



January 25, 2018

WDNR
Attn: Mr. Ralph Smith
101 S. Webster Street, PO Box 7921
Madison, WI 53707



Subject:

Update Report
Mack Lake Tavern
N10202 County Highway K
Trego, WI, 54888
BRRTS #03-66-000858
PECFA #54888-9299-02-A

Dear Mr. Smith:

On behalf of Kelly Grimes, REI Engineering, Inc. (REI) hereby submits one copy of the above referenced report.

If upon review of this report you have any comments, questions and/or require additional information please contact our office at (715) 675-9784.

Sincerely,
REI Engineering, Inc.

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

Enclosure (A/S)

cc: Ms. Kelly Grimes, N10202 County Highway K, Trego, WI 54888



RESPONSIVE. EFFICIENT. INNOVATIVE.

4080 N. 20th Avenue Wausau, WI 54401
715-675-9784 REIengineering.com

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REI

**CIVIL & ENVIRONMENTAL
ENGINEERING, SURVEYING**

**UPDATE REPORT
MACK LAKE TAVERN
10202 COUNTY HIGHWAY K
TREGO, WI 54888**

**BRRTS #03-66-000858
PECFA #54888-9299-02-A
REI PROJECT #5586**



**COMPREHENSIVE
SERVICES WITH
PRACTICAL
SOLUTIONS**



**UPDATE REPORT
MACK LAKE TAVERN
10202 COUNTY HIGHWAY K
TREGO, WI 54888**

**BRRTS #03-66-000858
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REI PROJECT #5586

PREPARED FOR:

**Ms. Kelly Grimes
10202 County Highway K
Trego, WI 54888**

JANUARY 2018

**UPDATE REPORT
MACK LAKE TAVERN
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REI PROJECT #5586

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 Wisconsin Statutes Chapter 470.01. I also certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), 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, Brian J. Bailey, 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."



Brian J. Bailey

1-25-18

Date

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**UPDATE REPORT
MACK LAKE TAVERN
10202 COUNTY HIGHWAY K
TREGO, WI 54888**

**BRRTS #03-66-000858
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REI PROJECT #5586

1.0 INTRODUCTION

1.1 Purpose

This report presents the completion of an additional round of groundwater sampling following the soil excavation to remove petroleum impacted soil from the Mack Lake Tavern. The approval was for piezometer installation and continued well sampling. The Mack Lake Tavern site is located at N10202 County Highway K, Trego, Wisconsin.

2.0 SITE LOCATION

The Mack Lake Tavern site is located at N10202 County Highway K in the NW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 29, Township 41 North, Range 12 West, Town of Brooklyn, Washburn County, Wisconsin (Figure 1). Site layout is depicted in Figure 2.

3.0 SUMMARY OF WORK

3.1 Monitoring Well Installation

On October 9, 2017, REI was on site to direct and oversee the installation of three (3) NR 141 compliant groundwater monitoring wells (PZ2, PZ3 and PZ4). Gestra Engineering, Inc. of Milwaukee, WI was contracted to install the wells. Piezometer PZ2 was installed in the west ditch of County Highway K right-of-way. Piezometers PZ3 and PZ4 were advanced in the neighboring property (see Figure 2). All borings were blind drilled and WDNR boring log forms are included in Appendix A. Upon completion, wells were developed, sampled and surveyed into the existing well network. Well construction forms and well development forms are also included in

Appendix A. All purge water was containerized in 55-gallon DOT approved steel drums and taken to Wausau Wastewater Treatment Plant for disposal. Soil cuttings were also containerized in 55-gallon DOT approved steel drums and taken to the Lincoln County Landfill. Disposal Documentation is included in Appendix B.

3.2 Groundwater Monitoring and Analytical Results

One (1) round of groundwater sampling was completed from select wells from the existing well network on October 9, 2017 and the new piezometers (PZ2-PZ4) were developed, surveyed and sampled on October 31, 2017. Depth to groundwater was measured in each well prior to sampling. Table 1 presents the depth to groundwater and groundwater elevations for this investigation. Groundwater samples were collected and submitted to Pace Analytical, Green Bay, WI for analysis of PVOC and naphthalene compounds. Groundwater analytical results are summarized in Tables 2a-n. The complete laboratory analytical report is included as Appendix C. Historical groundwater flow is westerly.

4.0 CONCLUSION AND RECOMMENDATIONS

REI is currently completing the approved scope of services which includes three (3) additional quarterly rounds of groundwater sampling. REI will submit another report after the fourth approved sampling event has been completed.

Table 1
Depth to Water and Water Table Elevations
Mack Lake
Trego, Wisconsin

Depth to Water (feet) below Reference Elevation

Date	MW500	MW600	MW700	SP800	MW900	MW1000	MW1200	MW1300	MW1400	PZ100	PZ2	PZ3	PZ4
10/11/2004	20.65	15.89	16.82							19.69			
11/18/2004	20.67	15.94	16.85	5.96						19.72			
2/1/2005	21.02	16.29	17.25	3.35	18.03					20.07			
3/24/2005	21.23		17.49		18.26	20.91				20.31			
6/1/2006	Well	16.32	17.34	3.19	18.17	20.85	25.51		23.50	20.2			
May-07	Under	23.30	23.50	Dry	23.40	Dry	27.30	Dry	20.68				
Aug-07	Asphalt	17.85	18.82	4.45	19.63	Dry	27.00	Dry	20.42				
Nov-07	Not	17.65	18.70	4.20	19.50		26.82		20.60				
Mar-08	Sampled	17.85	18.90	4.05			27.50		20.60				
1/12/2011	21.82		18.08	NM	18.85	21.52	21.93		19.82	20.86			
4/28/2011	21.41	16.57	17.68	NM		21.13	25.81		19.42	20.43			
9/22/2011	20.52	15.74	16.76	NM	17.51	20.19	24.85		18.50	19.55			
5/9/2012	NM	NM	NM	NM	18.34	21.03	25.68		19.33	20.36			
5/7/2013	22.23	17.40	18.50		19.26	21.93	26.60		20.24	21.23			
6/30/2015	19.06	14.30	15.38	1.10	16.04	18.70	23.35		17.01	18.09			
10/9/2017					15.44	18.06	22.75		16.45	17.55	17.24	22.64	17.63

Measuring Point Elevations

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

Initial Survey	1,052.24	1,047.83	1,048.30	1,048.30	1,048.66	1,051.01	1,055.36	1,051.59	1,049.45	1,051.09			
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Ground Surface Elevation

	1,052.67	1,048.14	1,048.61	1,046.20	1,049.10	1,051.65	1,055.57	1,051.59	1,049.45	1,051.53			
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Depth to Water (feet) below Ground Surface

Average	21.39	17.40	18.31	1.66	18.98	21.12	25.95	21.17	19.63	20.28			
Maximum	22.66	23.61	23.81	3.86	23.84	22.57	27.71	22.65	23.50	21.67			
Minimum	19.49	14.61	15.69	-1.00	15.88	18.70	22.96	18.55	16.45	17.99			
Range	3.17	9	8.12	4.86	7.96	3.87	4.75	4.1	7.05	3.68			

Water Level Elevation (feet MSL)

Date	MW500	MW600	MW700	SP800	MW900	MW1000	MW1200	MW1300	MW1400	PZ100	PZ2	PZ3	PZ4
10/11/2004	1,031.59	1,031.94	1,031.48							1,031.40			
11/18/2004	1,031.57	1,031.89	1,031.45	1,042.34						1,031.37			
2/1/2005	1,031.22	1,031.54	1,031.05	1,044.95	1,030.63					1,031.02			
3/24/2005	1,031.01		1,030.81	1,040.95	1,030.49	1,030.10				1,030.78			
6/1/2006		1,031.51	1,030.96	1,045.11	1,030.49	1,030.16	1,029.85		1,025.95	1,030.89			
May-07		1,024.53	1,024.80		1,025.26		1,028.06		1,028.77				
Aug-07		1,029.98	1,029.48	1,043.85	1,029.03		1,028.36		1,029.03				
Nov-07		1,030.18	1,029.60	1,044.10	1,029.16		1,028.54		1,029.99				
Mar-08		1,029.98	1,029.40	1,044.25			1,027.86		1,028.85				
1/12/2011	1,030.42		1,030.22		1,029.81	1,029.49	1,029.63		1,029.66	1,030.23			
4/28/2011	1,030.83	1,031.26	1,030.62		1,031.15	1,029.88	1,029.55		1,030.09	1,030.66			
9/22/2011	1,031.72	1,032.09	1,031.54		1,030.82	1,030.51	1,030.31		1,030.95	1,031.54			
5/9/2012					1,030.32	1,029.98	1,029.68		1,030.97	1,030.73			
5/7/2013	1,030.01	1,030.43	1,029.80		1,029.40	1,029.08	1,028.76		1,029.22	1,029.21			
6/30/2015	1,033.18	1,033.53	1,032.92	1,047.20	1,032.62	1,032.31	1,032.01		1,032.44	1,033.00			
10/9/2017					1,033.22	1,032.95	1,032.61		1,033.04				
10/31/2017									1,033.00	1,033.54			

Survey elevations provided by others

NM = Not Measured

Table 2a
Summary of Groundwater Analytical Results
Mack Lake
Trego, WI

Parameter	Sample Location		PZ100									
	ES	PAL	Date	10/11/2004	11/18/2004	2/1/2005	3/24/2005	6/1/2006	Project Bid	May-07	Aug-07	Nov-07
DRO			Units	1,700	NA	NA	NA	NA		Not	Not	Not
GRO			mg/l	3,100	NA	NA	NA	NA		Sampled	Sampled	Sampled
Lead	15	1.5	µg/l	NA	NA	< 1.4	NA	NA				
VOC Parameters												
Benzene	5	0.5	µg/l	3.3	11	NA	8	3.6				
Toluene	800	160	µg/l	32	< 0.22	NA	< 1.1	1.32*				
Ethylbenzene	700	140	µg/l	34	8.1	NA	4.1	1.16*				
Xylenes (mixed isomers)	2,000	400	µg/l	150	23	NA	7	3.3*				
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.50	10	NA	< 0.88	< 0.52				
Naphthalene	100	10	µg/l	7.4	NA	NA	NA	NA				
Trimethylbenzenes (mixed isomers)	480	96	µg/l	300	244	NA	113	23.6				

Parameter	Sample Location		PZ100									
	ES	PAL	Date	Mar-08	Project Stalled	1/12/2011	4/28/2011	9/22/2011	5/9/2012	5/8/2013	6/30/2015	10/31/2017
DRO			Units	Not		NA	NA	NA	NA	NA	NA	NA
GRO			mg/l	Sampled		NA	NA	NA	NA	NA	NA	NA
Lead	15	1.5	µg/l			NA	NA	NA	NA	NA	NA	NA
VOC Parameters												
Benzene	5	0.5	µg/l			<i>1.78*</i>	259	18.2	< 0.39	7.10	< 0.40	< 0.40
Toluene	800	160	µg/l			<i>1.81*</i>	19.8	5.1	<i>0.79*</i>	<i>0.85*</i>	< 0.39	< 0.39
Ethylbenzene	700	140	µg/l			<i>0.794*</i>	58.1	12.1	4.7	2.30	5.60	0.66*
Xylenes (mixed isomers)	2,000	400	µg/l			3.24	98.2	24.49	7.9	4.97	16.50	1.6*
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l			< 0.30	< 0.76	< 0.38	< 0.38	< 0.38	< 0.48	< 0.48
Naphthalene	100	10	µg/l			< 2.0	<i>10.9</i>	5.1	1.6	<i>0.84*</i>	2.0	<i>0.80*</i>
Trimethylbenzenes (mixed isomers)	480	96	µg/l			<i>2.33*</i>	34.5	10.7	6.0	3.8	10.4	13.4

Notes:

ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits

NS = Not Sampled

NA - Not Analyzed

* = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Enforcement Standard exceeded **BOLD**
Preventive Action Limit exceeded *Italics*

All samples results prior to 1-12-2011 were collected, analyzed and reported by others

Table 2b
Summary of Groundwater Analytical Results
Mack Lake
Trego, WI

Parameter	Sample Location		MW500									
	ES	PAL	Date	10/11/2004	11/18/2004	2/1/2005	3/24/2005	6/1/2006	Project Bid	May-07	Aug-07	Nov-07
DRO			mg/l	< 100	NA	NA	NA	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
GRO			mg/l	< 50	NA	NA	NA	Sampled				
Lead	15	1.5	µg/l	NA	NA	NA	NA					
VOC Parameters												
Benzene	5	0.5	µg/l	< 0.20	< 0.25	NA	< 0.25	No Access	Well	Well	Well	Well
Toluene	800	160	µg/l	< 0.20	< 0.11	NA	< 0.11		Under	Under	Under	Under
Ethylbenzene	700	140	µg/l	< 0.50	< 0.22	NA	< 0.22	to	Asphalt	Asphalt	Asphalt	Asphalt
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.50	< 0.39	NA	< 0.39	Well				
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.50	< 0.23	NA	< 0.23					
Naphthalene	100	10	µg/l	< 0.25	NA	NA	NA					
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.20	< 0.44	NA	< 0.44					
Natural Attenuation Parameters												
Iron	0.30	0.15	mg/l	NA	NA	NA	NA					
Nitrate/Nitrite	10	2	mg/l	NA	NA	NA	NA					
Sulfate	250	125	mg/l	NA	NA	NA	NA					

Parameter	Sample Location		MW500									
	ES	PAL	Date	Mar-08	Project Stalled	1/12/2011	4/28/2011	9/22/2011	5/9/2012	5/8/2013	6/30/2015	10/9/2017
DRO			mg/l	Not Sampled		NA	NA	NA	Not Sampled	NA	NA	Not Sampled
GRO			mg/l	Sampled		NA	NA	NA	Sampled	NA	NA	Sampled
Lead	15	1.5	µg/l			NA	NA	NA				
VOC Parameters												
Benzene	5	0.5	µg/l	Well		< 0.31	< 0.39	< 0.39		< 0.39	< 0.40	
Toluene	800	160	µg/l	Under		0.669*	< 0.42	< 0.42		< 0.42	< 0.39	
Ethylbenzene	700	140	µg/l	Asphalt		< 0.50	< 0.41	< 0.41		< 0.41	< 0.39	
Xylenes (mixed isomers)	2,000	400	µg/l			< 0.62	< 0.87	< 0.87		< 0.87	< 0.80	
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l			< 0.50	< 0.38	< 0.38		< 0.38	< 0.48	
Naphthalene	100	10	µg/l			< 2.0	< 0.40	< 0.40		< 0.40	< 0.42	
Trimethylbenzenes (mixed isomers)	480	96	µg/l			< 0.44	< 0.43	< 0.43		< 0.43	< 0.42	
Natural Attenuation Parameters												
Iron	0.30	0.15	mg/l			NA	NA	NA		NA	NA	
Nitrate/Nitrite	10	2	mg/l			NA	NA	NA		NA	NA	
Sulfate	250	125	mg/l			NA	NA	NA		NA	NA	

Notes:
ES = NRI140.10 Enforcement Standards
PAL = NRI140.10 Preventive Action Limits
NS = Not Sampled
NA - Not Analyzed
* = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation
Enforcement Standard exceeded
Preventive Action Limit exceeded

BOLD
<i>Italics</i>

All samples results prior to 1-12-2011 were collected, analyzed and reported by others

Table 2c
Summary of Groundwater Analytical Results
Mack Lake
Trego, WI

Parameter	MW600										
	Sample Location	Date	10/11/2004	11/18/2004	2/1/2005	3/24/2005	6/1/2006	Project	May-07	Aug-07	Nov-07
DRO	ES	PAL	< 100	NA	NA	Not Sampled	NA	NA	NA	NA	NA
GRO			< 50	NA	NA	Sampled	NA	NA	NA	NA	NA
Lead	15	1.5	µg/l	NA	NA	NA	NA	NA	NA	NA	NA
VOC Parameters											
Benzene	5	0.5	µg/l	< 0.20	< 0.25	NA	No Access	< 0.17	< 0.25	< 0.25	< 0.25
Toluene	800	160	µg/l	< 0.20	< 0.11	NA	to	< 0.78	< 0.11	< 0.11	< 0.11
Ethylbenzene	700	140	µg/l	< 0.50	< 0.22	NA	Well	< 1.0	< 0.22	< 0.22	< 0.22
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.50	< 0.39	NA		< 2.84	< 0.39	< 0.39	< 0.39
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.50	< 0.23	NA		< 0.52	< 0.23	< 0.23	< 0.23
Naphthalene	100	10	µg/l	< 0.25	NA	NA		NA	< 0.50	< 0.50	< 0.50
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.20	< 0.44	NA		< 1.95	< 0.25	< 0.25	< 0.25
Natural Attenuation Parameters											
Iron	0.30	0.15	mg/l	NA	NA	NA		NA	2.3	34	4.2
Nitrate/Nitrite	10	2	mg/l	NA	NA	NA		NA	< 0.1	< 0.1	< 0.5
Sulfate	250	125	mg/l	NA	NA	NA		NA	5.00	1.00	1.80

Parameter	MW600										
	Sample Location	Date	Mar-08	Project	1/12/2011	4/28/2011	9/22/2011	5/9/2012	5/8/2013	6/30/2015	10/9/2017
DRO	ES	PAL	NA	Stalled	Not Sampled	NA	NA	NA	NA	NA	Not Sampled
GRO			NA	NA	Sampled	NA	NA	Sampled	NA	NA	Sampled
Lead	15	1.5	µg/l	NA	NA	NA	NA	NA	NA	NA	NA
VOC Parameters											
Benzene	5	0.5	µg/l	< 0.25	Under	< 0.39	< 0.39	< 0.39	< 0.39	< 0.40	< 0.40
Toluene	800	160	µg/l	< 0.11	Debris	< 0.42	< 0.42	< 0.42	< 0.42	< 0.39	< 0.39
Ethylbenzene	700	140	µg/l	< 0.22		< 0.41	< 0.41	< 0.41	< 0.41	< 0.39	< 0.39
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.39		< 0.87	< 0.87	< 0.87	< 0.87	< 0.80	< 0.80
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.23		< 0.38	< 0.38	< 0.38	< 0.38	< 0.48	< 0.48
Naphthalene	100	10	µg/l	< 0.50		< 0.40	< 0.40	< 0.40	< 0.40	< 0.42	< 0.42
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.25		< 0.43	< 0.43	< 0.43	< 0.43	< 0.42	< 0.42
Natural Attenuation Parameters											
Iron	0.30	0.15	mg/l	72	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	10	2	mg/l	< 0.1	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	mg/l	< 1.5	NA	NA	NA	NA	NA	NA	NA

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

BOLD
<i>Italics</i>

All samples results prior to 1-12-2011 were collected, analyzed and reported by others

Table 2d
Summary of Groundwater Analytical Results
Mack Lake
Trego, WI

Parameter	Sample Location	MW700										
		Date	10/11/2004	11/18/2004	2/1/2005	3/24/2005	6/1/2006	Project	May-07	Aug-07	Nov-07	
		Units					Bid					
DRO	ES	PAL	170	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO			470	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	1.5	µg/l	NA	NA	< 1.4	NA	NA	NA	NA	NA	NA
VOC Parameters												
Benzene	5	0.5	µg/l	31	37	NA	NA	53	11.6	1.60	1.30	0.83
Toluene	800	160	µg/l	1.2	2.0	NA	NA	2.4	5.9	< 0.11	< 0.11	< 0.11
Ethylbenzene	700	140	µg/l	8.9	10	NA	NA	19	3.6	4.00	1.00	1.00
Xylenes (mixed isomers)	2,000	400	µg/l	1.3	1.5	NA	NA	3.4	< 1.28	< 0.39	< 0.39	< 0.39
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.50	< 0.23	NA	NA	< 0.63	< 0.34	< 0.23	< 0.23	< 0.23
Naphthalene	100	10	µg/l	0.82	NA	NA	NA	NA	< 2.2	< 0.5	< 0.5	0.97
Trimethylbenzenes (mixed isomers)	480	96	µg/l	0.23	< 0.44	NA	NA	0.3	< 1.36	< 0.25	< 0.25	< 0.25
Natural Attenuation Parameters												
Iron	0.30	0.15	mg/l	NA	NA	NA	NA	NA	NA	8.7	13	8.7
Nitrate/Nitrite	10	2	mg/l	NA	NA	NA	NA	NA	NA	< 0.1	< 0.1	< 0.5
Sulfate	250	125	mg/l	NA	NA	NA	NA	NA	NA	4.00	1.00	0.18

Parameter	Sample Location	MW700										
		Date	Mar-08	Project	1/12/2011	4/28/2011	9/22/2011	5/9/2012	5/8/2013	6/30/2015	10/9/2017	
		Units		Stalled								
DRO	ES	PAL	NA	NA	NA	NA	NA	NA	NA	Not	NA	Not
GRO			NA	NA	NA	NA	NA	NA	NA	Sampled	NA	Sampled
Lead	15	1.5	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOC Parameters												
Benzene	5	0.5	µg/l	1.10			2.71	2.0	< 0.39	< 0.39	< 0.40	
Toluene	800	160	µg/l	< 0.11			0.659*	2.0	< 0.42	< 0.42	< 0.39	
Ethylbenzene	700	140	µg/l	0.29			2.71	< 0.41	< 0.41	< 0.41	< 0.39	
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.39			< 0.62	< 0.87	< 0.87	< 0.87	< 0.80	
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.23			< 0.50	< 0.38	< 0.38	< 0.38	< 0.48	
Naphthalene	100	10	µg/l	< 0.5			< 2.0	< 0.40	< 0.40	< 0.40	< 0.42	
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.25			< 0.44	< 0.43	< 0.43	< 0.43	< 0.42	
Natural Attenuation Parameters												
Iron	0.30	0.15	mg/l	13			NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	10	2	mg/l	< 0.1			NA	NA	NA	NA	NA	NA
Sulfate	250	125	mg/l	< 1.5			NA	NA	NA	NA	NA	NA

Notes:

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

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<i>Italics</i>

All samples results prior to 1-12-2011 were collected, analyzed and reported by others

Table 2e
Summary of Groundwater Analytical Results
Mack Lake
Trego, WI

Parameter	Sample Location	SP800									
		Date	11/18/2004	2/1/2005	3/24/2005	6/1/2006	May-07	Aug-07	Nov-07	Mar-08	
	PAL	Units	NA	NA	Not Sampled	NA	Well	NA	NA	NA	
DRO	ES	mg/l	NA	NA	Not	NA	Well	NA	NA	NA	
GRO		mg/l	NA	NA	Sampled	NA	Dry	NA	NA	NA	
Lead	15	µg/l	NA	NA		NA		NA	NA	NA	
VOC Parameters											
Benzene	5	µg/l	1.6	NA		< 0.17	Not	0.30	< 0.25	0.26	
Toluene	800	µg/l	12	NA	Well	1.69*	Sampled	8.00	0.87	0.15	
Ethylbenzene	700	µg/l	< 0.50	NA	Frozen	< 0.2		< 0.22	< 0.22	< 0.22	
Xylenes (mixed isomers)	2,000	µg/l	3.6	NA		< 1.28		< 0.39	< 0.39	< 0.39	
Methyl tert-Butyl Ether (MTBE)	60	µg/l	< 0.50	NA		< 0.34		< 0.23	< 0.23	< 0.23	
Naphthalene	100	µg/l	0.43	NA		< 2.2		< 0.5	< 0.5	< 0.5	
Trimethylbenzenes (mixed isomers)	480	µg/l	0.44	NA		< 1.36		< 0.25	< 0.25	< 0.25	
Natural Attenuation Parameters											
Iron	0.30	mg/l	NA	NA		NA		40	22	6.8	
Nitrate/Nitrite	10	mg/l	NA	NA		NA		< 0.1	< 0.5	< 0.1	
Sulfate	250	mg/l	NA	NA		NA		< 0.25	2.9	820	

Parameter	Sample Location	SP800									
		Date	1/12/2011	4/28/2011	9/22/2011	5/9/2012	5/8/2013	6/30/2015	10/9/2017		
	PAL	Units	Project Stalled	NA	NA	NA	NA	NA	NA	NA	
DRO	ES	mg/l		NA	NA	NA	NA	NA	NA	NA	
GRO		mg/l		NA	NA	NA	NA	NA	NA	NA	
Lead	15	µg/l		NA	NA	NA	NA	NA	NA	NA	
VOC Parameters											
Benzene	5	µg/l		< 0.31	< 0.39	< 0.39	Not	< 0.40	< 0.40	< 0.40	
Toluene	800	µg/l		0.669*	< 0.42	1.2	Sampled	2.1	3.6	3.6	
Ethylbenzene	700	µg/l		< 0.50	< 0.41	< 0.41		< 0.39	< 0.39	< 0.39	
Xylenes (mixed isomers)	2,000	µg/l		< 0.62	< 0.87	< 0.87		< 0.80	< 0.80	< 0.80	
Methyl tert-Butyl Ether (MTBE)	60	µg/l		< 0.50	< 0.38	< 0.38		< 0.48	< 0.48	< 0.48	
Naphthalene	100	µg/l		< 2.0	< 0.40	< 0.40		< 0.42	< 0.42	< 0.42	
Trimethylbenzenes (mixed isomers)	480	µg/l		< 0.44	< 0.43	< 0.43		0.44*	< 0.42	< 0.42	
Natural Attenuation Parameters											
Iron	0.30	mg/l		NA	NA	NA	NA	NA	NA	NA	
Nitrate/Nitrite	10	mg/l		NA	NA	NA	NA	NA	NA	NA	
Sulfate	250	mg/l		NA	NA	NA	NA	NA	NA	NA	

Notes:
ES = NRI140.10 Enforcement Standards
PAL = NRI140.10 Preventive Action Limits
NS = Not Sampled
NA = Not Analyzed
* = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation
Enforcement Standard exceeded
Preventive Action Limit exceeded

BOLD
<i>Italics</i>

All samples results prior to 1-12-2011 were collected, analyzed and reported by others

Table 2f
Summary of Groundwater Analytical Results
Mack Lake
Trego, WI

Parameter	Sample Location	MW900											
		Date	2/1/2005	3/24/2005	6/1/2006	Project Bid	May-07	Aug-07	Nov-07	Mar-08			
ES	PAL	Units											
DRO		mg/l	1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO		mg/l	3,600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	µg/l	< 1.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOC Parameters													
Benzene	5	µg/l	47	46	3.15					12	3.0	< 5.9	< 0.25
Toluene	800	µg/l	630	560	86					28	13	29	0.38
Ethylbenzene	700	µg/l	360	370	76					39	24	65	0.41
Xylenes (mixed isomers)	2,000	µg/l	1,200	1,200	239					130	42	170	1.40
Methyl tert-Butyl Ether (MTBE)	60	µg/l	< 5.0	< 1.2	< 0.34					< 2.0	< 0.23	< 0.23	< 0.23
Naphthalene	100	µg/l	54	57	11.1					7.0	2.0	8.2	< 0.5
Trimethylbenzenes (mixed isomers)	480	µg/l	439	410	92.1					80	20	98	1.91
Natural Attenuation Parameters													
Iron	0.30	mg/l	NA	NA	NA					12	9	12	0.380
Nitrate/Nitrite	10	mg/l	NA	NA	NA					< 0.1	< 0.1	< 0.5	0.35
Sulfate	250	mg/l	NA	NA	NA					4	70	NA	21

Parameter	Sample Location	MW900											
		Date	Project Stalled	1/12/2011	4/28/2011	9/22/2011	5/9/2012	5/8/2013	6/30/2015	10/9/2017			
ES	PAL	Units											
DRO		mg/l		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO		mg/l		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	µg/l		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOC Parameters													
Benzene	5	µg/l		77.9	8.7	213	89.2	104	104	66.9	47.9	47.9	47.9
Toluene	800	µg/l		86.9	1.1	14.7	20.1	130	149	292	292	292	292
Ethylbenzene	700	µg/l		75.8	5.0	88.5	74.7	126	425	425	425	425	425
Xylenes (mixed isomers)	2,000	µg/l		246.2	6.3	142.7	132.5	297	912	912	912	912	912
Methyl tert-Butyl Ether (MTBE)	60	µg/l		8.48	< 0.38	2.9	0.76*	0.85*	5.1	5.1	3.2*	3.2*	3.2*
Naphthalene	100	µg/l		22.2	0.92*	14.2	10.8	20.1	106	106	125	125	125
Trimethylbenzenes (mixed isomers)	480	µg/l		135.1	7.8	163	69.4	108.5	328	328	1,053	1,053	1,053
Natural Attenuation Parameters													
Iron	0.30	mg/l		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	10	mg/l		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	mg/l		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NS = Not Sampled

NA - Not Analyzed

* = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Enforcement Standard exceeded

Preventive Action Limit exceeded

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<i>Italics</i>

All samples results prior to 1-12-2011 were collected, analyzed and reported by others

Table 2g
Summary of Groundwater Analytical Results
Mack Lake
Trego, WI

Parameter	Sample Location		MW1000										Project Stalled
	ES	PAL	Date	3/24/2005	6/1/2006	Project Bid	May-07	Aug-07	Nov-07	Mar-08			
DRO			Units	mg/l	NA		Well	Well	Well	Well			
GRO			mg/l	9,700	NA		Dry	Dry	Filled	Filled			
Lead	15	1.5	µg/l	NA	NA				In	In			
VOC Parameters													
Benzene	5	0.5	µg/l	34	212								
Toluene	800	160	µg/l	110	1,190		Not	Not	Not	Not			
Ethylbenzene	700	140	µg/l	670	910		Sampled	Sampled	Sampled	Sampled			
Xylenes (mixed isomers)	2,000	400	µg/l	1,800	2,515*								
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 20	< 26								
Naphthalene	100	10	µg/l	140	106*								
Trimethylbenzenes (mixed isomers)	480	96	µg/l	1,550	731								
Natural Attenuation Parameters													
Iron	0.30	0.15	mg/l	NA	NA								
Nitrate/Nitrite	10	2	mg/l	NA	NA								
Sulfate	250	125	mg/l	NA	NA								

Parameter	Sample Location		MW1000									
	ES	PAL	Date	1/12/2011	4/28/2011	9/22/2011	5/9/2012	5/8/2013	6/30/2015	10/9/2017		
DRO			Units	mg/l	NA	NA	NA	NA	NA	NA	NA	
GRO			mg/l	NA	NA	NA	NA	NA	NA	NA	NA	
Lead	15	1.5	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	
VOC Parameters												
Benzene	5	0.5	µg/l	33.4	8.7	< 0.39	22.1	23.5	16.1	0.62*		
Toluene	800	160	µg/l	159	1.1	< 0.42	37.6	8.8	< 0.39	< 0.39		
Ethylbenzene	700	140	µg/l	537	5.0	< 0.41	286	308	17	15.4		
Xylenes (mixed isomers)	2,000	400	µg/l	1,076.8	6.3	< 0.87	564.8	587.2	25.9	23.7		
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	30.3	< 0.38	< 0.38	2.9	3.3	< 0.48	< 0.48		
Naphthalene	100	10	µg/l	87.8	0.92*	< 0.40	67.8	61.9	19.8	5.8		
Trimethylbenzenes (mixed isomers)	480	96	µg/l	445	7.8	< 0.43	230.6	243.4	10.5	28.9		
Natural Attenuation Parameters												
Iron	0.30	0.15	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	
Nitrate/Nitrite	10	2	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	
Sulfate	250	125	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	

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

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<i>Italics</i>

All samples results prior to 1-12-2011 were collected, analyzed and reported by others

Table 2h
Summary of Groundwater Analytical Results
Mack Lake
Trego, WI

Parameter	Sample Location		MW1200					Project Stalled
	PAL	Date	6/1/2006	May-07	Aug-07	Nov-07	Mar-08	
DRO	ES	Units	NA	NA	NA	NA	NA	
GRO		mg/l	NA	NA	NA	NA	NA	
Lead	15	µg/l	NA	NA	NA	NA	NA	
VOC Parameters								
Benzene	5	µg/l	< 0.17	< 0.25	< 0.25	< 0.25	< 0.25	
Toluene	800	µg/l	< 0.59	< 0.11	< 0.11	< 0.11	< 0.11	
Ethylbenzene	700	µg/l	< 0.2	< 0.22	< 0.22	< 0.22	< 0.22	
Xylenes (mixed isomers)	2,000	µg/l	< 1.28	< 0.39	< 0.39	< 0.39	< 0.39	
Methyl tert-Butyl Ether (MTBE)	60	µg/l	< 0.34	< 0.23	< 0.23	< 0.23	< 0.23	
Naphthalene	100	µg/l	< 2.2	< 0.5	< 0.5	< 0.5	< 0.5	
Trimethylbenzenes (mixed isomers)	480	µg/l	< 1.36	< 0.25	< 0.25	< 0.25	< 0.25	
Natural Attenuation Parameters								
Iron	0.30	mg/l	NA	3.3	7.5	8.5	6.8	
Nitrate/Nitrite	10	mg/l	NA	0.80	0.14	< 0.5	< 0.1	
Sulfate	250	mg/l	NA	7	4	2	< 1.5	

Parameter	Sample Location		MW1200					Project Stalled		
	PAL	Date	1/12/2011	4/28/2011	9/22/2011	5/9/2012	5/8/2013		6/30/2015	10/9/2017
DRO	ES	Units	Not Sampled	NA	NA	NA	NA	NA	NA	
GRO		mg/l	Sampled	NA	NA	NA	NA	NA	NA	
Lead	15	µg/l		NA	NA	NA	NA	NA	NA	
VOC Parameters										
Benzene	5	µg/l	Under Truck	< 0.39	1.6	< 0.39	< 0.39	< 0.39	< 0.40	
Toluene	800	µg/l	Truck	< 0.42	8.3	< 0.42	< 0.42	< 0.39	< 0.39	
Ethylbenzene	700	µg/l		< 0.41	65.4	< 0.41	< 0.41	< 0.39	< 0.39	
Xylenes (mixed isomers)	2,000	µg/l		< 0.87	126.8	< 0.87	< 0.87	< 0.80	< 0.80	
Methyl tert-Butyl Ether (MTBE)	60	µg/l		< 0.38	1.6	< 0.38	< 0.38	< 0.48	< 0.48	
Naphthalene	100	µg/l		< 0.40	13.7	< 0.40	< 0.40	< 0.42	< 0.42	
Trimethylbenzenes (mixed isomers)	480	µg/l		< 0.43	73.3	< 0.43	< 0.43	< 0.42	< 0.42	
Natural Attenuation Parameters										
Iron	0.30	mg/l		NA	NA	NA	NA	NA	NA	
Nitrate/Nitrite	10	mg/l		NA	NA	NA	NA	NA	NA	
Sulfate	250	mg/l		NA	NA	NA	NA	NA	NA	

Notes:

ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits

NS = Not Sampled

NA - Not Analyzed

* = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Enforcement Standard exceeded

Preventive Action Limit exceeded

BOLD
<i>Italics</i>

All samples results prior to 1-12-2011 were collected, analyzed and reported by others

Table 2i
Summary of Groundwater Analytical Results
Mack Lake
Trego, WI

Parameter	Sample Location		MW1300					Project Stalled	1/12/2011	4/28/2011
	ES	PAL	Date	Units	May-07	Aug-07	Nov-07			
DRO				mg/l	Well	Well	NA	Well	Well	NA
GRO				mg/l	Dry	Dry	NA	Dry	Dry	NA
Lead	15	1.5		µg/l			NA			NA
VOC Parameters										
Benzene	5	0.5		µg/l	Not Sampled	Not Sampled	< 0.25	Not Sampled	Not Sampled	< 0.39
Toluene	800	160		µg/l	Sampled	Sampled	< 0.11	Sampled	Sampled	< 0.42
Ethylbenzene	700	140		µg/l			< 0.22			< 0.41
Xylenes (mixed isomers)	2,000	400		µg/l			< 0.39			< 0.87
Methyl tert-Butyl Ether (MTBE)	60	12		µg/l			< 0.23			< 0.38
Naphthalene	100	10		µg/l			< 0.5			< 0.40
Trimethylbenzenes (mixed isomers)	480	96		µg/l			< 0.25			< 0.43
Natural Attenuation Parameters										
Iron	0.30	0.15		mg/l			48			NA
Nitrate/Nitrite	10	2		mg/l			NA			NA
Sulfate	250	125		mg/l			NA			NA

Parameter	Sample Location		MW1300					10/9/2017		
	ES	PAL	Date	Units	9/22/2011	5/9/2012	5/8/2013		6/30/2015	
DRO				mg/l	NA	Not Sampled	NA	NA	NA	
GRO				mg/l	NA	Sampled	NA	NA	NA	
Lead	15	1.5		µg/l	NA		NA	NA	NA	
VOC Parameters										
Benzene	5	0.5		µg/l	< 0.39		< 0.39	< 0.40	< 0.40	
Toluene	800	160		µg/l	< 0.42		< 0.42	< 0.39	< 0.39	
Ethylbenzene	700	140		µg/l	< 0.41		< 0.41	< 0.39	< 0.39	
Xylenes (mixed isomers)	2,000	400		µg/l	< 0.87		< 0.87	< 0.80	< 0.80	
Methyl tert-Butyl Ether (MTBE)	60	12		µg/l	< 0.38		< 0.38	< 0.48	< 0.48	
Naphthalene	100	10		µg/l	< 0.40		< 0.40	< 0.42	< 0.42	
Trimethylbenzenes (mixed isomers)	480	96		µg/l	< 0.43		< 0.43	< 0.42	< 0.42	
Natural Attenuation Parameters										
Iron	0.30	0.15		mg/l	NA		NA	NA	NA	
Nitrate/Nitrite	10	2		mg/l	NA		NA	NA	NA	
Sulfate	250	125		mg/l	NA		NA	NA	NA	

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

BOLD
<i>Italics</i>

All samples results prior to 1-12-2011 were collected, analyzed and reported by others

Table 2j
Summary of Groundwater Analytical Results
Mack Lake
Trego, WI

Parameter	ES	Sample Location		MW1400							Project	1/12/2011	4/28/2011
		Date	Units	May-07	Aug-07	Nov-07	Mar-08	Stalled					
DRO		PAL	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO			mg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	1.5	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOC Parameters													
Benzene	5	0.5	µg/l	< 4.7	< 5.0	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	1.77*	0.97*
Toluene	800	160	µg/l	< 0.11	< 6	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.37	0.70*
Ethylbenzene	700	140	µg/l	< 0.22	< 0.6	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.50	0.89*
Xylenes (mixed isomers)	2,000	400	µg/l	0.80	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.62	1.1*
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	0.70	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.30	< 0.38
Naphthalene	100	10	µg/l	< 0.8	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	2.23*	< 0.40
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.40	< 0.43
Natural Attenuation Parameters													
Iron	0.30	0.15	mg/l	10	12	10	10	10	1.7	1.7	1.7	NA	NA
Nitrate/Nitrite	10	2	mg/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA
Sulfate	250	125	mg/l	4	11	0.24	2.5	2.5	2.5	2.5	2.5	NA	NA

Parameter	ES	Sample Location		MW1400							10/31/2017	
		Date	Units	9/22/2011	5/9/2012	5/8/2013	6/30/2015					
DRO		PAL	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO			mg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	1.5	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOC Parameters												
Benzene	5	0.5	µg/l	0.96*	0.71*	0.63*	0.63*	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Toluene	800	160	µg/l	0.67*	< 0.42	< 0.42	< 0.42	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
Ethylbenzene	700	140	µg/l	0.86*	< 0.41	< 0.41	< 0.41	1.1	1.1	1.1	1.7	1.7
Xylenes (mixed isomers)	2,000	400	µg/l	1.3*	< 0.87	< 0.87	< 0.87	< 0.80	< 0.80	< 0.80	2.7	2.7
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	0.43*	< 0.38	< 0.38	< 0.38	0.61*	0.61*	0.61*	< 0.48	< 0.48
Naphthalene	100	10	µg/l	0.64*	< 0.40	< 0.40	< 0.40	0.69*	0.69*	0.69*	1.7	1.7
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.43	< 0.43	< 0.43	< 0.43	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42
Natural Attenuation Parameters												
Iron	0.30	0.15	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	10	2	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits

NS = Not Sampled

NA - Not Analyzed

* = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Enforcement Standard exceeded

Preventive Action Limit exceeded

BOLD
<i>Italics</i>

All samples results prior to 1-12-2011 were collected, analyzed and reported by others

**Table 2k
Summary of Groundwater Analytical Results
Mack Lake
Trego, WI**

Parameter	Sample Location		PZ2 10/31/17
	ES	PAL	
VOC Parameters			
Benzene	5	0.5	< 0.40 µg/l
Toluene	800	160	< 0.39 µg/l
Ethylbenzene	700	140	< 0.39 µg/l
Xylenes (mixed isomers)	2,000	400	< 0.80 µg/l
Methyl tert-Butyl Ether (MTBE)	60	12	< 0.48 µg/l
Naphthalene	100	10	< 0.42 µg/l
Trimethylbenzenes (mixed isomers)	480	96	< 0.42 µg/l

Notes:

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

BOLD
<i>Italics</i>

**Table 21
Summary of Groundwater Analytical Results
Mack Lake
Trego, WI**

Parameter	Sample Location		PZ3 10/31/17
	ES	PAL	
VOC Parameters			
Benzene	5	0.5	< 0.40 µg/l
Toluene	800	160	< 0.39 µg/l
Ethylbenzene	700	140	< 0.39 µg/l
Xylenes (mixed isomers)	2,000	400	< 0.80 µg/l
Methyl tert-Butyl Ether (MTBE)	60	12	< 0.48 µg/l
Naphthalene	100	10	< 0.42 µg/l
Trimethylbenzenes (mixed isomers)	480	96	< 0.42 µg/l

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NS = Not Sampled

NA - Not Analyzed

* = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Enforcement Standard exceeded

Preventive Action Limit exceeded

BOLD
<i>Italics</i>

**Table 2m
Summary of Groundwater Analytical Results
Mack Lake
Trego, WI**

Parameter	Sample Location		PZ4 10/31/17
	ES	PAL	
VOC Parameters			
Benzene	5	0.5	< 0.40 µg/l
Toluene	800	160	< 0.39 µg/l
Ethylbenzene	700	140	< 0.39 µg/l
Xylenes (mixed isomers)	2,000	400	< 0.80 µg/l
Methyl tert-Butyl Ether (MTBE)	60	12	< 0.48 µg/l
Naphthalene	100	10	< 0.42 µg/l
Trimethylbenzenes (mixed isomers)	480	96	< 0.42 µg/l

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NS = Not Sampled

NA - Not Analyzed

* = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Enforcement Standard exceeded

Preventive Action Limit exceeded

BOLD
<i>Italics</i>

Table 2a
 Summary of Groundwater Analytical Results
 Mack Lake
 Trego, WI

Parameter	Sample Location		FW1 (Former NI0202 City Hwy K Well)				FW1 (Current NI0202 City Hwy K Well)														
	ES	PAL	Date	Units	10/11/2004	11/18/2004	3/24/2005	6/1/2006	Project Bid	May-07	Aug-07	Nov-07	Mar-08	Project Stalled	1/12/2011	4/28/2011	9/22/2011	5/9/2012	5/8/2013	6/30/2015	10/9/2017
Benzene	5	0.5	µg/l		<0.20	<0.25	<0.25	<0.17		Not Sampled	Not Sampled	Not Sampled	Not Sampled	Project Stalled	Not Sampled	<0.038	Not Sampled	<0.41	<0.047	<0.21	<0.23
Toluene	800	160	µg/l		<0.20	<0.11	<0.11	<0.25		Not Sampled	Not Sampled	Not Sampled	Not Sampled	Project Stalled	Not Sampled	<0.043	Not Sampled	<0.67	<0.065	<0.12	<0.22
Ethylbenzene	700	140	µg/l		<0.50	<0.22	<0.22	<0.20		Not Sampled	Not Sampled	Not Sampled	Not Sampled	Project Stalled	Not Sampled	<0.034	Not Sampled	<0.64	<0.078	<0.23	<0.22
Xylenes (mixed isomers)	2,000	400	µg/l		<0.50	<0.39	<0.39	<0.51		Not Sampled	Not Sampled	Not Sampled	Not Sampled	Project Stalled	Not Sampled	<0.12	Not Sampled	<1.8	<0.15	<0.41	<0.20
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l		<0.50	<0.23	<0.23	<0.34		Not Sampled	Not Sampled	Not Sampled	Not Sampled	Project Stalled	Not Sampled	<0.040	Not Sampled	<0.61	<0.048	<0.16	<0.48
Naphthalene	100	10	µg/l		<0.55	NA	NA	<2.2		Not Sampled	Not Sampled	Not Sampled	Not Sampled	Project Stalled	Not Sampled	<0.058	Not Sampled	<0.69	<0.11	<0.14	<0.23
Trimethylbenzenes (mixed isomers)	480	96	µg/l		<0.20	<0.44	<0.44	<1.36		Not Sampled	Not Sampled	Not Sampled	Not Sampled	Project Stalled	Not Sampled	<0.050	Not Sampled	<0.83	<0.086	<0.20	<0.22

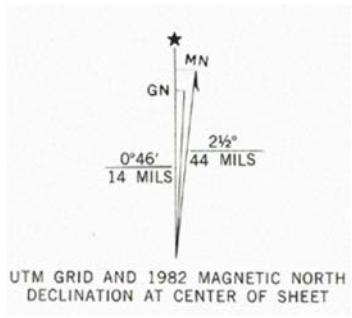
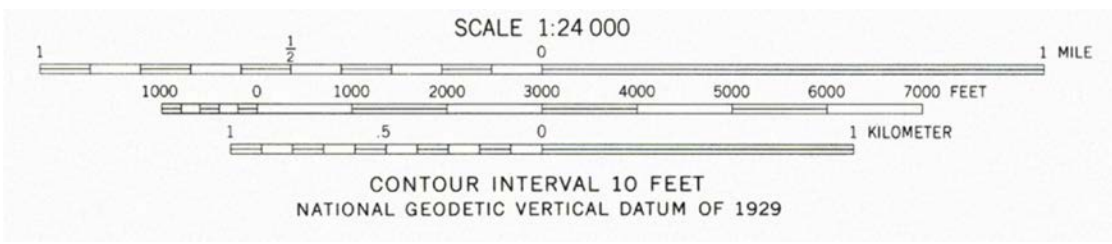
Parameter	Sample Location		FW2 (NI0212 City Hwy K)				FW3 (NI0189 City Hwy K)														
	ES	PAL	Date	Units	10/11/2004	11/18/2004	3/24/2005	6/1/2006	Project Bid	May-07	Aug-07	Nov-07	Mar-08	Project Stalled	1/12/2011	4/28/2011	9/22/2011	5/9/2012	5/8/2013	6/30/2015	10/9/2017
Benzene	5	0.5	µg/l		<0.20	<0.25	Well	Well		Not Sampled	Not Sampled	<0.05	Not Sampled	Project Stalled	Not Sampled	<0.038	Not Sampled	<0.41	<0.047	Not Sampled	Not Sampled
Toluene	800	160	µg/l		<0.20	<0.11	Not Sampled	Not Sampled		Not Sampled	Not Sampled	<0.05	Not Sampled	Project Stalled	Not Sampled	<0.043	Not Sampled	<0.67	<0.065	Not Sampled	Not Sampled
Ethylbenzene	700	140	µg/l		<0.50	<0.22	Sampled	Sampled		Not Sampled	Not Sampled	<0.05	Not Sampled	Project Stalled	Not Sampled	<0.034	Not Sampled	<0.64	<0.078	Not Sampled	Not Sampled
Xylenes (mixed isomers)	2,000	400	µg/l		<0.50	<0.39				Not Sampled	Not Sampled	<0.05	Not Sampled	Project Stalled	Not Sampled	<0.12	Not Sampled	<1.8	<0.15	Not Sampled	Not Sampled
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l		<0.50	<0.23				Not Sampled	Not Sampled	<0.05	Not Sampled	Project Stalled	Not Sampled	<0.040	Not Sampled	<0.61	<0.048	Not Sampled	Not Sampled
Naphthalene	100	10	µg/l		<0.55	NA				Not Sampled	Not Sampled	<0.23	Not Sampled	Project Stalled	Not Sampled	<0.058	Not Sampled	<0.69	<0.11	Not Sampled	Not Sampled
Trimethylbenzenes (mixed isomers)	480	96	µg/l		<0.20	<0.44				Not Sampled	Not Sampled	<0.05	Not Sampled	Project Stalled	Not Sampled	<0.050	Not Sampled	<0.83	<0.086	Not Sampled	Not Sampled

Parameter	Sample Location		FW3 (NI0189 City Hwy K)				FW3 (NI0189 City Hwy K)														
	ES	PAL	Date	Units	10/11/2004	11/18/2004	3/24/2005	6/1/2006	Project Bid	May-07	Aug-07	Nov-07	Mar-08	Project Stalled	1/12/2011	4/28/2011	9/22/2011	5/9/2012	5/8/2013	6/30/2015	10/9/2017
Benzene	5	0.5	µg/l		Well	<0.20	Well	<0.2		Not Sampled	Not Sampled	<0.05	Not Sampled	Project Stalled	Not Sampled	<0.038	Not Sampled	<0.41	<0.047	Not Sampled	Not Sampled
Toluene	800	160	µg/l		Not Sampled	<0.20	Not Sampled	<0.2		Not Sampled	Not Sampled	<0.05	Not Sampled	Project Stalled	Not Sampled	<0.043	Not Sampled	<0.67	<0.065	Not Sampled	Not Sampled
Ethylbenzene	700	140	µg/l		Sampled	<0.50	Sampled	<0.5		Not Sampled	Not Sampled	<0.05	Not Sampled	Project Stalled	Not Sampled	<0.034	Not Sampled	<0.64	<0.078	Not Sampled	Not Sampled
Xylenes (mixed isomers)	2,000	400	µg/l		<0.50	<0.39				Not Sampled	Not Sampled	<0.05	Not Sampled	Project Stalled	Not Sampled	<0.12	Not Sampled	<1.8	<0.15	Not Sampled	Not Sampled
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l		<0.50	<0.23				Not Sampled	Not Sampled	<0.05	Not Sampled	Project Stalled	Not Sampled	<0.040	Not Sampled	<0.61	<0.048	Not Sampled	Not Sampled
Naphthalene	100	10	µg/l		<0.55	NA				Not Sampled	Not Sampled	<0.23	Not Sampled	Project Stalled	Not Sampled	<0.058	Not Sampled	<0.69	<0.11	Not Sampled	Not Sampled
Trimethylbenzenes (mixed isomers)	480	96	µg/l		<0.20	<0.44				Not Sampled	Not Sampled	<0.05	Not Sampled	Project Stalled	Not Sampled	<0.050	Not Sampled	<0.83	<0.086	Not Sampled	Not Sampled

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

All samples results prior to 1-12-2011 were collected, analyzed and reported by others

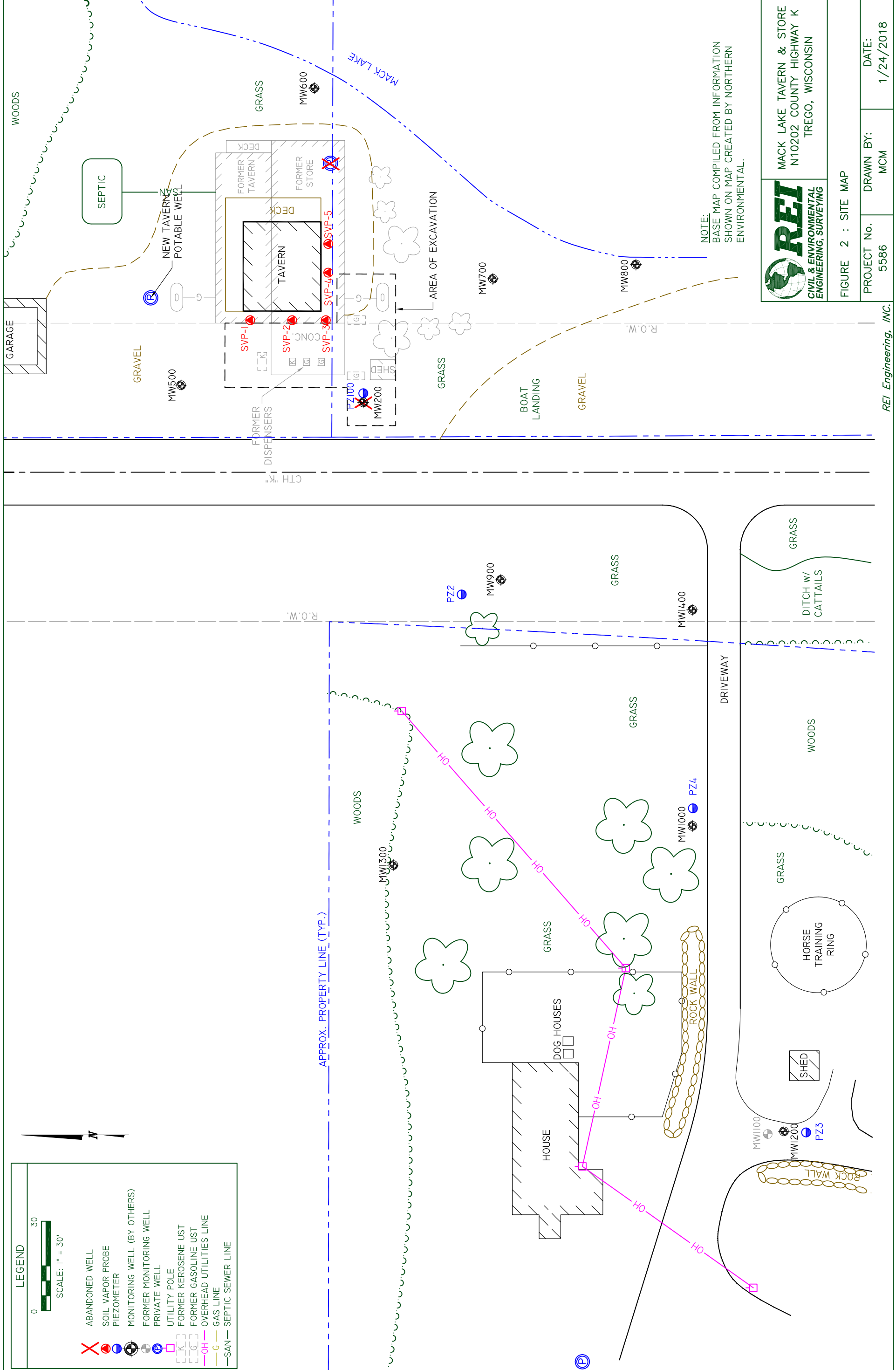
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HORSESHOE LAKE, WIS.
SW/4 MINONG 15' QUADRANGLE
N4600-W9152.5/7.5
1982
REI Engineering, INC.

MACK LAKE TAVERN & STORE
N10202 COUNTY HIGHWAY K
TREGO, WISCONSIN

FIGURE 1 : SITE VICINITY MAP			
PROJECT NO.	5586	DRAWN BY:	DATE:
		TAW	11/2/2010



LEGEND

SCALE: 1" = 30'

- ABANDONED WELL
- SOIL VAPOR PROBE
- PIEZOMETER
- MONITORING WELL (BY OTHERS)
- FORMER MONITORING WELL
- PRIVATE WELL
- UTILITY POLE
- FORMER KEROSENE UST
- FORMER GASOLINE UST
- OVERHEAD UTILITIES LINE
- GAS LINE
- SAN - SEPTIC SEWER LINE



MACK LAKE TAVERN & STORE
 N10202 COUNTY HIGHWAY K
 TREGO, WISCONSIN

NOTE:
 BASE MAP COMPILED FROM INFORMATION
 SHOWN ON MAP CREATED BY NORTHERN
 ENVIRONMENTAL.

FIGURE 2 : SITE MAP	
PROJECT No. 5586	DRAWN BY: MCM
DATE: 1/24/2018	

REI Engineering, INC.

APPENDIX A

SOIL BORING LOGS, WELL CONSTRUCTION FORMS AND WELL DEVELOPMENT FORMS



Route To: Watershed/Wastewater Waste Management
 Remediation/Redevelopment Other

Facility/Project Name Mack Lake Tavern		License/Permit/Monitoring Number BRRTS #03-66-000858		Boring Number PZ-2	
Boring Drilled By: Name of crew chief (first, last) and Firm Gestra Engineering (Steve)			Date Drilling Started 10/9/17	Date Drilling Completed 10/9/17	Drilling Method Hollow Stem Auger
WI Unique Well No.	DNR Well ID No.	Common Well Name PZ-2	Final Static Water Level	Surface Elevation 0	Borehole Diameter 8.25" -2
Local Grid Origin <input type="checkbox"/> (estimated) <input type="checkbox"/> or Boring Location <input checked="" type="checkbox"/> State Plane			Lat Long	Local Grid Location N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W <input type="checkbox"/>	
Facility ID 5586		County Washburn	County Code 65	Civil Town/City/or Village Trego	

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					RQD/ Comments
Number	Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
				1	BLIND DRILL Blind drilled to 40' BLS										
				2											
				3											
				4											
				5											
				6											
				7											
				8											
				9											
				10											
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				36											
				37											
				38											
				39											
				40		END OF BORING EOB @ 40' BLS									
				41											
				42											
				43											
				44											
				45											

I hereby 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
-----------	---

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

Route To: Watershed/Wastewater Waste Management
 Remediation/Redevelopment Other

Facility/Project Name Mack Lake Tavern		License/Permit/Monitoring Number BRRTS #03-66-000858		Boring Number PZ-3	
Boring Drilled By: Name of crew chief (first, last) and Firm Gestra Engineering (Steve)			Date Drilling Started 10/9/17	Date Drilling Completed 10/9/17	Drilling Method Hollow Stem Auger
WI Unique Well No.	DNR Well ID No.	Common Well Name PZ-3	Final Static Water Level	Surface Elevation 0	Borehole Diameter 8.25" -3
Local Grid Origin <input type="checkbox"/> (estimated) <input type="checkbox"/> or Boring Location <input checked="" type="checkbox"/> State Plane			Lat	Local Grid Location N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W <input type="checkbox"/>	
Facility ID 5586		County Washburn	County Code 65	Civil Town/City/or Village Trego	

Number	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					RQD/ Comments		
	Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200			
1				1	BLIND DRILL Blind drilled to 40' BLS												
2				2													
3				3													
4				4													
5				5													
6				6													
7				7													
8				8													
9				9													
10				10													
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36				36													
37				37													
38				38													
39				39													
40				40													
41				41		END OF BORING											
42				42		EOB @ 40' BLS											
43				43													
44				44													
45				45													

I hereby 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
-----------	--

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

Route To: Watershed/Wastewater Waste Management
 Remediation/Redevelopment Other

Facility/Project Name Mack Lake Tavern		License/Permit/Monitoring Number BRRTS #03-66-000858		Boring Number PZ-4	
Boring Drilled By: Name of crew chief (first, last) and Firm Gestra Engineering (Steve)			Date Drilling Started 10/10/17	Date Drilling Completed 10/10/17	Drilling Method Hollow Stem Auger
WI Unique Well No.	DNR Well ID No.	Common Well Name PZ-4	Final Static Water Level	Surface Elevation 0	Borehole Diameter 8.25" -4
Local Grid Origin <input type="checkbox"/> (estimated) <input type="checkbox"/> or Boring Location <input checked="" type="checkbox"/> State Plane			Lat Long	Local Grid Location N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W <input type="checkbox"/>	
Facility ID 5586		County Washburn	County Code 65	Civil Town/City/or Village Trego	

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					RQD/ Comments		
Number	Type Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200			
			1	BLIND DRILL Blind drilled to 40' BLS												
			2													
			3													
			4													
			5													
			6													
			7													
			8													
			9													
			10													
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			32													
			33													
			34													
			35													
			36													
			37													
			38													
			39													
			40		END OF BORING EOB @ 40' BLS											
			41													
			42													
			43													
			44													
			45													

I hereby 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
-----------	---

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

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

Facility/Project Name Mack Lake Tavern	Local Grid Location of Well ____ Feet S. ____ Feet W. ____ Feet N. ____ Feet E.	Well Name PZ2
Facility License Permit or Monitoring Number BRRTS# 03-66-000858	Grid Origin Location	Ws. Unique Well Number DNR Well Number
Type of Well Water Table Observation Well <input checked="" type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	Section Location of Waste/Source <input type="checkbox"/> E <input type="checkbox"/> W	Date Well Installed 10/9/17
Distance Well Is From Waste/Source Boundary Ft.	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	Well Installed By (Person's Name and Firm) Gestra Engineering (Steve)
Is Well A Point of Enforcement Std. Application <input type="checkbox"/> Yes <input type="checkbox"/> 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 1 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):

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. 8.56 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
b. Volume added 0.68 ft³

8. Filter pack material: Manufacturer, product name and mesh size
a. #40
b. Volume added 4.11 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 Johnson Screen
c. Slot size: 0.10 in.
d. Slotted length: 10 ft.

11. Backfill material (below filter Pack): None 14
Other

E. Bentonite seal, top _____ ft. MSL or 1 ft.

F. Fine sand, top _____ ft. MSL or 26 ft.

G. Filter pack, top _____ ft. MSL or 28 ft.

H. Screen joint, top _____ ft. MSL or 30 ft.

I. Well bottom _____ ft. MSL or 40 ft.

J. Filter pack, bottom _____ ft. MSL or 40 ft.

K. Borehole, bottom _____ ft. MSL or 40 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.32 in.

N. I.D. well casing 2.07 in.

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 54401

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.

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

Facility/Project Name Mack Lake Tavern	Local Grid Location of Well Feet S. ___ Feet W. ___ Feet N. ___ Feet E. ___	Well Name PZ-3
Facility License Permit or Monitoring Number BRRTS# 03-66-000858	Grid Origin Location	Wis. Unique Well Number DNR Well Number
Type of Well Water Table Observation Well <input checked="" type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	Section Location of Waste/Source <input type="checkbox"/> E <input type="checkbox"/> W	Date Well Installed 10/9/17
Distance Well Is From Waste/Source Boundary Ft. ___	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	Well Installed By (Person's Name and Firm) Gestra Engineering (Steve)
Is Well A Point of Enforcement Std. Application <input type="checkbox"/> Yes <input type="checkbox"/> 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 1 ft. MSL or _____ ft.

12. USCS Classification of soil near screen:

GP <input type="checkbox"/>	GM <input type="checkbox"/>	GC <input type="checkbox"/>	GW <input type="checkbox"/>	SW <input checked="" type="checkbox"/>	SP <input type="checkbox"/>
SM <input type="checkbox"/>	SC <input type="checkbox"/>	ML <input type="checkbox"/>	MH <input type="checkbox"/>	CL <input type="checkbox"/>	CH <input type="checkbox"/>

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):

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. 8.56 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
b. Volume added 0.68 ft³

8. Filter pack material: Manufacturer, product name and mesh size
a. #40
b. Volume added 4.11 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 Johnson Screen
c. Slot size: 0.10 in.
d. Slotted length: 10 ft.

11. Backfill material (below filter Pack): None 14
Other

E. Bentonite seal, top _____ ft. MSL or 1 ft.

F. Fine sand, top _____ ft. MSL or 26 ft.

G. Filter pack, top _____ ft. MSL or 28 ft.

H. Screen joint, top _____ ft. MSL or 30 ft.

I. Well bottom _____ ft. MSL or 40 ft.

J. Filter pack, bottom _____ ft. MSL or 40 ft.

K. Borehole, bottom _____ ft. MSL or 40 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.32 in.

N. I.D. well casing 2.07 in.

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

Signature [Signature] Firm REI Engineering, Inc.
4080 N. 20th Ave.
Wausau, WI 54401

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.

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

Facility/Project Name Mack Lake Tavern	Local Grid Location of Well Feet S. ___ Feet W ___ Feet N ___ Feet E ___	Well Name PZ-4
Facility License Permit or Monitoring Number BRRTS# 03-66-000858	Grid Origin Location	Wis. Unique Well Number DNR Well Number
Type of Well Water Table Observation Well <input checked="" type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	Section Location of Waste/Source <input type="checkbox"/> E <input type="checkbox"/> W	Date Well Installed 10/10/17
Distance Well Is From Waste/Source Boundary Ft. ___	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	Well Installed By (Person's Name and Firm) Gestra Engineering (Steve)
Is Well A Point of Enforcement Std. Application <input type="checkbox"/> Yes <input type="checkbox"/> 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 1 ft. MSL or _____ ft.

12. USCS Classification of soil near screen:
 GP GM GC GW SW SP
 SM SC ML MH CL CH
 Bedrock

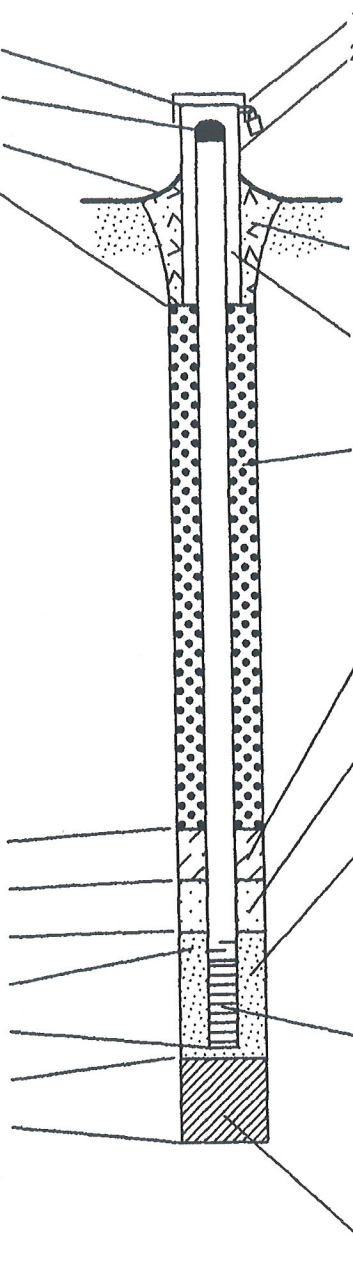
13. Sieve analysis attached? Yes No

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):



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. 8.56 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
 b. Volume added 0.68 ft³

8. Filter pack material: Manufacturer, product name and mesh size
 a. #40
 b. Volume added 4.11 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 Johnson Screen
 c. Slot size: 0.10 in.
 d. Slotted length: 10 ft.

11. Backfill material (below filter Pack): None 14
 Other

E. Bentonite seal, top _____ ft. MSL or 1 ft.
 F. Fine sand, top _____ ft. MSL or 26 ft.
 G. Filter pack, top _____ ft. MSL or 28 ft.
 H. Screen joint, top _____ ft. MSL or 30 ft.
 I. Well bottom _____ ft. MSL or 40 ft.
 J. Filter pack, bottom _____ ft. MSL or 40 ft.
 K. Borehole, bottom _____ ft. MSL or 40 ft.
 L. Borehole, diameter 8.25 in.
 M. O.D. well casing 2.32 in.
 N. I.D. well casing 2.07 in.

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

Signature [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.

Facility/Project Name Mack Lake Tavern	County Name Washburn	Well Name PZ-2	
Facility Licence, Permit or Monitoring Number	County Code 65	Wis. Unique Well Number	DNR Well Number

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 68 min.

4. Depth of well (from top of Casing) 38.70 ft.

5. Inside diameter of well 2 in.

6. Volume of water in filter pack and well casing 20.4 gal.

7. Volume of water removed from well 60 gal.

8. Volume of water added (if any) 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. 17.24 ft.	17.41 ft.
Data mm/dd/yy	b. 10/31/17	10/31/17
Time	c. 1:22 <input checked="" type="checkbox"/> p.m. <input type="checkbox"/> a.m.	2:30 <input checked="" type="checkbox"/> p.m. <input type="checkbox"/> a.m.
12. Sediment in well bottom	28 inches	2 inches
13. Water clarity	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe)	Clear <input checked="" type="checkbox"/> 10 Turbid <input type="checkbox"/> 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: Jed Kosch / 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: 

Print Initials:

Firm: REI Engineering, Inc.

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

Facility/Project Name Mack Lake Tavern	County Name Washburn	Well Name PZ-3
Facility Licence, Permit or Monitoring Number	County Code 65	Wis. Unique Well Number
		DNR Well Number

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 67 min.

4. Depth of well (from top of Casing) 38.51 ft.

5. Inside diameter of well 2 in.

6. Volume of water in filter pack and well casing 15.08 gal.

7. Volume of water removed from well 60 gal.

8. Volume of water added (If any) 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. 22.64 ft.	22.72 ft.
Data mm/dd/yy	b. 10/31/17	10/31/17
Time	c. 4:03 <input checked="" type="checkbox"/> p.m. <input type="checkbox"/> a.m.	5:10 <input checked="" type="checkbox"/> p.m. <input type="checkbox"/> a.m.
12. Sediment in well bottom	34 inches	1 inches
13. Water clarity	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe)	Clear <input checked="" type="checkbox"/> 10 Turbid <input type="checkbox"/> 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: Jed Kosch / 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: 

Print Initials: - - -

Firm: REI Engineering, Inc.

Facility/Project Name Mack Lake Tavern	County Name Washburn	Well Name PZ-4	
Facility Licence, Permit or Monitoring Number	County Code 65	Wis. Unique Well Number	DNR Well Number

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 75 min.

4. Depth of well (from top of Casing) 38.75 ft.

5. Inside diameter of well 2 in.

6. Volume of water in filter pack and well casing 20.1 gal.

7. Volume of water removed from well 65 gal.

8. Volume of water added (If any) 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. 17.63 ft.	18.01 ft.
Data mm/dd/yy	b. 10/31/17	10/31/17
Time	c. 2:42 <input checked="" type="checkbox"/> p.m. <input type="checkbox"/> a.m.	3:57 <input checked="" type="checkbox"/> p.m. <input type="checkbox"/> a.m.
12. Sediment in well bottom	18 inches	0 inches
13. Water clarity	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe)	Clear <input checked="" type="checkbox"/> 10 Turbid <input type="checkbox"/> 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: Jed Kosch / 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: 

Print Initials: _____

Firm: REI Engineering, Inc.

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

APPENDIX B

SOIL DISPOSAL DOCUMENTATION



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: 10/16/2017
Time In: 02:31 PM

TICKET #: 237894 Vehicle #:
Time Out: 02:44 PM

BILL TO: R.E.I.
HAULER: R.E.I.

JOB : -
PO# :

\$23.00 ton exempt (CON31) 3.12 tn
Gross: 21380 Tare: 15140

Net Weight: 6240

Scale Notes:

REI JOB NO 5586
MACK LAKE TAVERN

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 C

GROUNDWATER LABORATORY ANALYTICAL RESULTS



October 31, 2017

DAVID LARSEN
REI
4080 NORTH 20TH AVENUE
Wausau, WI 54401

RE: Project: 5586 MACK LAKE
Pace Project No.: 40158721

Dear DAVID LARSEN:

Enclosed are the analytical results for sample(s) received by the laboratory on October 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.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

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

Sincerely,



Steven Mleczko for
Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: 5586 MACK LAKE

Pace Project No.: 40158721

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

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without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: 5586 MACK LAKE

Pace Project No.: 40158721

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40158721001	MW900	Water	10/09/17 13:05	10/14/17 07:50
40158721002	MW800	Water	10/09/17 12:50	10/14/17 07:50
40158721003	MW1000	Water	10/09/17 13:25	10/14/17 07:50
40158721004	MW1200	Water	10/09/17 13:55	10/14/17 07:50
40158721005	MW1300	Water	10/09/17 13:40	10/14/17 07:50
40158721006	ONSITE POTABLE	Water	10/09/17 12:15	10/14/17 07:50
40158721007	N10189 POTABLE	Water	10/09/17 14:40	10/14/17 07:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 5586 MACK LAKE

Pace Project No.: 40158721

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40158721001	MW900	WI MOD GRO	ALD	10
40158721002	MW800	WI MOD GRO	ALD	10
40158721003	MW1000	WI MOD GRO	ALD	10
40158721004	MW1200	WI MOD GRO	ALD	10
40158721005	MW1300	WI MOD GRO	ALD	10

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: 5586 MACK LAKE

Pace Project No.: 40158721

Sample: MW900 **Lab ID: 40158721001** Collected: 10/09/17 13:05 Received: 10/14/17 07:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV Analytical Method: WI MOD GRO									
Benzene	47.9	ug/L	5.0	2.0	5		10/17/17 17:25	71-43-2	
Ethylbenzene	719	ug/L	5.0	2.0	5		10/17/17 17:25	100-41-4	
Methyl-tert-butyl ether	3.2J	ug/L	5.0	2.4	5		10/17/17 17:25	1634-04-4	
Naphthalene	125	ug/L	5.0	2.1	5		10/17/17 17:25	91-20-3	
Toluene	292	ug/L	5.0	1.9	5		10/17/17 17:25	108-88-3	
1,2,4-Trimethylbenzene	803	ug/L	5.0	2.1	5		10/17/17 17:25	95-63-6	
1,3,5-Trimethylbenzene	250	ug/L	5.0	2.1	5		10/17/17 17:25	108-67-8	
m&p-Xylene	1640	ug/L	10.0	4.0	5		10/17/17 17:25	179601-23-1	
o-Xylene	333	ug/L	5.0	2.2	5		10/17/17 17:25	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-120		5		10/17/17 17:25	98-08-8	

Sample: MW800 **Lab ID: 40158721002** Collected: 10/09/17 12:50 Received: 10/14/17 07:50 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		10/17/17 14:26	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		10/17/17 14:26	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		10/17/17 14:26	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		10/17/17 14:26	91-20-3	
Toluene	3.6	ug/L	1.0	0.39	1		10/17/17 14:26	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		10/17/17 14:26	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		10/17/17 14:26	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		10/17/17 14:26	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		10/17/17 14:26	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		10/17/17 14:26	98-08-8	

Sample: MW1000 **Lab ID: 40158721003** Collected: 10/09/17 13:25 Received: 10/14/17 07:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV Analytical Method: WI MOD GRO									
Benzene	0.62J	ug/L	1.0	0.40	1		10/18/17 12:15	71-43-2	
Ethylbenzene	15.4	ug/L	1.0	0.39	1		10/18/17 12:15	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		10/18/17 12:15	1634-04-4	
Naphthalene	5.8	ug/L	1.0	0.42	1		10/18/17 12:15	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		10/18/17 12:15	108-88-3	
1,2,4-Trimethylbenzene	16.2	ug/L	1.0	0.42	1		10/18/17 12:15	95-63-6	
1,3,5-Trimethylbenzene	11.7	ug/L	1.0	0.42	1		10/18/17 12:15	108-67-8	
m&p-Xylene	23.7	ug/L	2.0	0.80	1		10/18/17 12:15	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		10/18/17 12:15	95-47-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 5586 MACK LAKE

Pace Project No.: 40158721

Sample: MW1000 **Lab ID: 40158721003** Collected: 10/09/17 13:25 Received: 10/14/17 07:50 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)	99	%	80-120		1		10/18/17 12:15	98-08-8	
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Sample: MW1200 **Lab ID: 40158721004** Collected: 10/09/17 13:55 Received: 10/14/17 07:50 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		10/17/17 14:52	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		10/17/17 14:52	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		10/17/17 14:52	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		10/17/17 14:52	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		10/17/17 14:52	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		10/17/17 14:52	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		10/17/17 14:52	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		10/17/17 14:52	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		10/17/17 14:52	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		10/17/17 14:52	98-08-8	

Sample: MW1300 **Lab ID: 40158721005** Collected: 10/09/17 13:40 Received: 10/14/17 07:50 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		10/17/17 15:18	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		10/17/17 15:18	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		10/17/17 15:18	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		10/17/17 15:18	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		10/17/17 15:18	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		10/17/17 15:18	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		10/17/17 15:18	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		10/17/17 15:18	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		10/17/17 15:18	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		10/17/17 15:18	98-08-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 5586 MACK LAKE
Pace Project No.: 40158721

QC Batch: 270790 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 40158721001, 40158721002, 40158721003, 40158721004, 40158721005

METHOD BLANK: 1591909 Matrix: Water
Associated Lab Samples: 40158721001, 40158721002, 40158721003, 40158721004, 40158721005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.42	1.0	10/17/17 08:54	
1,3,5-Trimethylbenzene	ug/L	<0.42	1.0	10/17/17 08:54	
Benzene	ug/L	<0.40	1.0	10/17/17 08:54	
Ethylbenzene	ug/L	<0.39	1.0	10/17/17 08:54	
m&p-Xylene	ug/L	<0.80	2.0	10/17/17 08:54	
Methyl-tert-butyl ether	ug/L	<0.48	1.0	10/17/17 08:54	
Naphthalene	ug/L	<0.42	1.0	10/17/17 08:54	
o-Xylene	ug/L	<0.45	1.0	10/17/17 08:54	
Toluene	ug/L	<0.39	1.0	10/17/17 08:54	
a,a,a-Trifluorotoluene (S)	%	101	80-120	10/17/17 08:54	

LABORATORY CONTROL SAMPLE & LCSD: 1591910

Parameter	Units	Spike Conc.	1591911		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qualifiers
			LCS Result	LCSD Result						
1,2,4-Trimethylbenzene	ug/L	20	20.1	21.2	100	106	80-120	6	20	
1,3,5-Trimethylbenzene	ug/L	20	19.4	20.4	97	102	80-120	5	20	
Benzene	ug/L	20	19.9	20.0	99	100	80-120	0	20	
Ethylbenzene	ug/L	20	19.6	20.3	98	101	80-120	3	20	
m&p-Xylene	ug/L	40	38.8	40.4	97	101	80-120	4	20	
Methyl-tert-butyl ether	ug/L	20	20.1	20.6	101	103	80-120	3	20	
Naphthalene	ug/L	20	19.6	21.7	98	108	80-120	10	20	
o-Xylene	ug/L	20	19.7	20.5	98	102	80-120	4	20	
Toluene	ug/L	20	19.6	20.0	98	100	80-120	2	20	
a,a,a-Trifluorotoluene (S)	%				100	101	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1592441

Parameter	Units	40158721001		1592442		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Spike Conc.	MSD Result						
1,2,4-Trimethylbenzene	ug/L	803	100	100	914	905	111	102	11-200	1	20
1,3,5-Trimethylbenzene	ug/L	250	100	100	349	348	99	98	54-142	0	20
Benzene	ug/L	47.9	100	100	137	137	89	89	66-140	0	20
Ethylbenzene	ug/L	719	100	100	813	795	93	76	66-143	2	20
m&p-Xylene	ug/L	1640	200	200	1840	1820	99	86	60-141	1	20
Methyl-tert-butyl ether	ug/L	3.2J	100	100	94.3	94.2	91	91	70-129	0	20
Naphthalene	ug/L	125	100	100	220	219	95	95	64-129	0	20
o-Xylene	ug/L	333	100	100	425	424	93	91	68-132	0	20
Toluene	ug/L	292	100	100	383	377	90	85	76-130	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: 5586 MACK LAKE

Pace Project No.: 40158721

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		1592441		1592442									
Parameter	Units	40158721001 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)	%						98	99	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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QUALIFIERS

Project: 5586 MACK LAKE

Pace Project No.: 40158721

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 5586 MACK LAKE
Pace Project No.: 40158721

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40158721001	MW900	WI MOD GRO	270790		
40158721002	MW800	WI MOD GRO	270790		
40158721003	MW1000	WI MOD GRO	270790		
40158721004	MW1200	WI MOD GRO	270790		
40158721005	MW1300	WI MOD GRO	270790		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Client Name: REI

Project #: **WO# : 40158721**



Courier: Fed Ex UPS Client Pace Other: Walter

Tracking #: 1519916-1

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: NA

Type of Ice: Wet Blue Dry None

Samples on ice, cooling process has begun

Cooler Temperature: Uncorr: _____ ICorr: ROI

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: 10/14/17

Initials: KJ

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2.	<u>002-007 no time/date, 006-007 no time</u> <u>KJ 10/14/17</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	<u>no relinquish time KJ 10/14/17</u>
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:	
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.	<u>no MS/MSD KJ 10/14/17</u>
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.	<u>002 1 vial no # after MW + no time placed by vials client bagged with it</u> <u>KJ 10/14/17</u>
-Includes date/time/ID/Analysis Matrix:			
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.	<u>Γ HNO3 Γ H2SO4 Γ NaOH Γ NaOH + ZnAct 006+007 preserved w/ascorbic acid</u> <u>KJ 10/14/17</u>
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12) exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed	Lab Std #ID of preservative
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.	Date/Time:
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.	
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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: 002-007 date 10/19, 006 time 1215, 007 time 2:40 KJ 10/14/17

Project Manager Review:

F-GB-C-031-Rev.04 (12Dec2016) SCUR.xls
Pace Analytical Services LLC. - Green Bay WI

Date: 10-16-17

ANALYTICAL REPORT

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

Client: Pace Analytical Services Inc (GB)
 Attn: Brian D Basten
 1241 Bellevue Street
 Green Bay, WI 54302 2156

WDNR Laboratory ID No. 721026460
WDATECP Laboratory Certification No. 105-330
EPA Laboratory ID No. WI00034
 Printed: 10/31/17 Page 1 of 1
NLS Project: 289404
NLS Customer: 94575
 Fax: 920 469 8827 Phone: 800 736 2436

Project: 40158721 5586 Mack Lake

40158721006 NLS ID: 1025516

COC: 1 Matrix: DW
 Collected: 10/09/17 12:15 Received: 10/20/17

Parameter
 SDWA Volatile Organics (VOCs) by EPA 524.2

40158721007 NLS ID: 1025517

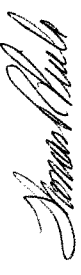
COC: 2 Matrix: DW
 Collected: 10/09/17 14:40 Received: 10/20/17

Parameter
 SDWA Volatile Organics (VOCs) by EPA 524.2

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.
 ND = Not Detected (< LOD) LOD = Limit of Detection
 DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000
 MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

LOQ = Limit of Quantitation
 1000 ug/L = 1 mg/L
 NA = Not Applicable

Reviewed by:



Authorized by:
 R. T. Krueger
 President

Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
see attached					10/24/17	EPA 524.2, Rev 4.1	721026460
Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
see attached					10/24/17	EPA 524.2, Rev 4.1	721026460

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis (Agi5977E)

Customer: Pace Analytical Services Inc (GB) NLS Project: 289404

Project Description: 40158721

Template: AGIW Printed: 10/31/2017 12:05

Sample: 1025516_40158721006 Collected: 10/09/17 Analyzed: 10/24/17 - Analytes: 60

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.23	0.82	5	
Bromobenzene	ND	ug/L	1	0.26	0.91		
Bromochloromethane	ND	ug/L	1	0.34	1.2		
Bromodichloromethane	ND	ug/L	1	0.23	0.81	80	
Bromoform	ND	ug/L	1	0.21	0.74	80	
Bromomethane	ND	ug/L	1	0.37	1.3		
n-Butylbenzene	ND	ug/L	1	0.22	0.76		
sec-Butylbenzene	ND	ug/L	1	0.23	0.83		
tert-Butylbenzene	ND	ug/L	1	0.23	0.80		
Carbon Tetrachloride	ND	ug/L	1	0.22	0.76	5	
Chlorobenzene	ND	ug/L	1	0.24	0.86	100	
Chloroethane	ND	ug/L	1	1.5	5.2		
Chloroform	ND	ug/L	1	0.25	0.90	80	
Chloromethane	ND	ug/L	1	0.23	0.83		
2-Chlorotoluene	ND	ug/L	1	0.23	0.82		
4-Chlorotoluene	ND	ug/L	1	0.20	0.73		
Dibromochloromethane	ND	ug/L	1	0.17	0.61	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.20	0.71		
1,2-Dibromoethane	ND	ug/L	1	0.22	0.76		
Dibromomethane	ND	ug/L	1	0.26	0.90		
1,2-Dichlorobenzene	ND	ug/L	1	0.25	0.87	600	
1,3-Dichlorobenzene	ND	ug/L	1	0.25	0.89		
1,4-Dichlorobenzene	ND	ug/L	1	0.28	1.0	75	
Dichlorodifluoromethane	ND	ug/L	1	0.22	0.77		
1,1-Dichloroethane	ND	ug/L	1	0.31	1.1		
1,2-Dichloroethane	ND	ug/L	1	0.25	0.90	5	
1,1-Dichloroethene	ND	ug/L	1	0.25	0.87	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.30	1.1	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.47	1.7	100	
1,2-Dichloropropane	ND	ug/L	1	0.23	0.81	5	
1,3-Dichloropropane	ND	ug/L	1	0.25	0.87		
2,2-Dichloropropane	ND	ug/L	1	0.15	0.54		
1,1-Dichloropropene	ND	ug/L	1	0.32	1.1		
cis-1,3-Dichloropropene	ND	ug/L	1	0.18	0.65		
trans-1,3-Dichloropropene	ND	ug/L	1	0.21	0.75		
Ethylbenzene	ND	ug/L	1	0.22	0.79	700	
Hexachlorobutadiene	ND	ug/L	1	0.24	0.83		
Isopropylbenzene	ND	ug/L	1	0.22	0.77		
p-Isopropyltoluene	ND	ug/L	1	0.22	0.78		
Methylene chloride	ND	ug/L	1	0.22	0.79	5	
Naphthalene	ND	ug/L	1	0.23	0.83		
n-Propylbenzene	ND	ug/L	1	0.22	0.78		
Styrene	ND	ug/L	1	0.21	0.73	100	
ortho-Xylene	ND	ug/L	1	0.20	0.70		
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.21	0.74		
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.20	0.72		
Tetrachloroethene	ND	ug/L	1	0.28	0.99	5	
Toluene	ND	ug/L	1	0.22	0.79	1000	
1,2,3-Trichlorobenzene	ND	ug/L	1	0.24	0.85		
1,2,4-Trichlorobenzene	ND	ug/L	1	0.25	0.90	70	
1,1,1-Trichloroethane	ND	ug/L	1	0.32	1.1	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.27	0.94	5	
Trichloroethene	ND	ug/L	1	0.30	1.1	5	

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis (Agi5977E)
Customer: Pace Analytical Services Inc (GB) NLS Project: 289404
Project Description: 40158721
Project Title: 5586 Mack Lake
Template: AGIW Printed: 10/31/2017 12:05

Sample: 1025516_40158721006_Collected: 10/09/17 Analyzed: 10/24/17 - Analytes: 60

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Trichlorofluoromethane	ND	ug/L	1	0.30	1.1		
1,2,3-Trichloropropane	ND	ug/L	1	0.30	1.0		
1,2,4-Trimethylbenzene	ND	ug/L	1	0.21	0.73		
1,3,5-Trimethylbenzene	ND	ug/L	1	0.22	0.77		
Vinyl chloride	ND	ug/L	1	0.20	0.70	2	
meta,para-Xylene	ND	ug/L	1	0.48	1.7	10000	
MTBE	ND	ug/L	1	0.29	1.0		
4-Bromofluorobenzene (SURR)	71%						S
1,2-Dichlorobenzene-d4 (SURR)	93%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis (Agi5977E)

Customer: Pace Analytical Services Inc (GB) NLS Project: 289404

Project Description: 40158721

Project Title: 5586 Mack Lake Template: AGIW Printed: 10/31/2017 12:05

Sample: 1025517_40158721007 Collected: 10/09/17 Analyzed: 10/24/17 - Analytes: 60

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.23	0.82	5	
Bromobenzene	ND	ug/L	1	0.26	0.91		
Bromochloromethane	ND	ug/L	1	0.34	1.2		
Bromodichloromethane	ND	ug/L	1	0.23	0.81	80	
Bromoform	ND	ug/L	1	0.21	0.74	80	
Bromomethane	ND	ug/L	1	0.37	1.3		
n-Butylbenzene	ND	ug/L	1	0.22	0.76		
sec-Butylbenzene	ND	ug/L	1	0.23	0.83		
tert-Butylbenzene	ND	ug/L	1	0.23	0.80		
Carbon Tetrachloride	ND	ug/L	1	0.22	0.76	5	
Chlorobenzene	ND	ug/L	1	0.24	0.86	100	
Chloroethane	ND	ug/L	1	1.5	5.2		
Chloroform	ND	ug/L	1	0.25	0.90	80	
Chloromethane	ND	ug/L	1	0.23	0.83		
2-Chlorotoluene	ND	ug/L	1	0.23	0.82		
4-Chlorotoluene	ND	ug/L	1	0.20	0.73		
Dibromochloromethane	ND	ug/L	1	0.17	0.61	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.20	0.71		
1,2-Dibromomethane	ND	ug/L	1	0.22	0.76		
Dibromomethane	ND	ug/L	1	0.26	0.90		
1,2-Dichlorobenzene	ND	ug/L	1	0.25	0.87	600	
1,3-Dichlorobenzene	ND	ug/L	1	0.25	0.89		
1,4-Dichlorobenzene	ND	ug/L	1	0.28	1.0	75	
Dichlorodifluoromethane	ND	ug/L	1	0.22	0.77		
1,1-Dichloroethane	ND	ug/L	1	0.31	1.1		
1,2-Dichloroethane	ND	ug/L	1	0.25	0.90	5	
1,1-Dichloroethene	ND	ug/L	1	0.25	0.87	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.30	1.1	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.47	1.7	100	
1,2-Dichloropropane	ND	ug/L	1	0.23	0.81	5	
1,3-Dichloropropane	ND	ug/L	1	0.25	0.87		
2,2-Dichloropropane	ND	ug/L	1	0.15	0.54		
1,1-Dichloropropene	ND	ug/L	1	0.32	1.1		
cis-1,3-Dichloropropene	ND	ug/L	1	0.18	0.65		
trans-1,3-Dichloropropene	ND	ug/L	1	0.21	0.75		
Ethylbenzene	ND	ug/L	1	0.22	0.79	700	
Hexachlorobutadiene	ND	ug/L	1	0.24	0.83		
Isopropylbenzene	ND	ug/L	1	0.22	0.77		
p-Isopropyltoluene	ND	ug/L	1	0.22	0.78		
Methylene chloride	ND	ug/L	1	0.22	0.79	5	
Naphthalene	ND	ug/L	1	0.23	0.83		
n-Propylbenzene	ND	ug/L	1	0.22	0.78		
Styrene	ND	ug/L	1	0.21	0.73	100	
ortho-Xylene	ND	ug/L	1	0.20	0.70		
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.21	0.74		
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.20	0.72		
Tetrachloroethene	ND	ug/L	1	0.28	0.99	5	
Toluene	ND	ug/L	1	0.22	0.79	1000	
1,2,3-Trichlorobenzene	ND	ug/L	1	0.24	0.85		
1,2,4-Trichlorobenzene	ND	ug/L	1	0.25	0.90	70	
1,1,1-Trichloroethane	ND	ug/L	1	0.32	1.1	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.27	0.94	5	
Trichloroethene	ND	ug/L	1	0.30	1.1	5	

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis (Agi5977E)
Customer: Pace Analytical Services Inc (GB) NLS Project: 289404
Project Description: 40158721
Project Title: 5586 Mack Lake
Template: AGIW Printed: 10/31/2017 12:05

Sample: 1025517 - 40158721007 Collected: 10/09/17 Analyzed: 10/24/17 - Analytes: 60

ANALYTE NAME	UNITS	DIL	LOD	LOQ	MCL	Note
Trichlorofluoromethane	ug/L	1	0.30	1.1		
1,2,3-Trichloropropane	ug/L	1	0.30	1.0		
1,2,4-Trimethylbenzene	ug/L	1	0.21	0.73		
1,3,5-Trimethylbenzene	ug/L	1	0.22	0.77		
Vinyl chloride	ug/L	1	0.20	0.70	.2	
meta,para-Xylene	ug/L	1	0.48	1.7	10000	
MTBE	ug/L	1	0.29	1.0		
4-Bromofluorobenzene (SURR)			72%			S
1,2-Dichlorobenzene-q4 (SURR)			93%			S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

Chain of Custody



Workorder: 40158721 Workorder Name: 5586 MACK LAKE Results Requested By: 10/30/2017

Report / Invoice To: Subcontract To
 Brian Basten
 Pace Analytical Green Bay
 1241 Bellevue Street
 Suite 9
 Green Bay, WI 54302
 Phone (920)469-2436
 Email: brian.basten@pacelabs.com

State of Sample Origin: WI LOD/LOQ
 Northern Lake Service
 400 N Lake Ave
 Crandon, WI 54520
 P.O.

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers		Requested Analysis	LAB USE ONLY
					Other			
1	ONSITE POTABLE 1025516	10/9/2017 12:15	40158721006	Water	3		SDWA VOC (See List)	
2	N10189 POTABLE 517	10/9/2017 14:40	40158721007	Water	3			
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	<i>Brian Basten</i>	10/19/17 8:36	<i>Kristina Blum</i>	10/20/17 18:00	
2					
3					

Cooler Temperature on Receipt 1.0 °C Received on Ice Y or N Custody Seal Y or N Samples Intact Y or N

#5.1 K8

TestName	TestName
1,1,1,2-Tetrachloroethane	n-Butylbenzene
1,1,1-Trichloroethane	n-Propylbenzene
1,1,2,2-Tetrachloroethane	p-Isopropyltoluene
1,1,2-Trichloroethane	s-Butylbenzene
1,1-Dichloroethane	Styrene
1,1-Dichloroethene	t-Butylbenzene
1,1-Dichloropropene	Tetrachloroethene
1,2,3-Trichlorobenzene	Toluene
1,2,3-Trichloropropane	trans-1,2-Dichloroethene
1,2,4-Trichlorobenzene	trans-1,3-Dichloropropene
1,2,4-Trimethylbenzene	Trichloroethene
1,2-Dibromo-3-chloropropane	Vinyl Chloride
1,2-Dibromoethane	Xylene, Total
1,2-Dichlorobenzene	
1,2-Dichloroethane	
1,2-Dichloropropane	
1,3,5-Trimethylbenzene	
1,3-Dichlorobenzene	
1,3-Dichloropropane	
1,4-Dichlorobenzene	
2,2-Dichloropropane	
2-Chlorotoluene	
4-Chlorotoluene	
Benzene	
Bromobenzene	
Bromochloromethane	
Bromodichloromethane	
Bromoform	
Bromomethane	
Carbon Tetrachloride	
Chlorobenzene	
Chlorodibromomethane	
Chloroethane	
Chloroform	
Chloromethane	
cis-1,2-Dichloroethene	
cis-1,3-Dichloropropene	
Dibromomethane	
Dichlorodifluoromethane	
Ethylbenzene	
Fluorotrichloromethane	
Hexachlorobutadiene	
Isopropylbenzene	
Methylene Chloride	
Methyl-tert-butyl-ether	
Naphthalene	

10407376

Chain of Custody



Workorder: 40158721 Workorder Name: 5586 MACK LAKE Owner Received Date: 10/14/2017 Results Requested By: 10/30/2017

Report To: Brian Basten
 Pace Analytical Green Bay
 1241 Bellevue Street
 Suite 9
 Green Bay, WI 54302
 Phone (920)469-2436

Subcontract To: Pace Analytical Minnesota
 1700 Elm Street SE
 Suite 200
 Minneapolis, MN 55414
 Phone (612)607-1700

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		LAB USE ONLY
						Other		
1	ONSITE POTABLE	PS	10/9/2017 12:15	40158721006	Water			006
2	N10189 POTABLE	PS	10/9/2017 14:40	40158721007	Water			007
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time	Received on Ice		Samples Intact
					Y	N	
1	ROCKWELL	10/11/17 10:00	MANR	10/12/17			
2	Shirley Pace	10/11/17 10:00	MANR	10/11/17 12:00			
3							

Cooler Temperature on Receipt: 1.3 °C Custody Seal: Y Received on Ice: Y Samples Intact: Y

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.

November 08, 2017

DAVID LARSEN
REI
4080 NORTH 20TH AVENUE
Wausau, WI 54401

RE: Project: 5586 AXUC MACK LAKE TAVERN
Pace Project No.: 40160014

Dear DAVID LARSEN:

Enclosed are the analytical results for sample(s) received by the laboratory on November 02, 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,



Christopher Hyska for
Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 5586 AXUC MACK LAKE TAVERN

Pace Project No.: 40160014

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

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SAMPLE SUMMARY

Project: 5586 AXUC MACK LAKE TAVERN

Pace Project No.: 40160014

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40160014001	PZ-2	Water	10/31/17 14:30	11/02/17 08:45
40160014002	PZ-3	Water	10/31/17 17:10	11/02/17 08:45
40160014003	PZ-4	Water	10/31/17 16:00	11/02/17 08:45
40160014004	PZ-100	Water	10/31/17 14:00	11/02/17 08:45
40160014005	MW-1400	Water	10/31/17 15:15	11/02/17 08:45

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SAMPLE ANALYTE COUNT

Project: 5586 AXUC MACK LAKE TAVERN

Pace Project No.: 40160014

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40160014001	PZ-2	WI MOD GRO	ALD	10
40160014002	PZ-3	WI MOD GRO	ALD	10
40160014003	PZ-4	WI MOD GRO	ALD	10
40160014004	PZ-100	WI MOD GRO	ALD	10
40160014005	MW-1400	WI MOD GRO	ALD	10

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 5586 AXUC MACK LAKE TAVERN

Lab Project No.: 40160014

Sample: PZ-2 Lab ID: 40160014001 Collected: 10/31/17 14:30 Received: 11/02/17 08:45 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		11/06/17 13:32	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		11/06/17 13:32	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		11/06/17 13:32	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		11/06/17 13:32	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		11/06/17 13:32	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		11/06/17 13:32	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		11/06/17 13:32	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		11/06/17 13:32	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		11/06/17 13:32	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	95	%	80-120		1		11/06/17 13:32	98-08-8	

Sample: PZ-3 Lab ID: 40160014002 Collected: 10/31/17 17:10 Received: 11/02/17 08:45 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		11/06/17 13:57	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		11/06/17 13:57	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		11/06/17 13:57	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		11/06/17 13:57	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		11/06/17 13:57	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		11/06/17 13:57	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		11/06/17 13:57	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		11/06/17 13:57	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		11/06/17 13:57	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		11/06/17 13:57	98-08-8	

Sample: PZ-4 Lab ID: 40160014003 Collected: 10/31/17 16:00 Received: 11/02/17 08:45 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		11/06/17 14:55	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		11/06/17 14:55	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		11/06/17 14:55	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		11/06/17 14:55	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		11/06/17 14:55	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		11/06/17 14:55	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		11/06/17 14:55	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		11/06/17 14:55	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		11/06/17 14:55	95-47-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 5586 AXUC MACK LAKE TAVERN

Pace Project No.: 40160014

Sample: PZ-4 **Lab ID: 40160014003** Collected: 10/31/17 16:00 Received: 11/02/17 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
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WIGRO GCV Analytical Method: WI MOD GRO

Surrogates

a,a,a-Trifluorotoluene (S)	101	%	80-120		1		11/06/17 14:55	98-08-8	
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Sample: PZ-100 **Lab ID: 40160014004** Collected: 10/31/17 14:00 Received: 11/02/17 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
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WIGRO GCV Analytical Method: WI MOD GRO

Benzene	<0.40	ug/L	1.0	0.40	1		11/07/17 23:34	71-43-2	
Ethylbenzene	0.66J	ug/L	1.0	0.39	1		11/07/17 23:34	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		11/07/17 23:34	1634-04-4	
Naphthalene	0.80J	ug/L	1.0	0.42	1		11/07/17 23:34	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		11/07/17 23:34	108-88-3	
1,2,4-Trimethylbenzene	7.1	ug/L	1.0	0.42	1		11/07/17 23:34	95-63-6	
1,3,5-Trimethylbenzene	6.3	ug/L	1.0	0.42	1		11/07/17 23:34	108-67-8	
m&p-Xylene	1.6J	ug/L	2.0	0.80	1		11/07/17 23:34	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		11/07/17 23:34	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	105	%	80-120		1		11/07/17 23:34	98-08-8	

Sample: MW-1400 **Lab ID: 40160014005** Collected: 10/31/17 15:15 Received: 11/02/17 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
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WIGRO GCV Analytical Method: WI MOD GRO

Benzene	<0.40	ug/L	1.0	0.40	1		11/06/17 11:32	71-43-2	
Ethylbenzene	1.7	ug/L	1.0	0.39	1		11/06/17 11:32	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		11/06/17 11:32	1634-04-4	
Naphthalene	1.7	ug/L	1.0	0.42	1		11/06/17 11:32	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		11/06/17 11:32	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		11/06/17 11:32	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		11/06/17 11:32	108-67-8	
m&p-Xylene	2.7	ug/L	2.0	0.80	1		11/06/17 11:32	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		11/06/17 11:32	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	103	%	80-120		1		11/06/17 11:32	98-08-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 5586 AXUC MACK LAKE TAVERN

Pace Project No.: 40160014

QC Batch: 273094 Analysis Method: WI MOD GRO
 QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
 Associated Lab Samples: 40160014001, 40160014002, 40160014003, 40160014004, 40160014005

METHOD BLANK: 1607187 Matrix: Water
 Associated Lab Samples: 40160014001, 40160014002, 40160014003, 40160014004, 40160014005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.42	1.0	11/06/17 09:50	
1,3,5-Trimethylbenzene	ug/L	<0.42	1.0	11/06/17 09:50	
Benzene	ug/L	<0.40	1.0	11/06/17 09:50	
Ethylbenzene	ug/L	<0.39	1.0	11/06/17 09:50	
m&p-Xylene	ug/L	<0.80	2.0	11/06/17 09:50	
Methyl-tert-butyl ether	ug/L	<0.48	1.0	11/06/17 09:50	
Naphthalene	ug/L	<0.42	1.0	11/06/17 09:50	
o-Xylene	ug/L	<0.45	1.0	11/06/17 09:50	
Toluene	ug/L	<0.39	1.0	11/06/17 09:50	
a,a,a-Trifluorotoluene (S)	%	100	80-120	11/06/17 09:50	

LABORATORY CONTROL SAMPLE & LCSD: 1607188 1607189

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	19.4	98	97	80-120	1	20	
1,3,5-Trimethylbenzene	ug/L	20	19.0	18.6	95	93	80-120	2	20	
Benzene	ug/L	20	20.2	19.7	101	98	80-120	3	20	
Ethylbenzene	ug/L	20	19.5	19.0	98	95	80-120	3	20	
m&p-Xylene	ug/L	40	38.3	37.3	96	93	80-120	3	20	
Methyl-tert-butyl ether	ug/L	20	20.0	20.2	100	101	80-120	1	20	
Naphthalene	ug/L	20	18.9	20.1	94	101	80-120	6	20	
o-Xylene	ug/L	20	19.7	19.3	98	96	80-120	2	20	
Toluene	ug/L	20	19.8	19.3	99	96	80-120	3	20	
a,a,a-Trifluorotoluene (S)	%				100	100	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1607376 1607377

Parameter	Units	40160014005 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	20.6	20.6	103	103	11-200	0	20	
1,3,5-Trimethylbenzene	ug/L	<0.42	20	20	20.0	20.0	100	100	54-142	0	20	
Benzene	ug/L	<0.40	20	20	20.2	20.0	101	100	66-140	1	20	
Ethylbenzene	ug/L	1.7	20	20	22.6	22.6	105	105	66-143	0	20	
m&p-Xylene	ug/L	2.7	40	40	44.1	44.1	103	104	60-141	0	20	
Methyl-tert-butyl ether	ug/L	<0.48	20	20	18.8	18.9	94	95	70-129	1	20	
Naphthalene	ug/L	1.7	20	20	20.6	21.9	95	101	64-129	6	20	
o-Xylene	ug/L	<0.45	20	20	21.9	21.7	109	109	68-132	1	20	
Toluene	ug/L	<0.39	20	20	20.9	20.8	105	104	76-130	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

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QUALITY CONTROL DATA

Project: 5586 AXUC MACK LAKE TAVERN

Pace Project No.: 40160014

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		1607376		1607377									
Parameter	Units	40160014005 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				

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.

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QUALIFIERS

Project: 5586 AXUC MACK LAKE TAVERN

Pace Project No.: 40160014

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 5586 AXUC MACK LAKE TAVERN

Pace Project No.: 40160014

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40160014001	PZ-2	WI MOD GRO	273094		
40160014002	PZ-3	WI MOD GRO	273094		
40160014003	PZ-4	WI MOD GRO	273094		
40160014004	PZ-100	WI MOD GRO	273094		
40160014005	MW-1400	WI MOD GRO	273094		

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical

Client Name: REI

Project #: WO# : 40160014



Courier: Fed Ex UPS Client Pace Other: Walker

Tracking #: 1541470

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

Cooler Temperature: Uncorr: ROT ICorr: Biological Tissue is Frozen: yes no

Temp Blank Present: yes no

Person examining contents:
Date: 11-2-17
Initials: SKW

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

		Comments:
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8. <u>No MS/MSD Volume</u>
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	10. <u>002, 003 + 005 - 1 vial each distended</u>
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. <u>Septas.</u>
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>W</u>	
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤ 2; NaOH+ZnAct ≥ 9, NaOH ≥ 12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: <input checked="" type="checkbox"/> VOA coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed Lab Std #/ID of preservative Date/Time:
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	<u> </u>	

Client Notification/ Resolution:

Person Contacted: Date/Time: If checked, see attached form for additional comments

Comments/ Resolution:

Project Manager Review:

Date: 11/2/17