	1.7
2-Chlorotoluene	ND	1	0.25	0.86
4-Chlorotoluene	ND	1	0.25	0.88
Dibromochloromethane	ND	1	0.23	0.80
1,2-Dibromo-3-Chloropropane	ND	1	0.17	0.60
1,2-Dibromoethane	ND	1	0.22	0.76
Dibromomethane	ND	1	0.21	0.73
1,2-Dichlorobenzene	ND	1	0.26	0.89
1,3-Dichlorobenzene	ND	1	0.29	0.99
1,4-Dichlorobenzene	ND	1	0.30	1.0
Dichlorodifluoromethane	ND	1	0.28	0.96
1,1-Dichloroethane	ND	1	0.28	0.97
1,2-Dichloroethane	ND	1	0.27	0.92
1,1-Dichloroethene	ND	1	0.27	0.93
cis-1,2-Dichloroethene	ND	1	0.27	0.92
trans-1,2-Dichloroethene	ND	1	0.29	1.0
1,2-Dichloropropane	ND	1	0.28	0.95
1,3-Dichloropropane	ND	1	0.59	2.0
2,2-Dichloropropane	ND	1	0.73	2.5
1,1-Dichloropropene	ND	1	0.24	0.82
cis-1,3-Dichloropropene	ND	1	0.27	0.92
trans-1,3-Dichloropropene	ND	1	0.28	0.95
Ethylbenzene	ND	1	0.26	0.88
Hexachlorobutadiene	ND	1	0.38	1.3
Isopropylbenzene	ND	1	0.25	0.87
p-Isopropyltoluene	ND	1	0.56	1.9
Methylene chloride	ND	1	0.27	0.94
Naphthalene	ND	1	0.25	0.86
n-Propylbenzene	ND	1	0.27	0.93
ortho-Xylene/Styrene	ND	1	0.47	1.6
1,1,1,2-Tetrachloroethane	ND	1	0.29	1.0
1,1,2,2-Tetrachloroethane	ND	1	0.23	0.79
Tetrachloroethene	ND	1	0.25	0.86
Toluene	1.2	1	0.24	0.82
1,2,3-Trichlorobenzene	ND	1	0.38	1.3
1,2,4-Trichlorobenzene	ND	1	0.30	1.1
1,1,1-Trichloroethane	ND	1	0.32	1.1
1,1,2-Trichloroethane	ND	1	0.27	0.94
Trichloroethene	ND	1	0.23	0.79
Trichlorofluoromethane	ND	1	0.32	1.1
1,2,3-Trichloropropane	ND	1	0.46	1.6
1,2,4-Trimethylbenzene	ND	1	0.27	0.92

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB) Page: 12

Customer: GHD, Inc Project Description: Brown's Auto Northern Lake Service Project Number: 52109

Analyte	221189 Trip Blank	DILUTION	LOD	LOQ
Name	ug/L	FACTOR	ug/L	<u>ug/L</u>
1,3,5-Trimethylbenzene	ND	1	0.27	0.93
Vinyl chloride	ND	1	0.19	0.66
meta,para Xylene	ND	1	0.50	1.7
MTBE	ND	1	0.42	1.5
Isopropylether	ND	1	0.20	0.70
Surrogate Recovery on 2-Bromochlorobenzene-	PID = 104 %			

Surrogate Recovery on 2-Bromochlorobenzene-HECD = 103 %



NORTHERN LAKE SERVICE, INC.

Analytical Laboratory and Environmental Services

400 North Lake Avenue • Crandon, WI 54520-1298 Tel: (715) 478-2777 • Fax: (715) 478-3060

NO. 101804 SAMPLE COLLECTION AND

CHAIN OF CUSTODY RECORD Underground Storage Tank Projects Wisconsin Lab Cert. No. 721026460

										EN	TER O	THER	PARA	METER	RS-CHE	CK BE	LOW I	F FIELD	FILTE
CLIENT 90 CUT	PROJ	IECT TITLE									1	1	1	/	/	/	1	/	1
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CITY STATE ZIP	CONT	TACT			PHON	E			/	- Ser	10/		2	15	E	/ /	/	/	/
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NLS	COLLEC	TION	SAMPLE			[VOC	1	17	3	H.	1	Mer !	5/-	S	/	/	/	/
LAB. NO. SAMPLE ID	DATE	TIME	TYPE	GRO	PVOC	DRO	8021	PAH	13	13	1	1 7	715	7 :	5/	/	/	/	/
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COLLECTED BY (signatures)				CUSTODY	SEAL NO.	(IF ANY)	DA	TE/TIME	Ξ		1	REP	ORT T	0					
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	HEOLIVED D	(signature)					DA					O	1.14	EN		1.11			
DISPATCHED BY (signature)	METHOD OF	TRANSPOR	T				DA	TE/TIME							· · ·	1.375			
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adeller ind and	1-19	100						1.1.1			2								
SEALINTACT?	REMARK	S & OTHER	INFORMATIO	N.	1112.0							S	am	e					
SAMPLE TYPE GW=groundwater, WW=waste water, DW=	drinking water. S	=soil																	
13																			
MPORTANT: 1. TO MEET REGULATORY REQUIREMENT	S, THIS FORM M	IUST BE CC	MPLETED IN	DETAIL AN	ID INCLUDE	ED IN TH	E SHIPP	PER CON	NTAININ	IG THE	SAMF	PLES D	DESCR	IBED.					
MFORTANT: 1. TO MEET REGULATORY REQUIREMENT 2. PLEASE USE-ONE LINE PER SAMPLES - 3. RETURN THIS FORM WITH SAMPLES -	S, THIS FORM <u>M</u> I <u>OT</u> PER BOTTLE CLIENT MAY KEE	IUST BE CC E. EP PINK COI	MPLETED IN	I DETAIL AN	ID INCLUDE	ED IN TH	E SHIPP	PER CON	NTAININ STOM	ig the	SAMF	PLES	DESCR	IBED.					

NORTHERN LAKE SEF Analytical Laboratory and En 400 North Lake Avenue - Cra	RVICE, INC. vironmental Services ndon, WI 54520				WIS. LAB	CERT. NO. 72102	6460
Tel:(715)478-2777 Fax:(715)4	78-3060	ANALYTICAL	REPORT		PAGE: 1	NLS PROJI	ECT# 52453
Client:	GHD, Inc Attn: Susan Lawrenz 820 W. Main St. PO Box 69 Chilton, WI 53014					NLS CUST‡	\$ 60346
Project Description	on: Brown's of Two Rivers						
Sample ID: BA-MW7 Ref. Line 1 of COC 101804 Collected: 01/18/00 Rec	NLS#: 222588 Description: BA-MW7 ceived: 01/19/00 Reported: 02/08/00)			· · · · · · · · · · · · · · · · · · ·		
Parameter		Result	Units	LOD	LOQ	Method	Analyzed Lab
Alkalinity, tot. as Nitrogen, ammonia as Nitrogen, NO2 + NO3 Nitrogen, Kjeldahl a Sulfate, as SO4 (unf PVOCs (water) by EPA	CaCO3 (unfiltered) N (unfiltered) as N (unfiltered) s N (unfiltered) iltered) 8020	400 0.069 13 0.70 82 see attached	mg/L mg/L mg/L mg/L mg/L	12 0.019 0.42 0.10 5.0	41 0.062 1.5 0.33 5.0	EPA 310.1 EPA 350.1 EPA 353.2 EPA 351.2 SW846 9056 SW846 8020	01/20/00 721026460 01/24/00 721026460 01/26/00 721026460 02/01/00 721026460 01/20/00 721026460 01/20/00 721026460
Sample ID: BA-MW8 Ref. Line 2 of COC 101804 Collected: 01/18/00 Rec	NLS#: 222589 Description: BA-MW8 seived: 01/19/00 Reported: 02/08/00)			<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>		
Parameter		Result	Units	LOD	LOQ	Method	Analyzed Lab
Alkalinity, tot. as Nitrogen, ammonia as Nitrogen, NO2 + NO3 Nitrogen, Kjeldahl a Sulfate, as SO4 (unf PVOCs (water) by SW8 PAHs (water) by EPA	CaCO3 (unfiltered) N (unfiltered) as N (unfiltered) s N (unfiltered) iltered) 46 8020 + Naphthalene 8310	480 0.63 ND 1.5 5.7 see attached Additional Com standard causin present. see attached Additional Com anthracene (0.0 Check standard	mg/L mg/L mg/L mg/L mg/L ments: Sample ig results to ha ments: Present 061ug/L), fluora recovery was ou	12 0.019 0.042 0.10 5.0 matrix interfere ve a low bias. in the extracti inthene (0.051ug/ tside QC limits	41 0.062 0.15 0.33 5.0 d with the Unidentifi on blank w L) and pyr for benzo	EPA 310.1 EPA 350.1 EPA 353.2 EPA 351.2 SW846 9056 SW846 8020 internal ed hydrocarbo SW846 8310 as ene (0.076ug, (a) pyrene.	01/20/00 721026460 01/24/00 721026460 01/26/00 721026460 02/01/00 721026460 01/20/00 721026460 01/24/00 721026460 01/24/00 721026460 02/07/00 721026460 /L).
Sampl	e# 222589 results continued of	on next page.				,	
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NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services 400 North Lake Avenue - Crandon, WI 54520			WIS. LAB CERT. NO. 721026460				
Tel:(715)478-2777 Fax:(715)478-3060	ANALYTICA	AL REPORT		PAGE: 2	NLS PROJI	ECT# 524!	53
Client: GHD, Inc Attn: Susan Lawrenz 820 W. Main St. PO Box 69 Chilton, WI 53014					NLS CUST	¥ 6034	16
Project Description: Brown's of Two Rive	ers						
Sample ID: BA-MW8 NLS#: 222589 (cc Ref. Line 2 of COC 101804 Description: BA-MW8 Collected: 01/18/00 Received: 01/19/00 Reported: 02/0	ontinued) 8/00				· · · · · · · · · · · · · · · · · · ·	, , , , , , , , , , , , , , , , , , , 	
Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
Organics Extraction for PAHs	yes		•		SW846 3500	01/21/00	721026460
Sample ID: BA-MW9 NLS#: 222590 Ref. Line 3 of COC 101804 Description: BA-MW9 Collected: 01/18/00 Received: 01/19/00 Reported: 02/0	8/00				<u> </u>		· · · · · · · · · · · · · · · · · · ·
Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
Alkalinity, tot. as CaCO3 (unfiltered) Nitrogen, ammonia as N (unfiltered) Nitrogen, NO2 + NO3 as N (unfiltered) Nitrogen, Kjeldahl as N (unfiltered) Sulfate, as SO4 (unfiltered) PVOCs (water) by EPA 8020	350 < 0.055 > 36 0.66 53 see attached	mg/L mg/L mg/L mg/L mg/L	12 0.019 0.85 0.10 5.0	41 0.062 2.9 0.33 5.0	EPA 310.1 EPA 350.1 EPA 353.2 EPA 351.2 SW846 9056 SW846 8020	01/20/00 01/24/00 01/26/00 02/01/00 01/20/00 01/24/00	721026460 721026460 721026460 721026460 721026460 721026460
Sample ID: BA-MW10NLS#: 222591Ref. Line 4 of COC 101804Description: BA-MW10Collected: 01/18/00Received: 01/19/00Reported: 02/0	8/00						
Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
Alkalinity, tot. as CaCO3 (unfiltered) Nitrogen, ammonia as N (unfiltered) Nitrogen, NO2 + NO3 as N (unfiltered) Nitrogen, Kjeldahl as N (unfiltered) Sulfate, as SO4 (unfiltered) PVOCs (water) by EPA 8020	300 ND 11 0.45 42 see attached	mg/L mg/L mg/L mg/L mg/L	12 0.019 0.42 0.10 5.0	41 0.062 1.5 0.33 5.0	EPA 310.1 EPA 350.1 EPA 353.2 EPA 351.2 SW846 9056 SW846 8020	01/20/00 01/24/00 01/26/00 02/01/00 01/20/00 01/24/00	721026460 721026460 721026460 721026460 721026460 721026460 721026460
		· · · · · · · · · · · · · · · · · · ·					

NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services 400 North Lake Avenue - Crandon, WI 54520 Tel:(715)478-2777 Fax:(715)478-3060

Client:

ANALYTICAL REPORT

WIS. LAB CERT. NO. 721026460

PAGE: 3 NLS PROJECT# 52453

NLS CUST# 60346

GHD	, Inc		
Att	n: Su	san 1	Lawrenz
820	W. 1	Main	St.
PO	Box 6	9	
Chi	lton,	WI	53014

Project Description: Brown's of Two Rivers

Sample ID: BA-MW11 NLS#: 222592 Ref. Line 5 of COC 101804 Description: BA-MW11 Collected: 01/18/00 Received: 01/19/00 Reported: 02/08/00

Parameter	Result	Units	LOD	LOQ	Method	Analyzed Lab
Alkalinity, tot. as CaCO3 (unfiltered)	420	mg/L	12	41	EPA 310.1	01/20/00 721026460
Nitrogen, ammonia as N (unfiltered)	0.095	mg/L	0.019	0.062	EPA 350.1	01/24/00 721026460
Nitrogen, NO2 + NO3 as N (unfiltered)	ND	mg/L	0.042	0.15	EPA 353.2	01/26/00 721026460
Nitrogen, Kjeldahl as N (unfiltered)	0.70	mg/L	0.10	0.33	EPA 351.2	02/01/00 721026460
Sulfate, as SO4 (unfiltered)	ND	mg/L	5.0	5.0	SW846 9056	01/20/00 721026460
PVOCs (water) by SW846 8020 + Naphthalene	see attached	-			SW846 8020	01/24/00 721026460
	Additional Commen	nts: Sample matrix :	interfered	with the	internal	
	standard causing :	results to have a low	w bias. Un	nidentifie	d hydrocarbo	ons
	present.					
PAHs (water) by EPA 8310	see attached				SW846 8310	02/07/00 721026460
	Additional Commen	nts: Present in the	extraction	n blank wa:	S	
	anthracene (0.061)	ug/L), fluoranthene	(0.051ug/L)	and pyre	ne (0.076ug	/L).
	Check standard red	covery was outside Q0	C limits fo	or benzo (a	a) pyrene.	
Organics Extraction for PAHs	yes				SW846 3500	01/21/00 721026460

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NORTHERN LAKE SERV Analytical Laboratory and Envir 400 North Lake Avenue - Crand Tel:(715)478-2777 Fax:(715)478	/ICE, INC. ronmental Services on, WI 54520 -3060	ANALYTI	CAL REPORT		WIS. LAB PAGE: 4	CERT. NO. 7210 NLS PROJ	26460 JECT# 52453
Client:	GHD, Inc Attn: Susan Lawrenz 820 W. Main St. PO Box 69 Chilton, WI 53014					NLS CUSI	r# 60346
Project Description	a: Brown's of Two Rive	rs			•		
Sample ID: Trip Bla Ref. Line 6 of COC 101804 Collected: 01/18/00 Recei	nk NLS#: 222593 Description: Trip Blank ved: 01/19/00 Reported: 02/08	3/00					
Parameter		Result	Units	LOD	LOQ	Method	Analyzed Lab
PVOCs (water) by SW846	8020 + Naphthalene	see attache	d			SW846 8020	0 01/24/00 72102646
			Atum R. (Reviewed by:	uni_	Authorize R. T. K Laborator	d by: Irueger Y Manager	

ANALYTICAL RESULTS: WISCONSIN DNR MODIFIED GRO Page: 1

Customer: GHD, Inc Project Description: Browns of Two Rivers Northern Lake Service Project Number: 52453

Analyte	222588 BA-MW7	DILUTION	LOD	LOQ
Name	ug/l	FACTOR	ug/1	ug/l
MTBE	2.9	1	0.47	1.6
Benzene	ND	1	0.50	1.7
Toluene	< 0.71 >	1	0.52	1.8
Ethylbenzene	ND	1	0.54	1.9
M/P-xylene	< 2.8 >	1	1.0	3.6
O-xylene	ND	1	0.50	1.7
1,3,5-Trimethylbenzene	ND	1	0.52	1.8
1,2,4-Trimethylbenzene	ND	1	0.55	1.9
Surrogate Recovery on 1,2,3-Trichlorobenzene	= 85.0 %			
Analyte	222590 BA-MW9	DILUTION	LOD	roð
Name	ug/l	FACTOR	ug/l	ug/1
MTBE	ND	1	0.47	1.6
Benzene	ND	1	0.50	1.7
Toluene	< 0.77 >	1	0.52	1.8
Ethylbenzene	ND	1	0.54	1.9
M/P-xylene	< 2.8 >	1	1.0	3.6
0-xylene	ND	1	0.50	1.7
1,3,5-Trimethylbenzene	ND	1	0.52	1.8
1,2,4-Trimethylbenzene	ND	1	0.55	1.9
Surrogate Recovery on 1,2,3-Trichlorobenzene	= 86.0 %			
Analyte	222591 BA-MW10	DILUTION	LOD	LOQ
Name	ug/1	FACTOR	ug/l	uq/1
MTBE	ND	1	0.47	1.6
Benzene	ND	1	0.50	1.7
Toluene	< 1.1 >	1	0.52	1.8
Ethylbenzene	ND	1	0.54	1.9
M/P-xylene	< 3.2 >	1	1.0	3.6
0-xylene	ND	1	0.50	1.7
1.3.5-Trimethylbenzene	ND	1	0.52	1.8

ND

1

0.55

1.9

1,2,4-Trimethylbenzene Surrogate Recovery on 1,2,3-Trichlorobenzene = 84.0 **%** 1 1 1

Page: 1

Customer: GHD, Inc

Project Description: Browns of Two Rivers Northern Lake Service Project Number: 52453

Analyte	222589 BA-MW8	DILUTION	LOD	LOO
Name	ug/l	FACTOR	uq/l	uq/1
MTBE	ND	100	47	160
Benzene	< 130 >	100	50	170
Toluene	970	100	52	180
Ethylbenzene	210	100	55	190
M/P-xylene	800	100	100	360
0-xylene	200	100	50	170
1,3,5-Trimethylbenzene	< 110 >	100	52	180
1,2,4-Trimethylbenzene	240	100	55	190
Naphthalene	190	100	52	180
Surrogate Recovery on 1,2,3-Trichlorobenzene = 78.0) 🕏			
Analyte	222592 BA-MW11	DILUTION	LOD	LOQ
Name	<u>ug/1</u>	FACTOR	<u>ug/1</u>	' <u>ug/</u>]
MTBE	ND	50	24	81
Benzene	110	50	25	86
Toluene	480	50	26	90
Ethylbenzene	360	50	27	94
M/P-xylene	1200	50	51	180
0-xylene	520	50	25	86
1,3,5-Trimethylbenzene	100	50	26	89
1,2,4-Trimethylbenzene	290 March 10	50	28	95
Naphthalene	180	50	26	90
Surrogate Recovery on 1,2,3-Trichlorobenzene = 70.0) 8			
Analyte	222593 Trip Blank	DILUTION	LOD	LOQ
Name	ug/l	FACTOR	ug/l	ug/1
MTBE	ND	1	0.47	1.6
Benzene	ND	1	0.50	1.7
Toluene	< 1.5 >	1	0.52	1.8
Ethylbenzene	ND	1	0.55	1.9
M/P-xylene	< 3.2 >	1	1.0	3.6
0-xylene	ND	1	0.50	1.7
1,3,5-Trimethylbenzene	ND	1	0.52	1.8
1,2,4-Trimethylbenzene	ND	1	0.55	1.9
Naphthalene	ND	1 .	0.52	1.8
Surrogate Recovery on 1,2,3-Trichlorobenzene = 84.0) %			

Analyte	222589 BA-MW8	DILUTION	LOD	LOQ
Name	ug/L	FACTOR	ug/L	ug/L
Acenaphthene	4.7	25	0.65	2.1
Acenaphthylene	ND	25	1.8	5.8
Anthracene	< 0.049 >	1	0.023	0.074
Benzo (a) anthracene	< 0.051 >	1	0.042	0.14
Benzo (a) pyrene	0.13	1	0.016	0.053
Benzo (b) fluoranthene	ND	1	0.023	0.076
Benzo (g,h,i) perylene	0.25	1	0.031	0.10
Benzo (k) fluoranthene	< 0.041 >	1	0.028	0.092
Chrysene	0.095	1	0.023	0.076
Dibenzo (a,h) anthracene	0.11	1	0.022	0.069
Fluoranthene	0.19	1	0.034	0.11
Fluorene	< 0.96 >	25	0.78	2.6
Indeno (1,2,3-cd) pyrene	< 0.20 >	1	0.090	0.28
Methyl-1-Naphthalene	32	25	2.4	7.7
Methyl-2-Naphthalene	24	25	1.6	5.5
Naphthalene	110	25	0.84	2.8
Phenanthrene	< 0.20 >	1	0.066	0.22
Pyrene	0.28	1	0.025	0.079
Surrogate Recovery on P-Terphenyl = 87.0 %				
Analyte	222592 BA-MW11	DILUTION	LOD	LOQ
Analyte <u>Name</u>	222592 BA-MW11 ug/L	DILUTION FACTOR	LOD ug/L	LOQ ug/L
Analyte <u>Name</u> Acenaphthene	222592 ВА-МW11 ug/L 7.4	DILUTION FACTOR 25	LOD <u>ug/L</u> 0.65	LOQ ug/L 2.1
Analyte <u>Name</u> Acenaphthene Acenaphthylene	222592 BA-MW11 <u>ug/L</u> 7.4 < 3.1 >	DILUTION FACTOR 25 25	LOD <u>ug/L</u> 0.65 1.8	LOQ <u>ug/L</u> 2.1 5.8
Analyte <u>Name</u> Acenaphthene Acenaphthylene Anthracene	222592 BA-MW11 ug/L 7.4 < 3.1 > < 0.038 >	DILUTION FACTOR 25 25 1	LOD ug/L 0.65 1.8 0.023	LOQ <u>ug/L</u> 2.1 5.8 0.074
Analyte <u>Name</u> Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene	222592 BA-MW11 ug/L 7.4 < 3.1 > < 0.038 > ND	DILUTION FACTOR 25 25 1 1	LOD ug/L 0.65 1.8 0.023 0.042	LOQ ug/L 2.1 5.8 0.074 0.14
Analyte <u>Name</u> Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (a) pyrene	222592 BA-MW11 ug/L 7.4 < 3.1 > < 0.038 > ND ND	DILUTION FACTOR 25 25 1 1 1	LOD ug/L 0.65 1.8 0.023 0.042 0.016	LOQ ug/L 2.1 5.8 0.074 0.14 0.053
Analyte <u>Name</u> Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene	222592 BA-MW11 ug/L 7.4 < 3.1 > < 0.038 > ND ND ND	DILUTION FACTOR 25 25 1 1 1 1 1	LOD ug/L 0.65 1.8 0.023 0.042 0.016 0.023	LOQ ug/L 2.1 5.8 0.074 0.14 0.053 0.076
Analyte <u>Name</u> Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (b) fluoranthene Benzo (g,h,i) perylene	222592 BA-MW11 ug/L 7.4 < 3.1 > < 0.038 > ND ND ND ND ND	DILUTION <u>FACTOR</u> 25 25 1 1 1 1 1 1	LOD ug/L 0.65 1.8 0.023 0.042 0.016 0.023 0.031	LOQ ug/L 2.1 5.8 0.074 0.14 0.053 0.076 0.10
Analyte <u>Name</u> Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (b) fluoranthene Benzo (g,h,i) perylene Benzo (k) fluoranthene	222592 BA-MW11 <u>ug/L</u> 7.4 < 3.1 > < 0.038 > ND ND ND ND ND ND ND	DILUTION <u>FACTOR</u> 25 25 1 1 1 1 1 1 1	LOD ug/L 0.65 1.8 0.023 0.042 0.042 0.016 0.023 0.031 0.028	LOQ ug/L 2.1 5.8 0.074 0.14 0.053 0.076 0.10 0.092
Analyte <u>Name</u> Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (g,h,i) perylene Benzo (k) fluoranthene Chrysene	222592 BA-MW11 ug/L 7.4 < 3.1 > < 0.038 > ND ND ND ND ND ND ND ND ND ND	DILUTION <u>FACTOR</u> 25 25 1 1 1 1 1 1 1 1 1 1	LOD ug/L 0.65 1.8 0.023 0.042 0.016 0.023 0.031 0.028 0.023	LOQ ug/L 2.1 5.8 0.074 0.14 0.053 0.076 0.10 0.092 0.076
Analyte <u>Name</u> Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (b) fluoranthene Benzo (g,h,i) perylene Benzo (k) fluoranthene Chrysene Dibenzo (a,h) anthracene	222592 BA-MW11 ug/L 7.4 < 3.1 > < 0.038 > ND ND ND ND ND ND ND ND ND ND	DILUTION <u>FACTOR</u> 25 25 1 1 1 1 1 1 1 1 1 1 1	LOD ug/L 0.65 1.8 0.023 0.042 0.016 0.023 0.031 0.028 0.023 0.023 0.023 0.023	LOQ ug/L 2.1 5.8 0.074 0.14 0.053 0.076 0.092 0.076 0.069
Analyte <u>Name</u> Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (g,h,i) perylene Benzo (k) fluoranthene Chrysene Dibenzo (a,h) anthracene Fluoranthene	222592 BA-MW11 ug/L 7.4 < 3.1 > < 0.038 > ND ND ND ND ND ND ND ND ND ND	DILUTION <u>FACTOR</u> 25 25 1 1 1 1 1 1 1 1 1 1 1 1 1	LOD ug/L 0.65 1.8 0.023 0.042 0.016 0.023 0.031 0.028 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.031	LOQ ug/L 2.1 5.8 0.074 0.053 0.076 0.10 0.092 0.076 0.069 0.11
Analyte <u>Name</u> Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (b) fluoranthene Benzo (g,h,i) perylene Benzo (k) fluoranthene Chrysene Dibenzo (a,h) anthracene Fluoranthene Fluorene	222592 BA-MW11 ug/L 7.4 < 3.1 > < 0.038 > ND ND ND ND ND ND ND ND < 0.065 > < 1.4 >	DILUTION FACTOR 25 25 1 1 1 1 1 1 1 1 1 1 1 1 1	LOD ug/L 0.65 1.8 0.023 0.042 0.016 0.023 0.031 0.028 0.023 0.023 0.023 0.034 0.78	LOQ ug/L 2.1 5.8 0.074 0.14 0.053 0.076 0.10 0.092 0.076 0.069 0.11 2.6
Analyte <u>Name</u> Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (b) fluoranthene Benzo (b) fluoranthene Benzo (k) fluoranthene Chrysene Dibenzo (a,h) anthracene Fluoranthene Fluorene Indeno (1,2,3-cd) pyrene	222592 BA-MW11 Ug/L 7.4 < 3.1 > < 0.038 > ND ND ND ND ND ND ND ND ND C 0.065 > < 1.4 > ND	DILUTION <u>FACTOR</u> 25 25 1 1 1 1 1 1 1 1 1 1 1 25 1	LOD ug/L 0.65 1.8 0.023 0.042 0.016 0.023 0.031 0.028 0.023 0.023 0.023 0.023 0.023 0.034 0.78 0.090	LOQ ug/L 2.1 5.8 0.074 0.14 0.053 0.076 0.10 0.092 0.076 0.069 0.11 2.6 0.28
Analyte <u>Name</u> Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (g,h,i) perylene Benzo (g,h,i) perylene Benzo (k) fluoranthene Chrysene Dibenzo (a,h) anthracene Fluoranthene Fluorene Indeno (1,2,3-cd) pyrene Methyl-1-Naphthalene	222592 BA-MW11 ug/L 7.4 < 3.1 > < 0.038 > ND ND ND ND ND ND ND ND ND SD < 1.4 > ND 59	DILUTION <u>FACTOR</u> 25 25 1 1 1 1 1 1 1 1 1 25 1 25 1 25	LOD ug/L 0.65 1.8 0.023 0.042 0.042 0.016 0.023 0.031 0.028 0.023 0.023 0.022 0.034 0.78 0.090 2.4	LOQ ug/L 2.1 5.8 0.074 0.14 0.053 0.076 0.092 0.076 0.069 0.11 2.6 0.28 7.7
Analyte <u>Name</u> Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (b) fluoranthene Benzo (g,h,i) perylene Benzo (k) fluoranthene Chrysene Dibenzo (a,h) anthracene Fluoranthene Fluoranthene Fluoranthene Huorene Indeno (1,2,3-cd) pyrene Methyl-1-Naphthalene Methyl-2-Naphthalene	222592 BA-MW11 ug/L 7.4 < 3.1 > < 0.038 > ND ND ND ND ND ND ND C 0.065 > < 1.4 > ND 59 17	DILUTION FACTOR 25 25 1 1 1 1 1 1 1 1 25 1 25 1 25 25 25	LOD ug/L 0.65 1.8 0.023 0.042 0.016 0.023 0.031 0.028 0.023 0.023 0.022 0.034 0.78 0.090 2.4 1.6	LOQ ug/L 2.1 5.8 0.074 0.14 0.053 0.076 0.092 0.076 0.069 0.11 2.6 0.28 7.7 5.5
Analyte <u>Name</u> Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (g,h,i) perylene Benzo (k) fluoranthene Chrysene Dibenzo (a,h) anthracene Fluoranthene Fluorene Indeno (1,2,3-cd) pyrene Methyl-1-Naphthalene Methyl-2-Naphthalene Naphthalene	222592 BA-MW11 ug/L 7.4 < 3.1 > < 0.038 > ND ND ND ND ND ND ND ND ND SD < 0.065 > < 1.4 > ND 59 17 210	DILUTION FACTOR 25 25 1 1 1 1 1 1 1 1 25 1 25 1 25 50	LOD ug/L 0.65 1.8 0.023 0.042 0.016 0.023 0.031 0.028 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.031 0.023 0.023 0.023 0.031 0.023 0.023 0.031 0.023 0.023 0.023 0.031 0.023 0.023 0.031 0.023 0.023 0.023 0.031 0.023 0.023 0.023 0.031 0.023 0.023 0.023 0.023 0.023 0.031 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.024 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.023 0.024 0.023 0.023 0.023 0.022 0.034 0.78 0.090 2.4 1.6 1.7	LOQ ug/L 2.1 5.8 0.074 0.053 0.076 0.10 0.092 0.076 0.069 0.11 2.6 0.28 7.7 5.5 5.6
Analyte <u>Name</u> Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (g,h,i) perylene Benzo (k) fluoranthene Chrysene Dibenzo (a,h) anthracene Fluoranthene Fluorene Indeno (1,2,3-cd) pyrene Methyl-1-Naphthalene Methyl-2-Naphthalene Naphthalene Phenanthrene	222592 BA-MW11 ug/L 7.4 < 3.1 > < 0.038 > ND ND ND ND ND ND ND SD < 0.065 > < 1.4 > ND 59 17 210 < 0.087 >	DILUTION FACTOR 25 25 1 1 1 1 1 1 1 1 1 25 1 25 1 25 1 25 1 1 1 1 1 1 1 1 1 1 1 1 1	LOD ug/L 0.65 1.8 0.023 0.042 0.016 0.023 0.031 0.028 0.023 0.022 0.034 0.78 0.090 2.4 1.6 1.7 0.066	LOQ UG/L 2.1 5.8 0.074 0.053 0.076 0.092 0.076 0.092 0.076 0.069 0.11 2.6 0.28 7.7 5.5 5.6 0.22
Analyte <u>Name</u> Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (b) fluoranthene Benzo (b) fluoranthene Benzo (c), fluoranthene Benzo (c), fluoranthene Benzo (c), fluoranthene Chrysene Dibenzo (a,h) anthracene Fluoranthene Fluorene Indeno (1,2,3-cd) pyrene Methyl-1-Naphthalene Methyl-2-Naphthalene Naphthalene Phenanthrene Pyrene	222592 BA-MW11 ug/L 7.4 < 3.1 > < 0.038 > ND ND ND ND ND ND ND S0 < 1.4 > ND 59 17 210 < 0.087 > < 0.077 >	DILUTION FACTOR 25 25 1 1 1 1 1 1 1 1 1 25 1 25 1 25 1 1 1 1 1 1 1 1 1 1 1 1 1	LOD ug/L 0.65 1.8 0.023 0.042 0.016 0.023 0.031 0.028 0.023 0.022 0.034 0.78 0.090 2.4 1.6 1.7 0.066 0.025	LOQ UG/L 2.1 5.8 0.074 0.14 0.053 0.076 0.076 0.092 0.076 0.069 0.11 2.6 0.28 7.7 5.5 5.6 0.22 0.079

APPENDIX D

FIGURES







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APPENDIX E

TABLES

Table	1			
Capacity and C	ontent of			
Former Underground Storage Tank				
Brown's of Two Rivers - Two Rivers, Wisconsin				
SIR - Februar	ry 2000			
Contents	Capacity			
Waste Oil	500 Gallons			

Table 2

Soil Boring and Monitoring Well Location Descriptions Brown's of Two Rivers - Two Rivers, Wisconsin SIR – February 2000

Boring/Well	Total	Screened	
Name	Depth	Interval	Location Description
	(Feet)	(Feet)	
BA-B1	11		5.5' south of & 22' east of southwest
			corner of the southwest bldg.
BA-B2	10		99' west & 32' south of the northwest
		· · · · ·	corner of the main bldg.
BA-B3	11		67' west & 71' south of southeast corner
			of main bldg.
BA-B4	11		15' west and 23' south of southeast corner
			of main bldg.
BA-B5	11.5		3.5' north & 23.5' east of northwest
			corner of main bldg.
BA-B6	9		2.5' north & 75' east of northwest corner
			of main bldg.
BA-MW7	19.5	9-19	26' south & 71' west of southeast corner
			of main bldg.
BA-MW8	19.5	9-19	71' south & 42' west of southeast corner
			of main bldg.
BA-MW9	15	4-14	4.25' north & 49' west of northeast corner
			of main bldg.
BA-MW10	17.5	7-17	82' east & 10.6' north of northwest corner
			of main bldg.
BA-MW11	19.5	7-17	16' north & 4' east of southeast corner of
			main bldg.

Table 3 Water Table Elevations Brown's of Two Rivers - Two Rivers, Wisconsin SIR - February 2000

BA-MW7 Water Levels

Date	Depth to Water	TOC Elevation	TOS Elevation	Grade	Water Elevation	Feet Below Grade	Water Column Height
12/15/1999	13.21	96.04	87.48	96.51	82.83	13.68	5.85
1/18/2000	13.44	96.04	87.48	96.51	82.60	13.91	5.62

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BA-MW8 Water Levels

Date	Depth to Water	TOC Elevation	TOS Elevation	Grade	Water Elevation	Feet Below Grade	Water Column Height
12/15/1999	14.34	97.14	89.00	97.66	82.80	14.86	4.30
1/18/2000	14.58	97.14	89.00	97.66	82.56	15.10	4.06

BA-MW9 Water Levels

Date	Depth to Water	TOC Elevation	TOS Elevation	Grade	Water Elevation	Feet Below Grade	Water Column Height	
12/15/1999	12.49	96.51	92.65	97.19	84.02	13,17	1.87	
1/18/2000	12.73	96.51	92.65	97.19	83.78	13.41	1.63	

BA-MW10 Water Levels

Date	Depth to Water	TOC Elevation	TOS Elevation	Grade	Water Elevation	Feet Below Grade	Water Column Height	
12/15/1999	12.38	96.32	91.39	96.84	83.94	12.90	3.05	
1/18/2000	12.64	96.32	91.39	96.84	83.68	13.16	2.79	

BA-MW11 Water Levels

Date	Depth to Water	TOC Elevation	TOS Elevation	Grade	Water Elevation	Feet Below Grade	Column Height			
12/15/1999	13.47	97.41	91.33	97.84	83.94	13.90	3.11			
1/18/2000	13.07	97.41	91.33	97.84	84.34	13.50	3.51			

Table 4 (Page 1 of 2) Soil Headspace Data Summary^{1, 2} Brown's of Two Rivers – Two Rivers, Wisconsin SIR – February 2000

Boring Number				Sample De	epth (Feet)		· · ·	
BA-B1	1-3	3-5	5-7	7-9	9-11			
PID (IUs)	0.0	0.0	0.0	0.0	0.0 X			
SOIL TYPE	fine sand							
BA-B2	0-2	2-4	4-6	6-8	8-10			
PID (IUs)	0.0	0.0	0.0	0.0	0.0 X			•
SOIL TYPE	silty fine sand							
BA-B3	1-3	3-5	5-7	7-9	9-11			
PID (IUs)	0.0	0.0	0.0	0.0	402 X	-		
SOIL TYPE	silty fine sand	fine sand	fine sand	fine sand	fine sand			
BA-B4	1-3	3-5	5-7	7-9	9-11			
PID (IUs)	105	10.7	87	101	1,620+ X			
SOIL TYPE	silty fine sand	fine sand	fine sand	fine sand	fine sand			
BA-B5	1.5-3.5	3.5-5.5	5.5-7.5	7.5-9.5	9.5-11.5			
PID (IUs)	0.0	0.0	0.0	0.0	0.0 X			
SOIL TYPE	red clay	silty fine sand	silty fine sand	fine sand	fine sand			
BA-B6	1-3	3-5	5-7	7-9				
PID (IUs)	0.0 X	0.0	0.0	68.7 X				
SOIL TYPE	peastone	sandy silt	silty fine sand	fine sand				
BA-MW7	0-2	2.5-4.5	5-7	7.5-9.5	10-12	12.5-14.5	15-17	
PID (IUs)	0.0 X	0.0	9.8	0.0	0.0	0.0 X	0.0	
SOIL TYPE	silty fine sand	fine sand	fine sand	fine sand	fine sand	silty fine sand	silty fine sand	
BA-MW8	0-2	2.5-4.5	5-7	7.5-9.5	10-12	12.5-14.5	15-17	17.5-19.5
PID (IUs)	0.0 X	0.0	0.0	0.0	39.3	1,187 X	76.1	0.0 X
SOIL TYPE	silty fine sand	fine sand	fine sand	fine sand	fine sand	silty fine sand	silty fine sand	silty fine sand
BA-MW9 ³	0-2	10-12	12-14					
PID (IUs)	0.0 X	35.3	18.8 X					
SOIL TYPE	silty fine sand	fine sand	silty fine sand					
BA-MW10	0-2	2.5-4.5	5-7	7.5-9.5	10-12	12.5-14.5	15-17	
PID (IUs)	0.0 X	0.0	0.0	0.0	0.0 X	0.0 X	0.0	
SOIL TYPE	silty fine sand	silty fine sand	fine sand	fine sand	fine sand	fine sand	fine sand	l
BA-MW11	0-2	2.5-4.5	5-7	7.5-9.5	10-12	12.5-14.5	15-17	17.5-19.5
PID (IUs)	0.0 X	0.0	0.0	1,556	1,854	358 X	1,593	0.0 X
SOIL TYPE	silty fine sand							

- 1 The photo ionization detector used was a PhotoVac MICROTIP MP-100 with 10.6 eV lamp. Units are roughly equivalent to parts per million within the calibrated range of 0-2000 instrument units (IUs).
- 2 Headspace results in bold and marked with an "X" are those soil samples sent to the laboratory for analysis.
- 3 BA-MW9 was blind drilled and not sampled due to proximity to overhead power lines.

Table 5 (Page 1 of 2) Soil Analytical Results Brown's of Two Rivers - Two Rivers, Wisconsin SIR – February 2000

	NR	BA-B1	BA-B2	BA-B3	BA-B4	BA-B5	BA-B6	BA-MW7	BA-MW7	BA-MW8	BA-MW8
Parameter	720	@	@	@	@	@	@	@	@	@	@
	RCL's	9-11'	8-10'	9-11'	9-11'	9.5-11.5	7-9'	0-2'	12.5-14.5'	0-2'	12.5-14.5'
GRO	100	<3.1	<3.2	360	250	<3.1	200				
DRO	100	<4.8	54	<5.2	1,500	<4.6	13,000		<2.6		74
Cadmium	8							<.21		<0.56>	
Lead	50		<4.3					<3.4		10	
Benzene	5.5	<25	<25	<200	<500	<25	<130		<5.4		<530>
Ethylbenzene	2,900	<25	<25	1,000	14,000	<25	930		<5.9		8,000
Toluene	1,500	<25	<25	<200	8,600	<25	200		<5.9		9,400
Total TMBs	None	<50	<50	11,600	46,000	<50	24,700		<11.2		29,000
Total Xylenes	4,100	<50	<50	4,800	54,000	<50	8,400		<23		34,200
MTBE	None	<25	<25	<200	670	<25	<130		<11		<540
Naphthalene	None			1,200					<10		5,800
n-Butylbenzene	None			<200					<6.5		12,000
sec-Butylbenzene	None			680					<5.5		6,200
tert-Butylbenzene	None			<200					<6.1		1,800
Isopropylbenzene	None			580					<5.2		4,300
p-Isopropyltoluene	None		-	2,900					<11		1,900
n-Propylbenzene	None			1,200					<5.1		2,900
Isopropylether	None							· · · · · · · · · · · · · · · · · · ·	<6.5		4,700
Total PVOCs	None	<200	<200	18,000	123,770	<200	34,400		<62.4		81,670
Total VOCs	None	<200	<200	24,960	123,770	<200	34,400		<118.3		121,270
Acenaphthylene	None							:	<2.0		140
Benzo (a) pyrene	None								<1.4		<2.1>
Benzo (b) flouranthene	None								<1.5		<4.8>
Benzo (g,h,I) perylene	None								<1.9		<5.3>
Benzo (k) fluoranthene	None								<1.4		<1.7
Chrysene	None								<1.7		<2.5>
Dibenzo (a,h) anthracene	None								<1.0		<1.0
Fluoranthene	None								<1.6		6.3
Fluorine	None								<1.7		<43
Indeno (1,2,3-cd) pyrene	None								<2.7		<5.8>
Methyl-1-Naphthalene	None								<2.1		580
Methyl-2-Naphthalene	None								<1.8		1,000
Phenanthrene	None								<1.6		24
Pyrene	None								<1.8		<1.8
Total PAHs	None								<24.5		1,818.3

Notes: All concentrations are reported in parts per billion (ppb) unless otherwise noted VOCs stands for volatile organic compounds; PVOCs stands for petroleum volatile organic compounds

MTBE stands for methyl tert-butyl ether ppm stands for parts per million R_____nds_____ sidu____tam____eve
Table 5 (Page 2 of 2) Soil Analytical Results Brown's of Two Rivers – Two Rivers, Wisconsin SIR – February 2000

	NR	BA-MW8	BA-MW9	BA-MW9	BA-MW10	BA-MW10	BA-MW10	BA-MW11	BA-MW11	BA-MW11	BA-MW11
Parameter	720	@	@	@	@	@	@	@	@	@	@
	RCL's	17.5-19.5'	0-2'	12-14'	0-2'	10-12'	12.5-14.5'	0-2'	10-12'	12.5-14.5'	17.5-19.5'
GRO	100										
DRO	100	<2.6		26		<2.6			140		<2.6
Cadmium	8		<0.20	_	<0.22			1.7			
Lead	50		<3.6>		18			<4.0>			
Benzene	5.5	<24		<5.4		<5.4			<270		<98
Ethylbenzene	2,900	<24		<18>		<5.9			9,700		740
Toluene	1,500	<18		<19>		<5.9			5,500		440
Total TMBs	None	<49		1,480		<11.2			32,000		1,470
Total Xylenes	4,100	203		<23		<23			34,100		2,410
MTBE	None	<21		<11		<11			9,700		<85
Naphthalene	None			200		<10			9,700	570	
n-Butylbenzene	None			94		<6.5			12,000		
sec-Butylbenzene	None			160		<5.5			2,700		
tert-Butylbenzene	None			<6.1		<6.1			1,500		
Isopropylbenzene	None			<7.6>		<5.2		•	4,200		
p-Isopropyltoluene	None			<11		<11			2,100		
n-Propylbenzene	None			560		<5.1			3,200		
Isopropylether	None			<6.5		<6.5			<320		
Total PVOCs	None	339		1,556.4		<62.4			91,270	570	5,243
Total VOCs	None	339		2,601.6		<118.3			126,990	570	5,243
Acenaphthylene	None			<1.5			<2.0			41	
Benzo (a) pyrene	None			<3.5>			<1.4			<1.4	
Benzo (b) flouranthene	None			<1.5			<1.5			<1.5	
Benzo (g,h,I) perylene	None			22			<1.9			<1.9	
Benzo (k) fluoranthene	None			<1.8>			<1.7			<1.7	
Chrysene	None			17			<1.7			<1.7	
Dibenzo (a,h) anthracene	None			11			<1.0			<1.0	
Fluoranthene	None			14			<1.6			<1.6	
Fluorine	None			9.3			<1.7			7.9	
Indeno (1,2,3-cd) pyrene	None			13			<2.7			<2.7	
Methyl-1-Naphthalene	None			110			<2.1			200	
Methyl-2-Naphthalene	None			160			<1.8			420	
Phenanthrene	None			26			<1.6			<2.5>	
Pyrene	None			24			<1.8			<1.8	
Total PAHs				414.6			<24.5			684.9	A CONTRACTOR OF A CONTRACTOR OF

Notes: All concentrations are reported in parts per billion (ppb) unless otherwise noted VOCs stands for volatile organic compounds; PVOCs stands for petroleum volatile organic compounds TMB stands for trimethylbenzenes

MTBE stands for methyl tert-butyl ether ppm stands for parts per million RCL stands for residual contaminant level

Table 6 (Page 1 of 5) Groundwater Analytical Results Brown's of Two Rivers - Two Rivers, Wisconsin SIR - February 2000

PARAMETER	NR 140 ES / PAL	BA-I	MW7
	Standards	12/15/1999	1/18/2000
DRO (ppm)	none	<0.029	
Cadmium	5/0.5	<0.21	
Dissolved Lead (ppm)	15 / 1.5	<1.4	
Benzene	5/0.5	<0.24	<0.50
Ethylbenzene	700 / 140	<0.26	<0.54
Toluene	343 / 68.6	<0.28>	<0.71>
Total Trimethylbenzenes	480 / 96	<0.54	<1.07
Total Xylenes	620 / 124	<0.97	<2.8>
Methyl tert-butyl Ether	60 / 12	1.8	2.9
Naphthalene	40/8	<0.25	
Isopropyibenzene	none	<0.25	
n-Butylbenzene	none	< 0.34	
n-Propylbenzene	none	<0.27	
Isopropylether	none	<0.20	
Total PVOCs	none	4.09	8.52
Total VOCs	none	5.40	8.52
Nitrogen, ammonia as N	9.771.9 ppm	0.11	0.069
Nitrogen N+N (mg/L)	10 / 2 ppm	9.6	13
Nitrogen, Kjeldahl (mg/L)	none	1.0	0.70
Sulfate (mg/L)	none	67	82
Alkalinity (mg/L)	none	430	400
Iron (mg/L)	none	>10	5
Conductivity (uS)	none	2,000+	3050
pH (SU)	none	9.5	7.3
Dissolved Oxygen (mg/L)	none	3.75	0.57
Acenaphthene	none		
Acenaphthylene	none		
Anthracene	3.000 / 600		
Benzo (a) anthracene	none		
Benzo (a) pyrene	0.2/0.02		
Benzo (g.h.i) pervlene	none		
Benzo (k) fluoranthene	none		
Chrysene	0.2/0.02		•
Dibenzo (a,h) anthracene	none		
Fluoranthene	400 / 80		
Fluorene	400 / 80		
Indeno (1.2.3-cd) ovrene	none		
Methyl-1-Naphthalene	none		····
Methyl-2-Naphthalene	none		
Phenanthrene	none		
Pyrene	250 / 50		
Total Polynuclear Aromatic Hydrocarbons	none		

Notes:

All results are reported in parts per billion (ppb) unless otherwise noted. ppm stands for parts per million, GRO stands for Gasoline Range Organics in Element and any uncher destination of the standard elements of thes

Table 6 (Page 2 of 5) Groundwater Analytical Results Brown's of Two Rivers - Two Rivers, Wisconsin SIR - February 2000

	I NR 140				
PARAMETER	ES / PAL	BA-WV8			
	Standards	12/15/1999	1/18/2000		
(DRO (ppm)	none	2.8			
Cadmium	5/0.5	<0.21			
Dissolved Lead (ppm)	15/1.5	<1.4			
Benzene	5/0.5	140	<130>		
Ethylbenzene	700 / 140	430	210		
Toluene	343 / 68.6	2,000	970		
Total Trimethylbenzenes	480 / 96	359	350		
Total Xylenes	620 / 124	1,460	1,000		
Methyl tert-butyl Ether	60 / 12	<21	<47		
Naphthalene	40/8	180	190		
Isopropylbenzene	none	<13			
n-Butylbenzene	none	<17			
n-Propylbenzene	none	<14>			
Isopropylether	none	<35>			
Total PVOCs	none	4,410	2,660		
Total VOCs	none	4,669	2,850		
Nitrogen, ammonia as N	9.7 / 1.9 ppm	0.97	0.63		
Nitrogen N+N (mg/L)	10 / 2 ppm	0.39	< 0.042		
Nitrogen, Kjeldahl (mg/L)	none	2.8	1.5		
Sulfate (mg/L)	none	7.3	5.7		
Alkalinity (mg/L)	none	540	480		
[Iron (mg/L)	none	7.0	9.0		
Conductivity (uS)	none	4410	5180		
pH (SU)	none	9.3	7.2		
Dissolved Oxygen (mg/L)	none	0.86	0.58		
Acenaphthene	none		4.7		
Acenaphthylene	none		<1.8		
Anthracene	3,000 / 600		< 0.049		
Benzo (a) anthracene	none		< 0.051>		
Benzo (a) pyrene	0.2/0.02		0.13		
Benzo (g,h,i) perylene	none		0.25		
Benzo (k) fluoranthene	none		< 0.041>		
Chrysene	0.2/0.02		0.095		
Dibenzo (a,h) anthracene	none		0.11		
Fluoranthene	400 / 80		0.19		
Fluorene	400 / 80		<0.96>		
Indeno (1,2,3-cd) pyrene	none		<0.20>		
Methyl-1-Naphthalene	none		32		
Methyl-2-Naphthalene	none		24		
Phenanthrene	none		<0.20>		
Pyrene	250 / 50		0.28		
Total Polynuclear Aromatic Hydrocarbons	none		65.05		

Notes:

All results are reported in parts per billion (ppb) unless otherwise noted. ppm stands for parts per million, GRO stands for Gasoline Range Organics Results in BOLD exceed NR 140 ES and results underlined exceed NR 140 PALs.

Table 6 (Page 3 of 5) Groundwater Analytical Results Brown's of Two Rivers - Two Rivers, Wisconsin SIR - February 2000

	NR 140	WW9	
PARAMETER	ES/PAL	1	-4/40/0000
	Standards	12/15/1999	1/18/2000
DRO (ppm)	none	0.80	
	5/0.5	<0.24>	
Dissolved Lead (ppm)	15/1.5	<1.4	-0.50
Benzene	570.5	<0.24	<0.50
Etnyibenzene	7007140	<0.26	< 0.54
Toluene	343768.6	<0.03>	<0.77>
Total Trimethylbenzenes	480796	6.5	<1.07
I otal Aylenes	6207124	5.5	<2.8>
Metnyi tert-butyi Etner	60712	<0.42	<0.47
	40/8	2.1	
Isopropyibenzene	none	<0.25	
n-Butylbenzene	none	1.1	
n-Propylbenzene	none	<0.27	
Isopropylether	none	<0.20	
Total PVOCs	none	13.55	6.15
		<u>18.07</u>	6.15
Nitrogen, ammonia as N	9.771.9 ppm	0.19	<0.055>
Nitrogen N+N (mg/L)	10/2 ppm	28	36
Nitrogen, Kjeldahl (mg/L)	none	1.4	0.66
Sulfate (mg/L)	none	61	53
Alkalinity (mg/L)	none		350
Iron (mg/L)	none	1.0	1.0
Conductivity (uS)	none	2,000+	4300
pH (SU)	none	9.0	7.2
Dissolved Oxvaen (ma/L)	none	5.5	0.79
Acenaphthene	none		
Acenaphthylene	none		
Anthracene	3,000/600		
Benzo (a) anthracene	none		
Benzo (a) pyrene	0.2/0.02		
Benzo (g,h,i) pervlene	none		
Benzo (k) fluoranthene	none		
Chrysene	0.2/0.02		
Dibenzo (a,h) anthracene	none		
Fluoranthene	400 / 80		
Fluorene	400 / 80		
Indeno (1,2,3-cd) pyrene	none		
Methyl-1-Naphthalene	none		
Methyl-2-Naphthalene	none		
Phenanthrene	none		
Pyrene	250 / 50		
Total Polynuclear Aromatic Hydrocarbons	none		

Notes:

All results are reported in parts per billion (ppb) unless otherwise noted. ppm stands for parts per million, GRO stands for Gasoline Range Organics in ______ (A = 14_____) de _____ de _____ Ls.

Table 6 (Page 4 of 5) Groundwater Analytical Results Brown's of Two Rivers - Two Rivers, Wisconsin SIR - February 2000

I					
PARAMETER	ES / PAI	BA-MW10			
TANAMETER	Standards	12/15/1999	1/18/2000		
(DRO (nnm)					
Cadmium	5/05	<0.21			
Dissolved Lead (ppm)	15/15	<1.4	•		
Benzene	5/05	<0.24	<0.50		
Ethylbenzene	700 / 140	<0.26	< 0.54		
Toluene	343/686	<0.30>	<1.1>		
Total Trimethylbenzenes	480 / 96	< 0.54	<1.07		
Total Xvlenes	620 / 124	< 0.97	<3.2>		
Methyl tert-butyl Ether	60 / 12	<0.50	<0.47		
Naphthalene	40/8	<0.25			
Isopropylbenzene	none	< 0.25			
n-Butylbenzene	none	< 0.34			
n-Propylbenzene	none	<0.27			
Isopropylether	none	<0.20			
Total PVOCs	none	<2.81	6.88		
Total VOCs	none	<4.12	6.88		
Nitrogen, ammonia as N	9.771.9 ppm	0.21	< 0.019		
Nitrogen N+N (mg/L)	10 / 2 ppm	15	11		
Nitrogen, Kjeldahl (mg/L)	none	7.8	0.45		
Sulfate (mg/L)	none	57	42		
Alkalinity (mg/L)	none	300	300		
Iron (mg/L)	none	4.0	5.0		
Conductivity (uS)	none	1,180	890		
pH (SU)	none	8.9	7.4		
Dissolved Oxvaen (ma/L)	none	4.46	2.20		
Acenaphthene	none				
Acenaphthylene	none				
Anthracene	3,000 / 600				
Benzo (a) anthracene	none				
Benzo (a) pyrene	0.2/0.02				
Benzo (g,h,i) perylene	none				
Benzo (k) fluoranthene	none				
Chrysene	0.2 / 0.02				
Dibenzo (a,h) anthracene	none				
Fluoranthene	400/80				
Fluorene	400 / 80				
Indeno (1,2,3-cd) pyrene	none				
Methyl-1-Naphthalene	none				
Methyl-2-Naphthalene	none				
Phenanthrene	none				
Pvrene	250 / 50				
Total Polynuclear Aromatic Hydrocarbons	none				

.

Notes:

All results are reported in parts per billion (ppb) unless otherwise noted. ppm stands for parts per million, GRO stands for Gasoline Range Organics Results in BOLD exceed NR 140 ES and results underlined exceed NR 140 PALs.

Table 6 (Page 5 of 5) Groundwater Analytical Results Brown's of Two Rivers - Two Rivers, Wisconsin SIR - February 2000

DADAMETED	NR 140	BA-N	1W11
FARAWETER	Standards	12/15/1000	1/18/2000
		14	1
Cadmium	5/05	< 21	
Dissolved Lead (ppm)	15/15	<14	
Benzene	5/05	<12	<24
Ethylbenzene	700/140	640	360
Toluene	343/686	380	480
Total Trimethylbenzenes	480/96	499	390
Total Xvienes	620/124	2,550	1,720
Methyl tert-butyl Ether	60/12	<21	<24
Naphthalene	40/8	240	210
Isopropylbenzene	none	<26>	
p-Isopropyltoluene	none	<28	
n-Propylbenzene	none	<35>	
Isopropylether	none	44	
Total PVOCs	none	4,102	2,974
Total VOCs	none	4,475	3.154
Nitrogen, ammonia as N	9.7/1.9 ppm	0.35	0.095
Nitrogen N+N (mg/L)	10 / 2 ppm	< 0.030	< 0.042
Nitrogen, Kjeldahl (mg/L)	none	1.6	0.70
Sulfate (mg/L)	none	7.3	<5.0
Alkalinity (mg/L)	none	360	420
Iron (mg/L)	none	2.0	5.5
Conductivity (uS)	none	2,000+	2,740
pH (SU)	none	9.2	7.5
Dissolved Oxvaen (ma/L)	none	2.44	0.47
Acenaphthene	none		7.4
Acenaphthylene	none		<3.1>
Anthracene	3,000 / 600		<0.038>
Benzo (a) anthracene	none		< 0.042
Benzo (a) pyrene	0.2 / 0.02		<0.016
Benzo (g,h,i) pervlene	none		<0.031
Benzo (k) fluoranthene	none		<0.028
Chrysene	0.2/0.02		<0.023
Dibenzo (a,h) anthracene	none		<0.022
Fluoranthene	400 / 80		<0.065>
Fluorene	400 / 80		<1.4>
Indeno (1,2,3-cd) pyrene	none		<0.090
Methyl-1-Naphthalene	none		59
Methyl-2-Naphthalene	none		17
Phenanthrene	none		<0.087>
Pvrene	250/50		<0.077>
Total Polynuclear Aromatic Hydrocarbons	none		88.42

Notes:

All results are reported in parts per billion (ppb) unless otherwise noted.

ppm stands for parts per million, GRO stands for Gasoline Range Organics

Table 7
Calculation of Volume and Mass of Contaminants for
Total DRO Soil Contamination
Brown's of Two Rivers - Two Rivers, Wisconsin
SIR - February 2000

				•					
Map Location Units	Area (square feet)	Average Thickness (feet)	Volume (cubic feet)	Mass of Contaminated Soil (tons)	Average Contaminant Concentration (ppb)	Mass of Contaminants (tons)	Mass of Contaminants % (of Total)	Cumulative Mass of Contaminants % (of Total)	Cumulative Volume of Contaminated Soil (tons)
Est. Total Cont. Area					i	i			1
>10,000 ppm	5	2	10	1	13,000	0.0000078	8.571	8.571	1
1,000-10,000 ppm	118	2	236	14	5,500	0.0000779	85.577	94.148	15
500-1,000 ppm	82	1	82	5	750	0.0000037	4.055	98.203	20
100-500 ppm	150	0.5	75	5	300	0.0000014	1.483	99.686	24
0-100 ppm	866	0.5	433	26	11	0.0000003	0.314	100.00	50
TOTALS	1221		836	50		0.0000910	100.00		

Parameter	Method		
Area	Measured using site map and Autosketch.		Kg of Cont.
Mass (Soil)	Assumed: 120 pounds per cubic foot.	area 1	0.007
Mass (Cont.)	Mass of contaminated soil x contaminant concentration.	area 2	0.070
		area 3	0.003
		area 4	0.001

area 5 0.000 Total Kg of Cont. 0.082

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APPENDIX F

WGNHS WELL CONSTRUCTION LOGS

State of Wisconsin Department of Natural Resources Private Water Supply Box 7921 Madison, Wisconsin 53707					N White Copy Green Copy Yellow Copy	DTE: – Division's Copy – Driller's Copy – Owner's Copy		WELL CO Form 330	ONSTRI 0-15 JUL	UCTOR'S	REPC Rev. 5)RT -85
1. COUNT	ТҮ			CHECK (V)	ONE:		Name			· · ·	· · · · · ·	
<u></u>	Mani	towoc		X Town	Vil	lage (X City	<u> </u>	Two	Rive	ers		
2. LOCAT	TION N	$E_4 SW$	4		L9N 24E	3. NAME LALOW	h Ste	gent at t geman			CHEC	K (1) ONE
OR	- Grid or Str 1	eet No. S 515 J	Street or Road	d Name S t .		ADDRESS R. 3		,	¹ • ب			
AND	- If available	subdivision	n name, lot &	block No.		POST OFFICE	River	a. Wia		ZIP COD	E I	
4. Distanc	ce in feet from	well Bu	ilding Sar	litary Bldg, Dra	in Sanitary	Bidg. Sewer	Floor Drai		orm Bidg	<u>, Drain</u>	Storr	n Bldg, Sewer
to near	rest: (Reco	rd		C.I. Ott	ner C.I.	Other C.I. S	Sewer Oth	er Sewer	C.I.	Other	C.I.	Other
block)	ewer Other	Sewers IF	6 Oundation D	rain Connecter								
San. St	torm C.I.	Other !	Sewer	Sewage	C.I. 0	her Sump	Tank Ta	ank Seepa	ge Pit ;	Stion Onit	Retent	ion or atic Tank
50 .	_ _	- 1	Clearwater Dr.	Clearwater			- -	Seepa	ge Bed ge Trenci	h	-	
Privy Pr W	et Pit: No Vaste Well	onconform	ing Existing	Subsurface Pu Nonconformi	mproom ng Existing	Barn Animal Anim Sutter Barn Yard Pen	al Silo With Pi	Glass Line It Storage Facility	d Slio w/o Pjt	Earthen S Storage T Or Plt	llage E rench N	Earthen Manure Basin
	- Pump Tank		_				-	-	4	-		-
Temporar Stack or F	y Manure W. Platform M	atertight L anure Tank	Iguid Manu or Pressu	re Subsurfac	e Waste Pond Disposal Ur	or Land Manure S	torage Basi	in O	ther (Des	scribe)	l_	
	Ba	asin 🛁	Pipe	Oll Tank	(Specify T	ype) Concrete	Floor and		<u></u>			
5. Well is	intended to su	upply water	r for:			9. FORMATIONS			ž	·		
	Bait	: Shop					Kind			From (ft.)		To (ft.)
6. DRIL	LHOLE) From (tt.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)	sand				Surface		28
10	Surface	99	6	99	370	clay		Ť Y		28		86
						hard pan)	Sector Sector		86		99
7. CASIN	NG, LINER, C Material, W	URBING A	ND SCREEN	V	<u> </u>	limoston						270
Dia. (in.)) <u>Mig. & Me</u>	ethod of As	ssembly	From (ft.)	<u>To (ft.)</u>							<u>, 10</u>
6	ASTM	A-53		Surface	99			}	<u> </u>			
	Sumit	tomo								<u> </u>		<u></u>
······································	Welde	ed joi	nt									
	Wt. 1	18.97	per ft	•								<u></u>
						10. TYPE OF DR	ILLING M	ACHINE US	SED			
8 CP01		DCEATIN	CMATEDIA	<u>і </u>	1	Cable To	001	W/drilli	ng air] Jettli	ng with
0. OKU	Ki	nd	O MAI LINIA	From (ft.)	To (ft.)	Rotary-a	lr a mud	Rotary-	hammer			Air
 D r				0.6	00	Rotary-w	v/drilling		Determ			Water
		maa		Surrace					Rotary			
11 8	UCCELLAN	FOUS DA	TA	<u> </u>	· · · · · · · · · · · · · · · · · · ·	Well construction	completed	on		<u>iy_30</u> ,		19_86_
11. N	/ield_Test:		<u> </u>	<u>Hrs. at</u> _	20 GPM	Well is terminated		8 inches		above below	ïnal gra	de
D	Depth from sur	face to nor	mal water lev	vel	100Ft.	Well disinfected up	on comple	tion	XX	Yes 🗆 1	No	
Ľ	Depth of water when pumpin	level	100_ _{Ft} .	Stabilized	🖾 Yes 🗆 I	No Well sealed waterti	ght upon c	ompletion	кх	Yes 🔲 1	No	
	Water sample se	ent to			Madisor	1	laborator	y on		June	12,	19_86
Your op finishing	pinion concern g the well, amo	ing other pount of cen	ollution haza nent used in g	rds, informatic grouting, blasti	on concerning d ng, etc., should	ifficulties encountered be given on reverse sid	l, and data le.	relating to n	earby we	lls, screens	, seals, r	nethod of
Signature	ç		1			Business Name and	d Complete	Mailing Add	iress			. <u></u>
Ãe	ionard	J. 1	Julen	Registere	d Well Driller	Wille R. 1	ms We Gree	ll Ďri nleaf.	llin. Wis	g •	5412	6

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	TYCH -	· Menitor			·	(Town			
Hish	1. Cou	NW, NW,	SE, Sec	. 1 779	IN R24E	{Village □ (City □ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Check one and g	VIA	CEIVED
12020	12 Loca	ation 15th_St	reet_	- 4001	south c	f Washing	ton Street		·····
Well	3. Owi	ner 🛛 or Agent [<u>M</u> 1)		uminum C	ompany	and Range number		302-11-1
Approvo	7 - A Mai	Address	Mos		o Wi -	partnership or nr		ENC	CAREALING
- Julie	4. Mai	Address	M.d.		Complete add	ress required	<u> </u>		
C.10.	5. Fro	m well to nearest	: Buildir	ıg	ft; sewer	ft; drain.	ft; septic tan	kft	;
FILE	;velity	well or filter bed	if	t: abando	oned well	ft.			•••
Two	6 Wol	lig intended to	unnlu m	aton for.	Indu	striel			
	7. DR	ILLHOLE:	suppry w	ater 101.			ATIONS		
	Din. (ln.)	From (ft.) To (ft.)	Dia. (in.)	From (IL)	To (ft.)		Kind	From (ft.)) To ((t.)
	_16	0 15				Drift			86
•	10	45 371				T.imost		86	277
	8. CA	SING AND LIN	ER PIP	E OR CU	RBING :			1-00	->/
	Dia. (in.)	Kind and Wei	t	From (ft.)	To (it.)		· · · · · · · · · · · · · · · · · · ·	1	
	16	Steel 3/8"	Wall	0	_451_	Ma	Intervor, Co.T	tril #	7
	10	Steel 307'	Wall	+21	_871_		ell # 1 Darm V	Vell No	57.817
						SP	BULLY SILLY SI	dc 1 T	TIAN RZYF
	9. GR	OUT:				To	WIN OF TWO E	IVERS	
		Kind	····	From (It.)	To (IL)	<u>-</u> <u>-</u> <u>-</u> <u>-</u> <u>-</u> <u>-</u> <u>-</u>			
	<u>N</u>	leat Cement		_0	_45!				·
				I	·	Constructio	on of the well was co	ompleted o	on:
	11. N	MISCELLANEO	US DAT.	A:		May	3		19.65_
	Yield t	est: 7-1/2	Hrs. at	300_	GPM.	The well is	terminated2	4	inches
	Depth :	from surface to v	vater-lev	el:		🖾 above, b	elow 📋 the permane	ent groun	d surface.
	Watar	lavel when num	ina.	350 .	T - f +	Was the w	ell disinfected upon	completio	n?
	water-	level when punt			•••••• 160		Yes		9
	Water	sample was sent	to the st	ate labor	atory at:	Was the w	ell sealed watertigh	t upon co	mpletion?
		City	on		19		Yes	X N	0
		,EGERER-(ALLOW	AY WEL	L CORP.	7136 W	Vest State St.		
	Signatu	ire h_ Un a	lus	**************************************	·····	Milwan	1kee, Wis. 532	13	
		/ Registered	i wen Dr	Fle	ease do not wr	te in space below	Complete Mail Ad		
	Rec'd			No		1 11	10 ml 10 ml 10	ml 10 m	il 10 ml
	Ans'd _					Gas-24 hrs.			
	Interpre	tation <u>CC</u> .	m	E. Ow	ton	48 hrs.			
		<u> </u>	State	fleo.	Survey	Confirm			
				<u> </u>	45 0	B. Coli	·		
				· /			Examiner_	*****	
						1			

UNIVERSITY OF WISCONSIN GEOLOGICAL & NATURAL HISTORY SURVEY Log No.Mn-35 · 1815 University Avenue, Madison, Wisconsin 53706 Issued: Oct., 1967 County: Manitowoc Well name Mirro Aluminum Company, Two Rivers, Wis. 24E R. Located 15th St., 400' S. of Washington St. Completed... 5/3/65. Owner... Mirro Aluminum Co. Field check. т. 595 'ETM Address. Manitowoc, Wisconsin Altitude.... 19 Use..... Industrial Driller. Egerer-Galloway Well Corp. Static w. 1. = 7'N. Engineer. Spec. cap... = 0.9Sec.) Manitowoc 15' Quad. Drill Hole Casing & Liner Pipe or Curbing Dia. from to Dia. from to Dia. Wgt.& Kind from to Dia. Wgt.& Kind from to steel 3/8" wall 16" 0 45.' 16 0 45 10" 371' 45 10' "steel .307" wall +2' 87' Grout: Kind from to Neat cement 45' 0 370' Date received: 9/16/65 Samples from 0 to Date: 2/11/66 Sample Nos. 257899 to 257972 Examined by: Janet Olmstead Formations: Drift, Silurian Remarks: Well tested for $7\frac{1}{2}$ hours at 300 gpm with 343 feet of drawdown. LOG OF WELL: For soil, mxd clr, mxd lithology Snd,mxd clr,M&C,Srnd,P srtg,tr fn,VC;mch cl,trVfn&fn gvl & soil Snd,mxd clr,M&C,Srnd,P srtg,trVC:ltl Vfn&fn gvl & cong Cl,it rd bn,dolic;ltl Vfn, fn gvl, tr snd Cl,it rd bn,dolic; mch st tr snd. & Vfn gvl 0-10 10 10 - 155 D 15 - 205 R 20-25 Cl. 1t rd bn, dolic; mch st, tr snd, & Vfn gvl Cl.Vlt rd bn,dolic; mch st, tr snd & Vfn gvl St & Cl, it yl gry bn; mch Vfn & fn snd 25-30 5 30 - 35-61 35-40 5 40-55 15 Cl, lt rd, dolic; mch st, tr snd ~C1, lt rd bn, dolic; mch st, tr snd Snd, mxd clr, C & VC, ang, P srtg, tr M, fn; ltl Vfn, fn gvl, cl 55-80 25 80-85 5 <u>85-90</u> 90-95 Dol, lt gry bn, M & fn, dns; mch cvd snd, tr sh & pyr 55 lt grv, M & fn, dns; tr pyr & sh Dol. lt yl gry bn, M & fn, dns: tr pyr & sh lt yl rd bn mot lt gry, M & fn, dns: tr pyr & sh lt yl rd bn mot lt gry, M & fn, dns: tr pyr, sh, oolic dol 95-100 5 Dol 5 100 - 105Do1 105-110 5 Dol. Ì₹ A 110 - 14030 Dol, lt yl rd bn mot lt gry, M & fn, dns; tr pyr & sh Dol, lt yl rd bn, M & fn, dns; 140-145 5 Vit yl gry, M & fn, dns: tr pvr 145-150 5 Dol. 20 150-170 Dol. Vit vl gry. M & fn. dns; tr nyr & sh

UNIVERSITY OF WISCONSIN GEOLOGICAL & NATURAL HISTORY SURVEY ~1815 Jniversity Avenue, Madison, Wisconsin 53706

Well name Mirro Aiuminum Co., Two Rivers, Wis. Sample Nos. 257899 to 257972





TWO RIVERS 2

					Mn-4
		860-875	-1-1-21	Limestone, mugnesian, Bluish-gray, very shaley	
		875-1100		Shale, bluish-gray, limy	•
					•**
9				•	•
5					* •
20			=		
$\langle \langle \rangle$					
5					•.
Ň.		1000-			•4
8					•••
					:
					•
	·				
	330	1100			
9		1100-1250	<u> </u>	Linnestone, bluish-gray, magnesian	
Z				H	
8					
R					
12			- topland		
12	[·			· · ·
17	[1300		•	•
IS .	1		┠╾┶┱╌┶┱╌┟ _┖ ╌		• •
w	{				•
V	[· .	1250-1265		Limestone magnesian, brownish-gray	-
2	[12.65-1280		Limestone, magnesian, blueish-gray	
	195	1280-1295	-	Limestone, magnesian, promnish-gray	
E	1	1300 1300		sandstone, fine to medium, gray & yellow,	
12	ł ·	1295-1340		little lime	•
24	45		·		
	1	1340-1400	· · · · · · · ·	Sandstone, time, yellowish and brownish red, grains	
	1	/	1	not well rounded, no line	· .
1					· .
}	{	1400	· · · ·		4
6	1	1400.1445		Sandstone, fine, red, grains fairly well rounded no lime	
10	1				
0	1	14115-1440			
à	1	1460-1475		Sandstone, meaning, yellowith brown, angular grains	1
2	1	1475-1490		Shale sandy reddish arey notime	4
13		17/0 11/0	· · · · · · · · · · · · · · · · · · ·	Sandstane time vellowish red and area income	4
5		1490-1550	1	poorly rounded	
W					
E	1	1	l		{ ·
7	1	1550-1580	t 	Sandstone fine, light red orains pourly rounded	•
	1.	,			
1	1	1580-1595	1	Sandstone, tine, dark yellowish-brown, well rounded	1
	270	1595-1610 1600	====	Shale, sandy, dark red, no lime	1
:03	:	1610-1640	1.1.1.1.1.	Quartzite, light gray to brown, glassy	1
153	30		11.1.1.1.		

1300

State of Wisconsin Department of Natural Resources Private Water Supply Box 7921 Madison, Wisconsin 53707					NC White Copy Green Copy Yellow Copy	TE: – Division's (– Driller's Co – Owner's Co	Сору ору ору	WELL CONSTRUCTOR'S REPORT Form 3300-15 Rev. 2-79				
1. COUNT	Y Ponit.	0.000		CHECK (√)	ONE:	_	N	ame	JULJ	1000		
2. LOCAT	I Grid or Stree	1-2- t No. 5	V't. Lo(SW 3-4-5- Street of Ros Memo:	A Section To 6 1 - 19 ad Name rial Dri	vnship Range A 24E	age L 3. NAME D JEI ADDRESS 15: POST OF	Al owner a owner a cs Van LIGHT 15 Memo	JAGENT AT TI Lanen HOUSE IN rial Dri	VELS ME OF DRILLI VN - WE L		ск (ло 1 - 816	
AND -	B.	lock	1.03	a diock no.		Two	o River	s. Wis.	54.24	11		
4. Distance to nearce answer block)	e in feet from w est: (Record in appropriate	rell Bu	allding Sa	C.I. Otl	ain Sanitary her C.I.	Bldg. Sewer Other	Floor L Connect C.I. Sewer	Drain ed To: Sto Other Sewer	Dr,m Bldg. Drain C.I. Other	Stor C.1.	rm Bldg. Oth	
Street Se San. St 100	orm C.I. OI	ther	Sewer Clearwater Dr.	Sewage Sump Clearwater Sump	C.I. Ot	ner Sum	p Tank	Tank, Seepag	e Absorption Un le Pit le Bed le Trench	Reten Pnuer	natic Tar	
Privy Pe W Pi	t Pit: Non aste Well Pump Tank	conform	ing Existing	Subsurface Pu Nonconformi	ng Existing MAN	arn Animal Barn Barn Pen	Animal Sile Yard Wift	Facility	Slio Earthe w/o Storage Pit Or Pit	n Sllage Trench -	Earthen Manure	
S Woll is	/ Manure Wate latform Man Basi	ertight L ure Tank n —	iquid Man or Press Pipe	ure Subsurfac sure Gasoline Oil Tank	e Waste Pond or Disposal Un (Specify T	or Land Ma it Co ype) Co - Pat	nurg Storage I ngléte Floor C ncrete Floor a tial Concrete	Basin Ot Only Ot Ind Walls	her (Describe)			
5. Well 18	Intended to sup II	eat	punp			. TORMA	Kind		From (f	t.)	To (f	
6. DRILI Dia. (in.)	HOLE	'o (ft.)	Dia. (in.)	From (ft.)	To (ft.)	sisand		•	Surface		20	
_10	Surface	20	6	20	124	sand	y clay		20		35	
					AND	clay			35		86	
7. CASIN 	G, LINER, CUI Material, Wei Mfg. & Meth	RBING A ght, Spec nod of As	AND SCREE cification ssembly	N From (ft.)	To (1.)	lime	stone		86		124	
6	ASTIN-	· <u>A53</u>		Surface	86							
	Repub T&C	lic				APPR	E LOCA	DATE:	FEBR. 8 Two F	3, 19 (IVE	84 Ers	
	://t.l	9.45	per f	t.		CC :	TO STA	TE CEO	ologi ED	ST		
8. GROU	TOROTHER Kind	SEALIN	G MATERL	AL 15 om (ft.) Surface	To (ft.)		able Tool otary-air /drilling mud otary-w/drillir ud	Rotary-h w/drillin mud & a Rotary-h & air	ammer 9 ir aammer R otary		Air Water	
11. M	ISCELLANE	OUS DA	ATA	/	75	Well constru	uction comple	ted on	Februa Z above	<u>ry 2</u> final gr	<u>5</u> ,19	
Y	epth from surfa	ce to nor	rmal water le	Hrs. at	<u> </u>	Well disinfe	cted upon con	npletion	Yes	No		
	epth of water le when pumping	evel	/25 Ft.	Stabilized	Yes 🗆 N	Well sealed	water tight upo	on completion	🖾 Yes 🗆	No		
D		1.10	-23	Dec. Cap	$\mathcal{A} = \mathcal{A}$		labora	tory on			19	
D w	ater sample cen							ata relating to pa	arby wells scree	ns, seals,	method	
W Your op finishing	ater sample sen inion concernin the well, amou	g other p nt of cer	ollution haz	ards, informatio grouting, blasti	on concerning di ng, etc., should l	fficulties encou be given on rev	erse side.	ata relating to ne	andy wens, seree		method	

			JAN 1 3 1988			
State of Wisconsin Department of Natural Resources	NO	TE: WELL CONSTR	WELL CONSTRUCTOR'S REPORT			
Private Water Supply Box 7921 Madicon Wisconstin 53707	White Copy - Green Copy - Yellow Copy -	- Division's Copy Form 3300-15 - Driller's Copy - Owner's Copy	Rev. 5-85			
1. CQUNTY	CHECK (/) ONE:	Name				
- MADi Towac	Town Villa		Bivers_			
2. LOCATION Mile 113.2 SW.	1 19025	ia ht house.	DRILLING CHECK IN ONE			
OR - Grid or Street No. Street or Road	Name TIAN, RAYE	ADDRESS				
AND – If available subdivision name, lot &	block No.	POST OFFICE	ZIP CODE			
4. Distance in feet from well Building Sant	Itary Bldg, Drain Sanitary E	Bldg. Sewer Floor Drain Storm Bl	dg. Drain Storm Bidg. Sewer			
to nearest: (Record answer in appropriate block)	.1. Other C.I.	Other C.I. Sewer Other Sewer C.I	Other CL Other			
Street Sewer Other Sewers Foundation Dr. San, Storm C.I. Other Sewer	ain Connected to: Sewage Sun Sewage C.I. Oth	PD Clearwater Septic Holdlos Sewage Abso er Sump Tank Tank Seepage Pit	rption Unit Manure Hopper or Retention or Pnuemalic Tank			
Clearwater Dr.	Clearwater	Seebage Bid	ch			
Prior Pet Pit: Nonconforming Existing Waste Well Pump Pump Pump Pump Pump Pump Pump Pump	Subsurface Pumproom B NonConforming Existing	arn Arlimai Silo Glass Lined Silo Utter Earn Yard With Pitt Sierape Pen Facility Pit	Earthen Slage (Earthen Storage Trench Or Pit			
Yemporary Manure Watertight Liquid Manur Stack or Platform Manure Tank or Pressur Basin Pipe	e Sybsurface Waste Pond o re Gasoline or Ofsposal Unit Oil Tank (Specify Ty	r Land Manure Brorage Basin Other (Pr Congrete Floor Only PE Concrete Floor and Other (Pr Doncrete Floor and Street Stree	escribe) ERM. WELL H			
5. Well is intended to supply water for:	H-2Pt	9. FORMATIONS				
6. DRILLHOLE	DIS, FAS CON	Kind N	From (ft.) 10 (ft.)			
Dia. (in.) From (tt.) To (ft.) Dia. (in.)	From (ft.) To (ft.)	GBAVE	Surface <u>\</u> O_			
Surface 69		Zandy-class	10 85			
6 39545		GRAVET	85 89			
ASING, LINER, CURBING AND SCREEN Material, Weight, Specification Dia. (in.) Mfg. & Method of Assembly	From (ft.) To (ft.)	L'MESTONE	89 400			
6 Nour DI. STL.	Surface 91	L'inerchisa	400 545			
PLENdusided	<u> </u>	MANITOWOL CO. MISC.	#6			
ASIM AS3		FILE LOC: TWO RIVER	2			
Idaa aga		APPROVAL DATE: FEB 19	1988			
		10. TYPE OF DRILLING MACHINE USED	<u> </u>			
8. GROUT OR OTHER SEALING MATERIAL	<u>}</u>	Cable Tool	Jetting with			
Kind	From (ft.) To (ft.)	Rotary-air w/drilling mud & air	r 🗌 Air 🗌 Water			
DR'IL SLURBY	Surface \$9	Rotary-w/drilling Reverse Rotary	,			
\sim		Well construction completed on	-10 1557			
11. MISCELLANEOUS DATA	Its. at GPM	Well is terminated inches	above final grade below			
Depth from surface to normal water leve	1 125 Ft.	Well disinfected upon completion	Yes 🗆 No			
Depth of water level 2008 Ft.	Stabilized E Yes D No	Well sealed watertight upon completion	Yes D No			
Water and a set of Control of Con	- Ranse =	0.7 GPM/ft. Ishorstory on 12-7	28 1987			
ur opinion concerning other pollution hazar	ds, information concerning diff	iculties encountered, and data relating to nearby w	vells, screens, seals, method of			
finishing the well, amount of cement used in gr	outing, diasting, etc., should be	Rusiness Namé and Complete Mailing Address				
Stand D. D.C. Dr		B'IN VANDE KACKT"M	VALER WELLING			
YCHU CAMPE LORAL	Registered well Driller	0.0.940% GR.S	the striggt			

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	State	of Wisco	ntin	•				10 s	an	n/e.s									
Depart	iment o Private	f Natura Water Si	l Resource	5			w	bite Conv	NOT	E: Division's	Conv		W] Fo	ELL (1m 33	CON	STRI 5	UCTOR	S REP	ORT
Mac	dison, V	water St ox 7921 Visconsu	1 53707				Ĝ Y	reen Copy ellow Cop	- - - y -	Driller's C Owner's C	сору ору М Сору	AR	3 1	98 8	.00-1	J			. 3-87
1. COUN	NTY	MA		^	.	CHEC	K (√) O	NE:	Villes	- /í		į N	ame						
. —		1/4 Sec	tion or Go	v't. Lot	$\overline{}$	Section	1000	nship Rang	pe 3.	NAME 1			JAGEN	TAT		OF	DRILLIN	G CHE	CK (1)
2. LOCA	ATION	SW	ż SWż			1	19	N. 24	Ε.	J	AMES 1	ANL	ANEN			We	11 #	2	·····
UK	- Gr	10 or Str 15	15	MEMO	ROSO	Name		*		ADDRES	ง 515 M7	MOR	τΔτ Γ	R	P	ER	り 井	81	605
AND	– If	available	subdivisio	n name,	lot & l	block No	0.			POST OF	FICE			<u> </u>			ZIP COD	Ē	
4 Distar	nce in f	eet from	well Bi	uliding	Sani	tary Bid	o. Drair	- Sanii		de Sewer	O RI	FRS	WI	S.	Storm		54241	1 510	- Bida
to nea	arest:	(Reco	rd	,	C		Othe	r C.I	i.	Other	C.I. Se	wer	ed To: Other Se	wer	C.1.		Other	C.I.	
block) Street S	sewer	Other	Sewers F	6 Foundati		ain Conr	-	of Sewage	Sum	Cleary	vater Se	ptic	Holding	Sew		bsorr		Manur	
San. S	Storm	C.I.	Other 1	Sewer		Sewag Sump	e	C.I.	Othe	Sun	T qr	ank	Tank	Seep	bage P	It		Reten Pnuen	tion or hatic Ta
100	-	-	- [Cléárwál Dr.	er	Sump	valer							Seer	page B page T	renci	h	l;	-
Privy	Pet Waste Pit	Well		ing Exist		Subsurfa Nonconf	forming	Existing	- Gut	ter Barn Pen	Yard	Wit	h Pit Sto Fai	ss Lin Drage Cility	ied S	v/o vit	Earthen Storage Or Pit	Silage French	Earthen Manure
-	-	Pump Tank					-	-			-	-		-		-	-		-
Tempora Stack or	ary Mar Platfor	ure Wa m M	atertight L anure Tank	iquid cor	Manur	e Subs e Gaso	urface line or	Waste Po Disposal	ond or Unit	Land M	anure Sto	rage I loor C	Basin Dniv		Other	(Des	scribe)		
	-	Ba	isin <mark>—</mark>		Pipe -	- -	Fank	Specif	у Тур	e) Co Pa	oncrete F	loor a crete	nd Walls		_	lak	e-75'		
5. Well i	is inten	led to su	pply water	r for:						. FORMA	TIONS				/		<u> </u>		
6. DRII	<u>Hea</u>	<u>t Pum</u> E	<u>p</u>				······			<u></u>		Kind					From (ft.	2─┼-	<u> </u>
Dia. (in	1.) Fro	m (11.)	To (ft.)	Dia. (i	n.)	From (f	1.)	To (ft.)		sand			\square				Surface		35
10) SI	uface	91	6		91		622		clav							35		01
								022		<u>cidy</u>						-			
7. CASI	ING. LI	NER. CI	IRBING A	ND SCH	EEN					limest	one		····				91		622
Dia. (in	Ma 1.) M	terial, W fg. & Me	eight, Spec thod of As	ification sembly		From (f	ît.)	<u>, To (ft.)</u>											
6		DT _5	٨			Surfac	-) À1		Mhoi	$+n(\cdot)$	γc	Ca		m:	$< \downarrow$	# /		
<u> </u>		<u> </u>	a. <u> </u>					<u> </u>		1	<u></u>	<u>n</u>	to e	· [- E-1		$\sqrt{2}$	301	 i
		ones		nlin					ł	$\frac{\pi p x o}{2}$		<u>U</u>	116_0	·	<u> </u>	2	<u>0, 1</u>	78	7
<u></u>	W	elded	joint							rile.	100	171	On .	- 	lω	24	Rive	13	
	W	t. 18	.97 pe	r ft.						CC: (Stat	е	Geo	olo	ais	sН			
										10. TYPE	OF DRI	LLING	G MACH	INE U	SED				
8 CPO		OTUE	SEATIN	C MATE							able Too	1		v/drill nud &	ing air	ner		Jetti	ing with
0. 0.00		Kir	nd			From (ft.)	To (ft.)			otary-air /dritling	mud		Rotary & air	y-ham	mer			Air
		~~ t				Surfac	_	6.0			otary-w/	drillin	، 🗆 ۱	Revers	ke Rot	arv			Wate
	Com	<u>ent</u>				Bullac						··							
	Cem					60		91		Well constr	uction co	mple	ed on _			LY_	7,		_ 198
	Cem Dri	lling	mud	TA -	100 C							۶	}	inche	ن د [: ب ۱ 🗔	adove below	final gr	ade
	<u>Cem</u> Dri MISCE	lling LLAN	<u>mud</u> EOUS DA	TA 4	Н	irs. at -		110 G	SPM	Well is term	inated .			mente					
11. N	Cem Dri MISCE Yield T	lling LLAN	<u>mud</u> EOUS DA	TA 8	H	Irs. at		<u>110 </u>	SPM_	Well is term			nlatic-	Biches	 f	<u>x</u> 1 ·	Ver 🗔		
	Cem Dri MISCE Yield T Depth f	lling LLAN est:	mud EOUS DA	TA 9	—_H er leve	<u>lrs.at</u>		110 G 40 F	5PM_ 71.	<u>Well is tern</u> Well disinfe	cted upo	n com	pletion		(<u>x</u>	Yes 🗆	No	
	Cem Dri MISCE Yield T Depth o when	lling LLAN est: from surf of water pumping	mud EOUS DA lace to nor level	TA 4 8 mal wate	er leve	lrs_at I Stabiliz	ed []	110 G 40 F 2 Yes [5PM 71.] No	Well is term Well disinfe Well sealed	cted upo watertigi	n com	pletion n compl	etion	(X) X)	Yes 🗆 Yes 🗔	No No	
	Cem Dri MISCE Yield T Depth 1 Depth 1 Water 5	lling LLAN est: from surf pumping ample se	mud EOUS DA face to nor level	TA 4 8 mal wate	er leve Ft.	Irs. at I Stabiliz	{ed	110 G 40 F 7 Yes [5PM ≈L.] No	Well is term Well disinfe Well sealed	cted upo watertigi	n com it upo abora	pletion n compl tory on	etion		<u>ر</u> ې درې	Yes 🗆 Yes 🗔	No No	19
11. 1 	Cem Dri MISCE Yield T Depth f Oepth f when Water s	lling LLAN est: from surf pumping ample se	mud EOUS DA face to nor level g nt to ing other p	TA 8 mal wate	Ft.	Irs_at I Stabiliz	ed []	110 G 40 F 2 Yes C	SPM Ft. No g diffic	Well is term Well disinfe Well sealed	cted upo watertigi	n com it upo abora and da	pletion n compl tory on nta relati	etion ng to	(l	X X y we	Yes Yes	No No , seals,	19 method
11. I I I Your oj finishin	Cem Dri MISCE Yield T Depth f Depth f Water s opinion ng the w	lling LLAN com surf of water pumping ample se concernivell, amo	mud EOUS DA face to nor level 8 ing other p ount of cerr	TA 4 8 mal wate 40 ollution hent used	Ft.	I Stabiliz ds, informouting, t	ed [] mation blasting	110 G 40 F 2 Yes C concerning, etc., shou	SPM St. No g diffic uld be	Well is term Well disinfe Well sealed Pulties enco given on rev	watertigi untered, rerse side	n com it upo abora and di	pletion n compl tory on nta relati	etion ng to :	[nearb;	X] X] y we	Yes Yes Yes	No No , scais,	19 method
11. P 11. P 1 1 1 1 1 1 1 1 1 1 1 1 1	Cem Dri MISCE Yield T Depth f Depth f when Water s opinion ng the w	Iling LLAN est: from surf of water pumping ample se concerni- cell, amo	mud EOUS DA face to nor level 8	TA 4 8 mal wate 40 ollution nent use 77.	Ft.	I Stabiliz Is, inform	ed []	110 G	FT. No g diffic	Well is term Well disinfe Well sealed culties enco given on rev Business Na WIL	untered, watertigg untered, erse side ame and d LEMS	n com it upo abora and da Comp WELL	pletion n compl tory on nta relati lete Mail	etion ng to ing Ac	(nearb) ddress	X X y we	Yes Yes Yes	No No	19 method

APPENDIX G

LIST AND LOCATION OF POSSIBLE OFF-SITE CONTAMINANT SOURCES

List of Possible off-site Contaminant Sources

- Sauve's Auto Service

 1421 Washington Street
 Two Rivers, Wisconsin 54241
 Feet from site: 140
- Hansel's Tire & Battery, Inc. 1415 East River Street Two Rivers, Wisconsin 54241 Feet from site: 80
- Property owned by city of Two Rivers/state Formerly Charlie's Service 1423 East River Street Two Rivers, Wisconsin 54241 Feet from site: 80
- 4. River Front Liquor, Bait, & Beverage 1431 East River Street Two Rivers, Wisconsin 54241 Feet from site: 80
- 5. U.S. Oil Petroleum Pipeline (red) 1308 Washington Street Two Rivers, Wisconsin 54241 Feet from site: 15
- 6. (2) USTs under State Trunk Highway 42 1400 Washington Street Two Rivers, Wisconsin 54241 Feet from site: 10
- Brown's of Two Rivers site is highlighted in yellow
- The 1967 Sanborn map does not show USTs under State Trunk Highway 42





SANBORN MAP LEGEND

GLOSSARY

A-B Lines. An arbitrary boundary between adjoin-CODING OF FIRE-RESISTIVE STRUCTURAL UNITS FOR FIREPROOF AND NON-COMBUSTIBLE BUILDINGS sheets. A Private garage FRAMING FLOORS ROOF <u>ABV</u> Above <u>AEA</u> Equipped with fire detecting devices wh automatically signal a central fire department. <u>AIR COND</u> Air cooling system employing du CODE_STRUCTURAL UNIT CODE_STRUCTURAL UNIT CODE STRUCTURAL UNIT The coding to the left, for framing, floor and not structural units is used in describing the construction of fig-resistive buildings. In Reinforced Concrete Frame Reinforced Concrete. Reinforced Concrete MPRON WALL A maximity wall extending 5" or L. addition, reports for fire-resistive buildings will show the date Reinforced Concrete with Masonry Reinforced Concrete with pult, wall construction other than brick, and ceilings, Reinforced Concrete Joists above township В Masonry Units. Reinforced Gypsum Units. ASSOC RISK Risk not underwritten by stock Fire I Columns, Beams, Trusses, Arches, he-cast Concrete or Gypsum Slabs or Masonry Piers. Companies. BASEMENT A story having its floor below grow A fireproof building built in 1962 with con-Planks Concrete Pre-cast Concrete or F P - 1962 (CONC.) Gypsum Slabs or Planks. crete walls and reinforced concrete frame. Cook County III: A floor of a building net bel-the first floor. Shown by the symbol B follow C. Protected Steel Frame Concrete or Metal Lath. floors and root. 4-1-2 Incompostible Form Boards. Concrete of Gypsum on Metal Lath. b. Individually Protected Steel Joists, D Paper-backed Wire Fabric, Steel Deck, and Ceilular, Ribbed or Incombustible Form Boards, Piner-Columns, Beams, Trusses, Arches A threphood building built in 1962 with inetal backed Wite Fabric, Steel Deck, and Cellular, Ribred or Corrugated Steel Units. tory height. Sub-basements or sub-cellary, estor FPX - Dec panel walls, reinforced concrete columns and beams, concrete walls on metal lath and gypbelow the first basement), are shown by the sym-E Indirectly Protected Steel Frame. Considued Steel Units (ى SB following basement symbol. CHIMNEYS (Applicable to maps in Rocky Mounta-8-2-a um slab root; noncombustible ceilings, Indirectly Protected Steel Joists Open Steel Deck or Grating, Incombustible Composition Boards with without Insulation. Masonry or Metal F -----Columns, Beams, Trusses, Arches, ٠× & Pacific Coast States, (Tites BC. Brick, stone, concrete brick & concrete chi G Unprotected Steel Frame non-combustible building built in 1962 with NC - 1962 Sieel Deck, Corrugated Metal or Asbesto d. concrete block walls; unprotected steel C. BL. C. Concrete block chimnes н Unprotected Steel Joists, Column Protected Metal with or without Insulation. columns, beams and joists; concrete floors on H-<u>C.C.</u> Non-standard concrete chonney <u>I.C.</u> Tile Chimney d Beams, Trusses, Arches netal lath and steel deck roof. <u>PC</u> Patent channey 0 Masonry Bearing Walls only IR, CH, Iron chinneys MASONRY CONSTRUCTION S.P. Sp we pipe S.P.V. Stove pipe with patent ventilator Masonry walls of residential buildings of four dwelling units or less are Important interior and all exterior masonry walls of all non-residential build-RESIDENTIAL OCCUPANCY SYMBOLS shown in a standard line and the construction is noted on all buildings diaings and residential buildings of five or more dwelling units are shown with D Sincle family out or as qualified by a numeral E. <u>MPTS</u> A multi-family residential building cor-sponding with local Rating Bureau definition weighted (-----) lines. gramed after July, 1963. PARTITIONS WALLS **OPENINGS** . . family units per floor, story height, & separation (Interior) (Exterior) ROOM G A residential Building normally occupi-Mixed Construction of Wall with No Openings by a single family but with 10 or more rooms re-86 8" Brick 1st Floor 8 8A F Concrete Blocks, Brick Faced ed for lodeing purposes. Frame Wall with Double Standard D EXCEPTIONS: 6 zoons in Arizona, Californ Nevada, Utah & Montana; 5 rooms in Oregon 1st & 2nd Floors Fire Doors 1st Floor 12" Concrete tong Tile from Foundation to Mixed Construction of Top Ceiling only Wall with Standard Fire Washington; 4 rooms in Idaho & Hawaii. 3rd Floor 681 Concrete Blocks and Brick Door Basement STUZE 18" & 20" Stone FIRE RESISTIVE CONSTRUCTION SYMBOLS Wall with Substandard Fire Concrete First Floor only G 1st & 4th FL with E.P. Approved masonry walls, floors & roof, inter-supports of approved masonry, concrete and/or p-Doors 1st & 3rd Floors Masonry Walls, Metal 668 12" & 8" Hollow Tile WELL F Metal Shutter 1st. Wall Thicknesses Placed Relative to Respective Faced Wall with Metal & Wired ected steel. (TILE) Hollow Cinder or Concrete E.P.X. F.P. qualifications except inferior or sub-sta Glass Fire Doors all Floors SL av Block 1st Floor only 10th& 22nd only HOUSE) Adobe ----Floors dard walls, N.C. Fire resistive with unprotected structural stealls Wall with Substandard Fire 10th & 22nd Fl. Cinder, Concrete or Cement **.**.-Doors 1st 2nd & 3rd Hollow Cinder or Concrete (C BR) Brick CR Floors & Unprotected HOLLOW WALL A bonded masonry wall having Brick 2nd Floor only Block Interior Wall Q. 2 Opening 4th Floor Glass Block Basement to Roof continuous air space within. I.E.P. Independent Electric Plant. Wall with Small Unprotected Tile Interior Wall Basement (C.B) Hollow Cinder or Concrete Tile 1st & 3rd Floor only IMPASSABLE Not traversable due to condition of te nu 74043 Openings only Blocks, Pilastered to Root Wired Glass in Metal Wall with Unprotected Openings all Floors LEDGED WALL A masonry bearing wall with Sash 2nd & 3rd FL Cement Brick End Wall extended edges to support floors. LOFT Tenanted by industrial occupancies. M.L. & P. Concrete or plaster applied to metal lath -NON-MASONRY CONSTRUCTION word studdings. M.S. & G. Metal sash & glass. NOT OPEN Streets appearing on records but not op-(Walls construction other than wood and stucco on wood frame is noted) on ground. <u>O.L.</u> Windows overlooking the roof above the corr mondure floor of an adjoining building O.U. Open between ground and first floor. <u>PILAST D.</u> Masonry reinforcing columns in walls. Iron Building with Wood Roof, (Location of Wood & Stucco & Cement Plaster, Etc. on Wood Frame Wood & Sash Glass WOUD 1 GLASS (18) Apron Walls with wood (CAS) Asphalt and/or ARM SKYTS, Skylights, Extensive Wood Areas Sash and Glass Asbestos Protected SL-CL: State attached to wood siding. <u>SM_HO</u>. Smoke House. <u>STABLE</u> Shown by crossing or diagonal lines on du **~**111 Specifically noted) Metal on Steel Frame Brick Veneered on Wood Metal & Sash Glass IR & GLASS Stucco, Cement Plaster, gram. Frame (Other Types of Veneered on Wood Frame Asbestos Clad on Wood N (VEND) SUSPID Suspended Ceilings below floor and/or ro-Etc. on Steel Frame Frame Noted in Non-\$ Residential Structures only. beams. Asphalt and/or Specifically Noted) APM SYST. System. Metal Clad on Wood Asbestos Protected (IR. CL) TRANSE Transformer. m Metal on Wood Frame Frame WD. Wood. Mixed Masonry & Non-Masonry(Type of د الموقع الموقع Mixed Wall--(9' of CB LAND USE APPLICABLE TO CHANGEN DIAGRAMMED AFTER 1 Masonry Specifically Gunite on Steel Frame with Metal Sash Above Soleda Iron Building MANUFACTURI: RESIDENTIAL (IRON R AT . (GLASS MA.JELS) Glass Panels RESIDENTIAL-TRANSIENT PUBLIC OR INSTITUTIONAL WE ARE S Metal Panels an Furt TILITY ¢ COMMERCIAL v Wood, Brick Lined, Br., TRANSPORTATE Filled & Brick Nogged WAREHOUSE 7 SUMERICAL PREFIX INDICATES THE NUMBER OF EST MIL JENTS IN EACH CATEGORY FIRE PROTECTION 2 Stories & Basement Single Hydran -g Frame Enclosed Elevator with Self -28 Fire Department Connection £SC. 5 1st Floor Occupied by Store Closing Traps 2 Residential Units above 1st Auto in Basement D Double Hydrant DH G \odot Automatic Sprinklers throughout Concrete Block Enclosed Elevator with **E** Tople Hydrant continuous sections of single risk TH . Drive or Passageway Trups Wood Shingle Roof Quadruple Hydrant of the High Pressure Q.H 🌰 Tile Enclosed Elevator with self closing Brick Chimney \odot Automatic Sprinklers all floors of building 0 TT SC Service Traps Iron Chimney HPES Automatic Sprinklers in part of building only (Nore under Symbol indicates protect ed portion of building) Gasoline Tank GTO 30,4,6, (4,4, 67) Water Pipes of the High Pressure Service Brick Enclosed Elevator with wired Glass A CH SA Iron Chimney ٢ BEY Daw (with spark arrestor) IST OWLY ۲ Fire Pump Water Pipes of the High Pressure Service Open Hoist • UP 8 ______ as shown on Key Map [#] Vertical Steam Boiler \odot Hoist with Traps Horizontal Steam Boder Not Sprinklered \mathcal{E} 5" N P Public Water Service Width of Street between Block Lines, not CARTER - 1 4 8 - -1 Open Hoist Basement to 1st Automatic Chemical Sprinklers Curh Lines \odot 6"WP (PRIV) Private Water Service ்தல் Stairs Ground Elevation Chemical Sprinklers in part of building only (Note under Synthol indicated pro-tected portion of building) TANKINE . (\mathfrak{a}) MISCELLANFOUS House numbers nearest to Buildings are VERTICAL OPENINGS Official or Actually up on Buildings, Old ש **V** 0 0 Sumber of stones. Height in Feet house numbers are farthest from Virtical Pipe or Stand Pipe Skybgra againg top story only Composition Roof Covering Buildings <u>AFA</u> Automatic Fire Alarm Skylight lighting 3 stories J Parapet 6" above Roof Frame Corr Block Number \odot Water Tank Reference Adjoining Page Skylight with Wired Glass in Metal Sash Parapet 12" above Roof WG

uppet 24" above Roof

Parapet 48" above Roof

Shingle Roof Co

W HO

15

Occupied by Warehouse Metal, Slate, Tile or Asbestos ÷

Fire Department as shown on Key Map

Vac. or V. – Vacant Vac. & Op. or V. –O. – Vacant & Open

June Contraction

FA

Service

Outside Vertical Pipe on fire Escape

oted "HPFS" on High Pressure Fire

[Ë]

FΕ

[7]

Open Elevator

Frame Enclosed Elevator

Frame Enclosed Elevator with Traps

KEY	$6.\pi$ Gasoline Tank
Treases in the proof construction.	TANKS O Gasonie fank
Adobe building.	4' EARTH DIKE
reserven sources Stone building	
(C.BR) Concrete, lime, ander or Windows with iron or tin clad shutters	CRUDE DU THNKS CAPER 100 000 GALS
(c. a) Hollow concrete or cementblock constant in thindow opening's territ to	EACH
(THE) The building E Doen elevator	
munet of trees at Bock building with frame cornice. Fre frame enclosed elevator. Width of street	
carrouinan maria Stone tront. ET: withtraps. mer cone unes)	1000 GAL. (25) (27) 2000 GAL
(vc++) Brick veneered building.	REROSENETR.
BAICK 157 - and frame building TISC Tile enclosed elevator with self closing traps. Ormit some angement	
Firear Sistered - metal clad	O
Deverume Frame residential building (13) Ground elevation.	E.
LOFT Tenanibuilding occupied by Onumber.	
(Ass cL) Frame building covered with asbestos Ore Vertical pipe or stand pipe. (0. U) Open under	ZODOO GAL PRESSURE TANK ELEVD ZO'ABV
Brick building with brick or metal cornice	ROOF ON STEEL FR.
Automatic sprinklers. Ho Single fire dept.	
Distructive and a sprinklers.	ELEVD. TO ABY GRD
Automalic sprinklers in part of building only.	
figures 8.12.16 indicate thickness working A Reference to	
Adjuning adjuning and size in inches with number ed. Adjuning adjuning	
Opening with single iron or lin clad door. on fire escape. Fire engine house.	Fire Cistem
Denings with wired glass doors.	Garage 2
Drive pr passage way TH Triple - page of previous edilion.	CAREY 20 CARS
CH. Quadruple hydrant of the High Pressure Fire Service	CAPET ZUCARS
Auto. House or private garage.	WOOD RAMPTOZNO REP. 2ND.
<u>c e.s.</u> Solid brick with interior walls of <u>2070 converte</u> Water pipes of the High Pressure Fire Service	
L.D. or U.B. and Drick mixed. "High Pressure fire Service" as shown on key map.	7
wike on construction of U.D. and Drick <u>dramane</u> Water pipes and size in inches.	PRIVATE GARAGE
Mixed construction of C. B. and brick with one wall faced with 4"brick. House numbers shown nearest to buildings are	CAPCY. IO CARS
Mixed construction of C.B.	CONC. FL.
and brick throughout.	

CODING OF STRUCTURAL UNITS FOR FIREPROOF AND NON-COMBUSTIBLE BUILDINGS									
	FRAMING		FLC	OORS		ROOF			
<u>CODE</u>	STRUCTURAL UNIT	CODE STRUCTURAL UNIT			UNIT	CODE	STRUCTURAL UNIT		
А. В.	Reinforced Concrete Frame. Reinforced Concrete Joists, Columns, Beams, Trusses,	1.	Reinforced Reinforced Masonry L Pre-cast C	l Concret l Concret Jnits. oncrete o	e. e with or Gypsum	a.	Reinforced Concrete. Reinforced Concrete with Masonry Units. Reinforced Gypsum		
C.	Protected Steel Frame.	2.	Slabs or Planks. Concrete or Metal Lath.				Concrete.Pre-cast Concrete or Gypsum Slabs or Planks.		
D.	Individually Protected Steel Joists, Columns, Beams, Trusses, Arches.		Incombustible Form Boards, Paper-backed Wire Fabric,		b.	Concrete or Gypsum on Metal Lath, Incombustible Form			
E.	Indirectly Protected Steel Frame.	Steel Deck, and Cellular, Ribbed or Corrugated Steel Units					Boards, Paper-backed Wire Fabric, Steel Deck, and		
F.	Indirectly Protected Steel Joists, Columns, Beams, Traises, Arches	3.	Open Stee	Deck of	Grating.	C	Cellular, Ribbed or Corrugated Steel Units.		
G.	Unprotected Steel Frame.	R RT	RESIDENTIAL RESIDENTIAL- TRANSIENT	M P	MANUFACTURING PUBLIC OR INSTITUTIONAL		Boards with or without Insulation. Masonry or Metal		
H.	Unprotected Steel Joists, Columns, Beams, Trusses, Arches.		COMMERCIAL WAREHOUSE	U T	UTILITY TRANSPORTATION	d.	Tiles. Steel Deck, Corrugated Metal or		
Ο.	Masonry Bearing Walls.	NUMERICAL PREFIX INDICATES THE NUMBER OF ESTABLISHMENT!					Asbestos Protected Metal with or without Insulation.		
The coding	The coding for framing, floor and roof structural units as shown above is used FP-1962 A fire-resistive building built in 1962 with concrete walls and								

in describing the construction of fire-resistive buildings. In addition, reports for fire resistive buildings will show the date built and wall construction other than brick. F P Buildings have masonry floors and roof; concrete and/or directly or indi-

rectly protected steel framing; and clay brick. stone or poured concrete walls. F P X buildings are F P buildings with inferior walls such as concrete block, cement brick, metal or glass panels, etc.

N C buildings have unprotected steel framing and fire-resistive but non-masonry floors and roof.

A-I-a

reinforced concrete frame, floors, and roof.

A fire-resistive building built in 1962 with metal panel walls. indirectly protected steel frame, concrete floors and roof on metal lath, noncombustible ceilings.

NC - 1962 SC A) H-2-d

A noncombustible building built in 1962 with concrete block walls; unprotected steel columns and beams; concrete floors on metal lath and steel deck roof.

