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March 9, 2010

James Delwiche
Hydrogeologist
Wisconsin Department of Natural Resources
Southeast Region Remediation and Redevelopment Program
Division of Air and Waste
141 NW Barstow St, Room 180
Waukesha WI 53188

Re: NR 716 Site Investigation Work Plan
Firestone Property
S73 W16437 Janesville Road
Muskego, WI 53150
WDNR BRRTS No.: 03-68-554227
WDNR FID No.: 268181540
PSI Project No.: 0054238

Dear Mr. Delwiche:

PSI has completed a Site Investigation Work Plan for the Firestone Property located at S73 W16437 Janesville Road in Muskego, Wisconsin. The plan has been prepared in general accordance with NR 716. One hard copy of the final report is enclosed.

Please contact PSI at 262-347-0898 with any questions or comments you may have.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Matthew J. Dahlem, P.G.
Professional Geologist

Larry Raether, P.E.
Department Manager

Enclosures

NR 716 SITE INVESTIGATION WORK PLAN

FOR THE:

FIRESTONE PROPERTY
S73 W16437 JANESVILLE ROAD
MUSKEGO, WISCONSIN 53150
WDNR BRRTS NO. 03-68-554227
WDNR FID NO. 268181540

PREPARED FOR:

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
SOUTHEAST REGION REMEDIATION AND REDEVELOPMENT PROGRAM
DIVISION OF AIR AND WASTE
141 NW BARSTOW STREET
ROOM 180
WAUKESHA, WISCONSIN 53188

PREPARED BY:

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PSI PROJECT NO. 0054238

MARCH 9, 2010

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1.0 INTRODUCTION

Professional Service Industries, Inc. has prepared this NR 716 Site Investigation Work Plan for the property referred to herein as the Firestone Property. Site information is included under this section.

Site Name: Firestone Property

Site Address: S73 W16437 Janesville Road
Muskego, WI 54150

The subject property is geographically located in the Southeast ¼ of the Northwest ¼ of Section 10, Township 5 North, Range 20 East, in the City of Muskego, Waukesha County, State of Wisconsin.

WDNR BRRTS No.:03-68-554227

WDNR FID No.: 268181540

Property Owner: Waukesha County

RP Contact: Leslie W. Williams, RHSP, CHMM
Hazardous Materials Coordinator
Waukesha County Department of Parks and Land Use
515 W. Moreland Blvd, Room AC 260
Waukesha, WI 53188
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Consultant: Larry Raether, P.E.
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W237 N2878 Woodgate Road, Suite 2
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1.1 PROJECT BACKGROUND

In 2007, PSI was retained by Waukesha County to complete a Phase I Environmental Site Assessment (ESA) for the Janesville Road (CTH L) relocation project. That Phase I ESA identified properties located along the Janesville Road right-of-way (ROW) that posed a real or perceived risk for contamination within the ROW. The subject property was one of the properties identified as a recognized environmental condition (REC) with respect to the ROW.

The Firestone Property is currently and has historically been utilized as an auto body shop. Waukesha County acquired the property around January 2010 and will allow the former owners to continue operation until late spring 2010, when the buildings will be razed as part of the CTH L relocation efforts.

According to the Phase I ESA, the Firestone Property was identified as an underground

storage tank (UST) site with a 500-gallon waste oil tank that was reportedly closed and filled with inert material. Additionally, the Firestone Property was listed as a Conditionally Exempt Small Quantity Generator (CESQG). Since this property formerly and currently operates as an auto body shop and formerly owned a 500-gallon waste oil tank, PSI recommended that a Phase II ESA be completed in the ROW located adjacent to the auto body shop.

On April 29, 2009, three soil probe borings were advanced within the ROW located adjacent to the Firestone Property under the direction of PSI. One soil sample was collected from each soil probe boring for laboratory analysis of diesel range organics (DRO), gasoline range organics (GRO), and petroleum volatile organic compounds (PVOCs). In one of the three soil probe borings, GRO was detected in the site soil at concentrations above the Wisconsin Department of Natural Resources (WDNR) suggested residual contaminant levels (RCLs) based on a non-industrial direct contact risk. A summary of the soil analytical data is presented in Table 1. A copy of the laboratory analytical report is included in Appendix C.

Two of the three soil probe borings were converted to temporary groundwater monitoring wells to facilitate groundwater sampling and analysis. Polynuclear aromatic hydrocarbons (PAHs) were present in one groundwater sample at concentrations above NR 140 Enforcement Standards (ESs). A summary of the groundwater analytical data is presented in Table 2. A copy of the laboratory analytical report is included in Appendix C.

On August 21, 2009, PSI, on behalf of Waukesha County, notified the WDNR that groundwater and soil contamination had been discovered within the Janesville Road ROW, which most likely originated from the Firestone Property. On October 5, 2009, WDNR issued a Responsible Party (RP) letter stating that Muskego Firestone is responsible for investigating and restoring the environment at the subject property described under Section 292.11, Wisconsin Statutes. This site was placed on the WDNR Bureau of Remediation and Redevelopment Tracking System (BRRTS) website as a leaking UST (LUST) site for the petroleum soil and groundwater contamination at the Firestone Property and in the Janesville Road ROW. Since that time, Waukesha County has purchased the Firestone Property and is taking responsibility for the contamination.

Building Inspection Records

Review of City of Muskego building inspection records and city assessor records for the property provided no further information regarding spills or tanks on the property. A 1985 document from the plan Commission indicates that the installation of a fuel oil UST was being considered on the property but no other information was found regarding the UST. However, on March 5, 2010, PSI was informed by Leslie Williams, Hazardous Materials Coordinator for Waukesha County Department of Parks and Land Use, that a Phase I ESA was conducted for the subject property in 1996 by Real Estate Technical Advisors, Inc. The Phase I indicated that a UST existed near the southwestern portion of the property; however, no documentation exists which indicates that the tank(s) had been removed.

Proximity of Other Sources of Discharge

At this time, the most logical source for the contamination identified by PSI in the Janesville Road ROW relate to the auto body operations conducted on the Firestone Property, including the waste oil UST that was installed for those operations. However, it should be noted that there are other potential sources for the contamination including backfill that may have been used in the road construction work. There are also LUST sites in the area, but none are believed to be responsible for the contamination identified in the ROW based on their closure status, location and/or type of media impacted.

2.0 PHYSIOGRAPHICAL AND GEOLOGICAL SETTING

The 7.5-minute topographic maps of the area (Muskego & Hales Corners, WI Quadrangle, 1959, photorevised 1971 and 1976) indicates that the subject property at S73 W16437 Janesville Road in Muskego, Wisconsin ranges in elevation from 819 to 820 feet above mean sea level. Overall, gradient of the area appears to be south and southwest. The subject property is geographically located in the Southeast ¼ of the Northwest ¼ of Section 10, Township 5 North, Range 20 East, in the City of Muskego, Waukesha County, State of Wisconsin. The site location is depicted on Figure 1.

The characteristic glacial landforms in Southeastern Wisconsin and their associated deposits were created by two lobes of the Wisconsin ice sheet: the Green Bay Lobe, which advanced from the northwest, and the Lake Michigan Lobe, which advanced from the east in this region. Most of Waukesha County is covered with glacial deposits associated with early advances of the Lake Michigan Lobe. In all, there were three known major advances of the Lake Michigan Lobe, each of which laid down a distinctive type of till. The first advance of the Lake Michigan Lobe occurred about 15,000 to 35,000 years ago and deposited the sandy tills of the Zenda and New Berlin Formations. The till of the Zenda Formation is older, pink, and medium-grained, and only rarely occurs at the surface. The younger New Berlin Formation contains yellowish-brown and coarse-grained tills; the New Berlin Formation usually overlies the Zenda Formation. During the second major advance of the Lake Michigan Lobe about 13,000 to 14,500 years ago, a gray silty till of the Oak Creek Formation was deposited and formed roughly parallel to the shoreline. This silty, clayey till has a very low permeability, but contains lenses of gravelly outwash and sandy lake deposits. The Oak Creek Formation is the native till that underlies the subject property. The third major advance of the Lake Michigan Lobe occurred from about 13,000 to 11,000 years ago, and deposited a reddish silty till (of the Kewaunee Formation) in a narrow band along the lakeshore north of Milwaukee and into Ozaukee County. This till does not occur in the region of the subject property (Southeastern Wisconsin Regional Planning Commission [SEWRPC] Technical Report No. 37, 2002).

Glaciation has largely determined the physiography and topography as well as the soils of the region. Based on review of the "Soil Survey of Milwaukee and Waukesha Counties, Wisconsin" publication developed by the United States Department of Agriculture (USDA) Soil Conservation Service (issued July 1971), the soil in the area where the subject property is located is classified as the Ozaukee-Morley-Mequon association. These soils consist of well-drained to somewhat poorly drained soils that have a subsoil of silty clay loam and silty clay; formed in thin loess and silty clay loam glacial till, on moraines. These soils are classified as low permeability units and are estimated to have a vertical hydraulic conductivity of less than 0.0001 centimeters per second (cm/s), or approximately 0.3 feet per day (ft/day). The native soil underlying the subject property has good attenuation potential and thus, may be considered less susceptible to contamination from land use activities.

The description of the site-specific subsurface conditions provided herein was derived from on site observations of soil samples collected only from the locations where borings were installed on April 29, 2009. The soil stratigraphy at the subject site generally included a ground surface of asphalt and gravel over fill material consisting of

black to brown sand, silt, and silty clay. Beneath the fill material, the site soils consisted of native brown silty clay with gray and rust mottling. The fill material was encountered in each of the soil probe borings to depths of approximately 7.5 feet bgs. Bedrock was not encountered in any of the borings to the maximum depth explored (10 feet bgs). The subsurface conditions encountered are documented on the boring logs contained in Appendix A. The WDNR borehole abandonment forms are included in Appendix B.

Surface drainage is poorly developed and very complex within the region because of the effects of the relatively recent glaciation. The land surface is complex as a result of being covered by glacial deposits, containing thousands of closed depressions that range in size from potholes to large areas. Additionally, recent anthropogenic activities have compounded the complexity of the surface drainage in the region. According to the SEWRPC Technical Report No. 37 (2002), the surface water drainage at the subject property lies within the Fox River Watershed. The Fox River watershed drains to the south and southwest towards its confluences with the Illinois River, a tributary of the Mississippi River.

The sand and gravel aquifer consists primarily of layers or lenses within alluvial and glacial deposits and is extremely variable in thickness. It is not as continuous as the bedrock aquifers. The sand and gravel aquifer occurs as broad outwash deposits, isolated lenses within less permeable deposits, stream terraces, valley fill directly overlying bedrock, and other materials deposited by water or glacier. According to the Ice Age Deposits of Wisconsin Map (1964) and the Depth to Bedrock in Wisconsin Map (1973) published by the Wisconsin Geological and Natural History Survey, the unconsolidated deposits at the site are defined as ground moraine. The ground moraine contains predominantly till of unstratified clay, silt, sand, gravel, and boulders. These moraines are locally 100-200 feet thick and unconformably overlie the Silurian Niagara Dolomite.

The Silurian dolomite aquifer is the uppermost bedrock aquifer in most of the region and is the primary source of most domestic water supplies and many high-capacity wells in the area underlain by the Maquoketa Formation. The Silurian dolomite aquifer extends over approximately ¾ of Waukesha County, except for a few places where the Silurian rocks have been removed by erosion. Well yields are erratic and depend upon the size and the number of crevices and solution cavities in the aquifer that are tapped by a well. Water in the aquifer may be under artesian conditions where glacial tills overlie the dolomite. In most of Waukesha County, the glacial sand and gravel aquifers are connected hydrologically to the Niagara aquifer. Because water moves almost freely between the aquifers, they generally are considered to be a single hydrologic unit.

The Maquoketa Formation underlies the Silurian dolomite aquifer and is exposed at the bedrock surface in various areas of Waukesha County. Rock in this unit, which is primarily shale with some dolomite, forms a continuous, low-permeability layer that restricts vertical groundwater flow between the Silurian dolomite aquifer and the underlying sandstone aquifer. Weathered zones near the top of the Maquoketa Formation may yield small amounts of water, but few wells are open exclusively to it.

The upper and lower sandstone aquifer includes all of the Cambrian and Ordovician rocks between the top of the Precambrian basement and the bottom of the Maquoketa

Formation. There is a semi-confining unit that locally restricts groundwater flow between the upper and lower sandstone aquifers; however, this unit is not continuous throughout the region. Because the water circulates between the various stratigraphic units of the sandstone aquifers and the semi-confining unit, the aquifer acts as a single hydraulic unit. The overlying semi-permeable Maquoketa Formation acts as a semi-confining bed and maintains artesian pressure in the sandstone aquifers.

Precambrian crystalline rock, mostly granite, underlies the Cambrian sedimentary sequence. Its characteristics are poorly known because only a very few wells reach the Precambrian surface in Southeastern Wisconsin. The Precambrian basement is not a source of water supply in the region. It is assumed to have a very low permeability and forms the lower boundary of the important sandstone aquifer.

Based on our interpretation of the physical setting sources, past data and our experience, PSI infers that the shallowest groundwater:

- Occurs at approximately 5 to 10-feet below ground surface;
- Exists under unconfined conditions;
- Regionally flows east towards Lake Michigan; and,
- Locally flows in a southerly direction.

Actual groundwater flow may be locally influenced by seasonal rainfall, proximity to surface bodies of water (lakes, rivers, canals), surface topography, underground structures, soil and bedrock geology, production wells and other factors beyond the scope of this study.

3.0 SAMPLING AND ANALYSIS STRATEGY

For this project, PSI proposes to complete the work in two phases, which are referred to herein as Task 1 and Task 2. In general, the intent of Task 1 will be to define the extent of soil contamination on the property and to provide groundwater data to support the placement of permanent wells, if necessary. Task 2, if necessary, will include the placement of permanent groundwater monitoring wells, sampling these wells for four quarters and then applying that data to the Mann-Kendall Statistical test to determine if there is a stable, decreasing or increasing trend in contaminant levels over the course of monitoring.

3.1 SCOPE OF WORK: TASK 1

The sampling plan presented herein is intended to specify the location of soil borings prior to the initiation of field activities. The borings may need to be relocated in the field due to the location of utilities, results of other borings, or other site constraints. The proposed sampling locations and depths are based on the information currently available.

The general scope of Task 1 will consist of the following activities: advancement of soil probes, installation of temporary groundwater monitoring wells, soil and groundwater sampling, laboratory analysis of soil and groundwater samples, data analysis and interpretation, and report preparation. A more detailed description of the proposed tasks for this project is presented below in numbered format.

Geoprobe® and sampling operations will be directed by a PSI Environmental Consultant or Professional Geologist. All field personnel will be OSHA trained in accordance with 29 CFR 1910.120. Prior to subsurface soil probe activities, PSI or the Geoprobe® firm will notify the utility service alert in accordance with local practices. Prior to fieldwork, the down-hole sampling equipment will be decontaminated with an Alconox and potable water solution followed by a potable water rinse. New, disposable acetate liners will be used for each sample collected and Nitrile™ gloves will be worn by sampling personnel and changed between samples. These procedures will be used to reduce the possibility of cross-contamination between samples and sample locations. Equipment decontamination, sample collection, field documentation, sample custody and laboratory analyses will be performed in general accordance with methods prescribed by the United States Environmental Protection Agency (USEPA).

1. PSI proposes to conduct a Ground Penetrating Radar (GPR) Survey of the subject property to identify the location of the UST (i.e. one UST is reportedly on-site and filled with inert material, others could be present), buried utilities and other objects of interest that may aid in the investigation. PSI will subcontract for the GPR survey and will review that information prior to advancing probes on-site. Depending on the findings, some predetermined probe locations may need to be altered.

2. PSI proposes to advance a minimum of eight soil probe borings on the subject property at the approximate locations shown on the attached "Boring Location Plan". Each boring will be advanced to a depth of 15-feet below ground surface (bgs), or refusal. If able, PSI will install temporary groundwater monitoring wells in four of the soil probe borings. If obvious signs of contamination are identified in these initial

probes, we will install additional probes further away from those locations in an attempt to define the horizontal level of impact.

3. Field screening for total volatile organic vapors during the subsurface soil investigation will be performed at each 2.5-foot sample interval at each boring. The headspace above each soil sample will be screened with a Thermo Instruments 580B photoionization detector (PID) equipped with a 10.6 electron volt lamp. The PID will be calibrated prior to use through the introduction of zero gas and subsequently a known concentration of isobutylene gas into the instrument. The manufacturer indicates that the sensitivity of the device is 1 part per million (ppm) for volatile organic compounds (VOCs) that have an ionization potential equal to or less than the lamp energy. The calibrated PID will be used to detect total organic vapors in comparison to the isobutylene standard. Due to the inexact volume of the headspace and varying soil conditions, PID readings will only be considered a relative indication of VOC concentrations. The moisture contents of soil and humid atmospheric conditions have been found to produce inaccurate organic vapor readings due to condensation on the lamp. To perform the field screening, each soil sample will placed in a resealable plastic bag and equilibrated to ambient temperature. Reported PID results will be obtained by sampling the headspace above each soil sample and recording the maximum instrument reading.

4. Soil samples will be collected from each of the soil probe borings for the purposes of olfactory observation, field screening, and soil classification at continuous five-foot intervals using a direct-push macro core sampler with acetate liners. Six macro core samples will also be collected from the soil probe borings for laboratory analysis of Diesel Range Organics (DRO), Gasoline Range Organics (GRO), Petroleum Volatile Organic Compounds (PVOCs), and Polynuclear Aromatic Hydrocarbons (PAHs). The laboratory samples will be selected based on visual evidence of contamination, from the sample intervals that exhibited the highest PID readings, or from the soil-groundwater interface. Soil samples collected from soil probe borings advanced through asphalt will be collected at a depth of at least three feet bgs in an effort to avoid erroneous readings that may be caused from the asphalt products themselves.

5. If able, PSI will collect one groundwater sample from each temporary groundwater monitoring wells for laboratory analysis of VOCs and PAHs. The groundwater samples will be collected near the end of the day. If groundwater is not encountered or can not be sampled, we will base our conclusions on the soil data only.

6. All boreholes will be properly abandoned with bentonite upon completion of sampling, and if applicable, after all well materials are removed from the borehole. Borehole abandonment forms will be prepared for each borehole. Probes installed through asphalt will be capped with an asphalt or concrete mix.

7. PSI will submit one trip blank for VOC analysis.

8. All samples will be prepared in laboratory supplied containers using new, disposable Nitrile™ gloves. All samples will be placed in a cooler packed with ice and transported under chain-of-custody to Pace Analytical Laboratory (PACE) in Green Bay, Wisconsin for chemical analysis performed on a normal turn-around basis. The

analytical methods for the analysis discussed above will be as follows:

- Diesel Range Organics (WI Modified Method)
- Gasoline Range Organics (WI Modified Method)
- Petroleum Volatile Organic Compounds (Method 8260)
- Volatile Organic Compounds (SW 846 Method 8260)
- Polynuclear Aromatic Hydrocarbons (SW 846 Method 8270 SIM)

9. Investigation derived waste from the site will be containerized in a sealed 55-gallon drum and left-on-site until disposal can be arranged.

10. Upon completion of the Task 1 work, PSI will complete a report in general accordance with NR 716. The report will contain the following elements:

    - Executive summary consisting of a brief narrative of the site investigation results, conclusions and recommendations for future action.
    - General site information.
    - Site background information obtained during the project scoping and performance of the field investigation.
    - Method of investigation utilized to characterize the site.
    - Detailed results of the data obtained during the project scoping, field investigation, and sample analysis.
    - Visual aids including maps, figures, tables, diagrams and photographs to support our results, interpretation and recommendations.
    - Well and borehole documentation contained on the appropriate DNR forms.
    - Conclusions and recommendations – A summary of results, a comparison of the results to the current cleanup standards and detailed recommendations for further response actions deemed necessary to protect public health, safety, welfare and the environment.

    The client shall receive one hard copy and an electronic copy of each report prepared by PSI.

3.2 Scope of Work: Task 2

During PSI's Phase II ESA, PAHs were found in the groundwater in the Janesville Road ROW adjacent to the Firestone Property at levels exceeding the NR 140 ESs. As such, it is reasonable to assume that long term groundwater monitoring will be required to achieve site closure. Depending on the site investigation findings, remediation may also be required.

The general scope of Task 2 consists of the following activities: installation of NR 141 compliant groundwater monitoring wells on the property, well development, four quarterly rounds of groundwater sampling, laboratory analysis of groundwater samples, data analysis and interpretation, drum disposal, and WDNR reporting. At this time, we are assuming that five wells will be installed (one at the source, one down gradient, one up gradient and two side gradient of the source). The actual number and locations for these wells will be determined based on the Task 1 findings.

Equipment decontamination, sample collection, field documentation, sample custody

and laboratory analyses will be in general accordance with methods prescribed by the USEPA.

1. Groundwater monitoring wells will be installed and developed in general accordance with NR 141 of the Wisconsin Administrative Code. A drill rig will be used to install these wells. The wells will be installed to a depth of 20-feet below ground surface (bgs) and will be screened from 5 to 20-feet bgs. The wells will be completed with a flush-mount well cover. The wells may be blind drilled, depending on where they are placed in relation to the prior investigative work (Task 1).

2. PSI will develop the wells within five days of installation. Soil cuttings generated during well installation and purge water generated during the well development and sampling operations will be containerized in sealed 55-gallon drums and left on-site until disposal can be arranged.

3. PSI will collect groundwater samples from each of the wells on a quarterly basis for one year (i.e. four rounds of sampling). The samples will be analyzed for PAHs (Method 8270 SIM) and VOCs (Method 8260). A quarterly sampling letter report will be prepared following each sampling event.

4. PSI will apply the Mann-Kendall Statistical test to the groundwater analysis results to determine if there is a stable, decreasing or increasing trend in contaminant levels over the course of monitoring. This test requires at least four rounds of monitoring. Assuming a stable or decreasing trend is observed over the four rounds of sampling, we will then request case closure from the WDNR. It is likely that the site will need to be placed in the WDNR's Geographic Information System (GIS) Registry, costs for which are included herein. The client shall receive one hard copy and an electronic copy of each report prepared by PSI.

5. Upon case closure, the monitoring wells will be abandoned and the 55-gallon drums of soil cuttings will be disposed of at a licensed facility. PSI estimates that up to twelve drums of waste will be generated in total.

4.0 GENERAL

4.1 SCHEDULE

PSI will schedule the work immediately upon receiving authorization to proceed. Assuming that there are no significant delays in the project, work of this nature can usually be completed in 52 weeks, or roughly 12 months. A breakdown of this schedule is presented in the following tables.

Schedule – Task 1 plus Well Installation & Development

	Week 1	Week 2	Week 3	Week 8	Week 5	Week 6	Week 7	Week 8
GPR Survey								
Field Sampling								
Evaluate Lab Data								
Complete SI Report								
Well Installation								
Well Development								

Schedule – Quarterly Groundwater Sampling & Reporting

	Week 8	Week 20	Week 32	Week 44	Week 46	Week 48	Week 50	Week 52
Quarterly Sampling No.1								
Quarterly Sampling No.2								
Quarterly Sampling No.3								
Quarterly Sampling No.4								
Mann-Kendall Analysis								
Well Abandonment								
Drum Disposal								
GIS Registry								
WDNR Closure Request								

4.2 SPECIAL INSTRUCTIONS

Some damage to ground surface may result from the Geoprobe® operations near the work areas and along ingress/egress pathways. We will attempt to minimize such damage, but no restoration other than backfilling the test borings is included.

PSI or the Geoprobe® contractor will contact Diggers Hotline for public utility clearance prior to the start of drilling activities. It is our experience that this service does not mark the locations of privately owned utilities, including lateral water and sewer lines; therefore, PSI will also subcontract a locating firm for marking private utilities.

4.3 RESPONSIBILITIES & PROJECT COORDINATION

The client is responsible for obtaining access to the subject site for PSI to perform the work.

LIST OF FIGURES

Figure 1: Site Location Map
Figure 2: Boring Location Plan

Source: United States Geological Survey, Muskego & Hales Corners, Wisconsin, 7.5-Minute Topographic Maps, 1959, photorevised 1971 and 1976

N

SCALE 1:24,000
APPROXIMATE SCALE

0 1 2

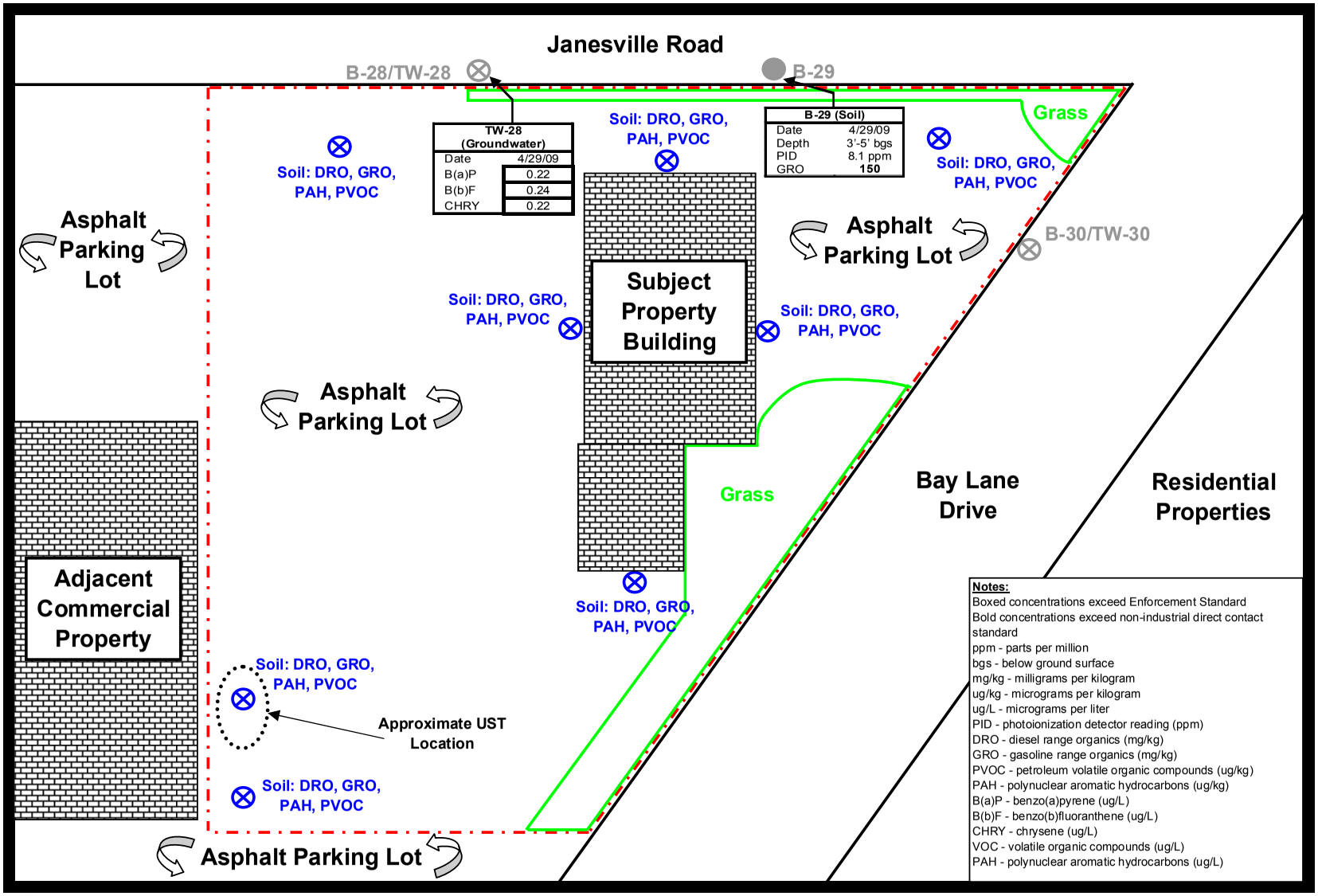
0 1000 2000 3000 4000 5000 6000 7000 8000 FEET

0 1 2 KILOMETERS

CONTOUR INTERVAL 10 FEET

Southeast 1/4 of the Northwest 1/4 of Section 10, Township 5 North, Range 20 East

psi Information To Build On Engineering • Consulting • Testing	Environmental Services W228 N727 Westmound Drive Waukesha, Wisconsin 53186 (262) 970-9022 Fax (262) 970-9032	Firestone Property S73 W16437 Janesville Road Muskego, Wisconsin **Site Location Map**	DATE: 2/10/2010	PROJECT NO: 0054238 **Figure 1**



Notes: * Temporary Monitoring Wells will be installed at 4 of the 8 proposed borings and analyzed for VOC & PAH

- Subject Property Boundary
- Buildings
- Former Soil Probe Boring/Temporary Monitoring Well
- Former Soil Probe Boring Location
- Proposed Soil Probe Boring/ Temporary Monitoring Well Location

Scale (feet): 0 50 100

psi Information To Build On — Engineering • Consulting • Testing	**Environmental Services** W228 N727 Westmound Drive Waukesha, Wisconsin 53186 (262) 970-9022 Fax (262) 970-9033	**S73 W16437 Janesville Road** Muskego, Wisconsin	**PSI Project Number:** 0054238	NORTH
		Figure 2 Boring Location Plan	**Scale:** See Above **Date:** 2/10/2010	

LIST OF TABLES

Table 1: Summary of Soil Sample Analytical Results (April 2009)
Table 2: Summary of Groundwater Sample Analytical Results (April 2009)

TABLE 1

Summary of Soil Sample Analytical Results
Janesville Road (CTH L) Relocation Project
Firestone Property
S73 W16437 Janesville Road
Muskego, Wisconsin

Analytical Parameter	Depth / Date / Units	B-28 3' - 5' 4/29/09	B-29 3' - 5' 4/29/09	B-30 5' - 7.5' 4/29/09	NR 720 RCL Direct Contact/ Non-Industrial	NR 746 RCL Groundwater Pathway
PID	i.u.	4	8.1	1.3	---	---
DRO	mg/kg	2.1	2.4	6.0	100	---
GRO	mg/kg	< 2.9	**150**	< 2.9	100	---
Detected PVOCs						
Ethylbenzene	ug/kg	< 25.0	939	< 25.0	2,900	4,600
1,2,4-Trimethylbenzene	ug/kg	< 25.0	759	< 25.0	---	83,000
1,3,5-Trimethylbenzene	ug/kg	< 25.0	1360	< 25.0	---	11,000
Total Xylene	ug/kg	< 75.0	731	< 75.0	4,100	42,000

Notes:
Boxed concentrations exceed protection of groundwater RCL
Bold concentrations exceed non-industrial direct contact standard
--- - Not analyzed/Not Established
J - concentration detected between the laboratory Limit of Detection and the Limit of Quantitation
i.u. - instrument units
mg/kg -milligrams per kilogram, parts per million
ug/kg -micrograms per kilogram, parts per billion
DRO - diesel range organics
GRO - gasoline range organics
PID - photoionization detector
RCL - residual contaminant level
PVOC - petroleum volatile organic compounds

TABLE 2

Summary of Groundwater Sample Analytical Results
Janesville Road (CTH L) Relocation Project
Firestone Property
S73 W16437 Janesville Road
Muskego, Wisconsin

Analytical Parameter	Sample ID Date Units	TW-28 4/29/2009	NR 140 ES	NR 140 PAL
Detected VOCs	ug/l	ND	---	---
Detected PAHs				
Acenaphthene	ug/l	0.016 J	---	---
Acenaphthylene	ug/l	0.0090 J	---	---
Anthracene	ug/l	0.033 J	3,000	600
Benzo(a)anthracene	ug/l	0.19	---	---
Benzo(a)pyrene	ug/l	0.22	0.2	0.02
Benzo(b)fluoranthene	ug/l	0.24	0.2	0.02
Benzo(ghi)perylene	ug/l	0.20	---	---
Benzo(k)fluoranthene	ug/l	0.12	---	---
Chrysene	ug/l	0.22	0.2	0.02
Dibenz(a,h)anthracene	ug/l	0.045 J	---	---
Fluoranthene	ug/l	0.29	400	80
Fluorene	ug/l	0.017 J	400	80
Indeno(1,2,3-cd)pyrene	ug/l	0.13	---	---
1-Methylnaphthalene	ug/l	0.073	---	---
2-Methylnaphthalene	ug/l	0.11	---	---
Naphthalene	ug/l	0.072	40	8
Phenanthrene	ug/l	0.14	---	---
Pyrene	ug/l	0.28	250	50

Notes:

Boxed concentrations exceed NR 140 ES
Bold concentrations exceed NR 140 PAL
--- - not analyzed/no standard established
ND - Not detected above laboratory method detection limits
J - concentration detected between the laboratory limit of detection and the limit of quantitation
ES - NR 140 Enforcement Standard
PAH - polynuclear aromatic hydrocarbons
PAL - NR 140 Preventive Action Limit
ug/l - micrograms per liter
VOC - volatile organic compounds

APPENDICES

Appendix A: Soil Boring Logs (April 2009)
Appendix B: WDNR Borehole Abandonment Forms (April 2009)
Appendix C: Laboratory Analytical Reports (April 2009)

APPENDIX A

SOIL BORING LOGS (APRIL 2009)

Professional Service Industries, Inc.
W228 N727 Westmound Drive, Suite A
Waukesha, WI 53186
Telephone: 262-970-9022
Fax: 262-970-9032

LOG OF BORING B-28

PSI Job No.:	0054151	Drilling Method:	Direct Push	WATER LEVELS	
Project:	Firestone Property	Sampling Method:	5' Macro Core	While Drilling	Not Obsvd.
Location:	S73 W16437 Janesville Road	Hammer Type:	Automatic	At Completion	Not Obsvd.
	Muskego, WI	Latitude:		24 Hr.	n/a
		Longitude:			

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	PID	MATERIAL DESCRIPTION Surface Elev.:	USCS Classification	SPT Blows per 6 inch	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ◎ (× Moisture, ◪ PL, ✚ LL; 1–25–50) / STRENGTH, tsf (▲ Qu, ✳ Qp; 0–2.0–4.0)	Additional Remarks
	0			1	85	4.0	FILL, Asphalt, Gravel, Sand, Silt and Clay, Dry	Fill				
				2	85	4.0	FILL, Brown and Gray Silty Clay, Stiff, Moderate Plasticity, Dry	FILL				Sample 3'-5' Submitted for Laboratory Analysis
	5			3	100	1.3	FILL, Brown and Gray Silty Clay, Stiff, Moderate Plasticity, Dry	FILL				
				4	100	1.3	SILTY CLAY, Brown with Gray and Rust Mottling, Stiff, Semi-Moist, Low Plasticity, 5% Subrounded Coarse Sand - Pebbles	CL				
	10											

Completion Depth:	10.0 ft
Date Boring Started:	4/29/09
Date Boring Completed:	4/29/09
Logged By:	MD
Drilling Contractor:	On-Site

Sample Types:
- Auger Cutting
- Split-Spoon
- Rock Core
- Shelby Tube
- Hand Auger

Remarks:

The stratification lines represent approximate boundaries. The transition may be gradual.

Professional Service Industries, Inc.
W228 N727 Westmound Drive, Suite A
Waukesha, WI 53186
Telephone: 262-970-9022
Fax: 262-970-9032

LOG OF BORING B-29

PSI Job No.:	0054151	Drilling Method:	Direct Push	WATER LEVELS	
Project:	Firestone Property	Sampling Method:	5' Macro Core	While Drilling	Not Obsvd.
Location:	S73 W16437 Janesville Road	Hammer Type:	Automatic	At Completion	Not Obsvd.
	Muskego, WI	Latitude:		24 Hr.	n/a
		Longitude:			

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	PID	MATERIAL DESCRIPTION Surface Elev.:	USCS Classification	SPT Blows per 6 inch	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ◎ (× Moisture, ◪ PL, ✚ LL; 1–25–50) / STRENGTH, tsf (▲ Qu, ✳ Qp; 0–2.0–4.0)	Additional Remarks
	0			1	85	5.4	FILL, Asphalt, Gravel, Sand and Silt, Dry	Fill				
				2	85	8.1	FILL, Dark Gray/Brown/Gray Silty Clay, Stiff, Dry, Low Plasticity	Fill				Sample 3'-5' Submitted for Laboratory Analysis
	5			3	100	1.3	FILL, Brown Silty Clay, Tan and Rust Mottling, Stiff, Dry, Low Plasticity, 5% Subrounded Medium Sand	Fill				
				4	100	1.3	SILTY CLAY, Brown with Gray and Rust Mottling, Stiff, Dry, Low Plasticity, 5% Subrounded Coarse San - Pebbles	CL				
	10						End of Boring at 10' bgs Groundwater Not Encountered					

Completion Depth:	10.0 ft	Sample Types:	Remarks:
Date Boring Started:	4/29/09	Auger Cutting, Split-Spoon, Rock Core, Shelby Tube, Hand Auger	
Date Boring Completed:	4/29/09		
Logged By:	MD		
Drilling Contractor:	On-Site		

The stratification lines represent approximate boundaries. The transition may be gradual.

Professional Service Industries, Inc.
W228 N727 Westmound Drive, Suite A
Waukesha, WI 53186
Telephone: 262-970-9022
Fax: 262-970-9032

LOG OF BORING B-30

PSI Job No.:	0054151	Drilling Method:	Direct Push	WATER LEVELS	
Project:	Firestone Property	Sampling Method:	5' Macro Core	While Drilling	Not Obsvd.
Location:	S73 W16437 Janesville Road	Hammer Type:	Automatic	At Completion	Not Obsvd.
	Muskego, WI	Latitude:		24 Hr.	n/a
		Longitude:			

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	PID	MATERIAL DESCRIPTION Surface Elev.:	USCS Classification	SPT Blows per 6 inch	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ◎ (× Moisture, ◪ PL, ✚ LL; 1–25–50) / STRENGTH, tsf (▲ Qu, ✳ Qp; 0–2.0–4.0)	Additional Remarks
	0			1	60	1.3	FILL, Asphalt, Gravel and Silty Clay	Fill				
				2	60	1.3	FILL, Brown Silty Clay, Stiff, Semi-Moist, Low Plasticity	Fill				
	5			3	100	1.3	FILL, Brown/Gray/Tan Silty Clay, Dry, Stiff, Low Plasticity	Fill				Sample 5'-7.5' Submitted for Laboratory Analysis
				4	100	0.0	SILTY CLAY, Brown with Gray and Rust Mottling, Dry, Stiff, Low Plasticity, 5% Subrounded Coarse Sand	CL				
	10						End of Boring at 10' bgs Groundwater Not Encountered Temporary Well TW-30 Installed to 10' bgs, 5' Screen					

Completion Depth:	10.0 ft	Sample Types:	Remarks:
Date Boring Started:	4/29/09	Auger Cutting, Shelby Tube, Split-Spoon, Hand Auger, Rock Core	
Date Boring Completed:	4/29/09		
Logged By:	MD		
Drilling Contractor:	On-Site		

The stratification lines represent approximate boundaries. The transition may be gradual.

APPENDIX B

WDNR BOREHOLE ABANDONMENT FORMS (APRIL 2009)

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, 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 used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment ☐ Waste Management ☐ Other: _____

1. Well Location Information

County: Waukesha
WI Unique Well # of Removed Well: ___ ___ ___ ___ ___
Hicap #:
Lattitude / Longitude (Degrees and Minutes): __ __ ° __ __ . __ __ __ 'N / __ __ ° __ __ . __ __ __ 'W
Method Code (see instructions): ___ ___ ___ ___ ___ ___
¼ / ¼ NE ¼ SW or Gov't Lot #
Section: 10
Township: 5 N
Range: 20 ☒ E ☐ W
Well Street Address:
Well City, Village or Town:
Well ZIP Code:
Subdivision Name:
Lot #:
Reason For Removal From Service:
WI Unique Well # of Replacement Well: ___ ___ ___ ___ ___

2. Facility / Owner Information

Facility Name: Firestone Property
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner:
Present Well Owner:
Mailing Address of Present Owner: 573 W16437
City of Present Owner: Muskego
State: WI
ZIP Code: 53150

3. Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 04/29/2009
If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.): 10
Casing Diameter (in.): 1
Lower Drillhole Diameter (in.): 2
Casing Depth (ft.): 10

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown
If yes, to what depth (feet)?
Depth to Water (feet): Between 5 and 10

4. Pump, Liner, Screen, Casing & Sealing Material

	Yes	No	N/A
Pump and piping removed?	☐	☐	☒
Liner(s) removed?	☐	☐	☒
Screen removed?	☒	☐	☐
Casing left in place?	☐	☒	☐
Was casing cut off below surface?	☐	☒	☐
Did sealing material rise to surface?	☐	☐	☒
Did material settle after 24 hours?	☐	☐	☒
If yes, was hole retopped?	☐	☐	☒
If bentonite chips were used, were they hydrated with water from a known safe source?	☐	☒	☐

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☒ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials
☐ Neat Cement Grout ☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " "
☒ Concrete ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used To Fill Well / Drillhole

Material	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Concrete	Surface	0.1		
Bentonite Chips	0.1	10	0.5	

6. Comments

B-28 / TW-28

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing: Matt Dahlem - PSI
License #:
Date of Filling & Sealing (mm/dd/yyyy): 04/29/2009
Street or Route: W228 N727 Westmound Drive, Suite A
Telephone Number: (262) 970-9022
City: Waukesha
State: WI
ZIP Code: 53186
Signature of Person Doing Work: Matt [signature]
Date Signed: 04/29/2009

DNR Use Only
Date Received:
Noted By:
Comments:

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, 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 used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment ☐ Waste Management ☐ Other: _____

1. Well Location Information

County: Waukesha
WI Unique Well # of Removed Well: _ _ _ _ _
Hicap #:
Lattitude / Longitude (Degrees and Minutes): __ __ ° __ __ . __ __ __ 'N / __ __ ° __ __ . __ __ __ 'W
Method Code (see instructions): _ _ _ _ _ _
¼ / ¼: NE ¼: SW
or Gov't Lot #:
Section: 10
Township: 5 N
Range: 20 ☒ E ☐ W
Well Street Address:
Well City, Village or Town:
Well ZIP Code:
Subdivision Name:
Lot #:
Reason For Removal From Service:
WI Unique Well # of Replacement Well: _ _ _ _ _

2. Facility / Owner Information

Facility Name: Firestone Property
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner:
Present Well Owner:
Mailing Address of Present Owner: 573 W16437
City of Present Owner: Muskego
State: WI
ZIP Code: 53150

3. Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 04/29/2009
If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.): 10
Casing Diameter (in.):
Lower Drillhole Diameter (in.): 2
Casing Depth (ft.):
Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown
If yes, to what depth (feet)?:
Depth to Water (feet): >10

4. Pump, Liner, Screen, Casing & Sealing Material

	Yes	No	N/A
Pump and piping removed?	☐	☐	☒
Liner(s) removed?	☐	☐	☒
Screen removed?	☐	☐	☒
Casing left in place?	☐	☐	☒
Was casing cut off below surface?	☐	☐	☒
Did sealing material rise to surface?	☐	☐	☒
Did material settle after 24 hours?	☐	☐	☒
If yes, was hole retopped?	☐	☐	☒
If bentonite chips were used, were they hydrated with water from a known safe source?	☐	☒	☐

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☒ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials
☐ Neat Cement Grout ☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " "
☒ Concrete ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used To Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Concrete	Surface	0.1		
Bentonite Chips	0.1	10	0.5	

6. Comments

B-29

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing: Matt Dahlem - PSI
License #:
Date of Filling & Sealing (mm/dd/yyyy): 04/29/2009
Street or Route: W228 N727 Westmound Drive, Suite A
Telephone Number: (262) 970-9022
City: Waukesha
State: WI
ZIP Code: 53186
Signature of Person Doing Work: Matt
Date Signed: 04/29/2009

DNR Use Only
Date Received:
Noted By:
Comments:

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, 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 used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment ☐ Waste Management ☐ Other: _____

1. Well Location Information

County: Waukesha
WI Unique Well # of Removed Well: _ _ _ _ _
Hicap #:
Lattitude / Longitude (Degrees and Minutes): __ __ ° __ __ . __ __ __ 'N / __ __ ° __ __ . __ __ __ 'W
Method Code (see instructions):
¼ / ¼: NE ¼: SW
Section: 10
Township: 5 N
Range: 20 ☒ E ☐ W
or Gov't Lot #:
Well Street Address:
Well City, Village or Town:
Well ZIP Code:
Subdivision Name:
Lot #:
Reason For Removal From Service:
WI Unique Well # of Replacement Well: _ _ _ _ _

2. Facility / Owner Information

Facility Name: Firestone Property
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner:
Present Well Owner:
Mailing Address of Present Owner: 573 W16437
City of Present Owner: Muskego
State: WI
ZIP Code: 53150

3. Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 04/29/2009
If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.): 10
Casing Diameter (in.): 1
Lower Drillhole Diameter (in.): 2
Casing Depth (ft.): 10
Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown
If yes, to what depth (feet)?
Depth to Water (feet): > 10

4. Pump, Liner, Screen, Casing & Sealing Material

	Yes	No	N/A
Pump and piping removed?	☐	☐	☒
Liner(s) removed?	☐	☐	☒
Screen removed?	☒	☐	☐
Casing left in place?	☐	☒	☐
Was casing cut off below surface?	☐	☒	☐
Did sealing material rise to surface?	☐	☐	☒
Did material settle after 24 hours?	☐	☐	☒
If yes, was hole retopped?	☐	☐	☒
If bentonite chips were used, were they hydrated with water from a known safe source?	☐	☒	☐

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☒ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials
☐ Neat Cement Grout ☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " "
☒ Concrete ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used To Fill Well / Drillhole

Material	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Concrete	Surface	0.1		
Bentonite Chips	0.1	10	0.5	

6. Comments

B-30 / TW-30

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing: Matt Dahlem - PSI
License #:
Date of Filling & Sealing (mm/dd/yyyy): 04/29/2009
Street or Route: W228 N727 Westmound Drive, Suite A
Telephone Number: (262) 970-9022
City: Waukesha
State: WI
ZIP Code: 53186
Signature of Person Doing Work: Matt [signature]
Date Signed: 04/29/2009

DNR Use Only
Date Received:
Noted By:
Comments:

APPENDIX C

LABORATORY ANALYTICAL REPORTS (APRIL 2009)

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

May 14, 2009

Matt Dahlem
PSI Incorporated
W228 N727 Westmound Drive
SUITE A
Waukesha, WI 53186

RE: Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

Dear Matt Dahlem:
Enclosed are the analytical results for sample(s) received by the laboratory on April 30, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Laurie Woelfel

laurie.woelfel@pacelabs.com
Project Manager

Enclosures

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

Green Bay Certification IDs

Wisconsin DATCP Certification #: 105-444
Wisconsin DATCP Certification #: 105-444
Wisconsin Certification #: 405132750
Wisconsin Certification #: 405132750
South Carolina Certification #: 83006001
South Carolina Certification #: 83006001
North Dakota Certification #: R-200
North Dakota Certification #: R-150
North Carolina Certification #: 503
North Carolina Certification #: 503
New York Certification #: 11887
New York Certification #: 11888
Minnesota Certification #: 055-999-334
Minnesota Certification #: 055-999-334
Louisiana Certification #: 04169
Louisiana Certification #: 04168
Kentucky Certification #: 83
Kentucky Certification #: 82
Illinois Certification #: 200051
Illinois Certification #: 200050
Florida/NELAP Certification #: E87951
Florida/NELAP Certification #: E87948

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Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4016789020	**TRIP BLANK**	Water	04/29/09 00:00	04/30/09 17:00
4016789010	**B-28 (3-5)**	Solid	04/29/09 12:20	04/30/09 17:00
4016789011	**B-29 (3-5)**	Solid	04/29/09 12:40	04/30/09 17:00
4016789012	**B-30 (5-7.5)**	Solid	04/29/09 13:00	04/30/09 17:00
4016789017	**TW-28**	Water	04/29/09 14:45	04/30/09 17:00

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Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4016789010	**B-28 (3-5)**	ASTM D2974-87	MRN	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4016789011	**B-29 (3-5)**	ASTM D2974-87	MRN	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4016789012	**B-30 (5-7.5)**	ASTM D2974-87	MRN	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4016789017	**TW-28**	EPA 8260	SMT	64	PASI-G
		EPA 8270 by SIM	RJN	20	PASI-G

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without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

Sample: TRIP BLANK **Lab ID: 4016789020** Collected: 04/29/09 00:00 Received: 04/30/09 17:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
	Analytical Method: EPA 8260								
Benzene	**<0.41**	ug/L	1.0	0.41	1		05/04/09 11:21	71-43-2	
Bromobenzene	**<0.82**	ug/L	1.0	0.82	1		05/04/09 11:21	108-86-1	
Bromochloromethane	**<0.97**	ug/L	1.0	0.97	1		05/04/09 11:21	74-97-5	
Bromodichloromethane	**<0.56**	ug/L	1.0	0.56	1		05/04/09 11:21	75-27-4	
Bromoform	**<0.94**	ug/L	1.0	0.94	1		05/04/09 11:21	75-25-2	
Bromomethane	**<0.91**	ug/L	1.0	0.91	1		05/04/09 11:21	74-83-9	
n-Butylbenzene	**<0.93**	ug/L	1.0	0.93	1		05/04/09 11:21	104-51-8	
sec-Butylbenzene	**<0.89**	ug/L	5.0	0.89	1		05/04/09 11:21	135-98-8	
tert-Butylbenzene	**<0.97**	ug/L	1.0	0.97	1		05/04/09 11:21	98-06-6	
Carbon tetrachloride	**<0.49**	ug/L	1.0	0.49	1		05/04/09 11:21	56-23-5	
Chlorobenzene	**<0.41**	ug/L	1.0	0.41	1		05/04/09 11:21	108-90-7	
Chloroethane	**<0.97**	ug/L	1.0	0.97	1		05/04/09 11:21	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		05/04/09 11:21	67-66-3	L1
Chloromethane	**<0.24**	ug/L	1.0	0.24	1		05/04/09 11:21	74-87-3	
2-Chlorotoluene	**<0.85**	ug/L	1.0	0.85	1		05/04/09 11:21	95-49-8	
4-Chlorotoluene	**<0.74**	ug/L	1.0	0.74	1		05/04/09 11:21	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	5.0	1.7	1		05/04/09 11:21	96-12-8	
Dibromochloromethane	**<0.81**	ug/L	1.0	0.81	1		05/04/09 11:21	124-48-1	
1,2-Dibromoethane (EDB)	**<0.56**	ug/L	1.0	0.56	1		05/04/09 11:21	106-93-4	
Dibromomethane	**<0.60**	ug/L	1.0	0.60	1		05/04/09 11:21	74-95-3	
1,2-Dichlorobenzene	**<0.83**	ug/L	1.0	0.83	1		05/04/09 11:21	95-50-1	
1,3-Dichlorobenzene	**<0.87**	ug/L	1.0	0.87	1		05/04/09 11:21	541-73-1	
1,4-Dichlorobenzene	**<0.95**	ug/L	1.0	0.95	1		05/04/09 11:21	106-46-7	
Dichlorodifluoromethane	**<0.99**	ug/L	1.0	0.99	1		05/04/09 11:21	75-71-8	
1,1-Dichloroethane	**<0.75**	ug/L	1.0	0.75	1		05/04/09 11:21	75-34-3	
1,2-Dichloroethane	**<0.36**	ug/L	1.0	0.36	1		05/04/09 11:21	107-06-2	
1,1-Dichloroethene	**<0.57**	ug/L	1.0	0.57	1		05/04/09 11:21	75-35-4	
cis-1,2-Dichloroethene	**<0.83**	ug/L	1.0	0.83	1		05/04/09 11:21	156-59-2	
trans-1,2-Dichloroethene	**<0.89**	ug/L	1.0	0.89	1		05/04/09 11:21	156-60-5	
1,2-Dichloropropane	**<0.49**	ug/L	1.0	0.49	1		05/04/09 11:21	78-87-5	
1,3-Dichloropropane	**<0.61**	ug/L	1.0	0.61	1		05/04/09 11:21	142-28-9	
2,2-Dichloropropane	**<0.62**	ug/L	1.0	0.62	1		05/04/09 11:21	594-20-7	
1,1-Dichloropropene	**<0.75**	ug/L	1.0	0.75	1		05/04/09 11:21	563-58-6	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		05/04/09 11:21	10061-01-5	
trans-1,3-Dichloropropene	**<0.19**	ug/L	1.0	0.19	1		05/04/09 11:21	10061-02-6	
Diisopropyl ether	**<0.76**	ug/L	1.0	0.76	1		05/04/09 11:21	108-20-3	
Ethylbenzene	**<0.54**	ug/L	1.0	0.54	1		05/04/09 11:21	100-41-4	
Hexachloro-1,3-butadiene	**<0.67**	ug/L	5.0	0.67	1		05/04/09 11:21	87-68-3	
Isopropylbenzene (Cumene)	**<0.59**	ug/L	1.0	0.59	1		05/04/09 11:21	98-82-8	
p-Isopropyltoluene	**<0.67**	ug/L	1.0	0.67	1		05/04/09 11:21	99-87-6	
Methylene Chloride	**<0.43**	ug/L	1.0	0.43	1		05/04/09 11:21	75-09-2	
Methyl-tert-butyl ether	**<0.61**	ug/L	1.0	0.61	1		05/04/09 11:21	1634-04-4	
Naphthalene	**<0.89**	ug/L	5.0	0.89	1		05/04/09 11:21	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	1.0	0.81	1		05/04/09 11:21	103-65-1	
Styrene	**<0.86**	ug/L	1.0	0.86	1		05/04/09 11:21	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.92**	ug/L	1.0	0.92	1		05/04/09 11:21	630-20-6	

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ANALYTICAL RESULTS

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

Sample: TRIP BLANK **Lab ID: 4016789020** Collected: 04/29/09 00:00 Received: 04/30/09 17:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		05/04/09 11:21	79-34-5	
Tetrachloroethene	**<0.45**	ug/L	1.0	0.45	1		05/04/09 11:21	127-18-4	
Toluene	**<0.67**	ug/L	1.0	0.67	1		05/04/09 11:21	108-88-3	
1,2,3-Trichlorobenzene	**<0.74**	ug/L	1.0	0.74	1		05/04/09 11:21	87-61-6	
1,2,4-Trichlorobenzene	**<0.97**	ug/L	1.0	0.97	1		05/04/09 11:21	120-82-1	
1,1,1-Trichloroethane	**<0.90**	ug/L	1.0	0.90	1		05/04/09 11:21	71-55-6	
1,1,2-Trichloroethane	**<0.42**	ug/L	1.0	0.42	1		05/04/09 11:21	79-00-5	
Trichloroethene	**<0.48**	ug/L	1.0	0.48	1		05/04/09 11:21	79-01-6	
Trichlorofluoromethane	**<0.79**	ug/L	1.0	0.79	1		05/04/09 11:21	75-69-4	
1,2,3-Trichloropropane	**<0.99**	ug/L	1.0	0.99	1		05/04/09 11:21	96-18-4	
1,2,4-Trimethylbenzene	**<0.97**	ug/L	1.0	0.97	1		05/04/09 11:21	95-63-6	
1,3,5-Trimethylbenzene	**<0.83**	ug/L	1.0	0.83	1		05/04/09 11:21	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		05/04/09 11:21	75-01-4	
m&p-Xylene	**<1.8**	ug/L	2.0	1.8	1		05/04/09 11:21	1330-20-7	
o-Xylene	**<0.83**	ug/L	1.0	0.83	1		05/04/09 11:21	95-47-6	
4-Bromofluorobenzene (S)	96	%	70-130		1		05/04/09 11:21	460-00-4	
Dibromofluoromethane (S)	90	%	70-130		1		05/04/09 11:21	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		05/04/09 11:21	2037-26-5	

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ANALYTICAL RESULTS

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

Sample: B-28 (3-5) **Lab ID: 4016789010** Collected: 04/29/09 12:20 Received: 04/30/09 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO			Preparation Method: WI MOD DRO					
Diesel Range Organics	**2.1**	mg/kg	2.0	0.83	1	05/06/09 12:42	05/07/09 10:22		Z2
WIGRO GCV	Analytical Method: WI MOD GRO			Preparation Method: TPH GRO/PVOC WI ext.					
Benzene	**<25.0**	ug/kg	60.0	25.0	1	05/05/09 10:35	05/05/09 16:25	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/05/09 10:35	05/05/09 16:25	100-41-4	W
Gasoline Range Organics	**<2.9**	mg/kg	2.9	2.9	1	05/05/09 10:35	05/05/09 16:25		
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	05/05/09 10:35	05/05/09 16:25	1634-04-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	05/05/09 10:35	05/05/09 16:25	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/05/09 10:35	05/05/09 16:25	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/05/09 10:35	05/05/09 16:25	108-67-8	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	05/05/09 10:35	05/05/09 16:25	1330-20-7	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	05/05/09 10:35	05/05/09 16:25	1330-20-7	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	05/05/09 10:35	05/05/09 16:25	95-47-6	W
a,a,a-Trifluorotoluene (S)	106	%	80-120		1	05/05/09 10:35	05/05/09 16:25	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**13.5**	%	0.10	0.10	1		05/05/09 08:40		

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ANALYTICAL RESULTS

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

Sample: B-29 (3-5) **Lab ID: 4016789011** Collected: 04/29/09 12:40 Received: 04/30/09 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO		Preparation Method: WI MOD DRO						
Diesel Range Organics	**2.4**	mg/kg	1.9	0.81	1	05/06/09 12:42	05/07/09 10:34		Z2
WIGRO GCV	Analytical Method: WI MOD GRO		Preparation Method: TPH GRO/PVOC WI ext.						
Benzene	**<25.0**	ug/kg	60.0	25.0	1	05/05/09 10:35	05/05/09 13:25	71-43-2	W
Ethylbenzene	**939**	ug/kg	70.1	29.2	1	05/05/09 10:35	05/05/09 13:25	100-41-4	
Gasoline Range Organics	**150**	mg/kg	2.9	2.9	1	05/05/09 10:35	05/05/09 13:25		
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	05/05/09 10:35	05/05/09 13:25	1634-04-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	05/05/09 10:35	05/05/09 13:25	108-88-3	W
1,2,4-Trimethylbenzene	**759**	ug/kg	70.1	29.2	1	05/05/09 10:35	05/05/09 13:25	95-63-6	
1,3,5-Trimethylbenzene	**1360**	ug/kg	70.1	29.2	1	05/05/09 10:35	05/05/09 13:25	108-67-8	
Xylene (Total)	**731**	ug/kg	210	87.6	1	05/05/09 10:35	05/05/09 13:25	1330-20-7	
m&p-Xylene	**731**	ug/kg	140	58.4	1	05/05/09 10:35	05/05/09 13:25	1330-20-7	
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	05/05/09 10:35	05/05/09 13:25	95-47-6	W
a,a,a-Trifluorotoluene (S)	112	%	80-120		1	05/05/09 10:35	05/05/09 13:25	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**14.4**	%	0.10	0.10	1		05/05/09 08:40		

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ANALYTICAL RESULTS

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

Sample: B-30 (5-7.5) **Lab ID: 4016789012** Collected: 04/29/09 13:00 Received: 04/30/09 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO			Preparation Method: WI MOD DRO					
Diesel Range Organics	**6.0**	mg/kg	2.0	0.82	1	05/06/09 12:42	05/07/09 10:46		Z2
WIGRO GCV	Analytical Method: WI MOD GRO			Preparation Method: TPH GRO/PVOC WI ext.					
Benzene	**<25.0**	ug/kg	60.0	25.0	1	05/05/09 10:35	05/05/09 16:51	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/05/09 10:35	05/05/09 16:51	100-41-4	W
Gasoline Range Organics	**<2.9**	mg/kg	2.9	2.9	1	05/05/09 10:35	05/05/09 16:51		
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	05/05/09 10:35	05/05/09 16:51	1634-04-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	05/05/09 10:35	05/05/09 16:51	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/05/09 10:35	05/05/09 16:51	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/05/09 10:35	05/05/09 16:51	108-67-8	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	05/05/09 10:35	05/05/09 16:51	1330-20-7	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	05/05/09 10:35	05/05/09 16:51	1330-20-7	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	05/05/09 10:35	05/05/09 16:51	95-47-6	W
a,a,a-Trifluorotoluene (S)	106	%	80-120		1	05/05/09 10:35	05/05/09 16:51	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**13.3**	%	0.10	0.10	1		05/05/09 08:40		

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ANALYTICAL RESULTS

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

Sample: TW-28 **Lab ID: 4016789017** Collected: 04/29/09 14:45 Received: 04/30/09 17:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510								
Acenaphthene	**0.016J**	ug/L	0.050	0.0083	1	05/05/09 07:30	05/05/09 16:37	83-32-9	
Acenaphthylene	**0.0090J**	ug/L	0.050	0.0053	1	05/05/09 07:30	05/05/09 16:37	208-96-8	
Anthracene	**0.033J**	ug/L	0.050	0.0069	1	05/05/09 07:30	05/05/09 16:37	120-12-7	Z2
Benzo(a)anthracene	**0.19**	ug/L	0.050	0.0037	1	05/05/09 07:30	05/05/09 16:37	56-55-3	Z2
Benzo(a)pyrene	**0.22**	ug/L	0.050	0.0057	1	05/05/09 07:30	05/05/09 16:37	50-32-8	Z2
Benzo(b)fluoranthene	**0.24**	ug/L	0.050	0.0055	1	05/05/09 07:30	05/05/09 16:37	205-99-2	Z2
Benzo(g,h,i)perylene	**0.20**	ug/L	0.050	0.0066	1	05/05/09 07:30	05/05/09 16:37	191-24-2	Z2
Benzo(k)fluoranthene	**0.12**	ug/L	0.050	0.0082	1	05/05/09 07:30	05/05/09 16:37	207-08-9	Z2
Chrysene	**0.22**	ug/L	0.050	0.0074	1	05/05/09 07:30	05/05/09 16:37	218-01-9	Z2
Dibenz(a,h)anthracene	**0.045J**	ug/L	0.050	0.0046	1	05/05/09 07:30	05/05/09 16:37	53-70-3	Z2
Fluoranthene	**0.29**	ug/L	0.050	0.0057	1	05/05/09 07:30	05/05/09 16:37	206-44-0	Z2
Fluorene	**0.017J**	ug/L	0.050	0.0066	1	05/05/09 07:30	05/05/09 16:37	86-73-7	
Indeno(1,2,3-cd)pyrene	**0.13**	ug/L	0.050	0.0038	1	05/05/09 07:30	05/05/09 16:37	193-39-5	Z2
1-Methylnaphthalene	**0.073**	ug/L	0.050	0.010	1	05/05/09 07:30	05/05/09 16:37	90-12-0	
2-Methylnaphthalene	**0.11**	ug/L	0.050	0.011	1	05/05/09 07:30	05/05/09 16:37	91-57-6	
Naphthalene	**0.072**	ug/L	0.050	0.017	1	05/05/09 07:30	05/05/09 16:37	91-20-3	L1
Phenanthrene	**0.14**	ug/L	0.050	0.0079	1	05/05/09 07:30	05/05/09 16:37	85-01-8	Z2
Pyrene	**0.28**	ug/L	0.050	0.0072	1	05/05/09 07:30	05/05/09 16:37	129-00-0	Z2
2-Fluorobiphenyl (S)	98	%	25-130		1	05/05/09 07:30	05/05/09 16:37	321-60-8	
Terphenyl-d14 (S)	118	%	36-140		1	05/05/09 07:30	05/05/09 16:37	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.41**	ug/L	1.0	0.41	1		05/05/09 17:20	71-43-2	
Bromobenzene	**<0.82**	ug/L	1.0	0.82	1		05/05/09 17:20	108-86-1	
Bromochloromethane	**<0.97**	ug/L	1.0	0.97	1		05/05/09 17:20	74-97-5	
Bromodichloromethane	**<0.56**	ug/L	1.0	0.56	1		05/05/09 17:20	75-27-4	
Bromoform	**<0.94**	ug/L	1.0	0.94	1		05/05/09 17:20	75-25-2	
Bromomethane	**<0.91**	ug/L	1.0	0.91	1		05/05/09 17:20	74-83-9	
n-Butylbenzene	**<0.93**	ug/L	1.0	0.93	1		05/05/09 17:20	104-51-8	
sec-Butylbenzene	**<0.89**	ug/L	5.0	0.89	1		05/05/09 17:20	135-98-8	
tert-Butylbenzene	**<0.97**	ug/L	1.0	0.97	1		05/05/09 17:20	98-06-6	
Carbon tetrachloride	**<0.49**	ug/L	1.0	0.49	1		05/05/09 17:20	56-23-5	
Chlorobenzene	**<0.41**	ug/L	1.0	0.41	1		05/05/09 17:20	108-90-7	
Chloroethane	**<0.97**	ug/L	1.0	0.97	1		05/05/09 17:20	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		05/05/09 17:20	67-66-3	
Chloromethane	**<0.24**	ug/L	1.0	0.24	1		05/05/09 17:20	74-87-3	
2-Chlorotoluene	**<0.85**	ug/L	1.0	0.85	1		05/05/09 17:20	95-49-8	
4-Chlorotoluene	**<0.74**	ug/L	1.0	0.74	1		05/05/09 17:20	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	5.0	1.7	1		05/05/09 17:20	96-12-8	
Dibromochloromethane	**<0.81**	ug/L	1.0	0.81	1		05/05/09 17:20	124-48-1	
1,2-Dibromoethane (EDB)	**<0.56**	ug/L	1.0	0.56	1		05/05/09 17:20	106-93-4	
Dibromomethane	**<0.60**	ug/L	1.0	0.60	1		05/05/09 17:20	74-95-3	
1,2-Dichlorobenzene	**<0.83**	ug/L	1.0	0.83	1		05/05/09 17:20	95-50-1	
1,3-Dichlorobenzene	**<0.87**	ug/L	1.0	0.87	1		05/05/09 17:20	541-73-1	
1,4-Dichlorobenzene	**<0.95**	ug/L	1.0	0.95	1		05/05/09 17:20	106-46-7	
Dichlorodifluoromethane	**<0.99**	ug/L	1.0	0.99	1		05/05/09 17:20	75-71-8	

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ANALYTICAL RESULTS

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

Sample: TW-28 **Lab ID: 4016789017** Collected: 04/29/09 14:45 Received: 04/30/09 17:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1-Dichloroethane	**<0.75**	ug/L	1.0	0.75	1		05/05/09 17:20	75-34-3	
1,2-Dichloroethane	**<0.36**	ug/L	1.0	0.36	1		05/05/09 17:20	107-06-2	
1,1-Dichloroethene	**<0.57**	ug/L	1.0	0.57	1		05/05/09 17:20	75-35-4	
cis-1,2-Dichloroethene	**<0.83**	ug/L	1.0	0.83	1		05/05/09 17:20	156-59-2	
trans-1,2-Dichloroethene	**<0.89**	ug/L	1.0	0.89	1		05/05/09 17:20	156-60-5	
1,2-Dichloropropane	**<0.49**	ug/L	1.0	0.49	1		05/05/09 17:20	78-87-5	
1,3-Dichloropropane	**<0.61**	ug/L	1.0	0.61	1		05/05/09 17:20	142-28-9	
2,2-Dichloropropane	**<0.62**	ug/L	1.0	0.62	1		05/05/09 17:20	594-20-7	
1,1-Dichloropropene	**<0.75**	ug/L	1.0	0.75	1		05/05/09 17:20	563-58-6	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		05/05/09 17:20	10061-01-5	
trans-1,3-Dichloropropene	**<0.19**	ug/L	1.0	0.19	1		05/05/09 17:20	10061-02-6	
Diisopropyl ether	**<0.76**	ug/L	1.0	0.76	1		05/05/09 17:20	108-20-3	
Ethylbenzene	**<0.54**	ug/L	1.0	0.54	1		05/05/09 17:20	100-41-4	
Hexachloro-1,3-butadiene	**<0.67**	ug/L	5.0	0.67	1		05/05/09 17:20	87-68-3	
Isopropylbenzene (Cumene)	**<0.59**	ug/L	1.0	0.59	1		05/05/09 17:20	98-82-8	
p-Isopropyltoluene	**<0.67**	ug/L	1.0	0.67	1		05/05/09 17:20	99-87-6	
Methylene Chloride	**<0.43**	ug/L	1.0	0.43	1		05/05/09 17:20	75-09-2	
Methyl-tert-butyl ether	**<0.61**	ug/L	1.0	0.61	1		05/05/09 17:20	1634-04-4	
Naphthalene	**<0.89**	ug/L	5.0	0.89	1		05/05/09 17:20	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	1.0	0.81	1		05/05/09 17:20	103-65-1	
Styrene	**<0.86**	ug/L	1.0	0.86	1		05/05/09 17:20	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.92**	ug/L	1.0	0.92	1		05/05/09 17:20	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		05/05/09 17:20	79-34-5	
Tetrachloroethene	**<0.45**	ug/L	1.0	0.45	1		05/05/09 17:20	127-18-4	
Toluene	**<0.67**	ug/L	1.0	0.67	1		05/05/09 17:20	108-88-3	
1,2,3-Trichlorobenzene	**<0.74**	ug/L	1.0	0.74	1		05/05/09 17:20	87-61-6	
1,2,4-Trichlorobenzene	**<0.97**	ug/L	1.0	0.97	1		05/05/09 17:20	120-82-1	
1,1,1-Trichloroethane	**<0.90**	ug/L	1.0	0.90	1		05/05/09 17:20	71-55-6	
1,1,2-Trichloroethane	**<0.42**	ug/L	1.0	0.42	1		05/05/09 17:20	79-00-5	
Trichloroethene	**<0.48**	ug/L	1.0	0.48	1		05/05/09 17:20	79-01-6	
Trichlorofluoromethane	**<0.79**	ug/L	1.0	0.79	1		05/05/09 17:20	75-69-4	
1,2,3-Trichloropropane	**<0.99**	ug/L	1.0	0.99	1		05/05/09 17:20	96-18-4	
1,2,4-Trimethylbenzene	**<0.97**	ug/L	1.0	0.97	1		05/05/09 17:20	95-63-6	
1,3,5-Trimethylbenzene	**<0.83**	ug/L	1.0	0.83	1		05/05/09 17:20	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		05/05/09 17:20	75-01-4	
m&p-Xylene	**<1.8**	ug/L	2.0	1.8	1		05/05/09 17:20	1330-20-7	
o-Xylene	**<0.83**	ug/L	1.0	0.83	1		05/05/09 17:20	95-47-6	
4-Bromofluorobenzene (S)	95	%	70-130		1		05/05/09 17:20	460-00-4	
Dibromofluoromethane (S)	103	%	70-130		1		05/05/09 17:20	1868-53-7	
Toluene-d8 (S)	106	%	70-130		1		05/05/09 17:20	2037-26-5	

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QUALITY CONTROL DATA

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

QC Batch: MSV/4343 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV
Associated Lab Samples: 4016789020

METHOD BLANK: 153301 | Matrix: Water
Associated Lab Samples: 4016789020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.92	1.0	05/04/09 08:32	
1,1,1-Trichloroethane	ug/L	<0.90	1.0	05/04/09 08:32	
1,1,2,2-Tetrachloroethane	ug/L	<0.20	1.0	05/04/09 08:32	
1,1,2-Trichloroethane	ug/L	<0.42	1.0	05/04/09 08:32	
1,1-Dichloroethane	ug/L	<0.75	1.0	05/04/09 08:32	
1,1-Dichloroethene	ug/L	<0.57	1.0	05/04/09 08:32	
1,1-Dichloropropene	ug/L	<0.75	1.0	05/04/09 08:32	
1,2,3-Trichlorobenzene	ug/L	<0.74	1.0	05/04/09 08:32	
1,2,3-Trichloropropane	ug/L	<0.99	1.0	05/04/09 08:32	
1,2,4-Trichlorobenzene	ug/L	<0.97	1.0	05/04/09 08:32	
1,2,4-Trimethylbenzene	ug/L	<0.97	1.0	05/04/09 08:32	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	5.0	05/04/09 08:32	
1,2-Dibromoethane (EDB)	ug/L	<0.56	1.0	05/04/09 08:32	
1,2-Dichlorobenzene	ug/L	<0.83	1.0	05/04/09 08:32	
1,2-Dichloroethane	ug/L	<0.36	1.0	05/04/09 08:32	
1,2-Dichloropropane	ug/L	<0.49	1.0	05/04/09 08:32	
1,3,5-Trimethylbenzene	ug/L	<0.83	1.0	05/04/09 08:32	
1,3-Dichlorobenzene	ug/L	<0.87	1.0	05/04/09 08:32	
1,3-Dichloropropane	ug/L	<0.61	1.0	05/04/09 08:32	
1,4-Dichlorobenzene	ug/L	<0.95	1.0	05/04/09 08:32	
2,2-Dichloropropane	ug/L	<0.62	1.0	05/04/09 08:32	
2-Chlorotoluene	ug/L	<0.85	1.0	05/04/09 08:32	
4-Chlorotoluene	ug/L	<0.74	1.0	05/04/09 08:32	
Benzene	ug/L	<0.41	1.0	05/04/09 08:32	
Bromobenzene	ug/L	<0.82	1.0	05/04/09 08:32	
Bromochloromethane	ug/L	<0.97	1.0	05/04/09 08:32	
Bromodichloromethane	ug/L	<0.56	1.0	05/04/09 08:32	
Bromoform	ug/L	<0.94	1.0	05/04/09 08:32	
Bromomethane	ug/L	<0.91	1.0	05/04/09 08:32	
Carbon tetrachloride	ug/L	<0.49	1.0	05/04/09 08:32	
Chlorobenzene	ug/L	<0.41	1.0	05/04/09 08:32	
Chloroethane	ug/L	<0.97	1.0	05/04/09 08:32	
Chloroform	ug/L	<1.3	5.0	05/04/09 08:32	
Chloromethane	ug/L	<0.24	1.0	05/04/09 08:32	
cis-1,2-Dichloroethene	ug/L	<0.83	1.0	05/04/09 08:32	
cis-1,3-Dichloropropene	ug/L	<0.20	1.0	05/04/09 08:32	
Dibromochloromethane	ug/L	<0.81	1.0	05/04/09 08:32	
Dibromomethane	ug/L	<0.60	1.0	05/04/09 08:32	
Dichlorodifluoromethane	ug/L	<0.99	1.0	05/04/09 08:32	
Diisopropyl ether	ug/L	<0.76	1.0	05/04/09 08:32	
Ethylbenzene	ug/L	<0.54	1.0	05/04/09 08:32	
Hexachloro-1,3-butadiene	ug/L	<0.67	5.0	05/04/09 08:32	
Isopropylbenzene (Cumene)	ug/L	<0.59	1.0	05/04/09 08:32	

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QUALITY CONTROL DATA

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

METHOD BLANK: 153301 Matrix: Water

Associated Lab Samples: 4016789020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/L	<1.8	2.0	05/04/09 08:32	
Methyl-tert-butyl ether	ug/L	<0.61	1.0	05/04/09 08:32	
Methylene Chloride	ug/L	<0.43	1.0	05/04/09 08:32	
n-Butylbenzene	ug/L	<0.93	1.0	05/04/09 08:32	
n-Propylbenzene	ug/L	<0.81	1.0	05/04/09 08:32	
Naphthalene	ug/L	<0.89	5.0	05/04/09 08:32	
o-Xylene	ug/L	<0.83	1.0	05/04/09 08:32	
p-Isopropyltoluene	ug/L	<0.67	1.0	05/04/09 08:32	
sec-Butylbenzene	ug/L	<0.89	5.0	05/04/09 08:32	
Styrene	ug/L	<0.86	1.0	05/04/09 08:32	
tert-Butylbenzene	ug/L	<0.97	1.0	05/04/09 08:32	
Tetrachloroethene	ug/L	<0.45	1.0	05/04/09 08:32	
Toluene	ug/L	<0.67	1.0	05/04/09 08:32	
trans-1,2-Dichloroethene	ug/L	<0.89	1.0	05/04/09 08:32	
trans-1,3-Dichloropropene	ug/L	<0.19	1.0	05/04/09 08:32	
Trichloroethene	ug/L	<0.48	1.0	05/04/09 08:32	
Trichlorofluoromethane	ug/L	<0.79	1.0	05/04/09 08:32	
Vinyl chloride	ug/L	<0.18	1.0	05/04/09 08:32	
4-Bromofluorobenzene (S)	%	97	70-130	05/04/09 08:32	
Dibromofluoromethane (S)	%	107	70-130	05/04/09 08:32	
Toluene-d8 (S)	%	100	70-130	05/04/09 08:32	

LABORATORY CONTROL SAMPLE & LCSD: 153302 153303

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	50	60.4	62.1	121	124	70-132	3	20	
1,1,2,2-Tetrachloroethane	ug/L	50	48.9	51.1	98	102	69-130	5	20	
1,1,2-Trichloroethane	ug/L	50	51.6	51.8	103	104	70-130	.4	20	
1,1-Dichloroethane	ug/L	50	55.1	58.9	110	118	70-130	7	20	
1,1-Dichloroethene	ug/L	50	55.0	56.3	110	113	70-130	2	20	
1,2-Dichloroethane	ug/L	50	55.8	58.3	112	117	70-134	4	20	
1,2-Dichloropropane	ug/L	50	53.0	54.5	106	109	70-130	3	20	
Benzene	ug/L	50	58.2	59.9	116	120	70-131	3	20	
Bromodichloromethane	ug/L	50	53.3	54.3	107	109	70-130	2	20	
Bromoform	ug/L	50	44.3	46.1	89	92	70-130	4	20	
Bromomethane	ug/L	50	52.1	54.8	104	110	23-200	5	20	
Carbon tetrachloride	ug/L	50	60.9	62.1	122	124	70-144	2	20	
Chlorobenzene	ug/L	50	51.7	51.5	103	103	70-130	.4	20	
Chloroethane	ug/L	50	54.1	54.4	108	109	70-136	.5	20	
Chloroform	ug/L	50	59.4	62.8	119	126	70-130	6	20	L0
Chloromethane	ug/L	50	33.8	34.1	68	68	54-148	.8	20	
cis-1,2-Dichloroethene	ug/L	50	56.4	58.1	113	116	70-130	3	20	
cis-1,3-Dichloropropene	ug/L	50	52.9	54.1	106	108	70-130	2	20	
Dibromochloromethane	ug/L	50	48.2	50.5	96	101	70-130	5	20	
Ethylbenzene	ug/L	50	52.4	53.9	105	108	70-130	3	20	

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QUALITY CONTROL DATA

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

LABORATORY CONTROL SAMPLE & LCSD: 153302 153303

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
m&p-Xylene	ug/L	100	107	104	107	104	70-130	2	20	
Methylene Chloride	ug/L	50	52.9	56.3	106	113	66-130	6	20	
o-Xylene	ug/L	50	51.8	53.1	104	106	70-130	2	20	
Styrene	ug/L	50	46.2	48.3	92	97	70-130	4	20	
Tetrachloroethene	ug/L	50	48.0	50.2	96	100	75-130	4	20	
Toluene	ug/L	50	53.1	54.1	106	108	70-130	2	20	
trans-1,2-Dichloroethene	ug/L	50	43.1	44.8	86	90	70-130	4	20	
trans-1,3-Dichloropropene	ug/L	50	51.4	52.7	103	105	70-130	2	20	
Trichloroethene	ug/L	50	54.4	55.9	109	112	70-130	3	20	
Vinyl chloride	ug/L	50	45.6	48.3	91	97	63-141	6	20	
4-Bromofluorobenzene (S)	%				94	95	70-130			
Dibromofluoromethane (S)	%				109	110	70-130			
Toluene-d8 (S)	%				98	98	70-130			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 153329 153330

Parameter	Units	4016712001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.90	50	50	59.8	60.8	120	122	70-137	2	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.20	50	50	50.1	51.8	100	104	67-130	3	20	
1,1,2-Trichloroethane	ug/L	<0.42	50	50	52.5	54.2	105	108	70-130	3	20	
1,1-Dichloroethane	ug/L	<0.75	50	50	44.4	53.2	89	106	70-130	18	20	
1,1-Dichloroethene	ug/L	<0.57	50	50	52.4	56.0	105	112	70-130	7	20	
1,2-Dichloroethane	ug/L	<0.36	50	50	54.7	57.2	109	114	69-134	4	20	
1,2-Dichloropropane	ug/L	<0.49	50	50	52.3	53.0	105	106	70-130	1	20	
Benzene	ug/L	<0.41	50	50	57.9	59.4	116	119	69-131	3	20	
Bromodichloromethane	ug/L	<0.56	50	50	52.4	52.7	105	105	70-130	.5	20	
Bromoform	ug/L	<0.94	50	50	44.3	45.7	89	91	68-130	3	20	
Bromomethane	ug/L	<0.91	50	50	52.3	54.7	105	109	22-200	4	20	
Carbon tetrachloride	ug/L	<0.49	50	50	60.9	61.5	122	123	70-144	.9	20	
Chlorobenzene	ug/L	<0.41	50	50	51.6	53.6	103	107	70-130	4	20	
Chloroethane	ug/L	<0.97	50	50	51.7	51.9	103	104	66-136	.3	20	
Chloroform	ug/L	<1.3	50	50	58.2	59.4	116	119	70-130	2	20	
Chloromethane	ug/L	<0.24	50	50	33.6	33.2	67	66	54-148	1	20	
cis-1,2-Dichloroethene	ug/L	<0.83	50	50	51.3	57.6	103	115	70-130	12	20	
cis-1,3-Dichloropropene	ug/L	<0.20	50	50	53.3	55.4	107	111	70-130	4	20	
Dibromochloromethane	ug/L	<0.81	50	50	47.8	50.2	96	100	70-130	5	20	
Ethylbenzene	ug/L	<0.54	50	50	52.3	53.9	105	108	70-130	3	20	
m&p-Xylene	ug/L	<1.8	100	100	104	106	104	106	70-130	2	20	
Methylene Chloride	ug/L	<0.43	50	50	54.5	54.2	109	108	64-130	.5	20	
o-Xylene	ug/L	<0.83	50	50	50.8	54.3	102	109	70-130	7	20	
Styrene	ug/L	<0.86	50	50	46.8	46.3	94	93	43-130	1	20	
Tetrachloroethene	ug/L	<0.45	50	50	48.6	50.8	97	102	70-130	4	20	
Toluene	ug/L	<0.67	50	50	54.1	55.4	108	111	70-130	2	20	
trans-1,2-Dichloroethene	ug/L	<0.89	50	50	36.7	40.7	73	81	70-130	10	20	
trans-1,3-Dichloropropene	ug/L	<0.19	50	50	52.2	53.9	104	108	70-130	3	20	
Trichloroethene	ug/L	<0.48	50	50	54.0	54.0	108	108	70-130	.04	20	

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QUALITY CONTROL DATA

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 153329 153330

Parameter	Units	4016712001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Vinyl chloride	ug/L	<0.18	50	50	45.9	44.5	92	89	59-141	3	20	
4-Bromofluorobenzene (S)	%						99	97	70-130			
Dibromofluoromethane (S)	%						110	109	70-130			
Toluene-d8 (S)	%						102	102	70-130			

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QUALITY CONTROL DATA

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

QC Batch: PMST/2432 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 4016789010, 4016789011, 4016789012

SAMPLE DUPLICATE: 153370

Parameter	Units	4016789001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%		21.9	21	10	

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QUALITY CONTROL DATA

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

QC Batch: MSV/4353 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV
Associated Lab Samples: 4016789017

METHOD BLANK: 153537 | Matrix: Water
Associated Lab Samples: 4016789017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.92	1.0	05/05/09 07:28	
1,1,1-Trichloroethane	ug/L	<0.90	1.0	05/05/09 07:28	
1,1,2,2-Tetrachloroethane	ug/L	<0.20	1.0	05/05/09 07:28	
1,1,2-Trichloroethane	ug/L	<0.42	1.0	05/05/09 07:28	
1,1-Dichloroethane	ug/L	<0.75	1.0	05/05/09 07:28	
1,1-Dichloroethene	ug/L	<0.57	1.0	05/05/09 07:28	
1,1-Dichloropropene	ug/L	<0.75	1.0	05/05/09 07:28	
1,2,3-Trichlorobenzene	ug/L	<0.74	1.0	05/05/09 07:28	
1,2,3-Trichloropropane	ug/L	<0.99	1.0	05/05/09 07:28	
1,2,4-Trichlorobenzene	ug/L	<0.97	1.0	05/05/09 07:28	
1,2,4-Trimethylbenzene	ug/L	<0.97	1.0	05/05/09 07:28	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	5.0	05/05/09 07:28	
1,2-Dibromoethane (EDB)	ug/L	<0.56	1.0	05/05/09 07:28	
1,2-Dichlorobenzene	ug/L	<0.83	1.0	05/05/09 07:28	
1,2-Dichloroethane	ug/L	<0.36	1.0	05/05/09 07:28	
1,2-Dichloropropane	ug/L	<0.49	1.0	05/05/09 07:28	
1,3,5-Trimethylbenzene	ug/L	<0.83	1.0	05/05/09 07:28	
1,3-Dichlorobenzene	ug/L	<0.87	1.0	05/05/09 07:28	
1,3-Dichloropropane	ug/L	<0.61	1.0	05/05/09 07:28	
1,4-Dichlorobenzene	ug/L	<0.95	1.0	05/05/09 07:28	
2,2-Dichloropropane	ug/L	<0.62	1.0	05/05/09 07:28	
2-Chlorotoluene	ug/L	<0.85	1.0	05/05/09 07:28	
4-Chlorotoluene	ug/L	<0.74	1.0	05/05/09 07:28	
Benzene	ug/L	<0.41	1.0	05/05/09 07:28	
Bromobenzene	ug/L	<0.82	1.0	05/05/09 07:28	
Bromochloromethane	ug/L	<0.97	1.0	05/05/09 07:28	
Bromodichloromethane	ug/L	<0.56	1.0	05/05/09 07:28	
Bromoform	ug/L	<0.94	1.0	05/05/09 07:28	
Bromomethane	ug/L	<0.91	1.0	05/05/09 07:28	
Carbon tetrachloride	ug/L	<0.49	1.0	05/05/09 07:28	
Chlorobenzene	ug/L	<0.41	1.0	05/05/09 07:28	
Chloroethane	ug/L	<0.97	1.0	05/05/09 07:28	
Chloroform	ug/L	<1.3	5.0	05/05/09 07:28	
Chloromethane	ug/L	<0.24	1.0	05/05/09 07:28	
cis-1,2-Dichloroethene	ug/L	<0.83	1.0	05/05/09 07:28	
cis-1,3-Dichloropropene	ug/L	<0.20	1.0	05/05/09 07:28	
Dibromochloromethane	ug/L	<0.81	1.0	05/05/09 07:28	
Dibromomethane	ug/L	<0.60	1.0	05/05/09 07:28	
Dichlorodifluoromethane	ug/L	<0.99	1.0	05/05/09 07:28	
Diisopropyl ether	ug/L	<0.76	1.0	05/05/09 07:28	
Ethylbenzene	ug/L	<0.54	1.0	05/05/09 07:28	
Hexachloro-1,3-butadiene	ug/L	<0.67	5.0	05/05/09 07:28	
Isopropylbenzene (Cumene)	ug/L	<0.59	1.0	05/05/09 07:28	

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QUALITY CONTROL DATA

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

METHOD BLANK: 153537 Matrix: Water

Associated Lab Samples: 4016789017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/L	<1.8	2.0	05/05/09 07:28	
Methyl-tert-butyl ether	ug/L	<0.61	1.0	05/05/09 07:28	
Methylene Chloride	ug/L	<0.43	1.0	05/05/09 07:28	
n-Butylbenzene	ug/L	<0.93	1.0	05/05/09 07:28	
n-Propylbenzene	ug/L	<0.81	1.0	05/05/09 07:28	
Naphthalene	ug/L	<0.89	5.0	05/05/09 07:28	
o-Xylene	ug/L	<0.83	1.0	05/05/09 07:28	
p-Isopropyltoluene	ug/L	<0.67	1.0	05/05/09 07:28	
sec-Butylbenzene	ug/L	<0.89	5.0	05/05/09 07:28	
Styrene	ug/L	<0.86	1.0	05/05/09 07:28	
tert-Butylbenzene	ug/L	<0.97	1.0	05/05/09 07:28	
Tetrachloroethene	ug/L	<0.45	1.0	05/05/09 07:28	
Toluene	ug/L	<0.67	1.0	05/05/09 07:28	
trans-1,2-Dichloroethene	ug/L	<0.89	1.0	05/05/09 07:28	
trans-1,3-Dichloropropene	ug/L	<0.19	1.0	05/05/09 07:28	
Trichloroethene	ug/L	<0.48	1.0	05/05/09 07:28	
Trichlorofluoromethane	ug/L	<0.79	1.0	05/05/09 07:28	
Vinyl chloride	ug/L	<0.18	1.0	05/05/09 07:28	
4-Bromofluorobenzene (S)	%	96	70-130	05/05/09 07:28	
Dibromofluoromethane (S)	%	102	70-130	05/05/09 07:28	
Toluene-d8 (S)	%	103	70-130	05/05/09 07:28	

LABORATORY CONTROL SAMPLE & LCSD: 153538 153539

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	50	56.2	55.5	112	111	70-132	1	20	
1,1,2,2-Tetrachloroethane	ug/L	50	46.3	41.8	93	84	69-130	10	20	
1,1,2-Trichloroethane	ug/L	50	49.3	47.0	99	94	70-130	5	20	
1,1-Dichloroethane	ug/L	50	55.3	54.3	111	109	70-130	2	20	
1,1-Dichloroethene	ug/L	50	54.7	54.3	109	109	70-130	.8	20	
1,2-Dichloroethane	ug/L	50	59.5	57.7	119	115	70-134	3	20	
1,2-Dichloropropane	ug/L	50	52.4	52.8	105	106	70-130	.8	20	
Benzene	ug/L	50	52.1	51.7	104	103	70-131	.8	20	
Bromodichloromethane	ug/L	50	50.5	50.9	101	102	70-130	.6	20	
Bromoform	ug/L	50	51.7	47.9	103	96	70-130	8	20	
Bromomethane	ug/L	50	37.1	36.8	74	74	23-200	.7	20	
Carbon tetrachloride	ug/L	50	57.1	54.2	114	108	70-144	5	20	
Chlorobenzene	ug/L	50	51.1	50.6	102	101	70-130	.9	20	
Chloroethane	ug/L	50	53.8	55.1	108	110	70-136	2	20	
Chloroform	ug/L	50	52.4	52.2	105	104	70-130	.3	20	
Chloromethane	ug/L	50	50.7	50.3	101	101	54-148	.7	20	
cis-1,2-Dichloroethene	ug/L	50	51.2	51.3	102	103	70-130	.3	20	
cis-1,3-Dichloropropene	ug/L	50	51.1	50.5	102	101	70-130	1	20	
Dibromochloromethane	ug/L	50	46.4	46.3	93	93	70-130	.1	20	
Ethylbenzene	ug/L	50	51.2	50.9	102	102	70-130	.7	20	

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QUALITY CONTROL DATA

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

LABORATORY CONTROL SAMPLE & LCSD: 153538 153539

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
m&p-Xylene	ug/L	100	104	105	104	105	70-130	1	20	
Methylene Chloride	ug/L	50	49.9	48.9	100	98	66-130	2	20	
o-Xylene	ug/L	50	49.7	50.3	99	101	70-130	1	20	
Styrene	ug/L	50	47.0	47.2	94	94	70-130	.3	20	
Tetrachloroethene	ug/L	50	52.6	52.5	105	105	75-130	.06	20	
Toluene	ug/L	50	49.2	50.4	98	101	70-130	3	20	
trans-1,2-Dichloroethene	ug/L	50	49.2	48.2	98	96	70-130	2	20	
trans-1,3-Dichloropropene	ug/L	50	51.0	50.1	102	100	70-130	2	20	
Trichloroethene	ug/L	50	48.3	49.0	97	98	70-130	1	20	
Vinyl chloride	ug/L	50	50.8	51.3	102	103	63-141	.9	20	
4-Bromofluorobenzene (S)	%				98	98	70-130			
Dibromofluoromethane (S)	%				105	104	70-130			
Toluene-d8 (S)	%				102	101	70-130			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 153715 153716

Parameter	Units	4016833005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.90	50	50	50.6	52.9	101	106	70-137	4	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.20	50	50	44.9	46.1	90	92	67-130	3	20	
1,1,2-Trichloroethane	ug/L	<0.42	50	50	46.8	49.4	94	99	70-130	6	20	
1,1-Dichloroethane	ug/L	4.5	50	50	56.4	56.5	104	104	70-130	.3	20	
1,1-Dichloroethene	ug/L	<0.57	50	50	49.8	47.2	100	94	70-130	5	20	
1,2-Dichloroethane	ug/L	<0.36	50	50	53.8	55.2	108	110	69-134	3	20	
1,2-Dichloropropane	ug/L	<0.49	50	50	49.4	51.1	99	102	70-130	3	20	
Benzene	ug/L	5.3	50	50	54.9	54.3	99	98	69-131	1	20	
Bromodichloromethane	ug/L	<0.56	50	50	46.9	47.1	94	94	70-130	.4	20	
Bromoform	ug/L	<0.94	50	50	47.4	51.0	95	102	68-130	7	20	
Bromomethane	ug/L	<0.91	50	50	27.8	31.0	56	62	22-200	11	20	
Carbon tetrachloride	ug/L	<0.49	50	50	50.3	51.3	101	103	70-144	2	20	
Chlorobenzene	ug/L	41.0	50	50	90.7	94.1	99	106	70-130	4	20	
Chloroethane	ug/L	4.1	50	50	54.6	55.2	101	102	66-136	1	20	
Chloroform	ug/L	<1.3	50	50	47.7	49.9	95	100	70-130	5	20	
Chloromethane	ug/L	<0.24	50	50	45.9	43.5	92	87	54-148	5	20	
cis-1,2-Dichloroethene	ug/L	14.7	50	50	61.5	62.2	93	95	70-130	1	20	
cis-1,3-Dichloropropene	ug/L	<0.20	50	50	46.4	47.2	93	94	70-130	2	20	
Dibromochloromethane	ug/L	<0.81	50	50	43.6	45.6	87	91	70-130	4	20	
Ethylbenzene	ug/L	1.1	50	50	50.4	52.5	98	103	70-130	4	20	
m&p-Xylene	ug/L	24.7	100	100	125	128	100	103	70-130	2	20	
Methylene Chloride	ug/L	<0.43	50	50	45.4	45.6	90	90	64-130	.5	20	
o-Xylene	ug/L	<0.83	50	50	47.1	49.5	93	98	70-130	5	20	
Styrene	ug/L	<0.86	50	50	32.4	34.0	65	68	43-130	5	20	
Tetrachloroethene	ug/L	<0.45	50	50	52.5	54.2	105	108	70-130	3	20	
Toluene	ug/L	<0.67	50	50	48.6	51.1	96	101	70-130	5	20	
trans-1,2-Dichloroethene	ug/L	<0.89	50	50	46.1	44.9	91	88	70-130	3	20	
trans-1,3-Dichloropropene	ug/L	<0.19	50	50	47.2	48.8	94	98	70-130	3	20	
Trichloroethene	ug/L	0.65J	50	50	46.4	46.4	92	92	70-130	.04	20	

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QUALITY CONTROL DATA

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 153715 153716

Parameter	Units	4016833005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Vinyl chloride	ug/L	15.4	50	50	61.6	61.5	92	92	59-141	.3	20	
4-Bromofluorobenzene (S)	%						99	97	70-130			
Dibromofluoromethane (S)	%						100	99	70-130			
Toluene-d8 (S)	%						103	106	70-130			

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QUALITY CONTROL DATA

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

QC Batch: OEXT/4170 | Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3510 | Analysis Description: 8270 Water PAH by SIM MSSV
Associated Lab Samples: 4016789017

METHOD BLANK: 153683 | Matrix: Water
Associated Lab Samples: 4016789017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	<0.010	0.050	05/05/09 10:46	
2-Methylnaphthalene	ug/L	<0.011	0.050	05/05/09 10:46	
Acenaphthene	ug/L	<0.0083	0.050	05/05/09 10:46	
Acenaphthylene	ug/L	<0.0053	0.050	05/05/09 10:46	
Anthracene	ug/L	0.013J	0.050	05/05/09 10:46	
Benzo(a)anthracene	ug/L	0.052	0.050	05/05/09 10:46	
Benzo(a)pyrene	ug/L	0.029J	0.050	05/05/09 10:46	
Benzo(b)fluoranthene	ug/L	0.063	0.050	05/05/09 10:46	
Benzo(g,h,i)perylene	ug/L	0.050	0.050	05/05/09 10:46	
Benzo(k)fluoranthene	ug/L	0.058	0.050	05/05/09 10:46	
Chrysene	ug/L	0.049J	0.050	05/05/09 10:46	
Dibenz(a,h)anthracene	ug/L	0.041J	0.050	05/05/09 10:46	
Fluoranthene	ug/L	0.091	0.050	05/05/09 10:46	
Fluorene	ug/L	<0.0066	0.050	05/05/09 10:46	
Indeno(1,2,3-cd)pyrene	ug/L	0.051	0.050	05/05/09 10:46	
Naphthalene	ug/L	<0.017	0.050	05/05/09 10:46	
Phenanthrene	ug/L	0.015J	0.050	05/05/09 10:46	
Pyrene	ug/L	0.11	0.050	05/05/09 10:46	
2-Fluorobiphenyl (S)	%	88	25-130	05/05/09 10:46	
Terphenyl-d14 (S)	%	165	36-140	05/05/09 10:46	S0

LABORATORY CONTROL SAMPLE & LCSD: 153684 153685

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1-Methylnaphthalene	ug/L	.2	0.12	0.21	59	104	33-130	56	46	R1
2-Methylnaphthalene	ug/L	.2	0.12	0.22	60	112	29-130	60	44	R1
Acenaphthene	ug/L	.2	0.12	0.15	62	73	43-130	18	46	
Acenaphthylene	ug/L	.2	0.11	0.13	57	66	33-130	15	47	
Anthracene	ug/L	.2	0.098	0.13	49	67	33-130	32	50	
Benzo(a)anthracene	ug/L	.2	0.15	0.16	77	78	41-130	1	20	
Benzo(a)pyrene	ug/L	.2	0.17	0.17	83	85	59-130	2	20	
Benzo(b)fluoranthene	ug/L	.2	0.18	0.19	88	93	53-130	5	20	
Benzo(g,h,i)perylene	ug/L	.2	0.19	0.19	93	96	55-130	4	20	
Benzo(k)fluoranthene	ug/L	.2	0.20	0.20	102	102	64-133	.05	20	
Chrysene	ug/L	.2	0.19	0.21	95	105	62-130	10	20	
Dibenz(a,h)anthracene	ug/L	.2	0.18	0.19	91	94	37-130	3	20	
Fluoranthene	ug/L	.2	0.12	0.15	62	77	48-130	22	37	
Fluorene	ug/L	.2	0.13	0.15	63	73	42-130	15	48	
Indeno(1,2,3-cd)pyrene	ug/L	.2	0.18	0.19	90	94	46-130	4	20	
Naphthalene	ug/L	.2	0.12	0.34	62	170	33-130	93	53	L0,R1
Phenanthrene	ug/L	.2	0.12	0.14	60	71	36-130	17	47	

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QUALITY CONTROL DATA

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

LABORATORY CONTROL SAMPLE & LCSD: 153684 153685

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Pyrene	ug/L	.2	0.14	0.18	72	90	51-130	22	33	
2-Fluorobiphenyl (S)	%				71	84	25-130			
Terphenyl-d14 (S)	%				192	142	36-140			S0

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

QC Batch: GCV/3337 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 4016789010, 4016789011, 4016789012

METHOD BLANK: 153723 Matrix: Solid
Associated Lab Samples: 4016789010, 4016789011, 4016789012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	05/05/09 11:14	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	05/05/09 11:14	
Benzene	ug/kg	<25.0	60.0	05/05/09 11:14	
Ethylbenzene	ug/kg	<25.0	60.0	05/05/09 11:14	
Gasoline Range Organics	mg/kg	<2.5	2.5	05/05/09 11:14	
m&p-Xylene	ug/kg	<50.0	120	05/05/09 11:14	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	05/05/09 11:14	
o-Xylene	ug/kg	<25.0	60.0	05/05/09 11:14	
Toluene	ug/kg	<25.0	60.0	05/05/09 11:14	
Xylene (Total)	ug/kg	<75.0	180	05/05/09 11:14	
a,a,a-Trifluorotoluene (S)	%	106	80-120	05/05/09 11:14	

LABORATORY CONTROL SAMPLE & LCSD: 153724 153725

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	1060	1100	106	110	80-120	4	20	
1,3,5-Trimethylbenzene	ug/kg	1000	1060	1100	106	110	80-120	4	20	
Benzene	ug/kg	1000	1010	1040	101	104	80-120	3	20	
Ethylbenzene	ug/kg	1000	1030	1060	103	106	80-120	3	20	
Gasoline Range Organics	mg/kg	10	8.9	9.1	89	91	80-120	2	20	
m&p-Xylene	ug/kg	2000	2060	2120	103	106	80-120	3	20	
Methyl-tert-butyl ether	ug/kg	1000	936	956	94	96	80-120	2	20	
o-Xylene	ug/kg	1000	1030	1060	103	106	80-120	3	20	
Toluene	ug/kg	1000	1030	1050	103	105	80-120	3	20	
Xylene (Total)	ug/kg	3000	3090	3180	103	106	80-120	3	20	
a,a,a-Trifluorotoluene (S)	%				105	105	80-120			

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QUALITY CONTROL DATA

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

QC Batch: OEXT/4180 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 4016789010, 4016789011, 4016789012

METHOD BLANK: 154056 Matrix: Solid
Associated Lab Samples: 4016789010, 4016789011, 4016789012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	0.89J	2.0	05/07/09 08:46	

LABORATORY CONTROL SAMPLE & LCSD: 154057 154058

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	20	14.5	17.3	73	87	70-120	18	20	

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Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: CTH-L MUSKEGO JANESVILLE RD.
Pace Project No.: 4016789

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

U - Indicates the compound was analyzed for, but not detected.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

BATCH QUALIFIERS

Batch: MSSV/1810

[1] QC had multiple issues including Blank contamination, RPD failures on the LCS/LCSD and high surrogate failures on the QC and some samples. There was no sample volume available for reextraction. A second QC set was extracted immediately after the samples. On the second QC set the blank was clean to the reporting limit and all compound and surrogates recoveries and RPDs were in control.

ANALYTE QUALIFIERS

L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.
W	Non-detect results are reported on a wet weight basis.
Z2	Analyte present in the associated method blank above the detection limit.

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UPPER MIDWEST REGION
MN: 612-607-1700 **WI:** 920-469-2436

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www.pacelabs.com

CHAIN OF CUSTODY

MRN

(Please Print Clearly)	
Company Name:	PSI
Branch/Location:	Waukesha
Project Contact:	Matt Dahlem
Phone:	262-970-9022
Project Number:	CTH-L Muskego
Project Name:	Janesville Rd. Relocation
Project State:	WI
Sampled By (Print):	Matt Dahlem
Sampled By (Sign):	Matt [signature]
PO #:	
Regulatory Program:	

***Preservation Codes**
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Quote #:	
Mail To Contact:	Matt Dahlem
Mail To Company:	PS
Mail To Address:	
Invoice To Contact:	Matt Dahlem
Invoice To Company:	PSI
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SI = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Analyses Requested: DRO	GRO	VOC	PAH	Lead	% solids	PVOC	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					Y/N: N	N	N	N	N	N	N			
					Pick Letter: A	F	F	A	A	A	F			
001	B-2 (3-5)	4/29/09	935	S	X	X	X	X	X	X		1-4oz poly A	2-4oz A 2-40ml F	
002	B-1 (3-5)	↓	950	↓	X	X	X	X	X	X		↓	↓	
003	B-3 (3-5)		1010		X	X	X	X	X	X			↓	
004	B-20 (3-5)		1030				X			X			1-40ml F	
005	B-21 (3-5)		1045				X			X			↓	
006	B-22 (7.5-9)		1100				X			X			↓	
007	B-23 (3-5)		1130		X	X				X	X		1-4oz A 2-40ml F	
008	B-24 (3-5)		1145		X	X				X	X		↓	
009	B-25 (3-5)		1200		X	X				X	X		↓	
010	B-28 (3-5)		1220		X	X				X	X		↓	
011	B-29 (3-5)		1240		X	X				X	X		↓	
012	B-30 (5-7.5)		1300		X	X				X	X		↓	
013	B-27 (0.5-2.5)	↓	1315	↓	X	X				X	X	↓	↓	↓

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Matt [signature]	4/30/09 1045	D. Fenwick	4/30/9 1045
D. Fenwick	4/30/9 1700	Waltco	
Waltco	5/1/09 900	[signature]	5/1/09 900

PACE Project No. 4016789
Receipt Temp = 201 °C
Sample Receipt pH OK / Adjusted N/A
Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

UPPER MIDWEST REGION
MN: 612-607-1700 **WI:** 920-469-2436

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CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)

Company Name:	PSI
Branch/Location:	Waukesha
Project Contact:	Matt Dahlem
Phone:	262-970-9022
Project Number:	CTH-L Muskego
Project Name:	Janesville Rd. Relocation
Project State:	WI
Sampled By (Print):	Matt Dahlem
Sampled By (Sign):	Matt [signature]
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	Matt Dahlem
Mail To Company:	PSI
Mail To Address:	
Invoice To Contact:	Matt Dahlem
Invoice To Company:	PSI
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SI = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	DRO	GRO	VOC	% Solid	VOC	PAH	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
FILTERED? (YES/NO) Y/N					N	N	N	N	N	N			
PRESERVATION (CODE)* Pick Letter					A	F	F	A	B	A			
014	B-26 (2.5-5)	4/29/09	1330	S	X	X	X	X			1-4oz poly A	1-4oz A 2-40ml F	
015	TW-23	↓	1415	GW					X		3-40ml B		
016	TW-22	↓	1430	↓					X		↓		
017	TW-28	↓	1445	↓					X	X	↓	1-1L AG A	
018	TW-27	↓	1520	↓					X	X	↓	↓	
019	Equipment Blank	↓	—	—					X		↓		
020	Trip Blank	—	—	—					X		4-40ml B		
↓	Trip Blank	—	—	—					X				
	Temperature Blank	—	—	—									
	Temperature Blank	—	—	—									

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Matt [signature]	4/30/09 1045	D. Fennimore	4/30/9 1045
D. Fennimore	4/30/9 1700	Walter	
Walter	5/1/09 900	[signature]	5/1/09 900

PACE Project No. 40167789
Receipt Temp = R01 °C
Sample Receipt pH OK / Adjusted N/A
Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 6.0 06/14/06

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical

Client Name: PSI Project # 4016789

Courier: ☒ AE Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other Waltco

Tracking #:

Optional
Proj. Due Date:
Proj. Name:

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals Intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☒ Other

Thermometer Used N/A Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature R01 Biological Tissue Is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 5/1/09 AE

Comments:

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☒No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☒No ☐N/A	7.
Sufficient Volume:	☒Yes ☐No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No ☐N/A	9. ZHE volume rec'd for DRO's. They will need to be subsampled
-Pace Containers Used:	☒Yes ☐No ☐N/A	
Containers Intact:	☒Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S/W		
All containers needing preservation have been checked.	☐Yes ☐No ☒N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☒N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☒No ☐N/A	15.
Trip Blank Present:	☒Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☒Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: LW **Date:** 5/4/09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

F-ALLC003rev.3, 11September2006