

General Engineering Company  
P.O. Box 340  
916 Silver Lake Drive  
Portage, WI 53901



608-742-2169 (Office)  
608-742-2592 (Fax)  
[gec@generalengineering.net](mailto:gec@generalengineering.net)  
[www.generalengineering.net](http://www.generalengineering.net)

*Engineers • Consultants • Inspectors*

December 21, 2016

Ms. Janet DiMaggio  
Wisconsin Department of Natural Resources  
3911 Fish Hatchery Road  
Fitchburg, WI 53711

**SUBJECT: STATUS UPDATE/GROUNDWATER MONITORING REPORT**  
Hugo Speaker Property  
6832 US Highway 18  
Mount Ida, Wisconsin  
BRRTs #: 03-22-178494  
PECFA # 53809-9640-32

Dear Ms. DiMaggio,

Attached is a Status Update/Groundwater Monitoring Report for the Site Investigation Activity at the Hugo Speaker Property, located at 6832 US Highway 18, Mount Ida, Wisconsin.

Please feel free to contact General Engineering Company with any questions at 608-742-2169.

Sincerely yours,

**GENERAL ENGINEERING COMPANY**

A handwritten signature in black ink that reads 'Brian Youngwirth'.

Brian Youngwirth  
Environmental Project Manager

A handwritten signature in black ink that reads 'Kory D. Anderson'.

Kory D. Anderson, P.E.  
Vice President

c: Sharon Speaker

Portage

• Black River Falls

• La Crosse



Consulting Engineering • Structural Engineering • Building Design • Environmental Services • Building Inspection • GIS Services  
Grant Procurement & Administration • Land Surveying • Zoning Administration • Mechanical, Electrical, & Plumbing Services



General Engineering Company  
P.O. Box 340  
916 Silver Lake Drive  
Portage, WI 53901



608-742-2169 (Office)  
608-742-2592 (Fax)  
[gec@generalengineering.net](mailto:gec@generalengineering.net)  
[www.generalengineering.net](http://www.generalengineering.net)

*Engineers • Consultants • Inspectors*

**TABLE OF CONTENTS  
HUGO SPEAKER PROPERTY**

	<u>Page</u>
<b>INTRODUCTION</b>	<b>1</b>
<ul style="list-style-type: none"><li>• General</li><li>• Purpose</li><li>• Scope</li><li>• Authorization</li></ul>	
<b>SITE FEATURES AND BACKGROUND</b>	<b>1-3</b>
<ul style="list-style-type: none"><li>• Site Features</li><li>• Background</li></ul>	
<b>FIELD ACTIVITIES AND PROCEDURES</b>	<b>3-4</b>
<ul style="list-style-type: none"><li>• Scope Summary</li><li>• Field Exploration</li><li>• Field Volatile Vapor Emission Screening</li></ul>	
<b>DESCRIPTION OF SUBSURFACE CONDITIONS</b>	<b>4</b>
<ul style="list-style-type: none"><li>• General</li><li>• Soil Conditions</li></ul>	
<b>GROUNDWATER MONITORING ACTIVITIES</b>	<b>5</b>
<ul style="list-style-type: none"><li>• Monitoring Well Development</li><li>• Groundwater Sampling</li><li>• Groundwater Well Elevations</li></ul>	
<b>EVALUATION AND DISCUSSION</b>	<b>5-6</b>
<ul style="list-style-type: none"><li>• Groundwater Quality Standards</li><li>• Laboratory Groundwater Results</li></ul>	
<b>CONCLUSIONS</b>	<b>6</b>
<b>GENERAL COMMENTS</b>	<b>6</b>



General Engineering Company  
P.O. Box 340  
916 Silver Lake Drive  
Portage, WI 53901



608-742-2169 (Office)  
608-742-2592 (Fax)  
[gec@generalengineering.net](mailto:gec@generalengineering.net)  
[www.generalengineering.net](http://www.generalengineering.net)

*Engineers • Consultants • Inspectors*

## APPENDICES

### APPENDIX A

- Figure 1 – Regional Site Location Map
- Figure 2 – Site Plan Map
- Figure 3 – Soil Boring and Monitoring Well Location Map
- Figure 4 - Groundwater Elevation and Contour Map—October 17 ,2016

### APPENDIX B

- Table 1 - Summary of Soil Analytical Results
- Table 2 – Summary of Groundwater Analytical Results
- Table 3 – Groundwater Elevation Table

### APPENDIX C

- Groundwater Analytical Reports
- Chain of Custodies

### APPENDIX D

- Soil Boring Logs
- Monitoring Well Construction Forms
- Monitoring Well Development Forms

# Status Update/Groundwater Monitoring Report

Speaker Property

Page 1

## INTRODUCTION

### General

This report presents the findings for the subsurface investigative activities performed at the Hugo Speaker Property located at 6382 US Highway 18, Mount Ida, Grant County, Wisconsin since the most recent Status Update, which was submitted to the Wisconsin Department of Natural Resources (WDNR) on August 13, 2015. In addition, this report presents recommendations for additional work, based on the findings. The activities were performed at the request and authorization of Mrs. Sharon Speaker, the former property owner and responsible party for the release.

### Purpose

The purpose of the investigation was to further evaluate the extent of petroleum affected groundwater resulting from a release from a former underground storage tank system.

### Scope

The scope of the most recent site investigation activities included the advancement of three (3) soil borings; air rotary drilling; the installation of three monitoring wells, collection of two (2) rounds of groundwater samples from the monitoring wells for laboratory analysis, an analysis of the data obtained; and preparation of this report. The investigation activities were structured specifically to address the presence of constituents associated with the former USTs.

### Authorization

Authorization to perform this site investigation was in the form of an acceptance copy of the Wisconsin Department of Commerce agent contract, dated May 12, 2010 and signed by Sharon Speaker on June 3, 2010. This report has been prepared on behalf of, and exclusively for the use of Sharon Speaker. The information contained in this Status Update/Groundwater Monitoring Report may not be relied upon by any other parties without the expressed written consent of General Engineering and Client, and acceptance by such parties of General Engineering's General Conditions.

## SITE FEATURES AND BACKGROUND

### Site Features

The project site is located at 6832 U.S. Highway 18 in Mount Ida, Wisconsin. More specifically, the property is located within the Northwest ¼ of the Northwest ¼ of Section 29, Township 06 North, Range 03 West, Grant County, Wisconsin. The site is located within a rural area surrounded by primarily residential properties and wooded land. A site location map is shown in Figure 1, Appendix A.

The subject site is currently occupied by a residence on the southwestern portion of the property. The surrounding properties are comprised of residential properties to the west; vacant or wooded land to the north; dense wooded land followed by a residential property to the east; and US Highway 18, followed by residential properties to the southwest.

# Status Update/Groundwater Monitoring Report

Speaker Property

Page 2

## Background

According to Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) records, one (1) 500 gallon single wall tank containing unleaded gasoline and one (1) 500 gallon single wall tank containing leaded gasoline are registered to the site as closed/removed on December 9, 1997. It is understood that the tanks were formerly located to the west of the northwest corner of the building and the dispensers were located along the southwestern portion of the property, located along Hwy 18. The locations of the former USTs are shown on Figure 2, Appendix A.

The WDNR was reportedly notified of a release on December 12, 1997 and a responsible party (RP) letter was sent on December 23, 1997. The case remained idle for several years and a push action was taken by the WDNR on December 27, 2004 followed by a deed affidavit for enforcement on March 28, 2005, and an additional push action on October 9, 2009. As a result, General Engineering Company was retained in May of 2010 to perform a soil and groundwater investigation at the site.

As part of the initial site investigation activities, six (6) soil probes, designated GP-1 to GP-6, were advanced on September 23, 2010. Due to the uneven and steep terrain, an all-terrain soil probe unit advanced seven additional probes, designated GP-7 to GP-13, on October 14, 2010 to further evaluate the extent of affected soil. The probes were advanced until refusal on bedrock at depths ranging from 4 feet to 14 feet below ground surface. Petroleum affected soils were encountered west/southwest of the structure near the location of the former tank bed and beyond toward the southwest and the former dispenser area.

Due to the presence of soil contamination to the depth of bedrock, one (1) boring was advanced into bedrock on June 3, 2011. Due to the terrain, a truck-mounted drilling rig could not access the former tank or dispenser area. Therefore, soil boring MW-1 was advanced just west of the property boundary, northwest of the former tank system. The boring was blind drilled to a depth of 8 feet to auger refusal on bedrock and advanced to a depth of approximately 32 feet utilizing air rotary drilling techniques. The boring was converted to a monitoring well, designated MW-1. Due to the presence of petroleum compounds within the initial groundwater sample collected from MW-1, two additional soil borings were advanced into bedrock on September 2, 2011. One boring was advanced to the south/southeast of the former tank bed (MW-2) and one was advanced to the northeast of MW-1 beyond the subject property boundary to the west (MW-3). The borings were blind drilled to bedrock at depths of about 10 feet and 8 feet below grade, respectively. The borings were advanced utilizing air rotary drilling techniques to depths of about 59 feet and 36 feet, respectively. The locations of the soil probes, soil borings, and monitoring wells are shown on Figure 3, Appendix A.

The soils at the probe locations generally consisted of gravel or grass/topsoil underlain by variable natural soils consisting of reddish brown and brown silty clay, silty sand, and sandy silt with varying amounts of gravel extending to bedrock at depths of 4 to 14 feet below grade. Groundwater was not encountered within the soil probes. At the soil borings, groundwater was encountered within bedrock at depths ranging from about 15 to 40 feet below grade.

Petroleum odors and PID results were observed within the samples collected from GP-2, GP-4, GP-7, GP-8, GP-9, and GP-10. The highest PID levels (983 IU to 1,242 IU) were detected within the soil samples collected from GP-7 (southwest of the former tank system) and GP-10 (near the southeast corner of the former tank system) at depths of about 13 feet and 9 feet, respectively.

Soil samples were collected from each probe at depths of approximately 4 to 14 feet below grade, where bedrock was encountered. Soil samples were collected and analyzed for the presence of PVOC, naphthalene, and GRO. The soil samples collected from GP-2, GP-4, GP-7, GP-8, and GP-10 contained petroleum compounds at levels exceeding each compound's respective NR 720 cancer risk based residual contaminant level (C RCL) or soil to groundwater standards. The highest levels of petroleum compounds were detected within the sample collected from GP-7 (near the former dispensers) at a depth of 13 to 14 feet below ground surface (bgs). The sample contained benzene at a concentration of 1,240 micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ), ethylbenzene (27,100  $\mu\text{g}/\text{kg}$ ), naphthalene (9,300  $\mu\text{g}/\text{kg}$ ), toluene (8,660  $\mu\text{g}/\text{kg}$ ), total trimethylbenzene (84,200  $\mu\text{g}/\text{kg}$ ), and total xylenes

## Status Update/Groundwater Monitoring Report

Speaker Property

Page 3

(127,800 µg/kg). The detected concentrations exceed their respective NR 720 Cancer Residual Contaminant Level (C RCL) and/or soil to groundwater RCL. Soil analytical results are summarized on Table 1, Appendix A.

The samples collected at the remaining locations either did not contain petroleum compounds or did not contain them at levels exceeding their respective standards. None of the collected samples from the direct contact zone contained petroleum compounds at concentrations exceeding their respective standards. The results of the chemical analyses on the soil samples are summarized on Table 1, Appendix B.

Groundwater samples were collected from MW-1 on July 5, 2011. Groundwater samples were collected from monitoring wells MW-1 to MW-3 on November 22, 2011, June 21, 2012, June 4, 2013, and August 8, 2014. The groundwater samples collected from monitoring wells MW-1 and MW-3 have generally contained benzene, ethylbenzene, naphthalene, and trimethylbenzene, and 1,2 dichloroethane (1,2 DCA) at levels exceeding each compound's respective NR 140 ES of 5 micrograms per liter (µg/l), 700 µg/l, 100 µg/l, 480 µg/l, and 5 µg/l, respectively. The highest levels were observed within the samples collected from MW-1, which contained benzene levels of 2,540 µg/l, 1,640 µg/l, 2,710 µg/l, 1,260 µg/l, and 2,490 µg/l during the sampling rounds performed. The samples collected from MW-3 contained benzene levels of 1,210 µg/l, 19.9 µg/l, 364 µg/l, and 990 µg/l. The samples collected from MW-2 contained benzene at levels exceeding its NR 140 PAL during the initial two sampling rounds but did not contain PVOCs or naphthalene during the June 4, 2013 and August 8, 2014 sampling rounds. The results of the groundwater analyses are summarized in Table 2 in Appendix B.

Based on the soil probes and borings/monitoring wells performed to date, it appears that the extent of soil contamination has generally been defined and is confined to the area of the former USTs and to the southwest of the former USTs (GP-2, GP-7, GP-8, and GP-10). However, it is possible that soil contamination may extend beneath the residence to the southeast of the former tanks. At the time of the most recent Status Update (August 13, 2015), the house on the subject site was unoccupied. GEC recommended that a preliminary vapor sample be collected from the lowest level of the house to address concerns related to the migration of vapors into the structure. Since submittal of the August 13, 2015 Status Update, the property is under new ownership and the house is being occupied by the new owner. The vapor testing has not been performed as of the date of this report and funds to perform the testing will be requested as part of a bid deferral request, which will be submitted subsequent to this status update.

With regard to the groundwater, since groundwater samples collected from MW-1 and MW-3 contained PVOCs, naphthalene, and 1,2 DCA at concentrations exceeding the NR 140 ES, GEC recommended the installation of three additional bedrock monitoring wells the northeast, north and northwest of the former tank area, beyond MW-1 and MW-3. The installation of the three additional wells and additional groundwater sampling rounds are discussed herein.

### FIELD ACTIVITIES AND PROCEDURES

#### Scope Summary

The scope of field exploration during the most recent site investigation activities included the advancement of three (3) soil borings; air rotary drilling; installation of a monitoring well (MW-6); two bedrock monitoring wells (MW-4 and MW-5); and performance of two (2) rounds of groundwater sampling. The monitoring wells were installed to further evaluate the extent of affected groundwater and the stability of the contaminant plume.

The soil borings/monitoring wells were performed by Ground Source (MW-4) or Soils & Engineering Services, Inc. (MW-5 and MW-6) under the direction of General Engineering. Soil samples were collected by driving a 24-inch split spoon into undisturbed soils. Two of the borings (MW-4 and MW-5) were advanced to bedrock and were completed utilizing air rotary drilling techniques.

Since the area of affected soil appears to have been defined and no petroleum odors or PID results were detected within the samples or cutting from the soil borings, no soil samples from MW-4, MW-5, and MW-6 were submitted for laboratory analysis.

## Status Update/Groundwater Monitoring Report

Speaker Property

Page 4

### Field Exploration

As part of the additional site investigation activities, one (1) monitoring well (MW-6) and one (1) bedrock monitoring well (MW-4) were performed on June 30, 2016 and October 11, 2016, respectively. A bedrock monitoring well (MW-5) was also performed on October 11, 2016. Refusal was encountered within MW-4 and MW-5 at depths of 22 feet and 9 feet bgs, respectively. Refusal was not encountered at MW-6 to a depth of 26 feet. MW-4 and MW-5 were advanced utilizing air rotary drilling techniques to depths of 45.5 feet and 29 feet, respectively. The wells were installed to depths of 45 feet, 29 feet, and 22 feet, respectively. The locations of the monitoring wells are shown on Figure 3, Appendix A.

The monitoring well construction consisted of a 15-foot (MW-4 and MW-5) to 10-foot (MW-6) section of 2-inch diameter, machine slotted PVC screen placed at or near the bottom of the borehole. This was surrounded by a properly graded granular filter medium in the annular space, with un-slotted riser pipe extending from the screened section to about 6-inches below the ground surface. A bentonite seal of approximately 2 feet, was placed above the granular filter medium. The remaining annular space was filled to the ground surface with bentonite chips. Flush mounted protective covers were used to protect the wells. Monitoring well construction forms are included within Appendix D.

### Field Volatile Vapor Emission Screening

Soil samples collected from the soil borings were screened for volatile organic vapor emissions with a Photovac Photoionization Detector (PID). The soil samples were placed in a plastic bag and permitted to equilibrate to at least 70 degrees Fahrenheit for a period of at least 15 minutes, based upon the ambient outdoor temperature. The screening was then performed by inserting the probe in the bag and measuring the headspace. The PID is an electronic instrument that measures the relative concentration of volatile organic vapor emissions in the headspace of a container. The response of the instrument is dependent upon volatility, temperature, and the ionization potential of the compounds measured. The meter serves as one tool in selecting samples for analytical testing, as it only gives a relative indication of the presence of volatile organic vapor emissions, but cannot quantify concentrations of individual compounds. PID readings were not detected within the auger cutting from MW-4 or the soil samples collected from MW-5 and MW-6.

## DESCRIPTION OF SUBSURFACE CONDITIONS

### General

A description of the subsurface conditions encountered at the soil probe locations is shown on the soil boring logs in Appendix D. The lines of demarcation shown on the logs represent an approximate boundary between the various soil classifications, but the transition is likely to be more gradual. It must be recognized that the soil descriptions are considered representative for the specific location, and that variations may occur between and beyond the sampling intervals and probe locations. A summary of the major soil profile components is described in the following paragraphs.

### Soil Conditions

The soils at the boring locations generally consisted of grass/topsoil underlain by variable natural soils consisting of reddish brown clayey silty or brown sandy silt with varying amounts of gravel to the refusal or termination depths of the borings at depths ranging from 9 feet to 26 feet bgs. Bedrock was encountered at depths of 22 feet at MW-4 and 9 feet at MW-5. Groundwater was not encountered within the upper soils at MW-4 and MW-5, but was encountered at a depth of about 12 feet at MW-6. At MW-4 and MW-5, groundwater appeared to be encountered within bedrock at depths ranging from about 15 to 35 feet below grade.

No soil staining or petroleum odors were detected within the auger cutting collected at MW-4 or within the soil samples collected from MW-5 and MW-6. No PID results were detected in the collected samples.

## **GROUNDWATER MONITORING ACTIVITIES**

### Monitoring Well Development

Monitoring wells MW-4 to MW-6 were developed on October 17, 2016. The monitoring wells were developed by alternately surging and purging with a bailer. The well development and other pertinent details are shown on Well Development Forms (Form 4400-113B), included in Appendix D.

### Groundwater Sampling

Groundwater samples were collected from MW-1 to MW-6 on February 11, 2016 and October 17, 2016. The samples were submitted for laboratory analysis for the presence of PVOCs, naphthalene, and/or 1,2 dichloroethane (DCA).

Samples submitted for PVOC, naphthalene, or 1,2 DCA analysis were transferred into a laboratory prepared 40-milliliter vials containing Hydrochloric Acid preservative. The sample containers were placed on ice and standard chain-of-custody procedures were initiated. The samples submitted for lead analysis were field filtered and transferred into laboratory prepared 250-mL containers containing nitric acid preservative. The groundwater samples were submitted to Synergy Environmental Lab in Appleton, Wisconsin.

### Groundwater Well Elevations

Depth to groundwater at the site has ranged from 12.51 feet below (TOC) at MW-6 on October 17, 2016 to 48.23 feet below TOC at MW-2 on October 17, 2016. The groundwater elevation has ranged from EL. 1166.33 at MW-2 on October 17, 2016 to EL. 1197.79 at MW-1 on June 4, 2013. Groundwater elevation data is summarized on Table 3 in Appendix B.

The depth to groundwater and groundwater elevations appear to be highly variable based on the information collected to date with over 20 feet of groundwater elevation difference between wells MW-2 (near the former tank area) and the five outlying wells (MW-2 to MW-6). However, the groundwater elevations within MW-2 to MW-6 appear to be more consistent. It is likely that the water elevations are representative of perched groundwater based on the site topography. Based on the groundwater analytical results the groundwater flow direction appears to be toward the north/northeast. A groundwater elevation contour and flow direction map, dated October 17, 2016 is included as Figure 4 in Appendix A. Additional sampling and other monitoring points would be necessary to further evaluate groundwater flow on the subject property.

## **EVALUATION AND DISCUSSION**

### Groundwater Quality Standards

The Enforcement Standards (ESs) and Preventive Action Limits (PALs) are Groundwater Quality Standards, which have been established in NR140 of the Wisconsin Administrative Code. These Standards are referenced when evaluating the need for further study or remedial activities. The PAL is the more stringent guideline, in terms of being lesser in magnitude than the ES, but will typically require less response action when exceeded. The required action is determined by DNR regulations, based on various site-specific considerations.

### Laboratory Groundwater Results

Groundwater samples were collected from MW-1 to MW-3 on February 11, 2016. The samples collected from MW-1 and MW-3 contained a few PVOCs, naphthalene, and/or 1,2 DCA at concentrations exceeding their respective NR 140 ES. The concentrations detected were similar to those detected in the previous four sampling



## Status Update/Groundwater Monitoring Report

Speaker Property

Page 6

rounds. The samples collected from MW-2 did not contain detectable concentrations of PVOCs, naphthalene, or 1,2 DCA.

Groundwater samples were collected from MW-1 to MW-3 and newly installed monitoring wells MW-4 to MW-6 on October 17, 2016. The samples collected from MW-1 and MW-3 contained a few PVOCs and naphthalene at concentrations exceeding their respective NR 140 ES. Specifically, benzene was detected at concentrations of 2,220 µg/l and 930 µg/l, respectively. The samples collected from MW-5 and MW-6 contained benzene at levels exceeding the NR 140 ES with concentrations of 77 µg/l and 5.6 µg/l, respectively. The sample collected from MW-4 contained benzene (0.79J µg/l), which exceeds its NR 140 PAL of 0.5 µg/l. The sample collected from MW-2 did not contain detectable levels of PVOCs or naphthalene.

The results of the chemical analyses of the groundwater samples are summarized in Table 2 in Appendix B. Laboratory analytical results and chain of custody forms are included in the Appendix C.

### CONCLUSIONS

Based on the soil probes and borings/monitoring wells performed to date, it appears that the extent of soil contamination has generally been defined and is confined to the area of the former USTs and to the southwest of the former USTs (GP-2, GP-7, GP-8, and GP-10). However, it is possible that soil contamination may extend beneath the residence to the southeast of the former tanks. Additionally, the residence has recently been purchased and is currently occupied by the new owner of the property. Therefore, it is recommended that vapor testing be performed within the residence to address concerns related to the migration of vapors into the structure. Pending the results of that testing, General Engineering will provide recommendations regarding the need for the excavation of petroleum affected soils and/or vapor mitigation systems.

With regard to the groundwater, based on the collected groundwater samples, it appears that the extent of groundwater contamination has been generally defined and extends from the area of the former tank system/dispensers toward the northeast beyond MW-5. Although benzene (77µg/l) was detected in the sample collected from MW-5, the concentration is well below the benzene concentrations of 2,220 µg/l and 930 µg/l detected at MW-1 and MW-3, respectively, during the most recent sampling round. In addition, there is an overhead power line and heavily wooded area beyond MW-5 to the northeast and installation of an additional monitoring well is not feasible at the present time.

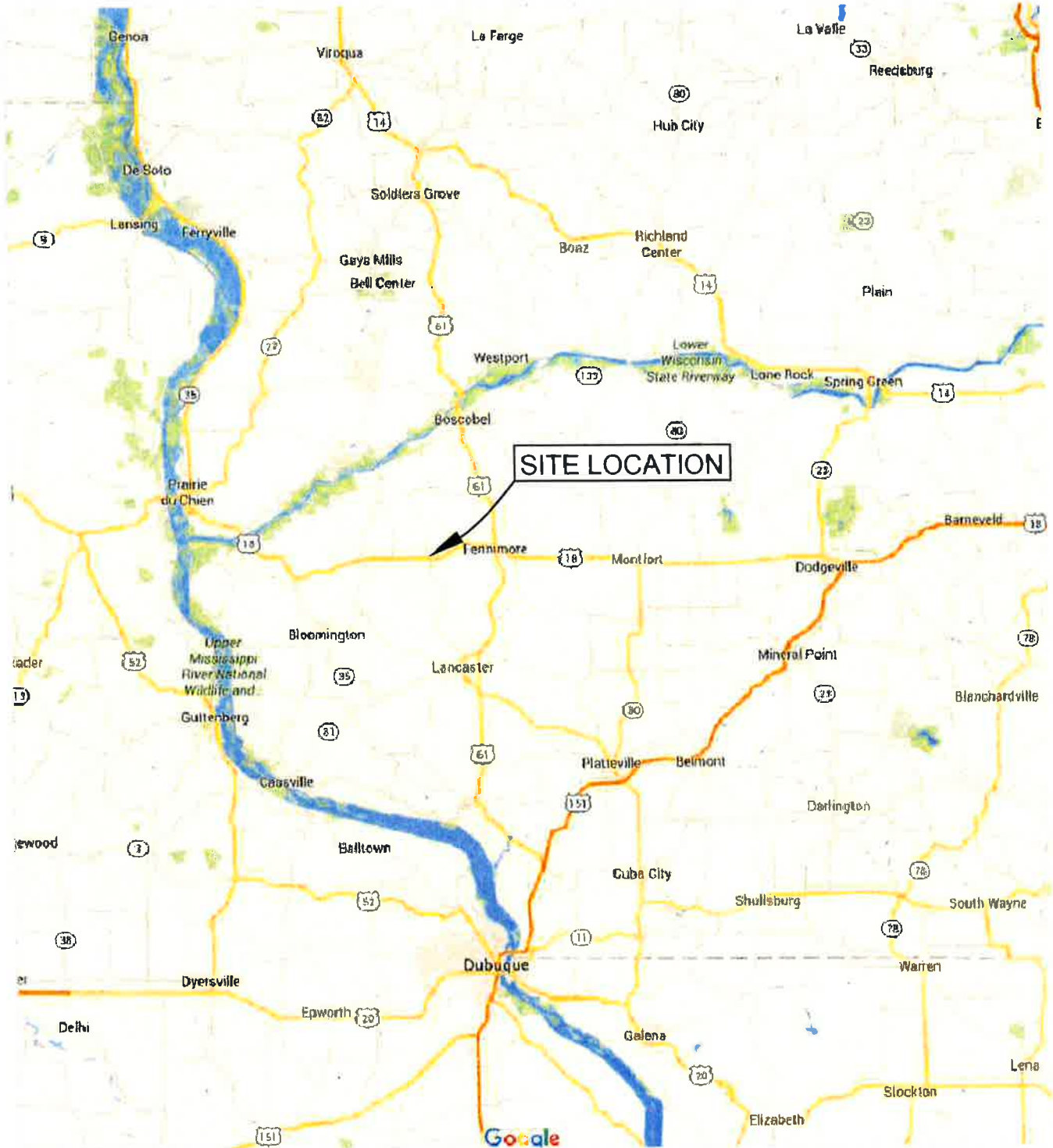
GEC proposes to submit a bid deferral request, which includes the costs to perform vapor testing within the residence (specific test locations and the type of vapor tests will be included within the request), collect two rounds of groundwater samples from the site monitoring wells (MW-1 to MW-6 and the potable well), and prepare a soil and groundwater site investigation report, which includes recommendations for a remedial action and/or additional groundwater monitoring, if it appears necessary.

### GENERAL COMMENTS

The investigative activities have been conducted in a manner consistent with that level of care ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. The findings, recommendations and opinions contained herein have been promulgated in accordance with generally accepted practice in similar fields. No other representations, expressed or implied, and no warranty or guarantee is included or intended in this report.

The conclusions presented in this report were formulated from the data obtained during the course of exploratory work on the site, which may result in a redirection of conclusions and interpretations where new information is obtained. The regulatory climate and interpretation may also have an effect on the outcome of the environmental investigation for this site. The information contained in this report may have an effect on the value of the property, and is considered confidential. Copies of this report will be submitted to others only with authorization from the client.

**APPENDIX A**  
**FIGURES**



**General Engineering Company**

P.O. Box 340 • 916 Silver Lake Dr. • Portage, WI 53801  
 608-742-2169 (Office) • 608-742-2592 (Fax)  
[www.generalengineering.net](http://www.generalengineering.net)

This document contains confidential or proprietary information of General Engineering Company. Neither this document nor the information herein is to be reproduced, distributed, used or disclosed either in whole or in part except as specifically authorized by General Engineering Company.

**SITE LOCATION MAP**

**Speaker Property &  
 Lutzen Property (Former Kreyer County Store)**  
 Town of Mount Ida  
 Grant County, WI



DRAWN BY	KP
REVIEWED BY	LMB
ISSUE DATE	Oct 2016
GEC FILE NO.	0710-190
SHEET NO.	

**FIGURE 1**





General Engineering Company  
 P.O. Box 340 • 916 Beaver Lake Dr. • Plover, WI 53011  
 608-742-2188 (Cellular) • 608-742-2382 (Fax)  
 www.generalengr.com

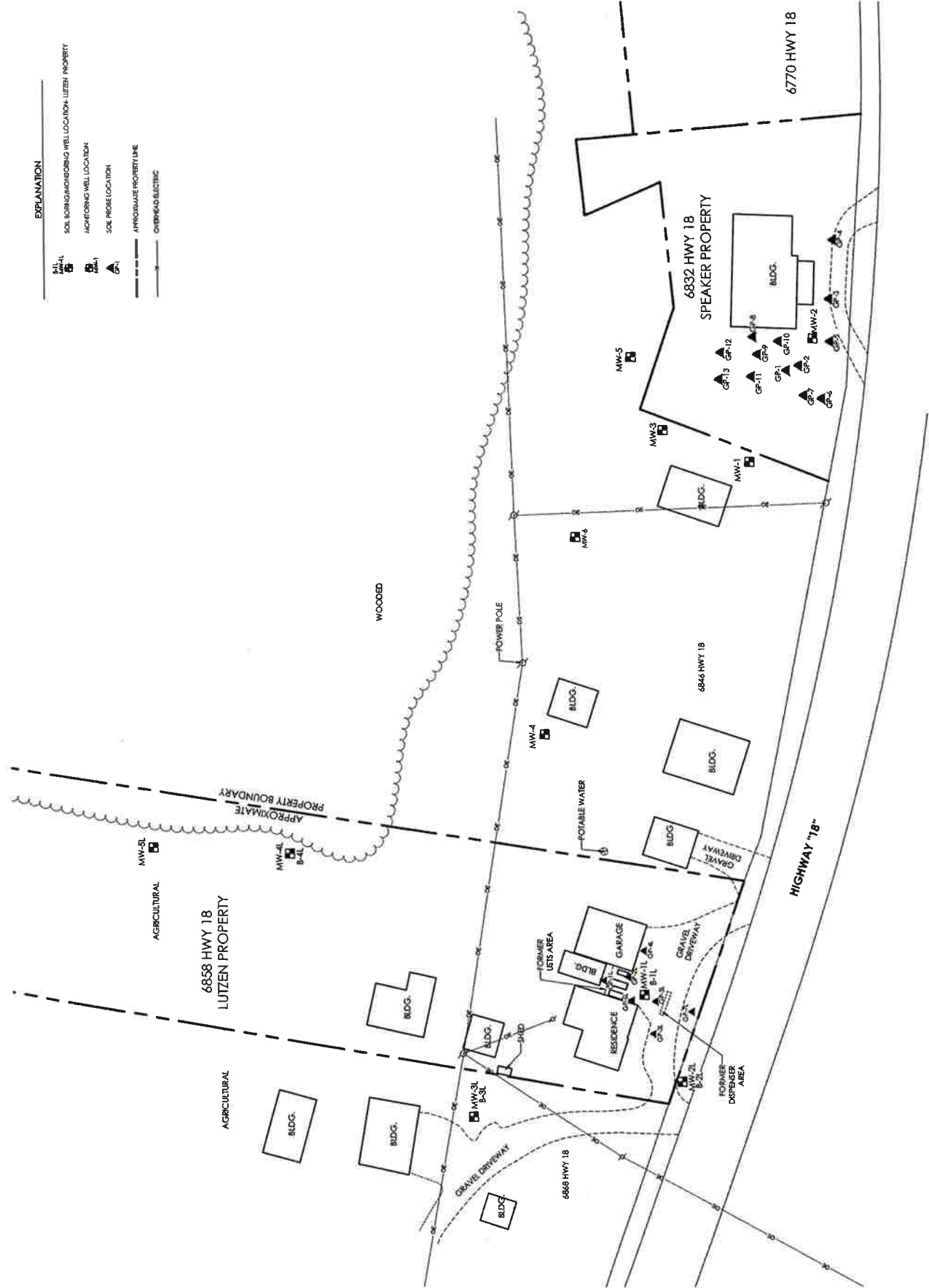
**SOIL PROBE, BORING & MONITORING  
 WELL LOCATION MAP**  
 Speaker Property &  
 Lutzen Property (Former Keyer County Store)  
 Town of Mount Kias  
 Grant County, WI

NO.	BY	DATE	REVISIONS



**FIGURE 3**  
 DRAWN BY: MBR  
 REVIEWED BY: MBR  
 ISSUE DATE: 08/20/16  
 GEC FILE NO.: 27176-100  
 SHEET NO.:

- EXPLANATION**
- SOIL BORING/MONITORING WELL LOCATION - LUTZEN PROPERTY
  - MONITORING WELL LOCATION
  - SOIL PROBE LOCATION
  - APPROXIMATE PROPERTY LINE
  - CHERRY-ELECTRIC





**APPENDIX B**  
**TABLES**

**TABLE 1  
SUMMARY OF SOIL ANALYTICAL RESULTS  
SPEAKER PROPERTY  
06'10-133**

Sample No. Sampling Date	NC RCL (ug/kg)	C RCL (ug/kg)	Direct Contact RCL (ug/kg)	Soil to Groundwater RCL (ug/kg)	GASOLINE RANGE ORGANICS (DRO) (mg/kg)																				
					GP-1 09/23/10	GP-2 09/23/10	GP-3 09/23/10	GP-4 09/23/10	GP-5 09/23/10	GP-6 09/23/10	GP-7 10/14/10	GP-8 10/14/10	GP-8 10/14/10	GP-9 10/14/10	GP-9 10/14/10	GP-10 10/14/10	GP-11 10/14/10	GP-12 10/14/10	GP-13 10/14/10						
Sample Depth (feet)					6-7	9-10	3-4	13-14	11-12	11-12	13-14'	3-4	8-9	3-4	8-9	8-9	9-10	9-10	9-10	9-10	9-10	9-10	9-10		
<b>GASOLINE RANGE ORGANICS (GRO), DIESEL RANGE ORGANICS (DRO) (mg/kg)</b>																									
GRO																									
	NE	NE	NE	NE	<3.6	<3.6	<3.1	<3.5	<3.8	<3.4	1010	<3.1	<3.4	<3.0	<3.0	<3.4	45.9	<3.1	<3.3	<3.3	<3.6	<3.6	<3.6	<3.6	
<b>PETROLEUM VOLATILE ORGANIC COMPOUNDS (PVOC) (ug/kg)</b>																									
	NE	NE	NE	NE	<25	<25	<25	41.3J	<25	<25	1240	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Benzene	111,000	1,490	1,490	5.1	<25	<25	<25	<25	<25	<25	27,100	<25	<25	<25	<25	<25	1100	<25	<25	<25	<25	<25	<25	<25	<25
Ethylbenzene	4,200,000	7,470	7,470	1,570	<25	<25	<25	<25	<25	<25	<200	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Methyl tert-butyl ether	23,800,000	59,400	59,400	27	<25	<25	<25	<25	<25	<25	9300	<25	<25	61.7J	<25	<25	753	<25	<25	<25	<25	<25	<25	<25	<25
Naphthalene	188,000	5,150	5,150	658	<25	5750	<25	<25	<25	<25	8660	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Toluene	5,300,000	NE	818,000	1107	<25	<25	<25	38.6J	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	89,800	NE	89,800	1382	<25	<25	<25	<25	<25	<25	63300	<25	<25	<25	<25	<25	4600	<25	<25	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	782,000	NE	182,000	1382	<25	<25	<25	<25	<25	<25	20900	<25	<25	<25	<25	<25	1420	<25	<25	<25	<25	<25	<25	<25	<25
Xylenes, -m, -p	890,000	NE	258,000	3940	<75	<75	<75	<75	<75	<75	127,800	<75	<75	<75	<75	<75	5154	<75	<75	<75	<75	<75	<75	<75	<75
Xylenes, -o																									

mg/kg = milligrams per kilogram  
 ug/kg = micrograms per kilogram  
 RCL = Residual Contaminant Level  
 SSL = Soil Screening Level  
 DCL = Direct Contact Level  
 NA = Parameter not analyzed  
 NE = NR 720 RCL not established  
 J = Analyte detected above laboratory limit of detection but below limit of quantitation.  
 Bold indicates analytical results exceed NR 720 RCL



TABLE 2  
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS  
HUGO SPEAKER PROPERTY  
GEC PROJECT NUMBER 0610-133

Monitoring Well	NR 140		MW-1							MW-2						MW-3						MW-4	MW-5	MW-6
	ES	PAL	7/5/2011	11/22/2011	6/21/2012	6/4/2013	8/8/2014	2/11/2016	10/17/2016	11/22/2011	6/21/2012	6/4/2013	8/8/2014	2/11/2016	10/17/2016	11/22/2011	6/21/2012	6/4/2013	8/8/2014	2/11/2016	10/17/2016	10/17/2016	10/17/2016	10/17/2016
<b>VOLATILE ORGANIC COMPOUNDS (VOC) (µg/L)</b>																								
Benzene	5	0.5	<b>2540</b>	<b>1640</b>	<b>2710</b>	<b>1260</b>	<b>2490</b>	<b>1820</b>	<b>2220</b>	1.3	1.7	<0.34	<0.27	<0.44	<0.46	<b>1210</b>	<b>19.9</b>	<b>364</b>	<b>990</b>	<b>660</b>	<b>930</b>	0.79J	<b>77</b>	<b>5.6</b>
Ethylbenzene	700	140	<b>1200</b>	<b>1230</b>	454	437	<b>1890</b>	<b>1370</b>	<b>1310</b>	<0.54	<0.41	<0.34	<0.82	<0.71	<0.73	<b>910</b>	8.5	586	<b>840</b>	<b>800</b>	650	<0.73	58	<0.73
Methyl tert-butyl ether	60	12	<12.2	16.1	<15.2	<7.4	<3.7	<55	<24.5	<0.61	<0.38	<0.37	<0.37	<1.1	<0.49	<15.2	1.2	7.4	<1.85	<11	<4.9	<0.49	<0.49	<0.49
Toluene	1000	200	<b>544</b>	<b>283</b>	<b>428</b>	<b>264</b>	<b>810</b>	<b>750</b>	<b>820</b>	<0.67	0.55J	<0.34	<0.8	<0.44	<0.39	164	2.3	95.6	180	130	135	<0.39	5.3	<0.39
1,2,4-Trimethylbenzene	480	96	<b>973</b>	<b>1380</b>	<b>798</b>	55.2	<b>2870</b>	<b>2680</b>	<b>1570</b>	<0.97	<0.43	<0.33	<0.83	<1.6	<0.68	<b>1170</b>	31.9	<b>1030</b>	<b>1550</b>	<b>1410</b>	<b>1140</b>	<0.68	31.2	<0.68
1,3,5-Trimethylbenzene			210	349	225	<7.1	<b>780</b>	<b>700</b>	<b>470</b>	<0.83	<0.40	<0.36	<0.86	<1.5	<0.83	241	59.3	296	440	370	307	<0.83	3.5	<0.83
Xylenes, -m, -p	10000	1000	<b>4540</b>	<b>4189</b>	<b>4290</b>	792	<b>7720</b>	<b>7390</b>	<b>5180</b>	<2.63	<1.25	<1.03	<2.41	<3.1	<2.06	3025	114.7	2011	2815	2875	2194	<2.06	52.02	<2.06
Xylenes, -o																								
<b>OTHER DETECTED VOLATILE ORGANIC COMPOUNDS (VOC) (µg/L)</b>																								
Chloromethane	30	3	<4.8	NA	NA	NA	NA	NA	NA	1.2	NA	NA	NA	NA	NA	<6.0	NA	NA	NA	NA	NA	NA	NA	NA
n-Butylbenzene	NE	NE	<18.6	NA	NA	NA	NA	NA	NA	<0.93	NA	NA	NA	NA	NA	45.2	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	5	0.5	<b>163</b>	NA	NA	NA	NA	<24	NA	<0.36	NA	NA	NA	<0.48	NA	<9.0	NA	NA	NA	<b>27</b>	NA	NA	NA	NA
Isopropylbenzene	NE	NE	49.1	NA	NA	NA	NA	NA	NA	<0.59	NA	NA	NA	NA	NA	63.9	NA	NA	NA	NA	NA	NA	NA	NA
Napthalene	100	10	<b>134</b>	<b>207</b>	<b>152</b>	17.8J	<b>430</b>	<b>400</b>	<b>320J</b>	<0.89	<0.40	<0.37	<1.2	<1.6	<2.6	<b>111J</b>	3.3	<b>125</b>	<b>178</b>	<b>183</b>	<b>105</b>	<2.6	<2.6	<2.6
n-Propylbenzene	NE	NE	171	NA	NA	NA	NA	NA	NA	<0.81	NA	NA	NA	NA	NA	224	NA	NA	NA	NA	NA	NA	NA	NA
<b>LEAD (µg/L)</b>																								
Lead	15	1.5	6.5J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

ES = Enforcement Standard  
PAL = Preventive Action Limit  
µg/L = micrograms per liter  
NA = Parameter not analyzed  
NE = NR 140 ES not established  
J = Analyte detected above laboratory limit of detection but below limit of quantitation.  
Bold indicates analytical results above NR 140 ES

**TABLE 3  
WATER LEVEL DATA  
SPEAKER PROPERTY  
0610-133**

Monitoring Well Number	Top of Well Casing Elevation	Screen Interval	Date Measured	Depth to Water (Ft.)	Groundwater Elevation (Ft.)
MW-1	1208.77	1187.07	7/5/2011	15.87	1192.90
			11/22/2011	16.60	1192.17
			6/21/2012	18.95	1189.82
		1177.07	6/4/2013	10.98	1197.79
			8/8/2014	15.86	1192.91
			6/9/2015	15.40	1193.37
			2/11/2016	16.38	1192.39
			2/11/2016	16.38	1192.39
MW-2	1214.56	1171.73	7/5/2011	NA	NA
			11/22/2011	38.22	1176.34
			6/21/2012	40.50	1174.06
		1156.73	6/4/2013	42.72	1171.84
			8/8/2014	42.40	1172.16
			6/9/2015	44.22	1170.34
			2/11/2016	45.65	1168.91
			10/17/2016	48.23	1166.33
MW-3	1208.17	1180.32	7/5/2011	NA	NA
			11/22/2011	19.29	1188.88
			6/21/2012	21.58	1186.59
		1170.32	6/4/2013	18.51	1189.66
			8/8/2014	21.66	1186.51
			6/9/2015	22.97	1185.20
			2/11/2016	21.24	1186.93
			10/17/2016	18.38	1189.79
MW-4	1206.61	1179.35	10/17/2016	17.72	1188.89
		1164.35			
MW-5	1200.52	1187.39	10/17/2016	16.75	1183.77
		1172.39			
MW-6	1200.76	1189.21	10/17/2016	12.51	1188.25
		1179.21			

ft = feet

**APPENDIX C**  
**SOIL AND GROUNDWATER ANALYTICAL REPORTS**  
**AND CHAIN OF CUSTODY FORMS**

# Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 \*P 920-830-2455 \* F 920-733-0631

BRIAN YOUNGWIRTH  
GENERAL ENGINEERING  
916 SILVER LAKE DRIVE  
PORTAGE, WI 53901

Report Date 25-Feb-16

Project Name SPEAKER/MOUNT IDA  
Project #

Invoice # E30488

Lab Code 5030488A  
Sample ID MW-1  
Sample Matrix Water  
Sample Date 2/11/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
PVOC + Naphthalene + 1,2 DCA										
Benzene	1820	ug/l	22	70	50	8260B		2/20/2016	CJR	1
1,2-Dichloroethane	< 24	ug/l	24	75	50	8260B		2/20/2016	CJR	1
Ethylbenzene	1370	ug/l	35.5	115	50	8260B		2/20/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 55	ug/l	55	185	50	8260B		2/20/2016	CJR	1
Naphthalene	400	ug/l	80	260	50	8260B		2/20/2016	CJR	1
Toluene	750	ug/l	22	70	50	8260B		2/20/2016	CJR	1
1,2,4-Trimethylbenzene	2680	ug/l	80	250	50	8260B		2/20/2016	CJR	1
1,3,5-Trimethylbenzene	700	ug/l	75	240	50	8260B		2/20/2016	CJR	1
m&p-Xylene	5900	ug/l	110	345	50	8260B		2/20/2016	CJR	1
o-Xylene	1490	ug/l	45	145	50	8260B		2/20/2016	CJR	1

Lab Code 5030488B  
Sample ID MW-2  
Sample Matrix Water  
Sample Date 2/11/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
PVOC + Naphthalene + 1,2 DCA										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		2/19/2016	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		2/19/2016	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		2/19/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		2/19/2016	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		2/19/2016	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		2/19/2016	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		2/19/2016	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		2/19/2016	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		2/19/2016	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		2/19/2016	CJR	1

Project Name SPEAKER/MOUNT IDA

Invoice # E30488

Project #

Lab Code 5030488C  
Sample ID MW-3  
Sample Matrix Water  
Sample Date 2/11/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
PVOC + Naphthalene + 1,2 DCA										
Benzene	660	ug/l	4.4	14	10	8260B		2/20/2016	CJR	1
1,2-Dichloroethane	27	ug/l	4.8	15	10	8260B		2/20/2016	CJR	1
Ethylbenzene	800	ug/l	7.1	23	10	8260B		2/20/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 11	ug/l	11	37	10	8260B		2/20/2016	CJR	1
Naphthalene	183	ug/l	16	52	10	8260B		2/20/2016	CJR	1
Toluene	130	ug/l	4.4	14	10	8260B		2/20/2016	CJR	1
1,2,4-Trimethylbenzene	1410	ug/l	16	50	10	8260B		2/20/2016	CJR	1
1,3,5-Trimethylbenzene	370	ug/l	15	48	10	8260B		2/20/2016	CJR	1
m&p-Xylene	2600	ug/l	22	69	10	8260B		2/20/2016	CJR	1
o-Xylene	275	ug/l	9	29	10	8260B		2/20/2016	CJR	1

"J" Flag: Analyte detected between LOD and LOQ

LOD Limit of Detection

LOQ Limit of Quantitation

Code Comment

1 Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature



# Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 \*P 920-830-2455 \* F 920-733-0631

BRIAN YOUNGWIRTH  
 GENERAL ENGINEERING  
 916 SILVER LAKE DRIVE  
 PORTAGE, WI 53901

Report Date 24-Oct-16

Project Name SPEAKER  
 Project #

Invoice # E31927

Lab Code 5031927A  
 Sample ID MW-1  
 Sample Matrix Water  
 Sample Date 10/17/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
PVOC + Naphthalene										
Benzene	2220	ug/l	23	75	50	GRO95/8021		10/21/2016	CJR	1
Ethylbenzene	1310	ug/l	36.5	115	50	GRO95/8021		10/21/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 24.5	ug/l	24.5	80	50	GRO95/8021		10/21/2016	CJR	1
Naphthalene	320 "J"	ug/l	130	415	50	GRO95/8021		10/21/2016	CJR	1
Toluene	820	ug/l	19.5	60	50	GRO95/8021		10/21/2016	CJR	1
1,2,4-Trimethylbenzene	1570	ug/l	34	110	50	GRO95/8021		10/21/2016	CJR	1
1,3,5-Trimethylbenzene	470	ug/l	41.5	130	50	GRO95/8021		10/21/2016	CJR	1
m&p-Xylene	4100	ug/l	70	220	50	GRO95/8021		10/21/2016	CJR	1
o-Xylene	1080	ug/l	33	105	50	GRO95/8021		10/21/2016	CJR	1

Lab Code 5031927B  
 Sample ID MW-2  
 Sample Matrix Water  
 Sample Date 10/17/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
PVOC + Naphthalene										
Benzene	< 0.46	ug/l	0.46	1.5	1	GRO95/8021		10/20/2016	CJR	1
Ethylbenzene	< 0.73	ug/l	0.73	2.3	1	GRO95/8021		10/20/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.49	ug/l	0.49	1.6	1	GRO95/8021		10/20/2016	CJR	1
Naphthalene	< 2.6	ug/l	2.6	8.3	1	GRO95/8021		10/20/2016	CJR	1
Toluene	< 0.39	ug/l	0.39	1.2	1	GRO95/8021		10/20/2016	CJR	1
1,2,4-Trimethylbenzene	< 0.68	ug/l	0.68	2.2	1	GRO95/8021		10/20/2016	CJR	1
1,3,5-Trimethylbenzene	< 0.83	ug/l	0.83	2.6	1	GRO95/8021		10/20/2016	CJR	1
m&p-Xylene	< 1.4	ug/l	1.4	4.4	1	GRO95/8021		10/20/2016	CJR	1
o-Xylene	< 0.66	ug/l	0.66	2.1	1	GRO95/8021		10/20/2016	CJR	1

Project Name SPEAKER  
Project #

Invoice # E31927

Lab Code 5031927C  
Sample ID MW-3  
Sample Matrix Water  
Sample Date 10/17/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
PVOC + Naphthalene										
Benzene	930	ug/l	4.6	15	10	GRO95/8021		10/21/2016	CJR	1
Ethylbenzene	650	ug/l	7.3	23	10	GRO95/8021		10/21/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 4.9	ug/l	4.9	16	10	GRO95/8021		10/21/2016	CJR	1
Naphthalene	105	ug/l	26	83	10	GRO95/8021		10/21/2016	CJR	1
Toluene	135	ug/l	3.9	12	10	GRO95/8021		10/21/2016	CJR	1
1,2,4-Trimethylbenzene	1140	ug/l	6.8	22	10	GRO95/8021		10/21/2016	CJR	1
1,3,5-Trimethylbenzene	307	ug/l	8.3	26	10	GRO95/8021		10/21/2016	CJR	1
m&p-Xylene	1950	ug/l	14	44	10	GRO95/8021		10/21/2016	CJR	1
o-Xylene	244	ug/l	6.6	21	10	GRO95/8021		10/21/2016	CJR	1

Lab Code 5031927D  
Sample ID MW-4  
Sample Matrix Water  
Sample Date 10/17/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
PVOC + Naphthalene										
Benzene	0.79 "J"	ug/l	0.46	1.5	1	GRO95/8021		10/20/2016	CJR	1
Ethylbenzene	< 0.73	ug/l	0.73	2.3	1	GRO95/8021		10/20/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.49	ug/l	0.49	1.6	1	GRO95/8021		10/20/2016	CJR	1
Naphthalene	< 2.6	ug/l	2.6	8.3	1	GRO95/8021		10/20/2016	CJR	1
Toluene	< 0.39	ug/l	0.39	1.2	1	GRO95/8021		10/20/2016	CJR	1
1,2,4-Trimethylbenzene	< 0.68	ug/l	0.68	2.2	1	GRO95/8021		10/20/2016	CJR	1
1,3,5-Trimethylbenzene	< 0.83	ug/l	0.83	2.6	1	GRO95/8021		10/20/2016	CJR	1
m&p-Xylene	< 1.4	ug/l	1.4	4.4	1	GRO95/8021		10/20/2016	CJR	1
o-Xylene	< 0.66	ug/l	0.66	2.1	1	GRO95/8021		10/20/2016	CJR	1

Lab Code 5031927E  
Sample ID MW-5  
Sample Matrix Water  
Sample Date 10/17/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
PVOC + Naphthalene										
Benzene	77	ug/l	0.46	1.5	1	GRO95/8021		10/20/2016	CJR	1
Ethylbenzene	58	ug/l	0.73	2.3	1	GRO95/8021		10/20/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.49	ug/l	0.49	1.6	1	GRO95/8021		10/20/2016	CJR	1
Naphthalene	< 2.6	ug/l	2.6	8.3	1	GRO95/8021		10/20/2016	CJR	1
Toluene	5.3	ug/l	0.39	1.2	1	GRO95/8021		10/20/2016	CJR	1
1,2,4-Trimethylbenzene	31.2	ug/l	0.68	2.2	1	GRO95/8021		10/20/2016	CJR	1
1,3,5-Trimethylbenzene	3.5	ug/l	0.83	2.6	1	GRO95/8021		10/20/2016	CJR	1
m&p-Xylene	50	ug/l	1.4	4.4	1	GRO95/8021		10/20/2016	CJR	1
o-Xylene	2.02 "J"	ug/l	0.66	2.1	1	GRO95/8021		10/20/2016	CJR	1

Project Name SPEAKER  
Project #

Invoice # E31927

Lab Code 5031927F  
Sample ID MW-6  
Sample Matrix Water  
Sample Date 10/17/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
PVOC + Naphthalene										
Benzene	5.6	ug/l	0.46	1.5	1	GRO95/8021	10/20/2016	10/20/2016	CJR	1
Ethylbenzene	< 0.73	ug/l	0.73	2.3	1	GRO95/8021	10/20/2016	10/20/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.49	ug/l	0.49	1.6	1	GRO95/8021	10/20/2016	10/20/2016	CJR	1
Naphthalene	< 2.6	ug/l	2.6	8.3	1	GRO95/8021	10/20/2016	10/20/2016	CJR	1
Toluene	< 0.39	ug/l	0.39	1.2	1	GRO95/8021	10/20/2016	10/20/2016	CJR	1
1,2,4-Trimethylbenzene	< 0.68	ug/l	0.68	2.2	1	GRO95/8021	10/20/2016	10/20/2016	CJR	1
1,3,5-Trimethylbenzene	< 0.83	ug/l	0.83	2.6	1	GRO95/8021	10/20/2016	10/20/2016	CJR	1
m&p-Xylene	< 1.4	ug/l	1.4	4.4	1	GRO95/8021	10/20/2016	10/20/2016	CJR	1
o-Xylene	< 0.66	ug/l	0.66	2.1	1	GRO95/8021	10/20/2016	10/20/2016	CJR	1

"J" Flag: Analyte detected between LOD and LOQ

LOD Limit of Detection

LOQ Limit of Quantitation

**Code**      **Comment**

1      Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature





# CHAIN OF STUDY RECORD

# Synergy

Chain # **No. 2786**,

Page      of     

**Environmental Lab, Inc.**

1990 Prospect Ct. • Appleton, WI 54914  
920-830-2455 • FAX 920-733-0631

Lab I.D. #      Quote No.:       
Account No.:       
Project #:     

**Sample Handling Request**  
Rush Analysis Date Required       
(Rushes accepted only with prior authorization)  
Normal Turn Around     

Sampler: (signature) Ben Yost  
Project (Name / Location): Ben Yost speaker / Mount Ida

Reports To: Ben Yost  
Company: General Engineering  
Address: 916 Silver Lake Drive  
City State Zip: Podg WI 53901  
Phone: 608 742 2169  
FAX:     

Invoice To:       
Company: CEL  
Address:       
City State Zip:       
Phone:       
FAX:     

Lab I.D.	Sample I.D.	Collection Date Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-PCRA METALS	Other Analysis	PID/ FID	
<u>S030489A</u>	<u>MW-1</u>	<u>2/11/16 AM</u>	<u>    </u>	<u>    </u>	<u>N</u>	<u>2</u>	<u>GW</u>	<u>4°C</u>																	
<u>B</u>	<u>MW-2</u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>N</u>	<u>2</u>	<u>GW</u>	<u>4°C</u>																	
<u>C</u>	<u>MW-3</u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>N</u>	<u>2</u>	<u>GW</u>	<u>4°C</u>																	

Comments/Special Instructions (\*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Sample Integrity - To be completed by receiving lab.  
Method of Shipment:       
Temp. of Temp. Blank      °C On Ice:       
Cooler seal intact upon receipt:  Yes  No

Relinquished By: (sign) [Signature] Time      Date       
Received By: (sign) [Signature] Time 9:57 am Date: 2/8/16

# CHAIN OF CUSTODY RECORD

# Synergy

Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914  
920-830-2455 • FAX 920-733-0631

Chain # N2 3133  
Page      of     

**Sample Handling Request**  
Rush Analysis Date Required \_\_\_\_\_  
(Rushes accepted only with prior authorization)  
Normal Turn Around \_\_\_\_\_

Lab I.D. # \_\_\_\_\_ Quote No.: \_\_\_\_\_  
Account No.: \_\_\_\_\_  
Project #: \_\_\_\_\_  
Sampler: (signature) Brian J Spivey  
Project (Name / Location): \_\_\_\_\_  
Reports To: Brian Younger  
Company: GES  
Address: 916 Silver Lake  
City State Zip: PA Parigi WI 53591  
Phone: 608 297 8010  
FAX: \_\_\_\_\_  
Invoice To: \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
City State Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_  
FAX: \_\_\_\_\_

Analysis Requested		Other Analysis	
DRO (Mid DRO Sep 95)			
GRO (Mod GRO Sep 95)			
LEAD			
NITRATE/NITRITE			
OIL & GREASE			
PAH (EPA 8270)			
PCB			
PVOC (EPA 8021)			
PVOC + NAPHTHALENE			
SULFATE			
TOTAL SUSPENDED SOLIDS			
VOC DW (EPA 542.2)			
VOC (EPA 8260)			
B-RORA METALS			

Lab I.D.	Sample I.D.	Collection Date Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)	Preservation
<u>SOS1731A</u>	<u>MW.1</u>	<u>10/18/16</u>	<u>1</u>	<u>1</u>	<u>N</u>	<u>2</u>	<u>GW</u>	<u>NK</u>
<u>B</u>	<u>MW.2</u>	<u>10/18/16</u>	<u>1</u>	<u>1</u>	<u>N</u>	<u>1</u>	<u>GW</u>	<u>NK</u>
<u>D</u>	<u>MW.3</u>	<u>10/18/16</u>	<u>1</u>	<u>1</u>	<u>N</u>	<u>1</u>	<u>GW</u>	<u>NK</u>
<u>Z</u>	<u>MW.4</u>	<u>10/18/16</u>	<u>1</u>	<u>1</u>	<u>N</u>	<u>1</u>	<u>GW</u>	<u>NK</u>
<u>F</u>	<u>MW.5</u>	<u>10/18/16</u>	<u>1</u>	<u>1</u>	<u>N</u>	<u>1</u>	<u>GW</u>	<u>NK</u>
	<u>MW.6</u>	<u>10/18/16</u>	<u>1</u>	<u>1</u>	<u>N</u>	<u>1</u>	<u>GW</u>	<u>NK</u>

Comments/Special Instructions (\*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.):

Relinquished By: (sign) [Signature] Time \_\_\_\_\_ Date \_\_\_\_\_  
Received By: (sign) \_\_\_\_\_ Time \_\_\_\_\_ Date \_\_\_\_\_  
Received in Laboratory By: [Signature] Time: 17:00 Date: 10/18/16

Sample Integrity - To be completed by receiving lab.  
Method of Shipment: Cool "C On Ice"  
Temp. of Temp. Blank: \_\_\_\_\_ "C On Ice"  
Cooler seal intact upon receipt: X Yes \_\_\_\_\_ No

**APPENDIX D**  
**MONITORING WELL ABANDONMENT FORMS**

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

Facility / Project Name <b>Speaker Property</b>		License /Permit /Monitoring / GEC Project No. <b>0610-133</b>		Boring Number <b>MW-4</b>	
Boring Drilled By (Firm name and name of crew chief) <b>Groundsource</b>		Drilling Method <b>HSA/ Air Rotary</b>	Borehole Diameter <b>12"</b>		
Date Drilling Started <b>6/30/2016</b>	Date Drilling Ended <b>6/30/2016</b>	Boring Location State Plane N, E <b>NE - NW, Sect. 29,T06N,R03W</b>			DNR County Code <b>20</b>
Local Grid Location (If applicable) Feet S Feet W		County <b>Grant</b>		Civil Town / City / Village <b>Town of Mt. Ida</b>	

Depth Below Surface/Elev. (ft)	VISUAL SOIL CLASSIFICATION Ground Surface Elevation:	Sample No.	USCS	Graphic Log	Well Diagram	Blow Count	N Value	PID	Remarks
2	-2.0								
4	-4.0								
6	-6.0								
8	-8.0								
10	-10.0								
12	-12.0								
14	-14.0								
16	-16.0								
18	-18.0								
20	-20.0								
22	-22.0								
24	-24.0								
26	-26.0								
28	-28.0								
30	-30.0								
32	-32.0								
34	-34.0								
36	-36.0								
38	-38.0								
40	-40.0								
42	-42.0								
44	-44.0								
46	-46.0								
48	-48.0								
50	-50.0								
52	-52.0								
54	-54.0								
56	-56.0								

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

Signature <i>Brian Youngwirth</i>	Brian Youngwirth Firm	<b>General Engineering Company</b> 916 Silver Lake Dr., P.O. BOX 340 Portage WI 53901
--------------------------------------	-----------------------	---

Lines of demarcation represent approximate boundaries between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual.

Route To:  Solid Waste  Haz. Waste  Wastewater  
 Env. Response & Repair  Underground Tanks  Other

<b>Facility / Project Name</b> Speaker Property	<b>County Name</b> Grant	<b>Well Name</b> MW-4
<b>Facility License/ Permit No./GEC Project No.</b> 0610-133	<b>County Code</b> 20	<b>Wis. Unique Well Number</b> n/a
		<b>DNR Well Number</b> n/a

<p>1. Can this well be purged dry? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>2. Well development method</p> <ul style="list-style-type: none"> <li>surge with bailer and bailed <input type="checkbox"/> 41</li> <li>surged with bailer and pumped <input type="checkbox"/> 61</li> <li>surged with block and bailed <input type="checkbox"/> 42</li> <li>surged with block and pumped <input type="checkbox"/> 62</li> <li>surge with block, bailed and pumped <input type="checkbox"/> 70</li> <li>compressed air <input type="checkbox"/> 20</li> <li>bailed only <input checked="" type="checkbox"/> 10</li> <li>pumped only <input type="checkbox"/> 51</li> <li>pumped slowly <input type="checkbox"/> 50</li> <li>Other <input type="checkbox"/></li> </ul> <p>3. Time spent developing well 60 min.</p> <p>4. Depth of Well (from top of casing) 45.3 ft.</p> <p>5. Inside diameter of well 2.00 in.</p> <p>6. Volume of water in filter pack and well casing 26 gal.</p> <p>7. Volume of water removed from well 30 gal.</p> <p>8. Volume of water added (if any) 0 gal.</p> <p>9. Source of water added <u>None</u></p> <p>10. Analysis performed on water added? <input type="checkbox"/> Yes <input type="checkbox"/> No (If yes, attach results)</p>	<p style="text-align: center;"><b>Before Development</b></p> <p>11. Depth to water 17.72 ft. From top of well casing</p> <p>Date 10/17/16</p> <p>Time 10:00</p> <p>12. Sediment in well bottom inches</p> <p>13. Water clarity</p> <p>Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe) <u>Cloudy</u></p>	<p style="text-align: center;"><b>After Development</b></p> <p>a. -- ft.</p> <p>b.</p> <p>c. 11:00 <input type="checkbox"/> p.m. <input checked="" type="checkbox"/> a.m.</p> <p>inches</p> <p>Clear <input checked="" type="checkbox"/> 10 Turbid <input type="checkbox"/> 15 (Describe)</p>
---	--	---

16. Additional comments on development

---

<p>Well developed by: Person's Name and Firm</p> <p>Name: <u>Brian Youngwirth</u></p> <p>Firm: <u>General Engineering Company</u></p>	<p>I hereby certify that the above information is true and correct to the best of my knowledge.</p> <p>Signature: _____</p> <p>Print Initials: _____</p> <p>Firm: <u>General Engineering Company</u></p>
---	--



Route To:  
 Solid Waste     Haz. Waste     Wastewater  
 Env. Response & Repair     Underground Tanks     Other \_\_\_\_\_

<b>Facility / Project Name</b> Speaker Property	<b>County Name</b> Grant	<b>Well Name</b> MW-6
<b>Facility License/ Permit No./GEC Project No.</b> 0610-133	<b>County Code</b> 20	<b>Wis. Unique Well Number</b> n/a
<b>DNR Well Number</b> n/a		

1. Can this well be purged dry?     Yes     No

2. Well development method
- surge with bailer and bailed     41
  - surged with bailer and pumped     61
  - surged with block and bailed     42
  - surged with block and pumped     62
  - surge with block, bailed and pumped     70
  - compressed air     20
  - bailed only     10
  - pumped only     51
  - pumped slowly     50
  - Other

3. Time spent developing well    30 min.

4. Depth of Well (from top of casing)    25.9 ft.

5. Inside diameter of well    2.00 in.

6. Volume of water in filter pack and well casing    12.6 gal.

7. Volume of water removed from well    15 gal.

8. Volume of water added (if any)    0 gal.

9. Source of water added    None

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

16. Additional comments on development

	Before Development	After Development
<b>11. Depth to water</b> 12.51 ft. From top of well casing	a. -- ft.	
<b>Date</b> 10/17/16	b.	b.
<b>Time</b> 11:45	c. <input type="checkbox"/> p.m. <input checked="" type="checkbox"/> a.m.	c. 12:15 <input checked="" type="checkbox"/> p.m. <input type="checkbox"/> a.m.
<b>12. Sediment in well bottom</b> inches		inches
<b>13. Water clarity</b>	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe) <u>Cloudy</u>	Clear <input checked="" type="checkbox"/> 10 Turbid <input type="checkbox"/> 15 (Describe)
Fill in if fluids were used and wells is at solid waste facility:		
<b>14. Total suspended solids</b> N/A mg/l		N/A mg/l
<b>15. COD</b> N/A mg/l		N/A mg/l

Well developed by: Person's Name and Firm

Name: Brian Youngwirth

Firm: General Engineering Company

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

Signature: \_\_\_\_\_

Print Initials: \_\_\_\_\_

Firm: General Engineering Company

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

Facility / Project Name <b>Speaker Property</b>		License /Permit /Monitoring / GEC Project No. <b>0610-133</b>		Boring Number <b>MW-5</b>	
Boring Drilled By (Firm name and name of crew chief) Soils & Engineering Services, Inc.		Drilling Method HSA/ Air Rotary	Borehole Diameter 12"		
Date Drilling Started 10/11/2016	Date Drilling Ended 10/11/2016	Boring Location State Plane N, E NE - NW, Sect. 29,T06N,R03W			DNR County Code 20
Local Grid Location (If applicable) Feet S                      Feet W		County <b>Grant</b>	Civil Town / City / Village Town of Mt. Ida		

Depth Below Surface/Elev. (ft)	VISUAL SOIL CLASSIFICATION Ground Surface Elevation:	Sample No.	USCS	Graphic Log	Well Diagram	Blow Count	Odor	PID	Remarks
1	-1.0	Black, Sandy SILT, moist (Topsoil)	SS-1	OL			No	0	
2	-2.0								
3	-3.0	Reddish brown, Clayey SILT with cobbles, moist	SS-2	ML			No	0	
4	-4.0								
5	-5.0	Brown, Sandy SILT, moist	SS-3	SM			No	0	
6	-6.0								
7	-7.0								
8	-8.0	Weathered Rock							
9	-9.0								
10	-10.0	Auger Refusal at 9.0 feet, <b>BEDROCK</b> , Air Rotary Drilled to 29.0 feet. Well was set at 29.0' with a 15.0' screen.							
11	-11.0								
12	-12.0								
13	-13.0								
14	-14.0								
15	-15.0								
16	-16.0								
17	-17.0								
18	-18.0								
19	-19.0								
20	-20.0								
21	-21.0								
22	-22.0								
23	-23.0								
24	-24.0								
25	-25.0								
26	-26.0								
27	-27.0								
28	-28.0								

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

Signature 	Brian Youngwirth	Firm <b>General Engineering Company</b> 916 Silver Lake Dr., P.O. BOX 340 Portage WI 53901
---------------	------------------	---

Lines of demarcation represent approximate boundaries between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual.



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

Facility / Project Name <b>Speaker Property</b>		License /Permit /Monitoring / GEC Project No. <b>0610-133</b>		Boring Number <b>MW-6</b>	
Boring Drilled By (Firm name and name of crew chief) Soils & Engineering Services, Inc.		Drilling Method <b>HAS</b>	Borehole Diameter <b>12"</b>		
Date Drilling Started <b>10/11/2016</b>	Date Drilling Ended <b>10/11/2016</b>	Boring Location State Plane N, E <b>NE - NW, Sect. 29,T06N,R03W</b>			DNR County Code <b>20</b>
Local Grid Location (If applicable) Feet S                      Feet W		County <b>Grant</b>	Civil Town / City / Village <b>Town of Mt. Ida</b>		

Depth Below Surface/Elev. (ft)	VISUAL SOIL CLASSIFICATION Ground Surface Elevation:	Sample No.	USCS	Graphic Log	Well Diagram	Blow Count	Odor	PID	Remarks
1	-1.0	SS-1	OL				No	0	
2	-2.0	SS-2							
3	-3.0	SS-3	ML				No	0	
4	-4.0								
5	-5.0	SS-4	SM				No	0	
6	-6.0								
7	-7.0								
8	-8.0								
9	-9.0								
10	-10.0								
11	-11.0								
12	-12.0								
13	-13.0								
14	-14.0								
15	-15.0								
16	-16.0								
17	-17.0								
18	-18.0								
19	-19.0								
20	-20.0								
21	-21.0								
22	-22.0								
23	-23.0								
24	-24.0								
25	-25.0								
<b>END OF BORING: 26.0'</b>									
26	-26.0								
27	-27.0								
28	-28.0								

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

Signature 	Brian Youngwirth Firm	<b>General Engineering Company</b> 916 Silver Lake Dr., P.O. BOX 340 Portage WI 53901
---------------	-----------------------	---

Lines of demarcation represent approximate boundaries between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual.

Route To: Solid Waste  Haz. Waste  Wastewater   
Env. Response & Repair  Underground Tanks  Other

<b>Facility / Project Name</b> Speaker Property	<b>Local Grid Location of Well</b> Feet S      Feet W	<b>Well Name</b> MW-5
<b>License /Permit /GEC Project No.</b> 0610-133	<b>Grid Origin Location</b>	<b>Wis. Unique No.</b> N/A
<b>Type Of Well</b> Water Table Observation <input checked="" type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	<b>Section Location of Waste / Source</b> NW - NW, SECT. 29, T06N, R03W	<b>Date Well Installed</b> 10/11/2016
<b>Distance Well is From Waste/Source Boundary</b>	<b>Location to Well Relative to Waste/Source</b> u <input type="checkbox"/> Upgradient      s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> downgradient      n <input type="checkbox"/> Not Shown	<b>Well Installed By:</b> (Persons Name & Firm) Soils & Engineering Services, Inc.
<b>Is Well a Point of Enforcement Std. Application</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		

A. Protective pipe, top elevation _____ ft. MSL		1. Cap and Lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																								
B. Well casing, top elevation _____ ft. MSL		2. Protective cover pipe: a. Inside diameter: 9 in b. Length: 1 ft c. Material: Steel <input checked="" type="checkbox"/> 4 Other <input type="checkbox"/>																								
C. Land surface elevation _____ ft. MSL		d. Additional protection? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: Expandable locking plug																								
D. Surface seal, bottom _____ ft. MSL      _____ ft.		3. Surface seal: Bentonite <input checked="" type="checkbox"/> 30 Concrete <input type="checkbox"/> 1 Concrete      Other <input type="checkbox"/>																								
<table border="1"> <tr> <td colspan="6">12. USCS Classification of soil near screen:</td> </tr> <tr> <td>GP <input type="checkbox"/></td> <td>GM <input type="checkbox"/></td> <td>GW <input type="checkbox"/></td> <td>SW <input type="checkbox"/></td> <td>SP <input type="checkbox"/></td> <td></td> </tr> <tr> <td>SM <input type="checkbox"/></td> <td>SC <input type="checkbox"/></td> <td>ML <input type="checkbox"/></td> <td>CL <input type="checkbox"/></td> <td>CH <input type="checkbox"/></td> <td></td> </tr> <tr> <td colspan="6">Bedrock <input checked="" type="checkbox"/></td> </tr> </table>		12. USCS Classification of soil near screen:						GP <input type="checkbox"/>	GM <input type="checkbox"/>	GW <input type="checkbox"/>	SW <input type="checkbox"/>	SP <input type="checkbox"/>		SM <input type="checkbox"/>	SC <input type="checkbox"/>	ML <input type="checkbox"/>	CL <input type="checkbox"/>	CH <input type="checkbox"/>		Bedrock <input checked="" type="checkbox"/>						4. Material between well casing and protective pipe: Bentonite <input checked="" type="checkbox"/> 30 Annular space seal <input type="checkbox"/> Other <input type="checkbox"/>
12. USCS Classification of soil near screen:																										
GP <input type="checkbox"/>	GM <input type="checkbox"/>	GW <input type="checkbox"/>	SW <input type="checkbox"/>	SP <input type="checkbox"/>																						
SM <input type="checkbox"/>	SC <input type="checkbox"/>	ML <input type="checkbox"/>	CL <input type="checkbox"/>	CH <input type="checkbox"/>																						
Bedrock <input checked="" type="checkbox"/>																										
<table border="0"> <tr> <td>13. Sieve analysis attached? <input type="checkbox"/> Yes    <input checked="" type="checkbox"/> No</td> <td></td> </tr> <tr> <td>14. Drilling method used:</td> <td>Rotary <input checked="" type="checkbox"/> 50 Hollow stem auger <input checked="" type="checkbox"/> 41 Other <input type="checkbox"/></td> </tr> <tr> <td>15. Drilling fluid used:</td> <td>Water <input type="checkbox"/> 02      Air <input checked="" type="checkbox"/> 50 Drilling Mud <input type="checkbox"/> 03      None <input type="checkbox"/> 41</td> </tr> <tr> <td>16. Drilling additives used? <input type="checkbox"/> Yes    <input checked="" type="checkbox"/> No</td> <td>Describe</td> </tr> <tr> <td colspan="2">17. Source of water (attach analysis)</td> </tr> </table>		13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		14. Drilling method used:	Rotary <input checked="" type="checkbox"/> 50 Hollow stem auger <input checked="" type="checkbox"/> 41 Other <input type="checkbox"/>	15. Drilling fluid used:	Water <input type="checkbox"/> 02      Air <input checked="" type="checkbox"/> 50 Drilling Mud <input type="checkbox"/> 03      None <input type="checkbox"/> 41	16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Describe	17. Source of water (attach analysis)		5. Annular space seal a. Granular Bentonite <input checked="" type="checkbox"/> 33 b. ___ Lbs/gal mud weight ..... Bentonite-sand slurry <input type="checkbox"/> 35 c. ___ Lbs/gal mud weight ..... Bentonite slurry <input type="checkbox"/> 31 d. ___ % Bentonite ..... Bentonite-cement grout <input type="checkbox"/> 50 e. ___ F3 volume added for any of the above f. How installed: Tremie <input type="checkbox"/> 1 Tremie pumped <input type="checkbox"/> 2 Gravity <input checked="" type="checkbox"/> 8														
13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																										
14. Drilling method used:	Rotary <input checked="" type="checkbox"/> 50 Hollow stem auger <input checked="" type="checkbox"/> 41 Other <input type="checkbox"/>																									
15. Drilling fluid used:	Water <input type="checkbox"/> 02      Air <input checked="" type="checkbox"/> 50 Drilling Mud <input type="checkbox"/> 03      None <input type="checkbox"/> 41																									
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Describe																									
17. Source of water (attach analysis)																										
E. Bentonite seal, top _____ ft. MSL or _____ 0.5 ft.		6. Bentonite seal: a. Bentonite Granules <input type="checkbox"/> 33 b. <input type="checkbox"/> 1/4 in. <input checked="" type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in.    Bentonite pellets <input checked="" type="checkbox"/> 32 Other <input type="checkbox"/>																								
F. Fine sand, top _____ ft. MSL or _____ 12.0 ft.		7. Fine sand material: Manufacture, product name and mesh size a. #45-55 Red Flint v. Volume added _____ 1 ft3																								
G. Filter pack, top _____ ft. MSL or _____ 13.0 ft.		8. Filter pack material: Manufacture, product name and mesh size a. #55 Red Flint v. Volume added _____ 15 ft3																								
H. Screen joint, top _____ ft. MSL or _____ 14.0 ft.		9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/>																								
I. Well bottom _____ ft. MSL or _____ 29.0 ft.		10. screen Material: a: Screen type: Factory Cut <input checked="" type="checkbox"/> 11 Continuous slot <input type="checkbox"/> 1 Other <input type="checkbox"/>																								
J. Filter pack , bottom _____ ft. MSL or _____ 29.0 ft.		b: Manufacture _____ Johnson c: Slot size: _____ 0.01 in. d. Slotted length: _____ 15 ft.																								
K. Borehole, bottom _____ ft. MSL or _____ 29.0 ft.		11. Backfill Material: None <input checked="" type="checkbox"/> 14 Other <input type="checkbox"/>																								
L. Borehole, diameter _____ 12 in																										
M. O.D. Well casing _____ 2.375 in																										
N. I.D. Well casing _____ 2.067 in																										

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

Signature *Brian A. Johnson*

Firm General Engineering Company  
916 Silver Lake Dr., P>O> Box 340  
Portage, WI 53901

Route To: Solid Waste  Haz. Waste  Wastewater   
Env. Response & Repair  Underground Tanks  Other

<b>Facility / Project Name</b> Speaker Property	<b>Local Grid Location of Well</b> Feet S      Feet W	<b>Well Name</b> MW-6
<b>License /Permit /GEC Project No.</b> 0610-133	<b>Grid Origin Location</b>	<b>Wis. Unique No.</b> N/A
<b>Type Of Well</b> Water Table Observation <input checked="" type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	<b>Section Location of Waste / Source</b> NW - NW, SECT. 29, T06N, R03W	<b>Date Well Installed</b> 10/11/2016
<b>Distance Well is From Waste/Source Boundary</b>	<b>Location to Well Relative to Waste/Source</b> u <input type="checkbox"/> Upgradient      s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> downgradient      n <input type="checkbox"/> Not Shown	<b>Well Installed By: (Persons Name &amp; Firm)</b> Soils & Engineering Services, Inc.
<b>Is Well a Point of Enforcement Std. Application</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		

A. Protective pipe, top elevation _____ ft. MSL		1. Cap and Lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																								
B. Well casing, top elevation _____ ft. MSL		2. Protective cover pipe: a. Inside diameter: 9 in b. Length: 1 ft c. Material: Steel <input checked="" type="checkbox"/> 4 Other <input type="checkbox"/>																								
C. Land surface elevation _____ ft. MSL		d. Additional protection? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: Expandable locking plug																								
D. Surface seal, bottom _____ ft. MSL		3. Surface seal: Bentonite <input checked="" type="checkbox"/> 30 Concrete <input type="checkbox"/> 1 Concrete    Other <input type="checkbox"/>																								
<table border="1"> <tr> <td colspan="6">12. USCS Classification of soil near screen:</td> </tr> <tr> <td>GP <input type="checkbox"/></td> <td>GM <input type="checkbox"/></td> <td>GW <input type="checkbox"/></td> <td>SW <input type="checkbox"/></td> <td>SP <input type="checkbox"/></td> <td></td> </tr> <tr> <td>SM <input checked="" type="checkbox"/></td> <td>SC <input type="checkbox"/></td> <td>ML <input type="checkbox"/></td> <td>CL <input type="checkbox"/></td> <td>CH <input type="checkbox"/></td> <td></td> </tr> <tr> <td colspan="6">Bedrock <input type="checkbox"/></td> </tr> </table>		12. USCS Classification of soil near screen:						GP <input type="checkbox"/>	GM <input type="checkbox"/>	GW <input type="checkbox"/>	SW <input type="checkbox"/>	SP <input type="checkbox"/>		SM <input checked="" type="checkbox"/>	SC <input type="checkbox"/>	ML <input type="checkbox"/>	CL <input type="checkbox"/>	CH <input type="checkbox"/>		Bedrock <input type="checkbox"/>						4. Material between well casing and protective pipe: Bentonite <input checked="" type="checkbox"/> 30 Annular space seal <input type="checkbox"/> Other <input type="checkbox"/>
12. USCS Classification of soil near screen:																										
GP <input type="checkbox"/>	GM <input type="checkbox"/>	GW <input type="checkbox"/>	SW <input type="checkbox"/>	SP <input type="checkbox"/>																						
SM <input checked="" type="checkbox"/>	SC <input type="checkbox"/>	ML <input type="checkbox"/>	CL <input type="checkbox"/>	CH <input type="checkbox"/>																						
Bedrock <input type="checkbox"/>																										
13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		5. Annular space seal a. Granular Bentonite <input checked="" type="checkbox"/> 33 b. ___ Lbs/gal mud weight ... Bentonite-sand slurry <input type="checkbox"/> 35 c. ___ Lbs/gal mud weight ..... Bentonite slurry <input type="checkbox"/> 31 d. ___ % Bentonite ..... Bentonite-cement grout <input type="checkbox"/> 50 e. ___ Ft3 volume added for any of the above																								
14. Drilling method used:      Rotary <input type="checkbox"/> 50 Hollow stem auger <input checked="" type="checkbox"/> 41 Other <input type="checkbox"/>		f. How installed: Tremie <input type="checkbox"/> 1 Tremie pumped <input type="checkbox"/> 2 Gravity <input checked="" type="checkbox"/> 8																								
15. Drilling fluid used:      Water <input type="checkbox"/> 02      Air <input type="checkbox"/> 50 Drilling Mud <input type="checkbox"/> 03      None <input checked="" type="checkbox"/> 41		6. Bentonite seal: a. Bentonite Granules <input type="checkbox"/> 33 b. <input type="checkbox"/> 1/4 in. <input checked="" type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in.    Bentonite pellets <input checked="" type="checkbox"/> 32 Other <input type="checkbox"/>																								
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe		7. Fine sand material: Manufacture, product name and mesh size a. #45-55 Red Flint v. Volume added _____ 1 ft3																								
17. Source of water (attach analysis)		8. Filter pack material: Manufacture, product name and mesh size a. #55 Red Flint v. Volume added _____ 13 ft3																								
E. Bentonite seal, top _____ ft. MSL or _____ 0.5 ft.		9. Well casing:      Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/>																								
F. Fine sand, top _____ ft. MSL or _____ 10.0 ft.		10. screen Material: a. Screen type:      Factory Cut <input checked="" type="checkbox"/> 11 Continuous slot <input type="checkbox"/> 1 Other <input type="checkbox"/>																								
G. Filter pack, top _____ ft. MSL or _____ 11.0 ft.		b. Manufacture _____ Johnson c. Slot size: _____ 0.01 in. d. Slotted length: _____ 10 ft.																								
H. Screen joint, top _____ ft. MSL or _____ 12.0 ft.		11. Backfill Material:      None <input checked="" type="checkbox"/> 14 Other <input type="checkbox"/>																								
I. Well bottom _____ ft. MSL or _____ 22.0 ft.																										
J. Filter pack , bottom _____ ft. MSL or _____ 26.0 ft.																										
K. Borehole, bottom _____ ft. MSL or _____ 26.0 ft.																										
L. Borehole, diameter _____ 12 in																										
M. O.D. Well casing _____ 2.375 in																										
N. I.D. Well casing _____ 2.067 in																										

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

Signature *Brian Johnson*

Firm General Engineering Company  
916 Silver Lake Dr., P>O> Box 340  
Portage, WI 53901