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ENGINEERING, SURVEYING

April 5, 2017

Wisconsin Department of Natural Resources
Attn: Mr. Ralph Smith
101 S. Webster Street
PO Box 7921
Madison, WI 53707-7921

Subject:

Environmental Site Investigation Report
Hedlund DX
10557 State Highway 70
Falun, WI
BRRTS #03-07-000151
PECFA #54840-9999-00

Dear Mr. Smith:

Enclosed is the Environmental Site Investigation Report for the above-mentioned site. REI identified significant petroleum related soil contamination and groundwater impact. REI is recommending the completion of a soil excavation to address the residual soil contamination followed by quarterly groundwater sampling through case closure consideration.

Please call me with questions or comments toll free at 877-734-7745 or contact me electronically at dlarsen@reiengineering.com.

Sincerely,
REI Engineering, Inc.

David N. Larsen, P.G.
Hydrogeologist/Project Manager

Enclosure

CC: Burnett County, Attn: Mr. Nathan Ehalt, 7410 County Road K, #116, Webster, WI 54872

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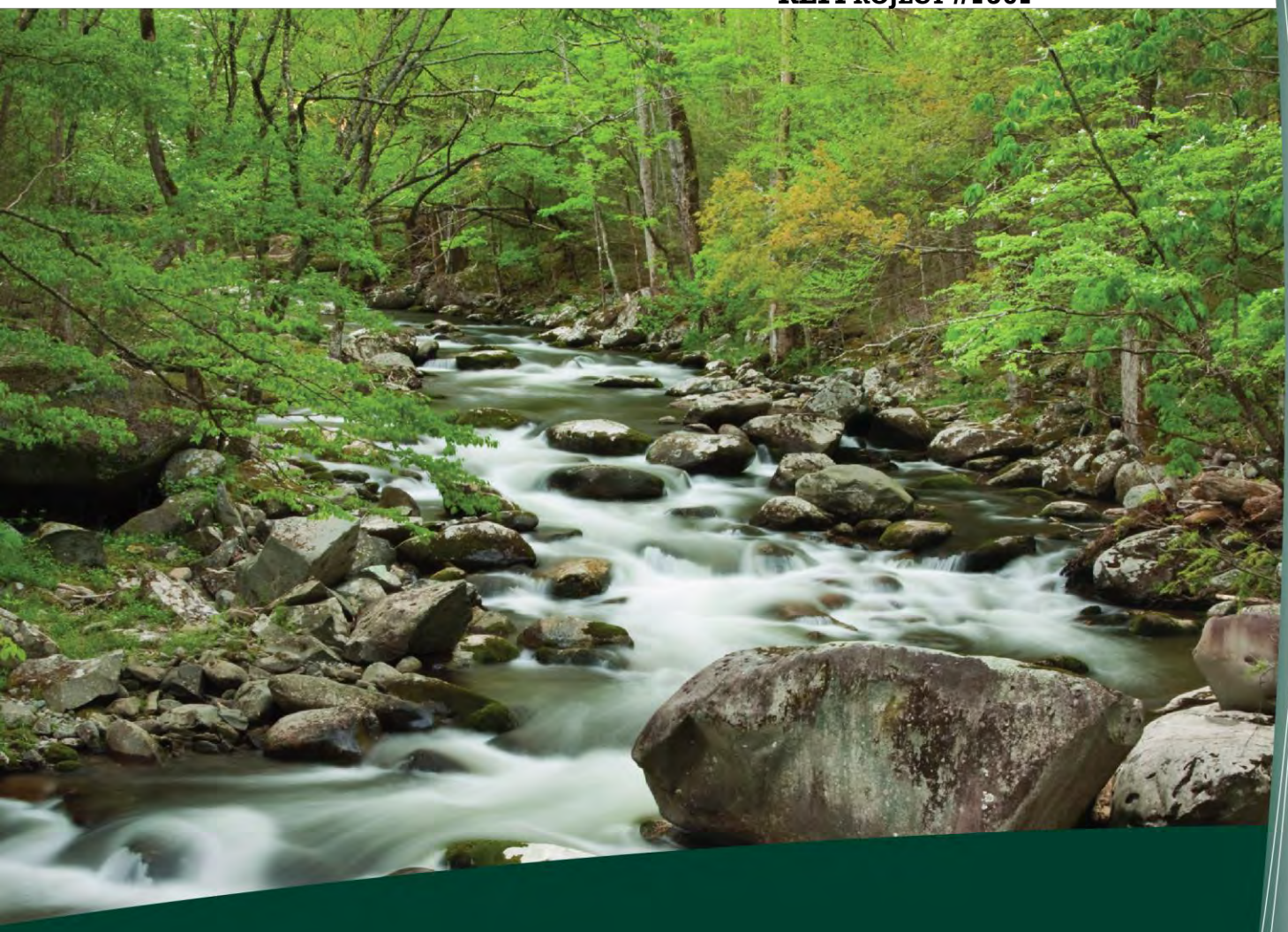
ENGINEERING, SURVEYING

Environmental Site Investigation Report

Hedlund DX
Falun, Wisconsin

WDNR BRRTS #03-07-000151
PECFA #54840-9999-00
REI Project #7367



COMPREHENSIVE SERVICES WITH PRACTICAL SOLUTIONS

ENVIRONMENTAL SITE INVESTIGATION REPORT

HEDLUND DX
10557 STATE HIGHWAY 70
FALUN, WI

BRRTS #03-07-000151
PECFA #54840-9999-00

REI #7367

PREPARED FOR:

Burnett County
Attn: Mr. Nathan Ehalt
7410 Cty Road K, #116
Siren, WI 54872

APRIL 2017

ENVIRONMENTAL SITE INVESTIGATION REPORT

HEDLUND DX
10557 STATE HIGHWAY 70
FALUN, WI

BRRTS #03-07-000151
PECFA #54840-9999-00

REI #7367

The recommendations contained in this report are based on the information obtained from our study of the site and were arrived at in accordance with accepted hydrogeologic and engineering practices at this time and location.

"I, David N. Larsen, hereby certify that I am a registered Professional Geologist in the State of Wisconsin as defined in the Wisconsin Statutes Chapter 470.01. I am also a hydrogeologist as that term is defined in s. NR 712.03 (3), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

"I, Scott J. Blado, hereby certify that I am a scientist as that term is defined in s. NR 712.03 (3), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

Scott J Blado
Environmental Scientist

4/6/17
Date

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ENVIRONMENTAL SITE INVESTIGATION REPORT

HEDLUND DX
10557 STATE HIGHWAY 70
FALUN, WI

BRRTS #03-07-000151
PECFA #54840-9999-00

REI #7367

1.0 INTRODUCTION

1.1 Purpose of Report

The Hedlund Oil Company, and others, had historically operated retail gas station and automotive repair shop on the subject property since the 1920's. This report presents the results of an Environmental Site Investigation performed at the former Hedlund DX site in Falun, Wisconsin. The purpose of the investigation was to determine the source, as well as the degree and extent of petroleum related contamination of soil, groundwater and soil gases. The Wisconsin Department of Natural Resources (WDNR) was notified of a petroleum release at the Hedlund DX location on February 9, 1990. A Site Investigation Workplan was submitted to the WDNR on July 16, 2016.

1.2 Site Background

1.2.1 Site Description

The Hedlund DX site is located in the NW ¼ of the NW ¼ of Section 19, Township 38 North, Range 17 West, in the Town of Daniels, Burnett County, Wisconsin (Figure 1). The site address is 10557 State Highway 70, Falun, Wisconsin 54840. Wisconsin Transverse Mercator (WTM) coordinates are 323585, 591806.

Two (2) underground storage tanks (UST) were known to have been used on the property. A 500-gallon UST was located on the west side of the property and a 1,000-gallon UST was located on the east side of the former Hedlund DX building. The 1,000-gallon UST was not installed on the Hedlund DX property, rather it was installed on the neighboring property to the east. REI was not able to secure access to investigate the potential release from the 1,000-gallon UST from the current owners of the adjacent property. Additional investigation into a potential release from the 1,000-gallon UST is warranted.

The neighboring properties are as follows:

North:	Highway 70
East:	Bobs Service (open environmental investigation) with residential beyond
South:	Undeveloped with Wood River beyond
West:	Backwoods Beer and Bait with residential beyond

1.2.2 Current Site Operation

The property is currently vacant, unimproved and gravel covered. The property is currently being used as a parking area for both the neighboring bait shop and automotive repair shop. Following the removal of the underground storage tanks in 1988 the property was abandoned. The property was eventually acquired by Burnett County and a WDNR Brownfields Site Assessment was awarded in 2005 which resulted in razing the building.

1.2.3 Previous Investigations

The Hedlund DX release notification was prompted by WDOT contractors advancing soil borings prior to the reconstruction of State Highway 70 in 1989. The WDOT contractors advanced a total of five (5) borings within WDOT right-of-way to determine the extent of the release. Following the WDOT investigation, Foth & Van Dyke were retained to investigate the petroleum release. Three (3) monitoring wells and three (3) soil borings were advanced under the direction of Foth & Van Dyke. Information specific to the WDOT and Foth & Van Dyke investigations are included in Appendix A.

The Hedlund DX site was the focus of a WDNR Brownfields Site Assessment Grant (BRRTS 07-07-537406), which was awarded in 2005. Other than the release from the PECFA eligible petroleum system and the Brownfields Site Assessment Grant, no other releases have been reported at this location.

1.3 Potable Water Survey

The area is serviced by private potable water supply wells and septic systems. Copies of local potable well construction logs are included in Appendix B.

1.4 Other Sources of Contamination

A review of the Wisconsin Department of Natural Resources (WDNR) Spills and Leaking Underground Storage Tank (LUST) list was performed for the surrounding area. According to the Bureau of Remediation and Redevelopment Tracking System (BRRTS) other potential release locations have been identified.

- Bobs Service Station (03-07-000148), 10545 State Highway 70. This property is located immediately east of the Hedlund DX property. This release was reported to the WDNR in 1990 and is still listed as an open investigation.

- Bobs Service (04-07-214719), 10545 State Highway 70. This release was associated with a fuel spill that occurred during the removal of the UST's. This release was reported to the WDNR in 1993 and was closed out in 1994.

- Andy's Bait Shop (03-07-000108) 10561 State Highway 70 (current location of Backwoods Beer and Bait). This property is immediately west of the Hedlund DX property. Petroleum impact to the potable water supply well was the trigger for the release notification. This release was reported to the WDNR in 1981 and was closed out in 2002 after it was determined that the Hedlund DX site had impacted the Andy's Bait Shop well. The impacted potable water supply well was later replaced with a new drilled well.

2.0 METHOD OF INVESTIGATION

2.1 Soil

The borings were placed to aid in the determination of the lateral and vertical extents of the petroleum contamination. A total of eleven (11) soil borings were advanced during the initial site investigation efforts conducted for WDOT and by Foth & Van Dyke. A total of seventeen (17) borings were advanced under the direction of REI. REI advanced a total of seven (7) Geoprobe soil borings and ten (10) monitoring wells.

The WDOT and Foth & Van Dyke advanced boring locations are presented in Appendix A. The REI advanced soil boring locations are shown on Figure 2. Additional information regarding site specific soil characteristics and contaminant concentrations will be detailed in later sections of this report.

Soil Boring Logs (WDNR Form 4400-122) are included in Appendix C. Monitoring Well Construction Forms (WDNR Form 4400-133A) are included in Appendix D. Monitoring Well Development Forms (WDNR Form 4400-133B) are included in Appendix E. Borehole Abandonment Forms (WDNR Form 3300-5) are included in Appendix F. Field sampling methods and procedures are included in Appendix G. Investigative waste disposal is included in Appendix H.

2.2 Groundwater

A total of thirteen (13) groundwater monitoring wells have been advanced to determine if the observed petroleum related soil contamination had impacted the groundwater at the Hedlund DX site. Three (3) monitoring wells, MW1, MW3 and MW4 were installed under the direction of Foth & Van Dyke. Wells MW3 and MW4 were later lost during the SAG grant scope of services. REI was informed that the flushmount covers were likely removed during the concrete removal and then covered with gravel. Abandonment forms were not completed and this may be an issue at time of closure if the wells are not located during the completion of the site investigation.

Ten (10) additional monitoring wells MW2-MW11 were installed under the direction of REI. Depths to groundwater and groundwater elevation measurements were collected during each well sampling event. The samples were placed in laboratory provided containers and submitted to a State Certified Laboratory for analysis. Additional information regarding site specific groundwater characteristics are presented in later sections of this report.

3.0 SUMMARY OF FIELD INVESTIGATION RESULTS

3.1 Regional Geology and Hydrogeology

Site specific topography is relatively flat with a slight grade to the south, southwest. The area is situated within the St. Croix River Basin of Wisconsin, with the Wood River as the primary drainage feature for the area (Young and Hindall, 1973).

The geology and water resources of the basin were described by Young and Hindall (1973). Briefly, the surficial geology consists of glacially derived sediments ranging from outwash plains to end moraines. The glacial deposits are underlain by Precambrian basaltic lava flows classified by Young and Hindall (1973). The depth to bedrock typically is greater than 100 feet (Trotta and Cotter, 1973).

The geology and water resources of the basin as described by Young and Hindall (1973) indicate that almost the entire St. Croix River basin is covered with unconsolidated deposits consisting of unpitted outwash, pitted outwash, lake deposits, end moraines and ground moraines. The outwash deposits are typically less than 50 feet in thickness but may be thicker over channels in bedrock. Soil permeability's for the soils as described on the site are 0.8 to 2.5 inches per hour. The average annual precipitation in the area is about 29.3 inches. The typical evapotranspiration rate is about 20.3 inches per year, leaving about 9.0 inches per year for both groundwater recharge and surface runoff Young and Hindall (1973). The regional groundwater recharge rate will be assumed to be the NR 720.09(3) default rate of 10.0 inches per year. Site specific topography grades to the southwest. Land surface elevations in the area are about 960 +/- 5 feet above Mean Sea Level (U.S.G.S. Falun 7 1/2-minute quadrangle map).

3.2 Site Specific Geology and Hydrogeology

The soil borings performed during the Hedlund DX investigation indicate the site geology consists mainly of gravel and sand fill material overlying clay to a depth of approximately fourteen (14) feet below land surface (bls) to encounter of saturated fine to medium grained sands. Figures 3a-b presents the geologic cross sections of the soils identified at the site.

Artesian groundwater conditions exist at the Hedlund DX site. While the average depth to groundwater measured in the monitoring wells is approximately three (3) feet bls, groundwater was first encountered at the site at a depth of approximately fourteen (14) feet bls. Groundwater was encountered in the saturated sand located immediately beneath a confining clay layer at a depth of approximately fourteen (14) feet bls. Therefore, the physical and hydraulic properties of the saturated fine to medium grained sand probably are most representative of the material below the water table through which most contaminant travel occurs.

3.2.1 Site Hydrogeology

Depths to groundwater were measured in the monitoring wells as part of each sampling event. While artesian conditions are reported at the site, groundwater flow directions were determined based on measured depths to groundwater in each well. The groundwater flow contour maps for September 14, 2016 and January 12, 2017 are presented in Figure 4a and 4b respectively. Each documents a southwesterly groundwater flow direction which is consistent with the flow directions from the previous investigation.

Hydraulic conductivities were calculated during the Foth & Van Dyke investigation for wells MW1, MW3 and MW4. Copies of the calculated hydraulic conductivity output is included in Appendix A. Calculated hydraulic conductivity results ranged from a low of 0.00023 cm/sec at MW1 to a high of 0.0002 cm/sec at MW4. Contaminant velocities will be less than groundwater velocities, and will depend on the retardation factors for each contaminant.

Hydraulic gradients were calculated between MW6 and MW4 for the January 12, 2017 sample date. The hydraulic gradient was calculated at 0.006 ft./ft. The average linear velocity is estimated to be approximately 3.13 feet per year, which is based on the estimated horizontal hydraulic conductivity, the horizontal gradients observed at the site and effective porosity of the soil.

3.3 Nature and Extent of Soil Contamination

Figure 2 documents the locations of the soil borings advanced during the site investigation. Soil samples were obtained to describe the lateral and vertical extent of the petroleum contamination in the subsurface. Analytical results were directly compared against the State of Wisconsin's cleanup criteria listed in the Chapter NR720. Numerous soil sample locations document the presence of petroleum compounds exceeding the NR720.09 (04) Residual Contaminant Level (RCL).

A total of thirty-four (34) soil samples were collected and submitted for laboratory analysis during the investigation. Tables 1a-c present the results from the thirty-four (34) soil borings advanced during the investigation. Copies of the soil laboratory analytical reports are included in Appendix I.

Based on field screening and analytical results, the estimated extent of pre-remedial soil contamination associated with the petroleum release at the Hedlund DX site encompasses an area of approximately 3,600 square feet. Figure 5 presents the estimated extent of petroleum impacted soil contamination at the Hedlund DX site associated with the petroleum release.

3.4 Nature and Extent of Groundwater Contamination

Numerous groundwater-sampling events have been conducted during the site investigation. Depth to water and water level elevations were measured for each REI sampling event and are presented in Table 2. Analysis of the groundwater samples from the groundwater sampling events indicates detectable petroleum compounds above NR 140.10 Groundwater Quality Enforcement Standards (ES) and laboratory qualified Preventive Action Limits (PAL) exceedances in numerous sample locations. A summary of groundwater analytical results is presented in

Tables 3a-o. Copies of the groundwater laboratory analytical reports are included in Appendix I. All development and purge water was transported either to the Village of Luck or City of Wausau for disposal in their waste water treatment system.

Petroleum related groundwater contamination was observed in monitoring wells MW2-MW6. Tetrachloroethelene detections were reported in wells MW8 and MW9. The source of the tetrachloroethelene is not known but it not related to the petroleum release. Figure 6 presents the estimated area of petroleum related groundwater contamination associated with the release from the Hedlund DX site in Daniels, Wisconsin.

3.5 Vapor Intrusion Screening Analysis

Vapor intrusion screening is used to determine the potential for vapor migration from a contaminated property. Vapor intrusion of petroleum compounds most often occurs when free phase petroleum compounds are located near building foundations, where petroleum impacted groundwater has entered a building, or when petroleum contaminated groundwater is in contact with a building foundation.

Vapor intrusion from petroleum releases tend to occur near the source of the petroleum release and are often detected by smelling petroleum odors in the building. When petroleum odors are not detected, vapor intrusion concerns can be dismissed if there is more than five (5) feet of clean unsaturated and aerated (greater than 5% oxygen content) soil separating the residual contamination from the building.

An investigation into the potential for vapor migration should be completed in situations when there is not more than five (5) feet of clean unsaturated and aerated (greater than 5% oxygen content) soil separating the residual contamination from the building or any of the following conditions:

- Free phase product that has the potential for off gassing vapors underlies a building or is within 30 feet, horizontally or vertically of a building foundation.

- Petroleum contaminated soils with the potential for off gassing vapors are within 5 feet or less of a building foundation.
- Benzene concentrations in groundwater underlying a building is >1,000 ppb and there is less than 20 feet of unsaturated soil between the groundwater and the building.
- Groundwater contaminated with petroleum product above Wisconsin's groundwater preventive action limit (PAL) is entering a building or in contact with a buildings foundation or is in water intercepted by the buildings foundation drainage system, including sumps.
- Petroleum vapors are present that may migrate from the petroleum source and move through preferential pathways (utility lines, fractured bedrock, etc.) into a building.

There is no structure on the former Hedlund DX property, but the neighboring bait shop building is very close to known soil and groundwater contamination. Based depth to groundwater, soil types and contaminants of concern, it can be concluded that the threat for vapor migration from the petroleum release at the Hedlund DX site is a possibility and further investigation into vapor migration was conducted.

3.6 Sub-Slab Vapor Probe Installation and Sampling

A total of two (2) sub slab vapor points were installed through the slab on grade concrete floor of the building. Only a small portion of the bait shop building has a concrete slab floor. The building is divided into both a retail portion and a residential portion. Sub-slab vapor ports were advanced though the concrete floor in both the beer cave and in the main retail area. Sample locations are depicted in Figure 2.

3.7 Sub-Slab Vapor Probe Installation

REI used a rotary hammer drill with a 3/8" bit to drill through the concrete slab and a ¾" bit to a depth of approximately 2" to set the probe. REI removed the concrete cuttings from the outer and inner holes with a small portable vacuum cleaner followed by a towel moistened with distilled water. REI placed the sub-slab soil

vapor probe in the hole so that the top of the probe is flush with the top of the floor. REI placed concrete grout into the annular space between the probe and the outer hole. The cement was allowed to dry prior to sampling.

3.8 Sub-Slab Vapor Probe Purging and Leak Detection

REI completed leak testing prior to sample collection. Tracer gas (helium) shrouds were placed over each sub-slab vapor sample location prior to sampling to ensure that ambient air was not being pulled into the canisters during sampling. This was accomplished by placing a clean, small plastic shroud over each probe location. Prior to purging or sampling activities, helium tracer gas was released via a small diameter tube, placed through the side of the shroud, into the open space beneath the shroud. The sub-slab vapor tube, fitted with an air-tight valve, extended up into the open space beneath the shroud. The valve was then connected to the sampling tube and canister (both outside of the shroud). A sample of the air inside the shroud was measured through a second port using a field meter calibrated to detect helium to determine the concentration of helium within the enclosure beneath the shroud.

REI purged one to two liters of sub-slab soil vapor from each probe assembly prior to sampling the sub slab vapor. Quality control leak detection included a combination of both vacuum testing and introduction of helium as a tracer to ensure the collected sub-slab vapor sample was representative of the sub-slab soil gas. Samples were collected using 6-Liter Summa™ canister and a helium shroud. Four (4) volumes of air were removed from the tubing and the purge air monitored for the presence of helium using an electronic helium detector. Once the line was purged, and the helium detector documented the seal is adequate, the Summa Canister was connected to the sample line and allowed to fill through the flow restrictor. During sample collection, REI checked each Summa Canister periodically to ensure that the canister vacuum had not reached zero. Canisters that reach zero vacuum should not be analyzed and a new sample should be collected at these locations.

Sub-slab sampling points were installed to collect soil gas immediately below the slab at each of the three (3) identified locations. Sub-slab gas samples were collected using a 6-Liter Summa™ canister fitted with a flow orifice pre-calibrated to collect a 6-Liter sample over a 30-minute period. Once the 30-minute sampling

period was completed, the canister was boxed and shipped to the laboratory for analysis. Following the removal of the 6-Liter Summa™ canister from the sub slab vapor collection sampling train, REI personnel collected soil gas data specific to carbon monoxide (CO), carbon dioxide (CO2), oxygen (O2) and methane (CH4). Additionally, values for lower explosive limit (LEL) results were collected.

3.9 Sub-Slab Vapor Probe Analytical Results

The two (2) sub slab vapor samples were submitted to Pace Analytical, Minneapolis, Minnesota, for TO-15 analysis. The vapor analytical results and field screening data are summarized in Table 4. The complete laboratory analytical reports are included as Appendix J. Analytical results along with the field screening data document that there are no elevated petroleum concentrations present beneath the concrete slab.

4.0 Evaluation of Environmental Factors

The five environmental factors were evaluated during the site investigation. These factors include:

a. Documented expansion of plume margin,
b. Verified contaminant concentrations in a private or potable well exceeding the PAL,
c. Contamination within bedrock or within 1 meter of bedrock,
d. Free phase petroleum product present with a thickness of 0.01 feet or more, verified by more than one sampling event, or
e. Documented contamination discharges to a surface water or wetland.

Site-specific characteristics indicate or suggest that none of the environmental factors have been triggered by the release at the Hedlund DX site.

4.1 Site Risk Classification

According to NR746.03(4) a "high-risk" site is been defined in SS 101.144(aq) as a release from a petroleum storage tank if one or more of the following applies:

1) Repeated tests determined the release has impacted a potable well used for human consumptive use.
2) Petroleum product that is not in a dissolved phase and present in a thickness of greater than 0.01 feet or more in repeated measurements.
3) An enforcement standard exceedance in groundwater within 1,000 feet of a municipal well or within 100 feet of any other well used for human consumptive use.
4) An enforcement standard exceedance in fractured bedrock.

Site-specific characteristics indicate or suggest that the potable water supply well for the bait shop were impacted from the release at the Hedlund DX site. The impacted well was abandoned and replaced and there is no longer a known impact to the bait shop potable water supply well. Additionally, an enforcement standard exceedance has been confirmed in monitoring wells located within 100 feet of the replacement potable water supply well for the bait shop. As such, the Hedlund DX site should be managed as a high-risk site.

5.0 RECOMMENDED REMEDIAL ACTION

This recommendation is based on current site conditions and is based on investigative results collected to date. The degree and extent of the release is not defined to the east because access to the neighboring property has not been allowed. Should access be allowed in the future, the recommendations may be revised.

REI recommends a soil excavation of approximately 1,380 cubic yards in the area identified in Figure 7. The soil excavation will extend to a proposed maximum depth of fifteen (15) to remove any smear zone contamination.

Due to the observed artesian conditions in each of the monitoring wells installed for the Hedlund DX investigation, managing the groundwater will be a priority to the success of the proposed soil excavation. REI is proposing the installation of groundwater extraction wells in advance of the proposed soil excavation. Groundwater will be extracted from the wells, treated on-site and discharged to green space south of the subject property. The intent of the groundwater extraction

is to lower the water levels in the proposed excavation area to allow the excavation to be completed.

REI estimates approximately 1,380 cubic yards, or approximately 2,000 tons of soil be removed for offsite disposal at an approved location. REI recommends confirmation soil samples be collected for PVOC and naphthalene compounds.

Additionally, REI also recommends quarterly groundwater sampling of the existing monitoring well network and proximal potable water supply wells. REI recommends the monitoring well samples be analyzed for PVOC and naphthalene compounds. In addition to the groundwater sampling, REI also recommends the completion and submittal of a construction documentation report following the soil excavation and an update reports after the completion of the second and fourth proposed groundwater sampling events. Case closure should be achievable prior to the PECFA deadline for the Hedlund DX investigation.

6.0 REFERENCES

Trotta, L.C., and Cotter, R.D., 1973, Depth to Bedrock in Wisconsin, University of Wisconsin - Extension Geological and Natural History Survey, Madison, Wisconsin.

Young, H.L. and Hindall, S.M., 1973, Water Resources of Wisconsin, St Croix River Basin, U.S. Geologic Survey Hydrologic Investigations Atlas HA-451, Washington D.C.

Table 1a
Summary of Soil Analytical Results
Hedlund DX
Falun, Wisconsin

		Date -->	11/7/1989		6/7/1990		12/19/1990			
		Sample ID -->	DX-1	DX-2	DX-3	DX-4	B-1	B-2	B-3	B-4
		Sample Depth (Feet) -->	5-7	4-6	5-7	3-5	5-7	9.5	9.5	7.5-9.5
Petroleum VOC's (µg/kg)	Non-Industrial Not-To-Exceed DC RCL	NR 140 Groundwater Pathway Protection (DF=2)								
Benzene	1,490	5.1	NA	NA	*21,000*	*< 1,000*	< 120	< 120	*1,200*	*2,200*
Ethylbenzene	7,470	1,570	NA	NA	*19,000*	*7,900*	< 120	< 120	1,500	*170*
Toluene	818,000	1,107	NA	NA	*82,000*	*3,500*	< 120	< 120	*5,300*	400
Xylenes (Total)	258,000	3,940	NA	NA	*173,000*	*50,000*	< 120	< 120	3,500	*950*
Methly tert Butyl Ether	59,400	27	NA	NA	NA	NA	< 120	< 120	< 120	*< 160*
1,2,4-Trimethylbenzene	89,800	NS	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	182,000	NS	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylbenzenes (Total)	NS	1,379	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	5,150	658.7	NA	NA	NA	NA	NA	NA	NA	NA
Metals (mg/kg)										
Arsenic			NA	0.01	NA	NA	NA	NA	NA	NA
Barium			NA	0.15	NA	NA	NA	NA	NA	NA
Cadmium			NA	0.002	NA	NA	NA	NA	NA	NA
Chromium			NA	0.009	NA	NA	NA	NA	NA	NA
Lead			NA	0.05	NA	NA	17	18	18	15
Mercury			NA	0.01	NA	NA	NA	NA	NA	NA
Selenium			NA	0.01	NA	NA	NA	NA	NA	NA
Silver			NA	0.001	NA	NA	NA	NA	NA	NA
TPH - Gasoline (mg/kg)			24	56	1,750	430	2.3	< 0.12	46	19

Notes:

NR720 Standards Obtained From WDNR Online Excel Database

RCL - NR 720 Proposed Soil Residual Contaminant Level

DC - Direct Contact

Background Threshold Value

Exceeds Non-Industrial Not-To-Exceed DC RCL — **Bold**

Exceeds NR 140 Groundwater Pathway Protection — *Italic*

NS - No Standard

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

< - Concentration below listed laboratory detection limit

NA - Not Analyzed

Table 1b
Summary of Soil Analytical Results
Geoprobe Borings
Hedlund DX
Falun, Wisconsin

				Date -->	8/8/2016		8/8/2016		8/8/2016		8/8/2016	8/8/2016		8/8/2016		8/8/2016	
				Sample ID -->	GP1		GP2		GP3		GP4b	GP5		GP6b		GP7	
				Sample Depth (Feet) -->	2-4	14-14.5	2-4	12-13	2-4	13-14	2-4	3-4	14-15	3-4	14-14.5	2-4	14-14.5
				Percent Moisture -->	27.5%	31.4%	15.9%	35.2%	15.9%	31.0%	22.0%	22.1%	33.0%	22.0%	29.3%	19.7%	31.2%
Lead (mg/kg)	400	13.5	BTV @52		8.4	13.2	11.4	12.1	**63.4**	12.9	**982**	18.7	13.5	6.2	12.3	18.3	12.5
Petroleum VOC's (µg/kg)	Non-Industrial Not-To-Exceed DC RCL	NR 140 Groundwater Pathway Protection (DF=2)															
Benzene	1,490	5.1			< 340	*472*	*934*	*1,210*	< 1,250	< 26.9	< 27.8	< 160	*417*	< 658	*306*	< 40.3	*688*
Ethylbenzene	7,470	1,570			**22,700**	284	**10,100**	797	**113,000**	< 26.9	< 27.8	*2,380*	73.5[J]	**55,900**	< 39.1	161	1,160
Toluene	818,000	1,107			< 340	38.9[J]	*15,200*	244	*18,300*	< 26.9	< 27.8	< 160	< 35.2	*5,410*	< 39.1	< 40.3	214
Xylenes (Total)	258,000	3,940			*68,070*	559	*39,200*	2,101	**587,000**	< 58.3	< 55.6	*10,560*	326	*236,160*	< 78.1	464	3,815
Methly tert Butyl Ether	59,400	27			829[J]	< 26.3	*663*	< 25	*3,290*	< 26.9	< 27.8	*657*	< 35.2	*2,500*	< 39.1	< 40.3	< 25.3
1,2,4-Trimethylbenzene	89,800	NS			60,400	< 26.3	15,800	112	**235,000**	< 26.9	36.6[J]	23,500	247	**140,000**	< 39.1	323	602
1,3,5-Trimethylbenzene	182,000	NS			25,600	< 26.3	5,990	< 25	84,500	< 26.9	< 27.8	12,000	87[J]	52,000	< 39.1	90.8[J]	153
Trimethylbenzenes (Total)	NS	1,379			*86,000*	< 26.3	*21,790*	112	*319,500*	< 26.9	< 27.8	*35,500*	334	*192,000*	< 39.1	414	755
Naphthalene	5,150	658.7			**8,210**	< 26.3	*3,090*	< 25	**44,700**	< 26.9	< 27.8	*2,610*	< 35.2	**27,200**	< 39.1	63.2[J]	86.6

Notes:

NR720 Standards Obtained From WDNR Online Excel Database
RCL - NR 720 Proposed Soil Residual Contaminant Level
DC - Direct Contact
Background Threshold Value
Exceeds Non-Industrial Not-To-Exceed DC RCL — **Bold**
Exceeds NR 140 Groundwater Pathway Protection — *Italic*
NS - No Standard
[J] - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
< - Concentration below listed laboratory detection limit
NA - Not Analyzed

Table 1c
Summary of Soil Analytical Results
Monitoring Wells
Hedlund DX
Falun, Wisconsin

				Date -->	9/13/2016		9/13/2016		9/13/2016		9/14/2016		1/12/2017	1/12/2017		1/12/2017	
				Sample ID -->	MW3		MW4		MW6		MW7		MW9	MW10		MW11	
				Sample Depth (Feet) -->	0-2	10-12	2-4	10-12	2-4	10-12	2-4	12-14	2-4	3-4	13-14	2-4	15-16
				Percent Moisture -->	3.7%	31.8%	14.4%	30.4%	15.6%	28.5%	16.4%	13.7%	25.0%	23.5%	32.4%	7.8%	32.2%
Lead (mg/kg)	400	13.5	BTV @52		**195**	14.0	**82.1**	18.0	4.3	12.0	5.2	1.6	10.2	14.9	12.0	2.7	14.4
Petroleum VOC's (µg/kg)	Non-Industrial Not-To-Exceed DC RCL	NR 140 Groundwater Pathway Protection (DF=2)															
Benzene	1,490	5.1			*1,380*[J]	< 33.3	**6,850**	*139*	< 25	*447*	< 25	< 25	< 25	< 33.3	< 25	< 25	< 25
Ethylbenzene	7,470	1,570			**73,600**	85.0[J]	**84,700**	787	< 25	73.0[J]	< 25	< 25	< 25	< 33.3	< 25	< 25	< 25
Toluene	818,000	1,107			*9,030*	< 33.3	*68,600*	562	< 25	234	< 25	< 25	< 25	< 33.3	< 25	< 25	< 25
Xylenes (Total)	258,000	3,940			**341,000**	431	**354,000**	*4,960*	< 50	156[J]	< 50	< 50	< 50	< 33.7	< 50	< 50	< 50
Methly tert Butyl Ether	59,400	27			*2,290*[J]	< 33.3	*4,480*	< 25	< 25	< 25	< 25	< 25	< 25	< 33.3	< 25	< 25	< 25
1,2,4-Trimethylbenzene	89,800	NS			**186,000**	287	**192,000**	2,780	< 25	< 25	< 25	< 25	< 25	< 33.3	< 25	< 25	< 25
1,3,5-Trimethylbenzene	182,000	NS			66,300	126	67,000	1,190	< 25	< 25	< 25	< 25	< 25	< 33.3	< 25	< 25	< 25
Trimethylbenzenes (Total)	NS	1,379			*252,300*	413	*259,000*	*3,970*	< 25	< 25	< 25	< 25	< 25	< 33.3	< 25	< 25	< 25
Naphthalene	5,150	658.7			**32,400**	52.3[J]	**36,100**	*738*	< 25	< 25	< 25	< 25	< 25	< 33.3	< 25	< 25	< 25

Notes:

NR720 Standards Obtained From WDNR Online Excel Database
RCL - NR 720 Proposed Soil Residual Contaminant Level
DC - Direct Contact
Background Threshold Value
Exceeds Non-Industrial Not-To-Exceed DC RCL — **Bold**
Exceeds NR 140 Groundwater Pathway Protection — *Italic*
NS - No Standard
[J] - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
< - Concentration below listed laboratory detection limit
NA - Not Analyzed

Table 2
Depth to Water and Water Table Elevations
Hedlund DX
Falun, Wisconsin

Depth to Water (feet) below Reference Elevation

Date	MW1	MW2	MW3	MW4	MW5	MW6	MW7	MW8	MW9	MW10	MW11
9/14/2016	5.23	2.02	1.74	2.18	2.46	2.5	0.97				
1/12/2017	5.86	froze	2.11	2.66	2.67	2.79	1.04	4.59	3.35	5.83	2.63

Measuring Point Elevations

Elevations referenced to a U.S.G.S. Benchmark (feet MSL)

Top of Casing Elevation

Initial Survey	961.15	958.40	957.79	958.04	958.69	958.97	957.21	960.68	959.39	961.41	958.33

Ground Surface Elevation

Initial Survey	959.18	958.79	958.30	958.57	959.00	959.55	957.76	961.02	959.78	958.25	958.92

Depth to Water (feet) below Ground Surface

Average	3.58	2.40	2.44	2.95	2.87	3.23	1.55	4.93	3.74	2.67	3.22
Maximum	3.89	2.40	2.62	3.19	2.98	3.37	1.59	4.93	3.74	2.67	3.22
Minimum	3.26	2.40	2.25	2.71	2.77	3.08	1.52	4.93	3.74	2.67	3.22
Range	0.63	0.00	0.37	0.48	0.21	0.29	0.07	0.00	0.00	0.00	0.00

Water Level Elevation (feet MSL)

Date	MW1	MW2	MW3	MW4	MW5	MW6	MW7	MW8	MW9	MW10	MW11
9/14/2016	955.92	956.38	956.05	955.86	956.23	956.47	956.24				
1/12/2017	955.29		955.68	955.38	956.02	956.18	956.17	956.09	956.04	955.58	955.70

Table 3a
Summary of Groundwater Analytical Results
WDOT Investigation
Hedlund DX
Falun, Wisconsin

			Sample Location ->	WDX-1	WDX-3	WDX-5
			Date ->	11/7/1989	6/7/1990	6/7/1990
Detected VOC Parameters	ES	PAL	Units			
Benzene	5	0.5	µg/l	**120**	**224**	**690**
Toluene	800	160	µg/l	140	*180*	18
Ethylbenzene	700	140	µg/l	58	19	5.9
Xylenes (mixed isomers)	2,000	400	µg/l	140	117	*810*
1,2-DCA	5	0.5	µg/l	**11**	NA	NA

Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded **BOLD**
Preventive Action Limit exceeded *Italics*
NA = Not Analyzed
NS = Not Sampled
J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 3b
Summary of Groundwater Analytical Results
Foth & Van Dyke Investigation
Hedlund DX
Falun, Wisconsin

				MW1		MW3		MW4	
			Date ->	12/31/1990	3/21/1991	12/31/1990	3/21/1991	12/31/1990	3/21/1991
Detected VOC Parameters	ES	PAL	Units						
TPH as Gasoline			µg/l	60	78	870	27,000	70	120,000
Benzene	5	0.5	µg/l	< 1.0	< 1.0	**6**	**1,700**	< 1.0	**6,900**
Toluene	800	160	µg/l	< 1.0	< 1.0	26	**890**	< 1.1	**2,000**
Ethylbenzene	700	140	µg/l	< 1.0	< 1.0	9	*450*	< 1.0	**1,600**
Xylenes (mixed isomers)	2,000	400	µg/l	< 3.0	9.3	49	1,600	< 1.0	**7,800**
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 4.0	< 4.0	< 4.0	**88**	< 4.0	< 4.0
Lead	15	1.5	µg/l	**200**	< 1.0	< 1.0	< 1.0	**400**	**40**

Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded **BOLD**
Preventive Action Limit exceeded *Italics*
NA = Not Analyzed
NS = Not Sampled
J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 3c
Summary of Groundwater Analytical Results
MW1
Hedlund DX
Falun, Wisconsin

			Date ->	8/8/2016	9/13/2016	1/1/2017
Detected VOC Parameters	ES	PAL	Units			
Benzene	5	0.5	µg/l	< 0.40	< 0.40	< 0.40
Toluene	800	160	µg/l	< 0.39	< 0.39	< 0.39
Ethylbenzene	700	140	µg/l	< 0.39	< 0.39	< 0.39
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.80	< 0.80	< 0.80
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.48	< 0.48	< 0.48
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.42	< 0.42	< 0.42
Naphthalene	100	10	µg/l	< 0.42	< 0.42	< 0.42

Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded **BOLD**
Preventive Action Limit exceeded *Italics*
NA = Not Analyzed
NS = Not Sampled
J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 3d
Summary of Groundwater Analytical Results
MW2
Hedlund DX
Falun, Wisconsin

			Date ->	9/13/2016	1/11/2017
Detected VOC Parameters	ES	PAL	Units		
Benzene	5	0.5	µg/l	**32.7**	Water
Toluene	800	160	µg/l	9.1	Froze
Ethylbenzene	700	140	µg/l	19	in
Xylenes (mixed isomers)	2,000	400	µg/l	52.1	Well
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	0.95[J]	
Trimethylbenzenes (mixed isomers)	480	96	µg/l	10.1	
Naphthalene	100	10	µg/l	3.5	

Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded **BOLD**
Preventive Action Limit exceeded *Italics*
NA = Not Analyzed
NS = Not Sampled
[J] = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 3e
Summary of Groundwater Analytical Results
MW3
Hedlund DX
Falun, Wisconsin

			Date ->	9/13/2016	1/11/2017
Detected VOC Parameters	ES	PAL	Units		
Benzene	5	0.5	µg/l	**165**	**44.6**
Toluene	800	160	µg/l	36.1	0.79[J]
Ethylbenzene	700	140	µg/l	*146*	12.3
Xylenes (mixed isomers)	2,000	400	µg/l	*720*	14.4
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 1.2	1.0
Trimethylbenzenes (mixed isomers)	480	96	µg/l	*183.1*	12.0
Naphthalene	100	10	µg/l	*44.9*	5.0

Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded **BOLD**
Preventive Action Limit exceeded *Italics*
NA = Not Analyzed
NS = Not Sampled
[J] = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 3f
Summary of Groundwater Analytical Results
MW4
Hedlund DX
Falun, Wisconsin

			Date ->	9/13/2016	1/11/2017
Detected VOC Parameters	ES	PAL	Units		
Benzene	5	0.5	µg/l	**1,130**	**659**
Toluene	800	160	µg/l	*301*	18.7
Ethylbenzene	700	140	µg/l	*395*	*146*
Xylenes (mixed isomers)	2,000	400	µg/l	**11,504**	160
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 2.4	< 4.8
Trimethylbenzenes (mixed isomers)	480	96	µg/l	*322.7*	49.3
Naphthalene	100	10	µg/l	*74.7*	*13.9*

Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded — **BOLD**
Preventive Action Limit exceeded — *Italics*
NA = Not Analyzed
NS = Not Sampled
J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 3g
Summary of Groundwater Analytical Results
MW5
Hedlund DX
Falun, Wisconsin

			Date ->	9/13/2016	1/11/2017
Detected VOC Parameters	ES	PAL	Units		
Benzene	5	0.5	µg/l	**119**	**77.9**
Toluene	800	160	µg/l	24	11.7
Ethylbenzene	700	140	µg/l	109	65.1
Xylenes (mixed isomers)	2,000	400	µg/l	285	102
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	2.0	1.3
Trimethylbenzenes (mixed isomers)	480	96	µg/l	79.3	32.8
Naphthalene	100	10	µg/l	*17.2*	*10.6*

Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded — **BOLD**
Preventive Action Limit exceeded — *Italics*
NA = Not Analyzed
NS = Not Sampled
J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 3h
Summary of Groundwater Analytical Results
MW6
Hedlund DX
Falun, Wisconsin

			Date ->	9/13/2016	1/11/2017
Detected VOC Parameters	ES	PAL	Units		
Benzene	5	0.5	µg/l	*3.5*	**23.1**
Toluene	800	160	µg/l	0.88[J]	< 0.39
Ethylbenzene	700	140	µg/l	2.8	3.9
Xylenes (mixed isomers)	2,000	400	µg/l	6.4	< 0.80
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.48	< 0.48
Trimethylbenzenes (mixed isomers)	480	96	µg/l	1.3	< 0.42
Naphthalene	100	10	µg/l	0.46[J]	< 0.42

Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded **BOLD**
Preventive Action Limit exceeded *Italics*
NA = Not Analyzed
NS = Not Sampled
[J] = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 3i
Summary of Groundwater Analytical Results
MW7
Hedlund DX
Falun, Wisconsin

	ES	PAL	Units	9/21/2016	1/11/2017
Dissolved Lead	15	1.5	µg/l	< 3.0	NA
Detected VOC Parameters					
Benzene	5	0.5	µg/l	< 0.40	< 0.40
Toluene	800	160	µg/l	< 0.39	< 0.39
Ethylbenzene	700	140	µg/l	< 0.39	< 0.39
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.80	< 0.80
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.48	< 0.48
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.42	< 0.42
Naphthalene	100	10	µg/l	< 0.42	< 0.42

Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded **BOLD**
Preventive Action Limit exceeded *Italics*
NA = Not Analyzed
NS = Not Sampled
J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 3j
Summary of Groundwater Analytical Results
MW8
Hedlund DX
Falun, Wisconsin

			Date ->	1/11/2017
Detected VOC Parameters	ES	PAL	Units	
Benzene	5	0.5	µg/l	< 0.50
Toluene	800	160	µg/l	< 0.50
Ethylbenzene	700	140	µg/l	< 0.50
Xylenes (mixed isomers)	2,000	400	µg/l	< 1.0
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.17
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.50
Naphthalene	100	10	µg/l	< 2.5
Tetrachloroethene	5	0.5	µg/l	*0.75*[J]
Inorganic Compounds				
Dissolved Iron	300	150	µg/l	**4,670**
Dissolved Manganese	50	25	µg/l	**1,190**

Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded — **BOLD**
Preventive Action Limit exceeded — *Italics*
NA = Not Analyzed
NS = Not Sampled
[J] = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 3k
Summary of Groundwater Analytical Results
MW9
Hedlund DX
Falun, Wisconsin

			Date ->	1/11/2017
Detected VOC Parameters	ES	PAL	Units	
Benzene	5	0.5	µg/l	< 0.50
Toluene	800	160	µg/l	< 0.50
Ethylbenzene	700	140	µg/l	< 0.50
Xylenes (mixed isomers)	2,000	400	µg/l	< 1.0
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.17
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.50
Naphthalene	100	10	µg/l	< 2.5
Tetrachloroethene	5	0.5	µg/l	*1.2*
Inorganic Compounds				
Dissolved Iron	300	150	µg/l	**2,370**
Dissolved Manganese	50	25	µg/l	**394**

Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded — **BOLD**
Preventive Action Limit exceeded — *Italics*
NA = Not Analyzed
NS = Not Sampled
J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 3l
Summary of Groundwater Analytical Results
MW10
Hedlund DX
Falun, Wisconsin

			Date ->	1/11/2017
Detected VOC Parameters	ES	PAL	Units	
Benzene	5	0.5	µg/l	< 0.50
Toluene	800	160	µg/l	< 0.50
Ethylbenzene	700	140	µg/l	< 0.50
Xylenes (mixed isomers)	2,000	400	µg/l	< 1.0
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.17
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.50
Naphthalene	100	10	µg/l	< 2.5
Tetrachloroethene	5	0.5	µg/l	< 0.50
Inorganic Compounds				
Dissolved Iron	300	150	µg/l	**1,560**
Dissolved Manganese	50	25	µg/l	**284**

Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded — **BOLD**
Preventive Action Limit exceeded — *Italics*
NA = Not Analyzed
NS = Not Sampled
J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 3m
Summary of Groundwater Analytical Results
MW11
Hedlund DX
Falun, Wisconsin

			Date ->	1/11/2017
Detected VOC Parameters	ES	PAL	Units	
Benzene	5	0.5	µg/l	< 0.50
Toluene	800	160	µg/l	< 0.50
Ethylbenzene	700	140	µg/l	< 0.50
Xylenes (mixed isomers)	2,000	400	µg/l	< 1.0
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.17
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.50
Naphthalene	100	10	µg/l	< 2.5
Tetrachloroethene	5	0.5	µg/l	< 0.50
Inorganic Compounds				
Dissolved Iron	300	150	µg/l	**468**
Dissolved Manganese	50	25	µg/l	**292**

Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded — **BOLD**
Preventive Action Limit exceeded — *Italics*
NA = Not Analyzed
NS = Not Sampled
J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 3n
Summary of Groundwater Analytical Results
10561 State Highway 70 - Potable Well
Hedlund DX
Falun, Wisconsin

	ES	PAL	Units	9/21/2016	1/11/2017
Dissolved Lead	15	1.5	µg/l	< 3.0	NS
Detected VOC Parameters					
Benzene	5	0.5	µg/l	< 0.086	< 0.086
Toluene	800	160	µg/l	< 0.080	< 0.080
Ethylbenzene	700	140	µg/l	< 0.051	< 0.051
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.073	< 0.073
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	NA	NA
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.083	< 0.083
Naphthalene	100	10	µg/l	< 0.064	< 0.064
Tetrachloroethene	5	0.5	µg/l	< 0.12	< 0.12

Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded **BOLD**
Preventive Action Limit exceeded *Italics*
NA = Not Analyzed
NS = Not Sampled
J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 3o
Summary of Groundwater Analytical Results
10531 State Highway 70 - Potable Well
Hedlund DX
Falun, Wisconsin

	ES	PAL	Units	9/21/2016	1/11/2017
Dissolved Lead	15	1.5	µg/l	< 3.0	NS
Detected VOC Parameters					
Benzene	5	0.5	µg/l	< 0.086	NS
Toluene	800	160	µg/l	< 0.080	NS
Ethylbenzene	700	140	µg/l	< 0.051	NS
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.073	NS
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	NA	NS
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.083	NS
Naphthalene	100	10	µg/l	< 0.064	NS
Tetrachloroethene	5	0.5	µg/l	< 0.12	NS

Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded **BOLD**
Preventive Action Limit exceeded *Italics*
NA = Not Analyzed
NS = Not Sampled
J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 4
Summary of Vapor Analytical Results
Hedlund DX
Falun, WI

Small Commercial Building (Attenuation Factor 0.03)		VP1	VP2
Chemical (µg/m^3)	SS-VRSL	1/12/2017	1/12/2017
Acetone		63.1	49.3
Benzene	530	2.5	2.6
2-Butanone (MEK)		5.8	10.8
Carbon disulfide		< 0.15	< 0.14
Chloromethane	13,000	0.84	0.71
Cyclohexane		2.3	5.3
Dichlorodifluoromethane	15,000	< 1.2	3.9
Ethylbenzene	1,600	5.0	6.0
4-Ethyltoluene		3.3	4.2
n-Heptane		2.1	4.0
n-Hexane		4.7	13.3
Propylene		< 0.19	< 0.19
Methylene Chloride	87,000	6.0	52.4
Tetrachloroethene	6,000	< 0.40	< 0.39
Toluene	730,000	17.1	58.7
Trichlorofluoromethane (Halocarbon 11)		2.1	1.4^J
1,2,4-Trimethylbenzene	1,000	11.7	15.9
1,3,5-Trimethylbenzene		2.8	3.7
Xylene (mix)	15,000	29.0	19.6

Notes:
Sub-Slab Vapor Risk Screening Levels Based on December 2015 National Screening Level Summary Table
Exceeds Sub-Slab Vapor Risk Screening Level **Bold**
^{J} - Estimated concentration at or above the Limit of Detection and below the Limit of Quantification

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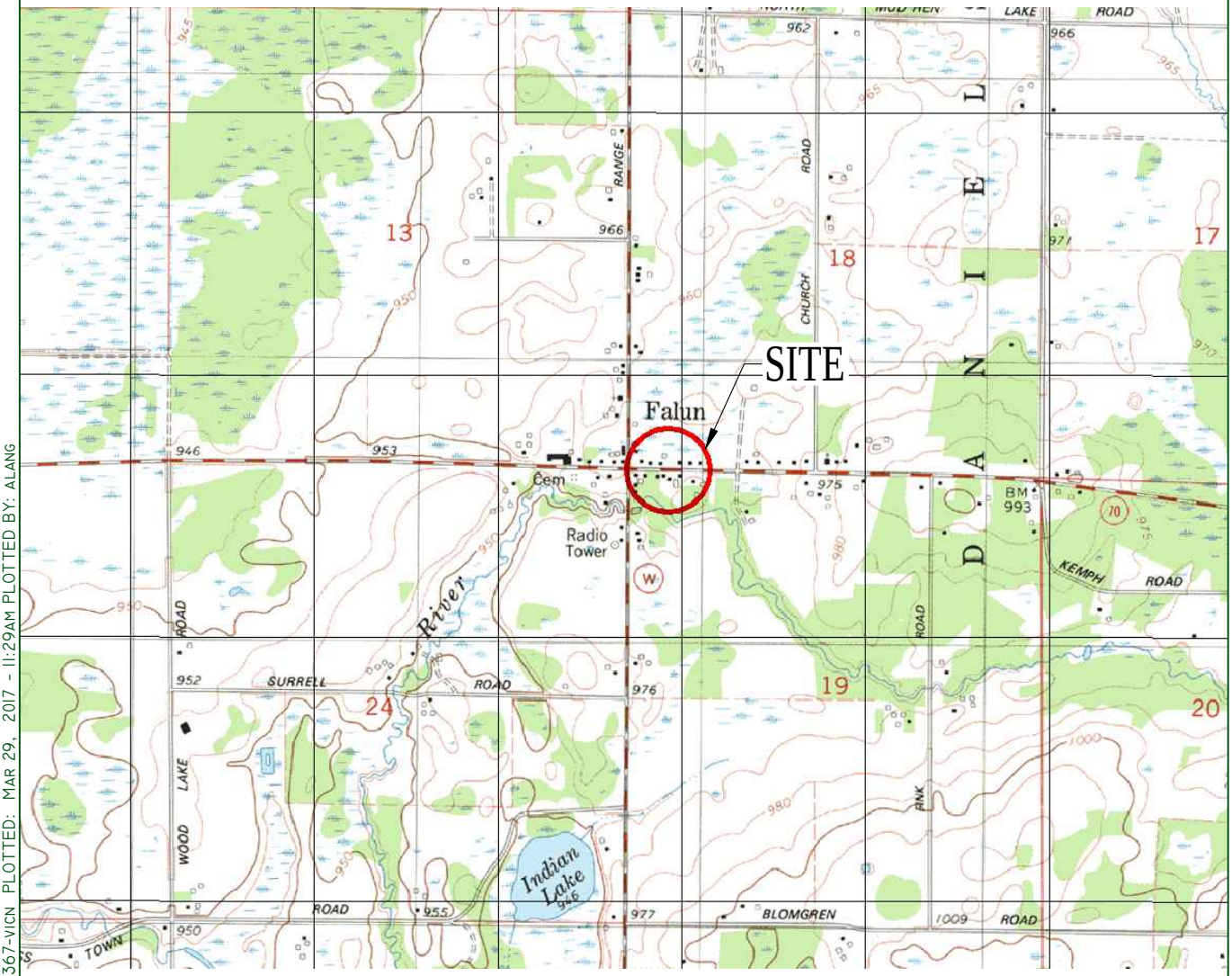


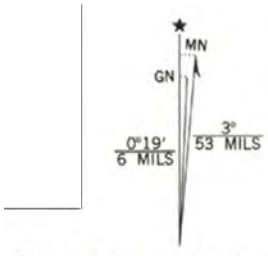
SCALE 1:24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
DOTTED LINES REPRESENT 5-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929



UTM GRID AND 1982 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

FALUN, WIS.
SE/4 GRANTSBURG 15' QUADRANGLE
N4545–W9230/7.5
1982
DMA 2475 I SE–SERIES V861

QUADRANGLE LOCATION

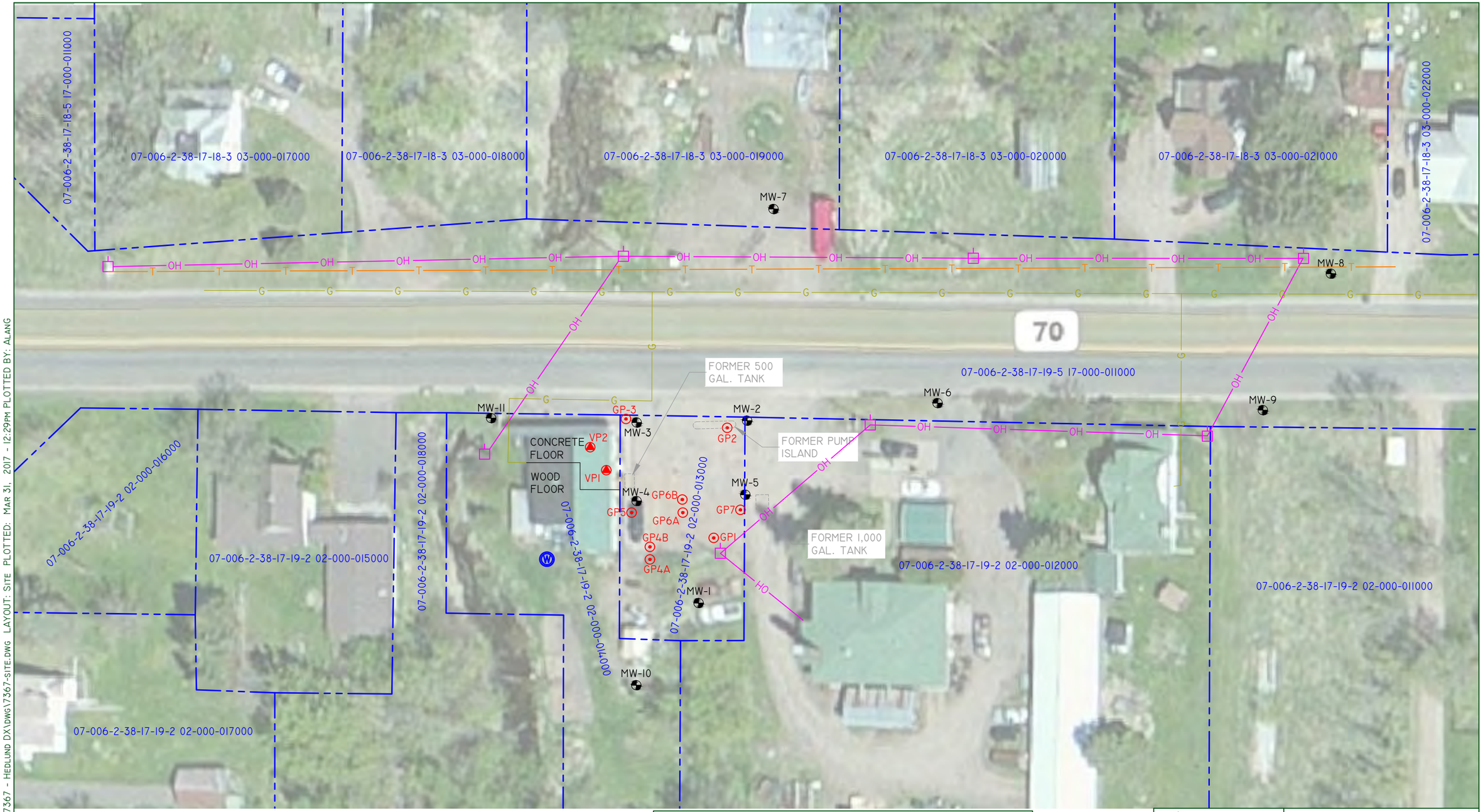
REI Engineering, INC.

BURNETT COUNTY–FORMER HEDLUND DX
10557 STATE HIGHWAY 70
FALUN, WISCONSIN 54872

FIGURE 1 : SITE VICINITY MAP

PROJECT NO.	DRAWN BY:	DATE:
7367AxUC	TAW	3/27/2017

DRAWING FILE: P:\7300-7399\7367 - HEDLUND DX\DWG\7367-VICN.DWG LAYOUT: 7367-VICN PLOTTED: MAR 29, 2017 - 11:29AM PLOTTED BY: ALANG



DRAWING FILE: P:\7300-7399\7367 - HEDLUND DX\DWG\7367-SITE.DWG LAYOUT: SITE PLOTTED: MAR 31, 2017 - 12:29PM PLOTTED BY: ALANG

N

LEGEND

0 40

SCALE: 1" = 40'

- GEOPROBE SOIL BORING
- MONITORING WELL
- POTABLE WELL
- UTILITY POLE
- OH — OVERHEAD UTILITIES LINE
- PROPERTY LINE (APPROXIMATE)
- G — GAS LINE
- T — TELEPHONE LINE
- SUB-SLAB VAPOR PROBE

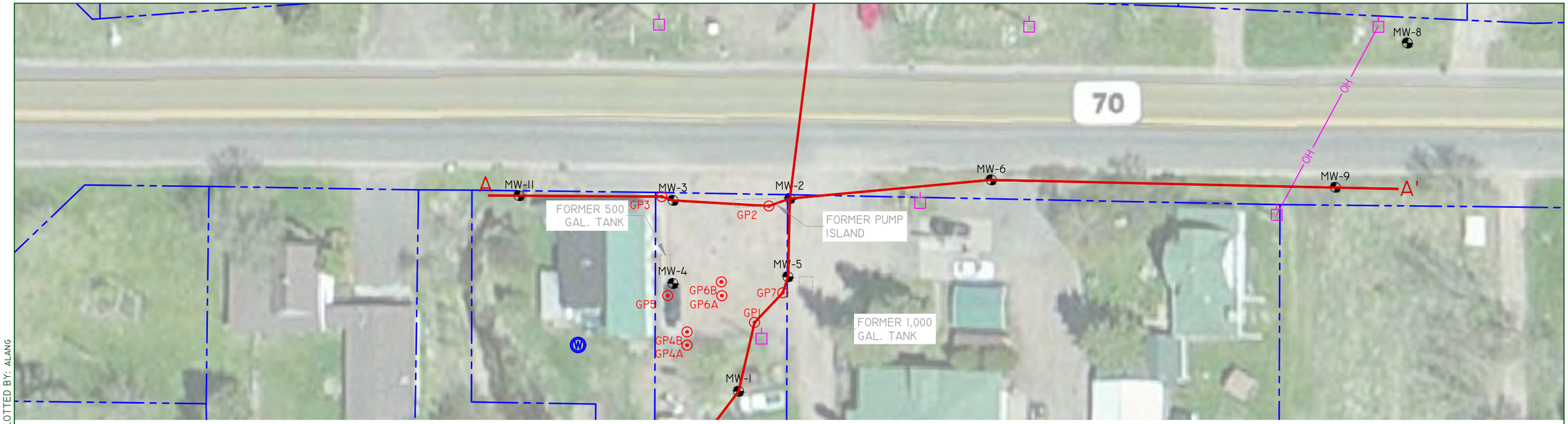
REI Engineering, INC.

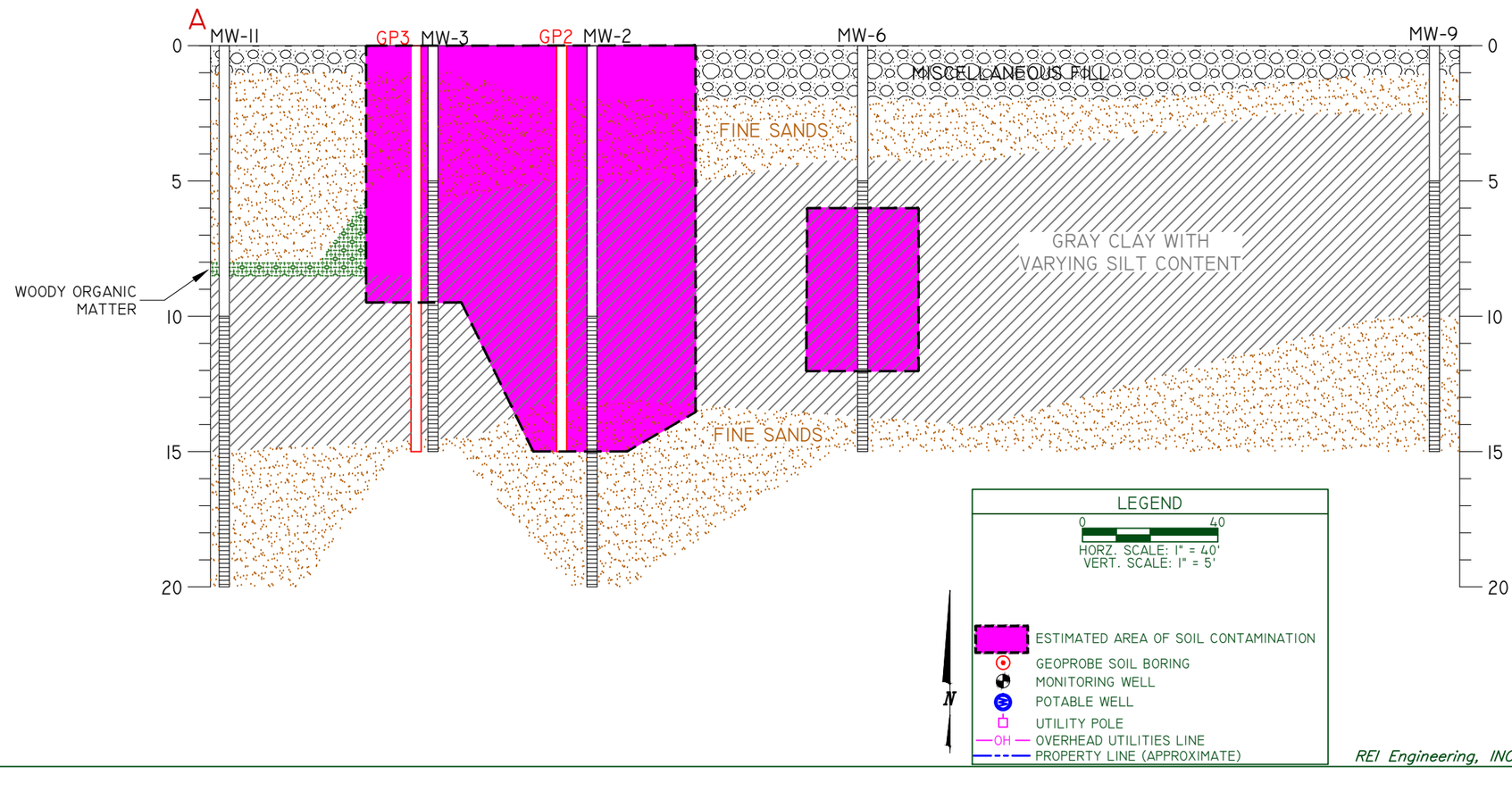
REI CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

BURNETT COUNTY–FORMER HEDLUND DX
10557 STATE HIGHWAY 70
FALUN, WISCONSIN 54872

FIGURE 2 : SITE MAP

PROJECT No.	DRAWN BY:	DATE:
7367AxUC	AJG	3/31/2017





LEGEND

0 40

HORZ. SCALE: 1" = 40'
VERT. SCALE: 1" = 5'

- ESTIMATED AREA OF SOIL CONTAMINATION
- GEOPROBE SOIL BORING
- MONITORING WELL
- POTABLE WELL
- UTILITY POLE
- OH — OVERHEAD UTILITIES LINE
- PROPERTY LINE (APPROXIMATE)

N

REI Engineering, INC.

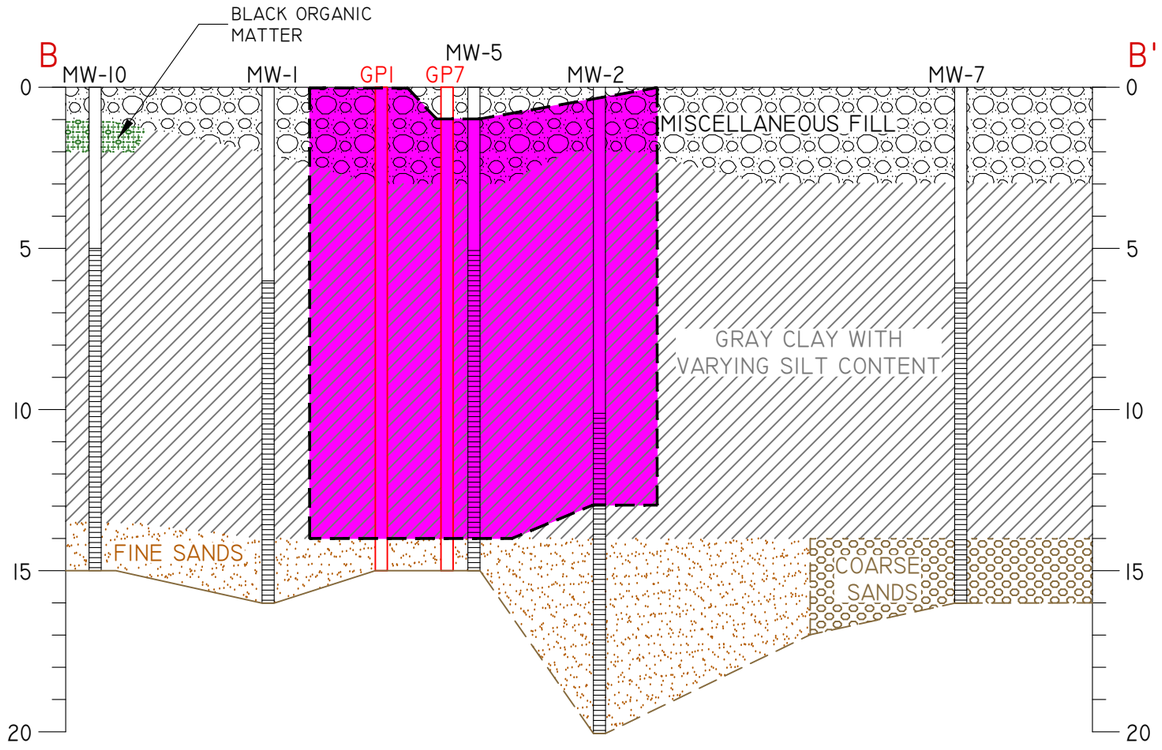
REI CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

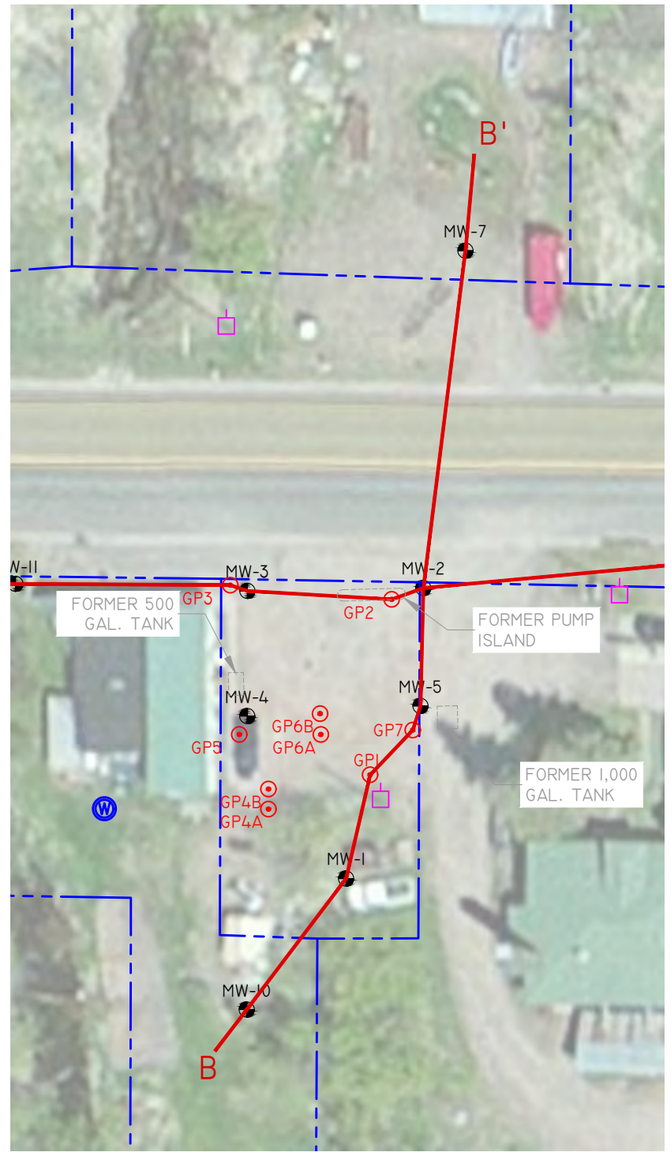
BURNETT COUNTY–FORMER HEDLUND DX
10557 STATE HIGHWAY 70
FALUN, WISCONSIN 54872

FIGURE 3a : CROSS SECTION A–A'

PROJECT No.	DRAWN BY:	DATE:
7367AxUC	AJG	3/27/2017

DRAWING FILE: P:\7300-7399\7367 - HEDLUND DX\DWG\7367-XS.DWG LAYOUT: XS-A PLOTTED: MAR 30, 2017 - 10:02AM PLOTTED BY: ALANG





LEGEND

0 40

HORZ. SCALE: 1" = 40'
VERT. SCALE: 1" = 5'

- ESTIMATED AREA OF SOIL CONTAMINATION
- GEOPROBE SOIL BORING
- MONITORING WELL
- POTABLE WELL
- UTILITY POLE
- OH — OVERHEAD UTILITIES LINE
- PROPERTY LINE (APPROXIMATE)

N

REI Engineering, INC.

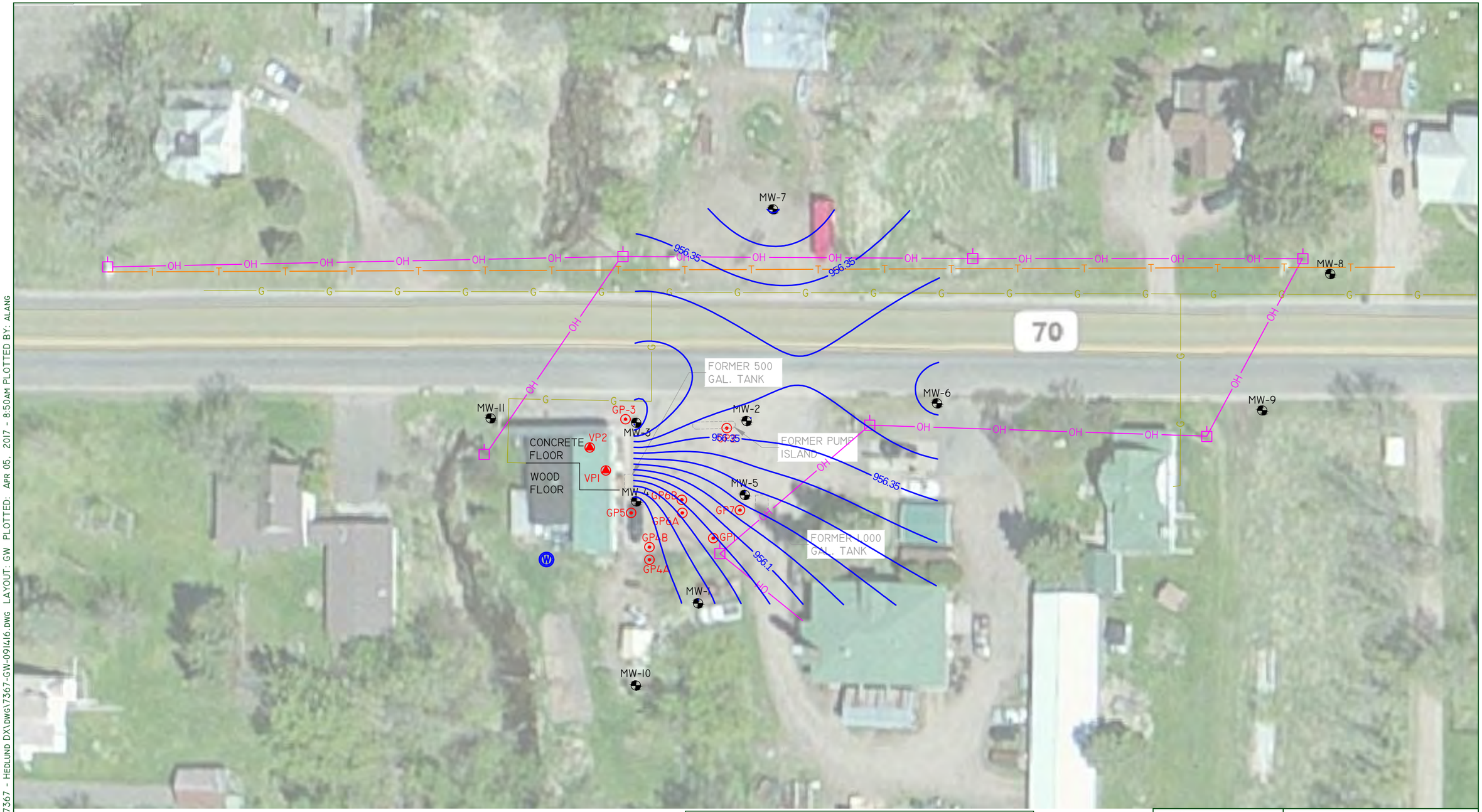
REI CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

BURNETT COUNTY–FORMER HEDLUND DX
10557 STATE HIGHWAY 70
FALUN, WISCONSIN 54872

FIGURE 3b : CROSS SECTION B–B'

PROJECT No.	DRAWN BY:	DATE:
7367AxUC	AJG	3/27/2017

DRAWING FILE: P:\7300-7399\7367 - HEDLUND DX\DWG\7367-XS.DWG LAYOUT: XS-B PLOTTED: MAR 30, 2017 - 10:01AM PLOTTED BY: ALANG



REI Engineering, INC.

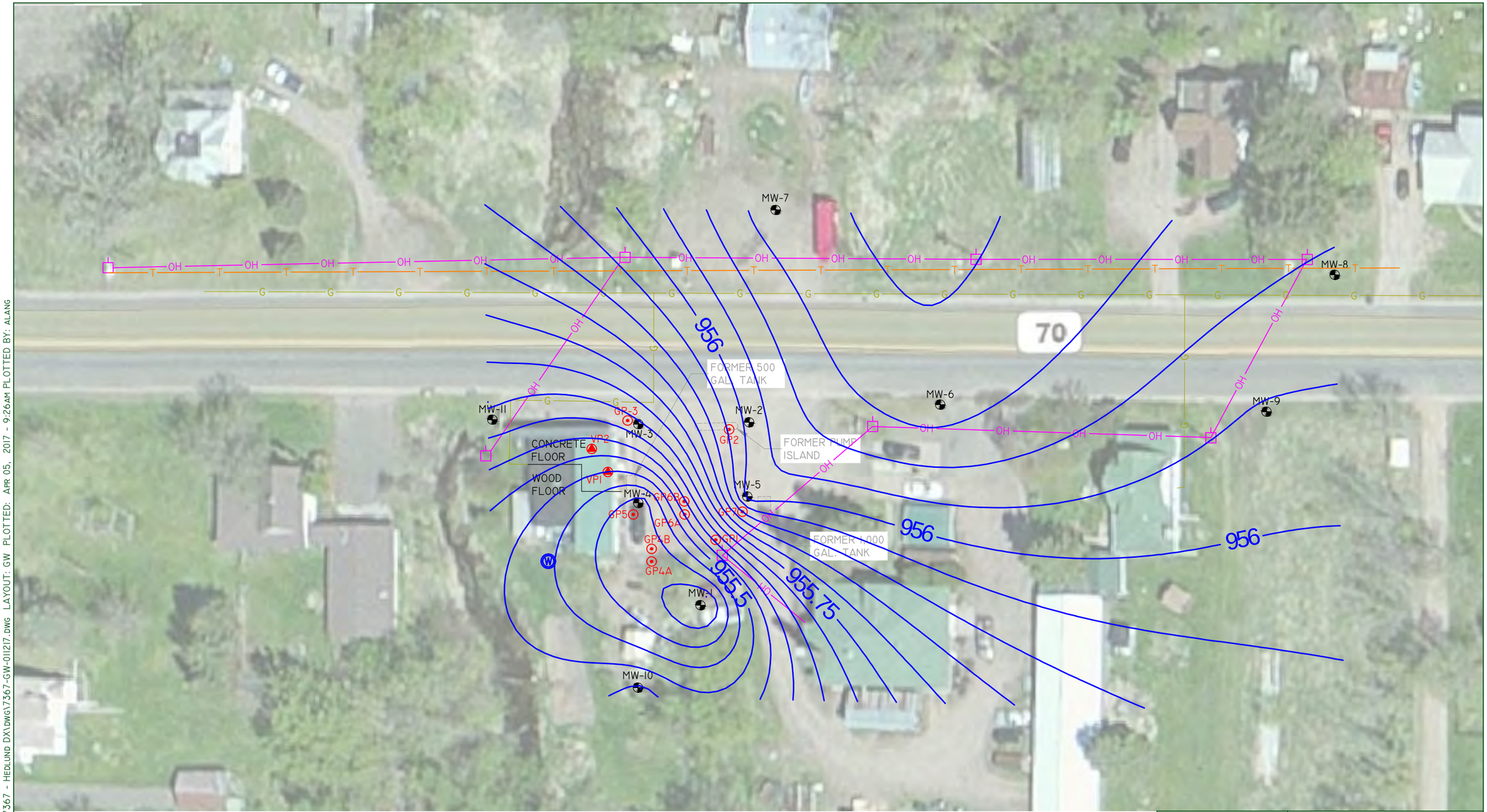
REI CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

BURNETT COUNTY–FORMER HEDLUND DX
10557 STATE HIGHWAY 70
FALUN, WISCONSIN 54872

FIGURE 4a : GROUNDWATER FLOW MAP (9/14/2016)

PROJECT No.	DRAWN BY:	DATE:
7367AxUC	AJG	3/27/2017

DRAWING FILE: P:\7300-7399\7367 - HEDLUND DX\DWG\7367-GW-091416.DWG LAYOUT: GW PLOTTED: APR 05, 2017 - 8:50AM PLOTTED BY: ALANG



LEGEND

0 40

SCALE: 1" = 40'

- GEOPROBE SOIL BORING
- MONITORING WELL
- POTABLE WELL
- UTILITY POLE
- OH — OVERHEAD UTILITIES LINE
- 955.5 — GROUNDWATER CONTOUR
- G — GAS LINE
- T — TELEPHONE LINE
- SUB-SLAB VAPOR PROBE

N

REI Engineering, INC.

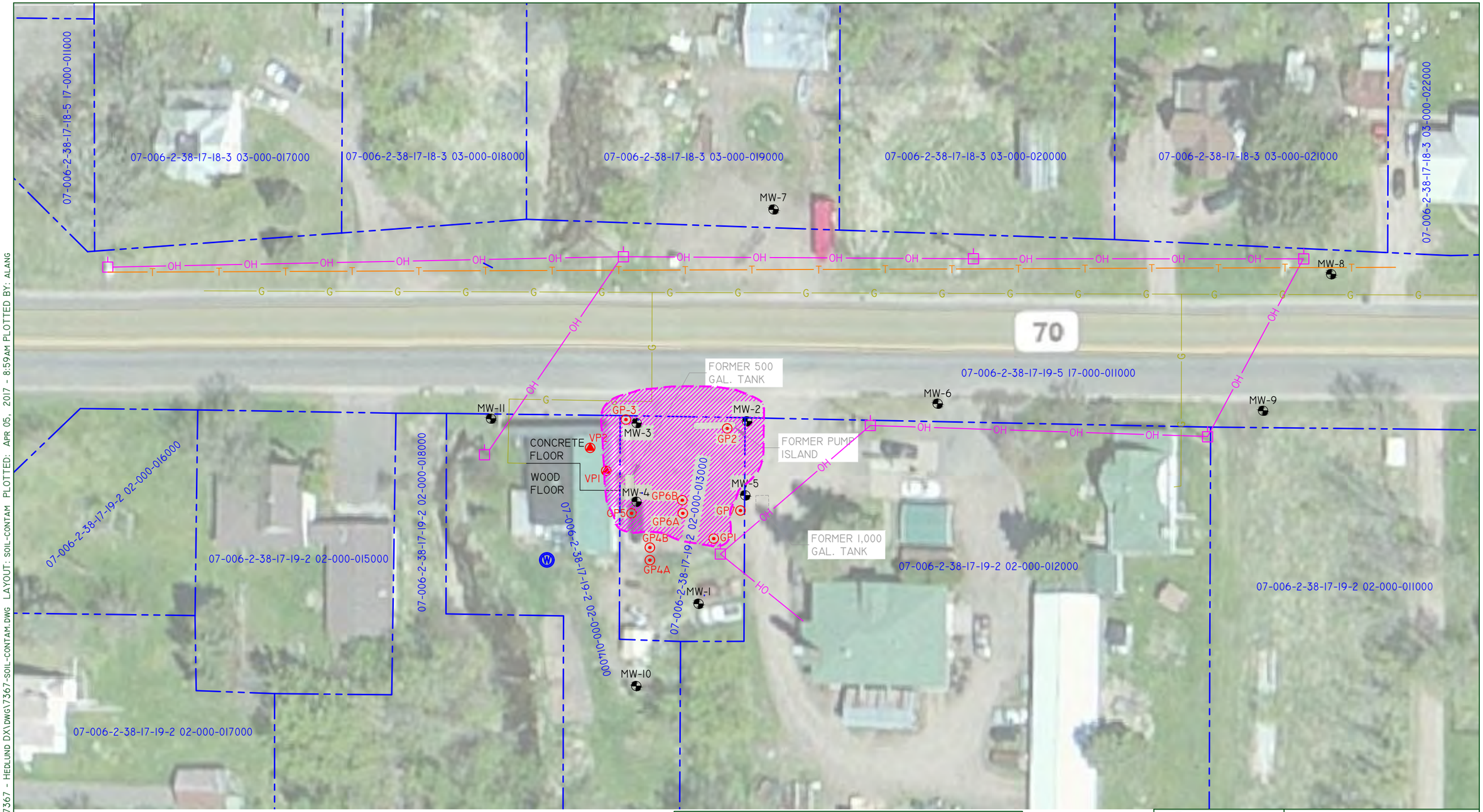
REI CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

BURNETT COUNTY–FORMER HEDLUND DX
10557 STATE HIGHWAY 70
FALUN, WISCONSIN 54872

FIGURE 4b : GROUNDWATER FLOW MAP (1/12/2017)

PROJECT No.	DRAWN BY:	DATE:
7367AxUC	AJG	3/27/2017

DRAWING FILE: P:\7300-7399\7367 - HEDLUND DX\DWG\7367-GW-0112I7.DWG LAYOUT: GW PLOTTED: APR 05, 2017 - 9:26AM PLOTTED BY: ALANG



DRAWING FILE: P:\7300-7399\7367 - HEDLUND DX\DWG\7367-SOIL-CONTAM.DWG LAYOUT: SOIL-CONTAM PLOTTED: APR 05, 2017 - 8:59AM PLOTTED BY: ALANG

N

LEGEND

0 40

SCALE: 1" = 40'

- GEOPROBE SOIL BORING
- MONITORING WELL
- POTABLE WELL
- UTILITY POLE
- OH — OVERHEAD UTILITIES LINE
- G — GAS LINE
- T — TELEPHONE LINE
- ESTIMATED SOIL CONTAMINATION
- SUB-SLAB VAPOR PROBE

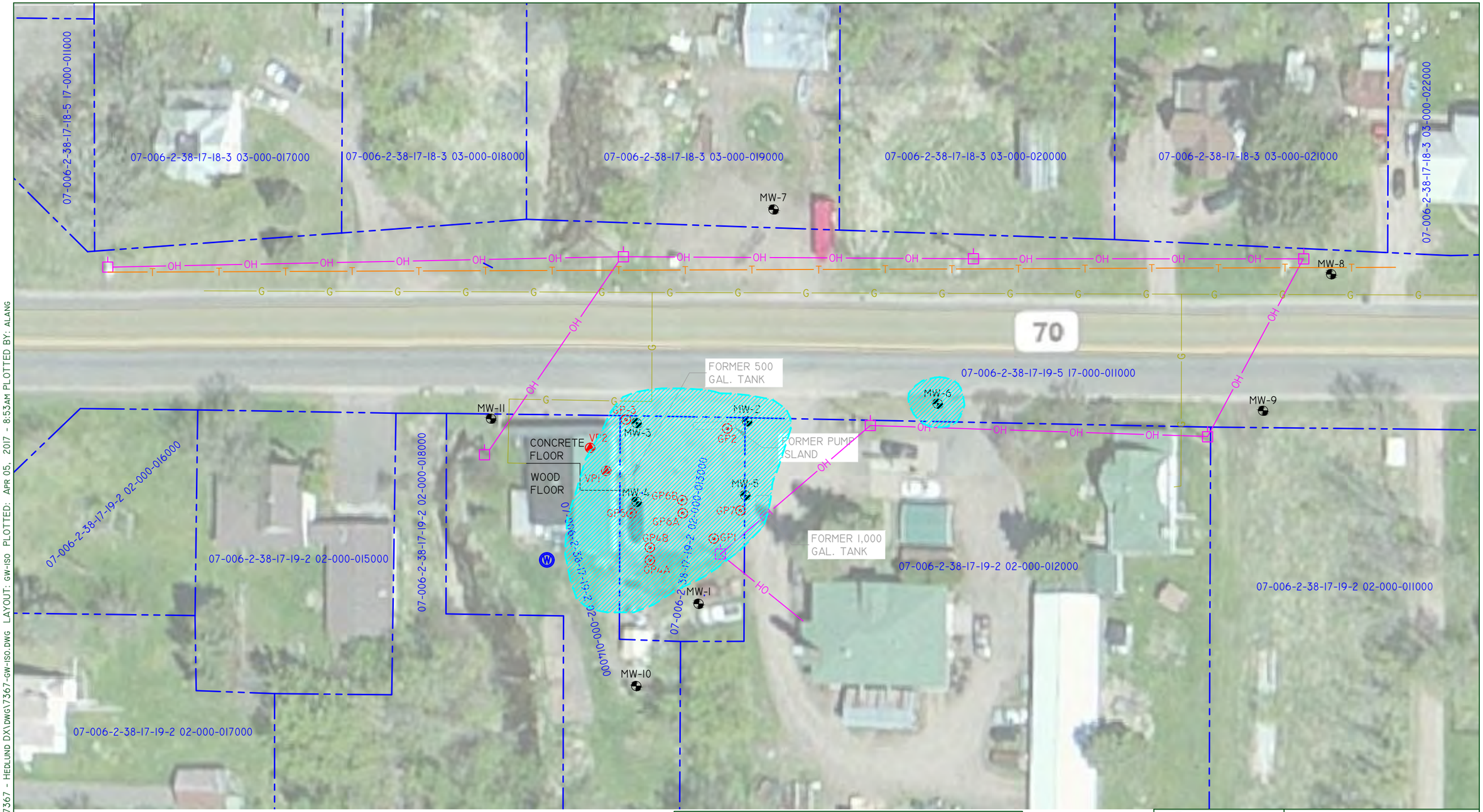
REI Engineering, INC.

REI CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

BURNETT COUNTY–FORMER HEDLUND DX
10557 STATE HIGHWAY 70
FALUN, WISCONSIN 54872

FIGURE 5 : ESTIMATED EXTENT OF PETROLEUM RELATED SOIL CONTAMINATION

PROJECT No.	DRAWN BY:	DATE:
7367AxUC	AJG	3/30/2017



DRAWING FILE: P:\7300-7399\7367 - HEDLUND DX\DWG\7367-GW-ISO.DWG LAYOUT: GW-ISO PLOTTED: APR 05, 2017 - 8:53AM PLOTTED BY: ALANG

LEGEND

SCALE: 1" = 40'

- GEOPROBE SOIL BORING
- MONITORING WELL
- POTABLE WELL
- UTILITY POLE
- OH — OVERHEAD UTILITIES LINE
- G — GAS LINE
- T — TELEPHONE LINE
- ESTIMATED GW CONTAMINATION
- SUB-SLAB VAPOR PROBE

N

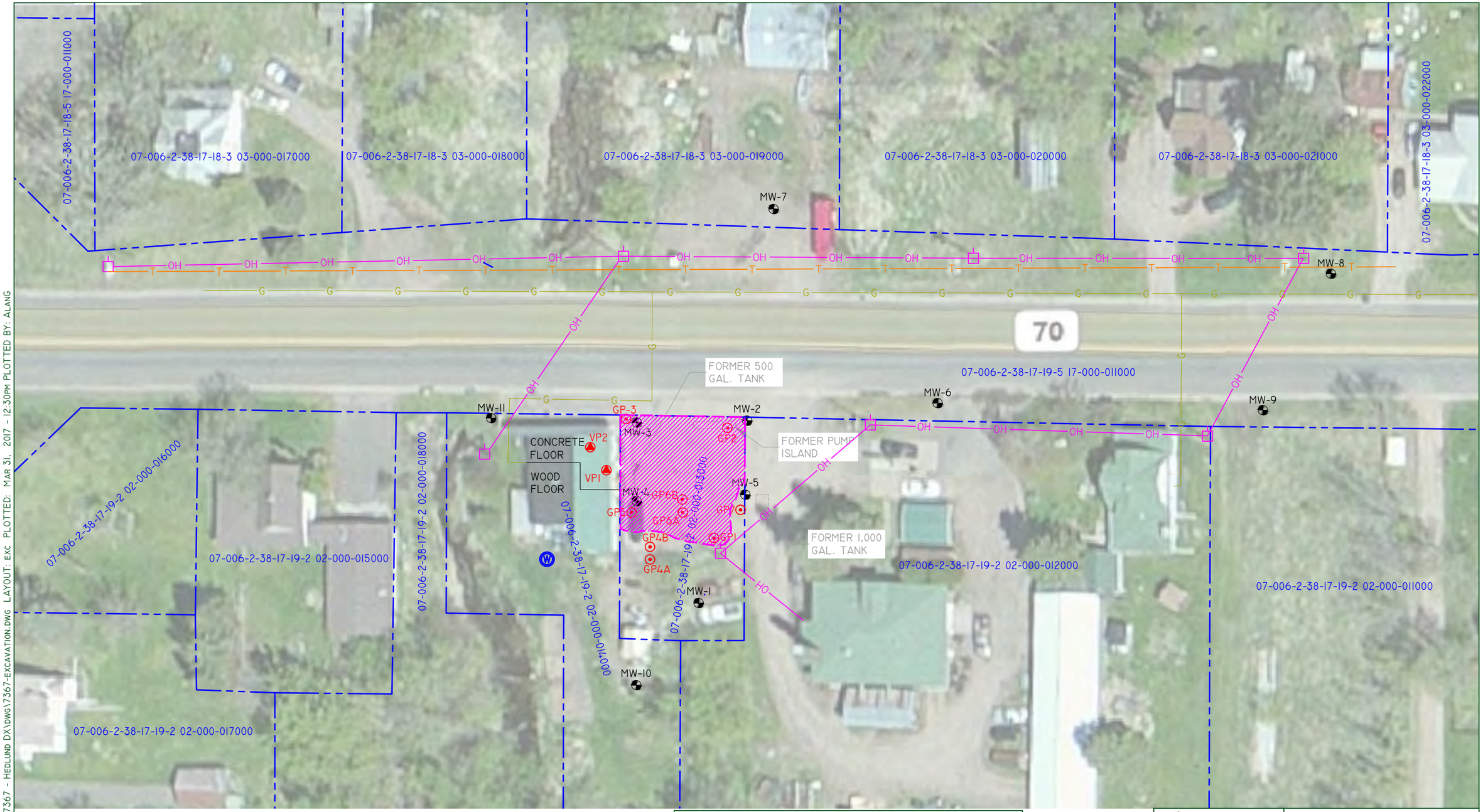
REI Engineering, INC.

REI CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

BURNETT COUNTY–FORMER HEDLUND DX
10557 STATE HIGHWAY 70
FALUN, WISCONSIN 54872

FIGURE 6 : ESTIMATED EXTENT OF PETROLEUM RELATED GROUNDWATER CONTAMINATION

PROJECT No.	DRAWN BY:	DATE:
7367AxUC	AJG	3/31/2017



DRAWING FILE: P:\7300-7399\7367 - HEDLUND DX\DWG\7367-EXCAVATION.DWG LAYOUT: EXC PLOTTED: MAR 31, 2017 - 12:30PM PLOTTED BY: ALANG

LEGEND

SCALE: 1" = 40'

- GEOPROBE SOIL BORING
- MONITORING WELL
- POTABLE WELL
- UTILITY POLE
- OH — OVERHEAD UTILITIES LINE
- G — GAS LINE
- T — TELEPHONE LINE
- PROPOSED EXCAVATION AREA
- SUB-SLAB VAPOR PROBE

N

REI Engineering, INC.

REI CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

BURNETT COUNTY–FORMER HEDLUND DX
10557 STATE HIGHWAY 70
FALUN, WISCONSIN 54872

FIGURE 7 : AREA OF PROPOSED EXCAVATION

PROJECT No.	DRAWN BY:	DATE:
7367AxUC	AJG	3/31/2017

APPENDIX A

SELECT SECTIONS FROM PREVIOUS REPORTS

FIGURE 3–1

AQUA-TECH INC.

SCALE: 1"=100'	APPROVED:	DRAWN BY:
DATE: 8/23/90		RICHARDSON

HEDLUND D–X /BOB'S SERVICE

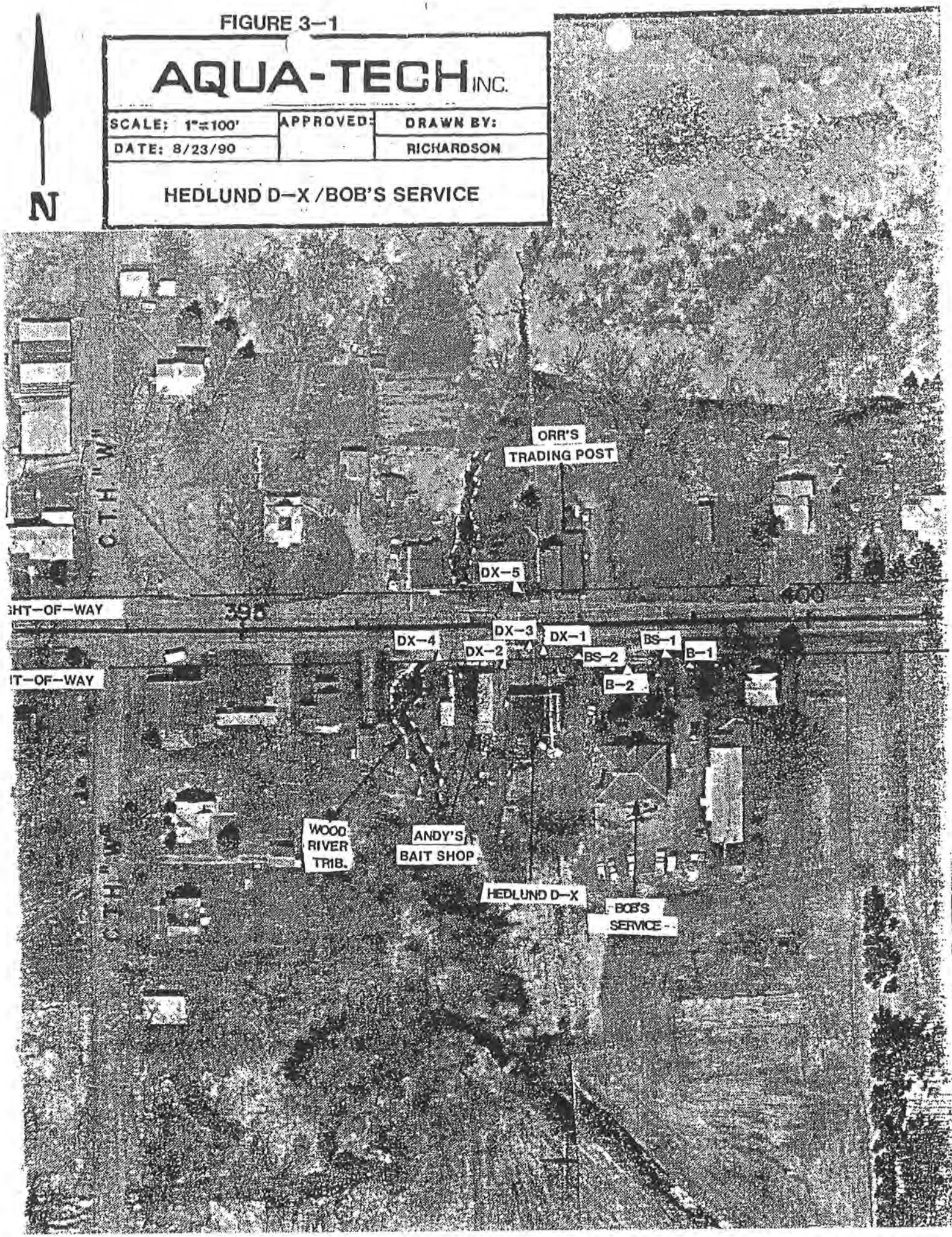
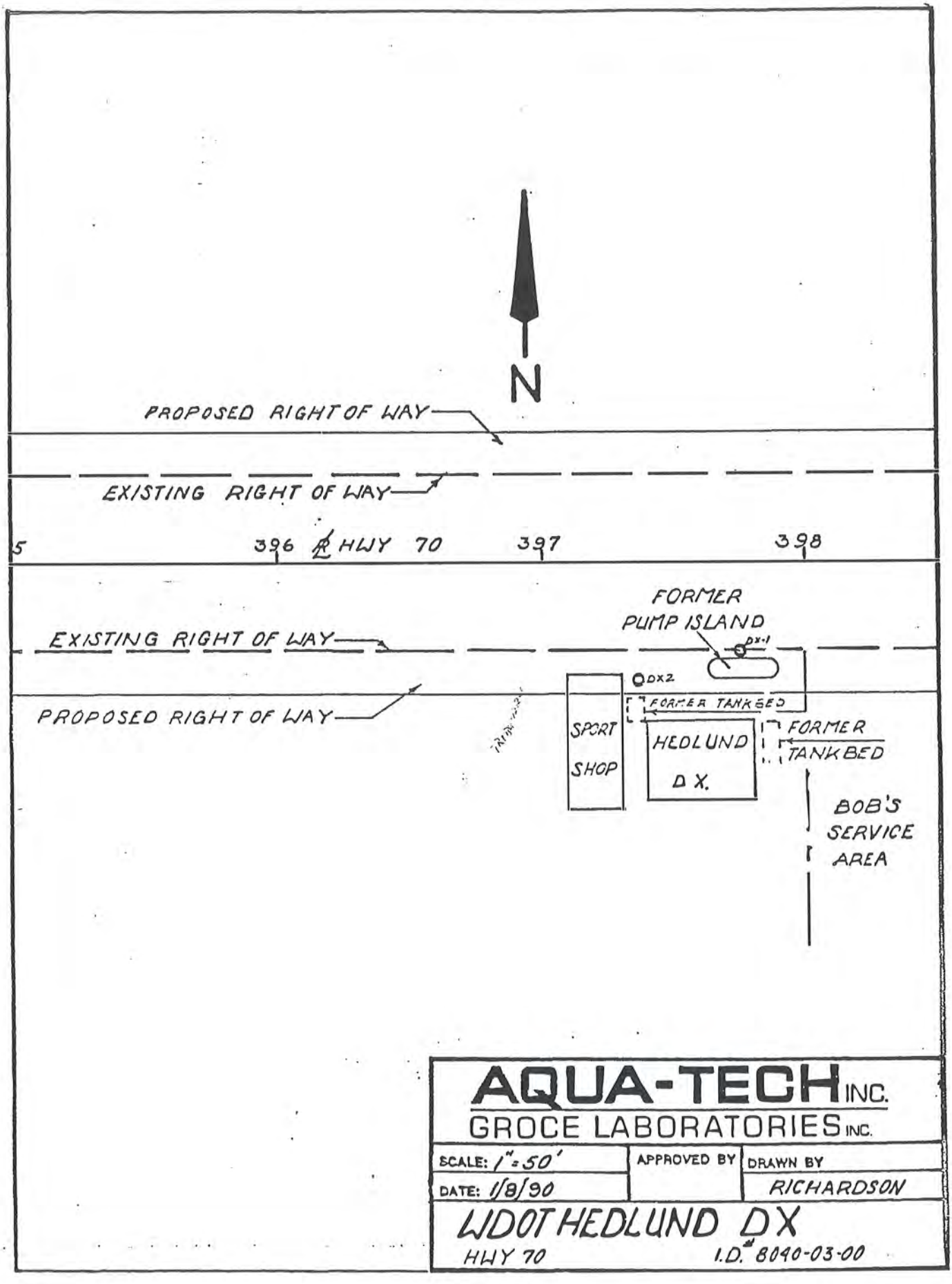
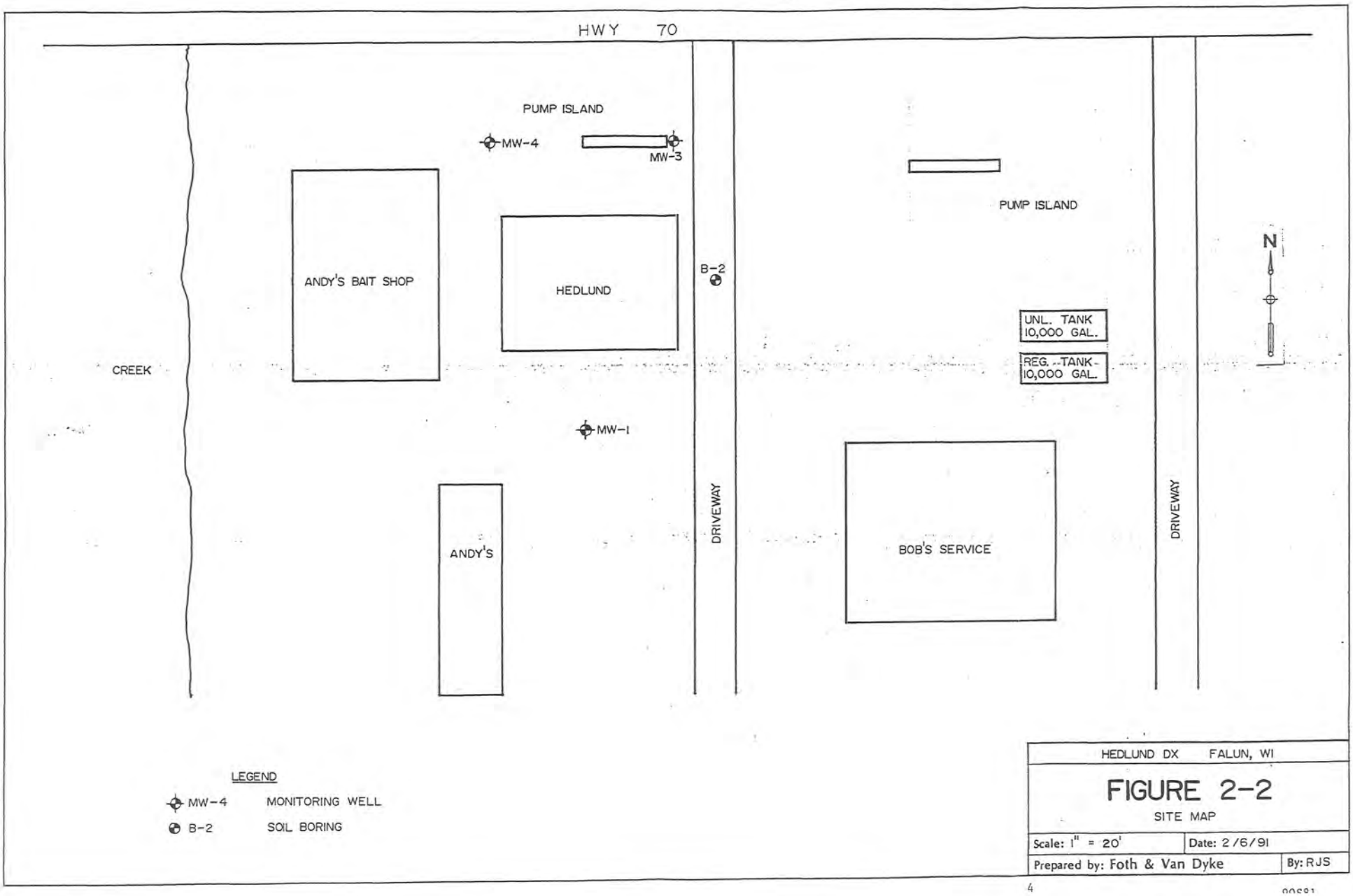
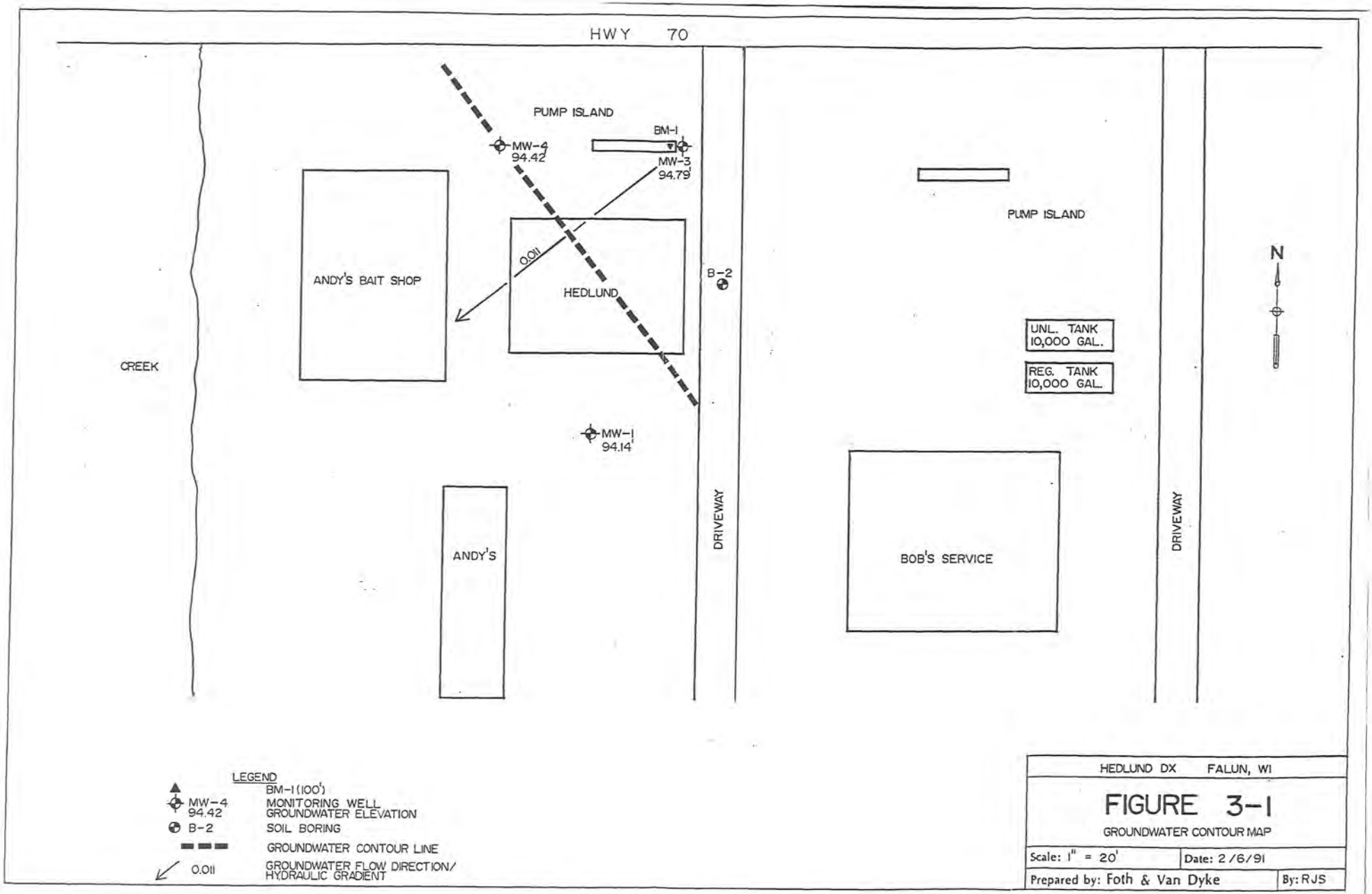


FIGURE 3-1
SITE FEATURES AND SAMPLING LOCATIONS




HWY 70
PUMP ISLAND
MW-4
MW-3
ANDY'S BAIT SHOP
HEDLUND
B-2
PUMP ISLAND
UNL. TANK 10,000 GAL.
REG. TANK 10,000 GAL.
N
CREEK
MW-1
DRIVEWAY
DRIVEWAY
ANDY'S
BOB'S SERVICE
LEGEND
MW-4 MONITORING WELL
B-2 SOIL BORING
HEDLUND DX FALUN, WI
FIGURE 2-2
SITE MAP
Scale: 1" = 20'
Date: 2/6/91
Prepared by: Foth & Van Dyke
By: RJS



HEDLUND DX FALUN, WI

FIGURE 3-1

GROUNDWATER CONTOUR MAP

Scale: 1" = 20'	Date: 2/6/91
Prepared by: Foth & Van Dyke	By: RJS

AQUA-TECH, INC

140 S. PARK ST.
PORT WASHINGTON, WI 53074
TELEPHONE:
(414) 284-5746
(414) 375-0407 (MILW METRO)

SOIL PROFILE LOG

PROJECT: DOT-HEDLUND DX
LOCATION: FALUN, WI

PROJECT#: DOT-8040-03-00
ATI WO#:

BORING # 1 SURFACE ELEVATION ------

SAMPLES NO.	MOISTURE	REC	HNU LEVELS (PPM)	DEPTH (FT)	DESCRIPTION AND REMARKS
				0.0	
	DRY		180		0.0 - 3.0' SAND & GRAVEL
				3.0	
			200		3.0 - 5.0' SAND & BLUE/GREY CLAY
				5.0	
DX-1			250		
				7.0	
			20		
				9.0	
			10		
				11.0	
WDX1	WET		1	12.0	5.0 - 12.0' GREY CLAY
					12.0 - 13.0' SAND
				13.0	TERMINATED BORING AT 13.0'

NO BEDROCK ENCOUNTERED
GROUNDWATER ENCOUNTERED AT 11.0'
SOIL SAMPLE DX-1 TAKEN AT 5.0 - 7.0'
GROUNDWATER SAMPLE WDX-1 TAKEN AT 11.0 - 13.0'
GROUNDWATER HNU LEVEL: 20 PPM

WATER LEVEL OBSERVATIONS

WHILE DRILLING ------
DEPTH TO WATER 11.0'
DEPTH TO CAVE-IN ------

GENERAL INFORMATION

START DATE: 11/7/89 COMPLETION DATE: 11/7/89
DRILLING METHOD: HOLLOW STEM AUGER; SPLIT SPOON SAMPLER; HNU
LOGGER:

AQUA-TECH, INC

140 S. PARK ST.
PORT WASHINGTON, WI 53074
TELEPHONE:
(414) 284-5746
(414) 375-0407 (MILW METRO)

SOIL PROFILE LOG

PROJECT: DOT-HEDLUND DX
LOCATION: FALUN, WI

PROJECT#: DOT-8040-03-00
ATI WO#:

BORING # 2 SURFACE ELEVATION ------

SAMPLES NO.	MOISTURE	REC	HNU LEVELS (PPM)	DEPTH (FT)	DESCRIPTION AND REMARKS
				0.0	
	MOIST				
			200	2.0	0.0 - 6.0' SAND (GASOLINE SATURATED)
				4.0	
DX-2			250	5.0	
				6.0	TERMINATED BORING AT 6.0'
					BORING ENDED DUE TO EXTENSIVE CONTAMINATION NO BEDROCK ENCOUNTERED NO GROUNDWATER ENCOUNTERED SOIL SAMPLE DX-2 COLLECTED AT 4.0 - 6.0'
				10.0	
				15.0	

WATER LEVEL OBSERVATIONS

WHILE DRILLING ------

DEPTH TO WATER ------

DEPTH TO CAVE-IN ------

GENERAL INFORMATION

START DATE: 11/7/89 COMPLETION DATE: 11/7/89

DRILLING METHOD: HOLLOW STEM AUGER; SPLIT SPOON SAMPLER; HNU

LOGGER:

AQUA-TECH, INC
140 S. PARK ST.
PORT WASHINGTON, WI 53074
TELEPHONE:
(414) 284-5746
(414) 375-0407 (MILW METRO)

SOIL PROFILE LOG

PROJECT: **HEDLUND DX**
LOCATION: STATE HWY 70 FALUN, WI
PROJECT#: 8040-03-00
ATI WO#: 91036

BORING DX-3 SURFACE ELEVATION _____

SAMPLES NO.	(bpf) MOISTURE	REC	PID LEVELS (PPM)	DEPTH (FT)	DESCRIPTION AND REMARKS
				0.0	0.0' - 0.4' GRAVEL (POTHOLE OF ASPHALT) 0.4' - 2.0' SAND AND GRAVEL
			30		
			50		2.0' - 13.0' GREY CLAY
			150		
WDX-3 DX-3			200	5.0 ▼	
			4	10.0	
			0		13.0' - 15.0' MEDIUM BROWN SAND
				15.0	TERMINATED BORING AT 15.0'
				20.0	

WATER LEVEL OBSERVATIONS

WHILE DRILLING ----
DEPTH TO WATER 6.5' ▼
DEPTH TO CAVE-IN ----

GENERAL INFORMATION

START DATE 6/07/90 COMPLETION DATE 6/07/90
DRILLING METHOD: HOLLOW STEM AUGERS; SPLIT SPOON SAMPLING
LOGGER:

AQUA-TECH, INC
140 S. PARK ST.
PORT WASHINGTON, WI 53074
TELEPHONE:
(414) 284-5746
(414) 375-0407 (MILW METRO)

SOIL PROFILE LOG

PROJECT: **HEDLUND DX**
LOCATION: STATE HWY 70
FALUN, WI
PROJECT#: 8040-03-00
ATI WO#: 91036

BORING DX-4 SURFACE ELEVATION _____

SAMPLES NO.	(bpf) MOISTURE	REC	PID LEVELS (PPM)	DEPTH (FT)	DESCRIPTION AND REMARKS
			100 (CUTTINGS)	0.0	0.0' - 0.2' ASPHALT 0.2' - 3.0' MEDIUM DARK BROWN SAND
DX-4			200	▼	3.0' - 8.0' MEDIUM BROWN SAND
			20	5.0	
			1		8.0' - 10.0' GREY CLAY
				10.0	TERMINATED BORING AT 10.0'
				15.0	
				20.0	

WATER LEVEL OBSERVATIONS
WHILE DRILLING ----
DEPTH TO WATER 4.0'▼
DEPTH TO CAVE-IN ----

GENERAL INFORMATION
START DATE 6/07/90 COMPLETION DATE 6/07/90
DRILLING METHOD: HOLLOW STEM AUGERS; SPLIT SPOON SAMPLING
LOGGER: _____

AQUA-TECH, INC
140 S. PARK ST.
PORT WASHINGTON, WI 53074
TELEPHONE:
(414) 284-5746
(414) 375-0407 (MILW METRO)

SOIL PROFILE LOG

PROJECT: **HEDLUND DX**
LOCATION: STATE HWY 70
FALUN, WI
PROJECT#: 8040-03-00
ATI WO#: 91036

BORING DX-5 SURFACE ELEVATION _____

SAMPLES NO.	(bpf) MOISTURE	REC	PID LEVELS (PPM)	DEPTH (FT)	DESCRIPTION AND REMARKS
				0.0	0.0' - 3.0' DARK BROWN SAND
WDX-5			0 (CUTTINGS)	▼5.0	3.0' - 10.0' BROWN CLAYEY SAND
				10.0	TERMINATED BORING AT 10.0' *ACCESS LIMITED DUE TO OVERHEAD UTILITIES
				15.0	
				20.0	

WATER LEVEL OBSERVATIONS

WHILE DRILLING ----
DEPTH TO WATER 5.0'▼
DEPTH TO CAVE-IN ----

GENERAL INFORMATION

START DATE 6/07/90 COMPLETION DATE 6/07/90
DRILLING METHOD: HOLLOW STEM AUGERS
LOGGER: _____

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE ABANDONMENT

Form 3300-5 Rev. 6-87

(1) GENERAL INFORMATION

Well/Drillhole Location: DX-3

County: BURNETT

___ 1/4 of ___ 1/4 of Sec. ___; T. ___ N; R. ___ ☐ E ☐ W

(If applicable)

___ Gov't Lot ___ Grid Number

Civil Town Name: HEDLUND DX

Street Address of Well: 350' east of State HWY 70 & Range Line Road

City, Village: FALUN, WI

Date of Abandonment: 6-7-90

(2) FACILITY NAME

Original Well Owner (If Known)

Present Well Owner

Street or Route

City, State, Zip Code

Well Number and/or Name (If Applicable)

Reason For Abandonment: TEST BORING FOR STH 70 Improvement

WELL/DRILLHOLE INFORMATION

(3) Original Well/Drillhole Construction Completed on (Date): 6-7-90

☐ Water Well
☒ Drillhole

Construction Report Available? ☑ Yes ☐ No Attached

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

Well Type: N/A
☐ Unconsolidated Formation Well ☐ Bedrock Well

Total Well Depth (ft.) ___ Casing Diameter (ins.) ___

Casing Depth (ft.) ___

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

(4) Depth to Water (Feet): 6-5

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

If No, Explain ___

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

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

(6) Acceptable Sealing Materials
Neat Cement Grout; Concrete Grout; Concrete; Clay Slurry; Sodium Bentonite Slurry

(7) Kind of Sealing Material	From (Ft.)	To (Ft.)	No. Yards or Sacks Sealant	Mix Ratio or Mud Weight
BENTONITE	Surface	15.0		10.0%

(8) Comments:

(9) Name of Person or Firm Doing Sealing Work: AQUA-TECH INC.

Signature of Person Doing Work: [signature] Date Signed: 7-23-90

Street or Route: 140 S PARK ST Telephone Number: (414) 284-5746

City, State, Zip Code: PORT WASHINGTON WI 53074

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected | District/County

Reviewer/Inspector

Follow-up Necessary

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE ABANDONMENT

Form 3300-5 Rev. 6-87

(1) GENERAL INFORMATION

Well/Drillhole Location: DX-4

County: BURNETT

___ 1/4 of ___ 1/4 of Sec. ___; T. ___ N; R. ___ ☐ E ☐ W

(If applicable) ___ Gov't Lot ___ Grid Number

Civil Town Name: HOLAND DX

Street Address of Well: 350' EAST OF STH 70 AND RANGE LINE ROAD

City, Village: FALUN WI

Date of Abandonment: 6-7-90

(2) FACILITY NAME

Original Well Owner (If Known)

Present Well Owner

Street or Route

City, State, Zip Code

Well Number and/or Name (If Applicable)

Reason For Abandonment: TEST BORING FOR STH 70 IMPROVEMENT

WELL/DRILLHOLE INFORMATION

(3) Original Well/Drillhole Construction Completed on (Date): 6-7-90

☐ Water Well ☒ Drillhole

Construction Report Available? ☒ Yes ☐ No ATTACHED

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

Well Type: N/A
☐ Unconsolidated Formation Well ☐ Bedrock Well

Total Well Depth (ft.) ___ Casing Diameter (ins.) ___

Casing Depth (ft.) ___

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

(4) Depth to Water (Feet): 4.0'

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

If No, Explain ___

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

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

(6) Acceptable Sealing Materials
Neat Cement Grout; Concrete Grout; Concrete; Clay Slurry; Sodium Bentonite Slurry

(7) Kind of Sealing Material	From (Ft.)	To (Ft.)	No. Yards or Sacks Sealant	Mix Ratio or Mud Weight
BENTONITE	Surface	10.0		100%

(8) Comments:

(9) Name of Person or Firm Doing Sealing Work
AQUA-TECH INC.

Signature of Person Doing Work: [signature] Date Signed: 7-23-90

Street or Route: 142 S. 1ST PARK ST. Telephone Number: (414) 284-5741

City, State, Zip Code: PORT WASHINGTON WI 53074

(10) FOR DNR OR COUNTY USE ONLY

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

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE ABANDONMENT

Form 3300-5 Rev. 6-87

(1) GENERAL INFORMATION

Well/Drillhole Location: DX-5

County: BURNETT

___ 1/4 of ___ 1/4 of Sec. ___; T. ___ N; R. ___ ☐ E ☐ W

(If applicable) Gov't Lot ___ Grid Number ___

Civil Town Name: MEDLUND DX

Street Address of Well: 350' EAST OF STH 70 AND RANGE LINE ROAD

City, Village: FALUN WI

Date of Abandonment: 6-7-90

(2) FACILITY NAME

Original Well Owner (If Known)

Present Well Owner

Street or Route

City, State, Zip Code

Well Number and/or Name (If Applicable)

Reason For Abandonment: TEST BORING FOR STH 70 Improvement

WELL/DRILLHOLE INFORMATION

(3) Original Well/Drillhole Construction Completed on (Date): 6-7-90

☐ Water Well ☐ Drillhole

Construction Report Available? ☒ Yes ☐ No Attached

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

Well Type: N/A
☐ Unconsolidated Formation Well ☐ Bedrock Well

Total Well Depth (ft.) ___ Casing Diameter (ins.) ___

Casing Depth (ft.) ___

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

(4) Depth to Water (Feet): 5.01

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

If No, Explain ___

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

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

(6) Acceptable Sealing Materials
Neat Cement Grout; Concrete Grout; Concrete; Clay Slurry; Sodium Bentonite Slurry

(7) Kind of Sealing Material	From (Ft.)	To (Ft.)	No. Yards or Sacks Sealant	Mix Ratio or Mud Weight
BENTONITE	Surface	10.0		10%

(8) Comments:

(9) Name of Person or Firm Doing Sealing Work: AQUA-TECH INC

Signature of Person Doing Work: [signature] Date Signed: 7-23-90

Street or Route: 142 S. PARK ST. Telephone Number: (414) 284-5744

City, State, Zip Code: PORT WASHINGTON WI 53074

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected ___ District/County ___

Reviewer/Inspector ___

Follow-up Necessary ___

FOTH & VAN DYKE

Client: J. Stoessel
Project: Hedlund DX, Falun, WI.
Prepared by: RJS
Checked by:

Scope I.D.: 90S81
Page: 1
Date: 2/18/91
Date:

REPORT - LOG OF TEST BORING

Test Boring No.: B-1
Start Date: 12/19/90
Completion Date: 12/19/90
Logged by: RJS
Location: south side of building
Boring Depth: 14.5 ft
Surface Elevation: 999.2

MSL ELEV	DEPTH FR LND SURF	SAMP DEPTH INTERVAL	TYPE	#	N	REC (ft)	DESCRIPTION OF MATERIAL	CLASS	LABORATORY TESTS	DRILLING AND SAMPLING NOTES
999.2	--0									
		2.5-4.5	SB	11	13	0.6	2.5YR 4/0 dk. gray, lean CLAY, slightly sandy, mod. plasticity, moist	CL		TIP 28.3 ppm
994.2	--5.0	5.0-7.0	SB	12	11	0.6	as above, saturated at 6.0'		lab sample	TIP NA
		7.5-9.5	SB	13	7	1.1	as above, w- some silt, friable, dense			TIP 4.4 ppm
989.2	--10	10.0-12.0	SB	14	11	1.7	as above			TIP 8.9 ppm
		12.5-14.5	SB	15	42	0.5	as above			TIP 3.8 ppm
						1.5	10YR 4/4 dk. ylwish brn, poorly graded SAND, fn-med sand w- some silt, loose, saturated	SP		
984.2	--15									
							End of boring at 14.5 feet. Monitoring well MW-1 constructed in borehole.			
979.2	--20									
974.2	--25									
969.2	--30									
964.2	--35									
959.2	--40									
954.2	--45									
949.2	--50									
944.2	--55									

DRILLING METHOD: 4.25" ID Hollow Stem Augers
DRILLING CONTRACTOR: WTD Environmental Drilling

DEPTH TO WATER -
AT COMPLETION: 7.7 ft. TOC
LATER TIME/DEPTH: 12-20-90/6.70 TOC

FOTH & VAN DYKE	Client: J. Stoessel Project: Hedlund DX, Falun, WI. Prepared by: RJS Checked by:	Scope I.D.: 90S81 Page: 1 Date: 2/19/91 Date:

REPORT - LOG OF TEST BORING

Test Boring No.: B-2
Start Date: 12/19/90
Location: east side of building,tank basin
Completion Date: 12/19/90
Boring Depth: 24 feet
Logged by: RJS
Surface Elevation: 999.2

MSL ELEV	DEPTH FR LND SURF	SAMP DEPTH INTERVAL	TYPE	#	N	REC (ft)	DESCRIPTION OF MATERIAL	CLASS	LABORATORY TESTS	DRILLING AND SAMPLING NOTES
999.2	--0									
		2.5-4.5	SB	21	21	1.1	5G 6/1 grnish gray, lean CLAY mod. plasticity, dense, moist	CL		TIP 9.6 ppm
994.2	--5.0	5.0-7.0	SB	22	6	2.0	5Y 6/1 gray, lean CLAY, tr. sand & silt			TIP 10.2 ppm
		7.5-9.5	SB	23	9	2.0	as above, saturated		lab sample	TIP 5.7 ppm
989.2	--10	10.0-12.0	SB	24	27	1.0	as above			TIP 7.6 ppm
				24a		1.0	5YR 4/2 dk reddish brn, poorly SAND, fn sand,loose, saturated	SP		TIP 8.4 ppm
		12.5-14.5	SB	25	20	1.6	as above, coarsening downward			TIP 5.5 ppm
984.2	--15	15.0-17.0	SB	26	30	2.0	as above			TIP 4.3 ppm
		17.5-19.5	SB	27	75	1.7	as above			TIP 3.3 ppm
				27a		0.3	2.5YR 3/4 dk reddish brn,sandy lean CLAY, low plasticity,dense wet	SC-CL		TIP 3.2 ppm
979.2	--20	20.0-22.0	SB	28	56	0.5	as above			TIP 3.4 ppm
						0.6	2.5YR 3/4 dk reddish brn, sandy lean CLAY, interbedded w-poorly graded SAND, saturated	SC-SP		
		22.5-24.5	SB	29	48	1.8	as above			TIP 0.5 ppm
974.2	--25						End of boring at 24.5 feet. Borehole backfilled with bentonite.			
969.2	--30									
964.2	--35									

DRILLING METHOD: 4.25" ID Hollow Stem Augers
DRILLING CONTRACTOR: WTD Environmental Drilling

DEPTH TO WATER -
AT COMPLETION: 6.0'
LATER TIME/DEPTH: NA

FOTH & VAN DYKE	Client: J. Stoessel Project: Hedlund DX, Falun, WI. Prepared by: RJS Checked by:	Scope I.D.: 90S81 Page: 1 Date: 2/19/91 Date:

REPORT - LOG OF TEST BORING

Test Boring No.: B-3
Start Date: 12/19/90
Completion Date: 12/19/90
Logged by: RJS
Location: adjacent to pump island
Boring Depth: 14.5 feet
Surface Elevation: 999.1

MSL ELEV	DEPTH FR LND SURF	SAMP DEPTH INTERVAL	TYPE	#	N	REC (ft)	DESCRIPTION OF MATERIAL	CLASS	LABORATORY TESTS	DRILLING AND SAMPLING NOTES
999.1	--0									
		2.5-4.5	SB	31	7	1.0	10YR 4/2 dk gryish brn, poorly graded SAND w- clay	SP		TIP 2003 ppm
				31a		1.0	5BG 6/1 grnish gray, lean CLAY w-tr sand,dense,moist	CL		TIP 2149 ppm
994.1	--5.0	5.0-7.0	SB	32	10	1.8	as above, mod plasticity, wet			TIP 2076 ppm
		7.5-9.5	SB	33	10	2.0	as above, wet		lab sample	TIP 2288 ppm
989.1	--10	10.0-12.0	SB	34	9	2.0	10YR 4/1 dk gray, lean CLAY w- some silt, low plasticity, dense			TIP 2516 ppm
		12.5-14.5	SB	35	8	0.5	as above			TIP 159 ppm
						0.9	at 13.0' 5YR 4/2 dk reddish gray poorly graded SAND, fn sand, loose, saturated	SP		
984.1	--15									
							End of boring at 14.5 feet. Monitoring well MW- 3 constructed in borehole.			
979.1	--20									
974.1	--25									
969.1	--30									
964.1	--35									
959.1	--40									
954.1	--45									
949.1	--50									
944.1	--55									

DRILLING METHOD: 4.25" ID Hollow Stem Augers
DRILLING CONTRACTOR: WTD Environmental Drilling

DEPTH TO WATER -
AT COMPLETION: 5.5'
LATER TIME/DEPTH: 1-12-91/3.69'

FOTH & VAN DYKE

Client: J. Stoessel
Project: Hedlund DX, Falun WI.
Prepared by: RJS
Checked by:

Scope I.D.: 90S81
Page: 1
Date: 2/19/91
Date:

REPORT - LOG OF TEST BORING

Test Boring No.: B-4
Start Date: 12/20/90
Completion Date: 12/20/90
Logged by: RJS
Location: NE corner prop. (tank basin)
Boring Depth: 14.5 feet
Surface Elevation: 998.7

MSL ELEV	DEPTH FR LND SURF	SAMP DEPTH INTERVAL	TYPE	#	N	REC (ft)	DESCRIPTION OF MATERIAL	CLASS	LABORATORY TESTS	DRILLING AND SAMPLING NOTES
998.7	--0									
		2.5-4.5	SB	41	10	0.9	10YR 3/1 v dk gray, sandy CLAY, fn-med sand, cohesive	SC		TIP 2020 ppm discolored, petro odor
993.7	--5.0	5.0-7.0	SB	42	14	0.0	no sample recovery			TIP NA
		7.5-9.5	SB	43	8	1.5	10YR 5/1 gray, lean CLAY w- silt, mod plasticity, dense,wet	CL	lab sample	TIP 1499 ppm
988.7	--10	10.0-12.0	SB	44	12	2.0	as above			TIP 337 ppm
		12.5-14.5	SB	45	18	1.0	as above			TIP 55.7 ppm TIP 46.6 ppm
983.7	--15			45a		1.0	5YR 5/2 reddish gray, poorly graded SAND w- silt, loose, saturated	SP		
978.7	--20						End of boring at 14.5 feet. Monitoring well MW -4 constructed in borehole.			
973.7	--25									
968.7	--30									
963.7	--35									
958.7	--40									
953.7	--45									
948.7	--50									
943.7	--55									

DRILLING METHOD: 4.25" ID Hollow Stem Augers
DRILLING CONTRACTOR: WTD Environmental Drilling

DEPTH TO WATER -
AT COMPLETION: 4.4'
LATER TIME/DEPTH: 1-12-90/3.54'

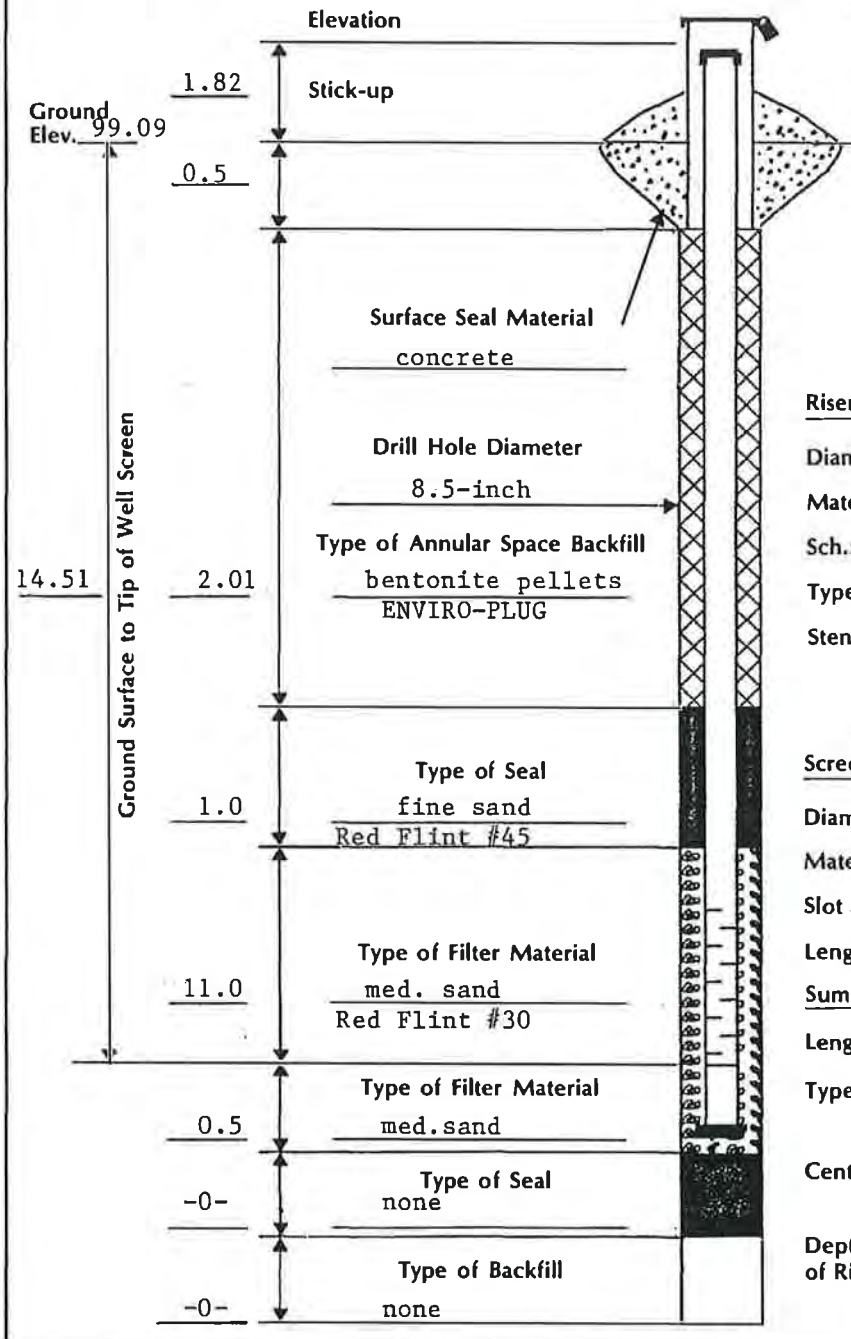
Foth & Van Dyke

Client: Hedlund — Scope I.D.: 90S81
Project: Hedlund DX, Falun, WI — Page: 1
Prepared by: RJS — Date: 12/30/90
Checked by: — Date:

MONITORING WELL CONSTRUCTION DIAGRAM

Driller: WTD Environmental Drilling — Well No.: MW-1
Drilling Method: Hollow Stem Auger — Date Installed: 12/19/90

Coordinates:



Protector Pipe:
Size: 4-inch diameter
Material: steel
Lock No.: master 2121

Riser:
Diameter: 2-inch
Material: PVC
Sch.: 40
Type of Joints: flush threaded
Stenciled? no

Screen:
Diameter: 2-inch
Material: PVC
Slot Size: 0.010-inch
Length: 10-feet

Sump:
Length: 0.25-feet
Type of Cap: threaded point cap

Centralizer: Used ☐ Not Used ☒

Depth to Water From Top of Riser at Completion: 6.77 feet

NOTE: Not to Scale

FORM #309 GEM (Rev. 1/89)

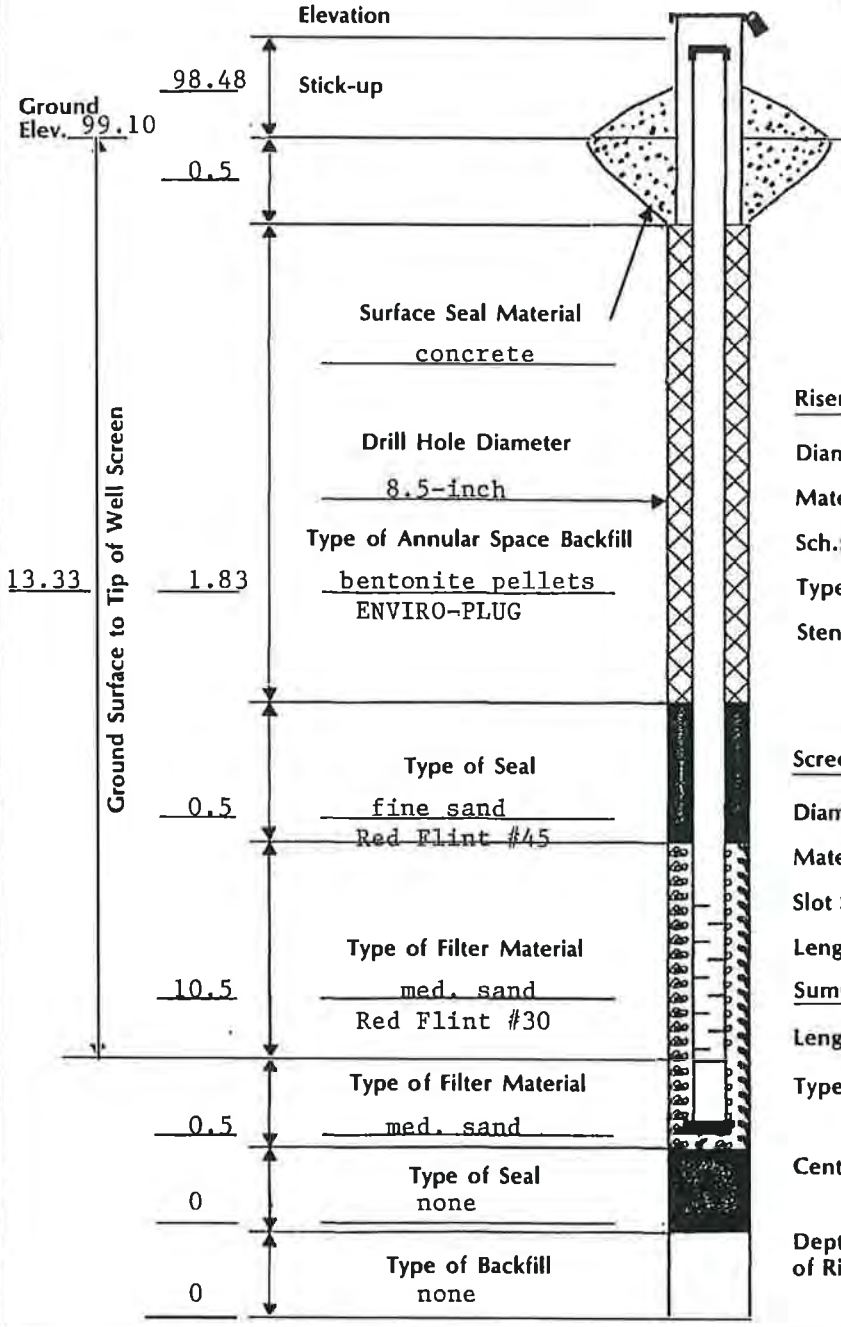
Foth & Van Dyke

Client: Hedlund — Scope I.D.: 90S81
Project: Hedlund, DX, Falun, WI — Page: 1
Prepared by: RJS — Date: 12/30/90
Checked by: — Date:

MONITORING WELL CONSTRUCTION DIAGRAM

Driller: WTD Environmental Drilling — Well No.: MW-3
Drilling Method: Hollow Stem Auger — Date Installed: 12/20/90

Coordinates:



Protector Pipe:
Size: 8-inch, flush mount
Material: steel
Lock No.: Master 2121

Riser:
Diameter: 2-inch
Material: PVC
Sch.: 40
Type of Joints: flush threaded
Stenciled? no

Screen:
Diameter: 2-inch
Material: PVC
Slot Size: 0.010-inch
Length: 10-feet

Sump:
Length: 0.25-feet
Type of Cap: threaded point cap

Centralizer: Used ☐ Not Used ☒

Depth to Water From Top of Riser at Completion: 3.69 feet

NOTE: Not to Scale

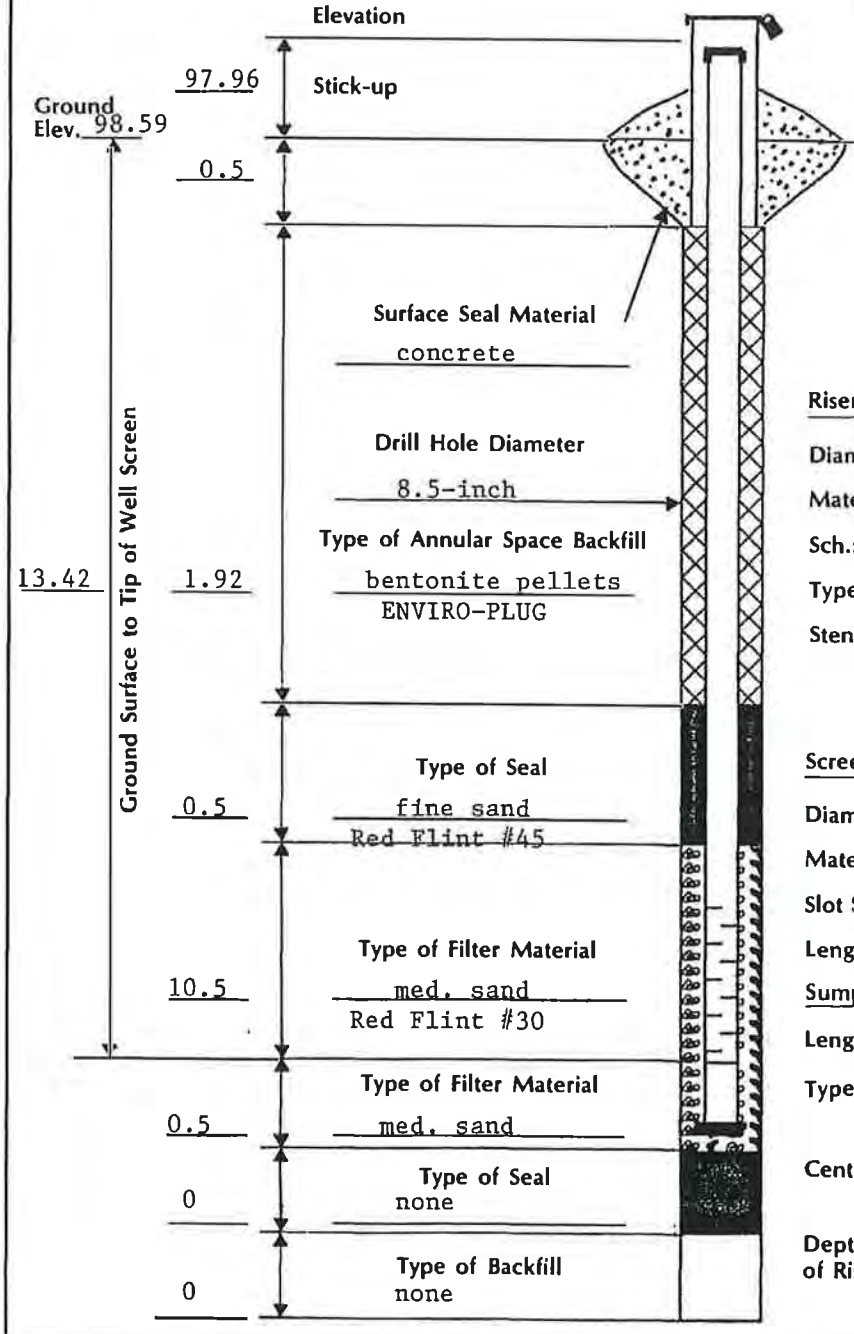
FORM #309 GEM (Rev. 1/89)

Foth & Van Dyke

Client: Hedlund — Scope I.D.: 90S81
Project: Hedlund DX, Falun, WI — Page: 1
Prepared by: RJS — Date: 12/30/90
Checked by: — Date:

MONITORING WELL CONSTRUCTION DIAGRAM

Driller: WTD Environmental — Well No.: MW-4
Drilling Method: Hollow Stem Auger — Date Installed: 12/20/90
Coordinates:



Protector Pipe:
Size: 8-inch, flush mount
Material: steel
Lock No.: Master 2121

Riser:
Diameter: 2-inch
Material: PVC
Sch.: 40
Type of Joints: flush threaded
Stenciled? no

Screen:
Diameter: 2-inch
Material: PVC
Slot Size: 0.010-inch
Length: 10-feet

Sump:
Length: 0.25-feet
Type of Cap: threaded point cap

Centralizer: Used ☐ Not Used ☒

Depth to Water From Top of Riser at Completion: 3.54 feet

NOTE: Not to Scale

Foth & Van Dyke

Client: Stoessel Scope I.D.: 90S81
Project: Hedlund DX Page: 1
Prepared by: RJS Date: 12/20/90
Checked by: [illegible] Date: 5/9/91

MONITORING WELL DEVELOPMENT

Well Number: MW-1
Well Diameter: 2 inch
Total Depth of Well: 15.60

Depth to Water:
Initial: 7.75
Final: Dry

Time of Measurement:

Description of Development Method:
Surged and purged with 1.66 inch x 5 feet hand bailer.
Well was bailed dry and allowed to recharge.
This was done four consecutive times.

Volume of Water Removed From Well: ~ 25 gallons
Clarity of Water in Well Before Development: cloudy - muddy
Clarity of Water in Well After Development: cloudy
Presence of Sediment at the Bottom of the Well: no
Volume of Water Added to Well: none
Source of Water Added to Well: none
Time Spent for Development:

Stabilization Readings:

Gal. Removed	Depth to Water	Time	Field Temperature	Spec. Cond.	pH
25	15.3		39.2°C	850	6.1

FORM #449 GEM (5/88)

Foth & Van Dyke

Client: Stoessel — Scope I.D.: 90S81
Project: Hedlund DX — Page: 1
Prepared by: RJS — Date: 12/20/90
Checked by: rjp — Date: 5/9/91

MONITORING WELL DEVELOPMENT

Well Number: MW-3
Well Diameter: 2 inch
Total Depth of Well: 12.80

Depth to Water:
Initial: 3.40
Final: dry

Time of Measurement:

Description of Development Method:
Surged and purged with 1.66 inch x 5 feet hand bailer.
Well was bailed dry and allowed to recharge.
This was done four consecutive times.

Volume of Water Removed From Well: ~ 25 gallons
Clarity of Water in Well Before Development: cloudy - muddy
Clarity of Water in Well After Development: cloudy
Presence of Sediment at the Bottom of the Well: no
Volume of Water Added to Well: none
Source of Water Added to Well: none
Time Spent for Development:

Stabilization Readings:

Gal. Removed	Depth to Water	Time	Field Temperature	Spec. Cond.	pH
25	12.1		42.1°C	1235	6.1

FORM #449 GEM 15/88)

Foth & Van Dyke

Client: Stoessel Scope I.D.: 90S81
Project: Hedlund DX Page: 1
Prepared by: RJS Date: 12/20/90
Checked by: [illegible] Date: 5/9/91

MONITORING WELL DEVELOPMENT

Well Number: MW-4
Well Diameter: 2 inch
Total Depth of Well: 14.05

Depth to Water:
Initial: 3.54
Final: Dry

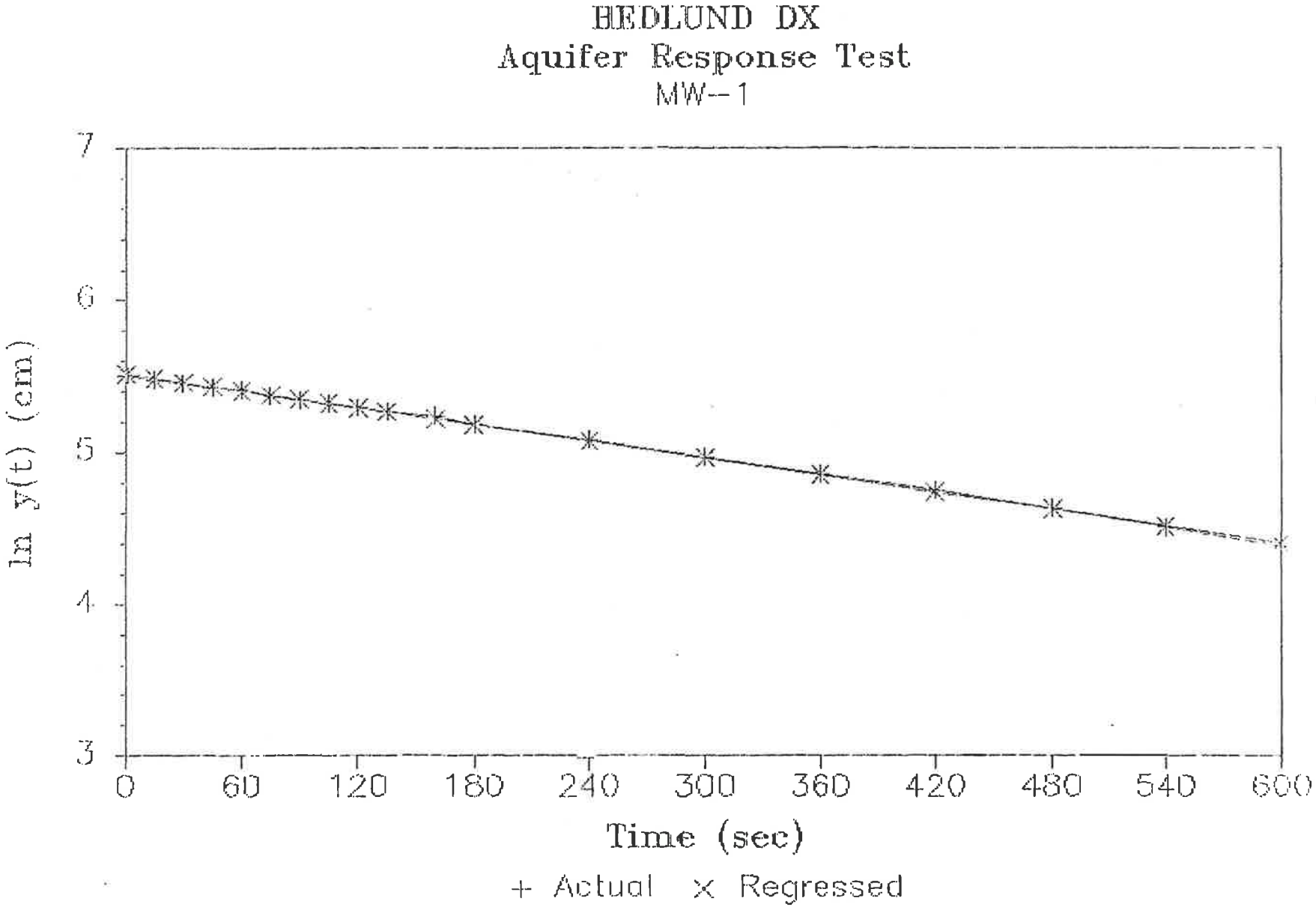
Time of Measurement:

Description of Development Method:
Surged and purged with 1.66 inch x 5 feet hand bailer.
Well was bailed dry and allowed to recharge.
This was done four consecutive times.

Volume of Water Removed From Well: ~ 20 gallons
Clarity of Water in Well Before Development: cloudy - muddy
Clarity of Water in Well After Development: cloudy
Presence of Sediment at the Bottom of the Well: no
Volume of Water Added to Well: none
Source of Water Added to Well: none
Time Spent for Development:

Stabilization Readings:

Gal. Removed	Depth to Water	Time	Field Temperature	Spec. Cond.	pH
20	1		42°C	1154	6.2



Bouwer and Rice Method

HEDLUND DX
Aquifer Response Tests - Bouwer & Rice Method
MW-1

$$K = \frac{rc^2 \ln(Re/rw) \ln \frac{[y(0)]}{[y(t)]}}{2Lt}$$

rc = casing radius = 2.54 cm
rw = borehole radius = 10.80 cm
L = screen length = 304.80 cm
D = aquifer thickness= 6,096.00 cm
H = well penetration = 291.39 cm
t = time
y(t) = drawdown @ time t

K = hydraulic conductivity = 2.3E-04 cm/s

DATA

Time (sec)	Drawdown y(t) (cm)
1.00	245.67
15.00	239.27
30.00	233.17
45.00	227.08
60.00	224.03
75.00	215.49
90.00	209.70
105.00	204.22
120.00	199.34
135.00	193.85
160.00	188.06

HEDLUND DX
Aquifer Response Tests - Bouwer & Rice Method
MW-1

180.00	178.92
240.00	160.93
300.00	143.87
360.00	128.93
420.00	115.82
480.00	103.02
540.00	91.14
600.00	80.16

Foth & Van Dyke

2.4×10^{-2} cm/s

Client: HEDLUND DX, FALIN Scope I.D.: 90581-1
Project: SLUG TEST Page: 1
Prepared by: MWD Date: 1/12/90
Checked by: Date:

AQUIFER RESPONSE TEST
FIELD DATA SHEET

Site Name: HEDLUND DX, FALIN Well: MW-1
Personnel: MWB

Type of Test (Check One): ☒ Baildown ☐ Slug Displacement ☐ Bail Displacement
Depth to Water: 6.77 ft
Total Well Depth: 16.33 ft
Estimated Volume Removed or Displaced: 16 gallons
Measurement Device (Check One): ☐ Transducer ☒ Water Level Indicator
Initial Transducer Reading (If Used): ft

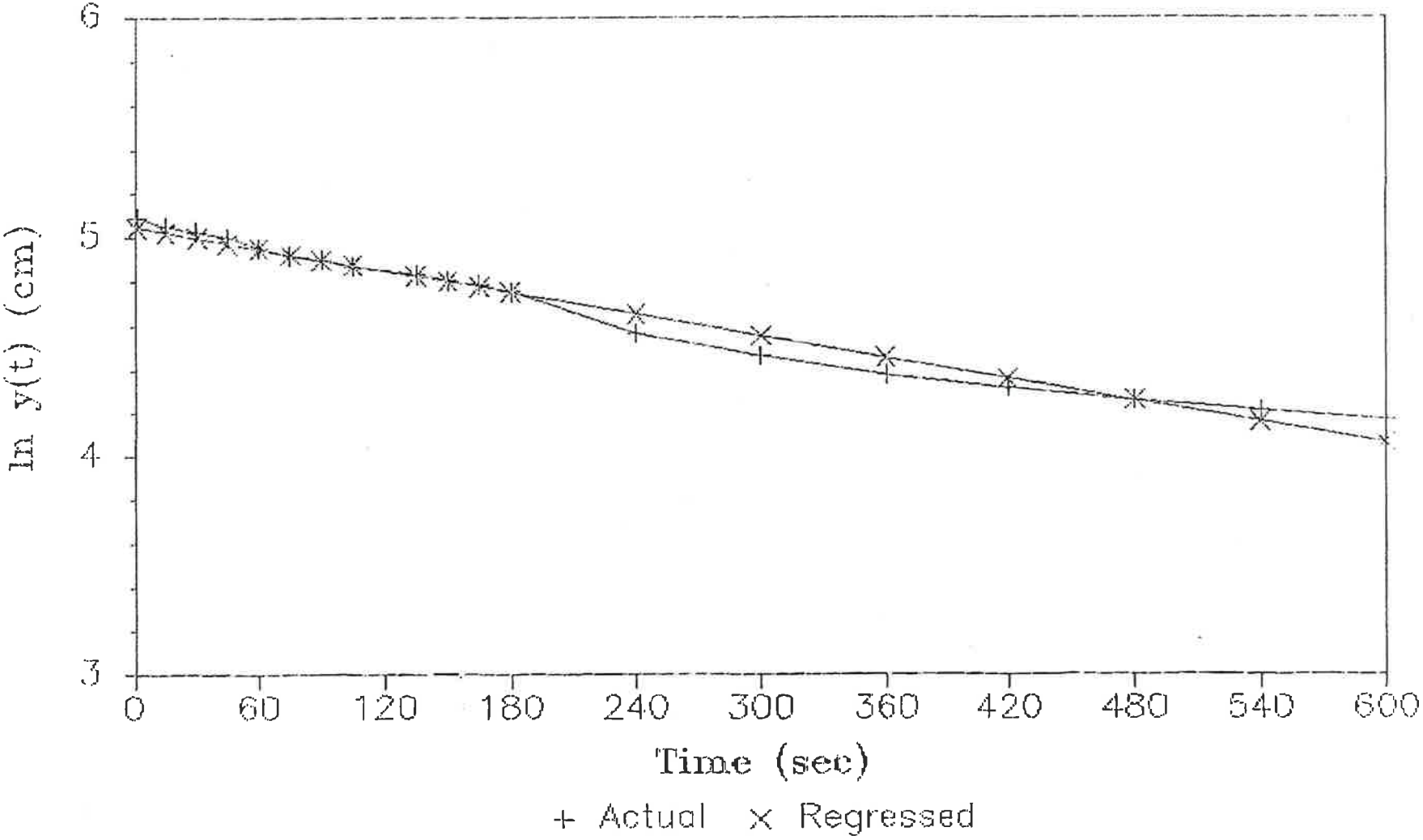
Readings

Time	Reading	Time	Reading
0	14.83	4 240	12.05
15	62	5 300	11.49
30	42	6 360	11.00
45	22	7 420	10.57
60	12	8 480	10.15
75	84	9 540	9.76
90	65	10 600	9.40
105	47		
120	31		
135	13		
160	13 74		
180	64		

Comments:

FORM #431 (Rev. 5/88)

HEDLUND DX
Aquifer Response Test
MW-3



Bouwer and Rice Method

HEDLUND DX
Aquifer Response Tests - Bouwer & Rice Method
MW-3

$$K = \frac{rc^2 \ln(Re/rw)}{2Lt} \ln \frac{[y(0)]}{[y(t)]}$$

rc = casing radius = 2.54 cm
rw = borehole radius = 10.80 cm
L = screen length = 304.80 cm
D = aquifer thickness= 6,096.00 cm
H = well penetration = 293.83 cm
t = time
y(t) = drawdown @ time t

K = hydraulic conductivity = 2.1E-04 cm/s

DATA

Time (sec)	Drawdown y(t) (cm)
1.00	162.76
15.00	155.75
30.00	152.10
45.00	148.13
60.00	141.12
75.00	136.86
90.00	134.42
105.00	130.15
135.00	125.27
150.00	121.92
165.00	119.48

HEDLUND DX
Aquifer Response Tests - Bouwer & Rice Method
MW-3

180.00	115.82
240.00	96.01
300.00	86.87
360.00	79.55
420.00	74.68
480.00	70.71
540.00	67.36
600.00	64.62

Foth & Van Dyke

2.1×10^{-4}

Client: HEDLUND DX, FALIN Scope I.D.: 90581-1
Project: SLUG TEST Page: 2
Prepared by: MWD Date: 11/12/90
Checked by: Date:

AQUIFER RESPONSE TEST
FIELD DATA SHEET

Site Name: HEDLUN DX, FALIN Well: MW-3
Personnel: MWD

Type of Test (Check One): ☒ Baildown ☐ Slug Displacement ☐ Bail Displacement
Depth to Water: 3.69 ft
Total Well Depth: 13.33 ft
Estimated Volume Removed or Displaced: 3.3 gallons
Measurement Device (Check One): ☐ Transducer ☒ Water Level Indicator
Initial Transducer Reading (If Used): ft

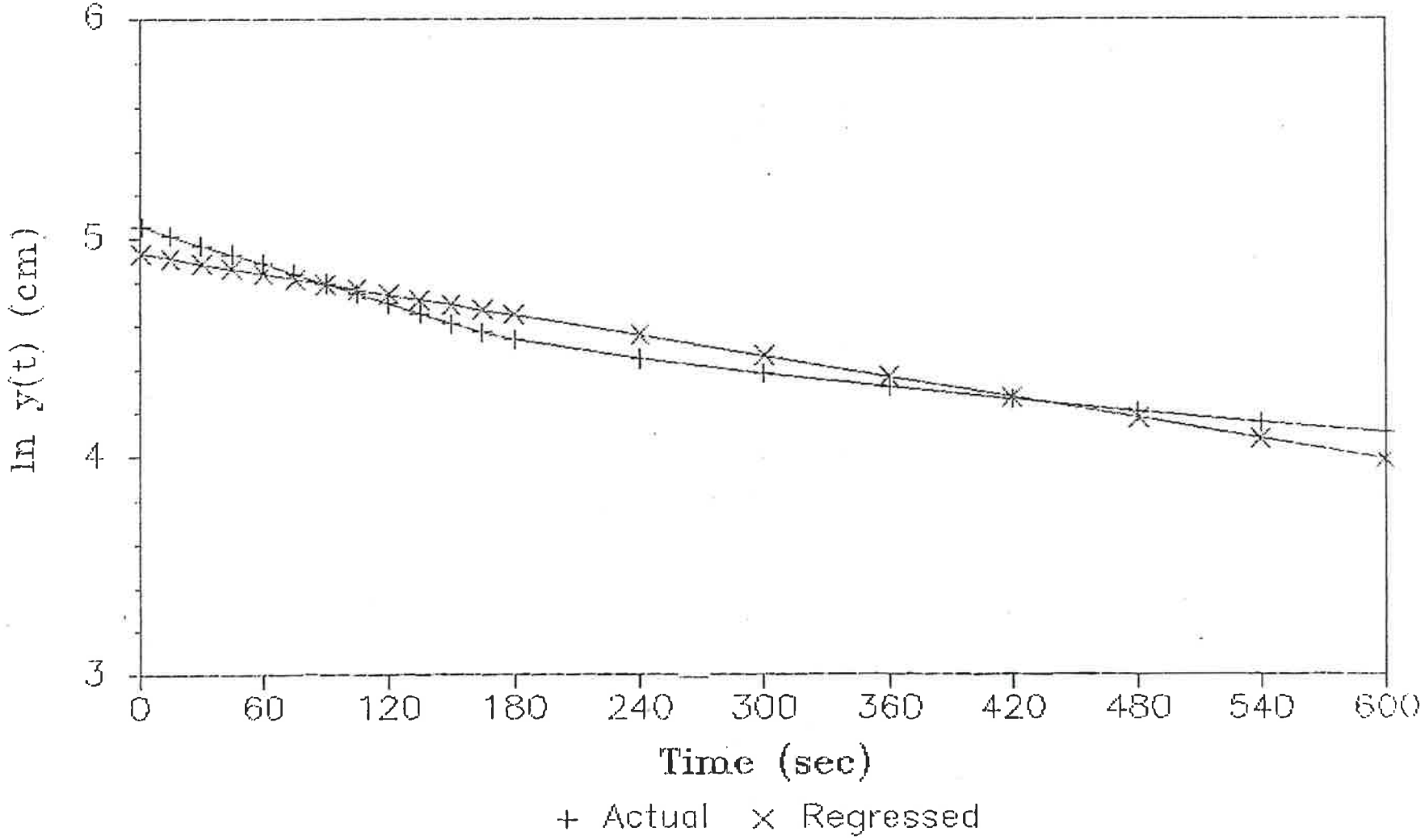
Readings

Time	Reading	Time	Reading
~~0~~ 1	9.03	4 240	6.84
15	8.84	5 300	6.54
30	8.68	6 360	6.30
45	8.55	7 420	6.14
1 60	8.32	8 480	6.01
15 75	8.18	9 540	5.90
30 90	8.10	10 600	5.81
45 105	7.96		
~~2 120~~			
15 135	7.80		
30 150	7.69		
45 165	7.61		
3 180	7.49		

Comments:

FORM #431 (Rev. 5/88)

HEDLUND DX
Aquifer Response Test
MW-4



Bouwer and Rice Method

HEDLUND DX
Aquifer Response Tests - Bouwer & Rice Method
MW-4

$$K = \frac{rc^2 \ln(Re/rw) \ln \frac{[y(0)]}{[y(t)]}}{2Lt}$$

rc = casing radius = 2.54 cm
rw = borehole radius = 10.80 cm
L = screen length = 304.80 cm
D = aquifer thickness= 6,096.00 cm
H = well penetration = 301.14 cm
t = time
y(t) = drawdown @ time t

K = hydraulic conductivity = 2.0E-04 cm/s

DATA

Time (sec)	Drawdown y(t) (cm)
1.00	156.97
15.00	150.27
30.00	143.87
45.00	138.38
60.00	132.59
75.00	126.49
90.00	121.01
105.00	115.52
120.00	110.34
135.00	105.16
150.00	100.28

HEDLUND DX
Aquifer Response Tests - Bouwer & Rice Method
MW-4

165.00	96.32
180.00	93.27
240.00	85.34
300.00	79.86
360.00	75.29
420.00	71.02
480.00	67.06
540.00	63.70
600.00	60.96

Foth & Van Dyke

2.0×10^{-4}

Client: HEDLUND DX, FALIN Scope I.D.: 90581-1
Project: SLUG TEST Page: 3
Prepared by: MWD Date: 1/12/90
Checked by: Date:

AQUIFER RESPONSE TEST
FIELD DATA SHEET

Site Name: HEDLUND DX, FALIN Well: MW-4
Personnel: MWD

Type of Test (Check One): ☒ Baildown ☐ Slug Displacement ☐ Bail Displacement
Depth to Water: 3.54 ft
Total Well Depth: 13.42 ft
Estimated Volume Removed or Displaced: gallons
Measurement Device (Check One): ☐ Transducer ☒ Water Level Indicator
Initial Transducer Reading (If Used): ft

Readings

Time	Reading	Time	Reading
0	8.69 ~~+0.02~~	4 240	6.34
15	8.47 ~~7.79~~	5 300	6.16
30	8.26 ~~7.61~~	6 360	6.01
45	8.08	7 420	5.87
1 60	7.89	8 480	5.74
15 75	7.69	9 540	5.63
30 90	7.51	10 600	5.54
45 105	7.33		
2 120	7.16		
15 135	6.99		
30 150	6.83		
45 165	6.70		
3 180	6.60		

Comments: STRONG ODOR

FORM #431 (Rev. 5/88)

APPENDIX B

POTABLE WELL CONSTRUCTION LOGS

Well Construction Report For WISCONSIN UNIQUE WELL NUMBER CF832

State of WI - Private Water Systems - DG/2
Department of Natural Resources, Box 7921
Madison, WI 53707
Please type or Print using a black Pen
Please Use Decimals Instead of Fractions.

Form 3300-77A
(R 8/00)

Property Owner: JIM KYES
Telephone Number: 715-689-2175
Mailing Address: 29577 FINK RD
City: SIREN
State: WI
Zip Code: 54872
County of Well Location: Burnett
County Well Permit No.: W
Well Completion Date: 07/10/1990

1. Well Location: [X] Town [ ] City [ ] Village of DANIELS
Fire # (if available):
Grid or Street Address or Road Name and Number:
Subdivision Name: Lot #: Block #:

Well Constructor (Business Name): BEECROFT GARY
License #: 137
Facility ID Number (Public Wells):
Address: RT 1 BOX 1073
Public Well Plan Approval #: W--
City: SIREN
State: WI
Zip Code: 54872
Date of Approval (mm/dd/yyyy):
Hicap Permanent well #:
Common Well #:
Specific Capacity: 1.2 gpm/ft

Gov't Lot #: or NW 1/4 of NE 1/4 of
Section 19 T 38 N; R 17 [ ] E [X] W
Latitude Deg. Min.
Longitude Deg. Min.

2. Well Type: [ ] New [X] Replacement [ ] Reconstruction
Lat/Long Method: GPS008
of previous unique well # constructed in
Reason for replaced or Reconstructed Well? OLD WELL PUMPS DRY

3. Well serves 1 # of homes and or (e.g. barn, restaurant, church, school, industry, etc.)
High capacity Well? [ ] Yes [X] No
Property? [ ] Yes [X] No

[X] Drilled [ ] Driven Point [ ] Jetted [ ] Other:

4. Is the well located upslope or sideslope and not downslope from any contamination source, including those on neighboring properties? [X] Yes [ ] No
Well located within 1,200 feet of a quarry? [ ] Yes [ ] No If yes, distance in feet from quarry:
Well located in floodplain? [ ] Yes [X] No

Distance in Feet from Well to Nearest:
1. Landfill
10 2. Building Overhang
3. Septic [ ] Holding Tank [ ]
4. Sewage Absorption Unit
5. Nonconforming Pit
6. Buried Home Heating Oil Tank
7. Buried Petroleum Tank
8. Shoreline [ ] Swimming Pool [ ]
9. Downspout/Yard Hydrant
70 10. Privy
11. Foundation Drain to Clearwater
12. Foundation Drain to Sewer
13. Building Drain [ ] Cast Iron or Plastic [ ] Other
14. Building Sewer [ ] Gravity [ ] Pressure [ ] Cast Iron or Plastic [ ] Other
15. Collector or Street Sewer: [ ] Sanitary [ ] Storm units in. diam. [ ] =< 6 [ ] > 6
16. Clearwater Sump
17. Wastewater Sump
18. Paved Animal Barn Pen
19. Animal Yard or Shelter
20. Silo
21. Barn Gutter
22. Manure Pipe [ ] Gravity [ ] Pressure [ ] Cast Iron or Plastic [ ] Other
23. Other Manure Storage
24. Ditch
25. Other NR 812 Waste Storage

5. Drillhole Dimensions and Construction Method

Dia (in.)	From (ft.)	To (ft.)
8	0	20
4	20	64.83

Upper Enlarged Drillhole / Lower Open Bedrock
[ ] ---1. Rotary - Mud Circulation----------
[ ] ---2. Rotary - Air----------
[ ] ---3. Rotary - Air and Foam----------
[ ] ---4. Drill-Through Casing Hammer
[ ] ---5. Reverse Rotary
[X] ---6. Cable-tool Bit 8 in. dia------
[ ] 7. Dual Rotary
[ ] 8. Temp. Outer Casing 8 in. dia. depth (ft)
Removed? [X] Yes [ ] No
If no, why not?

8. Geology

Type, Caving/Noncaving, Color, Hardness, etc	From (ft.)	To (ft.)
--CG CLAY @ ROCKS	0	13
--G- GRAVEL	13	47
--P- HARD PAN	47	55
--Y- SAND @ GRAVEL	55	64.8

6. Casing, Liner, Screen

Dia. (in.)	Material, Weight, Specification	From (ft.)	To (ft.)
	4 NEW BLACK STEEL 10.79# PER FT. ASTM A53 .237 WALLTHICKNESS SAWHILL PIPE WELDED JOINTS	0	60.8
4	STEEL SCREEN STAINLESS 18 SLOT	60.33	64.83

9. Static Water Level
ft. above ground surface
38 ft. below ground surface

10. Pump Test
Pumping Level 55 ft. below surface
Pumping at 20 GPM for 1 hours

11. Well is: [X] Above Grade 8 in. [ ] Below Grade
Developed? [X] Yes [ ] No
Disinfected? [X] Yes [ ] No
Capped? [X] Yes [ ] No

7. Grout or Other Sealing Material. Method:

Kind of Sealing Material	From (ft.)	To (ft.)	# Sacks Cement
DRILL CUTTINGS	0	20	

12. Did you notify the owner of the need to permanently abandon and fill all unused wells on this property? [ ] Yes [ ] No If no, explain:

13. Signature of the Well Constructor or Supervisory Driller: GB — Date signed: 08/08/1990
Signature of Drill Rig Operator (Mandatory unless same as above): GB — Date signed: 08/08/1990

Make additional comments on reverse side about geology, additional screens, water quality, etc.

Variance issued [ ] Yes [X] No

Department of Natural Resources

Well Codes and Identifiers

Well Construction Report Comment Sheet
Form 3300-77A **Rev. 8/00**

Geologic Log No	
SID Number	
Common Well Name	
Well Notification #	
Batch Seq #	85

Well Construction Report For WISCONSIN UNIQUE WELL NUMBER CR338

State of WI - Private Water Systems - DG/2
Department of Natural Resources, Box 7921
Madison, WI 53707
Please type or Print using a black Pen
Please Use Decimals Instead of Fractions.

Form 3300-77A
(R 8/00)

Property Owner: OTMER ANDERSON
Telephone Number: 715-689-2265
Mailing Address: 10561 STATE HWY 70
City: SIREN
State: WI
Zip Code: 54872
County of Well Location: Burnett
County Well Permit No.: W
Well Completion Date: 09/13/1990

1. Well Location: [X] Town [ ] City [ ] Village of DANIELS
Fire # (if available)
Grid or Street Address or Road Name and Number
Subdivision Name / Lot # / Block #

Well Constructor (Business Name): BEECROFT ROGER
License #: 182
Facility ID Number (Public Wells)
Address: RT 1 BOX 91BB
Public Well Plan Approval #: W--
City: SHELL LAKE
State: WI
Zip Code: 54871
Date of Approval (mm/dd/yyyy)

Gov't Lot # or NW 1/4 of NW 1/4 of
Section 19 T 38 N; R 17 [ ] E [X] W
Latitude Deg. Min.
Longitude Deg Min.

2. Well Type: [ ] New [X] Replacement [ ] Reconstruction
Lat/Long Method: GPS008

Hicap Permanent well #
Common Well #
Specific Capacity: 1.7 gpm/ft

of previous unique well # constructed in
Reason for replaced or Reconstructed Well?: CONTAMINATED POINT

3. Well serves 1 # of homes and or (e.g. barn, restaurant, church, school, industry, etc.)
High capacity Well? [ ] Yes [X] No
Property? [ ] Yes [X] No

[X] Drilled [ ] Driven Point [ ] Jetted [ ] Other:

4. Is the well located upslope or sideslope and not downslope from any contamination source, including those on neighboring properties? [X] Yes [ ] No
Well located within 1,200 feet of a quarry? [ ] Yes [ ] No If yes, distance in feet from quarry:
Well located in floodplain? [ ] Yes [X] No

Distance in Feet from Well to Nearest:
1. Landfill
10 2. Building Overhang
90 3. Septic [ ] Holding Tank [ ]
100 4. Sewage Absorption Unit
5. Nonconforming Pit
6. Buried Home Heating Oil Tank
7. Buried Petroleum Tank
8. Shoreline [ ] Swimming Pool [ ]
9. Downspout/Yard Hydrant
10. Privy
11. Foundation Drain to Clearwater
12. Foundation Drain to Sewer
13. Building Drain [ ] Cast Iron or Plastic [ ] Other
14. Building Sewer [ ] Gravity [ ] Pressure [ ] Cast Iron or Plastic [ ] Other
15. Collector or Street Sewer: [ ] Sanitary [ ] Storm units in. diam. [ ] =< 6 [ ] > 6
16. Clearwater Sump
17. Wastewater Sump
18. Paved Animal Barn Pen
19. Animal Yard or Shelter
20. Silo
21. Barn Gutter
22. Manure Pipe [ ] Gravity [ ] Pressure [ ] Cast Iron or Plastic [ ] Other
23. Other Manure Storage
24. Ditch
25. Other NR 812 Waste Storage

5. Drillhole Dimensions and Construction Method

Dia (in.)	From (ft.)	To (ft.)
10	0	8
6	8	89

Upper Enlarged Drillhole / Lower Open Bedrock
[ ] ---1. Rotary - Mud Circulation----------
[ ] ---2. Rotary - Air----------
[ ] ---3. Rotary - Air and Foam----------
[ ] ---4. Drill-Through Casing Hammer
[ ] ---5. Reverse Rotary
[X] ---6. Cable-tool Bit 10 in. dia------
[ ] 7. Dual Rotary
[ ] 8. Temp. Outer Casing in. dia. depth (ft)
Removed? [ ] Yes [ ] No
If no, why not?

8. Geology

Type, Caving/Noncaving, Color, Hardness, etc	From (ft.)	To (ft.)
--C- CLAY	0	8
--Y- SAND AND GRAVEL	8	20
--YV SOUPY SAND AND GRAVEL	20	42
--GC GRAVEL AND CLAY	42	74
--Y- SAND AND GRAVEL	74	89

6. Casing, Liner, Screen

Dia. (in.)	Material, Weight, Specification	From (ft.)	To (ft.)
6	NEW BLACK STEEL 19LB A53G LTV WELDED	0	85.4

Dia. (in.)	Screen type, material & slot size		
5	STAINLESS STEEL	84	89

9. Static Water Level: 1 ft. above ground surface

10. Pump Test: Pumping Level 25 ft. below surface; Pumping at 40 GPM for 1 hours

11. Well is: [X] Above Grade 12 in. [ ] Below Grade
Developed? [X] Yes [ ] No
Disinfected? [X] Yes [ ] No
Capped? [X] Yes [ ] No

7. Grout or Other Sealing Material. Method

Method: Kind of Sealing Material	From (ft.)	To (ft.)	# Sacks Cement
DRILL CUTTINGS	0	8	

12. Did you notify the owner of the need to permanently abandon and fill all unused wells on this property? [X] Yes [ ] No If no, explain:

13. Signature of the Well Constructor or Supervisory Driller: RB — Date signed: 09/13/1990

Signature of Drill Rig Operator (Mandatory unless same as above): RB — Date signed: 09/13/1990

Make additional comments on reverse side about geology, additional screens, water quality, etc.

Variance issued [ ] Yes [X] No

Department of Natural Resources

Well Codes and Identifiers

Geologic Log No

SID Number

Common Well Name

Well Notification #

Batch Seq # 93

Well Construction Report Comment Sheet
Form 3300-77A **Rev. 8/00**

Well Construction Report For *WISCONSIN UNIQUE WELL NUMBER* DV534

State of WI - Private Water Systems - DG/2
Department of Natural Resources, Box 7921
Madison, WI 53707
Please type or Print using a black Pen
Please Use Decimals Instead of Fractions.

Form 3300-77A
(R 8/00)

Property Owner: **GEORGE BRIGGS JR**
Telephone Number: --

Mailing Address: **23530 CO RD W**

City: **GRANTSBURG** | State: **WI** | Zip Code: **54840**

County of Well Location: **Burnett**
County Well Permit No.: **W**
Well Completion Date: **07/07/1991**

1. Well Location: [X] Town [ ] City [ ] Village of **DANIEL**
Fire # (if available): **23530**

Grid or Street Address or Road Name and Number: **23530 C RD W**

Subdivision Name | Lot # | Block #

Well Constructor (Business Name): **JENNEMANS HARDWARE HANK**
License #: **704**
Facility ID Number (Public Wells):

Address: **PO BOX 9**
Public Well Plan Approval #: W--

City: **SIREN** | State: **WI** | Zip Code: **54872-0009**
Date of Approval (mm/dd/yyyy):

Hicap Permanent well #
Common Well #
Specific Capacity: gpm/ft

Gov't Lot # or **NW** 1/4 of **NW** 1/4 of
Section **19** T **38** N; R **17** [ ] E [X] W
Latitude Deg. Min.
Longitude Deg Min.

2. Well Type: [ ] New [X] Replacement [ ] Reconstruction
Lat/Long Method: **GPS008**

of previous unique well # constructed in
Reason for replaced or Reconstructed Well?: **PLUGGED POINT**

3. Well serves **1** # of homes and or (e.g. barn, restaurant, church, school, industry, etc.)
High capacity Well? [ ] Yes [X] No
Property? [ ] Yes [X] No

[ ] Drilled [X] Driven Point [ ] Jetted [ ] Other:

4. Is the well located upslope or sideslope and not downslope from any contamination source, including those on neighboring properties? [X] Yes [ ] No

Well located within 1,200 feet of a quarry? [ ] Yes [ ] No If yes, distance in feet from quarry:
Well located in floodplain? [ ] Yes [X] No

Distance in Feet from Well to Nearest:
1. Landfill
3 2. Building Overhang
35 3. Septic [ ] Holding Tank [ ]
65 4. Sewage Absorption Unit
5. Nonconforming Pit
6. Buried Home Heating Oil Tank
7. Buried Petroleum Tank
8. Shoreline [ ] Swimming Pool [ ]
9. Downspout/Yard Hydrant
10. Privy
11. Foundation Drain to Clearwater
12. Foundation Drain to Sewer
13. Building Drain [ ] Cast Iron or Plastic [ ] Other
15 14. Building Sewer [X] Gravity [ ] Pressure [X] Cast Iron or Plastic [ ] Other
15. Collector or Street Sewer: [ ] Sanitary [ ] Storm units [ ] =< 6 [ ] > 6 in. diam.
16. Clearwater Sump
17. Wastewater Sump
18. Paved Animal Barn Pen
19. Animal Yard or Shelter
20. Silo
21. Barn Gutter
22. Manure Pipe [ ] Gravity [ ] Pressure [ ] Cast Iron or Plastic [ ] Other
23. Other Manure Storage
24. Ditch
25. Other NR 812 Waste Storage

5. Drillhole Dimensions and Construction Method

Dia (in.)	From (ft.)	To (ft.)	Upper Enlarged Drillhole	Lower Open Bedrock
			[ ] 1. Rotary - Mud Circulation	[ ]
			[ ] 2. Rotary - Air	[ ]
			[ ] 3. Rotary - Air and Foam	[ ]
			[ ] 4. Drill-Through Casing Hammer	
			[ ] 5. Reverse Rotary	
			[ ] 6. Cable-tool Bit in. dia	[ ]
			[ ] 7. Dual Rotary	[ ]
			[ ] 8. Temp. Outer Casing in. dia. Removed? [ ] Yes [ ] No If no, why not?	depth (ft)

8. Geology Type, Caving/Noncaving, Color, Hardness, etc | From (ft.) | To (ft.)

6. Casing, Liner, Screen

Dia. (in.)	Material, Weight, Specification	From (ft.)	To (ft.)
	2 STEEL PIPE ASTM A-53 TYPEF	**0**	**46**

Dia. (in.)	Screen type, material & slot size		
2	**S.S. POINT**	**46**	**49**

9. Static Water Level: **12** ft. above ground surface

10. Pump Test
Pumping Level ft. below surface
Pumping at GPM for hours

11. Well is: [X] Above Grade **18** in. [ ] Below Grade
Developed? [X] Yes [ ] No
Disinfected? [X] Yes [ ] No
Capped? [X] Yes [ ] No

7. Grout or Other Sealing Material Method

Method: Kind of Sealing Material	From (ft.)	To (ft.)	# Sacks Cement

12. Did you notify the owner of the need to permanently abandon and fill all unused wells on this property? [X] Yes [ ] No If no, explain:

13. Signature of the Well Constructor or Supervisory Driller: **CJ** Date signed: **07/25/1991**

Signature of Drill Rig Operator (Mandatory unless same as above) Date signed

Make additional comments on reverse side about geology, additional screens, water quality, etc. **Variance issued** [ ] Yes [X] No

Department of Natural Resources

Well Codes and Identifiers

Geologic Log No

SID Number

Common Well Name

Well Notification #

Batch Seq # 123

Well Construction Report Comment Sheet
Form 3300-77A **Rev. 8/00**

Well Construction Report For WISCONSIN UNIQUE WELL NUMBER KT179

State of WI - Private Water Systems - DG/2
Department of Natural Resources, Box 7921
Madison, WI 53707
Please type or Print using a black Pen
Please Use Decimals Instead of Fractions

Form 3300-77A
(R 8/00)

Property Owner: ERICKSON, BRUCE
Telephone Number: 715-463-5445
Mailing Address: 401 N PARK ST
City: GRANTSBURG
State: WI
Zip Code: 54840
County of Well Location: Burnett
County Well Permit No.: W
Well Completion Date: 07/09/1996

1. Well Location: [X] Town [ ] City [ ] Village of DANIELS
Fire # (if available):
Grid or Street Address or Road Name and Number:
Subdivision Name: Lot #: Block #:

Well Constructor (Business Name): GARY BEECROFT
License #: 137
Facility ID Number (Public Wells):
Address: 1318 350TH AVE
Public Well Plan Approval #: W--
City: SIREN
State: WI
Zip Code: 54872-9604
Date of Approval (mm/dd/yyyy):
Hicap Permanent well #:
Common Well #:
Specific Capacity: .6 gpm/ft

Gov't Lot #: or NE 1/4 of SE 1/4 of
Section 19 T 38 N; R 17 [ ] E [X] W
Latitude Deg. Min.
Longitude Deg Min.

2. Well Type: [ ] New [X] Replacement [ ] Reconstruction
Lat/Long Method: GPS008
of previous unique well # constructed in
Reason for replaced or Reconstructed Well?: REPLACE SAND POINT

3. Well serves 1 # of homes and or (e.g. barn, restaurant, church, school, industry, etc.)
High capacity Well? [ ] Yes [X] No
Property? [ ] Yes [X] No

[X] Drilled [ ] Driven Point [ ] Jetted [ ] Other:

4. Is the well located upslope or sideslope and not downslope from any contamination source, including those on neighboring properties? [X] Yes [ ] No
Well located within 1,200 feet of a quarry? [ ] Yes [ ] No If yes, distance in feet from quarry:
Well located in floodplain? [ ] Yes [X] No

Distance in Feet from Well to Nearest:
1. Landfill
3 2. Building Overhang
3. Septic [ ] Holding Tank [ ]
4. Sewage Absorption Unit
5. Nonconforming Pit
6. Buried Home Heating Oil Tank
7. Buried Petroleum Tank
8. Shoreline [ ] Swimming Pool [ ]
9. Downspout/Yard Hydrant
>50 10. Privy
11. Foundation Drain to Clearwater
12. Foundation Drain to Sewer
13. Building Drain [ ] Cast Iron or Plastic [ ] Other
14. Building Sewer [ ] Gravity [ ] Pressure [ ] Cast Iron or Plastic [ ] Other
15. Collector or Street Sewer: [ ] Sanitary [ ] Storm units in. diam. [ ] =< 6 [ ] > 6
16. Clearwater Sump
17. Wastewater Sump
18. Paved Animal Barn Pen
19. Animal Yard or Shelter
20. Silo
21. Barn Gutter
22. Manure Pipe [ ] Gravity [ ] Pressure [ ] Cast Iron or Plastic [ ] Other
23. Other Manure Storage
24. Ditch
25. Other NR 812 Waste Storage

5. Drillhole Dimensions and Construction Method

Dia (in.)	From (ft.)	To (ft.)
6	0	58.06

Upper Enlarged Drillhole / Lower Open Bedrock
[ ] ---1. Rotary - Mud Circulation----------
[ ] ---2. Rotary - Air----------
[ ] ---3. Rotary - Air and Foam----------
[ ] ---4. Drill-Through Casing Hammer
[ ] ---5. Reverse Rotary
[ ] ---6. Cable-tool Bit in. dia------
[ ] 7. Dual Rotary
[ ] 8. Temp. Outer Casing in. dia. depth (ft)
Removed? [ ] Yes [ ] No
If no, why not?

8. Geology Type, Caving/Noncaving, Color, Hardness, etc.

From (ft.)	To (ft.)	Type, Caving/Noncaving, Color, Hardness, etc.
--C-	0	18 CLAY
--CG	18	49 GRAVELY CLAY
--Y-	49	58 SAND @ GRAVEL

6. Casing, Liner, Screen

Dia. (in.)	Material, Weight, Specification	From (ft.)	To (ft.)
6	NEW BLACK STEEL 18 97 LB PER FT ASTM A53 280 WALLTHICKNESS SAWHILL PIPE CO WELDED JOINTS	0	54
4	STAINLESS STEEL SCREEN 18 SLOT	53.5	58

9. Static Water Level: ft. above ground surface
10 ft. below ground surface

10. Pump Test
Pumping Level 44 ft. below surface
Pumping at 20 GPM for 11 hours

11. Well is: [X] Above Grade 12 in. [ ] Below Grade
Developed? [X] Yes [ ] No
Disinfected? [X] Yes [ ] No
Capped? [X] Yes [ ] No

7. Grout or Other Sealing Material. Method

Method: Kind of Sealing Material	From (ft.)	To (ft.)	# Sacks Cement
BENTONITE GRAVNUELS WHILE DRIV	0	0	

12. Did you notify the owner of the need to permanently abandon and fill all unused wells on this property? [ ] Yes [X] No If no, explain:

13. Signature of the Well Constructor or Supervisory Driller: GB — Date signed: 07/23/1996
Signature of Drill Rig Operator (Mandatory unless same as above): TB — Date signed: 07/23/1996

Make additional comments on reverse side about geology, additional screens, water quality, etc.

Variance issued [ ] Yes [X] No

Department of Natural Resources

Well Codes and Identifiers

Well Construction Report Comment Sheet
Form 3300-77A **Rev. 8/00**

Geologic Log No	
SID Number	
Common Well Name	
Well Notification #	
Batch Seq #	419

Well Construction Report For WISCONSIN UNIQUE WELL NUMBER YH304

State of WI - Private Water Systems - DG/2
Department of Natural Resources, Box 7921
Madison, WI 53707
Please type or Print using a black Pen
Please Use Decimals Instead of Fractions

Form 3300-77A
(R 8/00)

Property Owner: SULLENDER, DENNIS & DEBRA
Telephone -- Number:
Mailing Address: 23530 COUNTY RD W
City: GRANTSBURG
State: WI
Zip Code: 54840
County of Well Location: Burnett
County Well Permit No.: W
Well Completion Date: 12/13/2012

1. Well Location: [X] Town [ ] City [ ] Village of DANIELS
Fire # (if available): 23530
Grid or Street Address or Road Name and Number: 23530 COUNTY RD W
Subdivision Name / Lot # / Block #:

Well Constructor (Business Name): BUTTERFIELD INC
License #: 7115
Facility ID Number (Public Wells):
Address: 14346 W ST RD 77
Public Well Plan Approval # W--
City: HAYWARD
State: WI
Zip Code: 54843-9790
Date of Approval (mm/dd/yyyy):
Hicap Permanent well #:
Common Well #:
Specific Capacity: 2 gpm/ft

Gov't Lot # / or NW 1/4 of NW 1/4 of
Section 19 T 38 N; R 17 [ ] E [X] W
Latitude Deg. 45 Min. 46.176
Longitude Deg. 92 Min. 31.633

2. Well Type: [ ] New [X] Replacement [ ] Reconstruction
of previous unique well # constructed in
Reason for replaced or Reconstructed Well? REPLACED SANDPT
Lat/Long Method: GPS008

3. Well serves 1 # of homes and or HOME (e.g. barn, restaurant, church, school, industry, etc.)
High capacity Well? [ ] Yes [X] No
Property? [ ] Yes [X] No

[X] Drilled [ ] Driven Point [ ] Jetted [ ] Other:

4. Is the well located upslope or sideslope and not downslope from any contamination source, including those on neighboring properties? [X] Yes [ ] No

Well located within 1,200 feet of a quarry? [ ] Yes [X] No If yes, distance in feet from quarry:
Well located in floodplain? [ ] Yes [X] No

Distance in Feet from Well to Nearest:
1. Landfill
25 2. Building Overhang
40 3. Septic [ ] Holding Tank [X]
4. Sewage Absorption Unit
5. Nonconforming Pit
6. Buried Home Heating Oil Tank
7. Buried Petroleum Tank
8. Shoreline [ ] Swimming Pool [ ]
9. Downspout/Yard Hydrant
10. Privy
11. Foundation Drain to Clearwater
12. Foundation Drain to Sewer
13. Building Drain [ ] Cast Iron or Plastic [ ] Other
14. Building Sewer [ ] Gravity [ ] Pressure [ ] Cast Iron or Plastic [ ] Other
15. Collector or Street Sewer: [ ] Sanitary [ ] Storm units in. diam. [ ] =< 6 [ ] > 6
16. Clearwater Sump
17. Wastewater Sump
18. Paved Animal Barn Pen
19. Animal Yard or Shelter
20. Silo
21. Barn Gutter
22. Manure Pipe [ ] Gravity [ ] Pressure [ ] Cast Iron or Plastic [ ] Other
23. Other Manure Storage
24. Ditch
25. Other NR 812 Waste Storage

5. Drillhole Dimensions and Construction Method

Dia (in.)	From (ft.)	To (ft.)
8.75	0	87

Upper Enlarged Drillhole / Lower Open Bedrock
[X] ---1. Rotary - Mud Circulation----------
[ ] ---2. Rotary - Air----------
[ ] ---3. Rotary - Air and Foam----------
[ ] ---4. Drill-Through Casing Hammer
[ ] ---5. Reverse Rotary
[ ] ---6. Cable-tool Bit in. dia----
[ ] 7. Dual Rotary
[ ] 8. Temp. Outer Casing in. dia. depth (ft)
Removed? [ ] Yes [X] No
If no, why not?

8. Geology

Type, Caving/Noncaving, Color, Hardness, etc	From (ft.)	To (ft.)
--I- Soil-Organic	0	1
G-C- Gray, Clay	1	8
--Y- Sand & Gravel	8	55
--YC Sand & Gravel, Clayey	55	70
-AY- Coarse, Sand & Gravel	70	87

6. Casing, Liner, Screen

Dia (in.)	Material, Weight, Specification	From (ft.)	To (ft.)
5	EAGLE PVC 1120SDR21 200PSI ASTM F480	0	84
3	18 CONTINUOUS SLOT STAINLESS STEEL	84	87

9. Static Water Level: ft. above ground surface
10 ft. below ground surface

10. Pump Test
Pumping Level 15 ft. below surface
Pumping at 10 GPM for 2 hours

11. Well is: [X] Above Grade 14 in. [ ] Below Grade
Developed? [X] Yes [ ] No
Disinfected? [X] Yes [ ] No
Capped? [X] Yes [ ] No

7. Grout or Other Sealing Material Method
Method: TREMIE PIPE-PUMPED

Kind of Sealing Material	From (ft.)	To (ft.)	# Sacks Cement
HIGH SOLID BENTONITE GROUT	0	81	7

12. Did you notify the owner of the need to permanently abandon and fill all unused wells on this property? [X] Yes [ ] No If no, explain:

13. Signature of the Well Constructor or Supervisory Driller: TAB
Date signed:

Signature of Drill Rig Operator (Mandatory unless same as above): JSM
Date signed:

Make additional comments on reverse side about geology, additional screens, water quality, etc.

Variance issued [ ] Yes [X] No

Department of Natural Resources

Well Construction Report Comment Sheet
Form 3300-77A Rev. 8/00

Well Codes and Identifiers

Geologic Log No	
SID Number	
Common Well Name	
Well Notification #	46567560
Batch Seq #	888888888

Well Construction Report For WISCONSIN UNIQUE WELL NUMBER TN241

State of WI - Private Water Systems - DG/2
Department of Natural Resources, Box 7921
Madison, WI 53707
Please type or Print using a black Pen
Please Use Decimals Instead of Fractions

Form 3300-77A (R 8/00)

Property Owner: **BISTRAM, DALE** | Telephone Number: **715-463-3333**

Mailing Address: **23439 EMIL FINK RD**

City: **SIREN** | State: **WI** | Zip Code: **54872**

County of Well Location: **Burnett** | County Well Permit No.: **W** | Well Completion Date: **10/17/2006**

1. Well Location: [X] Town [ ] City [ ] Village of **DANIELS** | Fire # (if available): **23439**

Grid or Street Address or Road Name and Number: **23439 EMIL FINK RD**

Subdivision Name | Lot # | Block #

Well Constructor (Business Name): **GARY C BEECROFT** | License #: **137** | Facility ID Number (Public Wells)

Address: **GARY BEECROFT WELL DRLG & WATER SY** | Public Well Plan Approval #: **W--**

City: **SIREN** | State: **WI** | Zip Code: **54872-9604** | Date of Approval (mm/dd/yyyy)

Hicap Permanent well # | Common Well #

Specific Capacity: **5.6** gpm/ft

Gov't Lot # | or **SW** 1/4 of **NE** 1/4 of

Section **19** T **38** N; R **17** [ ] E [X] W

Latitude Deg. Min.

Longitude Deg Min.

Lat/Long Method

2. Well Type: [X] New [ ] Reconstruction [ ] Replacement

of previous unique well # constructed in

Reason for replaced or Reconstructed Well?: **NEW HOME**

3. Well serves **1** # of homes and or (e.g. barn, restaurant, church, school, industry, etc.)

High capacity Well? [ ] Yes [X] No

Property? [ ] Yes [X] No

[X] Drilled [ ] Driven Point [ ] Jetted [ ] Other:

4. Is the well located upslope or sideslope and not downslope from any contamination source, including those on neighboring properties? [X] Yes [ ] No

Well located within 1,200 feet of a quarry? [ ] Yes [ ] No If yes, distance in feet from quarry:

Well located in floodplain? [ ] Yes [X] No

Distance in Feet from Well to Nearest:

1. Landfill
39 2. Building Overhang
63 3. Septic [X] Holding Tank [ ]
192 4. Sewage Absorption Unit
5. Nonconforming Pit
6. Buried Home Heating Oil Tank
7. Buried Petroleum Tank
8. Shoreline [ ] Swimming Pool [ ]
9. Downspout/Yard Hydrant
10. Privy
11. Foundation Drain to Clearwater
12. Foundation Drain to Sewer
13. Building Drain [ ] Cast Iron or Plastic [ ] Other
14. Building Sewer [ ] Gravity [ ] Pressure [ ] Cast Iron or Plastic [ ] Other
15. Collector or Street Sewer: [ ] Sanitary units in. diam. [ ] Storm [ ] =< 6 [ ] > 6
16. Clearwater Sump
17. Wastewater Sump
18. Paved Animal Barn Pen
19. Animal Yard or Shelter
20. Silo
21. Barn Gutter
22. Manure Pipe [ ] Gravity [ ] Pressure [ ] Cast Iron or Plastic [ ] Other
23. Other Manure Storage
24. Ditch
25. Other NR 812 Waste Storage

5. Drillhole Dimensions and Construction Method

Dia (in.)	From (ft.)	To (ft.)
8.75	**0**	**59.17**

Upper Enlarged Drillhole / Lower Open Bedrock

[X] ---1. Rotary - Mud Circulation----------
[ ] ---2. Rotary - Air----------
[ ] ---3. Rotary - Air and Foam----------
[ ] ---4.Drill-Through Casing Hammer
[ ] ---5. Reverse Rotary
[ ] ---6. Cable-tool Bit in. dia------
[ ] 7. Dual Rotary
[ ] 8. Temp. Outer Casing in. dia. depth (ft)
Removed? [ ] Yes [ ] No
If no, why not?

8. Geology

Type, Caving/Noncaving, Color, Hardness, etc.	From (ft.)	To (ft.)
--Z- **CLAY & GRAVEL**	**0**	**10**
--Y- **SAND & GRAVEL**	**10**	**19**
--P- **HARDPAN**	**19**	**49**
--G- **GRAVEL**	**49**	**59.2**

6. Casing, Liner, Screen

Dia. (in.)	Material, Weight, Specification	From (ft.)	To (ft.)
	5 EAGLE SDR 17 PVC	**0**	**55.5**
4	**SLOT STAINLESS 50 STEEL**	**54.83**	**59.17**

9. Static Water Level
7 ft. above ground surface
ft. below ground surface

10. Pump Test
Pumping Level **25** ft. below surface
Pumping at **100** GPM for **1** hours

11. Well is: [X] Above Grade **12** in. [ ] Below Grade
Developed? [X] Yes [ ] No
Disinfected? [X] Yes [ ] No
Capped? [X] Yes [ ] No

7. Grout or Other Sealing Material. Method
Method: **TREMIE**

Kind of Sealing Material	From (ft.)	To (ft.)	# Sacks Cement
QUICK GROUT	**0**		

12. Did you notify the owner of the need to permanently abandon and fill all unused wells on this property? [ ] Yes [ ] No If no, explain:

13. Signature of the Well Constructor or Supervisory Driller: **GB** Date signed: **03/05/2007**

Signature of Drill Rig Operator (Mandatory unless same as above) Date signed

Make additional comments on reverse side about geology, additional screens, water quality, etc.

Variance issued [ ] Yes [X] No

Department of Natural Resources

Well Construction Report Comment Sheet
Form 3300-77A Rev. 8/00

Well Codes and Identifiers

Geologic Log No	
SID Number	
Common Well Name	
Well Notification #	24184135
Batch Seq #	1070

Well Construction Report For WISCONSIN UNIQUE WELL NUMBER TD549

State of WI - Private Water Systems - DG/2
Department of Natural Resources, Box 7921
Madison, WI 53707
Please type or Print using a black Pen
Please Use Decimals Instead of Fractions

Form 3300-77A
(R 8/00)

Property Owner: **BJORKLAND, LAURA**
Telephone Number: --

Mailing Address: **10251 HWY 70**

City: **SIREN** State: **WI** Zip Code: **54872**

County of Well Location: **Burnett**
County Well Permit No.: **W**
Well Completion Date: **08/21/2006**

1. Well Location: [X] Town [ ] City [ ] Village of **DANIELS**
Fire # (if available): **10251**

Grid or Street Address or Road Name and Number: **ST HWY 70**

Subdivision Name: Lot #: Block #:

Well Constructor (Business Name): **CHELL WELL DRILLING**
License #: **22**
Facility ID Number (Public Wells):

Address: **3505 115TH ST**
Public Well Plan Approval #: **W--**

City: **FREDERIC** State: **WI** Zip Code: **54837-9803**
Date of Approval (mm/dd/yyyy):

Hicap Permanent well #:
Common Well #:
Specific Capacity: **2** gpm/ft

Gov't Lot #: or **NE** 1/4 of **NE** 1/4 of
Section **19** T **38** N; R **17** [ ] E [X] W
Latitude Deg. Min.
Longitude Deg. Min.

2. Well Type: [ ] New [X] Replacement [ ] Reconstruction
of previous unique well # constructed in
Reason for replaced or Reconstructed Well? **POINT DRY**

Lat/Long Method:

3. Well serves **1** # of homes and or (e.g. barn, restaurant, church, school, industry, etc.)
High capacity Well? [ ] Yes [X] No
Property? [ ] Yes [X] No

[X] Drilled [ ] Driven Point [ ] Jetted [ ] Other:

4. Is the well located upslope or sideslope and not downslope from any contamination source, including those on neighboring properties? [X] Yes [ ] No
Well located within 1,200 feet of a quarry? [ ] Yes [ ] No If yes, distance in feet from quarry:
Well located in floodplain? [ ] Yes [X] No

Distance in Feet from Well to Nearest:
1. Landfill
25 2. Building Overhang
50 3. Septic [X] Holding Tank [ ]
60 4. Sewage Absorption Unit
5. Nonconforming Pit
6. Buried Home Heating Oil Tank
7. Buried Petroleum Tank
8. Shoreline [ ] Swimming Pool [ ]
9. Downspout/Yard Hydrant
10. Privy
11. Foundation Drain to Clearwater
12. Foundation Drain to Sewer
13. Building Drain [ ] Cast Iron or Plastic [ ] Other
14. Building Sewer [ ] Gravity [ ] Pressure [ ] Cast Iron or Plastic [ ] Other
15. Collector or Street Sewer: [ ] Sanitary [ ] Storm units [ ] =< 6 [ ] > 6 in. diam.
16. Clearwater Sump
17. Wastewater Sump
18. Paved Animal Barn Pen
19. Animal Yard or Shelter
20. Silo
21. Barn Gutter
22. Manure Pipe [ ] Gravity [ ] Pressure [ ] Cast Iron or Plastic [ ] Other
23. Other Manure Storage
24. Ditch
25. Other NR 812 Waste Storage

5. Drillhole Dimensions and Construction Method

Dia (in.)	From (ft.)	To (ft.)
6	0	60

Upper Enlarged Drillhole / Lower Open Bedrock
[ ] ---1. Rotary - Mud Circulation----------
[X] ---2. Rotary - Air----------
[ ] ---3. Rotary - Air and Foam----------
[ ] ---4. Drill-Through Casing Hammer
[X] ---5. Reverse Rotary
[ ] ---6. Cable-tool Bit in. dia------
[ ] 7. Dual Rotary
[ ] 8. Temp. Outer Casing in. dia. depth (ft)
Removed? [ ] Yes [ ] No
If no, why not?

8. Geology Type, Caving/Noncaving, Color, Hardness, etc

From (ft.)	To (ft.)	Geology
0	60	-QS- SAND, C

6. Casing, Liner, Screen Material, Weight, Specification

Dia (in.)	Material, Weight, Specification	From (ft.)	To (ft.)
	6 STEEL PE 18.97 #/FT ASTM A-53 IPSCO WELD	0	57

Dia (in.)	Screen type, material & slot size	From (ft.)	To (ft.)
4	SS TELE 15 SLOT	57	60

9. Static Water Level
ft. above ground surface
30 ft. below ground surface

10. Pump Test
Pumping Level **40** ft. below surface
Pumping at **20** GPM for **1** hours

11. Well is: [X] Above Grade **14** in. [ ] Below Grade
Developed? [X] Yes [ ] No
Disinfected? [X] Yes [ ] No
Capped? [X] Yes [ ] No

7. Grout or Other Sealing Material. Method
Method: **MOUNDED**

Kind of Sealing Material	From (ft.)	To (ft.)	# Sacks Cement
BENTONITE GRANULARS	0		

12. Did you notify the owner of the need to permanently abandon and fill all unused wells on this property?
[X] Yes [ ] No If no, explain:

13. Signature of the Well Constructor or Supervisory Driller: **RC** Date signed: **02/11/2007**
Signature of Drill Rig Operator (Mandatory unless same as above) Date signed

Make additional comments on reverse side about geology, additional screens, water quality, etc.

Variance issued [ ] Yes [X] No

Department of Natural Resources

Well Construction Report Comment Sheet
Form 3300-77A **Rev. 8/00**

Well Codes and Identifiers

Geologic Log No	
SID Number	
Common Well Name	
Well Notification #	23673575
Batch Seq #	1067

Well Construction Report For WISCONSIN UNIQUE WELL NUMBER QM580

State of WI - Private Water Systems - DG/2
Department of Natural Resources, Box 7921
Madison, WI 53707
Please type or Print using a black Pen
Please Use Decimals Instead of Fractions

Form 3300-77A
(R 8/00)

Property Owner: MILLER, LEON
Telephone Number: 715-689-2535
Mailing Address: 23580 CT RD W
City: GRANTSBURG
State: WI
Zip Code: 54840
County of Well Location: Burnett
County Well Permit No.: W
Well Completion Date: 11/08/2001

1. Well Location: [X] Town [ ] City [ ] Village of DANIELS
Fire # (if available)
Grid or Street Address or Road Name and Number
Subdivision Name | Lot # | Block #

Well Constructor (Business Name): ROGER BEECROFT
License #: 182
Facility ID Number (Public Wells)
Address: W8834 SAND RD
Public Well Plan Approval # W--
City: SHELL LAKE
State: WI
Zip Code: 54871-9801
Date of Approval (mm/dd/yyyy)
Hicap Permanent well #
Common Well #
Specific Capacity: 2.5 gpm/ft

Gov't Lot # or NW 1/4 of NW 1/4 of
Section 19 T 38 N; R 17 [ ] E [X] W
Latitude Deg. Min.
Longitude Deg Min.

2. Well Type: [ ] New [X] Replacement [ ] Reconstruction
Lat/Long Method: GPS008
of previous unique well # constructed in
Reason for replaced or Reconstructed Well?

3. Well serves 1 # of homes and or (e.g. barn, restaurant, church, school, industry, etc.)
High capacity Well? [ ] Yes [X] No
Property? [ ] Yes [X] No

[X] Drilled [ ] Driven Point [ ] Jetted [ ] Other:

4. Is the well located upslope or sideslope and not downslope from any contamination source, including those on neighboring properties? [X] Yes [ ] No
Well located within 1,200 feet of a quarry? [ ] Yes [ ] No If yes, distance in feet from quarry:
Well located in floodplain? [ ] Yes [X] No
Distance in Feet from Well to Nearest:
1. Landfill
30 2. Building Overhang
40 3. Septic [ ] Holding Tank [X]
4. Sewage Absorption Unit
5. Nonconforming Pit
6. Buried Home Heating Oil Tank
7. Buried Petroleum Tank
8. Shoreline [ ] Swimming Pool [ ]
9. Downspout/Yard Hydrant
10. Privy
11. Foundation Drain to Clearwater
12. Foundation Drain to Sewer
13. Building Drain [ ] Cast Iron or Plastic [ ] Other
14. Building Sewer [ ] Gravity [ ] Pressure [ ] Cast Iron or Plastic [ ] Other
15. Collector or Street Sewer: [ ] Sanitary [ ] Storm units [ ] =< 6 [ ] > 6 in. diam.
16. Clearwater Sump
17. Wastewater Sump
18. Paved Animal Barn Pen
19. Animal Yard or Shelter
20. Silo
21. Barn Gutter
22. Manure Pipe [ ] Gravity [ ] Pressure [ ] Cast Iron or Plastic [ ] Other
23. Other Manure Storage
24. Ditch
25. Other NR 812 Waste Storage

5. Drillhole Dimensions and Construction Method

Dia (in.)	From (ft.)	To (ft.)
8.75	0	103

Upper Enlarged Drillhole / Lower Open Bedrock
[X] ---1. Rotary - Mud Circulation----------
[ ] ---2. Rotary - Air----------
[ ] ---3. Rotary - Air and Foam----------
[ ] ---4. Drill-Through Casing Hammer
[ ] ---5. Reverse Rotary
[ ] ---6. Cable-tool Bit in. dia------
[ ] 7. Dual Rotary
[ ] 8. Temp. Outer Casing in. dia. depth (ft)
Removed? [ ] Yes [ ] No
If no, why not?

8. Geology Type, Caving/Noncaving, Color, Hardness, etc.

From (ft.)	To (ft.)	Geology
0	92	--Z- GRAVEL & CLAY
92	103	--Y- SAND & GRAVEL

6. Casing, Liner, Screen

Dia. (in.)	Material, Weight, Specification	From (ft.)	To (ft.)
5	PVC SDR17 EAGLE SOLVENT WELD	0	99

Dia. (in.)	Screen type, material & slot size		
5	P.S. STAINLESS STEEL 18	99	103

9. Static Water Level
ft. above ground surface
4 ft. below ground surface

10. Pump Test
Pumping Level 10 ft. below surface
Pumping at 15 GPM for 1 hours

11. Well is: [X] Above Grade [ ] Below Grade
16 in.
Developed? [X] Yes [ ] No
Disinfected? [X] Yes [ ] No
Capped? [X] Yes [ ] No

7. Grout or Other Sealing Material. Method
Method:

Kind of Sealing Material	From (ft.)	To (ft.)	# Sacks Cement
AQUA-GROUT BENSEAL	0		

12. Did you notify the owner of the need to permanently abandon and fill all unused wells on this property? [X] Yes [ ] No If no, explain:

13. Signature of the Well Constructor or Supervisory Driller: RB
Date signed: 11/09/2001
Signature of Drill Rig Operator (Mandatory unless same as above) Date signed

Make additional comments on reverse side about geology, additional screens, water quality, etc.
Variance issued [ ] Yes [X] No

Department of Natural Resources

Well Codes and Identifiers

Well Construction Report Comment Sheet
Form 3300-77A **Rev. 8/00**

Geologic Log No	
SID Number	
Common Well Name	
Well Notification #	
Batch Seq #	772

Well Construction Report For WISCONSIN UNIQUE WELL NUMBER MB714

State of WI - Private Water Systems - DG/2
Department of Natural Resources, Box 7921
Madison, WI 53707
Please type or Print using a black Pen
Please Use Decimals Instead of Fractions.

Form 3300-77A
(R 8/00)

Property Owner: ERICKSON, BRUCE
Telephone Number: 715-689-2303
Mailing Address: 401 N PARK ST
City: GRANTSBURG
State: WI
Zip Code: 54840
County of Well Location: Burnett
County Well Permit No.: W
Well Completion Date: 09/26/1997

1. Well Location: [X] Town [ ] City [ ] Village of DANIELS
Fire # (if available):
Grid or Street Address or Road Name and Number:
Subdivision Name: Lot #: Block #:

Well Constructor (Business Name): GARY BEECROFT
License #: 137
Facility ID Number (Public Wells):
Address: 1318 350TH AVE
Public Well Plan Approval # W--
City: SIREN
State: WI
Zip Code: 54872-9604
Date of Approval (mm/dd/yyyy):
Hicap Permanent well #:
Common Well #:
Specific Capacity: 1.4 gpm/ft

Gov't Lot #: or NE 1/4 of SE 1/4 of
Section 19 T 38 N; R 17 [ ] E [X] W
Latitude Deg. Min.
Longitude Deg Min.

2. Well Type: [ ] Replacement [X] New [ ] Reconstruction
Lat/Long Method: GPS008
of previous unique well # constructed in
Reason for replaced or Reconstructed Well?: NEW HOME

3. Well serves 1 # of homes and or (e.g. barn, restaurant, church, school, industry, etc.)
High capacity Well? [ ] Yes [X] No
Property? [ ] Yes [X] No

[X] Drilled [ ] Driven Point [ ] Jetted [ ] Other:

4. Is the well located upslope or sideslope and not downslope from any contamination source, including those on neighboring properties? [X] Yes [ ] No
Well located within 1,200 feet of a quarry? [ ] Yes [ ] No If yes, distance in feet from quarry:
Well located in floodplain? [ ] Yes [X] No
Distance in Feet from Well to Nearest:
1. Landfill
7 2. Building Overhang
>25 3. Septic [ ] Holding Tank [ ]
>50 4. Sewage Absorption Unit
5. Nonconforming Pit
6. Buried Home Heating Oil Tank
7. Buried Petroleum Tank
8. Shoreline [ ] Swimming Pool [ ]
9. Downspout/Yard Hydrant
10. Privy
11. Foundation Drain to Clearwater
12. Foundation Drain to Sewer
13. Building Drain [ ] Cast Iron or Plastic [ ] Other
14. Building Sewer [ ] Gravity [ ] Pressure [ ] Cast Iron or Plastic [ ] Other
15. Collector or Street Sewer: [ ] Sanitary [ ] Storm units in. diam. [ ] =< 6 [ ] > 6
16. Clearwater Sump
17. Wastewater Sump
18. Paved Animal Barn Pen
19. Animal Yard or Shelter
20. Silo
21. Barn Gutter
22. Manure Pipe [ ] Gravity [ ] Pressure [ ] Cast Iron or Plastic [ ] Other
23. Other Manure Storage
24. Ditch
25. Other NR 812 Waste Storage

5. Drillhole Dimensions and Construction Method

Dia (in.)	From (ft.)	To (ft.)
6	0	50.75

Upper Enlarged Drillhole / Lower Open Bedrock
[ ] ---1. Rotary - Mud Circulation----------
[ ] ---2. Rotary - Air----------
[ ] ---3. Rotary - Air and Foam----------
[ ] ---4.Drill-Through Casing Hammer
[ ] ---5. Reverse Rotary
[ ] ---6. Cable-tool Bit in. dia-----
[ ] 7. Dual Rotary
[ ] 8. Temp. Outer Casing in. dia. depth (ft)
Removed? [ ] Yes [ ] No
If no, why not?

8. Geology

Type, Caving/Noncaving, Color, Hardness, etc		From (ft.)	To (ft.)
--S-	SAND	0	3
--CG	GRAVELY CLAY	3	9
--Y-	SAND @ GRAVEL	9	12
--CS	SANDY CLAY	12	31
--CG	GRAVELY CLAY	31	34
--SU	MUDDY SAND	34	42
--Y-	SAND @ GRAVEL	42	508.

6. Casing, Liner, Screen

Dia. (in.)	Material, Weight, Specification	From (ft.)	To (ft.)
6	NEW BLACK STEEL 1897 PER FT SATA53 280 WALLTHICKNESS SAWHILL PIPE CO WELED JOINT	0	46.8

Dia. (in.)	Screen type, material & slot size	From (ft.)	To (ft.)
4	SS 18 SLOT SCREEN	46.25	50.75

7. Grout or Other Sealing Material. Method

Method: Kind of Sealing Material	From (ft.)	To (ft.)	# Sacks Cement
BENTONITE GRRAU DRIVING CASING	0	0	

9. Static Water Level
ft. above ground surface
8 ft. below ground surface

10. Pump Test
Pumping Level 30 ft. below surface
Pumping at 30 GPM for .75 hours

11. Well is: [X] Above Grade 12 in. [ ] Below Grade
Developed? [X] Yes [ ] No
Disinfected? [X] Yes [ ] No
Capped? [X] Yes [ ] No

12. Did you notify the owner of the need to permanently abandon and fill all unused wells on this property? [ ] Yes [ ] No If no, explain:

13. Signature of the Well Constructor or Supervisory Driller: GB
Date signed: 10/08/1997
Signature of Drill Rig Operator (Mandatory unless same as above): TB
Date signed: 10/08/1997

Make additional comments on reverse side about geology, additional screens, water quality, etc.

Variance issued [ ] Yes [X] No

Department of Natural Resources

Well Codes and Identifiers

Geologic Log No

SID Number

Common Well Name

Well Notification #

Batch Seq # 477

Well Construction Report Comment Sheet
Form 3300-77A **Rev. 8/00**

Wel 6

WELL CONSTRUCTOR'S REPORT TO WISCONSIN STATE BOARD OF HEALTH

See Instructions on Reverse Side

1. County Burnett — Town ☑ Village ☐ City ☐ Daniels (Check one and give name)

2. Location Sec 18-T38-R17W (Name of street and number of premise or Section, Town and Range numbers)

3. Owner ☑ or Agent ☐ Rody Olson (Name of individual, partnership or firm)

4. Mail Address Siren, R#1 Box 54 (Complete address required)

5. From well to nearest: Building 5 ft; sewer ____ ft; drain ____ ft; septic tank 150 ft; dry well or filter bed ____ ft; abandoned well ____ ft.

6. Well is intended to supply water for: home

7. DRILLHOLE:

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
8	0	20	4	20	103

8. CASING AND LINER PIPE OR CURBING:

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
4	Republic Steel 11 lbs per foot	0	100
	Johnson Everdur Screen	100	103

has duplex pitless unit

9. GROUT:

Kind	From (ft.)	To (ft.)
Clay	0	20

10. FORMATIONS:

Kind	From (ft.)	To (ft.)
Red Clay	0	10
Sandy Clay	10	41
Sand & Gravel	41	103

11. MISCELLANEOUS DATA:

Yield test: 10 Hrs. at 8 GPM.

Depth from surface to water-level: 43 ft.

Water-level when pumping: 51 ft.

Water sample was sent to the state laboratory at: Madison (City) on Dec 22 1959

Construction of the well was completed on: Nov 15 1959

The well is terminated 12 inches ☑ above, below ☐ the permanent ground surface.

Was the well disinfected upon completion? Yes ✓ No ____

Was the well sealed watertight upon completion? Yes ✓ No ____

Signature Willis [illegible] (Registered Well Driller) — Cumberland Wis R#3 (Complete Mail Address)

Please do not write in space below

Rec'd DEC 23 1959 No. 44072

Ans'd

Interpretation UNSAFE

	10 ml	10 ml	10 ml	10 ml	10 ml
Gas—24 hrs.	+	+	+		
48 hrs.			+	0	0
Confirm	+	+	+		
B. Coli	3/5				

Examiner

1128

Wel 6

WELL CONSTRUCTOR'S REPORT TO WISCONSIN STATE BOARD OF HEALTH

See Instructions on Reverse Side

1. County Burnett — Town ☐ Village ☐ City ☐ Daniels (Check one and give name)

2. Location Sec 18-T38-R17W
Name of street and number of premise or Section, Town and Range numbers

3. Owner ☑ or Agent ☐ Rudy Olson
Name of individual, partnership or firm

4. Mail Address Sum R#1 Box 54
Complete address required

5. From well to nearest: Building 5 ft; sewer ____ ft; drain ____ ft; septic tank 150 ft;
dry well or filter bed ____ ft; abandoned well ____ ft.

6. Well is intended to supply water for: Home

7. DRILLHOLE:

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
			4	0	103
			4	100	120

8. CASING AND LINER PIPE OR CURBING:

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
	Republic	100	117
	Johnson Screen	117	120
	Everdur		

9. GROUT:

Kind	From (ft.)	To (ft.)

10. FORMATIONS:

Kind	From (ft.)	To (ft.)
Sand & Gravel	103	120

DEC 9 1960
SANITARY ENGINEERING

Construction of the well was completed on: Nov 5 19 60

The well is terminated 12 inches ☑ above, below ☐ the permanent ground surface.

Was the well disinfected upon completion? Yes ✓ No ____

Was the well sealed watertight upon completion? Yes ✓ No ____

11. MISCELLANEOUS DATA:

Yield test: 12 Hrs. at 8 GPM.

Depth from surface to water-level: 43 ft.

Water-level when pumping: 69 ft.

Water sample was sent to the state laboratory at: Madison (City) on Nov 30 1960

Signature Willis H Riley (Registered Well Driller) — Cumberland Wis (Complete Mail Address)

Please do not write in space below

Rec'd DEC 1 - 1960 No. 47437

Ans'd SAFE—BACTERIOLOGICALLY

Interpretation

	10 ml	10 ml	10 ml	10 ml	10 ml
Gas—24 hrs.					
48 hrs.					
Confirm					
B. Coli	0				

Examiner

1139

WELL CONSTRUCTOR'S REPORT
FORM 3300–15

APR 7 1976

NOTE
WHITE COPY – DIVISION'S COPY
GREEN COPY – DRILLER'S COPY
YELLOW COPY – OWNER'S COPY

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
Box 450
Madison, Wisconsin 53701

1. COUNTY: Burnett | CHECK ONE: ☒ Town ☐ Village ☐ City | NAME: Daniel

2. LOCATION – ¼ Section: NW¼ SE¼ | Section: 19 | Township: 38N | Range: 17W
OR – Grid or street no.: NW¼ | Street name:
AND – If available subdivision name, lot & block no.:

3. OWNER AT TIME OF DRILLING: Kenneth Hoefs
ADDRESS: Rt. 1
POST OFFICE: Siren, Wis.

4. Distance in feet from well to nearest: (Record answer in appropriate block)

BUILDING	SANITARY SEWER C. I.	SANITARY SEWER TILE	FLOOR DRAIN C. I.	FLOOR DRAIN TILE	FOUNDATION DRAIN SEWER CONNECTED	FOUNDATION DRAIN INDEPENDENT	WASTE WATER DRAIN C. I.	WASTE WATER DRAIN TILE
4								

CLEAR WATER DRAIN C. I.	CLEAR WATER DRAIN TILE	SEPTIC TANK	PRIVY	SEEPAGE PIT	ABSORPTION FIELD	BARN	SILO	ABANDONED WELL	SINK HOLE
		100		125					

OTHER POLLUTION SOURCES (Give description such as dump, quarry, drainage well, stream, pond, lake, etc.)

5. Well is intended to supply water for: Home.

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
8	Surface	14	4	14	70

7. CASING, LINER, CURBING, AND SCREEN

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
4	10-T & New block welded	Surface	66
4	screen A 120 g. S. C.	66	70

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
drill cuttings	Surface	14

9. FORMATIONS

Kind	From (ft.)	To (ft.)
hard pan	Surface	14
Coarse gravel	14	48
hard pan	48	63
sand	63	70

10. TYPE OF DRILLING MACHINE USED
☒ Cable Tool ☐ Direct Rotary ☐ Reverse Rotary
☐ Rotary – air w/drilling mud ☐ Rotary – hammer with drilling mud & air ☐ Jetting with ☐ Air ☐ Water

Well construction completed on: 9 - 11 19 75

11. MISCELLANEOUS DATA
Yield test: / Hrs. at 20 GPM
Depth from surface to normal water level: 35 ft.
Depth to water level when pumping: 55 ft.

Well is terminated 8 inches ☒ above ☐ below final grade
Well disinfected upon completion ☒ Yes ☐ No
Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to Madison laboratory on: 2 - 24 1976

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, type of casing joints, method of finishing the well, amount of cement used in grouting, blasting, sub-surface pumprooms, access pits, etc., should be given on reverse side.

SIGNATURE: Clarence Beecroft Registered Well Driller

COMPLETE MAIL ADDRESS: CLARENCE BEECROFT AND SONS
Well Drillers
Route 2 Box 108
Frederic, Wis. 54837

1130

Please do not write in space below

COLIFORM TEST RESULT	GAS – 24 HRS.	GAS – 48 HRS.	CONFIRMED	REMARKS 2948015 115 plot

REV. 3–71

Wel 6

WELL CONSTRUCTOR'S REPORT TO WISCONSIN STATE BOARD OF HEALTH

See Instructions on Reverse Side

1. County Burnett (NW, NE, NE) Town ☒ Village ☐ City ☐ Daniels — Check one and give name

2. Location NE NW Sec. 19 Twp. 38 N R 17 W — Name of street and number of premise or Section, Town and Range numbers

RECEIVED JUL 15 1963 SANITARY ENGINEERING

3. Owner ☒ or Agent ☐ Hugh Parker — Name of individual, partnership or firm

4. Mail Address Rt. 1, Siren, Wis. — Complete address required

5. From well to nearest: Building 18 ft; sewer — ft; drain 14 ft; septic tank 50 ft; dry well or filter bed 70 ft; abandoned well — ft.

6. Well is intended to supply water for: Home

7. DRILLHOLE:

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
8	0	20			
4	20	64			

8. CASING AND LINER PIPE OR CURBING:

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
4	11# black	0	62'
	3ft S.S. 4" diam		
	18 slot Johnson screen		

9. GROUT:

Kind	From (ft.)	To (ft.)
drill cuttings	0	20

10. FORMATIONS:

Kind	From (ft.)	To (ft.)
Stony clay	0	16
sandy clay	16	32
hard pan, layers	32	
gravel		56
Coarse sand	56	64

Construction of the well was completed on: May 30 19 63

The well is terminated 8 inches ☒ above, below ☐ the permanent ground surface.

Was the well disinfected upon completion? Yes X No

Was the well sealed watertight upon completion? Yes X No

11. MISCELLANEOUS DATA:

Yield test: 1 Hrs. at 15 GPM.

Depth from surface to water-level: 34 ft.

Water-level when pumping: 44 ft.

Water sample was sent to the state laboratory at: Madison City on June 3 1963

BEECROFT BROS. WELL DRILLERS
CLARENCE & WM. K. BEECROFT
Clam Falls, Wis.
Complete Mail Address

Signature Wm. K. Beecroft, Registered Well Driller

Please do not write in space below

Rec'd — No.

Ans'd

Interpretation

	10 ml	10 ml	10 ml	10 ml	10 ml
Gas—24 hrs.					
48 hrs.					
Confirm					
B. Coli					

Examiner

1131

114
2948014

plct

County Barnett Twp. Daniels (Office Record—Do not fill in) Sec. BT-35-U

JAN 3 1945

SE, NW, Section 20 T38N R17W

BT-35-U

TO THE WISCONSIN STATE BOARD OF HEALTH, WELL DRILLING DIVISION, MADISON, WIS.

WELL LOG PREMISES DIAGRAM, and REPORT

For Official Record of the Board

(TO BE USED FOR THAT PURPOSE ONLY)

Owner Victor Peterson (If a joint ownership give name of responsible official. Also name of each individual holding an interest. Use a separate sheet and attach hereto.)

Address Siren Wis (City, village, township, county)

Driller Axel Bergstrom

Address Grantsburg Wis

Date of Report Dec 29 1944

Registration No. 380

Give below the location of the property on which well is drilled.

If incorporated village or city: Name ..... Lot ..... Blk. ..... Street and No. .....

If unincorporated hamlet ..... Name ..... County ..... Twp. ..... Highway .....

If Lake Shore Plat ..... Name of Plat ..... Lot ..... Blk. ..... Street .....

If Farm Burnett County T 38 N. R 17 W. Twp. Lot 20 Sec. STH # 70 Highway

If School ..... County ..... Twp. ..... Sec. ..... District .....

If other public building ..... Kind ..... County ..... Twp. ..... Sec. .....

Miscellaneous ..... Kind ..... County ..... Twp. ..... Sec. .....

WELL LOG and REPORT

Kind of casing and liner in feet. Kind of shoe. Indicate grout, screen, seal, etc.

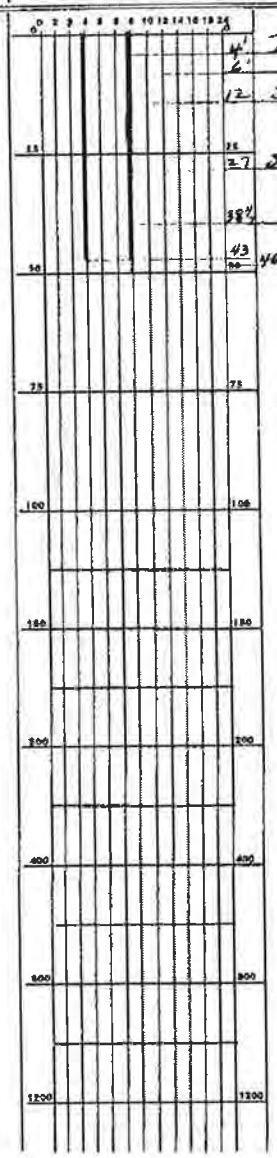
Standard Weight "National" Water Well Pipe.

Malleable iron Drive shoe #433

4'_ #40 Mesh Screen

Flange Seal

WELL DIAGRAM
Vertical Lines = in. Dia.
Horizontal Lines = ft. Depth



Give depth of formations in feet. State if dry or water bearing.

4'	Top Soil + Sand
6'	Red Clay
12	Sand
27	Sand + Clay
38½	Hard Pan
43	46' Course Gravel + Sand

Record of FINAL Pumping Test

Duration of test. Hours 2

Pumping Rate. G. P. M. 4

Depth of pump in well. Ft. 42

Standing water-level (from surface) Ft. 12

Water level when pumping Ft. 14

Water, End of test. Check:
Clear ✓
Cloudy
Turbid

Was well sterilized before test?
Yes ✓ No
Date 10/6/44

To which Laboratory was sample sent?
Superior Wis
Date 10/16/44

Was the well sealed on completion?
Yes ✓ No

How high did you leave casing above grade?
15"

Well was completed
May 27 1944

Well Driller's Signature. Axel Bergstrom

(Be sure to complete the report on the reverse side)

2948016 116 plat

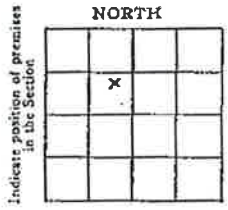
1132

PREMISES DIAGRAM

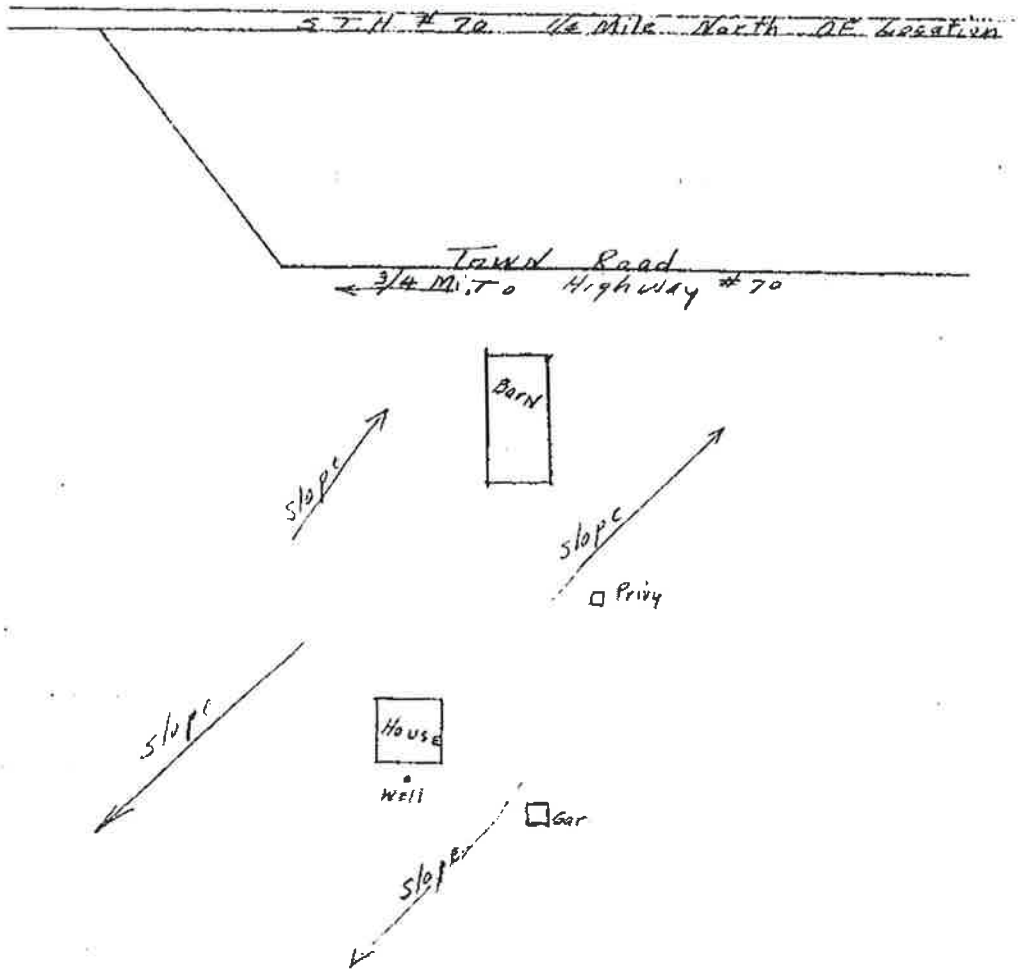
(See Rules)

Draw a representative sketch of the premises on which this well is located, showing the location of the well with reference to buildings and possible sources of pollution. Indicate the condition of the surroundings by printing descriptive words like high, low, level, slope, lake, river, swamp, forest, meadow, barnyard, cesspool, privy, sewer, etc., at their respective locations and show distance from the well on the sketch. Also show direction of the compass. See Part III of Code for specimen Diagram.

REMARKS:



Sec. T. R. (E) (W) (Each division equals 10') (If more or less indicate: .....)



Showing in circle the Direction of Compass

Note: Additional copies of this form may be obtained at 5c per copy in lots of 10 or more. Send remittance with order to State Board of Health, Well Drilling Division, Madison.

1132-2

County Burnett Twp. Daniels (Office Record—Do not fill in) Sec BT-34-U

JAN 3 1945

NE, SE, Section 20 T38N R17W

TO THE WISCONSIN STATE BOARD OF HEALTH, WELL DRILLING DIVISION, MADISON, WIS.

WELL LOG PREMISES DIAGRAM, and REPORT

For Official Record of the Board
(TO BE USED FOR THAT PURPOSE ONLY)

Owner R. M. Strum (If a joint ownership give name of responsible official. Also name of each individual holding as tenant. Use a separate sheet and attach hereto.)

Driller Axel Bergstrom

Address Grantsburg Wis

Address Siren Wisconsin (City, village, township, county)

Date of Report 12/29 1944

Registration No. 380

Give below the location of the property on which well is drilled.

If incorporated village or city: ________ Name ________ Lot ________ Blk. ________ Street and No.

If unincorporated hamlet ________ Name ________ County ________ Twp. ________ Highway

If Lake Shore Plat ________ Name of Plat ________ Lake ________ Lot ________ Blk. ________ Street

If Farm Burnett (County) T 38 N R 17 W (Twp.) 20 (Sec.) S.T.H. # 70 (Highway)

If School ________ County ________ Twp. ________ Sec. ________ District

If other public building ________ Kind ________ County ________ Twp. ________ Sec.

Miscellaneous ________ Kind ________ County ________ Twp. ________ Sec.

WELL LOG and REPORT

Kind of casing and liner in feet. Kind of shoe. Indicate grout, screen, seal, etc.	WELL DIAGRAM Vertical Lines = in. Dia. Horizontal Lines = ft. Depth	Give depth of formations in feet. State if dry or water bearing.	Record of FINAL Pumping Test
Standard Weight "National" Water Well Pipe	7'	Top Soil Clay & Sand	Duration of test. Hours 2
Malleable iron Drive shoe #433			Pumping Rate. G. P. M. 4
4' - #40 Mesh Screen			Depth of pump in well. Ft. 88'
Flange Seal	66'	Sand	Standing water-level (from surface.) Ft. 50'
	72	Water Bearing Sand	Water level when pumping Ft. 54
	88'	Fine Water Bearing Sand	Water. End of test. Check: Clear ✓ Cloudy ____ Turbid ____
	92'	Coarse Gravel & Sand	Was well sterilized before test? Yes ✓ No ____ Date 9/5/44
			To which Laboratory was sample sent? Superior Wis Date 9/20/44
			Was the well sealed on completion? Yes ✓ No ____
			How high did you leave casing above grade? 14"
			Well was completed May 20 1944
			Well Driller: Axel Bergstrom Signature
			(Be sure to complete the report on the reverse side)

2949043 Plot

WGNHS ORIGINAL

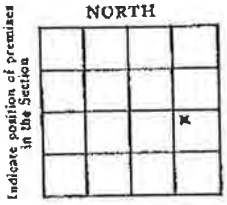
1133

PREMISES DIAGRAM

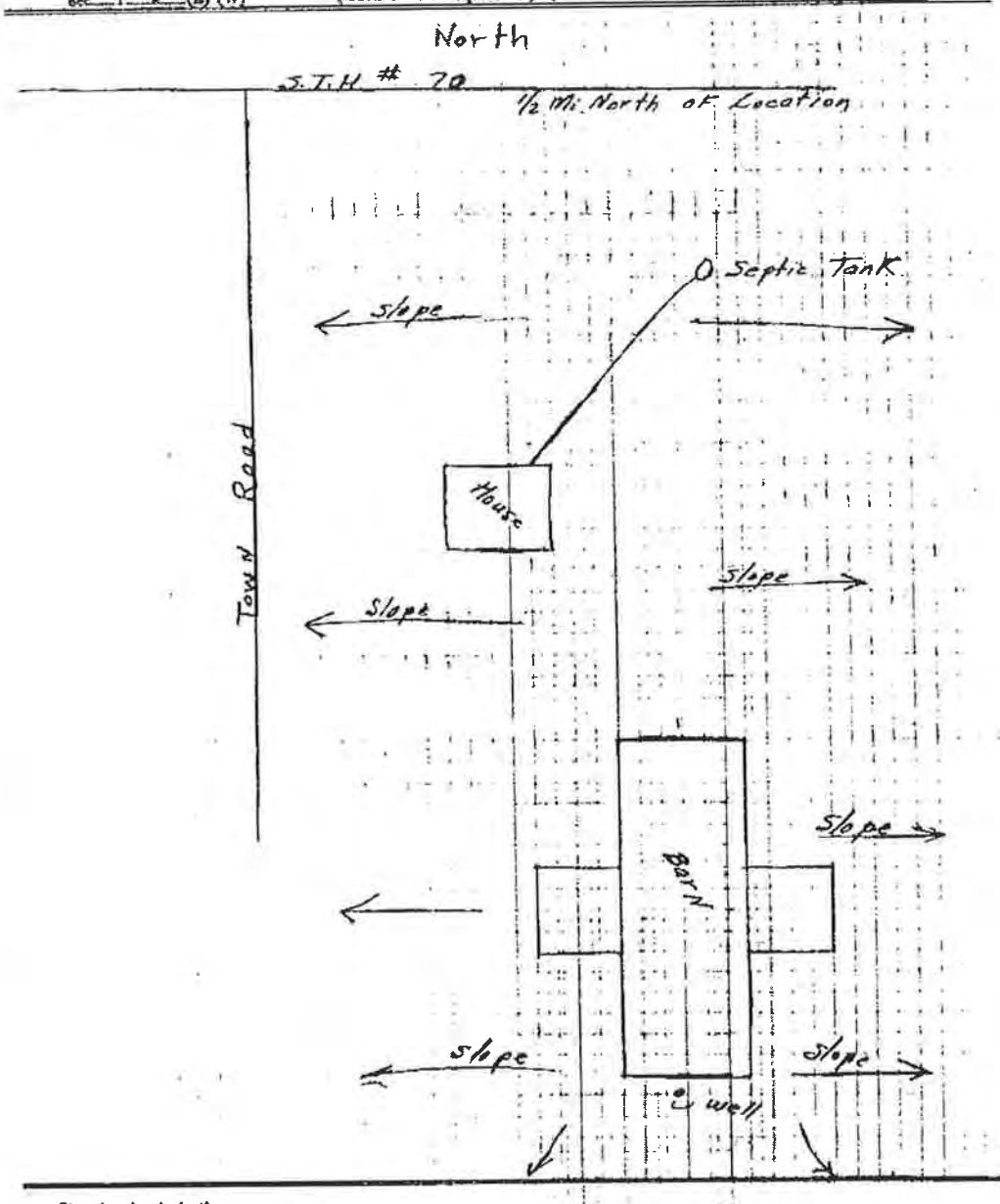
(See Rules)

Draw a representative sketch of the premises on which this well is located, showing the location of the well with reference to buildings and possible sources of pollution. Indicate the condition of the surroundings by printing descriptive words like high, low, level, slope, lake, river, swamp, forest, meadow, barnyard, cesspool, privy, sewer, etc., at their respective locations and show distance from the well on the sketch. Also show direction of the compass. See Part III of Code for specimen Diagram.

REMARKS:



Sec. T. R. (E) (W) (Each division equals 10') (If more or less indicate:)



Showing in circle the Direction of Compass

Note: Additional copies of this form may be obtained at 5c per copy in lots of 10 or more. Send remittance with order to State Board of Health, Well Drilling Division, Madison.

1133-2

WELL CONSTRUCTOR'S REPORT
FORM 3300–15

MAY 2 , 1975

NOTE
WHITE COPY – DIVISION'S COPY
GREEN COPY – DRILLER'S COPY
YELLOW COPY – OWNER'S COPY

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
Box 450
Madison, Wisconsin 53701

1. COUNTY: Burnett

CHECK ONE: [X] Town [ ] Village [ ] City

NAME: Daniels

2. LOCATION – ¼ Section: NE N.E. ¼ | Section: 21 | Township: 38-N | Range: 17 W

OR – Grid or street no. | Street name

AND – If available subdivision name, lot & block no

3. OWNER AT TIME OF DRILLING: Curtes Fallstrom

ADDRESS: R.R.1

POST OFFICE: Siren Wis. 54840

4. Distance in feet from well to nearest: (Record answer in appropriate block)

BUILDING	SANITARY SEWER C. I.	SANITARY SEWER TILE	FLOOR DRAIN C. I.	FLOOR DRAIN TILE	FOUNDATION DRAIN SEWER CONNECTED	FOUNDATION DRAIN INDEPENDENT	WASTE WATER DRAIN C. I.	WASTE WATER DRAIN TILE
20	30		30		XX	XX	30	

CLEAR WATER DRAIN C. I.	CLEAR WATER DRAIN TILE	SEPTIC TANK	PRIVY	SEEPAGE PIT	ABSORPTION FIELD	BARN	SILO	ABANDONED WELL	SINK HOLE
		44	XX	XX	78	XX	XX	XX	XX

OTHER POLLUTION SOURCES (Give description such as dump, quarry, drainage well, stream, pond, lake, etc.)

5. Well is intended to supply water for: Family Home

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
4	Surface	70			

7. CASING, LINER, CURBING, AND SCREEN

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
4	Steel pipe new	Surface	66
	Weight 11.00 T&C		
	4 Ft 4 In.screen		
	below casing		

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
Drove	Surface	70
Casing pulled 4 Ft.		

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Sand	Surface	70

10. TYPE OF DRILLING MACHINE USED

[ ] Cable Tool [ ] Direct Rotary [ ] Reverse Rotary
[ ] Rotary – air w/drilling mud [X] Rotary – hammer with drilling mud/air [ ] Jetting with [ ] Air [ ] Water

Well construction completed on Feb. 11 19 75

Well is terminated 12 inches [X] above [ ] below final grade

Well disinfected upon completion [X] Yes [ ] No

Well sealed watertight upon completion [X] Yes [ ] No

11. MISCELLANEOUS DATA

Yield test: 2 Hrs. at 10 GPM

Depth from surface to normal water level 43 ft.

Depth to water level when pumping 55 ft.

Water sample sent to State laboratory on: March 3 1975

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, type of casing joints, method of finishing the well, amount of cement used in grouting, blasting, sub-surface pumprooms, access pits, etc., should be given on reverse side.

SIGNATURE

Hoyer Bros Albert & Hoyer Registered Well Driller

COMPLETE MAIL ADDRESS

R.R.1 Bay City, Wis. 54723

Please do not write in space below

COLIFORM TEST RESULT	GAS – 24 HRS.	GAS – 48 HRS.	CONFIRMED	REMARKS
1134				232 216 A 2944040

REV. 3–71

State of Wisconsin
Department of Natural Resources
Box 450
Madison, Wisconsin 53701

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300–15
Rev. 10–75

AUG 31 1977

1. COUNTY Burnett

CHECK (✓) ONE: ☑ Town ☐ Village ☐ City

2. LOCATION ¼ Section SE¼ Section 22 Township 38N Range 17W
OR – Grid or Street No. (N½) Street Name
AND – If available subdivision name, lot & block No.

3. NAME Daniels ☑ OWNER ☐ AGENT AT TIME OF DRILLING CHECK (✓) ONE
Richard Strabel
ADDRESS Siren Wis RR#
POST OFFICE

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain C.I.	Sanitary Bldg. Drain Other	Sanitary Bldg. Sewer C.I.	Sanitary Bldg. Sewer Other	Floor Drain Connected To: C.I. Sewer	Floor Drain Connected To: Other Sewer	Storm Bldg. Drain C.I.	Storm Bldg. Drain Other	Storm Bldg. Sewer C.I.	Storm Bldg. Sewer Other
5										

Street Sewer San.	Street Sewer Storm	Other Sewers C.I.	Other Sewers Other	Foundation Drain Connected to: Sewer	Clearwater Dr.	Sewage Sump	Clearwater Sump	Sewage Sump C.I.	Sewage Sump Other	Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit: Seepage Pit	Seepage Bed	Seepage Trench
											90		100		

Privy	Pet Waste Pit	Pit: Nonconforming Existing – Well	Pump	Tank	Subsurface Pumproom Nonconforming Existing	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit

Temporary Manure Stack	Watertight Liquid Manure Tank	Solid Manure Storage Structure	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Other (Give Description)

5. Well is intended to supply water for: home

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
8	Surface	20	4	20	98

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification & Method of Assembly	From (ft.)	To (ft.)
4"	US Steel 11 lb A589 CT	Surface	95
	Johnson SS Screen	95	98
	see letter w.p. file on A-120		

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
Clay Slurry	Surface	26

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Sand & Gravel	Surface	26
Clay & Sand	26	32
Hard Pan	32	66
Clay & Sand	66	92
Sand & Gravel	92	98

10. TYPE OF DRILLING MACHINE USED
☒ Cable Tool ☐ Rotary-air w/drilling mud ☐ Rotary-w/drilling mud ☐ Rotary-hammer w/drilling mud & air ☐ Rotary-hammer & air ☐ Reverse Rotary ☐ Jetting with ☐ Air ☐ Water

Well construction completed on July 1 1977

Well is terminated 15 inches ☑ above ☐ below final grade

Well disinfected upon completion ☑ Yes ☐ No

Well sealed watertight upon completion ☑ Yes ☐ No

11. MISCELLANEOUS DATA
Yield Test: 14 Hrs. at 10 GPM
Depth from surface to normal water level 77 Ft.
Depth of water level when pumping 85 Ft. Stabilized ☑ Yes ☐ No

Water sample sent to Madison laboratory on July 25 1977

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Harry Langland

Signature 135 Willis H Riley Registered Well Driller

Complete Mail Address Barronett Wis 229

2444037

WELL CONSTRUCTOR'S REPORT
FORM 3300-15

MAY 2 , 1975

NOTE
WHITE COPY – DIVISION'S COPY
GREEN COPY – DRILLER'S COPY
YELLOW COPY – OWNER'S COPY

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
Box 450
Madison, Wisconsin 53701

1. COUNTY: Burnett

CHECK ONE: [X] Town [ ] Village [ ] City

NAME: Daniels

2. LOCATION – ¼ Section: ✓ NW, N.W.¼ | Section: 22 | Township: 38 N | Range: 17 W

OR – Grid or street no. | Street name

AND – If available subdivision name, lot & block no.

3. OWNER AT TIME OF DRILLING: Bruce Taylor

ADDRESS: R.R.1

POST OFFICE: Siren, Wis. 54872

4. Distance in feet from well to nearest: (Record answer in appropriate block)

BUILDING	SANITARY SEWER C. I.	SANITARY SEWER TILE	FLOOR DRAIN C. I.	FLOOR DRAIN TILE	FOUNDATION DRAIN SEWER CONNECTED	FOUNDATION DRAIN INDEPENDENT	WASTE WATER DRAIN C. I.	WASTE WATER DRAIN TILE
15	35		35		XXX	XXX	35	

CLEAR WATER DRAIN C. I.	CLEAR WATER DRAIN TILE	SEPTIC TANK	PRIVY	SEEPAGE PIT	ABSORPTION FIELD	BARN	SILO	ABANDONED WELL	SINK HOLE
		52	XX	XX	75	XX	XX	XXX	XX

OTHER POLLUTION SOURCES (Give description such as dump, quarry, drainage well, stream, pond, lake, etc.)

5. Well is intended to supply water for: Family Home

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
4	Surface	70			

7. CASING, LINER, CURBING, AND SCREEN

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
4	Steel pipe new	Surface	66
	Weight 11.00 T&C		
	& Ft. 4 In. Screen		
	below casing		

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
Drove	Surface	70
Casing pulled 4 Ft.		

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Sand	Surface	70

10. TYPE OF DRILLING MACHINE USED

[ ] Cable Tool [ ] Direct Rotary [ ] Reverse Rotary
[ ] Rotary – air w/drilling mud [X] Rotary – hammer with ~~XX~~ drilling mud ~~XX~~ air [ ] Jetting with [ ] Air [ ] Water

Well construction completed on Feb. 4 1975

Well is terminated 12 inches [X] above [ ] below final grade

Well disinfected upon completion [X] Yes [ ] No

Well sealed watertight upon completion [X] Yes [ ] No

11. MISCELLANEOUS DATA

Yield test: 2 Hrs. at 10 GPM

Depth from surface to normal water level 35 ft.

Depth to water level when pumping 40 ft.

Water sample sent to State laboratory on: March 3 1975

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, type of casing joints, method of finishing the well, amount of cement used in grouting, blasting, sub-surface pumprooms, access pits, etc., should be given on reverse side.

SIGNATURE

Hoyer Bros Collard L. Hoyer Registered Well Driller

COMPLETE MAIL ADDRESS

R.R.1 Bay City, Wis. 54723

Please do not write in space below

COLIFORM TEST RESULT	GAS – 24 HRS.	GAS – 48 HRS.	CONFIRMED	REMARKS
1136				231 P 2449039

REV. 3-71

Wel 6

WELL CONSTRUCTOR'S REPORT TO WISCONSIN STATE BOARD OF HEALTH

See Instructions on Reverse Side

1. County Burnette (Town ☒ / Village ☐ / City ☐) Daniels — Check one and give name

2. Location SW¼ SW¼ Sec. 23 Tnp. 38N R. 17W
Name of street and number of premise or Section, Town and Range numbers

3. Owner ☒ or Agent ☐ Otto Kollander
Name of individual, partnership or firm

4. Mail Address Siren, Wisconsin
Complete address required

5. From well to nearest: Building 3 ft; sewer - ft; drain - ft; septic tank - ft; dry well or filter bed - ft; abandoned well - ft.

6. Well is intended to supply water for: Household

7. DRILLHOLE:

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
4	0	101			

8. CASING AND LINER PIPE OR CURBING:

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
4	11# steel	1	98
	2" x 54' Johnson drive point		
	12 slot		

9. GROUT:

Kind	From (ft.)	To (ft.)

10. FORMATIONS:

Kind	From (ft.)	To (ft.)
silty sand	0	85
very fine sand	85	90
very fine silty sand	90	97
clean fine sand	97	101

RECEIVED
NOV 12 1958
ENVIRONMENTAL SANITATION

11. MISCELLANEOUS DATA:

Yield test: 1 Hrs. at 5 GPM.

Depth from surface to water-level: 70 ft.

Water-level when pumping: 20 ft.

Water sample was sent to the state laboratory at: Madison City on November 4 1958

Construction of the well was completed on: November 3, 1958

The well is terminated eight inches ☒ above, below ☐ the permanent ground surface.

Was the well disinfected upon completion? Yes X No

Was the well sealed watertight upon completion? Yes X No

Signature Wm. K. Beecroft, Registered Well Driller — Beecroft Bros., Clam Falls, Wis. Complete Mail Address

Please do not write in space below

36.164

Rec'd NOV 5 - 1958 No.

Ans'd

Interpretation SAFE

	10 ml	10 ml	10 ml	10 ml	10 ml
Gas—24 hrs.					
48 hrs.					
Confirm					
B. Coli					

Examiner

2949047

1137

BT-37-U

WELL CONSTRUCTOR'S REPORT TO WISCONSIN STATE BOARD OF HEALTH

See Instructions on Reverse Side

1. County Burnett {Town ☒ Village ☐ City ☐} Daniels Check one and

2. Location NE, NE sec 24 (T38N R17W)
Name of street and number of premise or Section, Town and Range numbers

RECEIVED NOV 7 1955 ENVIRONMENTAL SANITATION

3. Owner ☒ or Agent ☐ Geo Mc Cauley
Name of individual, partnership or firm

4. Mail Address Siren Wis
Complete address required

5. From well to nearest: Building 5 ft; sewer 70 ft; drain ____ ft; septic tank ____ ft; dry well or filter bed ____ ft; abandoned well ____ ft.

6. Well is intended to supply water for: Farm use

7. DRILLHOLE:

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
4	1	170			

8. CASING AND LINER PIPE OR CURBING:

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
4	Steel	1	170

9. GROUT:

Kind	From (ft.)	To (ft.)

10. FORMATIONS:

Kind	From (ft.)	To (ft.)
Sand & gravel	1	150
Hard Pan	150	160
gravel	160	170

Construction of the well was completed on: Oct 25 19 55

The well is terminated 12 inches ☒ above, below ☐ the permanent ground surface.

Was the well disinfected upon completion? Yes ____ No No

Was the well sealed watertight upon completion? Yes Yes No ____

11. MISCELLANEOUS DATA:

Yield test: ____ Hrs. at ____ GPM.

Depth from surface to water-level: 160 ft.

Water-level when pumping: 9 ft.

Water sample was sent to the state laboratory at: Madison (City) on Oct 31 1955

Signature Thos Bercaw
Registered Well Driller

Siren Wis
Complete Mail Address

Please do not write in space below

Rec'd ____ No. ____

Ans'd ____

Interpretation ____

	10 ml	10 ml	10 ml	10 ml	10 ml
Gas—24 hrs.					
48 hrs.					
Confirm					
B. Coli					

Examiner ____

1138

WELL CONSTRUCTOR'S REPORT
FORM 3300–15

AUG 7 1975

NOTE
WHITE COPY – DIVISION'S COPY
GREEN COPY – DRILLER'S COPY
YELLOW COPY – OWNER'S COPY

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
Box 450
Madison, Wisconsin 53701

1. COUNTY: BURNETT | CHECK ONE: ☒ Town ☐ Village ☐ City | NAME: DANIELS

2. LOCATION – ¼ Section: NW-NW | Section: 26 | Township: 38N | Range: 17W

3. OWNER AT TIME OF DRILLING: KENNETH STONER

OR – Grid or street no. | Street name | ADDRESS

AND – If available subdivision name, lot & block no. | POST OFFICE: SIREN, WI

4. Distance in feet from well to nearest: (Record answer in appropriate block)

BUILDING	SANITARY SEWER C. I.	SANITARY SEWER TILE	FLOOR DRAIN C. I.	FLOOR DRAIN TILE	FOUNDATION DRAIN SEWER CONNECTED	FOUNDATION DRAIN INDEPENDENT	WASTE WATER DRAIN C. I.	WASTE WATER DRAIN TILE
4	22							

CLEAR WATER DRAIN C. I.	CLEAR WATER DRAIN TILE	SEPTIC TANK	PRIVY	SEEPAGE PIT	ABSORPTION FIELD	BARN	SILO	ABANDONED WELL	SINK HOLE
		54			75	110		60	

OTHER POLLUTION SOURCES (Give description such as dump, quarry, drainage well, stream, pond, lake, etc.)

5. Well is intended to supply water for: PRIVATE

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
4	Surface	102			

7. CASING, LINER, CURBING, AND SCREEN

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
4	11# NEW STEEL, BLK., P.E.	Surface	99
4	SMITH SCREEN, S.S., # 15 SLOT	99 6/12	102

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
SAND	Surface	102

10. TYPE OF DRILLING MACHINE USED
☒ Cable Tool ☐ Direct Rotary ☐ Reverse Rotary
☐ Rotary – air w/drilling mud ☐ Rotary – hammer with drilling mud & air ☐ Jetting with ☐ Air ☐ Water

Well construction completed on 5/22 19 75

11. MISCELLANEOUS DATA
Yield test: / Hrs. at 20 GPM
Depth from surface to normal water level 70 ft.
Depth to water level when pumping 80 ft.

Well is terminated 8 inches ☒ above ☐ below final grade
Well disinfected upon completion ☒ Yes ☐ No
Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to MADISON laboratory on: 5/29 19 75

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, type of casing joints, method of finishing the well, amount of cement used in grouting, blasting, sub-surface pumprooms, access pits, etc., should be given on reverse side.

WM. K. BEECROFT & SONS

SIGNATURE: Wm. K. Beecroft Registered Well Driller

COMPLETE MAIL ADDRESS: Well Drilling and Pumps
Rt. 2, Box 109
Frederic, Wisconsin 54837

1139

Please do not write in space below

COLIFORM TEST RESULT	GAS – 24 HRS.	GAS – 48 HRS.	CONFIRMED	REMARKS
				2444048 DIST 240

REV. 3–71

County Burnett Twp. 39 N Range 16 W Sec. 27

Town of Daniels | Section 27 | T38N R17W

TO THE WISCONSIN STATE BOARD OF HEALTH, WELL DRILLING DIVISION, MADISON, WIS.

WELL LOG PREMISES DIAGRAM, and REPORT

For Official Record of the Board

(TO BE USED FOR THAT PURPOSE ONLY)

Owner C. A. Peterson (If a joint ownership give name of responsible official. Also name of each individual holding an interest. Use separate sheet and attach hereto.)

Address Grantsburg, Wis. (City, village, township, county)

Driller Vernon A Chell

Address Frederic, Wis.

Date of Report Sept 23 1937

Registration No. 223

Give below the location of the property on which well is drilled.

If incorporated village or city: Name ____ Lot ____ Blk. ____ Street and No. ____

If unincorporated hamlet ____ Name ____ County ____ Twp. ____ Highway ____

If Lake Shore Plat ____ Name of Plat ____ Lake ____ Lot ____ Blk. ____ Street ____

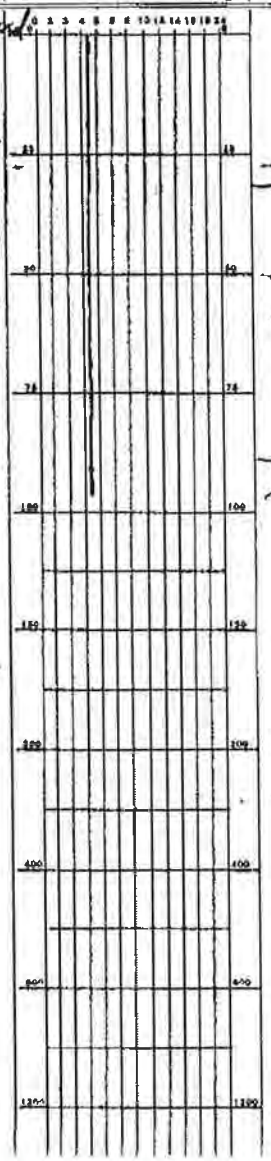
If Subdivision ____

If Farm Burnett (County) Daniels (Twp.) 27 (Sec.) Town Road (Highway) Lot ____ Blk. ____

If School ____ County ____ Twp. ____ Sec. ____ District ____

If other public building ____ Kind ____ County ____ Twp. ____ Sec. ____

WELL LOG and REPORT

Kind of casing and liner in feet. Kind of shoe. Indicate grout, screen, seal, etc.	WELL DIAGRAM Vertical Lines = in. Dia. Horizontal Lines = ft. Depth Use a red line to show casing	Give depth of formations in feet State if dry or water bearing.	Record of FINAL Pumping Test
4 in. Black Standard Pipe 95 ft. Malleable Drive Shoe Drive point Hudson Well Sealed.		Sand to 30 ft. Sand + gravel to 50 ft. Water Bearing Hard pan to 90 ft. Sand to 95 ft.	Duration of test Hours 10 Pumping Rate G. P. M. 4 Depth of pump in well Ft. 60 Standing water-level (from surface.) Ft. 40 Water level when pumping Ft. 45 Water. End of test. Check: Clear ✓ Cloudy ____ Turbid ____ Was well sterilized before test? Yes ____ No ✓ Date ____ To which Laboratory was sample sent? ____ Date ____ Was the well sealed on completion? Yes ✓ No ____ How high did you leave casing above grade? 8 in. Well was completed Sept 7 1938 Well Driller: V. A Chell Signature. (Be sure to complete the report on the reverse side)

WGNHS ORIGINAL

1140

NOV 14 1975

WELL CONSTRUCTOR'S REPORT
FORM 3300–15

NOTE
WHITE COPY – DIVISION'S COPY
GREEN COPY – DRILLER'S COPY
YELLOW COPY – OWNER'S COPY

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
Box 450
Madison, Wisconsin 53701

1. COUNTY: BURNETT
CHECK ONE: ☒ Town ☐ Village ☐ City
NAME: DANIELS

2. LOCATION – ¼ Section: NW-NW | Section: 27 | Township: 38N | Range: 17W
OR – Grid or street no. | Street name
AND – If available subdivision name, lot & block no.

3. OWNER AT TIME OF DRILLING: JAMES T. BARNES
ADDRESS: 2121 COMMONWEALTH
POST OFFICE: ST. PAUL MN. 55108

4. Distance in feet from well to nearest: (Record answer in appropriate block)

BUILDING	SANITARY SEWER C. I.	SANITARY SEWER TILE	FLOOR DRAIN C. I.	FLOOR DRAIN TILE	FOUNDATION DRAIN SEWER CONNECTED	FOUNDATION DRAIN INDEPENDENT	WASTE WATER DRAIN C. I.	WASTE WATER DRAIN TILE
40	52							

CLEAR WATER DRAIN C. I.	CLEAR WATER DRAIN TILE	SEPTIC TANK	PRIVY	SEEPAGE PIT	ABSORPTION FIELD	BARN	SILO	ABANDONED WELL	SINK HOLE
		70			90				

OTHER POLLUTION SOURCES (Give description such as dump, quarry, drainage well, stream, pond, lake, etc.)

5. Well is intended to supply water for: PRIVATE

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
4	Surface	86 6/12			

7. CASING, LINER, CURBING, AND SCREEN

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
4	10.89 NEW STEEL, BLK., P.E.	Surface	83 6/12
4	SMITH SCREEN, SS., # 8 SLOT	82	86 6/12

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
SAND	Surface	86 6/12

10. TYPE OF DRILLING MACHINE USED
☒ Cable Tool ☐ Direct Rotary ☐ Reverse Rotary
☐ Rotary – air w/drilling mud ☐ Rotary – hammer with drilling mud & air ☐ Jetting with ☐ Air ☐ Water

Well construction completed on: AUG. 11 19 75
Well is terminated 8 inches ☒ above ☐ below final grade
Well disinfected upon completion ☒ Yes ☐ No
Well sealed watertight upon completion ☒ Yes ☐ No

11. MISCELLANEOUS DATA
Yield test: 1 Hrs. at 15 GPM
Depth from surface to normal water level: 60 ft.
Depth to water level when pumping: 75 ft.

Water sample sent to MADISON laboratory on: AUG. 25 19 75

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, type of casing joints, method of finishing the well, amount of cement used in grouting, blasting, sub-surface pumprooms, access pits, etc., should be given on reverse side.

WM. K. BEECROFT & SONS

SIGNATURE: Wm. K. Beecroft Registered Well Driller

COMPLETE MAIL ADDRESS: Well Drilling and Pumps
Rt. 2, Box 109
Frederic, Wisconsin 54837

1141

Please do not write in space below

COLIFORM TEST RESULT	GAS – 24 HRS.	GAS – 48 HRS.	CONFIRMED	REMARKS
				237 ft

REV. 3–71

2949045

State of Wisconsin
Department of Natural Resources
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300–15 Rev. 12-76

NOV 2 1979

1. COUNTY: Burnett
CHECK (✓) ONE: ☒ Town ☐ Village ☐ City
Name: Daniel

2. LOCATION: ¼ Section: ~~SW~~ SW | Section: 28 | Township: 38N | Range: 17W
OR – Grid or Street No. | Street Name
AND – If available subdivision name, lot & block No.

3. NAME ☒ OWNER ☐ AGENT AT TIME OF DRILLING CHECK (✓) ONE: Ervin Meyers
ADDRESS: Rt 1
POST OFFICE: Siren, Wisconsin

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain		Sanitary Bldg. Sewer		Floor Drain Connected To:		Storm Bldg. Drain		Storm Bldg. Sewer	
	C.I.	Other	C.I.	Other	C.I. Sewer	Other Sewer	C.I.	Other	C.I.	Other
4										

Street Sewer		Other Sewers		Foundation Drain Connected to:		Sewage Sump		Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit	
San.	Storm	C.I.	Other	Sewer	Sewage Sump	C.I.	Other				Seepage Pit	
				Clearwater Dr.	Clearwater Sump						Seepage Bed	
											Seepage Trench	

Privy	Pet Waste Pit	Pit: Nonconforming Existing		Subsurface Pumproom Nonconforming Existing	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit
		Well			None						
		Pump									
		Tank									

Temporary Manure Stack	Watertight Liquid Manure Tank	Solid Manure Storage Structure	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Other (Give Description)

5. Well is intended to supply water for: Home

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
4	Surface	93			

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification & Method of Assembly	From (ft.)	To (ft.)
4	10.79 New bln Steel, Welded	Surface	89
4	Screen	89	93
	A-53 Valley Steel		

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Sand & gravel	Surface	93

10. TYPE OF DRILLING MACHINE USED
☒ Cable Tool ☐ Rotary-air w/drilling mud ☐ Rotary-w/drilling mud ☐ Rotary-hammer w/drilling mud & air ☐ Rotary-hammer & air ☐ Reverse Rotary ☐ Jetting with ☐ Air ☐ Water

Well construction completed on 3-7 1979

11. MISCELLANEOUS DATA
Yield Test: 1/2 Hrs. at 25 GPM
Depth from surface to normal water level 50 Ft.
Depth of water level when pumping 95 Ft. Stabilized ☒ Yes ☐ No

Well is terminated 8 inches ☒ above ☐ below final grade
Well disinfected upon completion ☒ Yes ☐ No
Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to Madison laboratory on 3-14 1979

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

CLARENCE BEECROFT AND SONS
Well Drillers
Route 2 Box 108
Frederic, Wis. 54837

Signature: Clarence Beecroft Registered Well Driller
1142

OCT 2 9 1973

WELL CONSTRUCTOR'S REPORT
FORM 3300–15

NOTE
WHITE COPY – DIVISION'S COPY
GREEN COPY – DRILLER'S COPY
YELLOW COPY – OWNER'S COPY

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
Box 450
Madison, Wisconsin 53701

1. COUNTY: BURNETT — CHECK ONE: ☒ Town ☐ Village ☐ City — NAME: DANIELS

2. LOCATION – ¼ Section: SE-SW | Section: 29 | Township: 38N | Range: 17W

OR – Grid or street no. | Street name

AND – If available subdivision name, lot & block no.

3. OWNER AT TIME OF DRILLING: DAN GOODREMOOT
ADDRESS: SIREN
POST OFFICE: WI

4. Distance in feet from well to nearest: (Record answer in appropriate block)

BUILDING	SANITARY SEWER C. I.	SANITARY SEWER TILE	FLOOR DRAIN C. I.	FLOOR DRAIN TILE	FOUNDATION DRAIN SEWER CONNECTED	FOUNDATION DRAIN INDEPENDENT	WASTE WATER DRAIN C. I.	WASTE WATER DRAIN TILE
30	45							

CLEAR WATER DRAIN C. I.	CLEAR WATER DRAIN TILE	SEPTIC TANK	PRIVY	SEEPAGE PIT	ABSORPTION FIELD	BARN	SILO	ABANDONED WELL	SINK HOLE
		70		90					

OTHER POLLUTION SOURCES (Give description such as dump, quarry, drainage well, stream, pond, lake, etc.)

5. Well is intended to supply water for: PRIVATE

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
4	Surface	80			

9. FORMATIONS

Kind	From (ft.)	To (ft.)
SAND and GRAVEL	Surface	80

7. CASING, LINER, CURBING, AND SCREEN

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
4	11# NEW STEEL, BLK., T&C.	Surface	78
4	JOHNSON SCREEN, S. STEEL, #18 SLOT	76½	80

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
	Surface	

10. TYPE OF DRILLING MACHINE USED
☒ Cable Tool ☐ Direct Rotary ☐ Reverse Rotary
☐ Rotary – air w/drilling mud ☐ Rotary – hammer with drilling mud & air ☐ Jetting with ☐ Air ☐ Water

Well construction completed on: Sept. 19 1973

11. MISCELLANEOUS DATA
Yield test: 1 Hrs. at 20 GPM
Depth from surface to normal water level: 45 ft.
Depth to water level when pumping: 70 ft.

Well is terminated 8 inches ☒ above ☐ below final grade
Well disinfected upon completion ☒ Yes ☐ No
Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to MADISON laboratory on: Sept. 13 and 24 1973

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, type of casing joints, method of finishing the well, amount of cement used in grouting, blasting, sub-surface pumprooms, access pits, etc., should be given on reverse side.

SIGNATURE: Wm. K. Beecroft — Registered Well Driller
COMPLETE MAIL ADDRESS: WM. K. BEECROFT & SONS
Well Drilling and Pumps
Rt. 2, Box 109
Frederic, Wisconsin 54837

1143

Please do not write in space below

COLIFORM TEST RESULT	GAS – 24 HRS.	GAS – 48 HRS.	CONFIRMED	REMARKS
				28 94001

REV. 3–71

State of Wisconsin
Department of Natural Resources
Box 450
Madison, Wisconsin 53701

JUN 7 1976

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300–15
Rev. 10–75

1. COUNTY: Burnett
CHECK (✓) ONE: ☒ Town ☐ Village ☐ City
Name: Daniels

2. LOCATION: ¼ Section: NW ¼ NW | Section: ~~28~~ | Township: 38N | Range: 17W
OR – Grid or Street No.: NE, NE | Street Name: S29
AND – If available subdivision name, lot & block No.:

3. NAME ☒ OWNER ☐ AGENT AT TIME OF DRILLING CHECK (✓) ONE: Melvin Peterson
ADDRESS: 1112 W 55 st 55419
POST OFFICE: Minneapolis, Minn

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain		Sanitary Bldg. Sewer		Floor Drain Connected To:		Storm Bldg. Drain		Storm Bldg. Sewer	
	C.I.	Other	C.I.	Other	C.I. Sewer	Other Sewer	C.I.	Other	C.I.	Other
4										

Street Sewer		Other Sewers		Foundation Drain Connected to:		Sewage Sump		Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit
San.	Storm	C.I.	Other	Sewer	Sewage Sump	C.I.	Other				Seepage Pit
				Clearwater Dr.	Clearwater Sump						Seepage Bed
											Seepage Trench

Privy	Pet Waste Pit	Pit: Nonconforming Existing	Subsurface Permanent Nonconforming Existing	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit
		Well								
		Pump								
		Tank								

Temporary Manure Stack	Watertight Liquid Manure Tank	Solid Manure Storage Structure	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Other (Give Description)

5. Well is intended to supply water for: home

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
8	Surface	15	4	15	73

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification & Method of Assembly	From (ft.)	To (ft.)
4	10.79 New	Surface	69
	Blk. steel		
	Weld		
	J. L. C. A120		
4	screen	69	73

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
drill cuttings	Surface	15

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Clay	Surface	15
sand & Gravel	15	73

10. TYPE OF DRILLING MACHINE USED
☒ Cable Tool ☐ Rotary-air w/drilling mud ☐ Rotary-w/drilling mud ☐ Rotary-hammer w/drilling mud & air ☐ Rotary-hammer & air ☐ Reverse Rotary ☐ Jetting with Air ☐ Water

Well construction completed on 5-25 19 76

11. MISCELLANEOUS DATA
Yield Test: 1 Hrs. at 30 GPM
Depth from surface to normal water level 20 Ft.
Depth of water level when pumping 45 Ft. Stabilized ☒ Yes ☐ No

Well is terminated 8 inches ☒ above ☐ below final grade
Well disinfected upon completion ☒ Yes ☐ No
Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to Madison laboratory on 6-1 19 76

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

CLARENCE BEECROFT AND SONS 236

Signature: Clarence Beecroft
Registered Well Driller

Complete Mail Address
Well Drillers
Route 2 Box 108
Frederic, Wis. 54837

2949044

4-44

Wel 6

WELL CONSTRUCTOR'S REPORT TO WISCONSIN STATE BOARD OF HEALTH

See Instructions on Reverse Side

1. County Burnett — Town ☐ Village ☑ Daniels City ☐ (Check one and give name)

2. Location S.W. of NW¼ Sec 30 T 35 N. R. 17 W. (Name of street and number of premise or Section, Town and Range numbers)

3. Owner ☑ or Agent ☐ E. W. Dreher (Name of individual, partnership or firm)

4. Mail Address Grantsburg R 1 Wis (Complete address required)

5. From well to nearest: Building 10 ft; sewer 50 ft; drain 60 ft; septic tank none ft; dry well or filter bed 70 ft; abandoned well none ft.

6. Well is intended to supply water for: Resident

7. DRILLHOLE:

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
6	0	22	4	0	77

8. CASING AND LINER PIPE OR CURBING:

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
4	Std. Pipe	1 above	77

9. GROUT:

Kind	From (ft.)	To (ft.)
Puddled Clay & drill Cuttings	0	22

10. FORMATIONS:

Kind	From (ft.)	To (ft.)
Top soil	0	2
Hard pan	2	10
Clay	10	16
Clay & sand	13	20
Sand fine	20	30
Sand fine	30	43
Clay & sand	43	70
Gravel	70	77

11. MISCELLANEOUS DATA:

Yield test: 10 Hrs. at 5 GPM.

Depth from surface to water-level: 34 ft.

Water-level when pumping: 40 ft.

Water sample was sent to the state laboratory at: _____ City on _____ 19____

Construction of the well was completed on: Jan 4 19 61

The well is terminated 10 inches ☑ above, below ☐ the permanent ground surface.

Was the well disinfected upon completion? Yes ✓ No _____

Was the well sealed watertight upon completion? Yes ✓ No _____

Signature Vivian Hall (Registered Well Driller) — Grantsburg R 1 Wis (Complete Mail Address)

Please do not write in space below

RECEIVED

Rec'd JAN 11 1961 No 157

Ans'd _____

Interpretation SAFE—BACTERIOLOGICALLY

1145

	10 ml	10 ml	10 ml	10 ml	10 ml
Gas—24 hrs.		JAN 17 1961			
48 hrs.		SANITARY			
Confirm		ENGINEERING			
B. Coli					

2948018

Examiner _____ 118 plot

INSTRUCTIONS

ALL INFORMATION INDICATED ON THE FACE OF THIS FORM MUST BE GIVEN

PLEASE BE GUIDED BY THE FOLLOWING:

Numbers below correspond to numbers of items of the form on the opposite side.

1. Name of the County and the name of the Town, Village or City. Indicate which is given.
2. If Rural: Number and the ¼ of the Section, the number of the Town North, and the number of the Range East or West.
   If Urban: Name of the Street and the number of the Premise.
3. Name of the Owner. If the name of the owner cannot be given, give instead the name of the Agent. Indicate which is given.
4. Name of the Street and the number of the Premise or the number of the Mail Route, the name of the Post Office and the name of the State.
5. Distance, in feet, from the well to the nearest building and to each source of pollution shown.
6. Indicate: Home, farm, school, tavern, creamery, community, industry, etc.
7. Show the diameter and depth of the initial drillhole or excavation and each reduction in size to bottom. If well was reconstructed, show diameter and depth of original well on first line.
8. Show diameter and kind of casing pipe, liner pipe or curbing and actual position in the well, measured from the surface.
9. Show kind of material (mud or cement) used in sealing the annular space, from and to what depths from the surface. If neither was used indicate "none".
10. Show thickness of each formation and the total depth at the base thereof.
11. Provide the data indicated.

Note: The Well Construction Report (Well Log) may be forwarded with the water sample from a newly constructed or reconstructed well, instead of the report requested by the State Laboratory of Hygiene, on the form which accompanies the sample bottle.

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, type of casing joints, method of finishing the well, amount of cement used in grouting, blasting, subsurface pumprooms, access pits, etc., may be given here:

No pollution hazards No nearby Wells! Screen Casing joints Clay & drill cuttings Well stopped for grouting No blasting! No pumproom or pit! Casing 12" above ground level!

If more space is needed another sheet may be attached.

1145-2

State of Wisconsin
Department of Natural Resources
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

SEP 20 1979

WELL CONSTRUCTOR'S REPORT

Form 3300–15 Rev. 12-76

NOV 27 1979

1. COUNTY: Burnett

CHECK (✓) ONE: ☐ Town ☐ Village ☐ City

Name: Daniels

2. LOCATION: ¼ Section: SW-SW | Section: 30 | Township: 38 N | Range: 17W

OR – Grid or Street No. | Street Name

AND – If available subdivision name, lot & block No.

3. NAME ☐ OWNER ☐ AGENT AT TIME OF DRILLING CHECK (✓) ONE: Charles Jones

ADDRESS: Grantsburg, Wisconsin 54840

POST OFFICE

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain		Sanitary Bldg. Sewer		Floor Drain Connected To:		Storm Bldg. Drain		Storm Bldg. Sewer	
	C.I.	Other	C.I.	Other	C.I. Sewer	Other Sewer	C.I.	Other	C.I.	Other
4' 6"										

Street Sewer		Other Sewers		Foundation Drain Connected to:		Sewage Sump		Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit
San.	Storm	C.I.	Other	Sewer	Sewage Sump	C.I.	Other				Seepage Pit
				Clearwater Dr.	Clearwater Sump						Seepage Bed
											Seepage Trench

Privy	Pet Waste Pit	Pit: Nonconforming Existing	Subsurface Pumproom Nonconforming Existing	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit
		Well								
		Pump								
		Tank								

Temporary Manure Stack	Watertight Liquid Manure Tank	Solid Manure Storage Structure	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Other (Give Description)

5. Well is intended to supply water for: House

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
8	Surface	20	4	20	48

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification & Method of Assembly	From (ft.)	To (ft.)
4	10.79 new bln	Surface	44
	Steel, Welded		
4	Screen	44	48
	A-53 VALLEY STEEL		

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
drill cuttings	Surface	20

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Clay	Surface	25
Sand	25	48

10. TYPE OF DRILLING MACHINE USED

☒ Cable Tool
☐ Rotary-air w/drilling mud
☐ Rotary-w/drilling mud
☐ Rotary-hammer w/drilling mud & air
☐ Rotary-hammer & air
☐ Reverse Rotary
☐ Jetting with Air / Water

Well construction completed on September 20 19 79

11. MISCELLANEOUS DATA

Yield Test: 1/2 Hrs. at 20 GPM

Depth from surface to normal water level 26 Ft.

Depth of water level when pumping 32 Ft. Stabilized ☒ Yes ☐ No

Well is terminated *8 inches ☒ above ☐ below final grade

Well disinfected upon completion ☒ Yes ☐ No

Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to Madison laboratory on September 24 19 79

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature: Clarence Beecroft Registered Well Driller

Complete Mail Address: ~~CLARENCE BEECROFT AND SONS~~ Well Drillers
Route 2 Box 108
Frederic, Wis. 54837

1146

284800 plot 705

Wel 6

WELL CONSTRUCTOR'S REPORT TO WISCONSIN STATE BOARD OF HEALTH

See Instructions on Reverse Side

1. County Burnett — Town ☑ Village ☐ City ☐ Daniels (Check one and give name)
2. Location N.W.¼ ~~of S.W.¼~~ Sec 30 T. 38 N. R. 17 W. (Name of street and number of premise or Section, Town and Range numbers)
3. Owner ☑ or Agent ☐ Hilda Pruhez (Drecher) (Name of individual, partnership or firm)
4. Mail Address Grantsburg Wis (Complete address required)

RECEIVED
JUN 22 1961
SANITARY ENGINEERING

5. From well to nearest: Building 60 ft; sewer 90 ft; drain 110 ft; septic tank 90 ft; dry well or filter bed none ft; abandoned well none ft.
6. Well is intended to supply water for: Home

7. DRILLHOLE:

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
8	0	22	4	1	49

8. CASING AND LINER PIPE OR CURBING:

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
4	Std. Pipe	1	49

9. GROUT:

Kind	From (ft.)	To (ft.)
Clay & drill Cuttings	0	22

10. FORMATIONS:

Kind	From (ft.)	To (ft.)
Top Soil	0	3
Clay	3	10
Sand & Clay	10	18
Sand	18	30
Sand & Clay	30	35
Sand	35	40
Gravel	40	49

Construction of the well was completed on: Jan 20 1961

The well is terminated 10 inches ☑ above, below ☐ the permanent ground surface.

Was the well disinfected upon completion? Yes ✓ No

Was the well sealed watertight upon completion? Yes ✓ No

11. MISCELLANEOUS DATA:

Yield test: 6 Hrs. at 5 GPM.

Depth from surface to water-level: 20 ft.

Water-level when pumping: 22 ft.

Water sample was sent to the state laboratory at: Madison (City) on June 14 1961

Signature Vinar Chell & Sons (Registered Well Driller) — Frederic R1 Wis. (Complete Mail Address)

Please do not write in space below

Rec'd JUN 15 1961 No. 20438

Ans'd

Interpretation

UNSAFE—BACTERIOLOGICALLY

	10 ml	10 ml	10 ml	10 ml	10 ml
Gas—24 hrs.	+				
48 hrs.					
Confirm	+				
B. Coli	+				

Examiner

1147

State of Wisconsin
Department of Natural Resources
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300–15 Rev. 12-76

APR 12 1979

1. COUNTY: Burnett

CHECK (✓) ONE: ☒ Town ☐ Village ☐ City

Name: Daniels

2. LOCATION: W½, Section 15 SW; Section 31; Township 38N; Range 17W

OR – Grid or Street No. ____ Street Name ____

AND – If available subdivision name, lot & block No. ____

3. NAME ☒ OWNER ☐ AGENT AT TIME OF DRILLING CHECK (✓) ONE: Roy Wicklund

ADDRESS: Rt. 1

POST OFFICE: Grantsburg, Wi.

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain C.I.	Sanitary Bldg. Drain Other	Sanitary Bldg. Sewer C.I.	Sanitary Bldg. Sewer Other	Floor Drain Connected To: C.I. Sewer	Floor Drain Connected To: Other Sewer	Storm Bldg. Drain C.I.	Storm Bldg. Drain Other	Storm Bldg. Sewer C.I.	Storm Bldg. Sewer Other
9			18							

Street Sewer San.	Street Sewer Storm	Other Sewers C.I.	Other Sewers Other	Foundation Drain Connected to: Sewer	Foundation Drain Connected to: Sewage Sump	Foundation Drain Connected to: Clearwater Dr.	Foundation Drain Connected to: Clearwater Sump	Sewage Sump C.I.	Sewage Sump Other	Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit
											43		Seepage Pit; Seepage Bed 28; Seepage Trench

Privy	Pet Waste Pit	Pit: Nonconforming Existing	Subsurface Pumproom Nonconforming Existing	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit
		Well; Pump; Tank								

Temporary Manure Stack	Watertight Liquid Manure Tank	Solid Manure Storage Structure	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Other (Give Description)
					None

5. Well is intended to supply water for: private residence

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
8	Surface	20			
4	20	140			

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification & Method of Assembly	From (ft.)	To (ft.)
4	New Std. BLK. T&C pipe 11#/FT. 455 A 589	Surface	136
4	Johnson S.S. #18 slot well screen	136	140

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
clay slurry	Surface	20

9. FORMATIONS

Kind	From (ft.)	To (ft.)
clay	Surface	15
clay & sand	15	30
sand	30	40
gravel & R. clay	40	135
gravel	135	140

10. TYPE OF DRILLING MACHINE USED

☒ Cable Tool ☐ Rotary-air w/drilling mud ☐ Rotary-w/drilling mud ☐ Rotary-hammer w/drilling mud & air ☐ Rotary-hammer & air ☐ Reverse Rotary ☐ Jetting with Air ☐ Jetting with Water

Well construction completed on 3-30 19 29

11. MISCELLANEOUS DATA

Yield Test: 3 Hrs. at 15 GPM

Depth from surface to normal water level 22 Ft.

Depth of water level when pumping 35 Ft. Stabilized ☒ Yes ☐ No

Well is terminated 10 inches ☐ above ☐ below final grade

Well disinfected upon completion ☒ Yes ☐ No

Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to Madison laboratory on 4-9 19 29

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature: Ronald Chell Registered Well Driller

Complete Mail Address: Rt. 3 Frederic Wi. 54837

1148

2848008

Lot 107

WELL CONSTRUCTOR'S REPORT TO WISCONSIN STATE BOARD OF HEALTH

See Instructions on Reverse Side

OCT 6 1947

1. County Burnett { Town Daniels / ~~Village~~ / ~~City~~

E½, SW, Sec. 32

2. Location ~~S.E. of N.E. ¼ of Sec 35~~ T. 38 R. 17 W. T38N

3. Owner ~~or Agent~~ Clearance Moline

4. Address Siren

5. From well to nearest: Building 60 ft; sewer none ft; drain 75 ft; septic tank none ft; dry well or filter bed none ft; abandoned well 300 ft.

6. Well is intended to supply water for: Dairy Farm

7. DRILLHOLE OR EXCAVATION:

Dia. (in.)	From (ft.)	To (ft.)
none		

8. CASING AND LINER PIPE OR CURBING:

Dia. (in.)	Kind	From (ft.)	To (ft.)
4"	Std. Black Pipe	0	74

9. GROUT:

Kind	From (ft.)	To (ft.)
none		

10. FORMATIONS:

Kind	Thickness (ft.)	Total Depth (ft.)
~~Sandy Clay~~	2	2
~~Sand~~	30	32
Gravel	18	50
Clay & sand	20	70
Gravel	4	74
gravel bottom much iron near bottom		

11. MISCELLANEOUS DATA:

Yield test: 2 Hrs. at 4 GPM.

Depth from surface to water: 18 ft.

Water-level when pumping: 30 ft.

Water sample sent to laboratory at ~~Superior~~ on July 20 1946

Signature W. A. Chell
Registered Well Driller

Construction of the well was completed on July 19 1946

The well is terminated 12 inches (above) (below) the permanent grade.

Was the well disinfected upon completion? Yes X No

Was the well sealed watertight upon completion? Yes X No

Frederic Wis.
Complete Mail Address

1149

2841003

803

STATE OF WISCONSIN

WELL CONSTRUCTOR'S REPORT

DEPARTMENT OF RESOURCE DEVELOPMENT

Wel 6

1. COUNTY: Burnett

CHECK ONE: ☑ Town ☐ Village ☐ City

NAME: Daniels

2. LOCATION (Number and Street or ¼ section, section, township and range. Also give subdivision name, lot and block numbers when available.)

~~NE¼ Sec. 31~~ T38N R17W NW, sec. 32

3. OWNER AT TIME OF DRILLING: Duane Anderson

4. OWNER'S COMPLETE MAIL ADDRESS: Siren, Wis.

5. Distance in feet from well to nearest: (Record answer in appropriate block)

BUILDING	SANITARY SEWER C. I.	SANITARY SEWER TILE	FLOOR DRAIN C. I.	FLOOR DRAIN TILE	FOUNDATION DRAIN SEWER CONNECTED	FOUNDATION DRAIN INDEPENDENT	WASTE WATER DRAIN C. I.	WASTE WATER DRAIN TILE
6	40		None		None		None	

CLEAR WATER DRAIN C. I.	CLEAR WATER DRAIN TILE	SEPTIC TANK	PRIVY	SEEPAGE PIT	ABSORPTION FIELD	BARN	SILO	ABANDONED WELL	SINK HOLE
None		50	None	80	90	200	200	None	None

OTHER POLLUTION SOURCES (Give description such as dump, quarry, drainage well, stream, pond, lake, etc.): None

6. Well is intended to supply water for: Farm house

7. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
8	Surface	20			
4	20	81			

8. CASING, LINER, CURBING, AND SCREEN

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
4	Std. BLK. Pipe 11# /ft.	Surface	78
4	Johnson Stainless Steel #18 slot well screen	78	81

9. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
Clay slurry	Surface	20

10. FORMATIONS

Kind	From (ft.)	To (ft.)
Red Clay + gravel	Surface	20
Red Clay + sand	20	35
Red clay + gravel	35	72
gravel	72	81

Well construction completed on: Sept. 10 1968

Well is terminated 15 inches ☑ above ☐ below final grade

Well disinfected upon completion ☑ Yes ☐ No

Well sealed watertight upon completion ☑ Yes ☐ No

11. MISCELLANEOUS DATA

Yield test: 4 Hrs. at 18 GPM

Depth from surface to normal water level: 25 ft.

Depth to water level when pumping: 30 ft.

Water sample sent to State Lab. of Hygiene - Madison laboratory on: Sept. 16 1968

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, type of casing joints, method of finishing the well, amount of cement used in grouting, blasting, subsurface pumprooms, access pits, etc., should be given on reverse side.

SIGNATURE: Ronald Chell Registered Well Driller

COMPLETE MAIL ADDRESS: Rt. 3 Frederic, Wis. 54837

Please do not write in space below

COLIFORM TEST RESULT	GAS — 24 HRS.	GAS — 48 HRS.	CONFIRMED	REMARKS
1150				

28 48 007 706

WEL 6

WELL CONSTRUCTOR'S REPORT TO WISCONSIN STATE BOARD OF HEALTH

See Instructions on Reverse Side

RECEIVED SEP 4 1962 ... ARY ... ENGINEERING

1. County BURNETT (38) Town ☑ Village ☐ City ☐ DANIELS Check one and give name

W½, NE sec. 33

2. Location SE of SE SEC. 28 T38N R.17W T38N
Name of street and number of premise or Section, Town and Range numbers

3. Owner ☑ or Agent ☐ FRED CARLSON
Name of individual, partnership or firm

4. Mail Address SIREN R.F.D.
Complete address required

RECEIVED SEP 18 1962 SANI... ENGINE...

5. From well to nearest: Building 6 ft; sewer 25 ft; drain 60 ft; septic tank 70 ft;
dry well or filter bed 80 ft; abandoned well none ft.

6. Well is intended to supply water for: RESIDENT.

7. DRILLHOLE:

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
8	0	22	4	0	66

8. CASING AND LINER PIPE OR CURBING:

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
4	STD. PIPE	18 above	66

9. GROUT:

Kind	From (ft.)	To (ft.)
CLAY & DRILL CUTTINGS.	0	22

10. FORMATIONS:

Kind	From (ft.)	To (ft.)
TOP SOIL	0	3
GRAVEL	3	8
SAND	8	20
GRAVEL	20	30
Clay	30	40
CLAY & SAND	40	45
SAND	45	60
GRAVEL	60	66

Construction of the well was completed on:
JUNE 26 1962

The well is terminated 18 inches
☒ above, below ☐ the permanent ground surface.

Was the well disinfected upon completion?
Yes ✓ No

Was the well sealed watertight upon completion?
Yes ✓ No

11. MISCELLANEOUS DATA:

Yield test: 4 Hrs. at 8 GPM.

Depth from surface to water-level: 45 ft.

Water-level when pumping: 48 ft.

Water sample was sent to the state laboratory at:
Madison on Aug 29 1962
City

Signature Vivian Chell
Registered Well Driller

Frederic Wis R.1.
Complete Mail Address

Please do not write in space below

Rec'd AUG 30 1962 No. 32926

Ans'd

Interpretation

SAFE—BACTERIOLOGICALLY

	10 ml	10 ml	10 ml	10 ml	10 ml
Gas—24 hrs.					
48 hrs.					
Confirm					
B. Coli	O	O	O	O	O

Examiner

1151

WELL CONSTRUCTOR'S REPORT

Wel–6

SEP 10 1971

WHITE COPY – DIVISION'S COPY
GREEN COPY – DRILLER'S COPY
YELLOW COPY – OWNER'S COPY

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
Box 450
Madison, Wisconsin 53701

1. COUNTY: Barnett — CHECK ONE: [X] Town [ ] Village [ ] City — NAME: Daniels

2. LOCATION (Number and Street or ¼ section, section, township and range. Also give subdivision name, lot and block numbers when available.) NW¼ Sec. 35 T38N R17W

3. OWNER AT TIME OF DRILLING: Robert Thompson

4. OWNER'S COMPLETE MAIL ADDRESS: Siren, Wis.

5. Distance in feet from well to nearest: (Record answer in appropriate block)

BUILDING	SANITARY SEWER C. I.	SANITARY SEWER TILE	FLOOR DRAIN C. I.	FLOOR DRAIN TILE	FOUNDATION DRAIN SEWER CONNECTED	FOUNDATION DRAIN INDEPENDENT	WASTE WATER DRAIN C. I.	WASTE WATER DRAIN TILE
10	14		None		None		None	

CLEAR WATER DRAIN C. I.	CLEAR WATER DRAIN TILE	SEPTIC TANK	PRIVY	SEEPAGE PIT	ABSORPTION FIELD	BARN	SILO	ABANDONED WELL	SINK HOLE
None		38	None	None	65	200	200	None	None

OTHER POLLUTION SOURCES (Give description such as, dump, quarry, drainage well, stream, pond, lake, etc.)
River 300

6. Well is intended to supply water for: Private residence

7. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
8	Surface	20			
4	20	46			

8. CASING, LINER, CURBING, AND SCREEN

Dia. (in.)	New Kind and Weight	From (ft.)	To (ft.)
4	New Std. Blk. Pipe 11# /ft. T&C	Surface	43
4	Johnson SS. #18 slot well screen	43	46

9. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
Clay Slurry	Surface	20

10. FORMATIONS

Kind	From (ft.)	To (ft.)
Sand	Surface	4
gravel & boulders	4	9
gravel & clay	9	28
Sand	28	38
gravel	38	46

Well construction completed on: Sept. 1 1971

11. MISCELLANEOUS DATA

Yield test: 4 Hrs. at 14 GPM

Depth from surface to normal water level: 24 ft.

Depth to water level when pumping: 28 ft.

Well is terminated 11 inches [X] above [ ] below final grade

Well disinfected upon completion [X] Yes [ ] No

Well sealed watertight upon completion [X] Yes [ ] No

Water sample sent to State Lab. of Hyg. ene-Madison laboratory on: Sept. 9 1971

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, type of casing joints, method of finishing the well, amount of cement used in grouting, blasting, subsurface pumprooms, access pits, etc., should be given on reverse side.

SIGNATURE: Ronald Chell Registered Well Driller

COMPLETE MAIL ADDRESS: Rt. 3 Frederic, Wis. 54837

Please do not write in space below

COLIFORM TEST RESULT	GAS – 24 HRS.	GAS – 48 HRS.	CONFIRMED	REMARKS
1152				2844004 804 1/01

REV. 11–68

APPENDIX C

WDNR SOIL BORING LOGS (FORM 4400-122)

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name Burnett County - Former Hedlund DX	**License/Permit/Monitoring Number** BRRTS #03-07-000151	**Boring Number** GP1

Boring Drilled By: Name of crew chief (first, last) and Firm Gestra (Mitch)	**Date Drilling Started** 8/8/16	**Date Drilling Completed** 8/8/16	**Drilling Method** Geoprobe

WI Unique Well No.	**DNR Well ID No.**	**Common Well Name**	**Final Static Water Level**	**Surface Elevation** 0	**Borehole Diameter** 2" ›1

Local Grid Orgin ☐ (estimated) ☐ or Boring Location ☑ **State Plane**	**Lat** **Long**	**Local Grid Location** N☐ E☐ S☐ W☐

Facility ID 807049540	**County** Burnett	**County Code** 07	**Civil Town/City/or Village** Town of Daniels

Sample: Number	Sample: Type	Sample: Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
1		36 in		0–3	**Fill** Miscellaneous FILL				754 ppm		M				
				3–5	**Clay** Grey/black silty clay										
2				5–10		CL			123.7 ppm 11.7 ppm						
3				10–15					1.8 ppm 2.9 ppm 4.0 ppm		W				
				15	**Sand** Brown fine sand -Wet **EOB @ 15'**	SM									
				15–20											

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

Signature [signature]	**Firm** REI Engineering, Inc. 4080 North 20th Avenue, Wausau, WI

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

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name Burnett County - Former Hedlund DX	**License/Permit/Monitoring Number** BRRTS #03-07-000151	**Boring Number** GP2

Boring Drilled By: Name of crew chief (first, last) and Firm Gestra (Mitch)	**Date Drilling Started** 8/8/16	**Date Drilling Completed** 8/8/16	**Drilling Method** Geoprobe	
WI Unique Well No.	**DNR Well ID No.**	**Common Well Name**	**Final Static Water Level**	**Surface Elevation** 0
Borehole Diameter 2"				

Local Grid Origin ☐ (estimated) ☐ or Boring Location ☑ **State Plane**	**Lat** **Long**	**Local Grid Location** N ☐ E ☐ S ☐ W ☐

Facility ID 807049540	**County** Burnett	**County Code** 07	**Civil Town/City/or Village** Town of Daniels

Sample Number	Sample Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1		48 in		1–4	**Fill** Miscellaneous fill						M				
				3–5	**Sand** Brown/black fine sand	SM			1265 ppm						
2		60 in		5–9	**Clay** Grey clay w/ orange mottling	CL			1294 ppm 817 ppm						
3		60 in		9–13					23.5 ppm 7.4 ppm		W				
				13–14	**Sand** Brown fine sand	SM			22.6 ppm						
				15	**EOB @ 15'bls**										

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

Signature Scott Block	**Firm**	**REI Engineering, Inc.** 4080 North 20th Avenue, Wausau, WI

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name Burnett County - Former Hedlund DX	**License/Permit/Monitoring Number** BRRTS #03-07-000151	**Boring Number** GP3

Boring Drilled By: Name of crew chief (first, last) and Firm Gestra (Mitch)			**Date Drilling Started** 8/8/16	**Date Drilling Completed** 8/8/16	**Drilling Method** Geoprobe
WI Unique Well No.	**DNR Well ID No.**	**Common Well Name**	**Final Static Water Level**	**Surface Elevation** 0	**Borehole Diameter** 2"

Local Grid Orgin ☐ (estimated) ☐ or **Boring Location** ☑ **State Plane**	**Lat** **Long**	**Local Grid Location** N ☐ S ☐ E ☐ W ☐	
Facility ID 807049540	**County** Burnett	**County Code** 07	**Civil Town/City/or Village** Town of Daniels

Sample Number	Sample Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
				1	**Fill** Miscellaneous fill						M-W				
1		60 in		2 3 4	**Sand** Black fine sand	SM			1495 ppm						
				5 6 7 8 9	**Organic matter** Woody organic material	OL			1322 ppm 231 ppm		M				
2		40 in		10 11 12 13 14	**Clay** Grey dry clay	CL			28.5 ppm 0.6 ppm 1.0 ppm		W				
3				15 16 17 18 19 20	**Sand** Brown fine sand **EOB @ 15'**	SM									

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

Signature Gibby Blade	**Firm**	**REI Engineering, Inc.** 4080 North 20th Avenue, Wausau, WI	

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Route To: **Watershed/Wastewater** ☐ **Waste Management** ☐
Remediation/Redevelopment ☑ **Other** ☐

Facility/Project Name Burnett County - Former Hedlund DX	**License/Permit/Monitoring Number** BRRTS # 03-07-000151	**Boring Number** GP4a

Boring Drilled By: Name of crew chief (first, last) and Firm Gestra (Mitch)	**Date Drilling Started** 8/8/16	**Date Drilling Completed** 8/8/16	**Drilling Method** Geoprobe

WI Unique Well No.	**DNR Well ID No.**	**Common Well Name**	**Final Static Water Level**	**Surface Elevation** 0	**Borehole Diameter** 2" ›4A

Local Grid Orgin ☐ **(estimated)** ☐ **or Boring Location** ☑ **State Plane**	**Lat** **Long**	**Local Grid Location** N☐ S☐ E☐ W☐

Facility ID 807049540	**County** Burnett	**County Code** 07	**Civil Town/City/or Village** Town of Daniels

Sample Number	Sample Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1		18 in		0–3	**Fill** Gravelly fill	GP			0.3 ppm		M-W				
				3–5	**Silt** Black sandy silt and trace small stones	SM									
2		NA		5–10	**No Recovery**										
				10	**EOB @ 10' bls**										

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

Signature [signature]	**Firm** **REI Engineering, Inc.** 4080 North 20th Avenue, Wausau, WI

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name Burnett County - Former Hedlund DX	**License/Permit/Monitoring Number**	**Boring Number** GP4b

Boring Drilled By: Name of crew chief (first, last) and Firm Gestra (Mitch)	**Date Drilling Started** 8/8/16	**Date Drilling Completed** 8/8/16 / **Drilling Method** Geoprobe

WI Unique Well No.	**DNR Well ID No.**	**Common Well Name**	**Final Static Water Level**	**Surface Elevation** 0	**Borehole Diameter** 2"

Local Grid Orgin ☐ (estimated) ☐ or Boring Location ☑ **Lat** **Local Grid Location** N ☐ E ☐
State Plane **Long** S ☐ W ☐

Facility ID 807049540	**County** Burnett	**County Code** 07	**Civil Town/City/or Village** Town of Daniels

Sample Number	Sample Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
				0	**Fill** Gravelly fill						M				
				1		GP									
1		36 in		2	**Silt** Black sandy silt				1.8 ppm						
				3		SM									
				4											
				5	**EOB @ 5'** Concrete refusal										
				6											
				7											

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

Signature Sally Bleda **Firm** REI Engineering, Inc. 4080 North 20th Avenue, Wausau, WI

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name Burnett County - Former Hedlund DX	**License/Permit/Monitoring Number** BRRTS # 807049540	**Boring Number** GP5

Boring Drilled By: Name of crew chief (first, last) and Firm Gestra (Mitch)	**Date Drilling Started** 8/8/16	**Date Drilling Completed** 8/8/16	**Drilling Method** Geoprobe	
WI Unique Well No.	**DNR Well ID No.**	**Common Well Name**	**Final Static Water Level**	**Surface Elevation** 0

Borehole Diameter 2" to 15

Local Grid Orgin ☐ (estimated) ☐ or Boring Location ☑ **State Plane** | **Lat** | **Long** | **Local Grid Location** N☐ S☐ E☐ W☐

Facility ID 807049540	**County** Burnett	**County Code** 07	**Civil Town/City/or Village** Town of Daniels

Sample Number	Sample Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1		36 in		1–3	**Fill** Gravelly fill	GP			649 ppm		M				
				4	**Sand** Silty sand - wet										
2		36 in		5–8	**Sand** Fine sand - saturated	SM			1217 ppm		W				
3		60 in		9–14	**Clay** Native grey clay	CH			51.5 ppm 226 ppm 15.1 ppm						
				15	**EOB @ 15'bls**										
				16–17											

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

Signature Scott J. Blader | **Firm** REI Engineering, Inc. 4080 North 20th Avenue, Wausau, WI

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Route To: **Watershed/Wastewater** ☐ **Waste Management** ☐
Remediation/Redevelopment ☑ **Other** ☐

Facility/Project Name Burnett County - Former Hedlund DX	**License/Permit/Monitoring Number** BRRTS #03-07-000151	**Boring Number** GP6A

Boring Drilled By: Name of crew chief (first, last) and Firm	**Date Drilling Started**	**Date Drilling Completed**	**Drilling Method**
Gestra (Mitch)	8/8/16	8/8/16	Geoprobe

WI Unique Well No.	**DNR Well ID No.**	**Common Well Name**	**Final Static Water Level**	**Surface Elevation**	**Borehole Diameter**
		GP6A		0	2 in ›6A

Local Grid Orgin ☐ **(estimated)** ☐ **or Boring Location** ☑	**Lat**	**Local Grid Location**
State Plane	**Long**	N☐ S☐ E☐ W☐

Facility ID 807049540	**County** Burnett	**County Code** 07	**Civil Town/City/or Village** Town of Daniels

Sample: Number	Sample: Type	Sample: Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
				0–3	Concrete fill										
				3	EOB @ 3'bls All fill - odor @ bottom										
				4											
				5											

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

Signature	**Firm** REI Engineering, Inc. 4080 North 20th Avenue, Wausau, WI

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name Burnett County - Former Hedlund DX	**License/Permit/Monitoring Number** BRRTS #03-07-000151	**Boring Number** GP6b

Boring Drilled By: Name of crew chief (first, last) and Firm Gestra (Mitch)	**Date Drilling Started** 8/8/16	**Date Drilling Completed** 8/8/16	**Drilling Method** Geoprobe	
WI Unique Well No.	**DNR Well ID No.**	**Common Well Name**	**Final Static Water Level**	**Surface Elevation** 0 / **Borehole Diameter** 2"

Local Grid Orgin ☐ (estimated) ☐ or **Boring Location** ☑ **Lat** **Long** **Local Grid Location** N☐ S☐ E☐ W☐
State Plane

Facility ID 807049540	**County** Burnett	**County Code** 07	**Civil Town/City/or Village** Town of Daniels

Sample Number	Sample Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1		36		1–3	**Fill** Gravelly fill	GP					M				
				3–5	**Clay** Gray clay -strong odor	CL			1220						
2	SS			5–8							W				
				8–10	**Sand** Fine sand	SM			190						
3	SS	60		10–14	**Clay** Gray clay	CL			4.0						
				14–15	**Sand** Fine sand	SM			3.6 18.2						
				15–17	**EOB @ 15'**										

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

Signature Stt J Blada	**Firm**	**REI Engineering, Inc.** 4080 North 20th Avenue, Wausau, WI

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name Burnett County - Former Hedlund DX	**License/Permit/Monitoring Number** BRRTS # 03-07-000151	**Boring Number** GP7

Boring Drilled By: Name of crew chief (first, last) and Firm Gestra (Mitch)	**Date Drilling Started** 8/8/16	**Date Drilling Completed** 8/8/16	**Drilling Method** Geoprobe

WI Unique Well No.	**DNR Well ID No.**	**Common Well Name**	**Final Static Water Level**	**Surface Elevation** 0	**Borehole Diameter** 2"

Local Grid Orgin ☐ (estimated) ☐ or Boring Location ☑ **State Plane**	**Lat** **Long**	**Local Grid Location** N☐ S☐ E☐ W☐

Facility ID 807049540	**County** Burnett	**County Code** 07	**Civil Town/City/or Village** Town of Daniels

Sample Number	Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1		36 in		0–3	**Fill** Miscellaneous Fill	GP			90.2		M-W				
				3–5	**Clay** Black/grey clay										
2		60 in		5–10	**Clay** Grey mottled clay	CL			79.2; 8.9						
3		60 in		10–14.5					13.8; 16.2						
				14.5–15	**Sand** Brown fine sand	SM			55.7						
				15	**EOB @ 15'bls**										

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

Signature [signature]	**Firm** REI Engineering, Inc. 4080 North 20th Avenue, Wausau, WI

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name Burnett County - Former Hedlund DX	**License/Permit/Monitoring Number** BRRTS #03-07-000151	**Boring Number** MW-2

Boring Drilled By: Name of crew chief (first, last) and Firm Gestra (Mitch & Joe)	**Date Drilling Started** 9/13/2016	**Date Drilling Completed** 9/13/2016	**Drilling Method** Hollow Stem Auger

WI Unique Well No.	**DNR Well ID No.**	**Common Well Name** MW-2	**Final Static Water Level**	**Surface Elevation** 0	**Borehole Diameter** 8.25" MW-2

Local Grid Orgin ☐ (estimated) ☐ or Boring Location ☒MW-2 **State Plane**	**Lat** **Long**	**Local Grid Location** N☐ S☐ E☐ W☐	

Facility ID 807049540	**County** Burnett	**County Code** 07	**Civil Town/City/or Village** Town of Daniels

Sample: Number	Sample: Type	Sample: Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
				1–22	**Blind drilled to 20'** **EOB** Well set @ 20' BLS										

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

Signature Scott J Blader	**Firm**	**REI Engineering, Inc.** 4080 North 20th Avenue, Wausau, WI	

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Department of Natural Resources

SOIL BORING LOG INFORMATION

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name Burnett County - Former Hedlund DX	**License/Permit/Monitoring Number** BRRTS #03-07-000151	**Boring Number** MW-3

Boring Drilled By: Name of crew chief (first, last) and Firm Gestra (Mitch & Joe)	**Date Drilling Started** 9/13/2016	**Date Drilling Completed** 9/13/2016	**Drilling Method** Hollow Stem Auger	
WI Unique Well No.	**DNR Well ID No.**	**Common Well Name** MW-3	**Final Static Water Level**	**Surface Elevation** 0

Borehole Diameter 8.25" W-3

Local Grid Orgin ☐ (estimated) ☐ or Boring Location ☑ **State Plane** | **Lat** **Long** | **Local Grid Location** N☐ S☐ E☐ W☐

Facility ID 807049540	**County** Burnett	**County Code** 07	**Civil Town/City/or Village** Town of Daniels

Sample Number	Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1		10"		1	**Miscellaneous Fill** Strong odor				1808		M				
				2	**Silt** Brown/black silt with trace fine sand										
2		18"		3					1480						
				4											
3		0		5		SM									
				6											
4		18"		7	**Sandy clay**	SC			548						
				8	**Hard clay**						W				
5		3"		9	**Clay** Gray clay with trace fine sands - wet				216						
				10											
6		12"		11		CL			208						
				12											
7		18"		13					118						
				14											
8		12"		15	**Sand** Brown fine sand - wet	SM			62						
				16	**EOB** Well set @ 15' BLS										
				17											
				18											
				19											
				20											

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

Signature Scott J Blade **Firm** REI Engineering, Inc. 4080 North 20th Avenue, Wausau, WI

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name Burnett County - Former Hedlund DX	**License/Permit/Monitoring Number** BRRTS #03-07-000151	**Boring Number** MW-4

Boring Drilled By: Name of crew chief (first, last) and Firm Gestra (Mitch & Joe)	**Date Drilling Started** 9/13/2016	**Date Drilling Completed** 9/13/2016	**Drilling Method** Hollow Stem Auger	
WI Unique Well No.	**DNR Well ID No.**	**Common Well Name** MW-4	**Final Static Water Level**	**Surface Elevation** 0

Borehole Diameter 8.25" MW-4*

Local Grid Orgin ☐ (estimated) ☐ or Boring Location ☑
State Plane
Lat
Long
Local Grid Location N☐ S☐ E☐ W☐

Facility ID 807049540	**County** Burnett	**County Code** 07	**Civil Town/City/or Village** Town of Daniels

Sample Number	Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1		14"		1	**Fill** Miscellaneous fill with woody debris				1460		M				
2		14"		2–3	**Gravel/sand** Gravelly coarse sand	GP			450						
				3–4	**Sand** White fine sand	SM									
3		14"		4–5	**Organic matter** Woody debris	GP			952						
				5–6	**Gravel/sand** Gravelly coarse sand	SM									
4		18"		6–7	**Sand** Dark fine sand				226		W				
5		18"		7–10	**Clay** Hard clay-wet	CL			212						
6		16"		10–11	**Sand** Dark black sand with clay	SC			46						
7		18"		11–14	**Clay** Grey hard clay	CL									
8		14"		14–15	**Sand** Fine brown sand - Saturated	SM									
				15–16	**EOB** Well set @ 15' BLS										

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

Signature Scott J Bleck **Firm** REI Engineering, Inc. 4080 North 20th Avenue, Wausau, WI

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SOIL BORING LOG INFORMATION

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name Burnett County - Former Hedlund DX	**License/Permit/Monitoring Number** BRRTS #03-07-000151	**Boring Number** MW-5

Boring Drilled By: Name of crew chief (first, last) and Firm Gestra (Mitch & Joe)	**Date Drilling Started** 9/13/2016	**Date Drilling Completed** 9/13/2016

Drilling Method Hollow Stem Auger

WI Unique Well No.	**DNR Well ID No.**	**Common Well Name** MW-5	**Final Static Water Level**	**Surface Elevation** 0	**Borehole Diameter** 8.25"

MW-5*

Local Grid Orgin ☐ (estimated) ☐ or **Boring Location** ☑ **State Plane**	**Lat** **Long**	**Local Grid Location** N☐ E☐ S☐ W☐

Facility ID 807049540	**County** Burnett	**County Code** 07	**Civil Town/City/or Village** Town of Daniels

Sample										Soil Properties					
Number	Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
				1–20	Blind drilled to 15' EOB Well set @ 15' BLS										

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

Signature Scott J Bleck	**Firm** REI Engineering, Inc. 4080 North 20th Avenue, Wausau, WI

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SOIL BORING LOG INFORMATION

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name Burnett County - Former Hedlund DX	**License/Permit/Monitoring Number** BRRTS #03-07-000151	**Boring Number** MW-6

Boring Drilled By: Name of crew chief (first, last) and Firm Gestra (Mitch & Joe)	**Date Drilling Started** 9/13/2016	**Date Drilling Completed** 9/13/2016

Drilling Method Hollow Stem Auger

WI Unique Well No.	**DNR Well ID No.**	**Common Well Name** MW-6	**Final Static Water Level**	**Surface Elevation** 0	**Borehole Diameter** 8.25"

MW-6*

Local Grid Orgin ☐ (estimated) ☐ or Boring Location ☑ **State Plane**	**Lat** **Long**	**Local Grid Location** N ☐ E ☐ S ☐ W ☐

Facility ID 807049540	**County** Burnett	**County Code** 07	**Civil Town/City/or Village** Town of Daniels

Sample Number	Sample Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1		12"		1	**MISCELLANEOUS FILL**				0.2		M				
2		16"		3	**Sand** Grey clayey fine sand	SC			0.4						
3		16"		5	**Clay** Hard grey clay				1 8						
4		18"		7					18.5						
5		18"		9					18.2						
6		18"		11		CL			9.1						
7		18"		13					0.6		W				
8		18"		14	**Sand** Saturated coarse brown sand	SP									
				15	**EOB** Well set @ 15' BLS										
				16											
				17											
				18											
				19											
				20											

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

Signature Stuff Bleck	**Firm**	**REI Engineering, Inc.** 4080 North 20th Avenue, Wausau, WI

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

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Burnett County - Former Hedlund DX	BRRTS #03-07-000151	MW-7

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Gestra (Mitch & Joe)	9/14/2016	9/14/2016	Hollow Stem Auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-7		0	8.25"

Local Grid Orgin ☐ (estimated) ☐ or Boring Location ☑ | Lat / Long | Local Grid Location N ☐ S ☐ E ☐ W ☐

State Plane

Facility ID	County	County Code	Civil Town/City/or Village
807049540	Burnett	07	Town of Daniels

Sample Number	Sample Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1		12"		1	**Sand** Brown medium-coarse sand (Fill)	SP			0.0		M				
2		18"		3					0.0						
				4	**Sandy clay** Grey/black	SC									
3		10"		5	**Clay** Hard grey clay				0.0						
4		18"		7					0.0						
5		18"		9		CL			0.0						
6		18"		11					0.0						
7		12"		13	**Sandy clay** Saturated	SC			0.0		W				
8		18"		14	**Sand** Saturated brown coarse sand	SP			0.0						
				15	**EOB** Well set @ 15' BLS										
				16											
				17											
				18											
				19											
				20											

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

Signature	Firm
Scott J Blader	REI Engineering, Inc. 4080 North 20th Avenue, Wausau, WI

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name Burnett County - Former Hedlund DX	**License/Permit/Monitoring Number** BRRTS #03-07-000151	**Boring Number** MW-8

Boring Drilled By: Name of crew chief (first, last) and Firm Gestra Engineering, Inc. (Mitch)	**Date Drilling Started** 1/11/2017	**Date Drilling Completed** 1/11/2017	**Drilling Method** Hollow Stem Auger

WI Unique Well No.	**DNR Well ID No.**	**Common Well Name** MW-8	**Final Static Water Level**	**Surface Elevation** 0	**Borehole Diameter** 8.25"

Local Grid Orgin ☐ (estimated) ☐ or **Boring Location** ☑ **Lat** **Local Grid Location** N☐ E☐
State Plane **Long** S☐ W☐

Facility ID 807049540	**County** Burnett	**County Code** 07	**Civil Town/City/or Village** Town of Daniels

Sample Number	Sample Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1				1–4	**Gravel fill** **Sand** Fine-medium brown silty sand	SM					M				
2				3–9	**Clay** Grey clay -Wet @ 4' BLS	CL					W				
3				10–14	**Sand** Fine-medium brown silty sand -Saturated	SM									
				15–16	**Clay** Grey clay **EOB** Well set @ 15' BLS	CL									

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

Signature Scott J Blouch **Firm** REI Engineering, Inc.
4080 North 20th Avenue, Wausau, WI

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name Burnett County - Former Hedlund DX	**License/Permit/Monitoring Number** BRRTS #03-07-000151	**Boring Number** MW-9

Boring Drilled By: Name of crew chief (first, last) and Firm Gestra Engineering, Inc. (Mitch)	**Date Drilling Started** 1/11/2017	**Date Drilling Completed** 1/11/2017

Drilling Method Hollow Stem Auger

WI Unique Well No.	**DNR Well ID No.**	**Common Well Name** MW-9	**Final Static Water Level**	**Surface Elevation** 0	**Borehole Diameter** 8.25"

MW-9

Local Grid Orgin ☐ (estimated) ☐ or Boring Location ☑ **State Plane**	**Lat** **Long**	**Local Grid Location** N ☐ S ☐ E ☐ W ☐

Facility ID 807049540	**County** Burnett	**County Code** 07	**Civil Town/City/or Village** Town of Daniels

Sample Number	Sample Type	Sample Length Att. & Recovered (in)	Sample Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
				1	**Gravel fill**						M				
1		44 in		2	**Sand** Brown silty sand (fine-medium)	SM									
				3	**Clay** Grey clay										
				4	-Wet @ 4' BLS						W				
				5											
2		40 in		6		CL									
				7											
				8											
				9											
				10	**Sand** Fine-medium brown silty sand										
				11											
3		44 in		12	-Saturated	SM									
				13											
				14											
				15	**Clay** Grey clay	CL									
				16	**EOB** Well set @ 15' BLS										
				17											
				18											
				19											
				20											

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

Signature Scott J Blumer	**Firm** REI Engineering, Inc. 4080 North 20th Avenue, Wausau, WI

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name Burnett County - Former Hedlund DX	**License/Permit/Monitoring Number** BRRTS #03-07-000151	**Boring Number** MW-10

Boring Drilled By: Name of crew chief (first, last) and Firm Gestra Engineering, Inc. (Mitch)	**Date Drilling Started** 1/12/2017	**Date Drilling Completed** 1/12/2017	**Drilling Method** Hollow Stem Auger

WI Unique Well No.	**DNR Well ID No.**	**Common Well Name** MW-10	**Final Static Water Level**	**Surface Elevation** 0	**Borehole Diameter** 8.25"

Local Grid Orgin ☐ (estimated) ☐ or **Boring Location** ☑ **Lat** **Local Grid Location** N ☐ E ☐
State Plane **Long** S ☐ W ☐

Facility ID 807049540	**County** Burnett	**County Code** 07	**Civil Town/City/or Village** Town of Daniels

Sample Number	Sample Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1		42"		1–5	**Sand** Fine-medium brown sand **Organic Matter** Black organic matter **Clay** Grey silty clay	SW					M				
2		36"		6–12	**Clay** Grey/black silty clay with organic matter/wood **Clay** Grey clay	CL					M-W				
3		24"		13–15	**Sand** Fine-medium brown silty sand -wet **EOB** Well set @ 15' BLS	SM					W				

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

Signature Scott J Blank	**Firm** REI Engineering, Inc. 4080 North 20th Avenue, Wausau, WI

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name Burnett County - Former Hedlund DX	**License/Permit/Monitoring Number** BRRTS #03-07-000151	**Boring Number** MW-11

Boring Drilled By: Name of crew chief (first, last) and Firm Gestra Engineering, Inc. (Mitch)	**Date Drilling Started** 1/12/2017	**Date Drilling Completed** 1/12/2017	**Drilling Method** Hollow Stem Auger

WI Unique Well No.	**DNR Well ID No.**	**Common Well Name** MW-11	**Final Static Water Level**	**Surface Elevation** 0	**Borehole Diameter** 8.25"

Local Grid Orgin ☐ (estimated) ☐ or **Boring Location** ☑ **Lat** **Long** **Local Grid Location** N ☐ S ☐ E ☐ W ☐
State Plane

Facility ID 807049540	**County** Burnett	**County Code** 07	**Civil Town/City/or Village** Town of Daniels

Sample Number	Sample Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
1		36"		1–4	**Fill** Brown silty sand (fine-medium) with gravel	SM					M				
2		42"		5–8											
				8–9	**Organic matter** Woody/organic matter with petroleum odor										
3		36"		9–15	**Clay** Grey silty clay	CL									
				15–17	**Clay** Grey clay										
4		60"		17–19	**Sand** Brown sand (fine-coarse) -wet	SW					W				
				20–23	**EOB** Well set @ 20' BLS										

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

Signature	**Firm** REI Engineering, Inc. 4080 North 20th Avenue, Wausau, WI

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APPENDIX D

WDNR MONITORING WELL CONSTRUCTION FORMS

(FORM 4400-133A)

State of Wisconsin
Department of Natural Resources

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4.90

Route To Solid Haste ☐ Haz. Haste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name Hedlund DX	**Local Grid Location of Well** _____ ___ Feet S. ___ Feet W ___ Feet N. ___ Feet E	**Well Name** MW-2
Facility License Permit or Monitoring Number	**Grid Origin Location**	**Wis. Unique Well Number** **DNR Well Number**
Type of Well Water Table Observation Well ☒ 11 Piezometer ☐ 12	**Section Location of Waste/Source** ☐ E NW 1/4 of NW 1/4 of Sec. 19, T. 38 N; R. 17 ☒ W	**Date Well Installed** 9/13/16
Distance Well Is From Waste/Source Boundary Ft.	**Location of Well Relative to Waste/Source** u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	**Well Installed By (Person's Name and Firm)** Gestra Mitch Panfil
Is Well A Point of Enforcement Std. Application ☐ Yes ☐ No		

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom .5 ft. MSL or _____ ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

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

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

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis):
_____

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

F. Fine sand, top _____ ft. MSL or 4.44 ft.

G. Filter pack, top _____ ft. MSL or 6.44 ft.

H. Screen joint, top _____ ft. MSL or 8.44 ft.

I. Well bottom _____ ft. MSL or 18.44 ft.

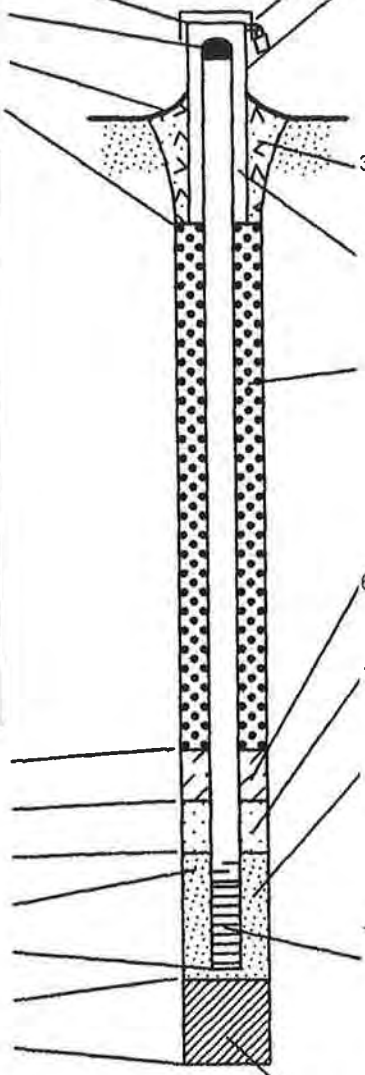
J. Filter pack, bottom _____ ft. MSL or 18.44 ft.

K. Borehole, bottom _____ ft. MSL or 18.44 ft.

L. Borehole, diameter 8 in.

M. O.D. well casing 2.1 in.

N. I.D. well casing 1.9 in.



1. Cap and lock? ☒ Yes ☐ No

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

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

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

5. Annular space seal: a. Granular Bentonite ☐ 33
b. _____ Lbs/gal mud weight Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight Bentonite slurry ☐ 31
d. _____ %Bentonite Bentonite-cement grout ☐ 50
e. _____ ft³ Volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08

6. Bentonite seal: a. Bentonite Granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. _____ Other ☐

7. Fine sand material Manufacturer, product name and mesh size
a. #15 Red Flint
b. Volume added 0.656 ft³

8. Filter pack material: Manufacturer, product name and mesh size
a. #40 Red Flint
b. Volume added 3.936 ft³

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

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11
Continuous slot ☐ 01
_____ Other ☐
b. Manufacturer U.S. Filter
c. Slot size: _____ in.
d. Slotted length: 10 ft.

11. Backfill material (below filter Pack): None ☒ 14
_____ Other ☐

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

Signature	Firm
	REI Engineering, Inc. 4080 N. 20th Ave. Wausau, WI 5440'

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

State of Wisconsin
Department of Natural Resources

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4.90

Route To Solid Haste ☐ Haz. Haste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name Hedlund DX	**Local Grid Location of Well** _____ ___ Feet S. ___ Feet W ___ Feet N. ___ Feet E	**Well Name** MW-3
Facility License Permit or Monitoring Number	**Grid Origin Location**	**Wis. Unique Well Number** **DNR Well Number**
Type of Well Water Table Observation Well ☒ 11 Piezometer ☐ 12	**Section Location of Waste/Source** ☐ E	**Date Well Installed** 9/13/16
Distance Well Is From Waste/Source Boundary Ft.	NW 1/4 of NW 1/4 of Sec. 19, T. 38 N; R 17 ☒ W	**Well Installed By (Person's Name and Firm)** Gestra Mitch Panfil
Is Well A Point of Enforcement Std. Application ☐ Yes ☐ No	**Location of Well Relative to Waste/Source** u ☐ *Upgradient* s ☐ *Sidegradient* d ☐ *Downgradient* n ☐ *Not Known*	

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom .5 ft. MSL or _____ ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

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

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

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis):
_____

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

F. Fine sand, top _____ ft. MSL or 1.96 ft.

G. Filter pack, top _____ ft. MSL or 2.96 ft.

H. Screen joint, top _____ ft. MSL or 3.96 ft.

I. Well bottom _____ ft. MSL or 13.96 ft.

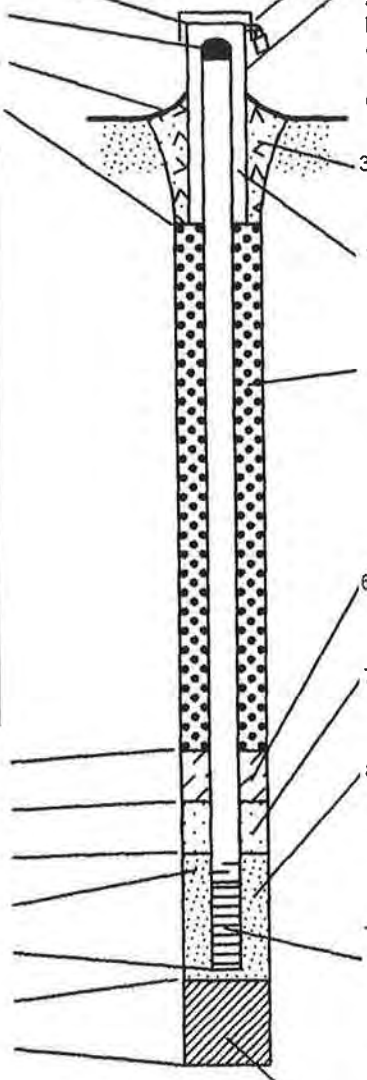
J. Filter pack, bottom _____ ft. MSL or 13.96 ft.

K. Borehole, bottom _____ ft. MSL or 13.96 ft.

L. Borehole, diameter 8 in.

M. O.D. well casing 2.1 in.

N. I.D. well casing 1.9 in.



1. Cap and lock? ☒ Yes ☐ No

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

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

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

5. Annular space seal:
a. Granular Bentonite ☐ 33
b. _____ Lbs/gal mud weight ---- Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight ---------- Bentonite slurry ☐ 31
d. _____ %Bentonite ------- Bentonite-cement grout ☐ 50
e. _____ ft³ Volume added for any of the above
f. How installed:
Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08

6. Bentonite seal:
a. Bentonite Granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. _____ Other ☐

7. Fine sand material Manufacturer, product name and mesh size
a. #15 Red Flint
b. Volume added 0.328 ft³

8. Filter pack material: Manufacturer, product name and mesh size
a. #40 Red Flint
b. Volume added 3.608 ft³

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

10. Screen material: PVC
a. Screen type:
Factory cut ☒ 11
Continuous slot ☐ 01
_____ Other ☐
b. Manufacturer U.S. Filter
c. Slot size: _____ in.
d. Slotted length: 10 ft.

11. Backfill material (below filter Pack):
None ☒ 14
_____ Other ☐

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

Signature	Firm
	REI Engineering, Inc. 4080 N. 20th Ave. Wausau, WI 5440'

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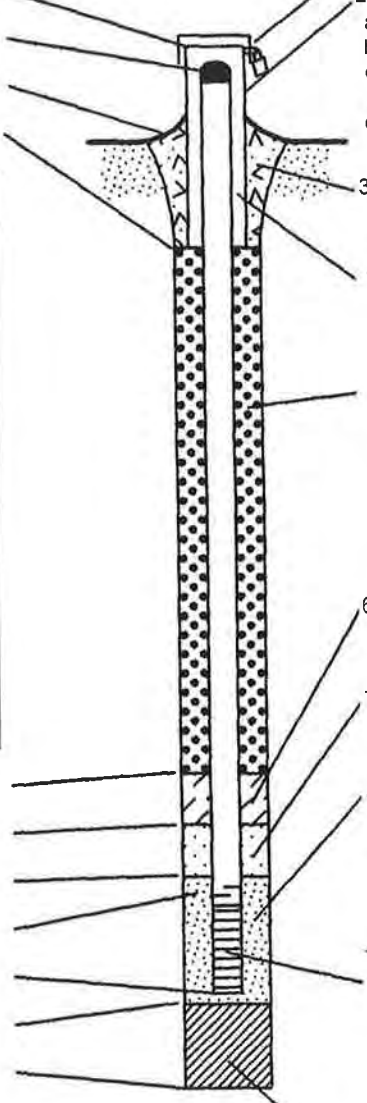
State of Wisconsin
Department of Natural Resources

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4.90

Route To Solid Haste ☐ Haz. Haste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name Hedlund DX	**Local Grid Location of Well** ___ Feet S. ___ Feet W ___ Feet N. ___ Feet E	**Well Name** MW-4
Facility License Permit or Monitoring Number	**Grid Origin Location**	**Wis. Unique Well Number** **DNR Well Number**
Type of Well Water Table Observation Well ☒ 11 Piezometer ☐ 12	**Section Location of Waste/Source** ☐ E	**Date Well Installed** 9/13/16
Distance Well Is From Waste/Source Boundary Ft.	NW 1/4 of NW 1/4 of Sec. 19, T. 38 N; R. 17 ☒ W	**Well Installed By (Person's Name and Firm)** Gestra Mitch Panfil
Is Well A Point of Enforcement Std. Application ☐ Yes ☐ No	**Location of Well Relative to Waste/Source** u ☐ *Upgradient* s ☐ *Sidegradient* d ☐ *Downgradient* n ☐ *Not Known*	



A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom .5 ft. MSL or _____ ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

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

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

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis):
_____

E. Bentonite seal, top _____ ft. MSL or 1.00 ft.
F. Fine sand, top _____ ft. MSL or 2.32 ft.
G. Filter pack, top _____ ft. MSL or 3.32 ft.
H. Screen joint, top _____ ft. MSL or 4.32 ft.
I. Well bottom _____ ft. MSL or 14.32 ft.
J. Filter pack, bottom _____ ft. MSL or 14.32 ft.
K. Borehole, bottom _____ ft. MSL or 14.32 ft.
L. Borehole, diameter 8 in.
M. O.D. well casing 2.1 in.
N. I.D. well casing 1.9 in.

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: _____ in.
b. Length: _____ ft.
c. Material: _____ Steel ☒ 04 Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30 Concrete ☒ 01 _____ Other ☐
4. Material between well casing and protective pipe: Bentonite ☒ 30 Annular space seal ☐ _____ Other ☐
5. Annular space seal: a. Granular Bentonite ☐ 33
b. _____ Lbs/gal mud weight ---- Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight ---- Bentonite slurry ☐ 31
d. _____ %Bentonite ---- Bentonite-cement grout ☐ 50
e. _____ ft³ Volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08
6. Bentonite seal: a. Bentonite Granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. _____ Other ☐
7. Fine sand material Manufacturer, product name and mesh size
a. #15 Red Flint
b. Volume added 0.328 ft³
8. Filter pack material: Manufacturer, product name and mesh size
a. #40 Red Flint
b. Volume added 3.608 ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 Flush threaded PVC schedule 80 ☐ 24 _____ Other ☐
10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01 _____ Other ☐
b. Manufacturer U.S. Filter
c. Slot size: _____ in.
d. Slotted length: 10 ft.
11. Backfill material (below filter Pack): None ☒ 14 _____ Other ☐

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

Signature	Firm
	REI Engineering, Inc. 4080 N. 20th Ave. Wausau, WI 5440'

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

State of Wisconsin
Department of Natural Resources

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4.90

Route To Solid Haste ☐ Haz. Haste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name Hedlund DX	**Local Grid Location of Well** ___ Feet S. ___ Feet W ___ Feet N. ___ Feet E	**Well Name** MW-5
Facility License Permit or Monitoring Number	**Grid Origin Location**	**Wis. Unique Well Number** **DNR Well Number**
Type of Well Water Table Observation Well ☒ 11 Piezometer ☐ 12	**Section Location of Waste/Source** ☐ E NW 1/4 of NW 1/4 of Sec 19, T. 38 N; R. 17 ☒ W	**Date Well Installed** 9/13/16
Distance Well Is From Waste/Source Boundary Ft.	**Location of Well Relative to Waste/Source** u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	**Well Installed By (Person's Name and Firm)** Gestra Mitch Panfil
Is Well A Point of Enforcement Std. Application ☐ Yes ☐ No		

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom .5 ft. MSL or _____ ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

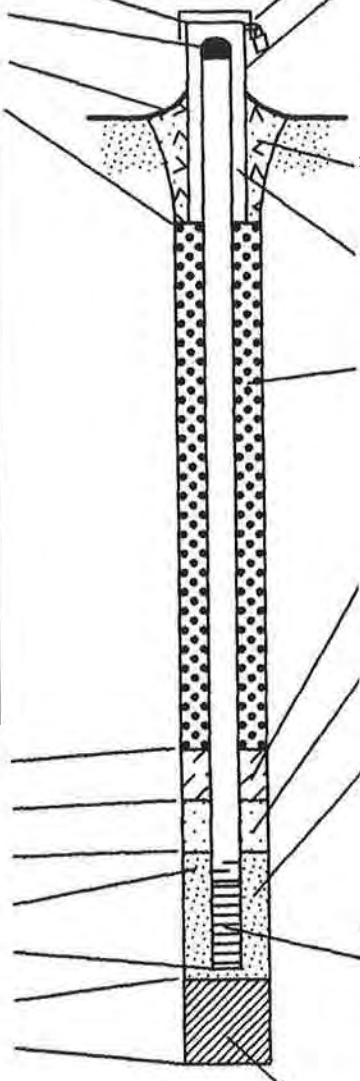
14. Drilling method used
Rotary ☐ 50
Hollow Stem Auger ☒ 41
_____ Other ☐

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

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis):
_____

E. Bentonite seal, top _____ ft. MSL or 1.0 ft.
F. Fine sand, top _____ ft. MSL or 3.00 ft.
G. Filter pack, top _____ ft. MSL or 4.00 ft.
H. Screen joint, top _____ ft. MSL or 5.00 ft.
I. Well bottom _____ ft. MSL or 15.00 ft.
J. Filter pack, bottom _____ ft. MSL or 15.00 ft.
K. Borehole, bottom _____ ft. MSL or 15.00 ft.
L. Borehole, diameter 8 in.
M. O.D. well casing 2.1 in.
N. I.D. well casing 1.9 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: ___ in.
b. Length: ___ ft.
c. Material: _____ Steel ☒ 04 Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30 Concrete ☒ 01 _____ Other ☐
4. Material between well casing and protective pipe:
Bentonite ☒ 30 Annular space seal ☐ _____ Other ☐
5. Annular space seal: a. Granular Bentonite ☐ 33
b. ___ Lbs/gal mud weight ---- Bentonite-sand slurry ☐ 35
c. ___ Lbs/gal mud weight ---- Bentonite slurry ☐ 31
d. ___ %Bentonite ---- Bentonite-cement grout ☐ 50
e. ___ ft³ Volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08
6. Bentonite seal: a. Bentonite Granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. _____ Other ☐
7. Fine sand material Manufacturer, product name and mesh size
a. #15 Red Flint
b. Volume added 0.328 ft³
8. Filter pack material: Manufacturer, product name and mesh size
a. #40 Red Flint
b. Volume added 3.608 ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
_____ Other ☐
10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01 _____ Other ☐
b. Manufacturer U.S. Filter
c. Slot size: ___ in.
d. Slotted length: 10 ft.
11. Backfill material (below filter Pack): None ☒ 14 _____ Other ☐

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

Signature	Firm	
		REI Engineering, Inc. 4080 N. 20th Ave. Wausau, WI 5440'

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State of Wisconsin
Department of Natural Resources

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4.90

Route To Solid Haste ☐ Haz. Haste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name Hedlund DX	**Local Grid Location of Well** _____ ___ Feet S. ___ Feet W ___ Feet N. ___ Feet E	**Well Name** MW-6
Facility License Permit or Monitoring Number	**Grid Origin Location**	**Wis. Unique Well Number** **DNR Well Number**
Type of Well Water Table Observation Well ☒ 11 Piezometer ☐ 12	**Section Location of Waste/Source** ☐ E	**Date Well Installed** 9/13/16
Distance Well Is From Waste/Source Boundary Ft.	NW 1/4 of NW 1/4 of Sec 19, T. 38 N; R. 17 ☒ W	**Well Installed By (Person's Name and Firm)** Gestra Mitch Panfil
Is Well A Point of Enforcement Std. Application ☐ Yes ☐ No	**Location of Well Relative to Waste/Source** u ☐ *Upgradient* s ☐ *Sidegradient* d ☐ *Downgradient* n ☐ *Not Known*	

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom .5 ft. MSL or _____ ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

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

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

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis):
_____

E. Bentonite seal, top _____ ft. MSL or 1.00 ft.

F. Fine sand, top _____ ft. MSL or 1.76 ft.

G. Filter pack, top _____ ft. MSL or 2.26 ft.

H. Screen joint, top _____ ft. MSL or 2.76 ft.

I. Well bottom _____ ft. MSL or 12.76 ft.

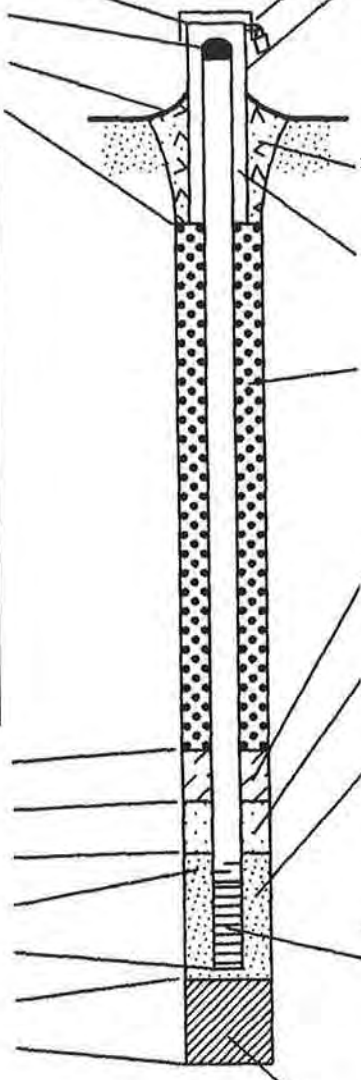
J. Filter pack, bottom _____ ft. MSL or 12.76 ft.

K. Borehole, bottom _____ ft. MSL or 12.76 ft.

L. Borehole, diameter 8 in.

M. O.D. well casing 2.1 in.

N. I.D. well casing 1.9 in.



1. Cap and lock? ☒ Yes ☐ No

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

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

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

5. Annular space seal: a. Granular Bentonite ☐ 33
b. _____ Lbs/gal mud weight Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight Bentonite slurry ☐ 31
d. _____ %Bentonite Bentonite-cement grout ☐ 50
e. _____ ft³ Volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08

6. Bentonite seal: a. Bentonite Granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. _____ Other ☐

7. Fine sand material Manufacturer, product name and mesh size
a. #15 Red Flint
b. Volume added 0.328 ft³

8. Filter pack material: Manufacturer, product name and mesh size
a. #40 Red Flint
b. Volume added 3.444 ft³

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

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01 _____ Other ☐
b. Manufacturer U.S. Filter
c. Slot size: _____ in.
d. Slotted length: 10 ft.

11. Backfill material (below filter Pack): None ☒ 14 _____ Other ☐

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

Signature _____ Firm REI Engineering, Inc.
4080 N. 20th Ave.
Wausau, WI 5440[illegible]

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State of Wisconsin
Department of Natural Resources

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4.90

Route To Solid Haste ☐ Haz. Haste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name Hedlund DX	**Local Grid Location of Well** _____ ___ Feet S. ___ Feet W ___ Feet N. ___ Feet E	**Well Name** MW-7
Facility License Permit or Monitoring Number	**Grid Origin Location**	**Wis. Unique Well Number** **DNR Well Number**
Type of Well Water Table Observation Well ☒ 11 Piezometer ☐ 12	**Section Location of Waste/Source** ☐ E	**Date Well Installed** 9/14/16
Distance Well Is From Waste/Source Boundary Ft.	NW 1/4 of NW 1/4 of Sec. 19, T. 38 N; R. 17 ☒ W	**Well Installed By (Person's Name and Firm)** Gestra Mitch Panfil
Is Well A Point of Enforcement Std. Application ☐ Yes ☐ No	**Location of Well Relative to Waste/Source** u ☐ *Upgradient* s ☐ *Sidegradient* d ☐ *Downgradient* n ☐ *Not Known*	

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom .5 ft. MSL or _____ ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

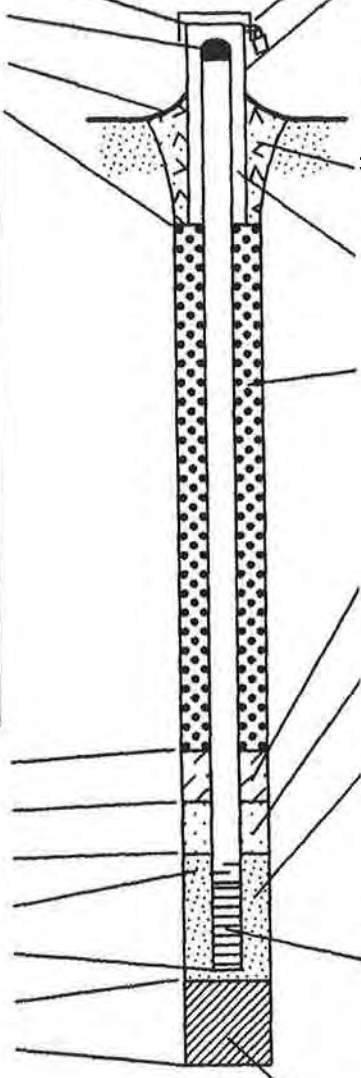
14. Drilling method used
Rotary ☐ 50
Hollow Stem Auger ☒ 41
_____ Other ☐

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

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis):
_____

E. Bentonite seal, top _____ ft. MSL or 1.0 ft.
F. Fine sand, top _____ ft. MSL or 2.55 ft.
G. Filter pack, top _____ ft. MSL or 3.55 ft.
H. Screen joint, top _____ ft. MSL or 4.55 ft.
1. Well bottom _____ ft. MSL or 14.55 ft.
J. Filter pack, bottom _____ ft. MSL or 14.55 ft.
K. Borehole, bottom _____ ft. MSL or 14.55 ft.
L. Borehole, diameter 8 in.
M. O.D. well casing 2.1 in.
N. I.D. well casing 1.9 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: _____ in.
b. Length: _____ ft.
c. Material: Steel ☒ 04 Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30 Concrete ☒ 01 Other ☐
4. Material between well casing and protective pipe: Bentonite ☒ 30 Annular space seal ☐ Other ☐
5. Annular space seal: a. Granular Bentonite ☐ 33
b. _____ Lbs/gal mud weight ---- Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight ---- Bentonite slurry ☐ 31
d. _____ %Bentonite ---- Bentonite-cement grout ☐ 50
e. _____ ft³ Volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08
6. Bentonite seal: a. Bentonite Granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. _____ Other ☐
7. Fine sand material Manufacturer, product name and mesh size
a. #15 Red Flint
b. Volume added 0.328 ft³
8. Filter pack material: Manufacturer, product name and mesh size
a. #40 Red Flint
b. Volume added 3.608 ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 Flush threaded PVC schedule 80 ☐ 24 _____ Other ☐
10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01 _____ Other ☐
b. Manufacturer U.S. Filter
c. Slot size: _____ in.
d. Slotted length: 10 ft.
11. Backfill material (below filter Pack): None ☒ 14 _____ Other ☐

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

Signature _____ Firm REI Engineering, Inc. 4080 N. 20th Ave. Wausau, WI 5440'

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State of Wisconsin
Department of Natural Resources

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4.90

Route To Solid Haste ☐ Haz. Haste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name Hedlund DX	**Local Grid Location of Well** _____ ___ Feet S. ___ Feet W ___ Feet N. ___ Feet E	**Well Name** MW-11
Facility License Permit or Monitoring Number	**Grid Origin Location**	**Wis. Unique Well Number** **DNR Well Number**
Type of Well Water Table Observation Well ☒ 11 Piezometer ☐ 12	**Section Location of Waste/Source** ☐ E	**Date Well Installed** 1-12-17
Distance Well Is From Waste/Source Boundary Ft.	NW 1/4 of NW 1/4 of Sec. 19, T. 38 N, R. 17 ☒ W	**Well Installed By (Person's Name and Firm)** Gestra Mitch Panfil
Is Well A Point of Enforcement Std. Application ☐ Yes ☐ No	**Location of Well Relative to Waste/Source** u ☐ *Upgradient* s ☐ *Sidegradient* d ☐ *Downgradient* n ☐ *Not Known*	

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

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

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

13. Sieve analysis attached? ☐ Yes ☒ No

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

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

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis):
_____

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

F. Fine sand, top _____ ft. MSL or 5.45 ft.

G. Filter pack, top _____ ft. MSL or 7.45 ft.

H. Screen joint, top _____ ft. MSL or 9.45 ft.

I. Well bottom _____ ft. MSL or 19.45 ft.

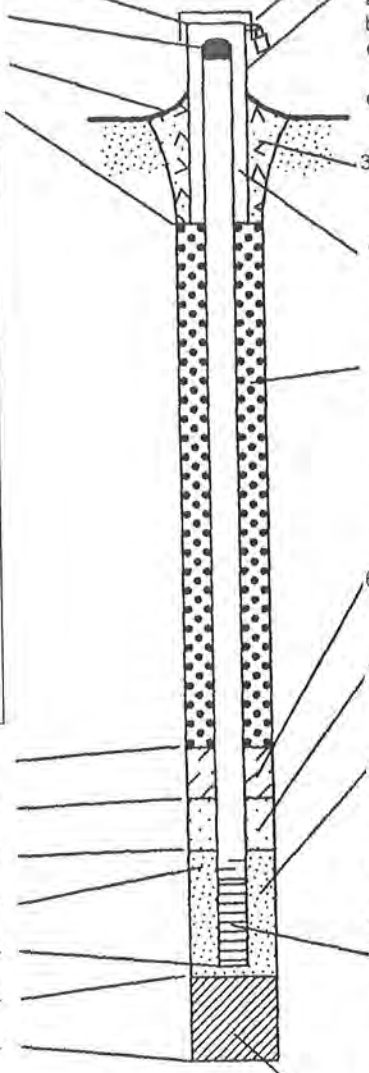
J. Filter pack, bottom _____ ft. MSL or 19.45 ft.

K. Borehole, bottom _____ ft. MSL or 19.45 ft.

L. Borehole, diameter 8 in.

M. O.D. well casing 2.1 in.

N. I.D. well casing 1.9 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 9 in.
b. Length: 1 ft.
c. Material: _____ Steel ☒ 04 Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

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

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

5. Annular space seal: a. Granular Bentonite ☐ 33
b. ____ Lbs/gal mud weight Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight Bentonite slurry ☐ 31
d. ____ %Bentonite Bentonite-cement grout ☐ 50
e. ____ ft³ Volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08

6. Bentonite seal: a. Bentonite Granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. _____ Other ☐

7. Fine sand material Manufacturer, product name and mesh size
a. #15 Red Flint
b. Volume added 0.328 ft³

8. Filter pack material: Manufacturer, product name and mesh size
a. #40 Red Flint
b. Volume added 3.608 ft³

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

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01
_____ Other ☐
b. Manufacturer U.S. Filter
c. Slot size: ____ in.
d. Slotted length: 10 ft.

11. Backfill material (below filter Pack): None ☒ 14
_____ Other ☐

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

Signature _____ Firm REI Engineering, Inc.
4080 N. 20th Ave.
Wausau, WI 5440'

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State of Wisconsin
Department of Natural Resources

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4.90

Route To Solid Haste ☐ Haz. Haste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name Hedlund DX	**Local Grid Location of Well** _____ ___ Feet S. ___ Feet W ___ Feet N. ___ Feet E	**Well Name** MW-8
Facility License Permit or Monitoring Number	**Grid Origin Location**	**Wis. Unique Well Number** **DNR Well Number**
Type of Well Water Table Observation Well ☒ 11 Piezometer ☐ 12	**Section Location of Waste/Source** ☐ E	**Date Well Installed** 1-11-17
Distance Well Is From Waste/Source Boundary Ft.	NW 1/4 of NW 1/4 of Sec. 19, T. 38 N; R. 17 ☒ W	**Well Installed By (Person's Name and Firm)** Gestra Mitch Panfil
Is Well A Point of Enforcement Std. Application ☐ Yes ☐ No	**Location of Well Relative to Waste/Source** u ☐ *Upgradient* s ☐ *Sidegradient* d ☐ *Downgradient* n ☐ *Not Known*	

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom .5 ft. MSL or _____ ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

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

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

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis):
_____

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

F. Fine sand, top _____ ft. MSL or 2.65 ft.

G. Filter pack, top _____ ft. MSL or 3.15 ft.

H. Screen joint, top _____ ft. MSL or 3.65 ft.

I. Well bottom _____ ft. MSL or 13.65 ft.

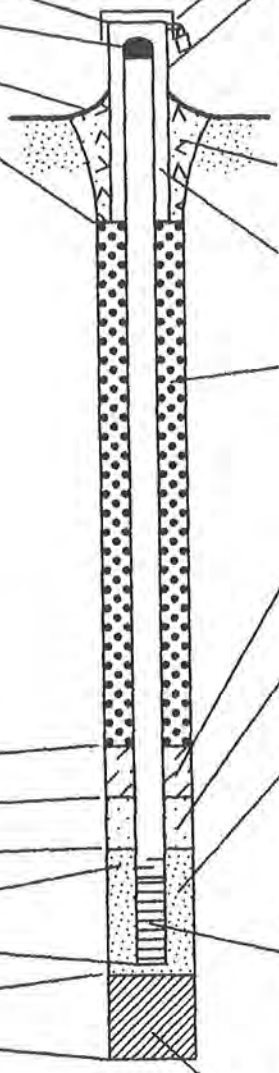
J. Filter pack, bottom _____ ft. MSL or 13.65 ft.

K. Borehole, bottom _____ ft. MSL or 13.65 ft.

L. Borehole, diameter 8 in.

M. O.D. well casing 2.1 in.

N. I.D. well casing 1.9 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 9 in.
b. Length: 1 ft.
c. Material: _____ Steel ☒ 04 Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

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

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

5. Annular space seal:
a. Granular Bentonite ☐ 33
b. _____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight ... Bentonite slurry ☐ 31
d. _____ %Bentonite ... Bentonite-cement grout ☐ 50
e. _____ ft³ Volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08

6. Bentonite seal:
a. Bentonite Granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. _____ Other ☐

7. Fine sand material Manufacturer, product name and mesh size
a. #15 Red Flint
b. Volume added 0.328 ft³

8. Filter pack material: Manufacturer, product name and mesh size
a. #40 Red Flint
b. Volume added 3.608 ft³

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

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01
_____ Other ☐
b. Manufacturer U.S. Filter
c. Slot size: _____ in.
d. Slotted length: 10 ft.

11. Backfill material (below filter Pack): None ☒ 14
_____ Other ☐

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

Signature	Firm
	REI Engineering, Inc. 4080 N. 20th Ave. Wausau, WI 5440'

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

State of Wisconsin
Department of Natural Resources

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4.90

Route To Solid Haste ☐ Haz. Haste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name Hedlund DX	**Local Grid Location of Well** _____ ___ Feet S. ___ Feet W ___ Feet N. ___ Feet E	**Well Name** MW-9
Facility License Permit or Monitoring Number	**Grid Origin Location**	**Wis. Unique Well Number** **DNR Well Number**
Type of Well Water Table Observation Well ☒ 11 Piezometer ☐ 12	**Section Location of Waste/Source** ☐ E NW 1/4 of NW 1/4 of Sec. 19, T. 38 N; R. 17 ☒ W	**Date Well Installed** 1-11-17
Distance Well Is From Waste/Source Boundary Ft.	**Location of Well Relative to Waste/Source** u ☐ *Upgradient* s ☐ *Sidegradient* d ☐ *Downgradient* n ☐ *Not Known*	**Well Installed By (Person's Name and Firm)** Gestra Mitch Panfil
Is Well A Point of Enforcement Std. Application ☐ Yes ☐ No		

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom .5 ft. MSL or _____ ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

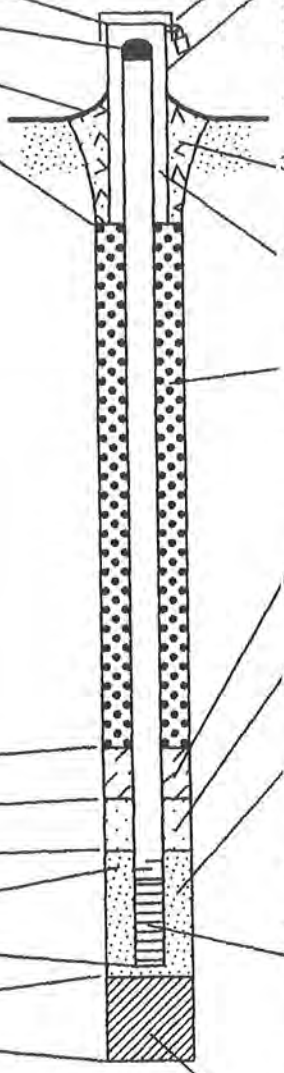
14. Drilling method used
Rotary ☐ 50
Hollow Stem Auger ☒ 41
_____ Other ☐

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

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis):
_____

E. Bentonite seal, top _____ ft. MSL or 1.0 ft.
F. Fine sand, top _____ ft. MSL or 3.75 ft.
G. Filter pack, top _____ ft. MSL or 4.25 ft.
H. Screen joint, top _____ ft. MSL or 4.85 ft.
I. Well bottom _____ ft. MSL or 14.85 ft.
J. Filter pack, bottom _____ ft. MSL or 14.85 ft.
K. Borehole, bottom _____ ft. MSL or 14.85 ft.
L. Borehole, diameter 8 in.
M. O.D. well casing 2.1 in.
N. I.D. well casing 1.9 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 9 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04 Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30 Concrete ☒ 01 Other ☐
4. Material between well casing and protective pipe: Bentonite ☒ 30 Annular space seal ☐ Other ☐
5. Annular space seal: a. Granular Bentonite ☐ 33
b. _____ Lbs/gal mud weight .... Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight ..... Bentonite slurry ☐ 31
d. _____ %Bentonite ..... Bentonite-cement grout ☐ 50
e. _____ ft³ Volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08
6. Bentonite seal: a. Bentonite Granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. _____ Other ☐
7. Fine sand material Manufacturer, product name and mesh size
a. #15 Red Flint
b. Volume added 0.328 ft³
8. Filter pack material: Manufacturer, product name and mesh size
a. #40 Red Flint
b. Volume added 3.608 ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 Flush threaded PVC schedule 80 ☐ 24 _____ Other ☐
10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01 _____ Other ☐
b. Manufacturer U.S. Filter
c. Slot size: _____ in.
d. Slotted length: 10 ft.
11. Backfill material (below filter Pack): None ☒ 14 _____ Other ☐

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

Signature

Firm REI Engineering, Inc.
4080 N. 20th Ave.
Wausau, WI 5440'

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

State of Wisconsin
Department of Natural Resources

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4.90

Route To Solid Haste ☐ Haz. Haste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name Hedlund DX	**Local Grid Location of Well** _____ ___ Feet S. ___ Feet W ___ Feet N. ___ Feet E	**Well Name** MW-10
Facility License Permit or Monitoring Number	**Grid Origin Location**	**Wis. Unique Well Number** **DNR Well Number**
Type of Well Water Table Observation Well ☒ 11 Piezometer ☐ 12	**Section Location of Waste/Source** ☐ E NW 1/4 of NW 1/4 of Sec. 19, T. 38 N; R. 17 ☒ W	**Date Well Installed** 1-12-17
Distance Well Is From Waste/Source Boundary Ft.	**Location of Well Relative to Waste/Source** u ☐ *Upgradient* s ☐ *Sidegradient* d ☐ *Downgradient* n ☐ *Not Known*	**Well Installed By (Person's Name and Firm)** Gestra Mitch Panfil
Is Well A Point of Enforcement Std. Application ☐ Yes ☐ No		

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom .5 ft. MSL or _____ ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

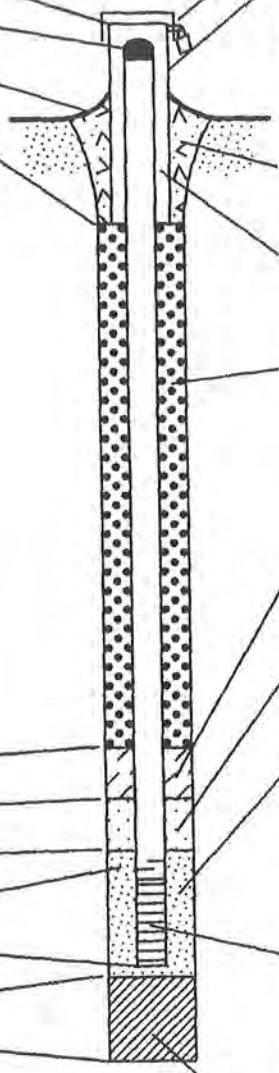
14. Drilling method used
Rotary ☐ 50
Hollow Stem Auger ☒ 41
_____ Other ☐

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

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis):
_____

E. Bentonite seal, top _____ ft. MSL or 0.0 ft.
F. Fine sand, top _____ ft. MSL or 3.09 ft.
G. Filter pack, top _____ ft. MSL or 3.69 ft.
H. Screen joint, top _____ ft. MSL or 4.29 ft.
I. Well bottom _____ ft. MSL or 14.29 ft.
J. Filter pack, bottom _____ ft. MSL or 14.29 ft.
K. Borehole, bottom _____ ft. MSL or 14.29 ft.
L. Borehole, diameter 8 in.
M. O.D. well casing 2.1 in.
N. I.D. well casing 1.9 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 4 in.
b. Length: 7 ft.
c. Material: Steel ☒ 04
Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
_____ Other ☐
4. Material between well casing and protective pipe:
Bentonite ☒ 30
Annular space seal ☐
_____ Other ☐
5. Annular space seal: a. Granular Bentonite ☐ 33
b. ____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight ... Bentonite slurry ☐ 31
d. ____ %Bentonite ... Bentonite-cement grout ☐ 50
e. ____ ft³ Volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08
6. Bentonite seal: a. Bentonite Granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. _____ Other ☐
7. Fine sand material Manufacturer, product name and mesh size
a. #15 Red Flint
b. Volume added 0.328 ft³
8. Filter pack material: Manufacturer, product name and mesh size
a. #40 Red Flint
b. Volume added 3.608 ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
_____ Other ☐
10. Screen material: PVC
a. Screen type: Factory cut ☒ 11
Continuous slot ☐ 01
_____ Other ☐
b. Manufacturer U.S. Filter
c. Slot size: ____ in.
d. Slotted length: 10 ft.
11. Backfill material (below filter Pack): None ☒ 14
_____ Other ☐

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

Signature	Firm
	REI Engineering, Inc. 4080 N. 20th Ave. Wausau, WI 5440'

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

APPENDIX E

WDNR MONITORING WELL DEVELOPMENT FORMS

(FORM 4400-133B)

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4.90

Facility/Project Name	County Name	Well Name	
Hedlund DX	Polk	MW1	
Facility Licence, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well Number**
	48		

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

2. Well development method

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

3. Time spent developing well	42	*min.*
4. Depth of well (from top of Casing)	16.16	*ft.*
5. Inside diameter of well	2.07	*in.*
6. Volume of water in filter pack and well casing	9.77	*gal.*
7. Volume of water removed from well	20	*gal.*
8. Volume of water added (if any)	0	*gal.*

9. Source of water added _____

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

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 5.87 *ft.*	dry *ft.*
Data *mm/dd/yy*	b. 9/15/16	9/15/16
Time	c. 10:20 ☐ p.m. ☒ a.m.	11:22 ☐ p.m. ☒ a.m.
12. Sediment in well bottom	6 *inches*	0 *inches*
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☒ 10 Turbid ☐ 15
(Describe)		Clear at 10 gallons

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

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

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: David Larsen (REI)

Firm: REI Engineering, Inc.
4020 N 20th Ave.
Wausau, WI 54401

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

Signature: [signature]

Print Initials: DNL

Firm: REI Engineering, Inc.

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

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 4.90

Facility/Project Name	County Name	Well Name	
Hedlund DX	Polk	MW2	
Facility Licence, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well Number**
	48		

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

2. Well development method

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

	Before Development	After Development
3. Time spent developing well	77 min.	
4. Depth of well (from top of Casing)	18.44 ft.	
5. Inside diameter of well	2.07 in.	
6. Volume of water in filter pack and well casing	gal.	
7. Volume of water removed from well	90 gal.	
8. Volume of water added (If any)	0 gal.	
9. Source of water added		
10. Analysis performed on water added? (If yes, attach results)	☐ Yes ☐ No	
11. Depth to Water (from top of well casing) a.	2.48 ft.	5.32 ft.
Data mm/dd/yy b.	9/15/16	9/15/16
Time c.	11:27 ☐ p.m. ☐ a.m.	12:38 ☐ p.m. ☐ a.m.
12. Sediment in well bottom	6 inches	0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe)	Clear ☒ 10 Turbid ☐ 15 (Describe) Clear at 10 gallons
Fill in if drilling fluids were used and well is at solid waste facility:		
14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: David Larsen (REI)

Firm: REI Engineering, Inc.
4020 N 20th Ave.
Wausau, WI 54401

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

Signature: [signature]

Print Initials: DNL

Firm: REI Engineering, Inc.

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

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4.90

Facility/Project Name	County Name	Well Name	
Hedlund DX	Polk	MW3	
Facility Licence, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well Number**
	48		

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

2. Well development method

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

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 1.74 ft.	dry ft.
Data mm/dd/yy	b. 9/15/16	9/15/16
Time	c. 1:14 ☒ p.m. ☐ a.m.	2:00 ☐ p.m. ☐ a.m.
12. Sediment in well bottom	6 inches	0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☒ 10 Turbid ☐ 15
(Describe)		Clear at 10 gallons

3. Time spent developing well	46	min.
4. Depth of well (from top of Casing)	13.96	ft.
5. Inside diameter of well	2.07	in.
6. Volume of water in filter pack and well casing	9.85	gal.
7. Volume of water removed from well	35	gal.
8. Volume of water added (If any)	0	gal.

9. Source of water added _____

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

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

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

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: David Larsen (REI)

Firm: REI Engineering, Inc.
4020 N 20th Ave.
Wausau, WI 54401

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

Signature: [signature]

Print Initials: D N L

Firm: REI Engineering, Inc.

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

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4.90

Facility/Project Name	County Name	Well Name	
Hedlund DX	Polk	MW4	
Facility Licence, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well Number**
	48		

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

2. Well development method

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

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 2.18 *ft.*	dry *ft.*
Data *mm/dd/yy*	b. 9/15/16	9/15/16
Time	c. 2:48 ☒ p.m. ☐ a.m.	3:03 ☒ p.m. ☐ a.m.
12. Sediment in well bottom	6 *inches*	0 *inches*
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe)	Clear ☐ 10 Turbid ☒ 15 (Describe)

3. Time spent developing well	15	*min.*
4. Depth of well (from top of Casing)	14.32	*ft.*
5. Inside diameter of well	2.07	*in.*
6. Volume of water in filter pack and well casing	9.84	*gal.*
7. Volume of water removed from well	15	*gal.*
8. Volume of water added (If any)	0	*gal.*

9. Source of water added _____

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

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

	Before Development	After Development
14. Total suspended solids	*mg/l*	*mg/l*
15. COD	*mg/l*	*mg/l*

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: David Larsen (REI)

Firm: REI Engineering, Inc.
4020 N 20th Ave.
Wausau, WI 54401

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

Signature: [signature]

Print Initials: DNL

Firm: REI Engineering, Inc.

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

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4.90

Facility/Project Name	County Name	Well Name	
Hedlund DX	Polk	MW5	
Facility Licence, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well Number**
	48		

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

2. Well development method

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

	Before Development	After Development
3. Time spent developing well	46 min.	
4. Depth of well (from top of Casing)	14.78 ft.	
5. Inside diameter of well	2.07 in.	
6. Volume of water in filter pack and well casing	9.9 gal.	
7. Volume of water removed from well	65 gal.	
8. Volume of water added (If any)	0 gal.	
9. Source of water added	_____	
10. Analysis performed on water added? (If yes, attach results)	☐ Yes ☐ No	
11. Depth to Water (from top of well casing)	a. 2.46 ft.	7.61 ft.
Data mm/dd/yy	b. 9/15/16	9/15/16
Time	c. 4:26 ☒ p.m. ☐ a.m.	5:12 ☒ p.m. ☐ a.m.
12. Sediment in well bottom	6 inches	0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☒ 10 Turbid ☐ 15
(Describe)		Clear at 20 gallons

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

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

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: David Larsen (REI)

Firm: REI Engineering, Inc.
4020 N 20th Ave.
Wausau, WI 54401

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

Signature: [signature]

Print Initials: DNL

Firm: REI Engineering, Inc.

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

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4.90

Facility/Project Name	County Name	Well Name	
Hedlund DX	Polk	MW6	
Facility Licence, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well Number**
	48		

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

2. Well development method

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

3. Time spent developing well 29 *min.*

4. Depth of well (from top of Casing) 12.76 *ft.*

5. Inside diameter of well 2.07 *in.*

6. Volume of water in filter pack and well casing 9.6 *gal.*

7. Volume of water removed from well 28 *gal.*

8. Volume of water added (if any) 0 *gal.*

9. Source of water added _____

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

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 2.50 *ft.*	dry *ft.*
Data *mm/dd/yy*	b. 9/15/16	9/15/16
Time	c. 6.31 ☒ p.m. ☐ a.m.	7:00 ☒ p.m. ☐ a.m.
12. Sediment in well bottom	6 *inches*	0 *inches*
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☐ 10 Turbid ☒ 15
(Describe)		

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

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

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: David Larsen (REI)

Firm: REI Engineering, Inc.
4020 N 20th Ave.
Wausau, WI 54401

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

Signature: [signature]

Print Initials: DNL

Firm: REI Engineering, Inc.

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

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4.90

Facility/Project Name	County Name	Well Name	
Hedlund DX	Polk	MW7	
Facility Licence, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well Number**
	48		

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

2. Well development method

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

	Before Development	After Development
3. Time spent developing well	58 min.	
4. Depth of well (from top of Casing)	14.55 ft.	
5. Inside diameter of well	2.07 in.	
6. Volume of water in filter pack and well casing	10.2 gal.	
7. Volume of water removed from well	40 gal.	
8. Volume of water added (If any)	0 gal.	
9. Source of water added		
10. Analysis performed on water added? (If yes, attach results)	☐ Yes ☐ No	
11. Depth to Water (from top of well casing) a.	0.97 ft.	10.52 ft.
Data mm/dd/yy b.	9/21/16	9/21/16
Time c.	8:17 ☐ p.m. ☒ a.m.	9:15 ☐ p.m. ☒ a.m.
12. Sediment in well bottom	6 inches	0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe)	Clear ☐ 10 Turbid ☒ 15 (Describe) Clear at 10 gallons

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

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

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: David Larsen (REI)

Firm: REI Engineering, Inc.
4020 N 20th Ave.
Wausau, WI 54401

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

Signature: [signature]

Print Initials: DNL

Firm: REI Engineering, Inc.

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

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4.90

Facility/Project Name	County Name	Well Name	
Hedlund DX	Polk	MW8	
Facility Licence, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well Number**
	48		

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

2. Well development method

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

3. Time spent developing well 32 *min.*

4. Depth of well (from top of Casing) 13.75 *ft.*

5. Inside diameter of well 2.07 *in.*

6. Volume of water in filter pack and well casing 9.2 *gal.*

7. Volume of water removed from well 40 *gal.*

8. Volume of water added (If any) 0 *gal.*

9. Source of water added _____

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

	Before Development	After Development
11. Depth to Water (from top of well casing	a. 4.59 *ft.*	4.90 *ft.*
Data *mm/dd/yy*	b. 1-12-17	1-12-17
Time	c. 8:28 ☐ p.m. ☒ a.m.	8:50 ☐ p.m. ☒ a.m.
12. Sediment in well bottom	6 *inches*	0 *inches*
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☒ 10 Turbid ☐ 15
(Describe)		Clear at 20 gallons

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

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

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: David Larsen (REI)

Firm: REI Engineering, Inc.
4020 N 20th Ave.
Wausau, WI 54401

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

Signature: [signature]

Print Initials: DNL

Firm: REI Engineering, Inc.

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

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4.90

Facility/Project Name	County Name	Well Name	
Hedlund DX	Polk	MW9	
Facility Licence, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well Number**
	48		

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

2. Well development method

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

	Before Development	After Development
11. Depth to Water (from top of well casing	a. 3.35 *ft.*	4.55 *ft.*
Data *mm/dd/yy*	b. 1-12-17	1-12-17
Time	c. 9:28 ☐ p.m. ☒ a.m.	9:50 ☐ p.m. ☒ a.m.
12. Sediment in well bottom	6 *inches*	0 *inches*
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☒ 10 Turbid ☐ 15
(Describe)		Clear at 40 gallons

3. Time spent developing well	32 *min.*	
4. Depth of well (from top of Casing)	14.85 *ft.*	
5. Inside diameter of well	2.07 *in.*	
6. Volume of water in filter pack and well casing	11.01 *gal.*	
7. Volume of water removed from well	45 *gal.*	
8. Volume of water added (If any)	0 *gal.*	
9. Source of water added _____		

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

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

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

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: David Larsen (REI)

Firm: REI Engineering, Inc.
4020 N 20th Ave.
Wausau, WI 54401

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

Signature: [signature]

Print Initials: D N L

Firm: REI Engineering, Inc.

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

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4.90

Facility/Project Name	County Name	Well Name	
Hedlund DX	Polk	MW10	
Facility Licence, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well Number**
	48		

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

2. Well development method

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

	Before Development	After Development
3. Time spent developing well	28 *min.*	
4. Depth of well (from top of Casing)	17.45 *ft.*	
5. Inside diameter of well	2.07 *in.*	
6. Volume of water in filter pack and well casing	11.03 *gal.*	
7. Volume of water removed from well	65 *gal.*	
8. Volume of water added (If any)	0 *gal.*	
9. Source of water added		
10. Analysis performed on water added? (If yes. attach results)	☐ Yes ☐ No	
11. Depth to Water (from top of well casing a.	5.83 *ft.*	7.22 *ft.*
Data *mm/dd/yy* b.	1-12-17	1-12-17
Time c.	12:15 ☒ p.m. ☐ a.m.	12:43 ☒ p.m. ☐ a.m.
12. Sediment in well bottom	6 *inches*	0 *inches*
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe)	Clear ☒ 10 Turbid ☐ 15 (Describe) Clear at 30 gallons

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

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

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: David Larsen (REI)

Firm: REI Engineering, Inc.
4020 N 20th Ave.
Wausau, WI 54401

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

Signature: [signature]

Print Initials: DWL

Firm: REI Engineering, Inc.

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

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4.90

Facility/Project Name	County Name	Well Name	
Hedlund DX	Polk	MW11	
Facility Licence, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well Number**
	48		

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

2. Well development method

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

	Before Development	After Development
3. Time spent developing well	20 *min.*	
4. Depth of well (from top of Casing)	19.57 *ft.*	
5. Inside diameter of well	2.07 *in.*	
6. Volume of water in filter pack and well casing	16.1 *gal.*	
7. Volume of water removed from well	30 *gal.*	
8. Volume of water added (If any)	0 *gal.*	
9. Source of water added		
10. Analysis performed on water added? (If yes. attach results)	☐ Yes ☐ No	
11. Depth to Water (from top of well casing a.	2.63 *ft.*	3.36 *ft.*
Data *mm/dd/yy* b.	1-12-17	1-12-17
Time c.	4:55 ☒ p.m. ☐ a.m.	5:15 ☒ p.m. ☐ a.m.
12. Sediment in well bottom	6 *inches*	0 *inches*
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe)	Clear ☒ 10 Turbid ☐ 15 (Describe) Clear at 20 gallons

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

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

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: David Larsen (REI)

Firm: REI Engineering, Inc.
4020 N 20th Ave.
Wausau, WI 54401

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

Signature: [signature]

Print Initials: D N L

Firm: REI Engineering, Inc.

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

APPENDIX F

WDNR BOREHOLE ABANDONMENT FORMS

(FORM 3300-5)

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

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, 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 DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☑ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Burnett	GP1	

Latitude / Longitude (see instructions) ____ N ____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼ NW or Gov't Lot #	¼ NW	Section	Township	Range
		19	38 N	17 ☐ E ☑ W

Well Street Address: 10557 State Highway 70

Well City, Village or Town	Well ZIP Code
Town of Daniels	54840

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
Temporary Borehole	GP1

2. Facility / Owner Information

Facility Name: Hedlund DX
Facility ID (FID or PWS): 807049540
License/Permit/Monitoring #:
Original Well Owner: Burnett County
Present Well Owner: Burnett County
Mailing Address of Present Owner: 10557 State Highway 70

City of Present Owner	State	ZIP Code
Town of Daniels	WI	54840

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☑ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 8/8/16

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.)	Casing Diameter (in.)
15'	2"

Lower Drillhole Diameter (in.)	Casing Depth (ft.)

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

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

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

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

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☐ 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
Granular bentonite	Surface	15'	1/2 Bag	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Gestra Engineering , REI Engineering		8/8/16

Street or Route	Telephone Number
4080 N. 20th Avenue	(715) 675-9784

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Wausau	WI	54401		3-26-17

DNR Use Only

Date Received	Noted By

Comments:

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

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, 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 DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☑ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Burnett	GP2	

Latitude / Longitude (see instructions) _____ N _____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS006 ☐ SCR002 ☐ OTH001

¼ / ¼ NW or Gov't Lot #	¼ NW	Section	Township	Range
		19	38 N	17 ☐ E ☑ W

Well Street Address: 10557 State Highway 70

Well City, Village or Town	Well ZIP Code
Town of Daniels	54840

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
Temporary Borehole	GP2

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☑ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 8/8/16

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.)	Casing Diameter (in.)
15'	2"

Lower Drillhole Diameter (in.)	Casing Depth (ft.)

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

2. Facility / Owner Information

Facility Name: Hedlund DX
Facility ID (FID or PWS): 807049540
License/Permit/Monitoring #:
Original Well Owner: Burnett County
Present Well Owner: Burnett County
Mailing Address of Present Owner: 10557 State Highway 70

City of Present Owner	State	ZIP Code
Town of Daniels	WI	54840

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

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

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

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☐ 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
Granular bentonite	Surface	15'	1/2 Bag	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Gestra Engineering , REI Engineering		8/8/16

Street or Route	Telephone Number
4080 N. 20th Avenue	(715) 675-9781

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Wausau	WI	54401		3-28-17

DNR Use Only

Date Received	Noted By

Comments:

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

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, 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 DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☑ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Burnett	GP3	

Latitude / Longitude (see instructions): ____ N ____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼ NW	¼ NW	Section	Township	Range
or Gov't Lot #		19	38 N	17 ☐ E ☑ W

Well Street Address: 10557 State Highway 70

Well City, Village or Town	Well ZIP Code
Town of Daniels	54840

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
Temporary Borehole	GP3

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☑ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 8/8/16

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.)	Casing Diameter (in.)
15'	2"

Lower Drillhole Diameter (in.)	Casing Depth (ft.)

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

2. Facility / Owner Information

Facility Name: Hedlund DX
Facility ID (FID or PWS): 807049540
License/Permit/Monitoring #:
Original Well Owner: Burnett County
Present Well Owner: Burnett County
Mailing Address of Present Owner: 10557 State Highway 70

City of Present Owner	State	ZIP Code
Town of Daniels	WI	54840

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

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

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

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☐ 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
Granular bentonite	Surface	15'	1/2 Bag	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Gestra Engineering , REI Engineering		8/8/16

Street or Route	Telephone Number
4080 N. 20th Avenue	(715) 675-9784

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Wausau	WI	54401		3-28-17

DNR Use Only

Date Received	Noted By

Comments:

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

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, 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 DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☑ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Burnett	GP4A	

Latitude / Longitude (see instructions) ____ N ____ W | Format Code: ☐ DD ☐ DDM | Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼ NW	¼ NW	Section	Township	Range
or Gov't Lot #		19	38 N	17 ☐ E ☑ W

Well Street Address: 10557 State Highway 70

Well City, Village or Town	Well ZIP Code
Town of Daniels	54840

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
Temporary Borehole	GP4A

2. Facility / Owner Information

Facility Name: Hedlund DX

Facility ID (FID or PWS): 807049540

License/Permit/Monitoring #:

Original Well Owner: Burnett County

Present Well Owner: Burnett County

Mailing Address of Present Owner: 10557 State Highway 70

City of Present Owner	State	ZIP Code
Town of Daniels	WI	54840

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☑ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 8/8/16

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.)	Casing Diameter (in.)
10'	2"

Lower Drillhole Diameter (in.)	Casing Depth (ft.)

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

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

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

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

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☐ 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
Granular bentonite	Surface	10'	1/3 Bag	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Gestra Engineering , REI Engineering		8/8/16

Street or Route	Telephone Number
4080 N. 20th Avenue	(715) 675-9784

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Wausau	WI	54401		3-26-17

DNR Use Only

Date Received	Noted By

Comments:

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

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, 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 DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☑ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Burnett	GP4B	

Latitude / Longitude (see instructions) — Format Code: ☐ DD ☐ DDM — Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

N
W

¼ / ¼ NW	¼ NW	Section	Township	Range
or Gov't Lot #		19	38 N	17 ☐ E ☑ W

Well Street Address: 10557 State Highway 70

Well City, Village or Town	Well ZIP Code
Town of Daniels	54840

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
Temporary Borehole	GP4B

2. Facility / Owner Information

Facility Name: Hedlund DX

Facility ID (FID or PWS): 807049540

License/Permit/Monitoring #:

Original Well Owner: Burnett County

Present Well Owner: Burnett County

Mailing Address of Present Owner: 10557 State Highway 70

City of Present Owner	State	ZIP Code
Town of Daniels	WI	54840

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☑ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 8/8/16

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.)	Casing Diameter (in.)
5'	2"

Lower Drillhole Diameter (in.)	Casing Depth (ft.)

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

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

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

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

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☐ 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
Granular bentonite	Surface	5'	1/5 Bag	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Gestra Engineering , REI Engineering		8/8/16

Street or Route	Telephone Number
4080 N. 20th Avenue	(715) 675-9784

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Wausau	WI	54401		3-26-17

DNR Use Only

Date Received	Noted By

Comments

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

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

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☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☑ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Burnett	GP5	

Latitude / Longitude (see instructions) ____ N ____ W | Format Code: ☐ DD ☐ DDM | Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼ NW or Gov't Lot #	¼ NW	Section	Township	Range
		19	38 N	17 ☐ E ☑ W

Well Street Address: 10557 State Highway 70

Well City, Village or Town	Well ZIP Code
Town of Daniels	54840

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
Temporary Borehole	GP5

2. Facility / Owner Information

Facility Name: Hedlund DX

Facility ID (FID or PWS): 807049540

License/Permit/Monitoring #:

Original Well Owner: Burnett County

Present Well Owner: Burnett County

Mailing Address of Present Owner: 10557 State Highway 70

City of Present Owner	State	ZIP Code
Town of Daniels	WI	54840

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☑ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 8/8/16

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.)	Casing Diameter (in.)
15'	2"

Lower Drillhole Diameter (in.)	Casing Depth (ft.)

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

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

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

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

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☐ 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
Granular bentonite	Surface	15'	1/2 Bag	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Gestra Engineering , REI Engineering		8/8/16

Street or Route	Telephone Number
4080 N. 20th Avenue	(715) 675-9784

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Wausau	WI	54401		3-28-17

DNR Use Only

Date Received	Noted By

Comments:

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

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

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☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☑ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Burnett	GP6A	

Latitude / Longitude (see instructions): ____ N ____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼ NW	¼ NW	Section	Township	Range
or Gov't Lot #		19	38 N	17 ☐ E ☑ W

Well Street Address: 10557 State Highway 70

Well City, Village or Town	Well ZIP Code
Town of Daniels	54840

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
Temporary Borehole	GP6A

2. Facility / Owner Information

Facility Name: Hedlund DX
Facility ID (FID or PWS): 807049540
License/Permit/Monitoring #:
Original Well Owner: Burnett County
Present Well Owner: Burnett County
Mailing Address of Present Owner: 10557 State Highway 70

City of Present Owner	State	ZIP Code
Town of Daniels	WI	54840

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☑ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 8/8/16

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.)	Casing Diameter (in.)
3'	2"

Lower Drillhole Diameter (in.)	Casing Depth (ft.)

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

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

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

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

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☐ 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
Granular bentonite	Surface	3'	1/8 Bag	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Gestra Engineering , REI Engineering		8/8/16

Street or Route	Telephone Number
4080 N. 20th Avenue	(715) 675-9784

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Wausau	WI	54401		3-28-17

DNR Use Only

Date Received	Noted By

Comments:

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

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

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☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☑ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Burnett	GP6B	

Latitude / Longitude (see instructions): ____ N ____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼ NW or Gov't Lot #	¼ NW	Section	Township	Range
		19	38 N	17 ☐ E ☑ W

Well Street Address: 10557 State Highway 70

Well City, Village or Town	Well ZIP Code
Town of Daniels	54840

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
Temporary Borehole	GP6B

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☑ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 8/8/16

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.)	Casing Diameter (in.)
15'	2"

Lower Drillhole Diameter (in.)	Casing Depth (ft.)

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

2. Facility / Owner Information

Facility Name: Hedlund DX

Facility ID (FID or PWS): 807049540

License/Permit/Monitoring #:

Original Well Owner: Burnett County

Present Well Owner: Burnett County

Mailing Address of Present Owner: 10557 State Highway 70

City of Present Owner	State	ZIP Code
Town of Daniels	WI	54840

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

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

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

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☐ 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
Granular bentonite	Surface	15'	1/2 Bag	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Gestra Engineering , REI Engineering		8/8/16

Street or Route	Telephone Number
4080 N. 20th Avenue	(715) 675-9784

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Wausau	WI	54401		3-28-17

DNR Use Only

Date Received	Noted By

Comments:

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

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

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☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☑ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Burnett	GP7	

Latitude / Longitude (see instructions): ____ N ____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼ NW or Gov't Lot #	¼ NW	Section	Township	Range
		19	38 N	17 ☐ E ☑ W

Well Street Address: 10557 State Highway 70

Well City, Village or Town	Well ZIP Code
Town of Daniels	54840

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
Temporary Borehole	GP7

2. Facility / Owner Information

Facility Name: Hedlund DX
Facility ID (FID or PWS): 807049540
License/Permit/Monitoring #:
Original Well Owner: Burnett County
Present Well Owner: Burnett County
Mailing Address of Present Owner: 10557 State Highway 70

City of Present Owner	State	ZIP Code
Town of Daniels	WI	54840

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☑ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 8/8/16
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.)	Casing Diameter (in.)
15'	2"

Lower Drillhole Diameter (in.)	Casing Depth (ft.)

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

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

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

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

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☐ 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
Granular bentonite	Surface	15'	1/2 Bag	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Gestra Engineering , REI Engineering		8/8/16

Street or Route	Telephone Number
4080 N. 20th Avenue	(715) 675-9784

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Wausau	WI	54401		3-28-17

DNR Use Only

Date Received	Noted By

Comments:

APPENDIX G

METHODS AND PROCEDURES

METHODS AND PROCEDURES

FOR

GEOPROBE SOIL SAMPLING

The Geoprobe unit hydraulically advances threaded, two-inch diameter, four-foot long, steel rod sections into the subsurface. A four-foot sampler, consisting of a drive shoe, a steel tube with a clean acetate liner, and a drive-head retractable piston, is attached to the leading Geoprobe rod. The sampler is driven down to the top of the interval to be sampled. The stop-pin is removed to release the drive head piston, which retracts as the sampler is advanced. When the sampler has been advanced four feet, the rods are retracted from the hole and the soil in the acetate liner is recovered. The acetate liner is split open and the soil is visually and manually classified by the field geologist/technician in accordance with **ASTM:D2488-84**. Logs of the borings are filled out indicating the depth and identification of the various strata, water level information, and pertinent information regarding the method of maintaining and advancing the borings.

Immediately after identification, the soil is quickly divided into two portions. One portion is prepared for potential laboratory analysis. The other portion is placed into a clean one-quart Ziploc bag for field screening. See the section "Soil Headspace Analysis" for field screening procedures.

HEADSPACE ANALYSIS

The soils were screened with a Mini-RAE photoionization detector (PID) equipped with an 10.6 eV lamp. The detector was calibrated in instrument units for Total Organic Vapors using an isobutylene standard. The soil sample, sealed in a Ziploc bag, was shaken vigorously to promote volatilization of the contaminant into the headspace of the bag. The sample was allowed to rest for at least ten minutes and then shaken again before screening. When ambient temperatures were below 60 degrees F, soil samples were allowed to warm for a minimum of 10 minutes in a heated environment prior to headspace development. The Ziploc bag was punctured with the PID probe and the resulting meter reading was recorded.

SAMPLING AND CHAIN OF CUSTODY

Soil samples for laboratory analysis were collected into laboratory prepared vials. Each vial was labeled and placed directly into a cooler pending delivery to the laboratory. Latex gloves were worn during all sample collection procedures.

An entry on a Chain of Custody log was completed as each sample was collected. The Chain of Custody included the following information: project name, work order number, shipped by, shipped to, sampling point, location, field ID number, date and time taken, sample type, number of containers, analysis required, sampler (s) signature (s), etc. As few people as possible handled the samples. The Chain of Custody log was sent to the laboratory with each cooler of samples.

DECONTAMINATION

Sampling equipment was decontaminated prior to sampling. Steel rod sections were washed after every sample collected.

METHODS AND PROCEDURES

FOR

SOIL SAMPLING USING HOLLOW STEM AUGERS

Soil sampling was done in accordance with **ASTM:D1586-84**. Using this procedure, a 2 inch **OD**, 2 foot long split barrel sampler was driven into the soil by a 140 pound weight falling 30 inches. After an initial set of 6 inches, the number of blows required to drive the sampler an additional 12 inches is known as the penetration resistance or N value. The N value is an index of the relative density of cohesionless soils and the consistency of cohesive soils.

As the samples were obtained in the field, they were visually and manually classified by the field geologist/technician in accordance with **ASTM:D2488-84**. Representative portions of the samples were returned to the laboratory for further examination and for verification of the field classification. Logs of the borings were filled out indicating the depth and identification of the various strata, the N value, water level information and pertinent information regarding the method of maintaining and advancing the borings.

Soil samples recovered by the split spoon were divided into two portions. One portion was prepared for laboratory analysis. The other portion was placed into a clean one quart Ziploc bag. A headspace analysis was then conducted on this latter portion.

HEADSPACE ANALYSIS

The soils were scanned with a RAE photoionization detector equipped with a 10.6 eV lamp and calibrated for direct reading in units of Total Organic Vapors using an isobutylene standard. A Ziploc bag was filled two-thirds of the volume with the sample. The bags were sealed and shaken vigorously before headspace development. Headspace development is allowing the sample to rest for at least ten minutes before scanning. When ambient temperatures were below 60 degrees F, soil samples were allowed to warm for a minimum of 10 minutes in a heated

environment prior to headspace development. The Ziploc bag was punctured with the probe and a reading was taken.

SAMPLING AND CHAIN OF CUSTODY

Soil samples were collected from a spilt barrel sampler and placed in laboratory prepared glass vials and placed directly into a cooler pending delivery to the laboratory. Latex gloves were worn during all sample collection procedures.

Upon completion of a sample, a chain of custody log was initiated. The chain of custody record included the following information: project name, work order number, shipped by, shipped to, sampling point, location, field ID number, date and time taken, sample type, number of containers, analysis required, sampler (s) signature (s), etc. As few people as possible handled the samples.

SURVEYING

Grade elevations of borings were surveyed to the nearest 0.1 foot and were tied to a USGS benchmark.

DECONTAMINATION

Sampling equipment were decontaminated prior to sampling. Augers were steam cleaned on plastic and split spoons were cleaned after every sample taken.

METHODS AND PROCEDURES

FOR

MONITORING WELL INSTALLATION AND GROUNDWATER SAMPLING

The water table monitoring wells consist of pipe joint threaded, two inch by ten feet long schedule 40 PVC (#10 slot) with 2 inch schedule 40 PVC riser. After the screen and riser pipe were set, a sand filter pack was placed around the screen to a depth 3 feet above the top of the screen, capped by a 2 foot fine sand layer, covered with a bentonite seal, annular space seal and surface seal. A protective casing did enclose the PVC riser pipe.

Monitoring wells were installed in accordance with Wisconsin Administrative Code NR 141 regulations. The WDNR "Monitoring Well Construction Form 4400-113A" were completed in accordance with NR 144 and NR 147.

The wells were developed by bailing or pumping to establish a reliable intercept with the surrounding formation. At least ten well volumes were removed or bailed until the wells were sediment free. If the well was bailed dry, a minimum of 3 volumes were taken. The WDNR "Monitoring Well Development Form 4400-113B" was completed for each well.

WATER LEVEL

Groundwater level measurements were obtained by using an electronic measuring device which indicated when a probe is in contact by lowering the probe into the well until the instrument indicated that the water surface has been encountered, and the distance from the top of the well to the probe was measured. All measurements were reported to the nearest 0.01 foot.

SAMPLING AND CHAIN OF CUSTODY

Water samples were collected using disposable bottom loading plastic bailers. Prior to sampling, the wells were purged. At least 4 well volumes were removed before sampling to ensure collection of a representative sample. If the well was purged dry, it was allowed to recharge and then it was sampled.

Samples were taken from the middle section of the bailer and placed in laboratory prepared bottles. Samples were labeled and placed in a cooler to be preserved at approximately 4 degrees C. Samples were accompanied by Chain of Custody records.

Upon completion of a sample, a chain of custody log was initiated. The chain of custody record included the following information: project name, work order number, shipped by, shipped to, sampling point, location, field ID number, date and time taken, sample type, number of containers, analysis required, sampler (s) signature (s), etc. As few people as possible handled the samples.

SURVEYING

Grade elevations of monitoring wells were surveyed to the nearest 0.1 foot and top of riser elevations were surveyed to the nearest 0.01 for monitoring wells. Elevations were tied to a USGS benchmark.

DECONTAMINATION

Sampling equipment was decontaminated prior to sampling. The water level measuring device was washed before it was placed into each well using distilled water and Alconox cleaning detergent. Latex gloves were worn during all sample collection procedures and were changed between the collection of each of the water samples from each monitoring well.

APPENDIX H

INVESTIGATIVE WASTE DISPOSAL

LINCOLN COUNTY LANDFILL 715-536-9636
Site: N4750 Landfill Lane, Merrill, WI 54452
Mailing: 801 N Sales St, Ste 201, Merrill, WI 54452
OPERATING HOURS:
Monday-Friday
SUMMER (May 1 - Sept. 30) 7:00 am - 4:00 pm
WINTER (Oct. 1 - Apr. 30) 8:00 am - 4:00 pm
1st and 3rd Sat. 8:00 am - Noon

DATE: 1/19/2017 TICKET #: 224697 Vehicle #:
Time In: 10:14 AM Time Out: 10:23 AM

BILL TO: R.E.I.
HAULER : R.E.I.

JOB : 17 - 3 B - RE #7367axuc Hedlund DX, Falun
PO# : REI job #7367axuc

$23.00 ton exempt (CON31) 1.12 tn
Gross: 10320 Tare: 8080 Net Weight: 2240

Scale Notes: Charge Transaction

HAVE A NICE DAY!

Customer Signature _____
Weighed By: Administrator

I certify that the waste in this vehicle complies with the Wisconsin Recycling law and the landfill bans. I also agree to pay 1.5% per month Late payment charge after 30 days.
Reprinted Ticket Ticket Edited

LINCOLN COUNTY LANDFILL 715-536-9636
Site: N4750 Landfill Lane, Merrill, WI 54452
Mailing: 801 N Sales St, Ste 201, Merrill, WI 54452
OPERATING HOURS:
Monday-Friday
SUMMER (May 1 - Sept. 30) 7:00 am - 4:00 pm
WINTER (Oct. 1 - Apr. 30) 8:00 am - 4:00 pm
1st and 3rd Sat. 8:00 am - Noon

DATE: 9/19/2016
Time In: 03:01 PM

TICKET #: 219686
Time Out: 03:01 PM

Vehicle #:

BILL TO: R.E.I.
HAULER : R.E.I.

JOB : 16 - 59 B - REI #7367 Hedlund DX, Falun
PO# : REI job #7367

$23.00 ton exempt (CON31) 2.95 tn
Gross: 27600 Tare: 21700 Net Weight: 5900

Scale Notes:

Charge Transaction

HAVE A NICE DAY!

Customer Signature _____
Weighed By: Administrator

I certify that the waste in this vehicle complies with the Wisconsin Recycling law and the landfill bans. I also agree to pay 1.5% per month Late payment charge after 30 days.

LINCOLN COUNTY LANDFILL 715-536-9636
Site: N4750 Landfill Lane, Merrill, WI 54452
Mailing: 801 N Sales St, Ste 201, Merrill, WI 54452
OPERATING HOURS:
Monday-Friday
SUMMER (May 1 - Sept. 30) 7:00 am - 4:00 pm
WINTER (Oct. 1 - Apr. 30) 8:00 am - 4:00 pm
1st and 3rd Sat. 8:00 am - Noon

DATE: 8/25/2016 TICKET #: 218461 Vehicle #:
Time In: 12:13 PM Time Out: 12:13 PM

BILL TO: R.E.I.
HAULER : R.E.I.

JOB : 16 - 59 B - REI #7367 Hedlund DX, Falun
PO# : REI job #7367

PEFCA DRUMS (PECFA) 1 un
Gross: 1 Tare: 0 Net Weight: 1

Scale Notes: Charge Transaction

HAVE A NICE DAY!

Customer Signature _____
Weighed By: Administrator

I certify that the waste in this vehicle complies with the Wisconsin Recycling law and the landfill bans. I also agree to pay 1.5% per month Late payment charge after 30 days.

APPENDIX I

SOIL AND GROUNDWATER ANALYTICAL REPORTS

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

August 16, 2016

DAVID LARSEN
REI
4080 NORTH 20TH AVENUE
Wausau, WI 54401

RE: Project: 7367 HEDLUND DX
Pace Project No.: 40136674

Dear DAVID LARSEN:
Enclosed are the analytical results for sample(s) received by the laboratory on August 12, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Brian Basten
brian.basten@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: 7367 HEDLUND DX
Pace Project No.: 40136674

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
Virginia VELAP ID: 460263
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
US Dept of Agriculture #: S-76505
Virginia VELAP Certification ID: 460263
Virginia VELAP ID: 460263
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: 7367 HEDLUND DX
Pace Project No.: 40136674

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40136674001	**MW1**	Water	08/08/16 06:00	08/12/16 08:50

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

SAMPLE ANALYTE COUNT

Project: 7367 HEDLUND DX
Pace Project No.: 40136674

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40136674001	**MW1**	WI MOD GRO	PMS	10

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 7367 HEDLUND DX
Pace Project No.: 40136674

Sample: MW1 **Lab ID: 40136674001** Collected: 08/08/16 06:00 Received: 08/12/16 08:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.40**	ug/L	1.0	0.40	1		08/15/16 18:44	71-43-2	
Ethylbenzene	**<0.39**	ug/L	1.0	0.39	1		08/15/16 18:44	100-41-4	
Methyl-tert-butyl ether	**<0.48**	ug/L	1.0	0.48	1		08/15/16 18:44	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		08/15/16 18:44	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		08/15/16 18:44	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		08/15/16 18:44	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		08/15/16 18:44	108-67-8	
m&p-Xylene	**<0.80**	ug/L	2.0	0.80	1		08/15/16 18:44	179601-23-1	
o-Xylene	**<0.45**	ug/L	1.0	0.45	1		08/15/16 18:44	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	104	%	80-120		1		08/15/16 18:44	98-08-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7367 HEDLUND DX
Pace Project No.: 40136674

QC Batch: 232262
QC Batch Method: WI MOD GRO
Analysis Method: WI MOD GRO
Analysis Description: WIGRO GCV Water
Associated Lab Samples: 40136674001

METHOD BLANK: 1377678 Matrix: Water
Associated Lab Samples: 40136674001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.42	1.0	08/15/16 10:36	
1,3,5-Trimethylbenzene	ug/L	<0.42	1.0	08/15/16 10:36	
Benzene	ug/L	<0.40	1.0	08/15/16 10:36	
Ethylbenzene	ug/L	<0.39	1.0	08/15/16 10:36	
m&p-Xylene	ug/L	<0.80	2.0	08/15/16 10:36	
Methyl-tert-butyl ether	ug/L	<0.48	1.0	08/15/16 10:36	
Naphthalene	ug/L	<0.42	1.0	08/15/16 10:36	
o-Xylene	ug/L	<0.45	1.0	08/15/16 10:36	
Toluene	ug/L	<0.39	1.0	08/15/16 10:36	
a,a,a-Trifluorotoluene (S)	%	105	80-120	08/15/16 10:36	

LABORATORY CONTROL SAMPLE & LCSD: 1377679 1377680

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	19.7	19.1	99	96	80-120	3	20	
1,3,5-Trimethylbenzene	ug/L	20	19.1	18.7	95	93	80-120	2	20	
Benzene	ug/L	20	20.3	20.3	101	101	80-120	0	20	
Ethylbenzene	ug/L	20	19.4	19.3	97	96	80-120	1	20	
m&p-Xylene	ug/L	40	38.5	38.4	96	96	80-120	0	20	
Methyl-tert-butyl ether	ug/L	20	20.4	19.9	102	99	80-120	3	20	
Naphthalene	ug/L	20	19.5	18.8	98	94	80-120	4	20	
o-Xylene	ug/L	20	19.7	19.7	99	99	80-120	0	20	
Toluene	ug/L	20	20.0	19.9	100	99	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%				103	104	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377869 1377870

Parameter	Units	40136648001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trimethylbenzene	ug/L	<0.42	20	20	18.9	18.5	94	93	48-177	2	20	
1,3,5-Trimethylbenzene	ug/L	<0.42	20	20	17.4	17.2	87	86	73-145	1	20	
Benzene	ug/L	<0.40	20	20	21.9	21.7	109	108	74-139	1	20	
Ethylbenzene	ug/L	<0.39	20	20	21.2	20.7	106	103	74-140	2	20	
m&p-Xylene	ug/L	<0.80	40	40	39.5	38.8	99	97	55-165	2	20	
Methyl-tert-butyl ether	ug/L	<0.48	20	20	21.8	21.1	109	106	80-120	3	20	
Naphthalene	ug/L	0.84J	20	20	20.9	20.2	100	97	73-133	3	20	
o-Xylene	ug/L	<0.45	20	20	20.1	19.7	101	98	73-136	2	20	
Toluene	ug/L	<0.39	20	20	21.4	21.2	107	106	80-128	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7367 HEDLUND DX
Pace Project No.: 40136674

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377869 1377870

Parameter	Units	40136648001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
a,a,a-Trifluorotoluene (S)	%						103	102	80-120			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: 7367 HEDLUND DX
Pace Project No.: 40136674

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 7367 HEDLUND DX
Pace Project No.: 40136674

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40136674001	**MW1**	WI MOD GRO	232262		

Pace Analytical®
www.pacelabs.com

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

Page 1 of

4013600674

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:	REI
Branch/Location:	
Project Contact:	David Carlsen
Phone:	715-685-9784
Project Number:	7367
Project Name:	Hedlund Dx
Project State:	WI
Sampled By (Print):	David Carlsen
Sampled By (Sign):	
PO #:	PEFA USC
Regulatory Program:	

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
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	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
SI = Sludge	WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	MW1	8/8/16	6:00	GW		X			3-40mlVB	

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:
	8/10/16 2:30		
	8/12/16 0852		8/12/16 0852

PACE Project No.
4013600674

Receipt Temp: ROI °C

Sample Receipt pH
OK / Adjusted

Cooler Custody Seal
Present (Not Present)
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Client Name: REI

Project #: **WO# : 40136674**

40136674

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: Walk-in

Tracking #: 113029 1

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

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

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

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

Cooler Temperature Uncorr: ROT /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☒ no

Person examining contents:
Date: 8-12-16
Initials: SW

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

		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.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
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.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR 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: W		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☑Yes ☐No	Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☐N/A	14.
Trip Blank Present:	☐Yes ☐No ☐N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:** 8-12-16

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

August 26, 2016

DAVID LARSEN
REI
4080 NORTH 20TH AVENUE
Wausau, WI 54401

RE: Project: 7367 HEDLUND DX
Pace Project No.: 40136672

Dear DAVID LARSEN:
Enclosed are the analytical results for sample(s) received by the laboratory on August 12, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Steven Mleczko for
Brian Basten
brian.basten@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: 7367 HEDLUND DX
Pace Project No.: 40136672

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
Virginia VELAP ID: 460263
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
US Dept of Agriculture #: S-76505
Virginia VELAP Certification ID: 460263
Virginia VELAP ID: 460263
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 7367 HEDLUND DX
Pace Project No.: 40136672

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40136672001	**GP1 @ 2-4**	Solid	08/08/16 03:30	08/12/16 08:50
40136672002	**GP1 @ 14-14.5**	Solid	08/08/16 04:00	08/12/16 08:50
40136672003	**GP2 @ 2-4**	Solid	08/08/16 04:45	08/12/16 08:50
40136672004	**GP2 @ 12-13**	Solid	08/08/16 05:05	08/12/16 08:50
40136672005	**GP3 @ 2-4**	Solid	08/08/16 05:20	08/12/16 08:50
40136672006	**GP3 @ 13-14**	Solid	08/08/16 05:30	08/12/16 08:50
40136672007	**GP4B @ 2-4**	Solid	08/08/16 05:55	08/12/16 08:50
40136672008	**GP5 @ 3-4**	Solid	08/08/16 06:15	08/12/16 08:50
40136672009	**GP5 @ 14-15**	Solid	08/08/16 06:30	08/12/16 08:50
40136672010	**GP6B @ 3-4**	Solid	08/08/16 07:00	08/12/16 08:50
40136672011	**GP6B @ 14-14.5**	Solid	08/08/16 07:20	08/12/16 08:50
40136672012	**GP7 @ 2-4**	Solid	08/08/16 07:40	08/12/16 08:50
40136672013	**GP7 @ 14-14.5**	Solid	08/08/16 07:50	08/12/16 08:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 7367 HEDLUND DX
Pace Project No.: 40136672

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40136672001	**GP1 @ 2-4**	WI MOD GRO	PMS	10
		EPA 6010	DLB	1
		ASTM D2974-87	KTS	1
40136672002	**GP1 @ 14-14.5**	WI MOD GRO	PMS	10
		EPA 6010	DLB	1
		ASTM D2974-87	KTS	1
40136672003	**GP2 @ 2-4**	WI MOD GRO	PMS	10
		EPA 6010	DLB	1
		ASTM D2974-87	KTS	1
40136672004	**GP2 @ 12-13**	WI MOD GRO	PMS	10
		EPA 6010	DLB	1
		ASTM D2974-87	KTS	1
40136672005	**GP3 @ 2-4**	WI MOD GRO	PMS	10
		EPA 6010	DLB	1
		ASTM D2974-87	KTS	1
40136672006	**GP3 @ 13-14**	WI MOD GRO	PMS	10
		EPA 6010	DLB	1
		ASTM D2974-87	KTS	1
40136672007	**GP4B @ 2-4**	WI MOD GRO	PMS	10
		EPA 6010	DLB	1
		ASTM D2974-87	KTS	1
40136672008	**GP5 @ 3-4**	WI MOD GRO	PMS	10
		EPA 6010	DLB	1
		ASTM D2974-87	KTS	1
40136672009	**GP5 @ 14-15**	WI MOD GRO	PMS	10
		EPA 6010	DLB	1
		ASTM D2974-87	KTS	1
40136672010	**GP6B @ 3-4**	WI MOD GRO	PMS	10
		EPA 6010	DLB	1
		ASTM D2974-87	KTS	1
40136672011	**GP6B @ 14-14.5**	WI MOD GRO	PMS	10
		EPA 6010	DLB	1
		ASTM D2974-87	KTS	1
40136672012	**GP7 @ 2-4**	WI MOD GRO	PMS	10
		EPA 6010	DLB	1
		ASTM D2974-87	KTS	1
40136672013	**GP7 @ 14-14.5**	WI MOD GRO	PMS	10

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SAMPLE ANALYTE COUNT

Project: 7367 HEDLUND DX
Pace Project No.: 40136672

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 6010	DLB	1
		ASTM D2974-87	KTS	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7367 HEDLUND DX
Pace Project No.: 40136672

Sample: GP1 @ 2-4 **Lab ID: 40136672001** Collected: 08/08/16 03:30 Received: 08/12/16 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<340**	ug/kg	679	340	12.5	08/15/16 05:30	08/15/16 16:41	71-43-2	W
Ethylbenzene	**22700**	ug/kg	937	469	12.5	08/15/16 05:30	08/15/16 16:41	100-41-4	
Methyl-tert-butyl ether	**829J**	ug/kg	937	469	12.5	08/15/16 05:30	08/15/16 16:41	1634-04-4	
Naphthalene	**8210**	ug/kg	937	469	12.5	08/15/16 05:30	08/15/16 16:41	91-20-3	
Toluene	**<340**	ug/kg	679	340	12.5	08/15/16 05:30	08/15/16 16:41	108-88-3	W
1,2,4-Trimethylbenzene	**60400**	ug/kg	937	469	12.5	08/15/16 05:30	08/15/16 16:41	95-63-6	
1,3,5-Trimethylbenzene	**25600**	ug/kg	937	469	12.5	08/15/16 05:30	08/15/16 16:41	108-67-8	
m&p-Xylene	**64800**	ug/kg	1870	937	12.5	08/15/16 05:30	08/15/16 16:41	179601-23-1	
o-Xylene	**3270**	ug/kg	937	469	12.5	08/15/16 05:30	08/15/16 16:41	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-120		12.5	08/15/16 05:30	08/15/16 16:41	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**8.4**	mg/kg	1.4	0.51	1	08/23/16 08:34	08/24/16 11:20	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**27.5**	%	0.10	0.10	1		08/24/16 15:07		

Sample: GP1 @ 14-14.5 **Lab ID: 40136672002** Collected: 08/08/16 04:00 Received: 08/12/16 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**472**	ug/kg	76.7	38.4	1	08/15/16 05:30	08/15/16 13:16	71-43-2	
Ethylbenzene	**284**	ug/kg	76.7	38.4	1	08/15/16 05:30	08/15/16 13:16	100-41-4	
Methyl-tert-butyl ether	**<26.3**	ug/kg	52.6	26.3	1	08/15/16 05:30	08/15/16 13:16	1634-04-4	W
Naphthalene	**<26.3**	ug/kg	52.6	26.3	1	08/15/16 05:30	08/15/16 13:16	91-20-3	W
Toluene	**38.9J**	ug/kg	76.7	38.4	1	08/15/16 05:30	08/15/16 13:16	108-88-3	
1,2,4-Trimethylbenzene	**<26.3**	ug/kg	52.6	26.3	1	08/15/16 05:30	08/15/16 13:16	95-63-6	W
1,3,5-Trimethylbenzene	**<26.3**	ug/kg	52.6	26.3	1	08/15/16 05:30	08/15/16 13:16	108-67-8	W
m&p-Xylene	**456**	ug/kg	153	76.7	1	08/15/16 05:30	08/15/16 13:16	179601-23-1	
o-Xylene	**103**	ug/kg	76.7	38.4	1	08/15/16 05:30	08/15/16 13:16	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1	08/15/16 05:30	08/15/16 13:16	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**13.2**	mg/kg	1.6	0.56	1	08/23/16 08:34	08/24/16 11:22	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**31.4**	%	0.10	0.10	1		08/24/16 15:08		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7367 HEDLUND DX
Pace Project No.: 40136672

Sample: GP2 @ 2-4 **Lab ID: 40136672003** Collected: 08/08/16 04:45 Received: 08/12/16 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**934**	ug/kg	297	149	5	08/15/16 05:30	08/15/16 16:16	71-43-2	
Ethylbenzene	**10100**	ug/kg	297	149	5	08/15/16 05:30	08/15/16 16:16	100-41-4	
Methyl-tert-butyl ether	**663**	ug/kg	297	149	5	08/15/16 05:30	08/15/16 16:16	1634-04-4	
Naphthalene	**3090**	ug/kg	297	149	5	08/15/16 05:30	08/15/16 16:16	91-20-3	
Toluene	**15200**	ug/kg	297	149	5	08/15/16 05:30	08/15/16 16:16	108-88-3	
1,2,4-Trimethylbenzene	**15800**	ug/kg	297	149	5	08/15/16 05:30	08/15/16 16:16	95-63-6	
1,3,5-Trimethylbenzene	**5990**	ug/kg	297	149	5	08/15/16 05:30	08/15/16 16:16	108-67-8	
m&p-Xylene	**28400**	ug/kg	594	297	5	08/15/16 05:30	08/15/16 16:16	179601-23-1	
o-Xylene	**10800**	ug/kg	297	149	5	08/15/16 05:30	08/15/16 16:16	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	93	%	80-120		5	08/15/16 05:30	08/15/16 16:16	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**11.4**	mg/kg	1.4	0.50	1	08/23/16 08:34	08/24/16 11:25	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.9**	%	0.10	0.10	1		08/24/16 15:08		

Sample: GP2 @ 12-13 **Lab ID: 40136672004** Collected: 08/08/16 05:05 Received: 08/12/16 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**1210**	ug/kg	77.2	38.6	1	08/15/16 05:30	08/15/16 13:41	71-43-2	
Ethylbenzene	**797**	ug/kg	77.2	38.6	1	08/15/16 05:30	08/15/16 13:41	100-41-4	
Methyl-tert-butyl ether	**<25.0**	ug/kg	50.0	25.0	1	08/15/16 05:30	08/15/16 13:41	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	50.0	25.0	1	08/15/16 05:30	08/15/16 13:41	91-20-3	W
Toluene	**244**	ug/kg	77.2	38.6	1	08/15/16 05:30	08/15/16 13:41	108-88-3	
1,2,4-Trimethylbenzene	**112**	ug/kg	77.2	38.6	1	08/15/16 05:30	08/15/16 13:41	95-63-6	
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	50.0	25.0	1	08/15/16 05:30	08/15/16 13:41	108-67-8	W
m&p-Xylene	**1890**	ug/kg	154	77.2	1	08/15/16 05:30	08/15/16 13:41	179601-23-1	
o-Xylene	**211**	ug/kg	77.2	38.6	1	08/15/16 05:30	08/15/16 13:41	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1	08/15/16 05:30	08/15/16 13:41	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**12.1**	mg/kg	1.6	0.57	1	08/23/16 08:34	08/24/16 11:27	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**35.2**	%	0.10	0.10	1		08/24/16 15:08		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7367 HEDLUND DX
Pace Project No.: 40136672

Sample: GP3 @ 2-4 **Lab ID: 40136672005** Collected: 08/08/16 05:20 Received: 08/12/16 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<1250**	ug/kg	2500	1250	50	08/15/16 05:30	08/15/16 17:58	71-43-2	W
Ethylbenzene	**113000**	ug/kg	2970	1490	50	08/15/16 05:30	08/15/16 17:58	100-41-4	
Methyl-tert-butyl ether	**3290**	ug/kg	2970	1490	50	08/15/16 05:30	08/15/16 17:58	1634-04-4	
Naphthalene	**44700**	ug/kg	2970	1490	50	08/15/16 05:30	08/15/16 17:58	91-20-3	
Toluene	**18300**	ug/kg	2970	1490	50	08/15/16 05:30	08/15/16 17:58	108-88-3	
1,2,4-Trimethylbenzene	**235000**	ug/kg	2970	1490	50	08/15/16 05:30	08/15/16 17:58	95-63-6	
1,3,5-Trimethylbenzene	**84500**	ug/kg	2970	1490	50	08/15/16 05:30	08/15/16 17:58	108-67-8	
m&p-Xylene	**426000**	ug/kg	5950	2970	50	08/15/16 05:30	08/15/16 17:58	179601-23-1	
o-Xylene	**161000**	ug/kg	2970	1490	50	08/15/16 05:30	08/15/16 17:58	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	111	%	80-120		50	08/15/16 05:30	08/15/16 17:58	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**63.4**	mg/kg	1.3	0.47	1	08/23/16 08:34	08/24/16 11:30	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.9**	%	0.10	0.10	1		08/24/16 15:08		

Sample: GP3 @ 13-14 **Lab ID: 40136672006** Collected: 08/08/16 05:30 Received: 08/12/16 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<26.9**	ug/kg	53.8	26.9	1	08/15/16 05:30	08/15/16 14:07	71-43-2	W
Ethylbenzene	**<26.9**	ug/kg	53.8	26.9	1	08/15/16 05:30	08/15/16 14:07	100-41-4	W
Methyl-tert-butyl ether	**<26.9**	ug/kg	53.8	26.9	1	08/15/16 05:30	08/15/16 14:07	1634-04-4	W
Naphthalene	**<26.9**	ug/kg	53.8	26.9	1	08/15/16 05:30	08/15/16 14:07	91-20-3	W
Toluene	**<26.9**	ug/kg	53.8	26.9	1	08/15/16 05:30	08/15/16 14:07	108-88-3	W
1,2,4-Trimethylbenzene	**<26.9**	ug/kg	53.8	26.9	1	08/15/16 05:30	08/15/16 14:07	95-63-6	W
1,3,5-Trimethylbenzene	**<26.9**	ug/kg	53.8	26.9	1	08/15/16 05:30	08/15/16 14:07	108-67-8	W
m&p-Xylene	**<53.8**	ug/kg	108	53.8	1	08/15/16 05:30	08/15/16 14:07	179601-23-1	W
o-Xylene	**<26.9**	ug/kg	53.8	26.9	1	08/15/16 05:30	08/15/16 14:07	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	103	%	80-120		1	08/15/16 05:30	08/15/16 14:07	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**12.9**	mg/kg	1.5	0.53	1	08/23/16 08:34	08/24/16 11:32	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**31.0**	%	0.10	0.10	1		08/24/16 15:08		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7367 HEDLUND DX
Pace Project No.: 40136672

Sample: GP4B @ 2-4 **Lab ID: 40136672007** Collected: 08/08/16 05:55 Received: 08/12/16 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<27.8**	ug/kg	55.6	27.8	1	08/15/16 05:30	08/15/16 15:24	71-43-2	W
Ethylbenzene	**<27.8**	ug/kg	55.6	27.8	1	08/15/16 05:30	08/15/16 15:24	100-41-4	W
Methyl-tert-butyl ether	**<27.8**	ug/kg	55.6	27.8	1	08/15/16 05:30	08/15/16 15:24	1634-04-4	W
Naphthalene	**<27.8**	ug/kg	55.6	27.8	1	08/15/16 05:30	08/15/16 15:24	91-20-3	W
Toluene	**<27.8**	ug/kg	55.6	27.8	1	08/15/16 05:30	08/15/16 15:24	108-88-3	W
1,2,4-Trimethylbenzene	**36.6J**	ug/kg	71.3	35.6	1	08/15/16 05:30	08/15/16 15:24	95-63-6	
1,3,5-Trimethylbenzene	**<27.8**	ug/kg	55.6	27.8	1	08/15/16 05:30	08/15/16 15:24	108-67-8	W
m&p-Xylene	**<55.6**	ug/kg	111	55.6	1	08/15/16 05:30	08/15/16 15:24	179601-23-1	W
o-Xylene	**<27.8**	ug/kg	55.6	27.8	1	08/15/16 05:30	08/15/16 15:24	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1	08/15/16 05:30	08/15/16 15:24	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**982**	mg/kg	1.3	0.46	1	08/23/16 08:34	08/24/16 11:40	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**22.0**	%	0.10	0.10	1		08/24/16 15:08		

Sample: GP5 @ 3-4 **Lab ID: 40136672008** Collected: 08/08/16 06:15 Received: 08/12/16 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<160**	ug/kg	321	160	5	08/15/16 05:30	08/15/16 17:07	71-43-2	W
Ethylbenzene	**2380**	ug/kg	412	206	5	08/15/16 05:30	08/15/16 17:07	100-41-4	
Methyl-tert-butyl ether	**657**	ug/kg	412	206	5	08/15/16 05:30	08/15/16 17:07	1634-04-4	
Naphthalene	**2610**	ug/kg	412	206	5	08/15/16 05:30	08/15/16 17:07	91-20-3	
Toluene	**<160**	ug/kg	321	160	5	08/15/16 05:30	08/15/16 17:07	108-88-3	W
1,2,4-Trimethylbenzene	**23500**	ug/kg	412	206	5	08/15/16 05:30	08/15/16 17:07	95-63-6	
1,3,5-Trimethylbenzene	**12000**	ug/kg	412	206	5	08/15/16 05:30	08/15/16 17:07	108-67-8	
m&p-Xylene	**8660**	ug/kg	823	412	5	08/15/16 05:30	08/15/16 17:07	179601-23-1	
o-Xylene	**1900**	ug/kg	412	206	5	08/15/16 05:30	08/15/16 17:07	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-120		5	08/15/16 05:30	08/15/16 17:07	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**18.7**	mg/kg	1.4	0.50	1	08/23/16 08:26	08/23/16 19:45	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**22.1**	%	0.10	0.10	1		08/24/16 15:08		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 7367 HEDLUND DX
Pace Project No.: 40136672

Sample: GP5 @ 14-15 **Lab ID: 40136672009** Collected: 08/08/16 06:30 Received: 08/12/16 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**417**	ug/kg	105	52.5	1	08/15/16 05:30	08/15/16 15:50	71-43-2	
Ethylbenzene	**73.5J**	ug/kg	105	52.5	1	08/15/16 05:30	08/15/16 15:50	100-41-4	
Methyl-tert-butyl ether	**<35.2**	ug/kg	70.4	35.2	1	08/15/16 05:30	08/15/16 15:50	1634-04-4	W
Naphthalene	**<35.2**	ug/kg	70.4	35.2	1	08/15/16 05:30	08/15/16 15:50	91-20-3	W
Toluene	**<35.2**	ug/kg	70.4	35.2	1	08/15/16 05:30	08/15/16 15:50	108-88-3	W
1,2,4-Trimethylbenzene	**247**	ug/kg	105	52.5	1	08/15/16 05:30	08/15/16 15:50	95-63-6	
1,3,5-Trimethylbenzene	**87.0J**	ug/kg	105	52.5	1	08/15/16 05:30	08/15/16 15:50	108-67-8	
m&p-Xylene	**326**	ug/kg	210	105	1	08/15/16 05:30	08/15/16 15:50	179601-23-1	
o-Xylene	**<35.2**	ug/kg	70.4	35.2	1	08/15/16 05:30	08/15/16 15:50	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1	08/15/16 05:30	08/15/16 15:50	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**13.5**	mg/kg	1.8	0.64	1	08/23/16 08:26	08/23/16 19:47	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**33.0**	%	0.10	0.10	1		08/24/16 15:08		

Sample: GP6B @ 3-4 **Lab ID: 40136672010** Collected: 08/08/16 07:00 Received: 08/12/16 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<658**	ug/kg	1320	658	25	08/15/16 05:30	08/15/16 17:33	71-43-2	W
Ethylbenzene	**55900**	ug/kg	1690	843	25	08/15/16 05:30	08/15/16 17:33	100-41-4	
Methyl-tert-butyl ether	**2500**	ug/kg	1690	843	25	08/15/16 05:30	08/15/16 17:33	1634-04-4	
Naphthalene	**27200**	ug/kg	1690	843	25	08/15/16 05:30	08/15/16 17:33	91-20-3	
Toluene	**5410**	ug/kg	1690	843	25	08/15/16 05:30	08/15/16 17:33	108-88-3	
1,2,4-Trimethylbenzene	**140000**	ug/kg	1690	843	25	08/15/16 05:30	08/15/16 17:33	95-63-6	
1,3,5-Trimethylbenzene	**52000**	ug/kg	1690	843	25	08/15/16 05:30	08/15/16 17:33	108-67-8	
m&p-Xylene	**227000**	ug/kg	3370	1690	25	08/15/16 05:30	08/15/16 17:33	179601-23-1	
o-Xylene	**9160**	ug/kg	1690	843	25	08/15/16 05:30	08/15/16 17:33	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		25	08/15/16 05:30	08/15/16 17:33	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**6.2**	mg/kg	1.4	0.50	1	08/23/16 08:26	08/23/16 19:50	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**22.0**	%	0.10	0.10	1		08/24/16 15:08		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7367 HEDLUND DX
Pace Project No.: 40136672

Sample: GP6B @ 14-14.5 **Lab ID: 40136672011** Collected: 08/08/16 07:20 Received: 08/12/16 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**306**	ug/kg	111	55.3	1	08/15/16 05:30	08/15/16 19:41	71-43-2	
Ethylbenzene	**<39.1**	ug/kg	78.1	39.1	1	08/15/16 05:30	08/15/16 19:41	100-41-4	W
Methyl-tert-butyl ether	**<39.1**	ug/kg	78.1	39.1	1	08/15/16 05:30	08/15/16 19:41	1634-04-4	W
Naphthalene	**<39.1**	ug/kg	78.1	39.1	1	08/15/16 05:30	08/15/16 19:41	91-20-3	W
Toluene	**<39.1**	ug/kg	78.1	39.1	1	08/15/16 05:30	08/15/16 19:41	108-88-3	W
1,2,4-Trimethylbenzene	**<39.1**	ug/kg	78.1	39.1	1	08/15/16 05:30	08/15/16 19:41	95-63-6	W
1,3,5-Trimethylbenzene	**<39.1**	ug/kg	78.1	39.1	1	08/15/16 05:30	08/15/16 19:41	108-67-8	W
m&p-Xylene	**<78.1**	ug/kg	156	78.1	1	08/15/16 05:30	08/15/16 19:41	179601-23-1	W
o-Xylene	**<39.1**	ug/kg	78.1	39.1	1	08/15/16 05:30	08/15/16 19:41	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1	08/15/16 05:30	08/15/16 19:41	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**12.3**	mg/kg	1.5	0.54	1	08/23/16 08:26	08/23/16 19:57	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**29.3**	%	0.10	0.10	1		08/24/16 15:08		

Sample: GP7 @ 2-4 **Lab ID: 40136672012** Collected: 08/08/16 07:40 Received: 08/12/16 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<40.3**	ug/kg	80.6	40.3	1	08/15/16 05:30	08/15/16 20:07	71-43-2	W
Ethylbenzene	**161**	ug/kg	100	50.2	1	08/15/16 05:30	08/15/16 20:07	100-41-4	
Methyl-tert-butyl ether	**<40.3**	ug/kg	80.6	40.3	1	08/15/16 05:30	08/15/16 20:07	1634-04-4	W
Naphthalene	**63.2J**	ug/kg	100	50.2	1	08/15/16 05:30	08/15/16 20:07	91-20-3	
Toluene	**<40.3**	ug/kg	80.6	40.3	1	08/15/16 05:30	08/15/16 20:07	108-88-3	W
1,2,4-Trimethylbenzene	**323**	ug/kg	100	50.2	1	08/15/16 05:30	08/15/16 20:07	95-63-6	
1,3,5-Trimethylbenzene	**90.8J**	ug/kg	100	50.2	1	08/15/16 05:30	08/15/16 20:07	108-67-8	
m&p-Xylene	**464**	ug/kg	201	100	1	08/15/16 05:30	08/15/16 20:07	179601-23-1	
o-Xylene	**<40.3**	ug/kg	80.6	40.3	1	08/15/16 05:30	08/15/16 20:07	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1	08/15/16 05:30	08/15/16 20:07	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**18.3**	mg/kg	2.9	1.0	2	08/23/16 08:26	08/24/16 12:28	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**19.7**	%	0.10	0.10	1		08/24/16 15:09		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7367 HEDLUND DX
Pace Project No.: 40136672

Sample: GP7 @ 14-14.5 **Lab ID: 40136672013** Collected: 08/08/16 07:50 Received: 08/12/16 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**688**	ug/kg	73.4	36.7	1	08/15/16 05:30	08/15/16 20:33	71-43-2	
Ethylbenzene	**1160**	ug/kg	73.4	36.7	1	08/15/16 05:30	08/15/16 20:33	100-41-4	
Methyl-tert-butyl ether	**<25.3**	ug/kg	50.5	25.3	1	08/15/16 05:30	08/15/16 20:33	1634-04-4	W
Naphthalene	**86.6**	ug/kg	73.4	36.7	1	08/15/16 05:30	08/15/16 20:33	91-20-3	
Toluene	**214**	ug/kg	73.4	36.7	1	08/15/16 05:30	08/15/16 20:33	108-88-3	
1,2,4-Trimethylbenzene	**602**	ug/kg	73.4	36.7	1	08/15/16 05:30	08/15/16 20:33	95-63-6	
1,3,5-Trimethylbenzene	**153**	ug/kg	73.4	36.7	1	08/15/16 05:30	08/15/16 20:33	108-67-8	
m&p-Xylene	**3140**	ug/kg	147	73.4	1	08/15/16 05:30	08/15/16 20:33	179601-23-1	
o-Xylene	**675**	ug/kg	73.4	36.7	1	08/15/16 05:30	08/15/16 20:33	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1	08/15/16 05:30	08/15/16 20:33	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**12.5**	mg/kg	1.6	0.59	1	08/23/16 08:26	08/23/16 20:02	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**31.2**	%	0.10	0.10	1		08/24/16 15:09		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7367 HEDLUND DX
Pace Project No.: 40136672

QC Batch: 232240 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 40136672001, 40136672002, 40136672003, 40136672004, 40136672005, 40136672006, 40136672007, 40136672008, 40136672009, 40136672010, 40136672011, 40136672012, 40136672013

METHOD BLANK: 1377614 Matrix: Solid
Associated Lab Samples: 40136672001, 40136672002, 40136672003, 40136672004, 40136672005, 40136672006, 40136672007, 40136672008, 40136672009, 40136672010, 40136672011, 40136672012, 40136672013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	50.0	08/15/16 08:21	
1,3,5-Trimethylbenzene	ug/kg	<25.0	50.0	08/15/16 08:21	
Benzene	ug/kg	<25.0	50.0	08/15/16 08:21	
Ethylbenzene	ug/kg	<25.0	50.0	08/15/16 08:21	
m&p-Xylene	ug/kg	<50.0	100	08/15/16 08:21	
Methyl-tert-butyl ether	ug/kg	<25.0	50.0	08/15/16 08:21	
Naphthalene	ug/kg	<25.0	50.0	08/15/16 08:21	
o-Xylene	ug/kg	<25.0	50.0	08/15/16 08:21	
Toluene	ug/kg	<25.0	50.0	08/15/16 08:21	
a,a,a-Trifluorotoluene (S)	%	102	80-120	08/15/16 08:21	

LABORATORY CONTROL SAMPLE & LCSD: 1377615 1377616

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	1190	1090	119	109	80-120	9	20	
1,3,5-Trimethylbenzene	ug/kg	1000	1170	1060	117	106	80-120	10	20	
Benzene	ug/kg	1000	1150	1070	115	107	80-120	7	20	
Ethylbenzene	ug/kg	1000	1150	1040	115	104	80-120	10	20	
m&p-Xylene	ug/kg	2000	2320	2090	116	105	80-120	10	20	
Methyl-tert-butyl ether	ug/kg	1000	1190	1070	119	107	80-120	10	20	
Naphthalene	ug/kg	1000	1100	996	110	100	80-120	10	20	
o-Xylene	ug/kg	1000	1170	1060	117	106	80-120	11	20	
Toluene	ug/kg	1000	1140	1040	114	104	80-120	9	20	
a,a,a-Trifluorotoluene (S)	%				102	102	80-120			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7367 HEDLUND DX
Pace Project No.: 40136672

QC Batch: 232853 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 40136672001, 40136672002, 40136672003, 40136672004, 40136672005, 40136672006, 40136672007

METHOD BLANK: 1380288 Matrix: Solid
Associated Lab Samples: 40136672001, 40136672002, 40136672003, 40136672004, 40136672005, 40136672006, 40136672007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	<0.43	1.2	08/24/16 10:31	

LABORATORY CONTROL SAMPLE: 1380289

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	50	47.7	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380290 1380291

Parameter	Units	40136667028 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/kg	2.9	57.8	57.7	56.7	57.3	93	94	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7367 HEDLUND DX
Pace Project No.: 40136672

QC Batch: 233018 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 40136672008, 40136672009, 40136672010, 40136672011, 40136672012, 40136672013

METHOD BLANK: 1381125 Matrix: Solid
Associated Lab Samples: 40136672008, 40136672009, 40136672010, 40136672011, 40136672012, 40136672013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	<0.43	1.2	08/23/16 19:11	

LABORATORY CONTROL SAMPLE: 1381126

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	50	42.8	86	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1381127 1381128

Parameter	Units	40136697001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/kg	36.2	166	166	184	184	89	89	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7367 HEDLUND DX
Pace Project No.: 40136672

QC Batch: 233226 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40136672001, 40136672002, 40136672003, 40136672004, 40136672005, 40136672006, 40136672007, 40136672008, 40136672009, 40136672010, 40136672011, 40136672012, 40136672013

SAMPLE DUPLICATE: 1382082

Parameter	Units	40136667030 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	29.0	29.9	3	10	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 7367 HEDLUND DX
Pace Project No.: 40136672

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

W Non-detect results are reported on a wet weight basis.

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 7367 HEDLUND DX
Pace Project No.: 40136672

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40136672001	**GP1 @ 2-4**	TPH GRO/PVOC WI ext.	232240	WI MOD GRO	232271
40136672002	**GP1 @ 14-14.5**	TPH GRO/PVOC WI ext.	232240	WI MOD GRO	232271
40136672003	**GP2 @ 2-4**	TPH GRO/PVOC WI ext.	232240	WI MOD GRO	232271
40136672004	**GP2 @ 12-13**	TPH GRO/PVOC WI ext.	232240	WI MOD GRO	232271
40136672005	**GP3 @ 2-4**	TPH GRO/PVOC WI ext.	232240	WI MOD GRO	232271
40136672006	**GP3 @ 13-14**	TPH GRO/PVOC WI ext.	232240	WI MOD GRO	232271
40136672007	**GP4B @ 2-4**	TPH GRO/PVOC WI ext.	232240	WI MOD GRO	232271
40136672008	**GP5 @ 3-4**	TPH GRO/PVOC WI ext.	232240	WI MOD GRO	232271
40136672009	**GP5 @ 14-15**	TPH GRO/PVOC WI ext.	232240	WI MOD GRO	232271
40136672010	**GP6B @ 3-4**	TPH GRO/PVOC WI ext.	232240	WI MOD GRO	232271
40136672011	**GP6B @ 14-14.5**	TPH GRO/PVOC WI ext.	232240	WI MOD GRO	232271
40136672012	**GP7 @ 2-4**	TPH GRO/PVOC WI ext.	232240	WI MOD GRO	232271
40136672013	**GP7 @ 14-14.5**	TPH GRO/PVOC WI ext.	232240	WI MOD GRO	232271
40136672001	**GP1 @ 2-4**	EPA 3050	232853	EPA 6010	233116
40136672002	**GP1 @ 14-14.5**	EPA 3050	232853	EPA 6010	233116
40136672003	**GP2 @ 2-4**	EPA 3050	232853	EPA 6010	233116
40136672004	**GP2 @ 12-13**	EPA 3050	232853	EPA 6010	233116
40136672005	**GP3 @ 2-4**	EPA 3050	232853	EPA 6010	233116
40136672006	**GP3 @ 13-14**	EPA 3050	232853	EPA 6010	233116
40136672007	**GP4B @ 2-4**	EPA 3050	232853	EPA 6010	233116
40136672008	**GP5 @ 3-4**	EPA 3050	233018	EPA 6010	233117
40136672009	**GP5 @ 14-15**	EPA 3050	233018	EPA 6010	233117
40136672010	**GP6B @ 3-4**	EPA 3050	233018	EPA 6010	233117
40136672011	**GP6B @ 14-14.5**	EPA 3050	233018	EPA 6010	233117
40136672012	**GP7 @ 2-4**	EPA 3050	233018	EPA 6010	233117
40136672013	**GP7 @ 14-14.5**	EPA 3050	233018	EPA 6010	233117
40136672001	**GP1 @ 2-4**	ASTM D2974-87	233226		
40136672002	**GP1 @ 14-14.5**	ASTM D2974-87	233226		
40136672003	**GP2 @ 2-4**	ASTM D2974-87	233226		
40136672004	**GP2 @ 12-13**	ASTM D2974-87	233226		
40136672005	**GP3 @ 2-4**	ASTM D2974-87	233226		
40136672006	**GP3 @ 13-14**	ASTM D2974-87	233226		
40136672007	**GP4B @ 2-4**	ASTM D2974-87	233226		
40136672008	**GP5 @ 3-4**	ASTM D2974-87	233226		
40136672009	**GP5 @ 14-15**	ASTM D2974-87	233226		
40136672010	**GP6B @ 3-4**	ASTM D2974-87	233226		
40136672011	**GP6B @ 14-14.5**	ASTM D2974-87	233226		
40136672012	**GP7 @ 2-4**	ASTM D2974-87	233226		
40136672013	**GP7 @ 14-14.5**	ASTM D2974-87	233226		

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

Pace Analytical®
www.pacelabs.com

B18

CHAIN OF CUSTODY

401366672

(Please Print Clearly)	
Company Name:	REI
Branch/Location:	
Project Contact:	David Lansen
Phone:	715-605-9764
Project Number:	7367 Hedlund DX
Project Name:	~~Hedlund~~ Somers
Project State:	WI
Sampled By (Print):	David Lansen
Sampled By (Sign):	
PO #:	PCFA Wdc
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:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
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	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
SI = Sludge	WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: Nitrate	Chloride	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	GP1@2-4	8/8/16	3:30		—	F	X	X	1-40mlVF	1-402oz A	
002	GP1@14-14.5		4:00				X	X			
003	GP2@2-4		4:45				X	X			
004	GP2@12-13		5:05				X	X			
005	GP3@2-4		5:20				X	X			
006	GP3@13-14		5:30				X	X			
007	GP4b@2-4		5:55				X	X			
008	GP5@3-4		6:15				X	X			
009	GP5@14-15		6:30				X	X			
010	GP6b@3-4		7:00				X	X			
011	GP6b@14-14.5		7:20				X	X			
012	GP7@2-4		7:40				X	X			
013	GP7@14-14.5		7:50				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:
	8/11/16 2:30		
Walter	8-12-16 0850	Susan Ulfig	8-12-16 0850
		Jane	

PACE Project No.: 401366672

Receipt Temp = 1.0 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / ~~Not Present~~ Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Project #: **WO#: 40136672**

40136672

Client Name: REI

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: Waldo

Tracking #: 113029 1

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

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

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

Thermometer Used N/A **Type of Ice:** (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROI /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☒ no

Person examining contents:
Date: 8-12-16
Initials: SW

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out: 8-12-16	☑Yes ☐No ☐N/A	2. No Matrix 8-12-16 SW
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.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
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.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11. 067 ID "GW 4@2-4"
Sample Labels match COC:	☑Yes ☐No ☐N/A	12. 008 1-40mlVF no date 010 8011 no "b" in sample IDS BH 8/12/16
-Includes date/time/ID/Analysis Matrix: S		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☑No	Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date: 8-12-16

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

September 23, 2016

DAVID LARSEN
REI
4080 NORTH 20TH AVENUE
Wausau, WI 54401

RE: Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138479

Dear DAVID LARSEN:
Enclosed are the analytical results for sample(s) received by the laboratory on September 17, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Brian Basten
brian.basten@pacelabs.com
Project Manager

Enclosures

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

CERTIFICATIONS

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138479

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
Virginia VELAP ID: 460263
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
US Dept of Agriculture #: S-76505
Virginia VELAP Certification ID: 460263
Virginia VELAP ID: 460263
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
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SAMPLE SUMMARY

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138479

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40138479001	**MW1**	Water	09/13/16 11:30	09/17/16 08:00
40138479002	**MW2**	Water	09/13/16 12:51	09/17/16 08:00
40138479003	**MW3**	Water	09/13/16 14:00	09/17/16 08:00
40138479004	**MW4**	Water	09/13/16 15:50	09/17/16 08:00
40138479005	**MW5**	Water	09/13/16 17:17	09/17/16 08:00
40138479006	**MW6**	Water	09/13/16 19:00	09/17/16 08:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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SAMPLE ANALYTE COUNT

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138479

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40138479001	**MW1**	WI MOD GRO	ALD	10
		EPA 6010	DLB	1
40138479002	**MW2**	WI MOD GRO	ALD	10
		EPA 6010	DLB	1
40138479003	**MW3**	WI MOD GRO	ALD	10
		EPA 6010	DLB	1
40138479004	**MW4**	WI MOD GRO	ALD	10
		EPA 6010	DLB	1
40138479005	**MW5**	WI MOD GRO	ALD	10
		EPA 6010	DLB	1
40138479006	**MW6**	WI MOD GRO	ALD	10
		EPA 6010	DLB	1

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ANALYTICAL RESULTS

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138479

Sample: MW1 **Lab ID: 40138479001** Collected: 09/13/16 11:30 Received: 09/17/16 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.40**	ug/L	1.0	0.40	1		09/19/16 14:27	71-43-2	
Ethylbenzene	**<0.39**	ug/L	1.0	0.39	1		09/19/16 14:27	100-41-4	
Methyl-tert-butyl ether	**<0.48**	ug/L	1.0	0.48	1		09/19/16 14:27	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		09/19/16 14:27	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		09/19/16 14:27	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		09/19/16 14:27	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		09/19/16 14:27	108-67-8	
m&p-Xylene	**<0.80**	ug/L	2.0	0.80	1		09/19/16 14:27	179601-23-1	
o-Xylene	**<0.45**	ug/L	1.0	0.45	1		09/19/16 14:27	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	104	%	80-120		1		09/19/16 14:27	98-08-8	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Lead, Dissolved	**<3.0**	ug/L	12.0	3.0	1		09/20/16 17:39	7439-92-1	1q

Sample: MW2 **Lab ID: 40138479002** Collected: 09/13/16 12:51 Received: 09/17/16 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**32.7**	ug/L	1.0	0.40	1		09/21/16 02:11	71-43-2	
Ethylbenzene	**19.0**	ug/L	1.0	0.39	1		09/21/16 02:11	100-41-4	
Methyl-tert-butyl ether	**0.95J**	ug/L	1.0	0.48	1		09/21/16 02:11	1634-04-4	
Naphthalene	**3.5**	ug/L	1.0	0.42	1		09/21/16 02:11	91-20-3	
Toluene	**9.1**	ug/L	1.0	0.39	1		09/21/16 02:11	108-88-3	
1,2,4-Trimethylbenzene	**8.8**	ug/L	1.0	0.42	1		09/21/16 02:11	95-63-6	
1,3,5-Trimethylbenzene	**1.3**	ug/L	1.0	0.42	1		09/21/16 02:11	108-67-8	
m&p-Xylene	**48.7**	ug/L	2.0	0.80	1		09/21/16 02:11	179601-23-1	
o-Xylene	**3.4**	ug/L	1.0	0.45	1		09/21/16 02:11	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	103	%	80-120		1		09/21/16 02:11	98-08-8	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Lead, Dissolved	**<3.0**	ug/L	12.0	3.0	1		09/20/16 17:42	7439-92-1	1q

Sample: MW3 **Lab ID: 40138479003** Collected: 09/13/16 14:00 Received: 09/17/16 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**165**	ug/L	2.5	0.99	2.5		09/19/16 20:37	71-43-2	
Ethylbenzene	**146**	ug/L	2.5	0.98	2.5		09/19/16 20:37	100-41-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138479

Sample: MW3 **Lab ID: 40138479003** Collected: 09/13/16 14:00 Received: 09/17/16 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Methyl-tert-butyl ether	**<1.2**	ug/L	2.5	1.2	2.5		09/19/16 20:37	1634-04-4	
Naphthalene	**44.9**	ug/L	2.5	1.1	2.5		09/19/16 20:37	91-20-3	
Toluene	**36.1**	ug/L	2.5	0.97	2.5		09/19/16 20:37	108-88-3	
1,2,4-Trimethylbenzene	**143**	ug/L	2.5	1.0	2.5		09/19/16 20:37	95-63-6	
1,3,5-Trimethylbenzene	**40.1**	ug/L	2.5	1.0	2.5		09/19/16 20:37	108-67-8	
m&p-Xylene	**499**	ug/L	5.0	2.0	2.5		09/19/16 20:37	179601-23-1	
o-Xylene	**221**	ug/L	2.5	1.1	2.5		09/19/16 20:37	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	106	%	80-120		2.5		09/19/16 20:37	98-08-8	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Lead, Dissolved	**<3.0**	ug/L	12.0	3.0	1		09/20/16 17:44	7439-92-1	1q

Sample: MW4 **Lab ID: 40138479004** Collected: 09/13/16 15:50 Received: 09/17/16 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**1130**	ug/L	5.0	2.0	5		09/19/16 17:11	71-43-2	M1
Ethylbenzene	**395**	ug/L	5.0	2.0	5		09/19/16 17:11	100-41-4	
Methyl-tert-butyl ether	**<2.4**	ug/L	5.0	2.4	5		09/19/16 17:11	1634-04-4	
Naphthalene	**74.7**	ug/L	5.0	2.1	5		09/19/16 17:11	91-20-3	
Toluene	**301**	ug/L	5.0	1.9	5		09/19/16 17:11	108-88-3	
1,2,4-Trimethylbenzene	**263**	ug/L	5.0	2.1	5		09/19/16 17:11	95-63-6	
1,3,5-Trimethylbenzene	**59.7**	ug/L	5.0	2.1	5		09/19/16 17:11	108-67-8	
m&p-Xylene	**1180**	ug/L	10.0	4.0	5		09/19/16 17:11	179601-23-1	
o-Xylene	**324**	ug/L	5.0	2.2	5		09/19/16 17:11	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	105	%	80-120		5		09/19/16 17:11	98-08-8	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Lead, Dissolved	**<3.0**	ug/L	12.0	3.0	1		09/22/16 13:12	7439-92-1	

Sample: MW5 **Lab ID: 40138479005** Collected: 09/13/16 17:17 Received: 09/17/16 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**119**	ug/L	1.0	0.40	1		09/19/16 15:02	71-43-2	
Ethylbenzene	**109**	ug/L	1.0	0.39	1		09/19/16 15:02	100-41-4	
Methyl-tert-butyl ether	**2.0**	ug/L	1.0	0.48	1		09/19/16 15:02	1634-04-4	
Naphthalene	**17.2**	ug/L	1.0	0.42	1		09/19/16 15:02	91-20-3	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138479

Sample: MW5 **Lab ID: 40138479005** Collected: 09/13/16 17:17 Received: 09/17/16 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Toluene	**24.0**	ug/L	1.0	0.39	1		09/19/16 15:02	108-88-3	
1,2,4-Trimethylbenzene	**63.7**	ug/L	1.0	0.42	1		09/19/16 15:02	95-63-6	
1,3,5-Trimethylbenzene	**15.6**	ug/L	1.0	0.42	1		09/19/16 15:02	108-67-8	
m&p-Xylene	**279**	ug/L	2.0	0.80	1		09/19/16 15:02	179601-23-1	
o-Xylene	**6.0**	ug/L	1.0	0.45	1		09/19/16 15:02	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	106	%	80-120		1		09/19/16 15:02	98-08-8	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Lead, Dissolved	**<3.0**	ug/L	12.0	3.0	1		09/22/16 13:14	7439-92-1	

Sample: MW6 **Lab ID: 40138479006** Collected: 09/13/16 19:00 Received: 09/17/16 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**3.5**	ug/L	1.0	0.40	1		09/21/16 01:19	71-43-2	
Ethylbenzene	**2.8**	ug/L	1.0	0.39	1		09/21/16 01:19	100-41-4	
Methyl-tert-butyl ether	**<0.48**	ug/L	1.0	0.48	1		09/21/16 01:19	1634-04-4	
Naphthalene	**0.46J**	ug/L	1.0	0.42	1		09/21/16 01:19	91-20-3	
Toluene	**0.88J**	ug/L	1.0	0.39	1		09/21/16 01:19	108-88-3	
1,2,4-Trimethylbenzene	**1.3**	ug/L	1.0	0.42	1		09/21/16 01:19	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		09/21/16 01:19	108-67-8	
m&p-Xylene	**6.4**	ug/L	2.0	0.80	1		09/21/16 01:19	179601-23-1	
o-Xylene	**0.69J**	ug/L	1.0	0.45	1		09/21/16 01:19	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		09/21/16 01:19	98-08-8	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Lead, Dissolved	**<3.0**	ug/L	12.0	3.0	1		09/22/16 13:17	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138479

QC Batch: 235226 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 40138479001, 40138479002, 40138479003, 40138479004, 40138479005, 40138479006

METHOD BLANK: 1394510 Matrix: Water
Associated Lab Samples: 40138479001, 40138479002, 40138479003, 40138479004, 40138479005, 40138479006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.42	1.0	09/19/16 09:44	
1,3,5-Trimethylbenzene	ug/L	<0.42	1.0	09/19/16 09:44	
Benzene	ug/L	<0.40	1.0	09/19/16 09:44	
Ethylbenzene	ug/L	<0.39	1.0	09/19/16 09:44	
m&p-Xylene	ug/L	<0.80	2.0	09/19/16 09:44	
Methyl-tert-butyl ether	ug/L	<0.48	1.0	09/19/16 09:44	
Naphthalene	ug/L	<0.42	1.0	09/19/16 09:44	
o-Xylene	ug/L	<0.45	1.0	09/19/16 09:44	
Toluene	ug/L	<0.39	1.0	09/19/16 09:44	
a,a,a-Trifluorotoluene (S)	%	104	80-120	09/19/16 09:44	

LABORATORY CONTROL SAMPLE & LCSD: 1394511 1394512

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	20.8	20.5	104	102	80-120	2	20	
1,3,5-Trimethylbenzene	ug/L	20	20.4	20.1	102	100	80-120	2	20	
Benzene	ug/L	20	21.0	20.5	105	103	80-120	2	20	
Ethylbenzene	ug/L	20	20.4	20.0	102	100	80-120	2	20	
m&p-Xylene	ug/L	40	40.6	39.6	102	99	80-120	3	20	
Methyl-tert-butyl ether	ug/L	20	21.1	20.2	105	101	80-120	5	20	
Naphthalene	ug/L	20	18.5	18.4	92	92	80-120	0	20	
o-Xylene	ug/L	20	20.6	20.1	103	101	80-120	2	20	
Toluene	ug/L	20	20.6	20.1	103	100	80-120	2	20	
a,a,a-Trifluorotoluene (S)	%				103	103	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1394752 1394753

Parameter	Units	40138479004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trimethylbenzene	ug/L	263	100	100	411	408	148	145	48-177	1	20	
1,3,5-Trimethylbenzene	ug/L	59.7	100	100	185	184	125	125	73-145	0	20	
Benzene	ug/L	1130	100	100	1130	1130	3	1	74-139	0	20	M1
Ethylbenzene	ug/L	395	100	100	478	477	83	82	74-140	0	20	
m&p-Xylene	ug/L	1180	200	200	1440	1430	130	124	55-165	1	20	
Methyl-tert-butyl ether	ug/L	<2.4	100	100	101	100	101	100	80-120	1	20	
Naphthalene	ug/L	74.7	100	100	169	168	95	93	73-133	1	20	
o-Xylene	ug/L	324	100	100	446	443	122	118	73-136	1	20	
Toluene	ug/L	301	100	100	387	385	86	84	80-128	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138479

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1394752 1394753

Parameter	Units	40138479004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
a,a,a-Trifluorotoluene (S)	%						102	103	80-120			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(920)469-2436

QUALITY CONTROL DATA

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138479

QC Batch: 235462 Analysis Method: EPA 6010
QC Batch Method: EPA 6010 Analysis Description: ICP Metals, Trace, Dissolved
Associated Lab Samples: 40138479001, 40138479002, 40138479003

METHOD BLANK: 1395480 Matrix: Water
Associated Lab Samples: 40138479001, 40138479002, 40138479003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead, Dissolved	ug/L	<3.0	12.0	09/20/16 16:41	

LABORATORY CONTROL SAMPLE: 1395481

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead, Dissolved	ug/L	500	457	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1395482 1395483

Parameter	Units	40138373001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead, Dissolved	ug/L	<3.0	500	500	451	452	90	90	75-125	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138479

QC Batch: 235685 Analysis Method: EPA 6010
QC Batch Method: EPA 6010 Analysis Description: ICP Metals, Trace, Dissolved
Associated Lab Samples: 40138479004, 40138479005, 40138479006

METHOD BLANK: 1397038 Matrix: Water
Associated Lab Samples: 40138479004, 40138479005, 40138479006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead, Dissolved	ug/L	<3.0	12.0	09/22/16 12:51	

LABORATORY CONTROL SAMPLE: 1397039

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead, Dissolved	ug/L	500	461	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1397040 1397041

Parameter	Units	40138490030 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead, Dissolved	ug/L	<12.0	500	500	467	471	93	94	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
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QUALIFIERS

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138479

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1q	Analyte was measured in the associated method blank at a concentration of -3.6 ug/L.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138479

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40138479001	**MW1**	WI MOD GRO	235226		
40138479002	**MW2**	WI MOD GRO	235226		
40138479003	**MW3**	WI MOD GRO	235226		
40138479004	**MW4**	WI MOD GRO	235226		
40138479005	**MW5**	WI MOD GRO	235226		
40138479006	**MW6**	WI MOD GRO	235226		
40138479001	**MW1**	EPA 6010	235462		
40138479002	**MW2**	EPA 6010	235462		
40138479003	**MW3**	EPA 6010	235462		
40138479004	**MW4**	EPA 6010	235685		
40138479005	**MW5**	EPA 6010	235685		
40138479006	**MW6**	EPA 6010	235685		

40138479

Pace Analytical®
www.pacelabs.com

CHAIN OF CUSTODY

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

(Please Print Clearly)

Company Name:	RET
Branch/Location:	
Project Contact:	David Larsen
Phone:	715-675-9784
Project Number:	7367AAUE
Project Name:	Medford Dx
Project State:	WI
Sampled By (Print):	David Larsen
Sampled By (Sign):	[signature]
PO #:	
Regulatory Program:	RCRA

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

*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

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, Sl = 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	VOC	Dissolved Lead	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
FILTERED? (YES/NO) Y/N					N	Y			
PRESERVATION (CODE)* Pick Letter					B	D			
001	MW1	9/13/16	11:30	GW	X	X		3-40ml V B	1-250ml P D
002	MW2	↓	12:51	↓	X	X		↓	↓
003	MW3	↓	2:00	↓	X	X		↓	↓
004	MW4	↓	3:50	↓	X	X		↓	↓
005	MW5	↓	5:17	↓	X	X		↓	↓
006	MW6	↓	7:00pm	↓	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:
[signature]	9/16/16 @ 8:30		
Waltco	9/17/16 0800	[signature] Pace	9/17/16 0800

PACE Project No.
Receipt Temp = ROI °C
Sample Receipt pH: OK / Adjusted (OK circled)
Cooler Custody Seal: Present / Not Present (Not Present circled)
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Client Name: REI

Project # **WO#: 40138479**

40138479

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: Waltco

Tracking #: 1159704-2

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

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

Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROT /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents:
Date: 9/17/16
Initials: BB

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

		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.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
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.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR 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. 002 - 2 vials ED MW32 mm9716
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☑Yes ☐No ☐N/A	13. ☑ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 <2; NaOH+ZnAct ≥9, NaOH ≥12)	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☑Yes ☐No	Initial when completed BB / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	14.
Trip Blank Present:	☐Yes ☑No ☐N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:** 9-19-16

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

September 26, 2016

DAVID LARSEN
REI
4080 NORTH 20TH AVENUE
Wausau, WI 54401

RE: Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138480

Dear DAVID LARSEN:
Enclosed are the analytical results for sample(s) received by the laboratory on September 17, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Brian Basten
brian.basten@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138480

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
Virginia VELAP ID: 460263
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
US Dept of Agriculture #: S-76505
Virginia VELAP Certification ID: 460263
Virginia VELAP ID: 460263
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(920)469-2436

SAMPLE SUMMARY

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138480

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40138480001	**MW3 @ 0-2**	Solid	09/13/16 10:00	09/17/16 08:00
40138480002	**MW3 @ 10-12**	Solid	09/13/16 10:15	09/17/16 08:00
40138480003	**MW4 @ 2-4**	Solid	09/13/16 12:20	09/17/16 08:00
40138480004	**MW4 @ 10-12**	Solid	09/13/16 12:35	09/17/16 08:00
40138480005	**MW6 @ 2-4**	Solid	09/13/16 16:30	09/17/16 08:00
40138480006	**MW6 @ 10-12**	Solid	09/13/16 16:50	09/17/16 08:00
40138480007	**MW7 @ 2-4**	Solid	09/14/16 08:30	09/17/16 08:00
40138480008	**MW7 @ 12-14**	Solid	09/14/16 08:45	09/17/16 08:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(920)469-2436

SAMPLE ANALYTE COUNT

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138480

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40138480001	**MW3 @ 0-2**	WI MOD GRO	ALD	10
		EPA 6010	DLB	1
		ASTM D2974-87	MAV	1
40138480002	**MW3 @ 10-12**	WI MOD GRO	ALD	10
		EPA 6010	DLB	1
		ASTM D2974-87	MAV	1
40138480003	**MW4 @ 2-4**	WI MOD GRO	ALD	10
		EPA 6010	DLB	1
		ASTM D2974-87	MAV	1
40138480004	**MW4 @ 10-12**	WI MOD GRO	ALD	10
		EPA 6010	DLB	1
		ASTM D2974-87	MAV	1
40138480005	**MW6 @ 2-4**	WI MOD GRO	ALD	10
		EPA 6010	DLB	1
		ASTM D2974-87	MAV	1
40138480006	**MW6 @ 10-12**	WI MOD GRO	ALD	10
		EPA 6010	DLB	1
		ASTM D2974-87	MAV	1
40138480007	**MW7 @ 2-4**	WI MOD GRO	ALD	10
		EPA 6010	DLB	1
		ASTM D2974-87	MAV	1
40138480008	**MW7 @ 12-14**	WI MOD GRO	ALD	10
		EPA 6010	DLB	1
		ASTM D2974-87	MAV	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138480

Sample: MW3 @ 0-2 **Lab ID: 40138480001** Collected: 09/13/16 10:00 Received: 09/17/16 08:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**1380J**	ug/kg	2740	1140	40	09/22/16 07:34	09/22/16 16:40	71-43-2	
Ethylbenzene	**73600**	ug/kg	2740	1140	40	09/22/16 07:34	09/22/16 16:40	100-41-4	
Methyl-tert-butyl ether	**2290J**	ug/kg	2740	1140	40	09/22/16 07:34	09/22/16 16:40	1634-04-4	
Naphthalene	**32400**	ug/kg	2740	1140	40	09/22/16 07:34	09/22/16 16:40	91-20-3	
Toluene	**9030**	ug/kg	2740	1140	40	09/22/16 07:34	09/22/16 16:40	108-88-3	
1,2,4-Trimethylbenzene	**186000**	ug/kg	2740	1140	40	09/22/16 07:34	09/22/16 16:40	95-63-6	
1,3,5-Trimethylbenzene	**66300**	ug/kg	2740	1140	40	09/22/16 07:34	09/22/16 16:40	108-67-8	
m&p-Xylene	**237000**	ug/kg	5480	2280	40	09/22/16 07:34	09/22/16 16:40	179601-23-1	
o-Xylene	**104000**	ug/kg	2740	1140	40	09/22/16 07:34	09/22/16 16:40	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	131	%	80-120		40	09/22/16 07:34	09/22/16 16:40	98-08-8	S7
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**195**	mg/kg	1.3	0.46	1	09/21/16 12:47	09/22/16 16:58	7439-92-1	M0,R1
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**6.7**	%	0.10	0.10	1		09/22/16 15:41		

Sample: MW3 @ 10-12 **Lab ID: 40138480002** Collected: 09/13/16 10:15 Received: 09/17/16 08:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<33.3**	ug/kg	80.0	33.3	1	09/22/16 07:34	09/22/16 13:16	71-43-2	W
Ethylbenzene	**85.0J**	ug/kg	117	48.9	1	09/22/16 07:34	09/22/16 13:16	100-41-4	
Methyl-tert-butyl ether	**<33.3**	ug/kg	80.0	33.3	1	09/22/16 07:34	09/22/16 13:16	1634-04-4	W
Naphthalene	**52.3J**	ug/kg	117	48.9	1	09/22/16 07:34	09/22/16 13:16	91-20-3	
Toluene	**<33.3**	ug/kg	80.0	33.3	1	09/22/16 07:34	09/22/16 13:16	108-88-3	W
1,2,4-Trimethylbenzene	**287**	ug/kg	117	48.9	1	09/22/16 07:34	09/22/16 13:16	95-63-6	
1,3,5-Trimethylbenzene	**126**	ug/kg	117	48.9	1	09/22/16 07:34	09/22/16 13:16	108-67-8	
m&p-Xylene	**303**	ug/kg	235	97.8	1	09/22/16 07:34	09/22/16 13:16	179601-23-1	
o-Xylene	**128**	ug/kg	117	48.9	1	09/22/16 07:34	09/22/16 13:16	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	104	%	80-120		1	09/22/16 07:34	09/22/16 13:16	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**14.0**	mg/kg	1.7	0.61	1	09/21/16 12:47	09/22/16 17:04	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**31.8**	%	0.10	0.10	1		09/22/16 15:41		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138480

Sample: MW4 @ 2-4 **Lab ID: 40138480003** Collected: 09/13/16 12:20 Received: 09/17/16 08:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**6850**	ug/kg	2800	1170	40	09/22/16 07:34	09/22/16 17:06	71-43-2	
Ethylbenzene	**84700**	ug/kg	2800	1170	40	09/22/16 07:34	09/22/16 17:06	100-41-4	
Methyl-tert-butyl ether	**4480**	ug/kg	2800	1170	40	09/22/16 07:34	09/22/16 17:06	1634-04-4	
Naphthalene	**36100**	ug/kg	2800	1170	40	09/22/16 07:34	09/22/16 17:06	91-20-3	
Toluene	**68600**	ug/kg	2800	1170	40	09/22/16 07:34	09/22/16 17:06	108-88-3	
1,2,4-Trimethylbenzene	**192000**	ug/kg	2800	1170	40	09/22/16 07:34	09/22/16 17:06	95-63-6	
1,3,5-Trimethylbenzene	**67000**	ug/kg	2800	1170	40	09/22/16 07:34	09/22/16 17:06	108-67-8	
m&p-Xylene	**248000**	ug/kg	5610	2340	40	09/22/16 07:34	09/22/16 17:06	179601-23-1	
o-Xylene	**106000**	ug/kg	2800	1170	40	09/22/16 07:34	09/22/16 17:06	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	109	%	80-120		40	09/22/16 07:34	09/22/16 17:06	98-08-8	1q,P4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**82.1**	mg/kg	1.4	0.49	1	09/21/16 12:47	09/22/16 17:07	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**14.4**	%	0.10	0.10	1		09/22/16 15:41		

Sample: MW4 @ 10-12 **Lab ID: 40138480004** Collected: 09/13/16 12:35 Received: 09/17/16 08:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**139**	ug/kg	86.3	35.9	1	09/22/16 07:34	09/22/16 16:14	71-43-2	
Ethylbenzene	**787**	ug/kg	86.3	35.9	1	09/22/16 07:34	09/22/16 16:14	100-41-4	
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 16:14	1634-04-4	W
Naphthalene	**738**	ug/kg	86.3	35.9	1	09/22/16 07:34	09/22/16 16:14	91-20-3	
Toluene	**562**	ug/kg	86.3	35.9	1	09/22/16 07:34	09/22/16 16:14	108-88-3	
1,2,4-Trimethylbenzene	**2780**	ug/kg	86.3	35.9	1	09/22/16 07:34	09/22/16 16:14	95-63-6	
1,3,5-Trimethylbenzene	**1190**	ug/kg	86.3	35.9	1	09/22/16 07:34	09/22/16 16:14	108-67-8	
m&p-Xylene	**3550**	ug/kg	173	71.9	1	09/22/16 07:34	09/22/16 16:14	179601-23-1	
o-Xylene	**1410**	ug/kg	86.3	35.9	1	09/22/16 07:34	09/22/16 16:14	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	114	%	80-120		1	09/22/16 07:34	09/22/16 16:14	98-08-8	1q,P4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**18.0**	mg/kg	1.6	0.58	1	09/21/16 12:47	09/22/16 17:09	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**30.4**	%	0.10	0.10	1		09/22/16 15:42		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138480

Sample: MW6 @ 2-4 **Lab ID: 40138480005** Collected: 09/13/16 16:30 Received: 09/17/16 08:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 13:41	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 13:41	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 13:41	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 13:41	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 13:41	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 13:41	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 13:41	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	09/22/16 07:34	09/22/16 13:41	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 13:41	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-120		1	09/22/16 07:34	09/22/16 13:41	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**4.3**	mg/kg	1.3	0.47	1	09/21/16 12:47	09/22/16 17:12	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.6**	%	0.10	0.10	1		09/22/16 15:42		

Sample: MW6 @ 10-12 **Lab ID: 40138480006** Collected: 09/13/16 16:50 Received: 09/17/16 08:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**447**	ug/kg	83.9	35.0	1	09/22/16 07:34	09/22/16 14:07	71-43-2	
Ethylbenzene	**73.0J**	ug/kg	83.9	35.0	1	09/22/16 07:34	09/22/16 14:07	100-41-4	
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 14:07	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 14:07	91-20-3	W
Toluene	**234**	ug/kg	83.9	35.0	1	09/22/16 07:34	09/22/16 14:07	108-88-3	
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 14:07	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 14:07	108-67-8	W
m&p-Xylene	**114J**	ug/kg	168	69.9	1	09/22/16 07:34	09/22/16 14:07	179601-23-1	
o-Xylene	**42.0J**	ug/kg	83.9	35.0	1	09/22/16 07:34	09/22/16 14:07	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	103	%	80-120		1	09/22/16 07:34	09/22/16 14:07	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**12.0**	mg/kg	1.5	0.55	1	09/21/16 12:47	09/22/16 17:19	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**28.5**	%	0.10	0.10	1		09/22/16 16:10		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138480

Sample: MW7 @ 2-4 **Lab ID: 40138480007** Collected: 09/14/16 08:30 Received: 09/17/16 08:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 19:13	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 19:13	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 19:13	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 19:13	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 19:13	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 19:13	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 19:13	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	09/22/16 07:34	09/22/16 19:13	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 19:13	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	09/22/16 07:34	09/22/16 19:13	98-08-8	1q,P4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**5.2**	mg/kg	1.3	0.46	1	09/21/16 12:47	09/22/16 17:21	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**16.4**	%	0.10	0.10	1		09/22/16 16:10		

Sample: MW7 @ 12-14 **Lab ID: 40138480008** Collected: 09/14/16 08:45 Received: 09/17/16 08:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 14:32	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 14:32	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 14:32	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 14:32	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 14:32	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 14:32	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 14:32	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	09/22/16 07:34	09/22/16 14:32	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	09/22/16 07:34	09/22/16 14:32	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1	09/22/16 07:34	09/22/16 14:32	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**1.6**	mg/kg	1.2	0.44	1	09/21/16 12:47	09/22/16 17:24	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**13.7**	%	0.10	0.10	1		09/22/16 16:10		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138480

QC Batch: 235708 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 40138480001, 40138480002, 40138480003, 40138480004, 40138480005, 40138480006, 40138480007, 40138480008

METHOD BLANK: 1397417 Matrix: Solid
Associated Lab Samples: 40138480001, 40138480002, 40138480003, 40138480004, 40138480005, 40138480006, 40138480007, 40138480008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	50.0	09/22/16 08:23	
1,3,5-Trimethylbenzene	ug/kg	<25.0	50.0	09/22/16 08:23	
Benzene	ug/kg	<25.0	50.0	09/22/16 08:23	
Ethylbenzene	ug/kg	<25.0	50.0	09/22/16 08:23	
m&p-Xylene	ug/kg	<50.0	100	09/22/16 08:23	
Methyl-tert-butyl ether	ug/kg	<25.0	50.0	09/22/16 08:23	
Naphthalene	ug/kg	<25.0	50.0	09/22/16 08:23	
o-Xylene	ug/kg	<25.0	50.0	09/22/16 08:23	
Toluene	ug/kg	<25.0	50.0	09/22/16 08:23	
a,a,a-Trifluorotoluene (S)	%	99	80-120	09/22/16 08:23	

LABORATORY CONTROL SAMPLE & LCSD: 1397418 1397419

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	915	960	91	96	80-120	5	20	
1,3,5-Trimethylbenzene	ug/kg	1000	906	948	91	95	80-120	5	20	
Benzene	ug/kg	1000	982	988	98	99	80-120	1	20	
Ethylbenzene	ug/kg	1000	952	979	95	98	80-120	3	20	
m&p-Xylene	ug/kg	2000	1890	1950	95	98	80-120	3	20	
Methyl-tert-butyl ether	ug/kg	1000	980	966	98	97	80-120	1	20	
Naphthalene	ug/kg	1000	882	910	88	91	80-120	3	20	
o-Xylene	ug/kg	1000	953	986	95	99	80-120	3	20	
Toluene	ug/kg	1000	972	982	97	98	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%				100	100	80-120			

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REPORT OF LABORATORY ANALYSIS

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(920)469-2436

QUALITY CONTROL DATA

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138480

QC Batch: 235575 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 40138480001, 40138480002, 40138480003, 40138480004, 40138480005, 40138480006, 40138480007, 40138480008

METHOD BLANK: 1396294 Matrix: Solid
Associated Lab Samples: 40138480001, 40138480002, 40138480003, 40138480004, 40138480005, 40138480006, 40138480007, 40138480008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	<0.43	1.2	09/22/16 16:53	

LABORATORY CONTROL SAMPLE: 1396295

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	50	47.0	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1396296 1396297

Parameter	Units	40138480001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/kg	195	53.5	53.3	100	156	-176	-72	75-125	44	20	M0,R1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138480

QC Batch: 235851 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40138480001, 40138480002, 40138480003, 40138480004, 40138480005

SAMPLE DUPLICATE: 1398294

Parameter	Units	40138480002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	31.8	31.2	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138480

QC Batch: 235860 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40138480006, 40138480007, 40138480008

SAMPLE DUPLICATE: 1398375

Parameter	Units	40138481002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	4.7	4.8	3	10	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138480

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1q	Results are from sample aliquot taken from a jar with head space and preserved with MeOH in the laboratory.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
P4	Sample field preservation does not meet EPA or method recommendations for this analysis.
R1	RPD value was outside control limits.
S7	Surrogate recovery outside control limits (not confirmed by re-analysis).
W	Non-detect results are reported on a wet weight basis.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 7367 AXUC HEDLUND DX
Pace Project No.: 40138480

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40138480001	**MW3 @ 0-2**	TPH GRO/PVOC WI ext.	235708	WI MOD GRO	235772
40138480002	**MW3 @ 10-12**	TPH GRO/PVOC WI ext.	235708	WI MOD GRO	235772
40138480003	**MW4 @ 2-4**	TPH GRO/PVOC WI ext.	235708	WI MOD GRO	235772
40138480004	**MW4 @ 10-12**	TPH GRO/PVOC WI ext.	235708	WI MOD GRO	235772
40138480005	**MW6 @ 2-4**	TPH GRO/PVOC WI ext.	235708	WI MOD GRO	235772
40138480006	**MW6 @ 10-12**	TPH GRO/PVOC WI ext.	235708	WI MOD GRO	235772
40138480007	**MW7 @ 2-4**	TPH GRO/PVOC WI ext.	235708	WI MOD GRO	235772
40138480008	**MW7 @ 12-14**	TPH GRO/PVOC WI ext.	235708	WI MOD GRO	235772
40138480001	**MW3 @ 0-2**	EPA 3050	235575	EPA 6010	235771
40138480002	**MW3 @ 10-12**	EPA 3050	235575	EPA 6010	235771
40138480003	**MW4 @ 2-4**	EPA 3050	235575	EPA 6010	235771
40138480004	**MW4 @ 10-12**	EPA 3050	235575	EPA 6010	235771
40138480005	**MW6 @ 2-4**	EPA 3050	235575	EPA 6010	235771
40138480006	**MW6 @ 10-12**	EPA 3050	235575	EPA 6010	235771
40138480007	**MW7 @ 2-4**	EPA 3050	235575	EPA 6010	235771
40138480008	**MW7 @ 12-14**	EPA 3050	235575	EPA 6010	235771
40138480001	**MW3 @ 0-2**	ASTM D2974-87	235851		
40138480002	**MW3 @ 10-12**	ASTM D2974-87	235851		
40138480003	**MW4 @ 2-4**	ASTM D2974-87	235851		
40138480004	**MW4 @ 10-12**	ASTM D2974-87	235851		
40138480005	**MW6 @ 2-4**	ASTM D2974-87	235851		
40138480006	**MW6 @ 10-12**	ASTM D2974-87	235860		
40138480007	**MW7 @ 2-4**	ASTM D2974-87	235860		
40138480008	**MW7 @ 12-14**	ASTM D2974-87	235860		

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

Page 1 of

40138480

CHAIN OF CUSTODY

(Please Print Clearly)	
Company Name:	PET
Branch/Location:	
Project Contact:	David Larsen
Phone:	715-675-9784
Project Number:	7367 Axel
Project Name:	Hedlund DX
Project State:	WI
Sampled By (Print):	David Larsen
Sampled By (Sign):	
PO #:	Regulatory Program: PECFA

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

***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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: PVOC/N	LEAD	Dry Wt
001	MW3@0-2	9/13/16	10:00	Soil	N	F	X	X	
002	MW3@10-12		10:05		N	A	X	X	
003	MW4@2-4		12:20		N	A	X	X	
004	MW4@10-12		12:35		N	A	X	X	
005	MW6@2-4		4:30		N	A	X	X	
006	MW6@10-12		4:50		N	A	X	X	
007	MW7@2-4	9/14	8:30		N	A	X	X	
008	MW7@12-14	9/14	8:45		N	A	X	X	

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
1-40mlV F	1-4oz pA	

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:
	9/16/16 08:30 AM		
Waitco	9/17/16 0800	pace	9/17/16 0800

PACE Project No.: 40138480

Receipt Temp = ROI °C

Sample Receipt pH ~~OK / Adjusted~~

Cooler Custody Seal ~~Present~~ / Not Present
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Client Name: REI

Project #

WO#: 40138480

40138480

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: Waltco

Tracking #: 115970-2

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☑ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☑ no

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

Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROI /Corr: — **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

Person examining contents:
Date: 9/17/16
Initials: BB

				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.
- VOA Samples frozen upon receipt	☐Yes	☐No		Date/Time:
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.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
-Pace IR 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: -Includes date/time/ID/Analysis Matrix: S	☐Yes	☑No	☐N/A	12. 003 1-40mL F no ID / time/date on label matched by pairing in shipping / process of elimination. 007 time on samples "820" BB 9/17/16
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes	☐No	☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes	☐No	☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes	☑No		Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14.
Trip Blank Present:	☐Yes	☐No	☑N/A	15.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: [signature] **Date:** 9-19-16

F-GB-C-031-Rev.03 (9April2015) SCUR Form

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

October 04, 2016

DAVID LARSEN
REI
4080 NORTH 20TH AVENUE
Wausau, WI 54401

RE: Project: 7367 HEDLAND DX
Pace Project No.: 40138889

Dear DAVID LARSEN:
Enclosed are the analytical results for sample(s) received by the laboratory on September 23, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Brian Basten
brian.basten@pacelabs.com
Project Manager

Enclosures

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

CERTIFICATIONS

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
525 N 8th Street, Salina, KS 67401
Alaska Certification UST-107
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
Virginia VELAP ID: 460263
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
US Dept of Agriculture #: S-76505
Virginia VELAP ID: 460263
Virginia VELAP Certification ID: 460263
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40138889001	**MW7**	Water	09/21/16 09:14	09/23/16 09:00
40138889002	**10531**	Water	09/21/16 08:45	09/23/16 09:00
40138889003	**10561**	Water	09/21/16 09:15	09/23/16 09:00

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40138889001	**MW7**	WI MOD GRO	ALD	10	PASI-G
		EPA 6010	DLB	1	PASI-G
40138889002	**10531**	EPA 6010	DLB	1	PASI-G
		EPA 524.2	DJB	75	PASI-M
40138889003	**10561**	EPA 6010	DLB	1	PASI-G
		EPA 524.2	DJB	75	PASI-M

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

Sample: MW7 **Lab ID: 40138889001** Collected: 09/21/16 09:14 Received: 09/23/16 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.40**	ug/L	1.0	0.40	1		09/26/16 16:44	71-43-2	
Ethylbenzene	**<0.39**	ug/L	1.0	0.39	1		09/26/16 16:44	100-41-4	
Methyl-tert-butyl ether	**<0.48**	ug/L	1.0	0.48	1		09/26/16 16:44	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		09/26/16 16:44	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		09/26/16 16:44	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		09/26/16 16:44	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		09/26/16 16:44	108-67-8	
m&p-Xylene	**<0.80**	ug/L	2.0	0.80	1		09/26/16 16:44	179601-23-1	
o-Xylene	**<0.45**	ug/L	1.0	0.45	1		09/26/16 16:44	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		09/26/16 16:44	98-08-8	pH
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Lead, Dissolved	**<3.0**	ug/L	12.0	3.0	1		09/28/16 21:48	7439-92-1	

Sample: 10531 **Lab ID: 40138889002** Collected: 09/21/16 08:45 Received: 09/23/16 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Lead, Dissolved	**<3.0**	ug/L	12.0	3.0	1		09/28/16 21:50	7439-92-1	
524.2 MSV	Analytical Method: EPA 524.2								
Acetone	**<1.9**	ug/L	20.0	1.9	1		09/30/16 15:07	67-64-1	
Acrylonitrile	**<0.28**	ug/L	10.0	0.28	1		09/30/16 15:07	107-13-1	
Benzene	**<0.086**	ug/L	0.50	0.086	1		09/30/16 15:07	71-43-2	
Bromobenzene	**<0.081**	ug/L	0.50	0.081	1		09/30/16 15:07	108-86-1	
Bromochloromethane	**<0.16**	ug/L	1.0	0.16	1		09/30/16 15:07	74-97-5	
Bromodichloromethane	**<0.090**	ug/L	1.0	0.090	1		09/30/16 15:07	75-27-4	
Bromoform	**<0.23**	ug/L	4.0	0.23	1		09/30/16 15:07	75-25-2	
Bromomethane	**<0.20**	ug/L	4.0	0.20	1		09/30/16 15:07	74-83-9	
2-Butanone (MEK)	**<0.19**	ug/L	5.0	0.19	1		09/30/16 15:07	78-93-3	
n-Butylbenzene	**<0.081**	ug/L	0.50	0.081	1		09/30/16 15:07	104-51-8	
sec-Butylbenzene	**<0.063**	ug/L	0.50	0.063	1		09/30/16 15:07	135-98-8	
tert-Butylbenzene	**<0.097**	ug/L	0.50	0.097	1		09/30/16 15:07	98-06-6	
Carbon disulfide	**<0.042**	ug/L	1.0	0.042	1		09/30/16 15:07	75-15-0	
Carbon tetrachloride	**<0.076**	ug/L	1.0	0.076	1		09/30/16 15:07	56-23-5	
Chlorobenzene	**<0.068**	ug/L	0.50	0.068	1		09/30/16 15:07	108-90-7	
Chloroethane	**<0.18**	ug/L	1.0	0.18	1		09/30/16 15:07	75-00-3	
Chloroform	**<0.10**	ug/L	1.0	0.10	1		09/30/16 15:07	67-66-3	
Chloromethane	**<0.21**	ug/L	4.0	0.21	1		09/30/16 15:07	74-87-3	
2-Chlorotoluene	**<0.11**	ug/L	0.50	0.11	1		09/30/16 15:07	95-49-8	
4-Chlorotoluene	**<0.10**	ug/L	0.50	0.10	1		09/30/16 15:07	106-43-4	
1,2-Dibromo-3-chloropropane	**<0.18**	ug/L	4.0	0.18	1		09/30/16 15:07	96-12-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

Sample: 10531 **Lab ID: 40138889002** Collected: 09/21/16 08:45 Received: 09/23/16 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
Dibromochloromethane	**<0.13**	ug/L	0.50	0.13	1		09/30/16 15:07	124-48-1	
1,2-Dibromoethane (EDB)	**<0.091**	ug/L	0.50	0.091	1		09/30/16 15:07	106-93-4	
Dibromomethane	**<0.098**	ug/L	1.0	0.098	1		09/30/16 15:07	74-95-3	
1,2-Dichlorobenzene	**<0.10**	ug/L	0.50	0.10	1		09/30/16 15:07	95-50-1	
1,3-Dichlorobenzene	**<0.082**	ug/L	0.50	0.082	1		09/30/16 15:07	541-73-1	
1,4-Dichlorobenzene	**<0.075**	ug/L	0.50	0.075	1		09/30/16 15:07	106-46-7	
trans-1,4-Dichloro-2-butene	**<0.15**	ug/L	10.0	0.15	1		09/30/16 15:07	110-57-6	
Dichlorodifluoromethane	**<0.16**	ug/L	1.0	0.16	1		09/30/16 15:07	75-71-8	
1,1-Dichloroethane	**<0.088**	ug/L	0.50	0.088	1		09/30/16 15:07	75-34-3	
1,2-Dichloroethane	**<0.092**	ug/L	0.50	0.092	1		09/30/16 15:07	107-06-2	
1,1-Dichloroethene	**<0.089**	ug/L	0.50	0.089	1		09/30/16 15:07	75-35-4	
cis-1,2-Dichloroethene	**<0.085**	ug/L	1.0	0.085	1		09/30/16 15:07	156-59-2	
trans-1,2-Dichloroethene	**<0.11**	ug/L	0.50	0.11	1		09/30/16 15:07	156-60-5	
1,2-Dichloropropane	**<0.084**	ug/L	4.0	0.084	1		09/30/16 15:07	78-87-5	
1,3-Dichloropropane	**<0.094**	ug/L	0.50	0.094	1		09/30/16 15:07	142-28-9	
2,2-Dichloropropane	**<0.097**	ug/L	1.0	0.097	1		09/30/16 15:07	594-20-7	
1,1-Dichloropropene	**<0.080**	ug/L	0.50	0.080	1		09/30/16 15:07	563-58-6	
cis-1,3-Dichloropropene	**<0.071**	ug/L	0.50	0.071	1		09/30/16 15:07	10061-01-5	
trans-1,3-Dichloropropene	**<0.055**	ug/L	0.50	0.055	1		09/30/16 15:07	10061-02-6	
Ethylbenzene	**<0.051**	ug/L	0.50	0.051	1		09/30/16 15:07	100-41-4	
Ethyl methacrylate	**<0.071**	ug/L	5.0	0.071	1		09/30/16 15:07	97-63-2	
Hexachloro-1,3-butadiene	**<0.11**	ug/L	4.0	0.11	1		09/30/16 15:07	87-68-3	
2-Hexanone	**<0.19**	ug/L	5.0	0.19	1		09/30/16 15:07	591-78-6	
Isopropylbenzene (Cumene)	**<0.11**	ug/L	0.50	0.11	1		09/30/16 15:07	98-82-8	
p-Isopropyltoluene	**<0.083**	ug/L	0.50	0.083	1		09/30/16 15:07	99-87-6	
Methylene Chloride	**<0.20**	ug/L	4.0	0.20	1		09/30/16 15:07	75-09-2	
Methyl methacrylate	**<0.12**	ug/L	5.0	0.12	1		09/30/16 15:07	80-62-6	
4-Methyl-2-pentanone (MIBK)	**<0.34**	ug/L	5.0	0.34	1		09/30/16 15:07	108-10-1	
Methyl-tert-butyl ether	**<0.058**	ug/L	0.50	0.058	1		09/30/16 15:07	1634-04-4	
Naphthalene	**<0.064**	ug/L	4.0	0.064	1		09/30/16 15:07	91-20-3	
2-Nitropropane	**<0.42**	ug/L	10.0	0.42	1		09/30/16 15:07	79-46-9	
n-Propylbenzene	**<0.096**	ug/L	0.50	0.096	1		09/30/16 15:07	103-65-1	
Styrene	**<0.075**	ug/L	0.50	0.075	1		09/30/16 15:07	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.062**	ug/L	0.50	0.062	1		09/30/16 15:07	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.11**	ug/L	0.50	0.11	1		09/30/16 15:07	79-34-5	
Tetrachloroethene	**<0.12**	ug/L	0.50	0.12	1		09/30/16 15:07	127-18-4	
Toluene	**<0.080**	ug/L	0.50	0.080	1		09/30/16 15:07	108-88-3	
Total Trihalomethanes (Calc.)	**<2.0**	ug/L	4.0	2.0	1		09/30/16 15:07		
1,2,3-Trichlorobenzene	**<0.10**	ug/L	0.50	0.10	1		09/30/16 15:07	87-61-6	
1,2,4-Trichlorobenzene	**<0.12**	ug/L	0.50	0.12	1		09/30/16 15:07	120-82-1	
1,1,1-Trichloroethane	**<0.10**	ug/L	0.50	0.10	1		09/30/16 15:07	71-55-6	
1,1,2-Trichloroethane	**<0.098**	ug/L	0.50	0.098	1		09/30/16 15:07	79-00-5	
Trichloroethene	**<0.044**	ug/L	0.40	0.044	1		09/30/16 15:07	79-01-6	
Trichlorofluoromethane	**<0.13**	ug/L	0.50	0.13	1		09/30/16 15:07	75-69-4	
1,2,3-Trichloropropane	**<0.073**	ug/L	4.0	0.073	1		09/30/16 15:07	96-18-4	
1,2,4-Trimethylbenzene	**<0.083**	ug/L	0.50	0.083	1		09/30/16 15:07	95-63-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

Sample: 10531 **Lab ID: 40138889002** Collected: 09/21/16 08:45 Received: 09/23/16 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
1,3,5-Trimethylbenzene	**<0.078**	ug/L	0.50	0.078	1		09/30/16 15:07	108-67-8	
Vinyl chloride	**<0.098**	ug/L	0.20	0.098	1		09/30/16 15:07	75-01-4	
Xylene (Total)	**<0.073**	ug/L	1.5	0.073	1		09/30/16 15:07	1330-20-7	
m&p-Xylene	**<0.073**	ug/L	1.0	0.073	1		09/30/16 15:07	179601-23-1	
o-Xylene	**<0.073**	ug/L	0.50	0.073	1		09/30/16 15:07	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	91	%.	75-125		1		09/30/16 15:07	460-00-4	
Toluene-d8 (S)	98	%.	75-125		1		09/30/16 15:07	2037-26-5	
1,2-Dichloroethane-d4 (S)	115	%.	75-125		1		09/30/16 15:07	17060-07-0	

Sample: 10561 **Lab ID: 40138889003** Collected: 09/21/16 09:15 Received: 09/23/16 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Lead, Dissolved	**<3.0**	ug/L	12.0	3.0	1		09/28/16 21:53	7439-92-1	
524.2 MSV	Analytical Method: EPA 524.2								
Acetone	**<1.9**	ug/L	20.0	1.9	1		09/30/16 15:29	67-64-1	
Acrylonitrile	**<0.28**	ug/L	10.0	0.28	1		09/30/16 15:29	107-13-1	
Benzene	**<0.086**	ug/L	0.50	0.086	1		09/30/16 15:29	71-43-2	
Bromobenzene	**<0.081**	ug/L	0.50	0.081	1		09/30/16 15:29	108-86-1	
Bromochloromethane	**<0.16**	ug/L	1.0	0.16	1		09/30/16 15:29	74-97-5	
Bromodichloromethane	**<0.090**	ug/L	1.0	0.090	1		09/30/16 15:29	75-27-4	
Bromoform	**<0.23**	ug/L	4.0	0.23	1		09/30/16 15:29	75-25-2	
Bromomethane	**<0.20**	ug/L	4.0	0.20	1		09/30/16 15:29	74-83-9	
2-Butanone (MEK)	**<0.19**	ug/L	5.0	0.19	1		09/30/16 15:29	78-93-3	
n-Butylbenzene	**<0.081**	ug/L	0.50	0.081	1		09/30/16 15:29	104-51-8	
sec-Butylbenzene	**<0.063**	ug/L	0.50	0.063	1		09/30/16 15:29	135-98-8	
tert-Butylbenzene	**<0.097**	ug/L	0.50	0.097	1		09/30/16 15:29	98-06-6	
Carbon disulfide	**<0.042**	ug/L	1.0	0.042	1		09/30/16 15:29	75-15-0	
Carbon tetrachloride	**<0.076**	ug/L	1.0	0.076	1		09/30/16 15:29	56-23-5	
Chlorobenzene	**<0.068**	ug/L	0.50	0.068	1		09/30/16 15:29	108-90-7	
Chloroethane	**<0.18**	ug/L	1.0	0.18	1		09/30/16 15:29	75-00-3	
Chloroform	**<0.10**	ug/L	1.0	0.10	1		09/30/16 15:29	67-66-3	
Chloromethane	**<0.21**	ug/L	4.0	0.21	1		09/30/16 15:29	74-87-3	
2-Chlorotoluene	**<0.11**	ug/L	0.50	0.11	1		09/30/16 15:29	95-49-8	
4-Chlorotoluene	**<0.10**	ug/L	0.50	0.10	1		09/30/16 15:29	106-43-4	
1,2-Dibromo-3-chloropropane	**<0.18**	ug/L	4.0	0.18	1		09/30/16 15:29	96-12-8	
Dibromochloromethane	**<0.13**	ug/L	0.50	0.13	1		09/30/16 15:29	124-48-1	
1,2-Dibromoethane (EDB)	**<0.091**	ug/L	0.50	0.091	1		09/30/16 15:29	106-93-4	
Dibromomethane	**<0.098**	ug/L	1.0	0.098	1		09/30/16 15:29	74-95-3	
1,2-Dichlorobenzene	**<0.10**	ug/L	0.50	0.10	1		09/30/16 15:29	95-50-1	
1,3-Dichlorobenzene	**<0.082**	ug/L	0.50	0.082	1		09/30/16 15:29	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

Sample: 10561 **Lab ID: 40138889003** Collected: 09/21/16 09:15 Received: 09/23/16 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
1,4-Dichlorobenzene	**<0.075**	ug/L	0.50	0.075	1		09/30/16 15:29	106-46-7	
trans-1,4-Dichloro-2-butene	**<0.15**	ug/L	10.0	0.15	1		09/30/16 15:29	110-57-6	
Dichlorodifluoromethane	**<0.16**	ug/L	1.0	0.16	1		09/30/16 15:29	75-71-8	
1,1-Dichloroethane	**<0.088**	ug/L	0.50	0.088	1		09/30/16 15:29	75-34-3	
1,2-Dichloroethane	**<0.092**	ug/L	0.50	0.092	1		09/30/16 15:29	107-06-2	
1,1-Dichloroethene	**<0.089**	ug/L	0.50	0.089	1		09/30/16 15:29	75-35-4	
cis-1,2-Dichloroethene	**<0.085**	ug/L	1.0	0.085	1		09/30/16 15:29	156-59-2	
trans-1,2-Dichloroethene	**<0.11**	ug/L	0.50	0.11	1		09/30/16 15:29	156-60-5	
1,2-Dichloropropane	**<0.084**	ug/L	4.0	0.084	1		09/30/16 15:29	78-87-5	
1,3-Dichloropropane	**<0.094**	ug/L	0.50	0.094	1		09/30/16 15:29	142-28-9	
2,2-Dichloropropane	**<0.097**	ug/L	1.0	0.097	1		09/30/16 15:29	594-20-7	
1,1-Dichloropropene	**<0.080**	ug/L	0.50	0.080	1		09/30/16 15:29	563-58-6	
cis-1,3-Dichloropropene	**<0.071**	ug/L	0.50	0.071	1		09/30/16 15:29	10061-01-5	
trans-1,3-Dichloropropene	**<0.055**	ug/L	0.50	0.055	1		09/30/16 15:29	10061-02-6	
Ethylbenzene	**<0.051**	ug/L	0.50	0.051	1		09/30/16 15:29	100-41-4	
Ethyl methacrylate	**<0.071**	ug/L	5.0	0.071	1		09/30/16 15:29	97-63-2	
Hexachloro-1,3-butadiene	**<0.11**	ug/L	4.0	0.11	1		09/30/16 15:29	87-68-3	
2-Hexanone	**<0.19**	ug/L	5.0	0.19	1		09/30/16 15:29	591-78-6	
Isopropylbenzene (Cumene)	**<0.11**	ug/L	0.50	0.11	1		09/30/16 15:29	98-82-8	
p-Isopropyltoluene	**<0.083**	ug/L	0.50	0.083	1		09/30/16 15:29	99-87-6	
Methylene Chloride	**<0.20**	ug/L	4.0	0.20	1		09/30/16 15:29	75-09-2	
Methyl methacrylate	**<0.12**	ug/L	5.0	0.12	1		09/30/16 15:29	80-62-6	
4-Methyl-2-pentanone (MIBK)	**<0.34**	ug/L	5.0	0.34	1		09/30/16 15:29	108-10-1	
Methyl-tert-butyl ether	**<0.058**	ug/L	0.50	0.058	1		09/30/16 15:29	1634-04-4	
Naphthalene	**<0.064**	ug/L	4.0	0.064	1		09/30/16 15:29	91-20-3	
2-Nitropropane	**<0.42**	ug/L	10.0	0.42	1		09/30/16 15:29	79-46-9	
n-Propylbenzene	**<0.096**	ug/L	0.50	0.096	1		09/30/16 15:29	103-65-1	
Styrene	**<0.075**	ug/L	0.50	0.075	1		09/30/16 15:29	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.062**	ug/L	0.50	0.062	1		09/30/16 15:29	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.11**	ug/L	0.50	0.11	1		09/30/16 15:29	79-34-5	
Tetrachloroethene	**<0.12**	ug/L	0.50	0.12	1		09/30/16 15:29	127-18-4	
Toluene	**<0.080**	ug/L	0.50	0.080	1		09/30/16 15:29	108-88-3	
Total Trihalomethanes (Calc.)	**<2.0**	ug/L	4.0	2.0	1		09/30/16 15:29		
1,2,3-Trichlorobenzene	**<0.10**	ug/L	0.50	0.10	1		09/30/16 15:29	87-61-6	
1,2,4-Trichlorobenzene	**<0.12**	ug/L	0.50	0.12	1		09/30/16 15:29	120-82-1	
1,1,1-Trichloroethane	**<0.10**	ug/L	0.50	0.10	1		09/30/16 15:29	71-55-6	
1,1,2-Trichloroethane	**<0.098**	ug/L	0.50	0.098	1		09/30/16 15:29	79-00-5	
Trichloroethene	**<0.044**	ug/L	0.40	0.044	1		09/30/16 15:29	79-01-6	
Trichlorofluoromethane	**<0.13**	ug/L	0.50	0.13	1		09/30/16 15:29	75-69-4	
1,2,3-Trichloropropane	**<0.073**	ug/L	4.0	0.073	1		09/30/16 15:29	96-18-4	
1,2,4-Trimethylbenzene	**<0.083**	ug/L	0.50	0.083	1		09/30/16 15:29	95-63-6	
1,3,5-Trimethylbenzene	**<0.078**	ug/L	0.50	0.078	1		09/30/16 15:29	108-67-8	
Vinyl chloride	**<0.098**	ug/L	0.20	0.098	1		09/30/16 15:29	75-01-4	
Xylene (Total)	**<0.073**	ug/L	1.5	0.073	1		09/30/16 15:29	1330-20-7	
m&p-Xylene	**<0.073**	ug/L	1.0	0.073	1		09/30/16 15:29	179601-23-1	
o-Xylene	**<0.073**	ug/L	0.50	0.073	1		09/30/16 15:29	95-47-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

Sample: 10561 **Lab ID: 40138889003** Collected: 09/21/16 09:15 Received: 09/23/16 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
Surrogates									
4-Bromofluorobenzene (S)	92	%.	75-125		1		09/30/16 15:29	460-00-4	
Toluene-d8 (S)	95	%.	75-125		1		09/30/16 15:29	2037-26-5	
1,2-Dichloroethane-d4 (S)	114	%.	75-125		1		09/30/16 15:29	17060-07-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

QC Batch: 236132
QC Batch Method: WI MOD GRO
Analysis Method: WI MOD GRO
Analysis Description: WIGRO GCV Water
Associated Lab Samples: 40138889001

METHOD BLANK: 1400352
Matrix: Water
Associated Lab Samples: 40138889001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.42	1.0	09/26/16 11:11	
1,3,5-Trimethylbenzene	ug/L	<0.42	1.0	09/26/16 11:11	
Benzene	ug/L	<0.40	1.0	09/26/16 11:11	
Ethylbenzene	ug/L	<0.39	1.0	09/26/16 11:11	
m&p-Xylene	ug/L	<0.80	2.0	09/26/16 11:11	
Methyl-tert-butyl ether	ug/L	<0.48	1.0	09/26/16 11:11	
Naphthalene	ug/L	<0.42	1.0	09/26/16 11:11	
o-Xylene	ug/L	<0.45	1.0	09/26/16 11:11	
Toluene	ug/L	<0.39	1.0	09/26/16 11:11	
a,a,a-Trifluorotoluene (S)	%	103	80-120	09/26/16 11:11	

LABORATORY CONTROL SAMPLE & LCSD: 1400353 1400354

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	19.6	19.6	98	98	80-120	0	20	
1,3,5-Trimethylbenzene	ug/L	20	18.6	18.5	93	93	80-120	0	20	
Benzene	ug/L	20	19.3	19.2	97	96	80-120	0	20	
Ethylbenzene	ug/L	20	18.6	18.6	93	93	80-120	0	20	
m&p-Xylene	ug/L	40	36.7	36.6	92	91	80-120	0	20	
Methyl-tert-butyl ether	ug/L	20	19.8	19.7	99	99	80-120	0	20	
Naphthalene	ug/L	20	20.2	20.5	101	103	80-120	2	20	
o-Xylene	ug/L	20	19.1	18.9	95	94	80-120	1	20	
Toluene	ug/L	20	19.0	19.0	95	95	80-120	0	20	
a,a,a-Trifluorotoluene (S)	%				102	101	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1400457 1400458

Parameter	Units	40138855003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trimethylbenzene	ug/L	636	200	200	861	881	113	123	48-177	2	20	
1,3,5-Trimethylbenzene	ug/L	110	200	200	322	324	106	107	73-145	1	20	
Benzene	ug/L	57.5	200	200	217	218	80	80	74-139	0	20	
Ethylbenzene	ug/L	509	200	200	718	731	105	111	74-140	2	20	
m&p-Xylene	ug/L	1410	400	400	1830	1870	106	115	55-165	2	20	
Methyl-tert-butyl ether	ug/L	6.3J	200	200	173	172	83	83	80-120	1	20	
Naphthalene	ug/L	228	200	200	456	465	114	119	73-133	2	20	
o-Xylene	ug/L	514	200	200	729	741	108	114	73-136	2	20	
Toluene	ug/L	446	200	200	640	652	97	103	80-128	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1400457 1400458

Parameter	Units	40138855003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
a,a,a-Trifluorotoluene (S)	%						99	104	80-120			pH

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

QC Batch: 236420 Analysis Method: EPA 6010
QC Batch Method: EPA 6010 Analysis Description: ICP Metals, Trace, Dissolved
Associated Lab Samples: 40138889001, 40138889002, 40138889003

METHOD BLANK: 1401500 Matrix: Water
Associated Lab Samples: 40138889001, 40138889002, 40138889003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead, Dissolved	ug/L	<3.0	12.0	09/28/16 20:48	

LABORATORY CONTROL SAMPLE: 1401501

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead, Dissolved	ug/L	500	474	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1401502 1401503

Parameter	Units	40138869010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead, Dissolved	ug/L	3.9J	500	500	482	477	96	95	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

QC Batch: 438462 Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2 Analysis Description: 524.2 MSV
Associated Lab Samples: 40138889002, 40138889003

METHOD BLANK: 2381572 Matrix: Water
Associated Lab Samples: 40138889002, 40138889003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.062	0.50	09/30/16 12:11	
1,1,1-Trichloroethane	ug/L	<0.10	0.50	09/30/16 12:11	
1,1,2,2-Tetrachloroethane	ug/L	<0.11	0.50	09/30/16 12:11	
1,1,2-Trichloroethane	ug/L	<0.098	0.50	09/30/16 12:11	
1,1-Dichloroethane	ug/L	<0.088	0.50	09/30/16 12:11	
1,1-Dichloroethene	ug/L	<0.089	0.50	09/30/16 12:11	
1,1-Dichloropropene	ug/L	<0.080	0.50	09/30/16 12:11	
1,2,3-Trichlorobenzene	ug/L	<0.10	0.50	09/30/16 12:11	
1,2,3-Trichloropropane	ug/L	<0.073	4.0	09/30/16 12:11	
1,2,4-Trichlorobenzene	ug/L	<0.12	0.50	09/30/16 12:11	
1,2,4-Trimethylbenzene	ug/L	<0.083	0.50	09/30/16 12:11	
1,2-Dibromo-3-chloropropane	ug/L	<0.18	4.0	09/30/16 12:11	
1,2-Dibromoethane (EDB)	ug/L	<0.091	0.50	09/30/16 12:11	
1,2-Dichlorobenzene	ug/L	<0.10	0.50	09/30/16 12:11	
1,2-Dichloroethane	ug/L	<0.092	0.50	09/30/16 12:11	
1,2-Dichloropropane	ug/L	<0.084	4.0	09/30/16 12:11	
1,3,5-Trimethylbenzene	ug/L	<0.078	0.50	09/30/16 12:11	
1,3-Dichlorobenzene	ug/L	<0.082	0.50	09/30/16 12:11	
1,3-Dichloropropane	ug/L	<0.094	0.50	09/30/16 12:11	
1,4-Dichlorobenzene	ug/L	<0.075	0.50	09/30/16 12:11	
2,2-Dichloropropane	ug/L	<0.097	1.0	09/30/16 12:11	
2-Butanone (MEK)	ug/L	<0.19	5.0	09/30/16 12:11	
2-Chlorotoluene	ug/L	<0.11	0.50	09/30/16 12:11	
2-Hexanone	ug/L	<0.19	5.0	09/30/16 12:11	
2-Nitropropane	ug/L	<0.42	10.0	09/30/16 12:11	
4-Chlorotoluene	ug/L	<0.10	0.50	09/30/16 12:11	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.34	5.0	09/30/16 12:11	
Acetone	ug/L	<1.9	20.0	09/30/16 12:11	
Acrylonitrile	ug/L	<0.28	10.0	09/30/16 12:11	
Benzene	ug/L	<0.086	0.50	09/30/16 12:11	
Bromobenzene	ug/L	<0.081	0.50	09/30/16 12:11	
Bromochloromethane	ug/L	<0.16	1.0	09/30/16 12:11	
Bromodichloromethane	ug/L	<0.090	1.0	09/30/16 12:11	
Bromoform	ug/L	<0.23	4.0	09/30/16 12:11	
Bromomethane	ug/L	<0.20	4.0	09/30/16 12:11	
Carbon disulfide	ug/L	<0.042	1.0	09/30/16 12:11	
Carbon tetrachloride	ug/L	<0.076	1.0	09/30/16 12:11	
Chlorobenzene	ug/L	<0.068	0.50	09/30/16 12:11	
Chloroethane	ug/L	<0.18	1.0	09/30/16 12:11	
Chloroform	ug/L	<0.10	1.0	09/30/16 12:11	
Chloromethane	ug/L	<0.21	4.0	09/30/16 12:11	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

METHOD BLANK: 2381572 Matrix: Water
Associated Lab Samples: 40138889002, 40138889003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	<0.085	1.0	09/30/16 12:11	
cis-1,3-Dichloropropene	ug/L	<0.071	0.50	09/30/16 12:11	
Dibromochloromethane	ug/L	<0.13	0.50	09/30/16 12:11	
Dibromomethane	ug/L	<0.098	1.0	09/30/16 12:11	
Dichlorodifluoromethane	ug/L	<0.16	1.0	09/30/16 12:11	
Ethyl methacrylate	ug/L	<0.071	5.0	09/30/16 12:11	
Ethylbenzene	ug/L	<0.051	0.50	09/30/16 12:11	
Hexachloro-1,3-butadiene	ug/L	<0.11	4.0	09/30/16 12:11	
Isopropylbenzene (Cumene)	ug/L	<0.11	0.50	09/30/16 12:11	
m&p-Xylene	ug/L	<0.073	1.0	09/30/16 12:11	
Methyl methacrylate	ug/L	<0.12	5.0	09/30/16 12:11	
Methyl-tert-butyl ether	ug/L	<0.058	0.50	09/30/16 12:11	
Methylene Chloride	ug/L	<0.20	4.0	09/30/16 12:11	
n-Butylbenzene	ug/L	<0.081	0.50	09/30/16 12:11	
n-Propylbenzene	ug/L	<0.096	0.50	09/30/16 12:11	
Naphthalene	ug/L	<0.064	4.0	09/30/16 12:11	
o-Xylene	ug/L	<0.073	0.50	09/30/16 12:11	
p-Isopropyltoluene	ug/L	<0.083	0.50	09/30/16 12:11	
sec-Butylbenzene	ug/L	<0.063	0.50	09/30/16 12:11	
Styrene	ug/L	<0.075	0.50	09/30/16 12:11	
tert-Butylbenzene	ug/L	<0.097	0.50	09/30/16 12:11	
Tetrachloroethene	ug/L	<0.12	0.50	09/30/16 12:11	
Toluene	ug/L	<0.080	0.50	09/30/16 12:11	
Total Trihalomethanes (Calc.)	ug/L	<2.0	4.0	09/30/16 12:11	
trans-1,2-Dichloroethene	ug/L	<0.11	0.50	09/30/16 12:11	
trans-1,3-Dichloropropene	ug/L	<0.055	0.50	09/30/16 12:11	
trans-1,4-Dichloro-2-butene	ug/L	<0.15	10.0	09/30/16 12:11	
Trichloroethene	ug/L	<0.044	0.40	09/30/16 12:11	
Trichlorofluoromethane	ug/L	<0.13	0.50	09/30/16 12:11	
Vinyl chloride	ug/L	<0.098	0.20	09/30/16 12:11	
Xylene (Total)	ug/L	<0.073	1.5	09/30/16 12:11	
1,2-Dichloroethane-d4 (S)	%.	110	75-125	09/30/16 12:11	
4-Bromofluorobenzene (S)	%.	93	75-125	09/30/16 12:11	
Toluene-d8 (S)	%.	99	75-125	09/30/16 12:11	

LABORATORY CONTROL SAMPLE & LCSD: 2381573 2381574

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	22.6	21.0	113	105	70-130	7	20	
1,1,1-Trichloroethane	ug/L	20	21.6	19.4	108	97	70-130	11	20	
1,1,2,2-Tetrachloroethane	ug/L	20	17.7	18.1	88	90	70-130	2	20	
1,1,2-Trichloroethane	ug/L	20	20.3	19.6	102	98	70-130	4	20	
1,1-Dichloroethane	ug/L	20	19.9	18.3	99	91	70-130	8	20	
1,1-Dichloroethene	ug/L	20	19.9	18.4	99	92	70-130	8	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

LABORATORY CONTROL SAMPLE & LCSD: 2381573 2381574

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1-Dichloropropene	ug/L	20	21.0	19.5	105	98	70-130	7	20	
1,2,3-Trichlorobenzene	ug/L	20	18.2	17.5	91	87	70-130	4	20	
1,2,3-Trichloropropane	ug/L	20	19.1	18.8	95	94	70-130	1	20	
1,2,4-Trichlorobenzene	ug/L	20	17.4	16.7	87	84	70-130	4	20	
1,2,4-Trimethylbenzene	ug/L	20	19.7	18.3	98	92	70-130	7	20	
1,2-Dibromo-3-chloropropane	ug/L	50	40.0	38.7	80	77	70-130	3	20	
1,2-Dibromoethane (EDB)	ug/L	20	19.2	18.5	96	93	70-130	3	20	
1,2-Dichlorobenzene	ug/L	20	19.9	19.1	99	96	70-130	4	20	
1,2-Dichloroethane	ug/L	20	21.5	20.9	107	104	70-130	3	20	
1,2-Dichloropropane	ug/L	20	20.2	18.8	101	94	70-130	7	20	
1,3,5-Trimethylbenzene	ug/L	20	19.9	18.5	99	92	70-130	7	20	
1,3-Dichlorobenzene	ug/L	20	20.0	18.8	100	94	70-130	6	20	
1,3-Dichloropropane	ug/L	20	19.3	18.9	97	94	70-130	2	20	
1,4-Dichlorobenzene	ug/L	20	19.5	18.9	97	94	70-130	3	20	
2,2-Dichloropropane	ug/L	20	20.7	19.0	103	95	70-130	9	20	
2-Butanone (MEK)	ug/L	100	85.4	86.0	85	86	70-130	1	20	
2-Chlorotoluene	ug/L	20	18.8	17.4	94	87	70-130	8	20	
2-Hexanone	ug/L	100	86.7	85.0	87	85	70-130	2	20	
2-Nitropropane	ug/L	100	86.9	84.2	87	84	70-130	3	20	
4-Chlorotoluene	ug/L	20	19.3	18.3	97	91	70-130	5	20	
4-Methyl-2-pentanone (MIBK)	ug/L	100	88.1	85.9	88	86	70-130	2	20	
Acetone	ug/L	100	118	112	118	112	70-130	5	20	
Acrylonitrile	ug/L	200	180	178	90	89	70-130	1	20	
Benzene	ug/L	20	19.3	17.7	96	89	70-130	8	20	
Bromobenzene	ug/L	20	18.4	17.6	92	88	70-130	5	20	
Bromochloromethane	ug/L	20	20.1	19.0	101	95	70-130	6	20	
Bromodichloromethane	ug/L	20	22.2	20.6	111	103	70-130	8	20	
Bromoform	ug/L	20	19.9	18.9	100	95	70-130	5	20	
Bromomethane	ug/L	20	18.8	19.0	94	95	70-130	1	20	
Carbon disulfide	ug/L	20	19.6	18.1	98	90	70-130	8	20	
Carbon tetrachloride	ug/L	20	23.0	21.1	115	105	70-130	9	20	
Chlorobenzene	ug/L	20	19.7	18.5	99	92	70-130	6	20	
Chloroethane	ug/L	20	22.5	20.9	112	104	70-130	7	20	
Chloroform	ug/L	20	19.9	18.0	99	90	70-130	10	20	
Chloromethane	ug/L	20	19.9	18.3	100	91	70-130	9	20	
cis-1,2-Dichloroethene	ug/L	20	18.1	16.3	90	81	70-130	10	20	
cis-1,3-Dichloropropene	ug/L	20	22.2	20.7	111	104	70-130	7	20	
Dibromochloromethane	ug/L	20	20.8	19.6	104	98	70-130	6	20	
Dibromomethane	ug/L	20	22.3	20.5	111	103	70-130	8	20	
Dichlorodifluoromethane	ug/L	20	21.3	19.2	106	96	70-130	10	20	
Ethyl methacrylate	ug/L	20	19.3	18.7	96	93	70-130	3	20	
Ethylbenzene	ug/L	20	19.7	18.2	98	91	70-130	8	20	
Hexachloro-1,3-butadiene	ug/L	20	18.8	16.9	94	84	70-130	11	20	
Isopropylbenzene (Cumene)	ug/L	20	19.8	18.1	99	91	70-130	9	20	
m&p-Xylene	ug/L	40	41.0	37.7	103	94	70-130	8	20	
Methyl methacrylate	ug/L	20	18.3	18.0	92	90	70-130	2	20	
Methyl-tert-butyl ether	ug/L	20	17.6	17.4	88	87	70-130	1	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

LABORATORY CONTROL SAMPLE & LCSD: 2381573 2381574

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methylene Chloride	ug/L	20	20.7	19.6	104	98	70-130	5	20	
n-Butylbenzene	ug/L	20	18.2	16.7	91	84	70-130	9	20	
n-Propylbenzene	ug/L	20	18.1	16.7	90	83	70-130	8	20	
Naphthalene	ug/L	20	15.8	15.7	79	78	70-130	1	20	
o-Xylene	ug/L	20	20.5	18.8	103	94	70-130	9	20	
p-Isopropyltoluene	ug/L	20	19.3	17.9	96	90	70-130	7	20	
sec-Butylbenzene	ug/L	20	19.1	17.6	96	88	70-130	8	20	
Styrene	ug/L	20	21.9	20.4	110	102	70-130	7	20	
tert-Butylbenzene	ug/L	20	18.6	17.1	93	85	70-130	8	20	
Tetrachloroethene	ug/L	20	19.5	17.5	98	88	70-130	11	20	
Toluene	ug/L	20	19.4	18.1	97	90	70-130	7	20	
Total Trihalomethanes (Calc.)	ug/L	80	82.8	77.1	104	96	70-130	7	20	
trans-1,2-Dichloroethene	ug/L	20	20.1	18.4	101	92	70-130	9	20	
trans-1,3-Dichloropropene	ug/L	20	21.4	19.9	107	99	70-130	8	20	
trans-1,4-Dichloro-2-butene	ug/L	50	61.4	61.8	123	124	70-130	1	20	CH
Trichloroethene	ug/L	20	21.0	18.2	105	91	70-130	14	20	
Trichlorofluoromethane	ug/L	20	22.2	20.2	111	101	70-130	9	20	
Vinyl chloride	ug/L	20	19.4	17.6	97	88	70-130	9	20	
Xylene (Total)	ug/L	60	61.6	56.6	103	94	70-130	8	20	
1,2-Dichloroethane-d4 (S)	%.				102	102	75-125			
4-Bromofluorobenzene (S)	%.				90	93	75-125			
Toluene-d8 (S)	%.				93	95	75-125			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2381575 2381576

Parameter	Units	40138880010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.062	20	20	22.0	21.8	110	109	70-130	1	20	
1,1,1-Trichloroethane	ug/L	<0.10	20	20	23.4	22.2	117	111	70-130	5	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.11	20	20	18.4	18.2	92	91	70-130	1	20	
1,1,2-Trichloroethane	ug/L	<0.098	20	20	20.3	20.0	102	100	70-130	2	20	
1,1-Dichloroethane	ug/L	0.36J	20	20	21.7	20.7	107	102	70-130	5	20	
1,1-Dichloroethene	ug/L	<0.089	20	20	23.4	22.1	117	111	70-130	6	20	
1,1-Dichloropropene	ug/L	<0.080	20	20	24.4	22.6	122	113	70-130	8	20	
1,2,3-Trichlorobenzene	ug/L	<0.10	20	20	19.3	19.0	96	95	70-130	1	20	
1,2,3-Trichloropropane	ug/L	<0.073	20	20	19.4	18.9	97	94	70-130	3	20	
1,2,4-Trichlorobenzene	ug/L	<0.12	20	20	18.3	18.1	91	91	70-130	1	20	
1,2,4-Trimethylbenzene	ug/L	<0.083	20	20	19.7	19.7	99	99	70-130	0	20	
1,2-Dibromo-3-chloropropane	ug/L	<0.18	50	50	43.6	41.0	87	82	70-130	6	20	
1,2-Dibromoethane (EDB)	ug/L	<0.091	20	20	19.6	19.2	98	96	70-130	2	20	
1,2-Dichlorobenzene	ug/L	<0.10	20	20	20.1	19.7	101	99	70-130	2	20	
1,2-Dichloroethane	ug/L	<0.092	20	20	22.4	21.3	112	107	70-130	5	20	
1,2-Dichloropropane	ug/L	<0.084	20	20	20.2	19.4	101	97	70-130	4	20	
1,3,5-Trimethylbenzene	ug/L	<0.078	20	20	20.2	19.9	101	99	70-130	2	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2381575 2381576

Parameter	Units	40138880010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,3-Dichlorobenzene	ug/L	<0.082	20	20	20.1	20.0	100	100	70-130	1	20	
1,3-Dichloropropane	ug/L	<0.094	20	20	19.6	19.1	98	96	70-130	3	20	
1,4-Dichlorobenzene	ug/L	<0.075	20	20	19.3	19.4	96	97	70-130	1	20	
2,2-Dichloropropane	ug/L	<0.097	20	20	22.7	22.1	114	110	70-130	3	20	
2-Butanone (MEK)	ug/L	<0.19	100	100	91.9	83.6	92	84	70-130	10	20	
2-Chlorotoluene	ug/L	<0.11	20	20	18.6	18.6	93	93	70-130	0	20	
2-Hexanone	ug/L	<0.19	100	100	92.1	88.2	92	88	70-130	4	20	
2-Nitropropane	ug/L	<0.42	100	100	86.6	86.6	87	87	70-130	0	20	
4-Chlorotoluene	ug/L	<0.10	20	20	19.8	19.5	99	97	70-130	2	20	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.34	100	100	90.6	87.8	91	88	70-130	3	20	
Acetone	ug/L	<1.9	100	100	106	107	106	107	70-130	1	20	
Acrylonitrile	ug/L	<0.28	200	200	187	174	93	87	70-130	7	20	
Benzene	ug/L	0.29J	20	20	20.4	19.5	101	96	70-130	5	20	
Bromobenzene	ug/L	<0.081	20	20	19.0	18.8	95	94	70-130	1	20	
Bromochloromethane	ug/L	<0.16	20	20	20.3	18.6	101	93	70-130	8	20	
Bromodichloromethane	ug/L	<0.090	20	20	21.7	21.3	108	106	70-130	2	20	
Bromoform	ug/L	<0.23	20	20	19.7	19.6	98	98	70-130	1	20	
Bromomethane	ug/L	<0.20	20	20	22.6	23.7	113	119	70-130	5	20	
Carbon disulfide	ug/L	<0.042	20	20	22.4	21.6	112	108	70-130	4	20	
Carbon tetrachloride	ug/L	<0.076	20	20	26.0	24.4	130	122	70-130	7	20	
Chlorobenzene	ug/L	<0.068	20	20	19.6	19.4	98	97	70-130	1	20	
Chloroethane	ug/L	<0.18	20	20	24.6	24.4	123	122	70-130	1	20	
Chloroform	ug/L	<0.10	20	20	20.3	19.5	102	98	70-130	4	20	
Chloromethane	ug/L	<0.21	20	20	21.2	21.0	106	105	70-130	1	20	
cis-1,2-Dichloroethene	ug/L	6.7	20	20	24.6	24.1	89	87	70-130	2	20	
cis-1,3-Dichloropropene	ug/L	<0.071	20	20	21.1	20.6	105	103	70-130	2	20	
Dibromochloromethane	ug/L	<0.13	20	20	20.2	20.3	101	101	70-130	1	20	
Dibromomethane	ug/L	<0.098	20	20	21.7	20.8	108	104	70-130	4	20	
Dichlorodifluoromethane	ug/L	<0.16	20	20	30.2	28.5	151	143	70-130	6	20	M1
Ethyl methacrylate	ug/L	<0.071	20	20	19.8	18.4	99	92	70-130	7	20	
Ethylbenzene	ug/L	<0.051	20	20	20.0	20.3	100	101	70-130	1	20	
Hexachloro-1,3-butadiene	ug/L	<0.11	20	20	22.0	20.6	110	103	70-130	6	20	
Isopropylbenzene (Cumene)	ug/L	<0.11	20	20	20.1	20.3	101	101	70-130	1	20	
m&p-Xylene	ug/L	<0.073	40	40	40.9	40.4	102	101	70-130	1	20	
Methyl methacrylate	ug/L	<0.12	20	20	19.0	18.9	95	94	70-130	1	20	
Methyl-tert-butyl ether	ug/L	<0.058	20	20	18.4	17.2	92	86	70-130	7	20	
Methylene Chloride	ug/L	<0.20	20	20	21.8	20.7	109	104	70-130	5	20	
n-Butylbenzene	ug/L	<0.081	20	20	19.6	19.3	98	97	70-130	1	20	
n-Propylbenzene	ug/L	<0.096	20	20	18.5	18.4	92	92	70-130	1	20	
Naphthalene	ug/L	<0.064	20	20	16.4	16.4	82	82	70-130	0	20	
o-Xylene	ug/L	<0.073	20	20	20.5	19.8	103	99	70-130	4	20	
p-Isopropyltoluene	ug/L	<0.083	20	20	19.8	20.2	99	101	70-130	2	20	
sec-Butylbenzene	ug/L	<0.063	20	20	20.0	20.1	100	100	70-130	0	20	
Styrene	ug/L	<0.075	20	20	22.0	21.5	110	107	70-130	2	20	
tert-Butylbenzene	ug/L	<0.097	20	20	19.1	18.9	95	94	70-130	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2381575 2381576

Parameter	Units	40138880010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Tetrachloroethene	ug/L	<0.12	20	20	20.5	20.0	103	100	70-130	3	20	
Toluene	ug/L	<0.080	20	20	20.2	19.8	101	99	70-130	2	20	
Total Trihalomethanes (Calc.)	ug/L	<2.0	80	80	81.9	80.7	102	101	70-130	1	20	
trans-1,2-Dichloroethene	ug/L	1.5	20	20	23.5	22.4	110	104	70-130	5	20	
trans-1,3-Dichloropropene	ug/L	<0.055	20	20	21.3	20.9	106	104	70-130	2	20	
trans-1,4-Dichloro-2-butene	ug/L	<0.15	50	50	64.7	62.8	129	126	70-130	3	20	CH
Trichloroethene	ug/L	<0.044	20	20	21.6	20.4	108	102	70-130	6	20	
Trichlorofluoromethane	ug/L	<0.13	20	20	28.6	27.7	143	139	70-130	3	20	M1
Vinyl chloride	ug/L	20.9	20	20	42.0	42.1	105	106	70-130	0	20	
Xylene (Total)	ug/L	<0.073	60	60	61.4	60.2	102	100	70-130	2	20	
1,2-Dichloroethane-d4 (S)	%.						104	101	75-125			
4-Bromofluorobenzene (S)	%.						92	92	75-125			
Toluene-d8 (S)	%.						94	94	75-125			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay
PASI-M	Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
pH	Post-analysis pH measurement indicates insufficient VOA sample preservation.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 7367 HEDLAND DX
Pace Project No.: 40138889

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40138889001	**MW7**	WI MOD GRO	236132		
40138889001	**MW7**	EPA 6010	236420		
40138889002	**10531**	EPA 6010	236420		
40138889003	**10561**	EPA 6010	236420		
40138889002	**10531**	EPA 524.2	438462		
40138889003	**10561**	EPA 524.2	438462		

40138889

Pace Analytical®
www.pacelabs.com

B8

CHAIN OF CUSTODY

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

(Please Print Clearly)

Company Name:	REI
Branch/Location:	
Project Contact:	David Larsen
Phone:	715-675-9784
Project Number:	7367
Project Name:	Hedlund DX
Project State:	WI
Sampled By (Print):	David Larsen
Sampled By (Sign):	[signature]
PO #:	
Regulatory Program:	RCRA

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

*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

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, Sl = Sludge
W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

					Analyses Requested					
				FILTERED? (YES/NO)	Y/N	N	Y	N		
				PRESERVATION (CODE)*	Pick Letter	B	D	J		
PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX		NO3/N	Dissolved Lead	DW VOC	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)
001	MW7	9-21-16	9:14	GW		X	X			3-40ml vB 1-250ml pD
002	10531	↓	8:45	DW			X	X		3-40ml vJ ↓
003	10561	↓	9:15	DW			X	X		↓ ↓

Profile #

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:
[signature]	9-22-16 9:15 Am		
WalCo	9-23-16 0900	Susan Wylie Pace	9-23-16 0900

PACE Project No. 40138889

Receipt Temp = ROI °C

Sample Receipt pH
OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Client Name: RET

Project #: **WO# : 40138889**

40138889

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: Walker

Tracking #: 168965

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

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

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

Thermometer Used N/A **Type of Ice:** (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROT Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☒ no

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

Person examining contents:
Date: 9-23-16
Initials: SW

		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.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
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. all 250 mlp received ½ empty. 9-23-16 SW
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR 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: W		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☑Yes ☐No ☐N/A	13. ☑ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 <2; NaOH+ZnAct ≥9, NaOH ≥12)	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☑Yes ☐No	Initial when completed: KW / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	14.
Trip Blank Present:	☐Yes ☑No ☐N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:
Person Contacted: _____ Date/Time: _____
If checked, see attached form for additional comments ☐
Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 9-23-16

F-GB-C-031-Rev.03 (9April2015) SCUR Form

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

January 20, 2017

DAVID LARSEN
REI
4080 NORTH 20TH AVENUE
Wausau, WI 54401

RE: Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Dear DAVID LARSEN:
Enclosed are the analytical results for sample(s) received by the laboratory on January 14, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Brian Basten
brian.basten@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
Alaska Certification UST-107
525 N 8th Street, Salina, KS 67401
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40144491001	**MW9 @ 2-4' BLS**	Solid	01/12/17 16:10	01/14/17 08:10
40144491002	**MW10 @ 3-4' BLS**	Solid	01/12/17 11:13	01/14/17 08:10
40144491003	**MW10 @ 13-14' BLS**	Solid	01/12/17 11:30	01/14/17 08:10
40144491004	**MW11 @ 2-4' BLS**	Solid	01/12/17 13:00	01/14/17 08:10
40144491005	**MW11 @ 15-16' BLS**	Solid	01/12/17 13:35	01/14/17 08:10
40144491006	**MW1**	Water	01/11/17 15:15	01/14/17 08:10
40144491007	**MW3**	Water	01/11/17 14:45	01/14/17 08:10
40144491008	**MW4**	Water	01/11/17 15:00	01/14/17 08:10
40144491009	**MW5**	Water	01/11/17 14:30	01/14/17 08:10
40144491010	**MW6**	Water	01/11/17 16:45	01/14/17 08:10
40144491011	**MW7**	Water	01/11/17 17:30	01/14/17 08:10
40144491012	**MW8**	Water	01/12/17 09:00	01/14/17 08:10
40144491013	**MW9**	Water	01/12/17 09:50	01/14/17 08:10
40144491014	**MW10**	Water	01/12/17 12:40	01/14/17 08:10
40144491015	**MW11**	Water	01/12/17 17:15	01/14/17 08:10
40144491016	**BAITSHOP POTABLE**	Water	01/12/17 13:42	01/14/17 08:10

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SAMPLE ANALYTE COUNT

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40144491001	**MW9 @ 2-4' BLS**	WI MOD GRO	ALD	10	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	BTH	1	PASI-G
40144491002	**MW10 @ 3-4' BLS**	WI MOD GRO	ALD	10	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	BTH	1	PASI-G
40144491003	**MW10 @ 13-14' BLS**	WI MOD GRO	ALD	10	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	BTH	1	PASI-G
40144491004	**MW11 @ 2-4' BLS**	WI MOD GRO	ALD	10	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	BTH	1	PASI-G
40144491005	**MW11 @ 15-16' BLS**	WI MOD GRO	ALD	10	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	BTH	1	PASI-G
40144491006	**MW1**	WI MOD GRO	ALD	10	PASI-G
40144491007	**MW3**	WI MOD GRO	ALD	10	PASI-G
40144491008	**MW4**	WI MOD GRO	ALD	10	PASI-G
40144491009	**MW5**	WI MOD GRO	ALD	10	PASI-G
40144491010	**MW6**	WI MOD GRO	ALD	10	PASI-G
40144491011	**MW7**	WI MOD GRO	ALD	10	PASI-G
40144491012	**MW8**	EPA 6010	DLB	2	PASI-G
		EPA 8260	HNW	64	PASI-G
40144491013	**MW9**	EPA 6010	DLB	2	PASI-G
		EPA 8260	HNW	64	PASI-G
40144491014	**MW10**	EPA 6010	DLB	2	PASI-G
		EPA 8260	HNW	64	PASI-G
40144491015	**MW11**	EPA 6010	DLB	2	PASI-G
		EPA 8260	HNW	64	PASI-G
40144491016	**BAITSHOP POTABLE**	EPA 524.2	PRD	63	PASI-M

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ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Sample: MW9 @ 2-4' BLS **Lab ID: 40144491001** Collected: 01/12/17 16:10 Received: 01/14/17 08:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 13:22	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 13:22	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 13:22	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 13:22	91-20-3	W
Toluene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 13:22	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 13:22	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 13:22	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	100	50.0	1	01/17/17 07:00	01/17/17 13:22	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 13:22	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	103	%	80-120		1	01/17/17 07:00	01/17/17 13:22	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**10.2**	mg/kg	1.7	0.57	1	01/17/17 11:30	01/19/17 09:54	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**25.0**	%	0.10	0.10	1		01/14/17 10:46		

Sample: MW10 @ 3-4' BLS **Lab ID: 40144491002** Collected: 01/12/17 11:13 Received: 01/14/17 08:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<33.3**	ug/kg	66.7	33.3	1	01/17/17 07:00	01/17/17 13:48	71-43-2	W
Ethylbenzene	**<33.3**	ug/kg	66.7	33.3	1	01/17/17 07:00	01/17/17 13:48	100-41-4	W
Methyl-tert-butyl ether	**<33.3**	ug/kg	66.7	33.3	1	01/17/17 07:00	01/17/17 13:48	1634-04-4	W
Naphthalene	**<33.3**	ug/kg	66.7	33.3	1	01/17/17 07:00	01/17/17 13:48	91-20-3	W
Toluene	**<33.3**	ug/kg	66.7	33.3	1	01/17/17 07:00	01/17/17 13:48	108-88-3	W
1,2,4-Trimethylbenzene	**<33.3**	ug/kg	66.7	33.3	1	01/17/17 07:00	01/17/17 13:48	95-63-6	W
1,3,5-Trimethylbenzene	**<33.3**	ug/kg	66.7	33.3	1	01/17/17 07:00	01/17/17 13:48	108-67-8	W
m&p-Xylene	**<66.7**	ug/kg	133	66.7	1	01/17/17 07:00	01/17/17 13:48	179601-23-1	W
o-Xylene	**<33.3**	ug/kg	66.7	33.3	1	01/17/17 07:00	01/17/17 13:48	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	103	%	80-120		1	01/17/17 07:00	01/17/17 13:48	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**14.9**	mg/kg	1.6	0.53	1	01/17/17 11:30	01/19/17 09:56	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**23.5**	%	0.10	0.10	1		01/14/17 10:46		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Sample: MW10 @ 13-14' BLS **Lab ID: 40144491003** Collected: 01/12/17 11:30 Received: 01/14/17 08:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:05	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:05	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:05	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:05	91-20-3	W
Toluene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:05	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:05	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:05	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	100	50.0	1	01/17/17 07:00	01/17/17 15:05	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:05	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1	01/17/17 07:00	01/17/17 15:05	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**12.0**	mg/kg	1.9	0.62	1	01/17/17 11:30	01/19/17 09:59	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**32.4**	%	0.10	0.10	1		01/14/17 10:46		

Sample: MW11 @ 2-4' BLS **Lab ID: 40144491004** Collected: 01/12/17 13:00 Received: 01/14/17 08:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:31	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:31	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:31	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:31	91-20-3	W
Toluene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:31	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:31	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:31	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	100	50.0	1	01/17/17 07:00	01/17/17 15:31	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:31	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1	01/17/17 07:00	01/17/17 15:31	98-08-8	1q
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**2.7**	mg/kg	1.4	0.46	1	01/17/17 11:30	01/19/17 10:07	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**7.8**	%	0.10	0.10	1		01/14/17 10:46		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Sample: MW11 @ 15-16' BLS **Lab ID: 40144491005** Collected: 01/12/17 13:35 Received: 01/14/17 08:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:57	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:57	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:57	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:57	91-20-3	W
Toluene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:57	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:57	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:57	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	100	50.0	1	01/17/17 07:00	01/17/17 15:57	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	50.0	25.0	1	01/17/17 07:00	01/17/17 15:57	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1	01/17/17 07:00	01/17/17 15:57	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**14.4**	mg/kg	1.7	0.56	1	01/17/17 11:30	01/19/17 10:09	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**32.2**	%	0.10	0.10	1		01/14/17 10:46		

Sample: MW1 **Lab ID: 40144491006** Collected: 01/11/17 15:15 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.40**	ug/L	1.0	0.40	1		01/16/17 10:53	71-43-2	
Ethylbenzene	**<0.39**	ug/L	1.0	0.39	1		01/16/17 10:53	100-41-4	
Methyl-tert-butyl ether	**<0.48**	ug/L	1.0	0.48	1		01/16/17 10:53	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		01/16/17 10:53	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		01/16/17 10:53	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		01/16/17 10:53	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		01/16/17 10:53	108-67-8	
m&p-Xylene	**<0.80**	ug/L	2.0	0.80	1		01/16/17 10:53	179601-23-1	
o-Xylene	**<0.45**	ug/L	1.0	0.45	1		01/16/17 10:53	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	103	%	80-120		1		01/16/17 10:53	98-08-8	

Sample: MW3 **Lab ID: 40144491007** Collected: 01/11/17 14:45 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**44.6**	ug/L	1.0	0.40	1		01/16/17 14:45	71-43-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Sample: MW3 **Lab ID: 40144491007** Collected: 01/11/17 14:45 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Ethylbenzene	**12.3**	ug/L	1.0	0.39	1		01/16/17 14:45	100-41-4	
Methyl-tert-butyl ether	**1.0**	ug/L	1.0	0.48	1		01/16/17 14:45	1634-04-4	
Naphthalene	**5.0**	ug/L	1.0	0.42	1		01/16/17 14:45	91-20-3	
Toluene	**0.79J**	ug/L	1.0	0.39	1		01/16/17 14:45	108-88-3	
1,2,4-Trimethylbenzene	**6.4**	ug/L	1.0	0.42	1		01/16/17 14:45	95-63-6	
1,3,5-Trimethylbenzene	**5.6**	ug/L	1.0	0.42	1		01/16/17 14:45	108-67-8	
m&p-Xylene	**13.4**	ug/L	2.0	0.80	1		01/16/17 14:45	179601-23-1	
o-Xylene	**1.0**	ug/L	1.0	0.45	1		01/16/17 14:45	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	114	%	80-120		1		01/16/17 14:45	98-08-8	

Sample: MW4 **Lab ID: 40144491008** Collected: 01/11/17 15:00 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**659**	ug/L	10.0	4.0	10		01/16/17 15:37	71-43-2	
Ethylbenzene	**146**	ug/L	10.0	3.9	10		01/16/17 15:37	100-41-4	
Methyl-tert-butyl ether	**<4.8**	ug/L	10.0	4.8	10		01/16/17 15:37	1634-04-4	
Naphthalene	**13.9**	ug/L	10.0	4.2	10		01/16/17 15:37	91-20-3	
Toluene	**18.7**	ug/L	10.0	3.9	10		01/16/17 15:37	108-88-3	
1,2,4-Trimethylbenzene	**36.9**	ug/L	10.0	4.2	10		01/16/17 15:37	95-63-6	
1,3,5-Trimethylbenzene	**12.4**	ug/L	10.0	4.2	10		01/16/17 15:37	108-67-8	
m&p-Xylene	**160**	ug/L	20.0	8.0	10		01/16/17 15:37	179601-23-1	
o-Xylene	**5.2J**	ug/L	10.0	4.5	10		01/16/17 15:37	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	105	%	80-120		10		01/16/17 15:37	98-08-8	

Sample: MW5 **Lab ID: 40144491009** Collected: 01/11/17 14:30 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**77.9**	ug/L	1.0	0.40	1		01/17/17 09:03	71-43-2	
Ethylbenzene	**65.1**	ug/L	1.0	0.39	1		01/17/17 09:03	100-41-4	
Methyl-tert-butyl ether	**1.3**	ug/L	1.0	0.48	1		01/17/17 09:03	1634-04-4	
Naphthalene	**10.6**	ug/L	1.0	0.42	1		01/17/17 09:03	91-20-3	
Toluene	**11.7**	ug/L	1.0	0.39	1		01/17/17 09:03	108-88-3	
1,2,4-Trimethylbenzene	**26.6**	ug/L	1.0	0.42	1		01/17/17 09:03	95-63-6	
1,3,5-Trimethylbenzene	**7.2**	ug/L	1.0	0.42	1		01/17/17 09:03	108-67-8	
m&p-Xylene	**100**	ug/L	2.0	0.80	1		01/17/17 09:03	179601-23-1	
o-Xylene	**2.0**	ug/L	1.0	0.45	1		01/17/17 09:03	95-47-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Sample: MW5 **Lab ID: 40144491009** Collected: 01/11/17 14:30 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Surrogates									
a,a,a-Trifluorotoluene (S)	103	%	80-120		1		01/17/17 09:03	98-08-8	

Sample: MW6 **Lab ID: 40144491010** Collected: 01/11/17 16:45 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**23.1**	ug/L	1.0	0.40	1		01/16/17 09:57	71-43-2	
Ethylbenzene	**3.9**	ug/L	1.0	0.39	1		01/16/17 09:57	100-41-4	
Methyl-tert-butyl ether	**<0.48**	ug/L	1.0	0.48	1		01/16/17 09:57	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		01/16/17 09:57	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		01/16/17 09:57	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		01/16/17 09:57	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		01/16/17 09:57	108-67-8	
m&p-Xylene	**<0.80**	ug/L	2.0	0.80	1		01/16/17 09:57	179601-23-1	
o-Xylene	**<0.45**	ug/L	1.0	0.45	1		01/16/17 09:57	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-120		1		01/16/17 09:57	98-08-8	HS

Sample: MW7 **Lab ID: 40144491011** Collected: 01/11/17 17:30 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.40**	ug/L	1.0	0.40	1		01/16/17 11:19	71-43-2	
Ethylbenzene	**<0.39**	ug/L	1.0	0.39	1		01/16/17 11:19	100-41-4	
Methyl-tert-butyl ether	**<0.48**	ug/L	1.0	0.48	1		01/16/17 11:19	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		01/16/17 11:19	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		01/16/17 11:19	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		01/16/17 11:19	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		01/16/17 11:19	108-67-8	
m&p-Xylene	**<0.80**	ug/L	2.0	0.80	1		01/16/17 11:19	179601-23-1	
o-Xylene	**<0.45**	ug/L	1.0	0.45	1		01/16/17 11:19	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	103	%	80-120		1		01/16/17 11:19	98-08-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Sample: MW8 **Lab ID: 40144491012** Collected: 01/12/17 09:00 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**4670**	ug/L	100	15.5	1		01/19/17 12:08	7439-89-6	
Manganese, Dissolved	**1190**	ug/L	5.0	1.1	1		01/19/17 12:08	7439-96-5	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		01/16/17 13:27	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		01/16/17 13:27	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		01/16/17 13:27	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		01/16/17 13:27	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		01/16/17 13:27	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		01/16/17 13:27	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		01/16/17 13:27	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		01/16/17 13:27	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		01/16/17 13:27	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	124-48-1	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		01/16/17 13:27	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		01/16/17 13:27	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		01/16/17 13:27	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		01/16/17 13:27	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		01/16/17 13:27	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		01/16/17 13:27	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		01/16/17 13:27	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		01/16/17 13:27	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		01/16/17 13:27	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		01/16/17 13:27	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		01/16/17 13:27	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		01/16/17 13:27	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		01/16/17 13:27	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		01/16/17 13:27	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		01/16/17 13:27	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		01/16/17 13:27	1634-04-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Sample: MW8 **Lab ID: 40144491012** Collected: 01/12/17 09:00 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		01/16/17 13:27	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		01/16/17 13:27	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		01/16/17 13:27	79-34-5	
Tetrachloroethene	**0.75J**	ug/L	1.0	0.50	1		01/16/17 13:27	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		01/16/17 13:27	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		01/16/17 13:27	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	71-55-6	L3
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		01/16/17 13:27	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		01/16/17 13:27	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		01/16/17 13:27	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		01/16/17 13:27	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		01/16/17 13:27	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:27	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		01/16/17 13:27	460-00-4	
Dibromofluoromethane (S)	95	%	70-130		1		01/16/17 13:27	1868-53-7	
Toluene-d8 (S)	104	%	70-130		1		01/16/17 13:27	2037-26-5	

Sample: MW9 **Lab ID: 40144491013** Collected: 01/12/17 09:50 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**2370**	ug/L	100	15.5	1		01/19/17 12:10	7439-89-6	
Manganese, Dissolved	**394**	ug/L	5.0	1.1	1		01/19/17 12:10	7439-96-5	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		01/16/17 13:50	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		01/16/17 13:50	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		01/16/17 13:50	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		01/16/17 13:50	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		01/16/17 13:50	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	108-90-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Sample: MW9 **Lab ID: 40144491013** Collected: 01/12/17 09:50 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		01/16/17 13:50	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		01/16/17 13:50	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		01/16/17 13:50	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		01/16/17 13:50	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	124-48-1	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		01/16/17 13:50	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		01/16/17 13:50	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		01/16/17 13:50	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		01/16/17 13:50	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		01/16/17 13:50	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		01/16/17 13:50	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		01/16/17 13:50	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		01/16/17 13:50	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		01/16/17 13:50	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		01/16/17 13:50	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		01/16/17 13:50	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		01/16/17 13:50	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		01/16/17 13:50	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		01/16/17 13:50	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		01/16/17 13:50	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		01/16/17 13:50	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		01/16/17 13:50	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		01/16/17 13:50	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		01/16/17 13:50	79-34-5	
Tetrachloroethene	**1.2**	ug/L	1.0	0.50	1		01/16/17 13:50	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		01/16/17 13:50	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		01/16/17 13:50	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	71-55-6	L3
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		01/16/17 13:50	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		01/16/17 13:50	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		01/16/17 13:50	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	95-63-6	

REPORT OF LABORATORY ANALYSIS

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(920)469-2436

ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Sample: MW9 **Lab ID: 40144491013** Collected: 01/12/17 09:50 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		01/16/17 13:50	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		01/16/17 13:50	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 13:50	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		01/16/17 13:50	460-00-4	
Dibromofluoromethane (S)	95	%	70-130		1		01/16/17 13:50	1868-53-7	
Toluene-d8 (S)	104	%	70-130		1		01/16/17 13:50	2037-26-5	

Sample: MW10 **Lab ID: 40144491014** Collected: 01/12/17 12:40 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**1560**	ug/L	100	15.5	1		01/19/17 12:12	7439-89-6	
Manganese, Dissolved	**284**	ug/L	5.0	1.1	1		01/19/17 12:12	7439-96-5	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		01/16/17 14:12	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		01/16/17 14:12	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		01/16/17 14:12	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		01/16/17 14:12	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		01/16/17 14:12	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		01/16/17 14:12	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		01/16/17 14:12	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		01/16/17 14:12	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		01/16/17 14:12	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	124-48-1	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		01/16/17 14:12	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		01/16/17 14:12	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		01/16/17 14:12	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		01/16/17 14:12	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		01/16/17 14:12	107-06-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Sample: MW10 **Lab ID: 40144491014** Collected: 01/12/17 12:40 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		01/16/17 14:12	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		01/16/17 14:12	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		01/16/17 14:12	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		01/16/17 14:12	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		01/16/17 14:12	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		01/16/17 14:12	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		01/16/17 14:12	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		01/16/17 14:12	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		01/16/17 14:12	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		01/16/17 14:12	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		01/16/17 14:12	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		01/16/17 14:12	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		01/16/17 14:12	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		01/16/17 14:12	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		01/16/17 14:12	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		01/16/17 14:12	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	71-55-6	L3
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		01/16/17 14:12	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		01/16/17 14:12	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		01/16/17 14:12	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		01/16/17 14:12	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		01/16/17 14:12	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:12	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		01/16/17 14:12	460-00-4	
Dibromofluoromethane (S)	94	%	70-130		1		01/16/17 14:12	1868-53-7	
Toluene-d8 (S)	104	%	70-130		1		01/16/17 14:12	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Sample: MW11 **Lab ID: 40144491015** Collected: 01/12/17 17:15 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**468**	ug/L	100	15.5	1		01/19/17 12:14	7439-89-6	
Manganese, Dissolved	**292**	ug/L	5.0	1.1	1		01/19/17 12:14	7439-96-5	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		01/16/17 14:34	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		01/16/17 14:34	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		01/16/17 14:34	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		01/16/17 14:34	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		01/16/17 14:34	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		01/16/17 14:34	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		01/16/17 14:34	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		01/16/17 14:34	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		01/16/17 14:34	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	124-48-1	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		01/16/17 14:34	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		01/16/17 14:34	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		01/16/17 14:34	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		01/16/17 14:34	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		01/16/17 14:34	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		01/16/17 14:34	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		01/16/17 14:34	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		01/16/17 14:34	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		01/16/17 14:34	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		01/16/17 14:34	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		01/16/17 14:34	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		01/16/17 14:34	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		01/16/17 14:34	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		01/16/17 14:34	98-82-8	
p-Isopropyltoluene	**0.66J**	ug/L	1.0	0.50	1		01/16/17 14:34	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		01/16/17 14:34	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		01/16/17 14:34	1634-04-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Sample: MW11 **Lab ID: 40144491015** Collected: 01/12/17 17:15 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		01/16/17 14:34	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		01/16/17 14:34	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		01/16/17 14:34	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		01/16/17 14:34	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		01/16/17 14:34	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	71-55-6	L3
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		01/16/17 14:34	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		01/16/17 14:34	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		01/16/17 14:34	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		01/16/17 14:34	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		01/16/17 14:34	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		01/16/17 14:34	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		01/16/17 14:34	460-00-4	
Dibromofluoromethane (S)	94	%	70-130		1		01/16/17 14:34	1868-53-7	
Toluene-d8 (S)	105	%	70-130		1		01/16/17 14:34	2037-26-5	

Sample: BAITSHOP POTABLE **Lab ID: 40144491016** Collected: 01/12/17 13:42 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
Benzene	**<0.086**	ug/L	0.50	0.086	1		01/17/17 17:08	71-43-2	
Bromobenzene	**<0.081**	ug/L	0.50	0.081	1		01/17/17 17:08	108-86-1	
Bromochloromethane	**<0.16**	ug/L	1.0	0.16	1		01/17/17 17:08	74-97-5	
Bromodichloromethane	**<0.090**	ug/L	1.0	0.090	1		01/17/17 17:08	75-27-4	
Bromoform	**<0.23**	ug/L	4.0	0.23	1		01/17/17 17:08	75-25-2	
Bromomethane	**<0.20**	ug/L	4.0	0.20	1		01/17/17 17:08	74-83-9	
n-Butylbenzene	**<0.081**	ug/L	0.50	0.081	1		01/17/17 17:08	104-51-8	
sec-Butylbenzene	**<0.063**	ug/L	0.50	0.063	1		01/17/17 17:08	135-98-8	
tert-Butylbenzene	**<0.097**	ug/L	0.50	0.097	1		01/17/17 17:08	98-06-6	
Carbon tetrachloride	**<0.076**	ug/L	1.0	0.076	1		01/17/17 17:08	56-23-5	
Chlorobenzene	**<0.068**	ug/L	0.50	0.068	1		01/17/17 17:08	108-90-7	
Chloroethane	**<0.18**	ug/L	1.0	0.18	1		01/17/17 17:08	75-00-3	
Chloroform	**<0.10**	ug/L	1.0	0.10	1		01/17/17 17:08	67-66-3	
Chloromethane	**<0.21**	ug/L	4.0	0.21	1		01/17/17 17:08	74-87-3	
2-Chlorotoluene	**<0.11**	ug/L	0.50	0.11	1		01/17/17 17:08	95-49-8	

REPORT OF LABORATORY ANALYSIS

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(920)469-2436

ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Sample: BAITSHOP POTABLE **Lab ID: 40144491016** Collected: 01/12/17 13:42 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
4-Chlorotoluene	**<0.10**	ug/L	0.50	0.10	1		01/17/17 17:08	106-43-4	
1,2-Dibromo-3-chloropropane	**<0.18**	ug/L	4.0	0.18	1		01/17/17 17:08	96-12-8	
Dibromochloromethane	**<0.13**	ug/L	0.50	0.13	1		01/17/17 17:08	124-48-1	
1,2-Dibromoethane (EDB)	**<0.091**	ug/L	0.50	0.091	1		01/17/17 17:08	106-93-4	
Dibromomethane	**<0.098**	ug/L	1.0	0.098	1		01/17/17 17:08	74-95-3	
1,2-Dichlorobenzene	**<0.10**	ug/L	0.50	0.10	1		01/17/17 17:08	95-50-1	
1,3-Dichlorobenzene	**<0.082**	ug/L	0.50	0.082	1		01/17/17 17:08	541-73-1	
1,4-Dichlorobenzene	**<0.075**	ug/L	0.50	0.075	1		01/17/17 17:08	106-46-7	
Dichlorodifluoromethane	**<0.16**	ug/L	1.0	0.16	1		01/17/17 17:08	75-71-8	
1,1-Dichloroethane	**<0.088**	ug/L	0.50	0.088	1		01/17/17 17:08	75-34-3	
1,2-Dichloroethane	**<0.092**	ug/L	0.50	0.092	1		01/17/17 17:08	107-06-2	
1,1-Dichloroethene	**<0.089**	ug/L	0.50	0.089	1		01/17/17 17:08	75-35-4	
cis-1,2-Dichloroethene	**<0.085**	ug/L	0.50	0.085	1		01/17/17 17:08	156-59-2	
trans-1,2-Dichloroethene	**<0.11**	ug/L	0.50	0.11	1		01/17/17 17:08	156-60-5	
1,2-Dichloropropane	**<0.084**	ug/L	4.0	0.084	1		01/17/17 17:08	78-87-5	
1,3-Dichloropropane	**<0.094**	ug/L	0.50	0.094	1		01/17/17 17:08	142-28-9	
2,2-Dichloropropane	**<0.097**	ug/L	1.0	0.097	1		01/17/17 17:08	594-20-7	
1,1-Dichloropropene	**<0.080**	ug/L	0.50	0.080	1		01/17/17 17:08	563-58-6	
cis-1,3-Dichloropropene	**<0.071**	ug/L	0.50	0.071	1		01/17/17 17:08	10061-01-5	
trans-1,3-Dichloropropene	**<0.055**	ug/L	0.50	0.055	1		01/17/17 17:08	10061-02-6	
Ethylbenzene	**<0.051**	ug/L	0.50	0.051	1		01/17/17 17:08	100-41-4	
Hexachloro-1,3-butadiene	**<0.11**	ug/L	4.0	0.11	1		01/17/17 17:08	87-68-3	
Isopropylbenzene (Cumene)	**<0.11**	ug/L	0.50	0.11	1		01/17/17 17:08	98-82-8	
p-Isopropyltoluene	**<0.083**	ug/L	0.50	0.083	1		01/17/17 17:08	99-87-6	
Methylene Chloride	**<0.20**	ug/L	4.0	0.20	1		01/17/17 17:08	75-09-2	
Naphthalene	**<0.064**	ug/L	1.0	0.064	1		01/17/17 17:08	91-20-3	
n-Propylbenzene	**<0.096**	ug/L	0.50	0.096	1		01/17/17 17:08	103-65-1	
Styrene	**<0.075**	ug/L	0.50	0.075	1		01/17/17 17:08	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.062**	ug/L	0.50	0.062	1		01/17/17 17:08	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.11**	ug/L	0.50	0.11	1		01/17/17 17:08	79-34-5	
Tetrachloroethene	**<0.12**	ug/L	0.50	0.12	1		01/17/17 17:08	127-18-4	
Toluene	**<0.080**	ug/L	0.50	0.080	1		01/17/17 17:08	108-88-3	
1,2,3-Trichlorobenzene	**<0.10**	ug/L	0.50	0.10	1		01/17/17 17:08	87-61-6	
1,2,4-Trichlorobenzene	**<0.12**	ug/L	0.50	0.12	1		01/17/17 17:08	120-82-1	
1,1,1-Trichloroethane	**<0.10**	ug/L	0.50	0.10	1		01/17/17 17:08	71-55-6	
1,1,2-Trichloroethane	**<0.098**	ug/L	0.50	0.098	1		01/17/17 17:08	79-00-5	
Trichloroethene	**<0.044**	ug/L	0.40	0.044	1		01/17/17 17:08	79-01-6	
Trichlorofluoromethane	**<0.13**	ug/L	0.50	0.13	1		01/17/17 17:08	75-69-4	
1,2,3-Trichloropropane	**<0.073**	ug/L	4.0	0.073	1		01/17/17 17:08	96-18-4	
1,2,4-Trimethylbenzene	**<0.083**	ug/L	0.50	0.083	1		01/17/17 17:08	95-63-6	
1,3,5-Trimethylbenzene	**<0.078**	ug/L	0.50	0.078	1		01/17/17 17:08	108-67-8	
Vinyl chloride	**<0.098**	ug/L	0.20	0.098	1		01/17/17 17:08	75-01-4	
Xylene (Total)	**<0.073**	ug/L	1.5	0.073	1		01/17/17 17:08	1330-20-7	
m&p-Xylene	**<0.073**	ug/L	1.0	0.073	1		01/17/17 17:08	179601-23-1	
o-Xylene	**<0.073**	ug/L	0.50	0.073	1		01/17/17 17:08	95-47-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Sample: BAITSHOP POTABLE **Lab ID: 40144491016** Collected: 01/12/17 13:42 Received: 01/14/17 08:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
Surrogates									
4-Bromofluorobenzene (S)	95	%.	75-125		1		01/17/17 17:08	460-00-4	
Toluene-d8 (S)	96	%.	75-125		1		01/17/17 17:08	2037-26-5	
1,2-Dichloroethane-d4 (S)	102	%.	75-125		1		01/17/17 17:08	17060-07-0	

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QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

QC Batch: 246415 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 40144491001, 40144491002, 40144491003, 40144491004, 40144491005

METHOD BLANK: 1457396 Matrix: Solid
Associated Lab Samples: 40144491001, 40144491002, 40144491003, 40144491004, 40144491005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	50.0	01/17/17 10:47	
1,3,5-Trimethylbenzene	ug/kg	<25.0	50.0	01/17/17 10:47	
Benzene	ug/kg	<25.0	50.0	01/17/17 10:47	
Ethylbenzene	ug/kg	<25.0	50.0	01/17/17 10:47	
m&p-Xylene	ug/kg	<50.0	100	01/17/17 10:47	
Methyl-tert-butyl ether	ug/kg	<25.0	50.0	01/17/17 10:47	
Naphthalene	ug/kg	<25.0	50.0	01/17/17 10:47	
o-Xylene	ug/kg	<25.0	50.0	01/17/17 10:47	
Toluene	ug/kg	<25.0	50.0	01/17/17 10:47	
a,a,a-Trifluorotoluene (S)	%	104	80-120	01/17/17 10:47	

LABORATORY CONTROL SAMPLE & LCSD: 1457397 1457398

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	1050	1080	105	108	80-120	3	20	
1,3,5-Trimethylbenzene	ug/kg	1000	1020	1050	102	105	80-120	3	20	
Benzene	ug/kg	1000	1040	1060	104	106	80-120	2	20	
Ethylbenzene	ug/kg	1000	1020	1040	102	104	80-120	2	20	
m&p-Xylene	ug/kg	2000	2050	2120	103	106	80-120	3	20	
Methyl-tert-butyl ether	ug/kg	1000	1080	1030	108	103	80-120	4	20	
Naphthalene	ug/kg	1000	985	981	98	98	80-120	0	20	
o-Xylene	ug/kg	1000	1030	1060	103	106	80-120	3	20	
Toluene	ug/kg	1000	1020	1030	102	103	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%				103	101	80-120			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

QC Batch: 246321 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 40144491006, 40144491007, 40144491008, 40144491009, 40144491010, 40144491011

METHOD BLANK: 1457024 Matrix: Water
Associated Lab Samples: 40144491006, 40144491007, 40144491008, 40144491009, 40144491010, 40144491011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.42	1.0	01/16/17 08:14	
1,3,5-Trimethylbenzene	ug/L	<0.42	1.0	01/16/17 08:14	
Benzene	ug/L	<0.40	1.0	01/16/17 08:14	
Ethylbenzene	ug/L	<0.39	1.0	01/16/17 08:14	
m&p-Xylene	ug/L	<0.80	2.0	01/16/17 08:14	
Methyl-tert-butyl ether	ug/L	<0.48	1.0	01/16/17 08:14	
Naphthalene	ug/L	<0.42	1.0	01/16/17 08:14	
o-Xylene	ug/L	<0.45	1.0	01/16/17 08:14	
Toluene	ug/L	<0.39	1.0	01/16/17 08:14	
a,a,a-Trifluorotoluene (S)	%	101	80-120	01/16/17 08:14	

LABORATORY CONTROL SAMPLE & LCSD: 1457025 1457026

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	21.0	21.7	105	108	80-120	3	20	
1,3,5-Trimethylbenzene	ug/L	20	20.5	21.1	103	105	80-120	3	20	
Benzene	ug/L	20	20.9	21.5	104	107	80-120	3	20	
Ethylbenzene	ug/L	20	20.1	20.9	100	104	80-120	4	20	
m&p-Xylene	ug/L	40	40.4	41.9	101	105	80-120	4	20	
Methyl-tert-butyl ether	ug/L	20	20.5	22.2	103	111	80-120	8	20	
Naphthalene	ug/L	20	19.3	21.0	96	105	80-120	9	20	
o-Xylene	ug/L	20	20.4	21.0	102	105	80-120	3	20	
Toluene	ug/L	20	20.1	21.0	101	105	80-120	4	20	
a,a,a-Trifluorotoluene (S)	%				101	103	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1457081 1457082

Parameter	Units	40144422005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trimethylbenzene	ug/L	33.5	100	100	142	139	108	106	48-177	2	20	
1,3,5-Trimethylbenzene	ug/L	9.4	100	100	108	106	98	97	73-145	1	20	
Benzene	ug/L	332	100	100	408	397	76	65	74-139	3	20	M1
Ethylbenzene	ug/L	110	100	100	205	201	95	91	74-140	2	20	
m&p-Xylene	ug/L	74.3	200	200	268	265	97	95	55-165	1	20	
Methyl-tert-butyl ether	ug/L	<2.4	100	100	94.7	93.1	95	93	80-120	2	20	
Naphthalene	ug/L	38.6	100	100	130	127	91	88	73-133	2	20	
o-Xylene	ug/L	23.5	100	100	119	118	95	94	73-136	1	20	
Toluene	ug/L	31.5	100	100	123	122	92	91	80-128	1	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1457081 1457082

Parameter	Units	40144422005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
a,a,a-Trifluorotoluene (S)	%						103	103	80-120			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

QC Batch: 246549 Analysis Method: EPA 6010
QC Batch Method: EPA 6010 Analysis Description: ICP Metals, Trace, Dissolved
Associated Lab Samples: 40144491012, 40144491013, 40144491014, 40144491015

METHOD BLANK: 1457774 Matrix: Water
Associated Lab Samples: 40144491012, 40144491013, 40144491014, 40144491015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Dissolved	ug/L	<15.5	100	01/19/17 11:08	
Manganese, Dissolved	ug/L	<1.1	5.0	01/19/17 11:08	

LABORATORY CONTROL SAMPLE: 1457775

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Dissolved	ug/L	5000	4910	98	80-120	
Manganese, Dissolved	ug/L	500	470	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1457776 1457777

Parameter	Units	40144471001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Dissolved	ug/L	<15.5	5000	5000	5000	4950	100	99	75-125	1	20	
Manganese, Dissolved	ug/L	37.5	500	500	508	504	94	93	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

QC Batch: 246445 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 40144491001, 40144491002, 40144491003, 40144491004, 40144491005

METHOD BLANK: 1457469 Matrix: Solid
Associated Lab Samples: 40144491001, 40144491002, 40144491003, 40144491004, 40144491005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	<0.43	1.3	01/19/17 09:15	

LABORATORY CONTROL SAMPLE & LCSD: 1457470 1457471

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Lead	mg/kg	50	47.1	47.1	94	94	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1457472 1457473

Parameter	Units	40144500003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/kg	2.7	51.5	51.4	46.5	48.8	85	90	75-125	5	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

QC Batch: 455953 Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2 Analysis Description: 524.2 MSV
Associated Lab Samples: 40144491016

METHOD BLANK: 2495895 Matrix: Water
Associated Lab Samples: 40144491016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.062	0.50	01/17/17 13:49	
1,1,1-Trichloroethane	ug/L	<0.10	0.50	01/17/17 13:49	
1,1,2,2-Tetrachloroethane	ug/L	<0.11	0.50	01/17/17 13:49	
1,1,2-Trichloroethane	ug/L	<0.098	0.50	01/17/17 13:49	
1,1-Dichloroethane	ug/L	<0.088	0.50	01/17/17 13:49	
1,1-Dichloroethene	ug/L	<0.089	0.50	01/17/17 13:49	
1,1-Dichloropropene	ug/L	<0.080	0.50	01/17/17 13:49	
1,2,3-Trichlorobenzene	ug/L	<0.10	0.50	01/17/17 13:49	
1,2,3-Trichloropropane	ug/L	<0.073	4.0	01/17/17 13:49	
1,2,4-Trichlorobenzene	ug/L	<0.12	0.50	01/17/17 13:49	
1,2,4-Trimethylbenzene	ug/L	<0.083	0.50	01/17/17 13:49	
1,2-Dibromo-3-chloropropane	ug/L	<0.18	4.0	01/17/17 13:49	
1,2-Dibromoethane (EDB)	ug/L	<0.091	0.50	01/17/17 13:49	
1,2-Dichlorobenzene	ug/L	<0.10	0.50	01/17/17 13:49	
1,2-Dichloroethane	ug/L	<0.092	0.50	01/17/17 13:49	
1,2-Dichloropropane	ug/L	<0.084	4.0	01/17/17 13:49	
1,3,5-Trimethylbenzene	ug/L	<0.078	0.50	01/17/17 13:49	
1,3-Dichlorobenzene	ug/L	<0.082	0.50	01/17/17 13:49	
1,3-Dichloropropane	ug/L	<0.094	0.50	01/17/17 13:49	
1,4-Dichlorobenzene	ug/L	<0.075	0.50	01/17/17 13:49	
2,2-Dichloropropane	ug/L	<0.097	1.0	01/17/17 13:49	
2-Chlorotoluene	ug/L	<0.11	0.50	01/17/17 13:49	
4-Chlorotoluene	ug/L	<0.10	0.50	01/17/17 13:49	
Benzene	ug/L	<0.086	0.50	01/17/17 13:49	
Bromobenzene	ug/L	<0.081	0.50	01/17/17 13:49	
Bromochloromethane	ug/L	<0.16	1.0	01/17/17 13:49	
Bromodichloromethane	ug/L	<0.090	1.0	01/17/17 13:49	
Bromoform	ug/L	<0.23	4.0	01/17/17 13:49	
Bromomethane	ug/L	<0.20	4.0	01/17/17 13:49	
Carbon tetrachloride	ug/L	<0.076	1.0	01/17/17 13:49	
Chlorobenzene	ug/L	<0.068	0.50	01/17/17 13:49	
Chloroethane	ug/L	<0.18	1.0	01/17/17 13:49	
Chloroform	ug/L	<0.10	1.0	01/17/17 13:49	
Chloromethane	ug/L	<0.21	4.0	01/17/17 13:49	
cis-1,2-Dichloroethene	ug/L	<0.085	0.50	01/17/17 13:49	
cis-1,3-Dichloropropene	ug/L	<0.071	0.50	01/17/17 13:49	
Dibromochloromethane	ug/L	<0.13	0.50	01/17/17 13:49	
Dibromomethane	ug/L	<0.098	1.0	01/17/17 13:49	
Dichlorodifluoromethane	ug/L	<0.16	1.0	01/17/17 13:49	
Ethylbenzene	ug/L	<0.051	0.50	01/17/17 13:49	
Hexachloro-1,3-butadiene	ug/L	<0.11	4.0	01/17/17 13:49	

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REPORT OF LABORATORY ANALYSIS

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(920)469-2436

QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

METHOD BLANK: 2495895 Matrix: Water
Associated Lab Samples: 40144491016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isopropylbenzene (Cumene)	ug/L	<0.11	0.50	01/17/17 13:49	
m&p-Xylene	ug/L	<0.073	1.0	01/17/17 13:49	
Methylene Chloride	ug/L	<0.20	4.0	01/17/17 13:49	
n-Butylbenzene	ug/L	<0.081	0.50	01/17/17 13:49	
n-Propylbenzene	ug/L	<0.096	0.50	01/17/17 13:49	
Naphthalene	ug/L	<0.064	1.0	01/17/17 13:49	
o-Xylene	ug/L	<0.073	0.50	01/17/17 13:49	
p-Isopropyltoluene	ug/L	<0.083	0.50	01/17/17 13:49	
sec-Butylbenzene	ug/L	<0.063	0.50	01/17/17 13:49	
Styrene	ug/L	<0.075	0.50	01/17/17 13:49	
tert-Butylbenzene	ug/L	<0.097	0.50	01/17/17 13:49	
Tetrachloroethene	ug/L	<0.12	0.50	01/17/17 13:49	
Toluene	ug/L	<0.080	0.50	01/17/17 13:49	
trans-1,2-Dichloroethene	ug/L	<0.11	0.50	01/17/17 13:49	
trans-1,3-Dichloropropene	ug/L	<0.055	0.50	01/17/17 13:49	
Trichloroethene	ug/L	<0.044	0.40	01/17/17 13:49	
Trichlorofluoromethane	ug/L	<0.13	0.50	01/17/17 13:49	
Vinyl chloride	ug/L	<0.098	0.20	01/17/17 13:49	
Xylene (Total)	ug/L	<0.073	1.5	01/17/17 13:49	
1,2-Dichloroethane-d4 (S)	%.	97	75-125	01/17/17 13:49	
4-Bromofluorobenzene (S)	%.	98	75-125	01/17/17 13:49	
Toluene-d8 (S)	%.	98	75-125	01/17/17 13:49	

LABORATORY CONTROL SAMPLE & LCSD: 2495896 2495897

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.2	22.6	116	113	70-130	3	20	
1,1,1-Trichloroethane	ug/L	20	20.1	19.7	101	99	70-130	2	20	
1,1,2,2-Tetrachloroethane	ug/L	20	20.8	20.7	104	103	70-130	1	20	
1,1,2-Trichloroethane	ug/L	20	21.9	21.2	110	106	70-130	3	20	
1,1-Dichloroethane	ug/L	20	19.6	19.2	98	96	70-130	2	20	
1,1-Dichloroethene	ug/L	20	20.7	20.1	103	100	70-130	3	20	
1,1-Dichloropropene	ug/L	20	22.0	21.4	110	107	70-130	3	20	
1,2,3-Trichlorobenzene	ug/L	20	23.0	22.4	115	112	70-130	3	20	
1,2,3-Trichloropropane	ug/L	20	21.0	20.7	105	104	70-130	1	20	
1,2,4-Trichlorobenzene	ug/L	20	21.8	21.4	109	107	70-130	2	20	
1,2,4-Trimethylbenzene	ug/L	20	20.6	20.0	103	100	70-130	3	20	
1,2-Dibromo-3-chloropropane	ug/L	50	54.3	52.5	109	105	70-130	3	20	
1,2-Dibromoethane (EDB)	ug/L	20	21.0	20.9	105	104	70-130	0	20	
1,2-Dichlorobenzene	ug/L	20	21.8	21.4	109	107	70-130	2	20	
1,2-Dichloroethane	ug/L	20	19.1	18.9	96	95	70-130	1	20	
1,2-Dichloropropane	ug/L	20	21.5	21.1	108	105	70-130	2	20	
1,3,5-Trimethylbenzene	ug/L	20	20.9	20.4	104	102	70-130	2	20	
1,3-Dichlorobenzene	ug/L	20	21.7	21.6	109	108	70-130	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

LABORATORY CONTROL SAMPLE & LCSD: 2495896 2495897

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,3-Dichloropropane	ug/L	20	21.3	21.2	106	106	70-130	1	20	
1,4-Dichlorobenzene	ug/L	20	21.9	21.5	109	107	70-130	2	20	
2,2-Dichloropropane	ug/L	20	19.7	19.1	99	96	70-130	3	20	
2-Chlorotoluene	ug/L	20	21.6	21.2	108	106	70-130	2	20	
4-Chlorotoluene	ug/L	20	20.8	20.3	104	102	70-130	2	20	
Benzene	ug/L	20	19.3	19.2	97	96	70-130	1	20	
Bromobenzene	ug/L	20	22.3	21.6	112	108	70-130	3	20	
Bromochloromethane	ug/L	20	22.6	22.0	113	110	70-130	3	20	
Bromodichloromethane	ug/L	20	23.2	22.7	116	113	70-130	2	20	
Bromoform	ug/L	20	21.4	20.7	107	104	70-130	3	20	
Bromomethane	ug/L	20	16.2	17.0	81	85	70-130	5	20	
Carbon tetrachloride	ug/L	20	22.5	21.7	112	109	70-130	4	20	
Chlorobenzene	ug/L	20	21.4	20.8	107	104	70-130	3	20	
Chloroethane	ug/L	20	20.6	20.1	103	101	70-130	3	20	
Chloroform	ug/L	20	19.5	19.1	97	95	70-130	2	20	
Chloromethane	ug/L	20	15.1	14.8	75	74	70-130	2	20	
cis-1,2-Dichloroethene	ug/L	20	20.4	19.8	102	99	70-130	3	20	
cis-1,3-Dichloropropene	ug/L	20	21.1	20.8	106	104	70-130	1	20	
Dibromochloromethane	ug/L	20	23.5	22.5	117	113	70-130	4	20	
Dibromomethane	ug/L	20	21.3	21.6	106	108	70-130	2	20	
Dichlorodifluoromethane	ug/L	20	19.2	18.6	96	93	70-130	3	20	
Ethylbenzene	ug/L	20	20.7	19.9	103	100	70-130	4	20	
Hexachloro-1,3-butadiene	ug/L	20	23.0	23.5	115	118	70-130	2	20	
Isopropylbenzene (Cumene)	ug/L	20	20.3	19.6	101	98	70-130	4	20	
m&p-Xylene	ug/L	40	41.8	40.3	105	101	70-130	4	20	
Methylene Chloride	ug/L	20	21.2	20.7	106	104	70-130	2	20	
n-Butylbenzene	ug/L	20	20.5	20.4	103	102	70-130	1	20	
n-Propylbenzene	ug/L	20	20.2	19.8	101	99	70-130	2	20	
Naphthalene	ug/L	20	20.4	20.2	102	101	70-130	1	20	
o-Xylene	ug/L	20	20.9	20.3	104	101	70-130	3	20	
p-Isopropyltoluene	ug/L	20	19.8	19.4	99	97	70-130	2	20	
sec-Butylbenzene	ug/L	20	20.8	20.3	104	102	70-130	3	20	
Styrene	ug/L	20	21.0	20.4	105	102	70-130	3	20	
tert-Butylbenzene	ug/L	20	20.3	20.0	102	100	70-130	1	20	
Tetrachloroethene	ug/L	20	23.0	22.2	115	111	70-130	4	20	
Toluene	ug/L	20	20.9	20.4	104	102	70-130	2	20	
trans-1,2-Dichloroethene	ug/L	20	20.5	20.4	102	102	70-130	0	20	
trans-1,3-Dichloropropene	ug/L	20	22.0	21.2	110	106	70-130	4	20	
Trichloroethene	ug/L	20	22.5	22.0	113	110	70-130	2	20	
Trichlorofluoromethane	ug/L	20	22.5	22.0	112	110	70-130	2	20	
Vinyl chloride	ug/L	20	20.3	19.9	102	100	70-130	2	20	
Xylene (Total)	ug/L	60	62.7	60.6	104	101	70-130	3	20	
1,2-Dichloroethane-d4 (S)	%.				94	93	75-125			
4-Bromofluorobenzene (S)	%.				97	95	75-125			
Toluene-d8 (S)	%.				100	98	75-125			

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REPORT OF LABORATORY ANALYSIS

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(920)469-2436

QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

QC Batch: 246320 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40144491012, 40144491013, 40144491014, 40144491015

METHOD BLANK: 1457022 Matrix: Water
Associated Lab Samples: 40144491012, 40144491013, 40144491014, 40144491015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	01/16/17 08:39	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	01/16/17 08:39	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	01/16/17 08:39	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	01/16/17 08:39	
1,1-Dichloroethane	ug/L	<0.24	1.0	01/16/17 08:39	
1,1-Dichloroethene	ug/L	<0.41	1.0	01/16/17 08:39	
1,1-Dichloropropene	ug/L	<0.44	1.0	01/16/17 08:39	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	01/16/17 08:39	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	01/16/17 08:39	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	01/16/17 08:39	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	01/16/17 08:39	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	01/16/17 08:39	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	01/16/17 08:39	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	01/16/17 08:39	
1,2-Dichloroethane	ug/L	<0.17	1.0	01/16/17 08:39	
1,2-Dichloropropane	ug/L	<0.23	1.0	01/16/17 08:39	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	01/16/17 08:39	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	01/16/17 08:39	
1,3-Dichloropropane	ug/L	<0.50	1.0	01/16/17 08:39	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	01/16/17 08:39	
2,2-Dichloropropane	ug/L	<0.48	1.0	01/16/17 08:39	
2-Chlorotoluene	ug/L	<0.50	1.0	01/16/17 08:39	
4-Chlorotoluene	ug/L	<0.21	1.0	01/16/17 08:39	
Benzene	ug/L	<0.50	1.0	01/16/17 08:39	
Bromobenzene	ug/L	<0.23	1.0	01/16/17 08:39	
Bromochloromethane	ug/L	<0.34	1.0	01/16/17 08:39	
Bromodichloromethane	ug/L	<0.50	1.0	01/16/17 08:39	
Bromoform	ug/L	<0.50	1.0	01/16/17 08:39	
Bromomethane	ug/L	<2.4	5.0	01/16/17 08:39	
Carbon tetrachloride	ug/L	<0.50	1.0	01/16/17 08:39	
Chlorobenzene	ug/L	<0.50	1.0	01/16/17 08:39	
Chloroethane	ug/L	<0.37	1.0	01/16/17 08:39	
Chloroform	ug/L	<2.5	5.0	01/16/17 08:39	
Chloromethane	ug/L	<0.50	1.0	01/16/17 08:39	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	01/16/17 08:39	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	01/16/17 08:39	
Dibromochloromethane	ug/L	<0.50	1.0	01/16/17 08:39	
Dibromomethane	ug/L	<0.43	1.0	01/16/17 08:39	
Dichlorodifluoromethane	ug/L	<0.22	1.0	01/16/17 08:39	
Diisopropyl ether	ug/L	<0.50	1.0	01/16/17 08:39	
Ethylbenzene	ug/L	<0.50	1.0	01/16/17 08:39	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

METHOD BLANK: 1457022 Matrix: Water
Associated Lab Samples: 40144491012, 40144491013, 40144491014, 40144491015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	01/16/17 08:39	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	01/16/17 08:39	
m&p-Xylene	ug/L	<1.0	2.0	01/16/17 08:39	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	01/16/17 08:39	
Methylene Chloride	ug/L	<0.23	1.0	01/16/17 08:39	
n-Butylbenzene	ug/L	<0.50	1.0	01/16/17 08:39	
n-Propylbenzene	ug/L	<0.50	1.0	01/16/17 08:39	
Naphthalene	ug/L	<2.5	5.0	01/16/17 08:39	
o-Xylene	ug/L	<0.50	1.0	01/16/17 08:39	
p-Isopropyltoluene	ug/L	<0.50	1.0	01/16/17 08:39	
sec-Butylbenzene	ug/L	<2.2	5.0	01/16/17 08:39	
Styrene	ug/L	<0.50	1.0	01/16/17 08:39	
tert-Butylbenzene	ug/L	<0.18	1.0	01/16/17 08:39	
Tetrachloroethene	ug/L	<0.50	1.0	01/16/17 08:39	
Toluene	ug/L	<0.50	1.0	01/16/17 08:39	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	01/16/17 08:39	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	01/16/17 08:39	
Trichloroethene	ug/L	<0.33	1.0	01/16/17 08:39	
Trichlorofluoromethane	ug/L	<0.18	1.0	01/16/17 08:39	
Vinyl chloride	ug/L	<0.18	1.0	01/16/17 08:39	
4-Bromofluorobenzene (S)	%	102	70-130	01/16/17 08:39	
Dibromofluoromethane (S)	%	94	70-130	01/16/17 08:39	
Toluene-d8 (S)	%	104	70-130	01/16/17 08:39	

LABORATORY CONTROL SAMPLE: 1457023

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	28.7	143	70-131	L0
1,1,2,2-Tetrachloroethane	ug/L	20	16.0	80	67-130	
1,1,2-Trichloroethane	ug/L	20	17.0	85	70-130	
1,1-Dichloroethane	ug/L	20	18.1	91	70-133	
1,1-Dichloroethene	ug/L	20	17.2	86	70-130	
1,2,4-Trichlorobenzene	ug/L	20	18.1	91	70-130	
1,2-Dibromo-3-chloropropane	ug/L	20	16.2	81	50-150	
1,2-Dibromoethane (EDB)	ug/L	20	16.0	80	70-130	
1,2-Dichlorobenzene	ug/L	20	17.4	87	70-130	
1,2-Dichloroethane	ug/L	20	16.4	82	70-130	
1,2-Dichloropropane	ug/L	20	18.0	90	70-130	
1,3-Dichlorobenzene	ug/L	20	17.7	89	70-130	
1,4-Dichlorobenzene	ug/L	20	18.5	92	70-130	
Benzene	ug/L	20	18.7	93	60-135	
Bromodichloromethane	ug/L	20	17.9	90	70-130	
Bromoform	ug/L	20	18.7	94	70-130	
Bromomethane	ug/L	20	10.7	54	33-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

LABORATORY CONTROL SAMPLE: 1457023

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	20	17.4	87	70-138	
Chlorobenzene	ug/L	20	19.1	95	70-130	
Chloroethane	ug/L	20	19.0	95	51-130	
Chloroform	ug/L	20	17.2	86	70-130	
Chloromethane	ug/L	20	15.3	77	25-132	
cis-1,2-Dichloroethene	ug/L	20	17.1	85	69-130	
cis-1,3-Dichloropropene	ug/L	20	18.5	93	70-130	
Dibromochloromethane	ug/L	20	16.6	83	70-130	
Dichlorodifluoromethane	ug/L	20	12.4	62	23-130	
Ethylbenzene	ug/L	20	19.6	98	70-136	
Isopropylbenzene (Cumene)	ug/L	20	19.5	97	70-140	
m&p-Xylene	ug/L	40	38.9	97	70-138	
Methyl-tert-butyl ether	ug/L	20	15.1	75	66-138	
Methylene Chloride	ug/L	20	15.8	79	70-130	
o-Xylene	ug/L	20	18.9	95	70-134	
Styrene	ug/L	20	18.9	95	70-133	
Tetrachloroethene	ug/L	20	18.5	93	70-138	
Toluene	ug/L	20	19.4	97	70-130	
trans-1,2-Dichloroethene	ug/L	20	16.8	84	70-131	
trans-1,3-Dichloropropene	ug/L	20	18.9	95	69-130	
Trichloroethene	ug/L	20	18.3	92	70-130	
Trichlorofluoromethane	ug/L	20	19.6	98	50-150	
Vinyl chloride	ug/L	20	19.9	100	49-130	
4-Bromofluorobenzene (S)	%			104	70-130	
Dibromofluoromethane (S)	%			95	70-130	
Toluene-d8 (S)	%			105	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1457075 1457076

Parameter	Units	40144422001 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	<0.50	1000	1000	985	985	99	98	70-134	0	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1000	1000	889	876	89	88	67-130	1	20	
1,1,2-Trichloroethane	ug/L	<0.20	1000	1000	907	920	91	92	70-130	1	20	
1,1-Dichloroethane	ug/L	<0.24	1000	1000	990	999	99	100	70-134	1	20	
1,1-Dichloroethene	ug/L	<0.41	1000	1000	936	953	94	95	68-136	2	20	
1,2,4-Trichlorobenzene	ug/L	<2.2	1000	1000	1030	1050	103	105	62-139	1	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	1000	1000	926	860	93	86	50-150	7	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1000	1000	933	928	93	93	70-130	0	20	
1,2-Dichlorobenzene	ug/L	<0.50	1000	1000	981	991	98	99	70-130	1	20	
1,2-Dichloroethane	ug/L	<0.17	1000	1000	926	931	93	93	70-130	1	20	
1,2-Dichloropropane	ug/L	<0.23	1000	1000	987	996	99	100	70-130	1	20	
1,3-Dichlorobenzene	ug/L	<0.50	1000	1000	993	1000	99	100	70-131	1	20	
1,4-Dichlorobenzene	ug/L	<0.50	1000	1000	978	973	98	97	70-130	1	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1457075 1457076

Parameter	Units	40144422001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	<0.50	1000	1000	999	1010	100	101	57-138	1	20	
Bromodichloromethane	ug/L	<0.50	1000	1000	1010	1030	101	103	70-130	2	20	
Bromoform	ug/L	<0.50	1000	1000	918	911	92	91	70-130	1	20	
Bromomethane	ug/L	<2.4	1000	1000	658	673	66	67	33-130	2	27	
Carbon tetrachloride	ug/L	<0.50	1000	1000	984	997	98	100	70-138	1	20	
Chlorobenzene	ug/L	<0.50	1000	1000	1020	1010	102	101	70-130	0	20	
Chloroethane	ug/L	<0.37	1000	1000	1060	1080	106	108	51-130	2	20	
Chloroform	ug/L	47.7	1000	1000	973	971	93	92	70-130	0	20	
Chloromethane	ug/L	<0.50	1000	1000	834	817	83	82	25-132	2	20	
cis-1,2-Dichloroethene	ug/L	<0.26	1000	1000	915	929	92	93	61-140	1	20	
cis-1,3-Dichloropropene	ug/L	<0.50	1000	1000	1020	1040	102	104	70-130	1	20	
Dibromochloromethane	ug/L	<0.50	1000	1000	946	934	95	93	70-130	1	20	
Dichlorodifluoromethane	ug/L	<0.22	1000	1000	643	668	64	67	23-130	4	20	
Ethylbenzene	ug/L	17.9	1000	1000	1110	1110	110	109	70-138	0	20	
Isopropylbenzene (Cumene)	ug/L	5.0	1000	1000	1100	1100	109	109	70-152	0	20	
m&p-Xylene	ug/L	220	2000	2000	2340	2330	106	105	70-140	0	20	
Methyl-tert-butyl ether	ug/L	<0.17	1000	1000	842	840	84	84	66-139	0	20	
Methylene Chloride	ug/L	<0.23	1000	1000	856	836	86	84	70-130	2	20	
o-Xylene	ug/L	159	1000	1000	1200	1220	105	106	70-134	1	20	
Styrene	ug/L	<0.50	1000	1000	1080	1080	108	108	70-138	0	20	
Tetrachloroethene	ug/L	<0.50	1000	1000	989	1010	99	101	70-148	2	20	
Toluene	ug/L	14.7	1000	1000	1060	1070	104	106	70-130	1	20	
trans-1,2-Dichloroethene	ug/L	<0.26	1000	1000	888	900	89	90	70-133	1	20	
trans-1,3-Dichloropropene	ug/L	<0.23	1000	1000	974	938	97	94	69-130	4	20	
Trichloroethene	ug/L	<0.33	1000	1000	1010	1010	101	101	70-131	0	20	
Trichlorofluoromethane	ug/L	<0.18	1000	1000	1060	1070	106	107	50-150	1	20	
Vinyl chloride	ug/L	<0.18	1000	1000	1060	1080	106	108	49-133	2	20	
4-Bromofluorobenzene (S)	%						106	105	70-130			
Dibromofluoromethane (S)	%						96	96	70-130			
Toluene-d8 (S)	%						104	105	70-130			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

QC Batch: 246315 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40144491001, 40144491002, 40144491003, 40144491004, 40144491005

SAMPLE DUPLICATE: 1456982

Parameter	Units	40144491001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	25.0	25.2	1	10	

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REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay
PASI-M	Pace Analytical Services - Minneapolis

BATCH QUALIFIERS

Batch: 455953

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1q	Sample received overweight. Values should be considered an estimate.
HS	Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
W	Non-detect results are reported on a wet weight basis.

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40144491

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40144491001	**MW9 @ 2-4' BLS**	TPH GRO/PVOC WI ext.	246415	WI MOD GRO	246451
40144491002	**MW10 @ 3-4' BLS**	TPH GRO/PVOC WI ext.	246415	WI MOD GRO	246451
40144491003	**MW10 @ 13-14' BLS**	TPH GRO/PVOC WI ext.	246415	WI MOD GRO	246451
40144491004	**MW11 @ 2-4' BLS**	TPH GRO/PVOC WI ext.	246415	WI MOD GRO	246451
40144491005	**MW11 @ 15-16' BLS**	TPH GRO/PVOC WI ext.	246415	WI MOD GRO	246451
40144491006	**MW1**	WI MOD GRO	246321		
40144491007	**MW3**	WI MOD GRO	246321		
40144491008	**MW4**	WI MOD GRO	246321		
40144491009	**MW5**	WI MOD GRO	246321		
40144491010	**MW6**	WI MOD GRO	246321		
40144491011	**MW7**	WI MOD GRO	246321		
40144491001	**MW9 @ 2-4' BLS**	EPA 3050	246445	EPA 6010	246581
40144491002	**MW10 @ 3-4' BLS**	EPA 3050	246445	EPA 6010	246581
40144491003	**MW10 @ 13-14' BLS**	EPA 3050	246445	EPA 6010	246581
40144491004	**MW11 @ 2-4' BLS**	EPA 3050	246445	EPA 6010	246581
40144491005	**MW11 @ 15-16' BLS**	EPA 3050	246445	EPA 6010	246581
40144491012	**MW8**	EPA 6010	246549		
40144491013	**MW9**	EPA 6010	246549		
40144491014	**MW10**	EPA 6010	246549		
40144491015	**MW11**	EPA 6010	246549		
40144491016	**BAITSHOP POTABLE**	EPA 524.2	455953		
40144491012	**MW8**	EPA 8260	246320		
40144491013	**MW9**	EPA 8260	246320		
40144491014	**MW10**	EPA 8260	246320		
40144491015	**MW11**	EPA 8260	246320		
40144491001	**MW9 @ 2-4' BLS**	ASTM D2974-87	246315		
40144491002	**MW10 @ 3-4' BLS**	ASTM D2974-87	246315		
40144491003	**MW10 @ 13-14' BLS**	ASTM D2974-87	246315		
40144491004	**MW11 @ 2-4' BLS**	ASTM D2974-87	246315		
40144491005	**MW11 @ 15-16' BLS**	ASTM D2974-87	246315		

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

40144494

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:	REI
Branch/Location:	Warsaw
Project Contact:	Dave Larsen
Phone:	715-675-9784
Project Number:	7367arCUC
Project Name:	Hedlund DX
Project State:	WI
Sampled By (Print):	Brian J. Bailey
Sampled By (Sign):	B. J. Bailey
PO #:	
Regulatory Program:	

Quote #:	
Mail To Contact:	Dave Larsen
Mail To Company:	REI
Mail To Address:	dlarsen@reiengineering.com
Invoice To Contact:	
Invoice To Company:	
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, SL = 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	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: VOC+Naphthalene	Lead	Dry Wt.	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					N	F	A	A				
001	MW9 @ 2-4' bls	1/12/17	4:10P	S			X	X	X		1-40mlVF 1-40zpA	
002	MW10 @ 3-4' bls	1/12/17	11:13A	S			X	X	X			
003	MW10 @ 13-14' bls	1/12/17	11:30A	S			X	X	X			
004	MW11 @ 2-4' bls	1/12/17	1:00P	S			X	X	X			
005	MW11 @ 15-16' bls	1/12/17	1:35P	S			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:
B. J. Bailey	1/13/17 1010A		
Relinquished By:	Date/Time:	Received By:	Date/Time:
WattCO	1-14-17 0810	Maim McKay	1.14.17 0810
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

PACE Project No.
40144494

Receipt Temp = Roi °C

Sample Receipt pH
OK / Adjusted

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 COUSTODY

(Please Print Clearly)

Company Name:	REI
Branch/Location:	Wausau
Project Contact:	Dave Larsen
Phone:	715-675-9784
Project Number:	7367aXUC
Project Name:	Hedlund DX
Project State:	WI
Sampled By (Print):	Brian J. Bailey
Sampled By (Sign):	[signature]
PO #:	
Regulatory Program:	PECFA

Quote #:	
Mail To Contact:	Dave Larsen
Mail To Company:	REI
Mail To Address:	dlarsen@reiengineering.com
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

*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

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, Sl = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

				FILTERED? (YES/NO) Y/N	N	N	Y	N		
				PRESERVATION (CODE)* Pick Letter	B	B	D	J		
PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	PVOC+Naphthalene	VOC	Lead	VOC (524.2)	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)
006	MW1	1/11/17	3:15P	GW	X	—	—	—	2 VOA	2-40mlvB
007	MW3	1/11/17	2:45P	GW	X	—	—	—	2 VOA	↓
008	MW4	1/11/17	3:00P	GW	X	—	—	—	2 VOA	↓
009	MW5	1/11/17	2:30P	GW	X	—	—	—		3-40mlvB
010	MW6	1/11/17	4:45P	GW	X	—	—	—	1 VOA	1-40mlvB
011	MW7	1/11/17	5:30P	GW	X	—	—	—	1 VOA	↓
012	MW8	1/12/17	9:00A	GW	—	X	X	—		3-40mlvB 1-250mlp D
013	MW9	1/12/17	9:50A	GW	—	X	X	—		↓ ↓
014	MW10	1/12/17	12:40P	GW	—	X	X	—		↓ ↓
015	MW11	1/12/17	5:15P	GW	—	X	X	—		↓ ↓
016	Baitshop Potable	1/12/17	1:42P	DW	[crossed out]	—	—	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:
[signature]	1/13/17 10:00A		
WaLCO	1-14-17 0810	[signature] Pace	1-14-17 0810

PACE Project No. 4014449

Receipt Temp = ROI °C

Sample Receipt pH: OK / Adjusted

Cooler Custody Seal: Present / Not Present; Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Project #: **WO# : 40144491**

40144491

Client Name: REX

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: WalMart

Tracking #: 1260994-1

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

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

Thermometer Used IR1

Type of Ice: (Wet) (Blue) Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: R01 /Corr:

Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 1.14.17
Initials: MM

		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.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
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.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☑Yes ☐No ☐N/A	11. MM 1.14.17
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S, W		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☑Yes ☐No ☐N/A	13. ☑ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☑Yes ☐No	Initial when completed MM / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	14.
Trip Blank Present:	☐Yes ☑No ☐N/A	15.
Trip Blank Custody Seals Present	☐Yes ☑No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:
Person Contacted: _____ Date/Time: _____
If checked, see attached form for additional comments ☐
Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 1-16-17

APPENDIX J

SUB-SLAB VAPOR ANALYTICAL REPORT

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

January 18, 2017

David Larsen
REI Engineering
4080 N. 20th Ave
Wausau, WI 54401

RE: Project: 7367 Hedlund DX
Pace Project No.: 10376059

Dear David Larsen:
Enclosed are the analytical results for sample(s) received by the laboratory on January 17, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Carolynne Trout

Carolynne Trout
carolynne.trout@pacelabs.com
Project Manager

Enclosures

cc: Scott Blado, REI Engineering

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 7367 Hedlund DX
Pace Project No.: 10376059

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
Alaska Certification UST-107
525 N 8th Street, Salina, KS 67401
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 7367 Hedlund DX
Pace Project No.: 10376059

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10376059001	**VP-1**	Air	01/12/17 02:15	01/17/17 09:40
10376059002	**VP-2**	Air	01/12/17 02:55	01/17/17 09:40

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 7367 Hedlund DX
Pace Project No.: 10376059

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10376059001	**VP-1**	TO-15	NCK	57	PASI-M
10376059002	**VP-2**	TO-15	NCK	57	PASI-M

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 7367 Hedlund DX
Pace Project No.: 10376059

Sample: VP-1 **Lab ID: 10376059001** Collected: 01/12/17 02:15 Received: 01/17/17 09:40 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Acetone	**63.1**	ug/m3	3.5	1.2	1.44		01/17/17 23:16	67-64-1	
Benzene	**2.5**	ug/m3	0.47	0.18	1.44		01/17/17 23:16	71-43-2	
Bromodichloromethane	**<0.28**	ug/m3	2.0	0.28	1.44		01/17/17 23:16	75-27-4	
Bromoform	**<1.3**	ug/m3	3.0	1.3	1.44		01/17/17 23:16	75-25-2	
Bromomethane	**<0.45**	ug/m3	1.1	0.45	1.44		01/17/17 23:16	74-83-9	
1,3-Butadiene	**<0.25**	ug/m3	0.65	0.25	1.44		01/17/17 23:16	106-99-0	
2-Butanone (MEK)	**5.8**	ug/m3	4.3	0.33	1.44		01/17/17 23:16	78-93-3	
Carbon disulfide	**<0.15**	ug/m3	0.91	0.15	1.44		01/17/17 23:16	75-15-0	
Carbon tetrachloride	**0.48J**	ug/m3	0.92	0.28	1.44		01/17/17 23:16	56-23-5	
Chlorobenzene	**<0.19**	ug/m3	1.4	0.19	1.44		01/17/17 23:16	108-90-7	
Chloroethane	**<0.28**	ug/m3	0.78	0.28	1.44		01/17/17 23:16	75-00-3	
Chloroform	**<0.27**	ug/m3	0.71	0.27	1.44		01/17/17 23:16	67-66-3	
Chloromethane	**0.84**	ug/m3	0.60	0.16	1.44		01/17/17 23:16	74-87-3	
Cyclohexane	**2.3**	ug/m3	1.0	0.46	1.44		01/17/17 23:16	110-82-7	
Dibromochloromethane	**<1.2**	ug/m3	2.5	1.2	1.44		01/17/17 23:16	124-48-1	
1,2-Dibromoethane (EDB)	**<1.1**	ug/m3	2.2	1.1	1.44		01/17/17 23:16	106-93-4	
1,2-Dichlorobenzene	**<0.74**	ug/m3	1.8	0.74	1.44		01/17/17 23:16	95-50-1	
1,3-Dichlorobenzene	**<0.76**	ug/m3	1.8	0.76	1.44		01/17/17 23:16	541-73-1	
1,4-Dichlorobenzene	**<0.72**	ug/m3	1.8	0.72	1.44		01/17/17 23:16	106-46-7	
Dichlorodifluoromethane	**3.4J**	ug/m3	3.6	0.69	1.44		01/17/17 23:16	75-71-8	
1,1-Dichloroethane	**<0.23**	ug/m3	1.2	0.23	1.44		01/17/17 23:16	75-34-3	
1,2-Dichloroethane	**<0.30**	ug/m3	0.59	0.30	1.44		01/17/17 23:16	107-06-2	
1,1-Dichloroethene	**<0.34**	ug/m3	1.2	0.34	1.44		01/17/17 23:16	75-35-4	
cis-1,2-Dichloroethene	**<0.35**	ug/m3	1.2	0.35	1.44		01/17/17 23:16	156-59-2	
trans-1,2-Dichloroethene	**<0.55**	ug/m3	1.2	0.55	1.44		01/17/17 23:16	156-60-5	
1,2-Dichloropropane	**<0.39**	ug/m3	1.4	0.39	1.44		01/17/17 23:16	78-87-5	
cis-1,3-Dichloropropene	**<0.53**	ug/m3	1.3	0.53	1.44		01/17/17 23:16	10061-01-5	
trans-1,3-Dichloropropene	**<0.37**	ug/m3	1.3	0.37	1.44		01/17/17 23:16	10061-02-6	
Dichlorotetrafluoroethane	**<0.45**	ug/m3	2.0	0.45	1.44		01/17/17 23:16	76-14-2	
Ethyl acetate	**<0.50**	ug/m3	1.1	0.50	1.44		01/17/17 23:16	141-78-6	
Ethylbenzene	**5.0**	ug/m3	1.3	0.61	1.44		01/17/17 23:16	100-41-4	
4-Ethyltoluene	**3.3**	ug/m3	1.4	0.27	1.44		01/17/17 23:16	622-96-8	
n-Heptane	**2.1**	ug/m3	1.2	0.40	1.44		01/17/17 23:16	142-82-5	
Hexachloro-1,3-butadiene	**<0.94**	ug/m3	3.1	0.94	1.44		01/17/17 23:16	87-68-3	
n-Hexane	**4.7**	ug/m3	1.0	0.51	1.44		01/17/17 23:16	110-54-3	
2-Hexanone	**<0.59**	ug/m3	6.0	0.59	1.44		01/17/17 23:16	591-78-6	
Methylene Chloride	**6.0**	ug/m3	5.1	0.78	1.44		01/17/17 23:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.31**	ug/m3	6.0	0.31	1.44		01/17/17 23:16	108-10-1	
Methyl-tert-butyl ether	**<0.44**	ug/m3	5.3	0.44	1.44		01/17/17 23:16	1634-04-4	
Propylene	**<0.19**	ug/m3	0.50	0.19	1.44		01/17/17 23:16	115-07-1	
Styrene	**0.70J**	ug/m3	1.3	0.28	1.44		01/17/17 23:16	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.47**	ug/m3	1.0	0.47	1.44		01/17/17 23:16	79-34-5	
Tetrachloroethene	**<0.40**	ug/m3	0.99	0.40	1.44		01/17/17 23:16	127-18-4	
Tetrahydrofuran	**<0.17**	ug/m3	0.86	0.17	1.44		01/17/17 23:16	109-99-9	
Toluene	**17.1**	ug/m3	1.1	0.22	1.44		01/17/17 23:16	108-88-3	
1,2,4-Trichlorobenzene	**<1.3**	ug/m3	5.4	1.3	1.44		01/17/17 23:16	120-82-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 7367 Hedlund DX
Pace Project No.: 10376059

Sample: VP-1 **Lab ID: 10376059001** Collected: 01/12/17 02:15 Received: 01/17/17 09:40 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
1,1,1-Trichloroethane	**<0.36**	ug/m3	1.6	0.36	1.44		01/17/17 23:16	71-55-6	
1,1,2-Trichloroethane	**<0.35**	ug/m3	0.79	0.35	1.44		01/17/17 23:16	79-00-5	
Trichloroethene	**<0.40**	ug/m3	0.79	0.40	1.44		01/17/17 23:16	79-01-6	
Trichlorofluoromethane	**2.1**	ug/m3	1.6	0.19	1.44		01/17/17 23:16	75-69-4	
1,1,2-Trichlorotrifluoroethane	**0.61J**	ug/m3	2.3	0.43	1.44		01/17/17 23:16	76-13-1	
1,2,4-Trimethylbenzene	**11.7**	ug/m3	1.4	0.18	1.44		01/17/17 23:16	95-63-6	
1,3,5-Trimethylbenzene	**2.8**	ug/m3	1.4	0.26	1.44		01/17/17 23:16	108-67-8	
Vinyl acetate	**<0.48**	ug/m3	1.0	0.48	1.44		01/17/17 23:16	108-05-4	
Vinyl chloride	**<0.28**	ug/m3	0.37	0.28	1.44		01/17/17 23:16	75-01-4	
m&p-Xylene	**21.4**	ug/m3	2.5	1.1	1.44		01/17/17 23:16	179601-23-1	
o-Xylene	**7.6**	ug/m3	1.3	0.51	1.44		01/17/17 23:16	95-47-6	

Sample: VP-2 **Lab ID: 10376059002** Collected: 01/12/17 02:55 Received: 01/17/17 09:40 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Acetone	**49.3**	ug/m3	3.4	1.2	1.39		01/18/17 00:19	67-64-1	
Benzene	**2.6**	ug/m3	0.45	0.17	1.39		01/18/17 00:19	71-43-2	
Bromodichloromethane	**<0.27**	ug/m3	1.9	0.27	1.39		01/18/17 00:19	75-27-4	
Bromoform	**<1.3**	ug/m3	2.9	1.3	1.39		01/18/17 00:19	75-25-2	
Bromomethane	**<0.43**	ug/m3	1.1	0.43	1.39		01/18/17 00:19	74-83-9	
1,3-Butadiene	**<0.24**	ug/m3	0.63	0.24	1.39		01/18/17 00:19	106-99-0	
2-Butanone (MEK)	**10.8**	ug/m3	4.2	0.32	1.39		01/18/17 00:19	78-93-3	
Carbon disulfide	**<0.14**	ug/m3	0.88	0.14	1.39		01/18/17 00:19	75-15-0	
Carbon tetrachloride	**<0.27**	ug/m3	0.89	0.27	1.39		01/18/17 00:19	56-23-5	
Chlorobenzene	**<0.19**	ug/m3	1.3	0.19	1.39		01/18/17 00:19	108-90-7	
Chloroethane	**<0.27**	ug/m3	0.75	0.27	1.39		01/18/17 00:19	75-00-3	
Chloroform	**<0.26**	ug/m3	0.69	0.26	1.39		01/18/17 00:19	67-66-3	
Chloromethane	**0.71**	ug/m3	0.58	0.15	1.39		01/18/17 00:19	74-87-3	
Cyclohexane	**5.3**	ug/m3	0.97	0.44	1.39		01/18/17 00:19	110-82-7	
Dibromochloromethane	**<1.2**	ug/m3	2.4	1.2	1.39		01/18/17 00:19	124-48-1	
1,2-Dibromoethane (EDB)	**<1.1**	ug/m3	2.2	1.1	1.39		01/18/17 00:19	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/m3	1.7	0.71	1.39		01/18/17 00:19	95-50-1	
1,3-Dichlorobenzene	**<0.74**	ug/m3	1.7	0.74	1.39		01/18/17 00:19	541-73-1	
1,4-Dichlorobenzene	**<0.69**	ug/m3	1.7	0.69	1.39		01/18/17 00:19	106-46-7	
Dichlorodifluoromethane	**3.9**	ug/m3	3.5	0.67	1.39		01/18/17 00:19	75-71-8	
1,1-Dichloroethane	**<0.22**	ug/m3	1.1	0.22	1.39		01/18/17 00:19	75-34-3	
1,2-Dichloroethane	**<0.28**	ug/m3	0.57	0.28	1.39		01/18/17 00:19	107-06-2	
1,1-Dichloroethene	**<0.33**	ug/m3	1.1	0.33	1.39		01/18/17 00:19	75-35-4	
cis-1,2-Dichloroethene	**<0.34**	ug/m3	1.1	0.34	1.39		01/18/17 00:19	156-59-2	
trans-1,2-Dichloroethene	**<0.53**	ug/m3	1.1	0.53	1.39		01/18/17 00:19	156-60-5	
1,2-Dichloropropane	**<0.38**	ug/m3	1.3	0.38	1.39		01/18/17 00:19	78-87-5	
cis-1,3-Dichloropropene	**<0.51**	ug/m3	1.3	0.51	1.39		01/18/17 00:19	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 7367 Hedlund DX
Pace Project No.: 10376059

Sample: VP-2 **Lab ID: 10376059002** Collected: 01/12/17 02:55 Received: 01/17/17 09:40 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
trans-1,3-Dichloropropene	**<0.36**	ug/m3	1.3	0.36	1.39		01/18/17 00:19	10061-02-6	
Dichlorotetrafluoroethane	**<0.43**	ug/m3	2.0	0.43	1.39		01/18/17 00:19	76-14-2	
Ethyl acetate	**25.3**	ug/m3	1.0	0.48	1.39		01/18/17 00:19	141-78-6	
Ethylbenzene	**6.0**	ug/m3	1.2	0.59	1.39		01/18/17 00:19	100-41-4	
4-Ethyltoluene	**4.2**	ug/m3	1.4	0.26	1.39		01/18/17 00:19	622-96-8	
n-Heptane	**4.0**	ug/m3	1.2	0.39	1.39		01/18/17 00:19	142-82-5	
Hexachloro-1,3-butadiene	**<0.90**	ug/m3	3.0	0.90	1.39		01/18/17 00:19	87-68-3	
n-Hexane	**13.3**	ug/m3	1.0	0.50	1.39		01/18/17 00:19	110-54-3	
2-Hexanone	**<0.57**	ug/m3	5.8	0.57	1.39		01/18/17 00:19	591-78-6	
Methylene Chloride	**52.4**	ug/m3	4.9	0.75	1.39		01/18/17 00:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.30**	ug/m3	5.8	0.30	1.39		01/18/17 00:19	108-10-1	
Methyl-tert-butyl ether	**<0.42**	ug/m3	5.1	0.42	1.39		01/18/17 00:19	1634-04-4	
Propylene	**<0.19**	ug/m3	0.49	0.19	1.39		01/18/17 00:19	115-07-1	
Styrene	**0.80J**	ug/m3	1.2	0.27	1.39		01/18/17 00:19	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.46**	ug/m3	0.97	0.46	1.39		01/18/17 00:19	79-34-5	
Tetrachloroethene	**<0.39**	ug/m3	0.96	0.39	1.39		01/18/17 00:19	127-18-4	
Tetrahydrofuran	**<0.17**	ug/m3	0.83	0.17	1.39		01/18/17 00:19	109-99-9	
Toluene	**58.7**	ug/m3	1.1	0.21	1.39		01/18/17 00:19	108-88-3	
1,2,4-Trichlorobenzene	**<1.3**	ug/m3	5.2	1.3	1.39		01/18/17 00:19	120-82-1	
1,1,1-Trichloroethane	**<0.34**	ug/m3	1.5	0.34	1.39		01/18/17 00:19	71-55-6	
1,1,2-Trichloroethane	**<0.34**	ug/m3	0.76	0.34	1.39		01/18/17 00:19	79-00-5	
Trichloroethene	**<0.38**	ug/m3	0.76	0.38	1.39		01/18/17 00:19	79-01-6	
Trichlorofluoromethane	**1.4J**	ug/m3	1.6	0.18	1.39		01/18/17 00:19	75-69-4	
1,1,2-Trichlorotrifluoroethane	**<0.42**	ug/m3	2.2	0.42	1.39		01/18/17 00:19	76-13-1	
1,2,4-Trimethylbenzene	**15.9**	ug/m3	1.4	0.17	1.39		01/18/17 00:19	95-63-6	
1,3,5-Trimethylbenzene	**3.7**	ug/m3	1.4	0.25	1.39		01/18/17 00:19	108-67-8	
Vinyl acetate	**3.0**	ug/m3	1.0	0.46	1.39		01/18/17 00:19	108-05-4	
Vinyl chloride	**<0.27**	ug/m3	0.36	0.27	1.39		01/18/17 00:19	75-01-4	
m&p-Xylene	**25.3**	ug/m3	2.5	1.1	1.39		01/18/17 00:19	179601-23-1	
o-Xylene	**9.5**	ug/m3	1.2	0.49	1.39		01/18/17 00:19	95-47-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 7367 Hedlund DX
Pace Project No.: 10376059

QC Batch: 456042 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10376059001, 10376059002

METHOD BLANK: 2496434 Matrix: Air
Associated Lab Samples: 10376059001, 10376059002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	<0.25	1.1	01/17/17 16:40	
1,1,2,2-Tetrachloroethane	ug/m3	<0.33	0.70	01/17/17 16:40	
1,1,2-Trichloroethane	ug/m3	<0.25	0.55	01/17/17 16:40	
1,1,2-Trichlorotrifluoroethane	ug/m3	<0.30	1.6	01/17/17 16:40	
1,1-Dichloroethane	ug/m3	<0.16	0.82	01/17/17 16:40	
1,1-Dichloroethene	ug/m3	<0.24	0.81	01/17/17 16:40	
1,2,4-Trichlorobenzene	ug/m3	<0.91	3.8	01/17/17 16:40	
1,2,4-Trimethylbenzene	ug/m3	<0.12	1.0	01/17/17 16:40	
1,2-Dibromoethane (EDB)	ug/m3	<0.77	1.6	01/17/17 16:40	
1,2-Dichlorobenzene	ug/m3	<0.51	1.2	01/17/17 16:40	
1,2-Dichloroethane	ug/m3	<0.20	0.41	01/17/17 16:40	
1,2-Dichloropropane	ug/m3	<0.27	0.94	01/17/17 16:40	
1,3,5-Trimethylbenzene	ug/m3	<0.18	1.0	01/17/17 16:40	
1,3-Butadiene	ug/m3	<0.18	0.45	01/17/17 16:40	
1,3-Dichlorobenzene	ug/m3	<0.53	1.2	01/17/17 16:40	
1,4-Dichlorobenzene	ug/m3	<0.50	1.2	01/17/17 16:40	
2-Butanone (MEK)	ug/m3	<0.23	3.0	01/17/17 16:40	
2-Hexanone	ug/m3	<0.41	4.2	01/17/17 16:40	
4-Ethyltoluene	ug/m3	<0.19	1.0	01/17/17 16:40	
4-Methyl-2-pentanone (MIBK)	ug/m3	<0.22	4.2	01/17/17 16:40	
Acetone	ug/m3	<0.83	2.4	01/17/17 16:40	
Benzene	ug/m3	<0.12	0.32	01/17/17 16:40	
Bromodichloromethane	ug/m3	<0.19	1.4	01/17/17 16:40	
Bromoform	ug/m3	<0.90	2.1	01/17/17 16:40	
Bromomethane	ug/m3	<0.31	0.79	01/17/17 16:40	
Carbon disulfide	ug/m3	<0.10	0.63	01/17/17 16:40	
Carbon tetrachloride	ug/m3	<0.19	0.64	01/17/17 16:40	
Chlorobenzene	ug/m3	<0.13	0.94	01/17/17 16:40	
Chloroethane	ug/m3	<0.19	0.54	01/17/17 16:40	
Chloroform	ug/m3	<0.19	0.50	01/17/17 16:40	
Chloromethane	ug/m3	<0.11	0.42	01/17/17 16:40	
cis-1,2-Dichloroethene	ug/m3	<0.25	0.81	01/17/17 16:40	
cis-1,3-Dichloropropene	ug/m3	<0.37	0.92	01/17/17 16:40	
Cyclohexane	ug/m3	<0.32	0.70	01/17/17 16:40	
Dibromochloromethane	ug/m3	<0.86	1.7	01/17/17 16:40	
Dichlorodifluoromethane	ug/m3	<0.48	2.5	01/17/17 16:40	
Dichlorotetrafluoroethane	ug/m3	<0.31	1.4	01/17/17 16:40	
Ethyl acetate	ug/m3	<0.35	0.73	01/17/17 16:40	
Ethylbenzene	ug/m3	<0.42	0.88	01/17/17 16:40	
Hexachloro-1,3-butadiene	ug/m3	<0.65	2.2	01/17/17 16:40	
m&p-Xylene	ug/m3	<0.79	1.8	01/17/17 16:40	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 7367 Hedlund DX
Pace Project No.: 10376059

METHOD BLANK: 2496434 Matrix: Air
Associated Lab Samples: 10376059001, 10376059002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Methyl-tert-butyl ether	ug/m3	<0.30	3.7	01/17/17 16:40	
Methylene Chloride	ug/m3	<0.54	3.5	01/17/17 16:40	
n-Heptane	ug/m3	<0.28	0.83	01/17/17 16:40	
n-Hexane	ug/m3	<0.36	0.72	01/17/17 16:40	
o-Xylene	ug/m3	<0.35	0.88	01/17/17 16:40	
Propylene	ug/m3	<0.14	0.35	01/17/17 16:40	
Styrene	ug/m3	<0.19	0.87	01/17/17 16:40	
Tetrachloroethene	ug/m3	<0.28	0.69	01/17/17 16:40	
Tetrahydrofuran	ug/m3	<0.12	0.60	01/17/17 16:40	
Toluene	ug/m3	<0.15	0.77	01/17/17 16:40	
trans-1,2-Dichloroethene	ug/m3	<0.38	0.81	01/17/17 16:40	
trans-1,3-Dichloropropene	ug/m3	<0.26	0.92	01/17/17 16:40	
Trichloroethene	ug/m3	<0.28	0.55	01/17/17 16:40	
Trichlorofluoromethane	ug/m3	<0.13	1.1	01/17/17 16:40	
Vinyl acetate	ug/m3	<0.33	0.72	01/17/17 16:40	
Vinyl chloride	ug/m3	<0.20	0.26	01/17/17 16:40	

LABORATORY CONTROL SAMPLE: 2496435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	58.2	54.7	94	60-143	
1,1,2,2-Tetrachloroethane	ug/m3	74.7	81.4	109	49-150	
1,1,2-Trichloroethane	ug/m3	59.3	57.5	97	57-149	
1,1,2-Trichlorotrifluoroethane	ug/m3	81.8	75.1	92	66-131	
1,1-Dichloroethane	ug/m3	43.6	40.9	94	62-139	
1,1-Dichloroethene	ug/m3	42.7	39.1	92	62-135	
1,2,4-Trichlorobenzene	ug/m3	74.7	130	174	55-146	L1,SS
1,2,4-Trimethylbenzene	ug/m3	51.5	59.7	116	57-143	
1,2-Dibromoethane (EDB)	ug/m3	83.6	83.9	100	63-150	
1,2-Dichlorobenzene	ug/m3	63.6	81.9	129	57-141	
1,2-Dichloroethane	ug/m3	44	42.1	96	61-144	
1,2-Dichloropropane	ug/m3	50.7	48.8	96	63-144	
1,3,5-Trimethylbenzene	ug/m3	51.5	58.9	115	54-147	
1,3-Butadiene	ug/m3	23.4	21.7	93	61-140	
1,3-Dichlorobenzene	ug/m3	61.7	80.1	130	51-150	
1,4-Dichlorobenzene	ug/m3	63.6	78.8	124	57-143	
2-Butanone (MEK)	ug/m3	32.4	29.0	89	66-144	
2-Hexanone	ug/m3	44.6	46.5	104	63-147	
4-Ethyltoluene	ug/m3	49.5	59.1	119	56-150	
4-Methyl-2-pentanone (MIBK)	ug/m3	44.6	44.3	99	58-150	
Acetone	ug/m3	25.1	24.0	96	46-140	
Benzene	ug/m3	34.7	31.8	92	62-141	
Bromodichloromethane	ug/m3	72.2	70.6	98	58-149	
Bromoform	ug/m3	116	136	118	61-150	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 7367 Hedlund DX
Pace Project No.: 10376059

LABORATORY CONTROL SAMPLE: 2496435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/m3	39.1	38.1	98	58-136	
Carbon disulfide	ug/m3	33.2	35.7	107	59-135	
Carbon tetrachloride	ug/m3	68.4	75.2	110	60-149	
Chlorobenzene	ug/m3	50.1	49.7	99	60-150	
Chloroethane	ug/m3	26.3	27.5	105	61-136	
Chloroform	ug/m3	51.1	53.2	104	65-138	
Chloromethane	ug/m3	21.4	20.5	96	62-133	
cis-1,2-Dichloroethene	ug/m3	43.9	41.9	95	65-139	
cis-1,3-Dichloropropene	ug/m3	51.7	49.9	97	61-149	
Cyclohexane	ug/m3	37.1	35.2	95	64-134	
Dibromochloromethane	ug/m3	97	94.5	97	59-150	
Dichlorodifluoromethane	ug/m3	52.8	49.8	94	63-134	
Dichlorotetrafluoroethane	ug/m3	69.6	66.8	96	62-134	
Ethyl acetate	ug/m3	37.7	37.4	99	55-146	
Ethylbenzene	ug/m3	47.7	46.7	98	59-149	
Hexachloro-1,3-butadiene	ug/m3	109	156	143	42-150	SS
m&p-Xylene	ug/m3	47.7	48.7	102	59-146	
Methyl-tert-butyl ether	ug/m3	38.8	37.2	96	64-135	
Methylene Chloride	ug/m3	39.2	35.4	90	64-128	
n-Heptane	ug/m3	44.2	41.4	94	64-140	
n-Hexane	ug/m3	38.7	32.9	85	50-138	
o-Xylene	ug/m3	47.2	47.2	100	54-149	
Propylene	ug/m3	19.2	16.5	86	58-135	
Styrene	ug/m3	45.5	49.2	108	54-150	
Tetrachloroethene	ug/m3	72.4	69.9	97	60-142	
Tetrahydrofuran	ug/m3	33	31.5	95	56-143	
Toluene	ug/m3	41.4	38.0	92	61-138	
trans-1,2-Dichloroethene	ug/m3	41.9	43.2	103	67-137	
trans-1,3-Dichloropropene	ug/m3	48.4	52.0	107	59-145	
Trichloroethene	ug/m3	57.9	55.3	96	60-144	
Trichlorofluoromethane	ug/m3	58.8	53.8	91	59-134	
Vinyl acetate	ug/m3	40.4	36.8	91	55-143	
Vinyl chloride	ug/m3	27	25.9	96	63-135	

SAMPLE DUPLICATE: 2497269

Parameter	Units	10376052001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	<0.37		25	
1,1,2,2-Tetrachloroethane	ug/m3	ND	<0.49		25	
1,1,2-Trichloroethane	ug/m3	ND	<0.37		25	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	<0.45		25	
1,1-Dichloroethane	ug/m3	ND	<0.23		25	
1,1-Dichloroethene	ug/m3	ND	<0.35		25	
1,2,4-Trichlorobenzene	ug/m3	ND	<1.4		25	
1,2,4-Trimethylbenzene	ug/m3	ND	1.1J		25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 7367 Hedlund DX
Pace Project No.: 10376059

SAMPLE DUPLICATE: 2497269

Parameter	Units	10376052001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/m3	ND	<1.2		25	
1,2-Dichlorobenzene	ug/m3	ND	<0.76		25	
1,2-Dichloroethane	ug/m3	ND	<0.31		25	
1,2-Dichloropropane	ug/m3	ND	<0.40		25	
1,3,5-Trimethylbenzene	ug/m3	ND	<0.27		25	
1,3-Butadiene	ug/m3	ND	<0.26		25	
1,3-Dichlorobenzene	ug/m3	ND	<0.79		25	
1,4-Dichlorobenzene	ug/m3	ND	<0.74		25	
2-Butanone (MEK)	ug/m3	9.2	9.7	5	25	
2-Hexanone	ug/m3	ND	<0.61		25	
4-Ethyltoluene	ug/m3	ND	<0.28		25	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	<0.32		25	
Acetone	ug/m3	19.9	21.2	6	25	
Benzene	ug/m3	1.6	1.6	2	25	
Bromodichloromethane	ug/m3	ND	<0.29		25	
Bromoform	ug/m3	ND	<1.3		25	
Bromomethane	ug/m3	ND	<0.46		25	
Carbon disulfide	ug/m3	ND	<0.15		25	
Carbon tetrachloride	ug/m3	ND	<0.29		25	
Chlorobenzene	ug/m3	ND	<0.20		25	
Chloroethane	ug/m3	ND	<0.29		25	
Chloroform	ug/m3	ND	<0.28		25	
Chloromethane	ug/m3	1.1	1.1	0	25	
cis-1,2-Dichloroethene	ug/m3	ND	<0.37		25	
cis-1,3-Dichloropropene	ug/m3	ND	<0.55		25	
Cyclohexane	ug/m3	ND	0.87J		25	
Dibromochloromethane	ug/m3	ND	<1.3		25	
Dichlorodifluoromethane	ug/m3	ND	2.7J		25	
Dichlorotetrafluoroethane	ug/m3	ND	<0.46		25	
Ethyl acetate	ug/m3	ND	<0.52		25	
Ethylbenzene	ug/m3	ND	0.71J		25	
Hexachloro-1,3-butadiene	ug/m3	ND	<0.97		25	
m&p-Xylene	ug/m3	ND	2.4J		25	
Methyl-tert-butyl ether	ug/m3	ND	<0.45		25	
Methylene Chloride	ug/m3	24.5	25.8	5	25	
n-Heptane	ug/m3	ND	1.1J		25	
n-Hexane	ug/m3	6.9	7.4	6	25	
o-Xylene	ug/m3	ND	1.0J		25	
Propylene	ug/m3	ND	<0.20		25	
Styrene	ug/m3	ND	<0.29		25	
Tetrachloroethene	ug/m3	ND	<0.41		25	
Tetrahydrofuran	ug/m3	3.3	3.7	9	25	
Toluene	ug/m3	4.0	4.2	5	25	
trans-1,2-Dichloroethene	ug/m3	ND	<0.57		25	
trans-1,3-Dichloropropene	ug/m3	ND	<0.39		25	
Trichloroethene	ug/m3	ND	<0.41		25	
Trichlorofluoromethane	ug/m3	ND	1.6J		25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 7367 Hedlund DX
Pace Project No.: 10376059

SAMPLE DUPLICATE: 2497269

Parameter	Units	10376052001 Result	Dup Result	RPD	Max RPD	Qualifiers
Vinyl acetate	ug/m3	ND	<0.49		25	
Vinyl chloride	ug/m3	ND	<0.29		25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 7367 Hedlund DX
Pace Project No.: 10376059

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.
SS	This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 7367 Hedlund DX
Pace Project No.: 10376059

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10376059001	**VP-1**	TO-15	456042		
10376059002	**VP-2**	TO-15	456042		

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16376059

AIR: CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

25172

Page: 1 of 1

Section A Required Client Information:

Company: RET
Address: 4080 N. 20th Ave
Wausau WI 54401
Email To: dlarsen@retengineering.com
Phone: 715-675-9764 Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: David Carlson
Copy To:
Purchase Order No.:
Project Name: Medford OX
Project Number: 7367

Section C Invoice Information:

Attention: David Carlson
Company Name: RET Engineering Inc
Address: 4080 N. 20th Ave
Pace Quote Reference:
Pace Project Manager/Sales Rep.
Pace Profile #:

Program: [X] UST [ ] Superfund [ ] Emissions [ ] Clean Air Act [ ] Voluntary Clean Up [ ] Dry Clean [ ] RCRA [ ] Other

Location of Sampling by State:

Reporting Units: ug/m³ mg/m³ PPBV PPMV Other

Report Level II. III. IV. Other

Section D Required Client Information

AIR SAMPLE ID
Sample IDs MUST BE UNIQUE

Valid Media Codes

MEDIA	CODE
Tedlar Bag	TB
1 Liter Summa Can	1LC
6 Liter Summa Can	6LC
Low Volume Puff	LVP
High Volume Puff	HVP
Other	PM10

ITEM #	AIR SAMPLE ID	MEDIA CODE	PID Reading (Client only)	COLLECTED COMPOSITE START END/GRAB DATE	COLLECTED COMPOSITE START END/GRAB TIME	COLLECTED COMPOSITE END DATE	COLLECTED COMPOSITE END TIME	Canister Pressure (Initial Field - psig)	Canister Pressure (Final Field - psig)	Summa Can Number	Flow Control Number	Method: PM10	3C- Fixed Gas (%)	TO-3	TO-3M (Methane)	TO-4 (PCBs)	TO-13 (PAH)	TO-14	TO-15	TO15 Short List*	Pace Lab ID
1	UP-1			1-12-17	1:30	1-12	2:15	29	4	17625	6075							X			001
2	UP-2			1-12-17	2:25	1-12	2:55	23	5	02555	2849							X			002
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature]	1-13-17	10:45am	[signature]	1/17/17	0940

SAMPLE CONDITIONS

AMB	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed (MM / DD / YY)

ORIGINAL

Pace Analytical	Document Name: Air Sample Condition Upon Receipt	Document Revised: 26APR2016 Page 1 of 1
	Document No.: F-MN-A-106-rev.11	Issuing Authority: Pace Minnesota Quality Office

Air Sample Condition Upon Receipt

Client Name: REI

Project #: WO# : 10376059

10376059

Courier: ☑ Fed Ex ☐ UPS ☐ Speedee ☐ Client ☐ Commercial ☐ Pace ☐ Other:

Tracking Number: 6637 5040 9150

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No **Seals Intact?** ☐ Yes ☒ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ Foam ☐ None ☐ Tin Can ☐ Other: **Temp Blank rec:** ☐ Yes ☒ No

Temp. (TO17 and TO13 samples only) (°C): Y **Corrected Temp (°C):** Y **Thermom. Used:** ☐ B88A912167504 ☐ B88A0143310098 ☐ 151401163 ☐ 151401164

Temp should be above freezing to 6°C **Correction Factor:** 0 **Date & Initials of Person Examining Contents:** 1/17/17

Type of ice Received ☐ Blue ☐ Wet ☒ None

				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 and/or Signature on COC?	☐ Yes	☑ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ 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.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Media: Air Can Airbag Filter TDT Passive				11.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	12.

Samples Received:

Canisters			Canisters		
Sample Number	Can ID	Flow Controller ID	Sample Number	Can ID	Flow Controller ID

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: Carolyne Trust **Date:** 1/18/17

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)