



February 22, 2017

Wisconsin Department of Natural Resources

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



**Subject:**

Update Report  
Four Corners Tavern  
33015 County Road E  
Mason, WI  
BRRTS #03-04-104167

**Dear Mr. Smith:**

Enclosed is the latest Update Report for the above-mentioned site. The site has petroleum related soil and groundwater contamination present. This report documents the completion of the final two (2) of eight (8) post excavation groundwater sample events.

The contamination does not appear to have migrated off the subject property. Following the soil excavation, groundwater contaminant concentrations have decreased significantly. **REI is again recommending the investigation be reviewed for case closure consideration.**

Please call me with questions or comments toll free at 877-734-7745 or contact me electronically at [dlarsen@reiengineering.com](mailto:dlarsen@reiengineering.com).

Sincerely,  
REI Engineering, Inc.

A handwritten signature in black ink, appearing to read "DNL".

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

Enclosure

CC: Mr. Dave Zepczyk, 33015 County Road E, Mason, WI 54856



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

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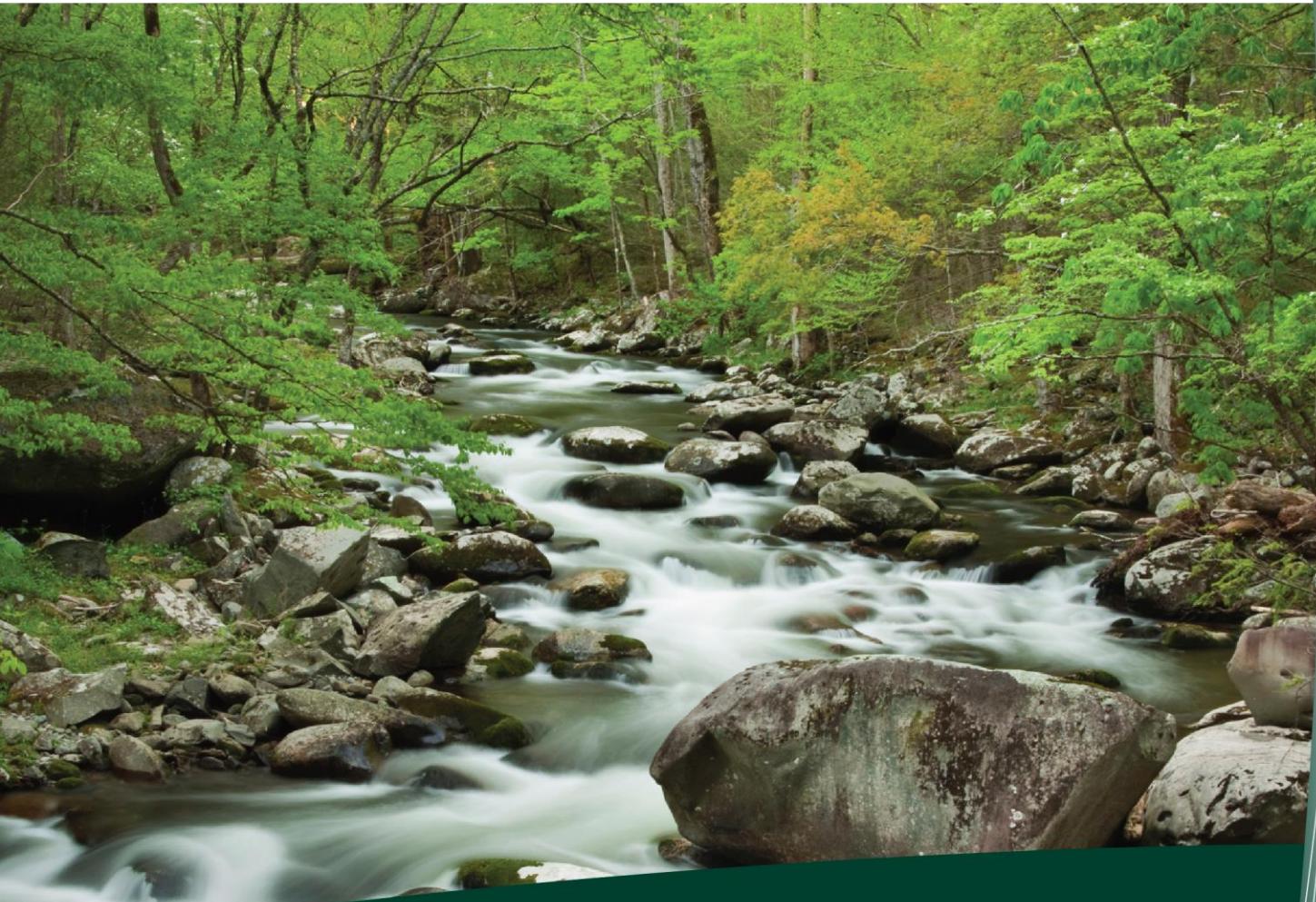


CIVIL & ENVIRONMENTAL  
ENGINEERING, SURVEYING

## UPDATE REPORT

FOUR CORNERS TAVERN  
30015 COUNTY ROAD E  
MASON, WI 54856

REI PROJECT #5377



COMPREHENSIVE  
SERVICES WITH  
PRACTICAL  
SOLUTIONS



## **UPDATE REPORT**

**FOUR CORNERS TAVERN  
30015 COUNTY ROAD E  
MASON, WI 54856  
BRRTS #03-04-104167**

**PECFA#54856-9726-78  
REI #5377**

**Prepared for:**

**Four Corners Tavern  
Mr. Dave Zepczyk  
33015 County Road E  
Mason, WI 54856  
(715) 765-4415**

**FEBRUARY 2017**

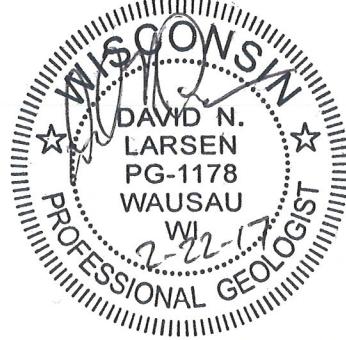
## UPDATE REPORT

**FOUR CORNERS TAVERN  
30015 COUNTY ROAD E  
MASON, WI 54856  
BRRTS #03-04-104167**

**PECFA#54856-9726-78  
REI #5377**

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

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



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



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## **UPDATE REPORT**

**FOUR CORNERS TAVERN  
30015 COUNTY ROAD E  
MASON, WI 54856  
BRRTS #03-04-104167**

**PECFA#54856-9726-78  
REI #5377**

### **1.0 INTRODUCTION**

The Four Corners Tavern property is located at 30015 County Highway E in the NW  $\frac{1}{4}$  of the NW  $\frac{1}{4}$  of Section 01 Township 45 North, Range 5 West, Town of Lincoln, Bayfield, County, Wisconsin (Figure 1). REI had approval for two (2) additional rounds of groundwater sampling from the well network and the potable water supply well and follow-up report.

### **2.0 SUMMARY OF ACTIVITIES**

#### **2.1 Monitoring Well Sampling Results**

A total of six (6) monitoring wells were installed during the investigation. Monitoring wells MW1R and MW2R were installed as replacement wells for wells MW1 and MW2 after the completion of the 2011 soil excavation. Locations of the wells are presented on Figure 2.

REI personnel have observed frost jacking of the wells during the site investigation activities. Groundwater elevations identified in this report may be subject to frost jacking and not representative of actual site conditions. Measured depth to groundwater and groundwater elevations are presented in Table 1. A summary of groundwater analytical results are presented in Tables 2a-g. An excess of four (4) well volumes was removed from each well prior to sampling by REI personnel. All purge water was properly disposed of at the City of Wausau waste water treatment facility. Investigative waste disposal documentation is included in Appendix A.

Groundwater samples were collected and submitted to a State certified laboratory for chemical analysis. Copies of the analytical chemistry reports are presented in Appendix B.

Groundwater sample results for the October 2016 and January 2017 sampling events document residual groundwater contamination in concentrations exceeding the NR 140.10 Groundwater Quality Enforcement Standards (ES) for petroleum compounds at sample locations MW1R and MW2R. Both wells have documented petroleum impacts throughout the history of the investigation. Contaminant concentrations have dropped substantially following the 2011 soil excavation.

The lateral extent of groundwater contamination appears to be adequately defined from the source in the up gradient direction with MW5, and side gradient with well MW3. The down gradient extent, at the water table, has been adequately defined with MW4 and MW6. A groundwater contour map was prepared for the January 26, 2017 groundwater sampling event for the water table wells (Figure 3). Figure 3 illustrates the mounding that typically occurs following a soil excavation when the native soils are clay and the excavation is backfilled with sands and gravels.

### **3.0 CONCLUSION AND RECOMMENDATIONS**

Based on site observations and the latest analytical testing of the groundwater, it can be concluded that the groundwater contamination has been adequately defined. Monitoring wells MW1 and MW2 were abandoned prior to the soil excavation and replaced with MW1R and MW2R following the soil excavation. Analytical results from the post soil excavation sampling events document significantly decreasing trends in both wells. The remaining wells were historically non-detect for all analyzed parameters. Additionally, the previous potable water supply well, located in the southwest corner of the County Highway E and Four Corners Road intersection has been replaced with a new well located immediately southeast of the Four Corners Tavern structure. Analytical results of the new well were also non-detect for all parameters.

This site investigation is likely ready for case closure consideration. REI recommends the Four Corners Tavern site be reviewed for case closure consideration.

**Table 1**  
**Depth to Water and Water Table Elevations**  
**Four Corners Tavern**  
**Mason, Wisconsin**

**Depth to Water (feet) below Reference Elevation**

Date	MW1	MW1R	MW2	MW2R	MW3	MW4	MW5	MW6
8/9/2010	8.62		3.33		3.43	2.94	6.76	2.63
9/15/2010	7.11		3.51		3.31	4.25	6.09	3.93
1/11/2011	5.94		5.78		4.68	5.33	5.97	3.24
4/27/2011	2.66		2.41		3.87	2.28	2.67	2.24
9/23/2011	abandoned	Dry	abandoned	Dry	4.80	3.85	3.33	
10/24/2011				1.99				
2/7/2012	12.18		6.70		5.04	4.37	6.95	4.13
5/8/2012	8.78		6.07		4.01	2.58	4.46	2.56
3/4/2013	4.27		3.46		5.19	7.03	5.17	
10/15/14	5.67		2.62		3.16	2.91	4.16	2.83
6/7/2015	2.62		2.73		1.54	4.03	3.61	2.69
10/5/2016	2.73		3.14		2.38	1.58	2.87	3.35
1/26/2017	3.14		4.69		4.91	5.37	3.1	2.91

**Measuring Point Elevations**

Elevations referenced to on site benchmark (feet)	
Initial Survey	99.20
Resurvey (10-15-14)	99.06

**Ground Surface Elevation**

Ground Surface Elevation	99.38	99.63	98.74	98.93	95.31	91.08	99.67	99.36	91.6
Depth to Water (feet) below Ground Surface									
Average	6.26	6.34	4.03	3.39	3.28	1.56	5.43	1.09	
Maximum	8.80	12.48	6.05	7.10	4.28	3.16	7.34	2.99	
Minimum	2.84	2.92	2.68	1.94	2.40	0.11	2.98	0.06	
Range	5.96	9.56	3.37	5.16	1.88	3.05	4.36	2.927	

**Water Level Elevation (feet MSL)**

Date	MW1	MW1R	MW2	MW2R	MW3	MW4	MW5	MW6
8/9/2010	90.58		95.14		92.64	90.31	92.60	88.97
9/15/2010	92.09		94.96		92.76	89.00	93.27	87.67
1/11/2011	93.26		92.69		91.39	87.92	93.39	88.36
4/27/2011	96.54		96.06		92.20	90.97	96.69	89.36
10/24/2011								
2/7/2012	87.15		96.54		91.03	88.88	92.41	87.47
5/8/2012	90.55		91.83		92.06	90.67	94.90	89.04
3/4/2013	95.06		96.46					
10/15/14	93.66		95.07					
6/7/2015	96.44		96.33					
10/5/2016	96.33		96.99					
1/26/2017	95.92		96.15					
	94.37		93.62					
			90.70					
				90.15				

**Table 2a**  
**Summary of Groundwater Analytical Results**  
**MW1/MW1R**  
**Four Corners Tavern**  
**Mason, Wisconsin**

	MW1										MW1R									
	Date ->	7/28/2010	1/11/2011	4/27/2011	Sept 2011	10/24/2011	2/7/2012	5/8/2012	3/4/2013	10/15/2014	6/17/2015	10/5/2016	1/26/2017							
Dissolved Lead	15	1.5	mg/l	< 1.7	1.03*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
VOC Parameters																				
Benzene	5	0.5	µg/l	<b>8,300</b>	<b>21,900</b>	Well	<b>3,540</b>	<b>3,010</b>	<b>1,650</b>	<b>1,020</b>	<b>1,320</b>	<b>289</b>	<b>937</b>							
Toluene	800	160	µg/l	<b>5,100</b>	<b>5,290</b>	Abandoned	143	69	23.6	< 5.0	< 3.9	1.3	< 3.9							
Ethylbenzene	700	140	µg/l	<b>999</b>	<b>2,130</b>	During	<b>287</b>	<b>268</b>	69	10.1	< 3.9	8.3	7.4*							
Xylenes (mixed isomers)	2,000	400	µg/l	<b>3,440</b>	<b>4,110</b>	Soil	438	143.9	20.0*	< 10	< 12.5	1.95*	< 8.0							
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 61	< 500	Excavation	< 12.2	< 7.6	< 7.6	< 1.7	< 4.8	0.94*	< 4.8							
Trimethylbenzenes (mixed isomers)	480	96	µg/l	<b>630</b>	<b>2,150</b>		<b>2,416</b>	69.6	62.7	9.0*	< 5.0	< 9.1*	0.85*	< 4.2						
Naphthalene	100	10	µg/l	< 89	NA		NA	NA	NA	18.2*	10.2	< 25	< 4.2	1.3	< 4.2					
1,2-Dichloroethane	5	0.5	µg/l	<b>585</b>	NA		NA	233	NA	NA	<b>24.5</b>	NA	NA	NA						

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

Enforcement Standard exceeded

Preventive Action Limit exceeded

NA = Not Analyzed

NS = Not Sampled

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

**Table 2b**  
**Summary of Groundwater Analytical Results**  
**MW2/MW2R**  
**Four Corners Tavern**  
**Mason, Wisconsin**

	MW2												MW2R					
	Date >	8/9/2010	1/11/2011	4/27/2011	Sept 2011	10/24/2011	2/7/2012	5/8/2012	3/4/2013	10/15/2014	6/17/2015	10/6/2016	1/26/2017					
<b>Dissolved Lead</b>	15	1.5	mg/l	9.18	2.88	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>VOOC Parameters</b>																		
Benzene	5	0.5	µg/l	<b>9,730</b>	<b>9,990</b>	13,500	Well	<b>89.0</b>	<b>87.7</b>	<b>116</b>	<b>83.3</b>	<b>19.3</b>	<b>5.6</b>	<b>21.4</b>	<b>9.5</b>			
Toluene	800	160	µg/l	<b>16,300</b>	<b>10,900</b>	16,600	Abandoned	<b>212</b>	1.4	1.9	0.08*	< 0.50	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
Ethylbenzene	700	140	µg/l	<b>1,480</b>	<b>1,300</b>	1,400	During	63.7	14.9	36.4	10.7	3.7	0.88*	6.9	2.5	6.9	2.5	2.5
Xylenes (mixed isomers)	2,000	400	µg/l	<b>11,870</b>	<b>11,700</b>	23,840	Soil	364.4	5.5	2.46*	2.1	< 1.0	< 1.25	2.5	0.92*	2.5	0.92*	2.5
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 250	< 250	< 122	Excavation	4.0	< 0.61	1.5	0.64*	< 0.17	< 0.48	0.98*	< 0.48	< 0.48	< 0.48	< 0.48
Trimethylbenzenes (mixed isomers)	480	96	µg/l	<b>2,202</b>	<b>3,390</b>	<b>3,057</b>		<b>140.3</b>	14.5	3.5	< 4.0	< 0.50	< 0.84	7.1	4.1	7.1	4.1	4.1
Naphthalene	100	10	µg/l	< 500	NA	NA		NA	NA	4.0	1.1	< 2.5	< 0.42	2.5	0.66*	2.5	0.66*	2.5
1,2-Dichloroethane	5	0.5	µg/l	<b>239*</b>	NA	NA		NA	<b>5.7</b>	NA	NA	1.1	NA	NA	NA	NA	NA	NA

Notes:

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PAL = NRI140.10 Preventive Action Limits

**BOLD**  
*Italics*

Enforcement Standard exceeded

Preventive Action Limit exceeded

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**Table 2c**  
**Summary of Groundwater Analytical Results**  
**MW3**  
**Four Corners Tavern**  
**Mason, Wisconsin**

		Date ->	7/28/2010	1/11/2011	4/27/2011	Sept 2011	9/23/2011	2/7/2012	5/8/2012	3/4/2013	10/15/2014	6/17/2015	10/5/2016	1/26/2017
<b>Dissolved Lead</b>	15	1.5 mg/l	< 1.7	< 0.60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>VOC Parameters</b>														
Benzene	5	0.5 µg/l	< 0.41	< 0.20	< 0.41	Soil	< 0.39	< 0.41	< 0.39	Not	< 0.50	< 0.40	< 0.40	< 0.40
Toluene	1,000	200 µg/l	< 0.67	< 0.40	< 0.67	Excavation	< 0.42	< 0.67	< 0.42	Sampled	< 0.50	< 0.39	< 0.39	< 0.39
Ethylbenzene	700	140 µg/l	< 0.54	< 0.20	< 0.54		< 0.41	< 0.54	< 0.41		< 0.50	< 0.39	< 0.39	< 0.39
Xylenes (mixed isomers)	10,000	1,000 µg/l	< 1.8	< 0.40	< 1.8		< 0.87	< 1.8	< 0.87	Under	< 0.10	< 1.25	< 0.80	< 0.80
Methyl tert-Butyl Ether (MTBE)	60	12 µg/l	< 0.61	< 0.50	< 0.61		< 0.38	< 0.61	< 0.38	Snow	< 0.17	< 0.48	< 0.48	< 0.48
Trimethylbenzenes (mixed isomers)	480	96 µg/l	< 0.97	< 0.20	< 0.97		< 0.43	< 0.97	< 0.43	Pile	< 0.50	< 0.84	< 0.42	< 0.42
Naphthalene	100	10 µg/l	< 0.89	NA	NA		NA	NA	NA		< 2.5	< 0.42	< 0.42	< 0.42
1,2-Dichloroethane	5	0.5 µg/l	< 0.36	NA	NA		< 0.36	< 0.40	< 0.40		< 0.17	NA	NA	NA

Notes:

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Enforcement Standard exceeded

<b>BOLD</b>
<i>italics</i>

Preventive Action Limit exceeded

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**Table 2d**  
**Summary of Groundwater Analytical Results**  
**MW4**  
**Four Corners Tavern**  
**Mason, Wisconsin**

		Date ->	8/9/2010	1/11/2011	4/27/2011	Sept 2011	9/23/2011	NA	NA													
<b>Dissolved Lead</b>	15	1.5	mg/l	< 0.60	< 0.60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<b>VOC Parameters</b>																						
Benzene	5	0.5	µg/l	< 0.20	< 0.20	< 0.41	Soil	< 0.39	< 0.41	< 0.39	< 0.39	< 0.50	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	
Toluene	1,000	200	µg/l	< 0.40	< 0.40	< 0.67	Excavation	< 0.42	< 0.67	< 0.42	< 0.42	< 0.50	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	
Ethylbenzene	700	140	µg/l	< 0.20	< 0.20	< 0.54		< 0.41	< 0.54	< 0.41	< 0.41	< 0.50	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	
Xylenes (mixed isomers)	10,000	1,000	µg/l	< 0.40	< 0.40	< 1.8		< 0.87	< 1.8	< 0.87	< 0.87	< 1.0	< 1.25	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.50	< 0.50	< 0.61		< 0.38	< 0.61	< 0.38	< 0.38	< 0.38	< 0.17	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.20	< 0.20	< 0.97		< 0.43	< 0.97	< 0.43	< 0.43	< 0.50	< 0.84	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	
Naphthalene	100	10	µg/l	< 1.0	< 1.0	NA	NA	NA	NA	NA	NA	NA	NA	< 2.5	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	
1,2-Dichloroethane	5	0.5	µg/l	< 0.30	< 0.30	NA	NA	< 0.36	< 0.40	< 0.40	< 0.40	< 0.17	NA									

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Enforcement Standard exceeded      **BOLD**

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**Table 2e**  
**Summary of Groundwater Analytical Results**  
**MW5**  
**Four Corners Tavern**  
**Mason, Wisconsin**

		Date ->	7/28/2010	1/11/2011	4/27/2011	Sept 2011	9/23/2011	2/7/2012	5/8/2012	3/4/2013	10/15/2014	6/17/2015	10/5/2016	1/26/2017
<b>Dissolved Lead</b>	15	1.5	mg/l	< 1.7	< 0.60	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>VOC Parameters</b>														
Benzene	5	0.5	µg/l	< 0.20	< 0.20	Soil	< 0.41	< 0.39	< 0.39	< 0.50	< 0.40	< 0.40	< 0.40	< 0.40
Toluene	1,000	200	µg/l	< 0.40	< 0.40	Excavation	< 0.67	< 0.42	< 0.67	< 0.42	< 0.50	< 0.39	< 0.39	< 0.39
Ethylbenzene	700	140	µg/l	< 0.20	< 0.20		< 0.54	< 0.41	< 0.54	< 0.41	< 0.50	< 0.39	< 0.39	< 0.39
Xylenes (mixed isomers)	10,000	1,000	µg/l	< 0.40	< 0.40		< 1.8	< 0.87	< 1.8	< 0.87	< 1.0	< 1.25	< 0.80	< 0.80
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.50	< 0.50		< 0.61	< 0.38	< 0.61	< 0.38	< 0.38	< 0.17	< 0.48	< 0.48
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.20	< 0.20		< 0.97	< 0.43	< 0.97	< 0.43	< 0.50	< 0.84	< 0.42	< 0.42
Naphthalene	100	10	µg/l	< 1.0	< 1.0	NA	NA	NA	NA	NA	< 2.5	< 0.42	< 0.42	< 0.42
1,2-Dichloroethane	5	0.5	µg/l	< 0.30	< 0.30	NA	< 0.36	< 0.40	< 0.40	< 0.17	NA	NA	NA	NA

Notes:

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Enforcement Standard exceeded

<b>BOLD</b>
<i>italics</i>

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**Table 2f**  
**Summary of Groundwater Analytical Results**  
**MW6**  
**Four Corners Tavern**  
**Mason, Wisconsin**

		Date ->	8/9/2010	1/11/2011	4/27/2011	Sept 2011	9/23/2011	2/7/2012	5/8/2012	3/4/2012	10/15/2014	6/17/2015	10/5/2016	1/26/2017
<b>Dissolved Lead</b>	15	1.5	mg/l	< 0.60	< 0.60	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>VOC Parameters</b>														
Benzene	5	0.5	µg/l	< 0.20	< 0.20	< 0.41	Soil	< 0.39	< 0.41	< 0.39	< 0.50	< 0.40	< 0.40	< 0.40
Toluene	1,000	200	µg/l	< 0.40	< 0.40	< 0.67	Excavation	< 0.42	< 0.67	< 0.42	< 0.50	< 0.39	< 0.39	< 0.39
Ethylbenzene	700	140	µg/l	< 0.20	< 0.20	< 0.54		< 0.41	< 0.54	< 0.41	< 0.50	< 0.39	< 0.39	< 0.39
Xylenes (mixed isomers)	10,000	1,000	µg/l	< 0.40	< 0.40	< 1.8		< 0.87	< 1.8	< 0.87	< 1.0	< 1.25	< 0.80	< 0.80
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.50	< 0.50	< 0.61		< 0.38	< 0.61	< 0.38	< 0.38	< 0.17	< 0.48	< 0.48
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.20	< 0.20	< 0.97		< 0.43	< 0.97	< 0.43	< 0.43	< 0.50	< 0.42	< 0.42
Naphthalene	100	10	µg/l	< 1.0	< 1.0	NA	NA	NA	NA	NA	< 2.5	< 0.42	< 0.42	< 0.42
1,2-Dichloroethane	5	0.5	µg/l	< 0.30	< 0.30	NA	NA	< 0.36	< 0.40	< 0.40	< 0.17	NA	NA	NA

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

Enforcement Standard exceeded      **BOLD**

Preventive Action Limit exceeded      *italics*

NA = Not Analyzed

NS = Not Sampled

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

**Table 2g**  
**Summary of Groundwater Analytical Results**  
**Potable Well**  
**Four Corners Tavern**  
**Mason, Wisconsin**

VOC Parameters	Old Potable Well		New Potable Well									
	Date ->	2/9/2011	4/27/2011	Sept 2011	10/24/2011	2/7/2012	5/8/2012	3/4/2013	10/15/2013	6/17/2014	8/31/2016	1/26/2017
Benzene	5	0.5	µg/l	< 0.20	< 0.038	Soil	< 0.39	NS	< 0.41	< 0.41	< 0.21	< 0.086
Toluene	1,000	200	µg/l	< 0.40	< 0.045	Excavation	< 0.40	NS	< 0.67	< 0.11	< 0.12	< 0.080
Ethylbenzene	700	140	µg/l	< 0.20	< 0.034		< 0.41	NS	< 0.54	< 0.54	< 0.23	< 0.051
Xylenes (mixed isomers)	10,000	1,000	µg/l	< 1.00	< 0.12		< 0.87	NS	< 1.8	< 0.21	< 0.41	< 0.073
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.50	< 0.040		< 0.38	NS	< 0.61	< 0.61	NA	< 0.058
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.20	< 0.050		< 0.43	NS	< 0.97	< 0.97	< 0.25	NA
Naphthalene	100	10	µg/l	< 1.00	< 0.058		< 0.40	NS	< 0.89	< 0.89	< 0.50	NA
1,2-Dichloroethane	5	0.5	µg/l	< 0.30	< 0.044		NA	NS	< 0.36	< 0.36	< 0.10	< 0.092

**Notes:**

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

Enforcement Standard exceeded

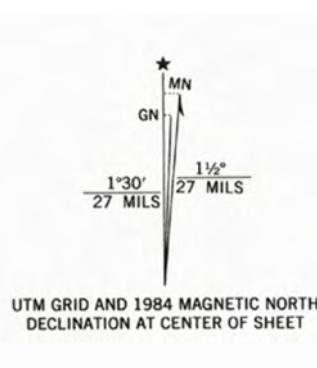
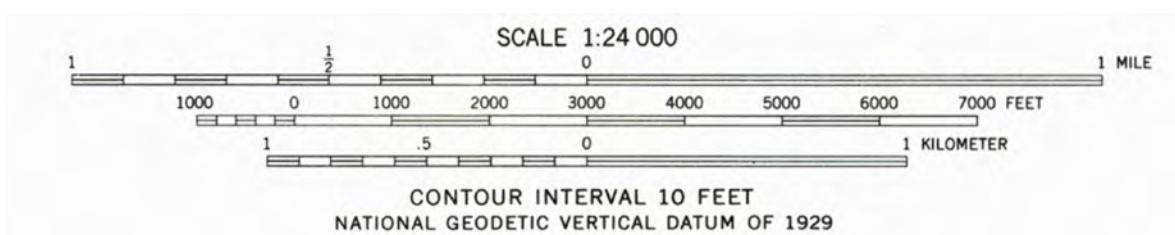
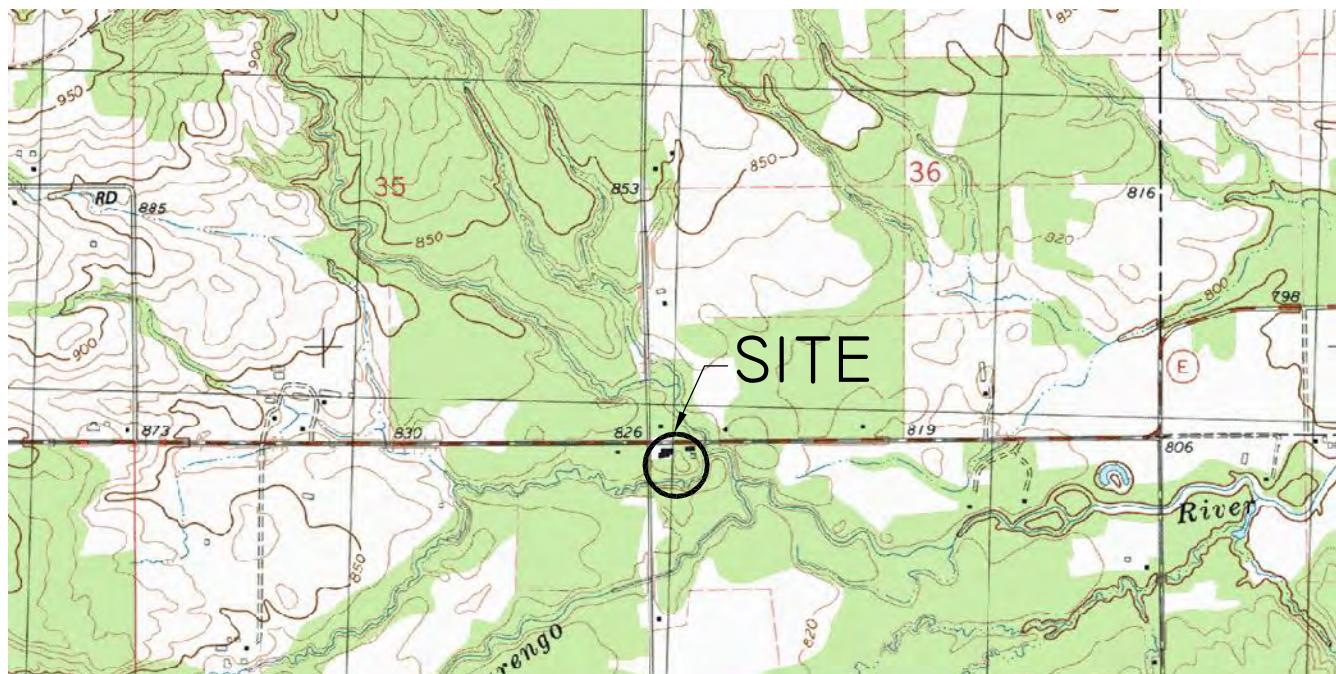
<b>BOLD</b>
<i>Italics</i>

Preventive Action Limit exceeded

NA = Not Analyzed

NS = Not Sampled

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



SANBORN, WIS.  
NW/4 MARENGO 15' QUADRANGLE  
46090-D8-TF-024  
1984  
DMA 2876 IV NW-SERIES V861



FOUR CORNERS TAVERN 30015 COUNTY HIGHWAY E MASON, WI	FIGURE 1 : SITE VICINITY MAP		
	PROJECT NO.	DRAWN BY:	DATE:



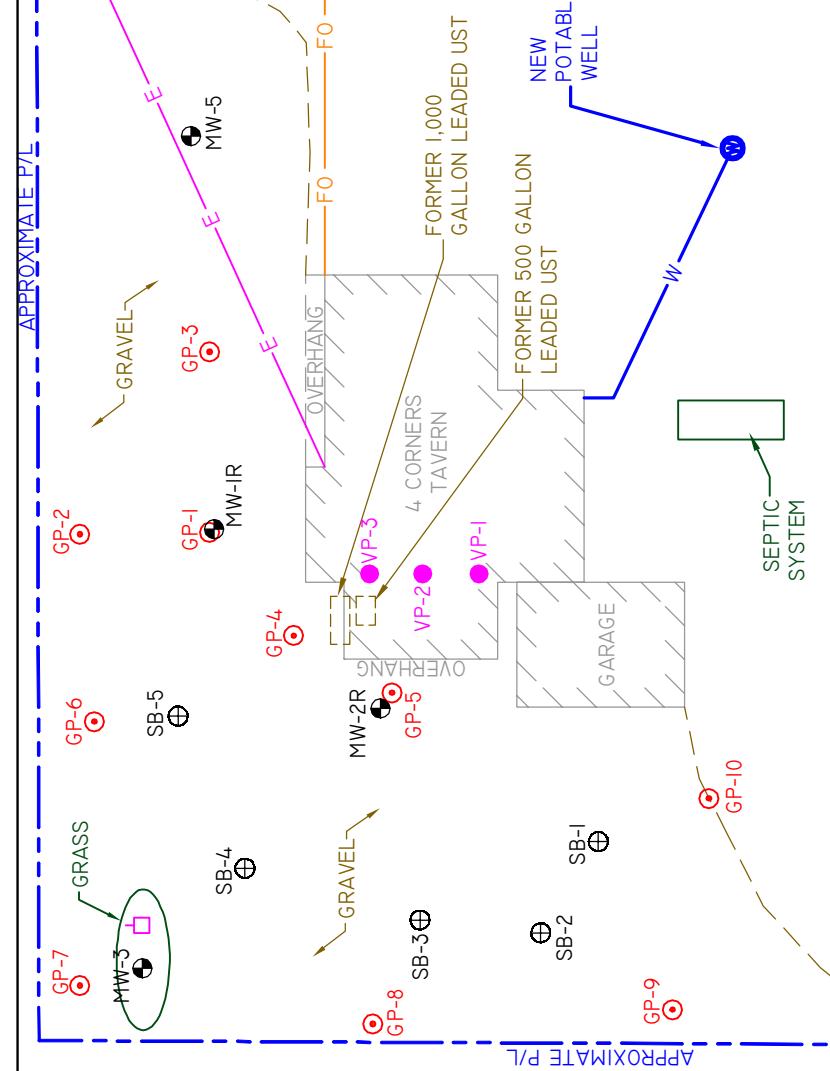
### LEGEND

0	40
SCALE: 1" = 40'	
CONFIRMATORY SOIL SAMPLE	
POWER POLE	
FIBER OPTIC LINE	
UNDERGROUND ELECTRICAL LINE	
WATER LINE	
TELEPHONE LINE	
SOIL BORING	
MONITORING WELL	
GEOPROBE SOIL BORING	
VAPOR PROBE	

CTH  
"E"

FOUR CORNERS TAVERN  
30015 COUNTY HIGHWAY E  
MASON, WISCONSIN

STORE ROAD



REI Engineering, INC.

FIGURE 2 : SITE MAP

PROJECT NO. 5377

DRAWN BY: TAW

DATE: 7/20/2015

DRAWING FILE: P:\5300-53300\53377 - FOUR CORNERS.DWG  
SITE LAYOUT: SITE PLOTTED: JUL 20, 2015 - 1:58PM PLOTTED BY: TODDW

## **APPENDIX A**

### **INVESTIGATIVE WASTE DISPOSAL DOCUMENTATION**



**SPECIAL DISCHARGE FORM**  
GROUNDWATER CLEANUP PROJECTS

This form is intended to document the discharge of contaminated groundwater or process waters into the Wausau Wastewater Treatment Facility. Sewerage Utility billing for this discharge will be directly to the party listed below.

Source of Water:

Monitoring Well purge water

Up to 500 gallons, no free product, no  
strong or volatile odors

Party Responsible for Utility Charges:

Dave Larsen

REI Engineering Inc.

4080 N. 20th Ave

Wausau WI 54401

Approved By:

Joe  
Wausau Sewerage Utility

TO BE COMPLETED BY WASTE HAULER

Name of Waste Hauler:

REI Engineering, Inc.

Disposal Date: 2/6/17

Approximate quantity of water discharged: 130 gallonsDate of Discharge: 2/6/17

Time of Discharge: \_\_\_\_\_

By submitting this form, the hauler will not be billed for this load. Special Discharge Request has been completed to obtain authorization for this discharge but please notify treatment plant operator if water contains oil, grease, solids, or sediments, has a strong odor or otherwise appears unsuitable for discharge into the treatment plant.

**THIS FORM TO BE SUBMITTED TO SEWERAGE UTILITY BY WASTE  
HAULER AT TIME OF DISCHARGE**

**SPECIAL DISCHARGE FORM**  
GROUNDWATER CLEANUP PROJECTS

This form is intended to document the discharge of contaminated groundwater or process waters into the Wausau Wastewater Treatment Facility. Sewerage Utility billing for this discharge will be directly to the party listed below.

Source of Water:

Monitoring well purge water

Up to 500 gallons, no free product, no  
strong or volatile odors

Party Responsible for Utility Charges:

Dave Larsen

REI Engineering Inc.

4080 N. 20th Ave

Wausau WI 54401

Approved By:

Wausau Sewerage Utility

TO BE COMPLETED BY WASTE HAULER

Name of Waste Hauler:

REI Engineering, Inc.

Disposal Date: 10-6-16

Approximate quantity of water discharged: 575 Gallons

Date of Discharge: 10-6-16

Time of Discharge: \_\_\_\_\_

By submitting this form, the hauler will not be billed for this load. Special Discharge Request has been completed to obtain authorization for this discharge but please notify treatment plant operator if water contains oil, grease, solids, or sediments, has a strong odor or otherwise appears unsuitable for discharge into the treatment plant.

**THIS FORM TO BE SUBMITTED TO SEWERAGE UTILITY BY WASTE  
HAULER AT TIME OF DISCHARGE**

## **APPENDIX B**

### **GROUNDWATER LABORATORY REPORTS**



September 13, 2016

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

RE: Project: 5377 AXUC FOUR CORNERS  
Pace Project No.: 40137763

Dear DAVID LARSEN:

Enclosed are the analytical results for sample(s) received by the laboratory on September 03, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Brian Basten  
brian.basten@pacelabs.com  
Project Manager

Enclosures



#### REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 5377 AXUC FOUR CORNERS  
 Pace Project No.: 40137763

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### Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414	Minnesota Certification #: 027-053-137
525 N 8th Street, Salina, KS 67401	Mississippi Certification #: Pace
A2LA Certification #: 2926.01	Montana Certification #: MT0092
Alaska Certification #: UST-078	Nevada Certification #: MN_00064
Alaska Certification #MN00064	Nebraska Certification #: Pace
Alabama Certification #40770	New Jersey Certification #: MN-002
Arizona Certification #: AZ-0014	New York Certification #: 11647
Arkansas Certification #: 88-0680	North Carolina Certification #: 530
California Certification #: 01155CA	North Carolina State Public Health #: 27700
Colorado Certification #Pace	North Dakota Certification #: R-036
Connecticut Certification #: PH-0256	Ohio EPA #: 4150
EPA Region 8 Certification #: 8TMS-L	Ohio VAP Certification #: CL101
Florida/NELAP Certification #: E87605	Oklahoma Certification #: 9507
Guam Certification #:14-008r	Oregon Certification #: MN200001
Georgia Certification #: 959	Oregon Certification #: MN300001
Georgia EPD #: Pace	Pennsylvania Certification #: 68-00563
Idaho Certification #: MN00064	Puerto Rico Certification
Hawaii Certification #MN00064	Saipan (CNMI) #.MP0003
Illinois Certification #: 200011	South Carolina #:74003001
Indiana Certification#C-MN-01	Texas Certification #: T104704192
Iowa Certification #: 368	Tennessee Certification #: 02818
Kansas Certification #: E-10167	Utah Certification #: MN000642013-4
Kentucky Dept of Envi. Protection - DW #90062	Virginia DGS Certification #: 251
Kentucky Dept of Envi. Protection - WW #:90062	Virginia/VELAP Certification #: Pace
Louisiana DEQ Certification #: 3086	Washington Certification #: C486
Louisiana DHH #: LA140001	West Virginia Certification #: 382
Maine Certification #: 2013011	West Virginia DHHR #:9952C
Maryland Certification #: 322	Wisconsin Certification #: 999407970
Michigan DEPH Certification #: 9909	

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 5377 AXUC FOUR CORNERS  
Pace Project No.: 40137763

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40137763001	POTABLE	Water	08/31/16 09:30	09/03/16 07:45

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: 5377 AXUC FOUR CORNERS  
Pace Project No.: 40137763

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40137763001	POTABLE	EPA 524.2	DJB	75	PASI-M

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 5377 AXUC FOUR CORNERS

Pace Project No.: 40137763

Sample: POTABLE	Lab ID: 40137763001	Collected: 08/31/16 09:30	Received: 09/03/16 07:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>	Analytical Method: EPA 524.2								
Acetone	<1.9	ug/L	20.0	1.9	1		09/09/16 19:01	67-64-1	
Acrylonitrile	<0.28	ug/L	10.0	0.28	1		09/09/16 19:01	107-13-1	
Benzene	<0.086	ug/L	0.50	0.086	1		09/09/16 19:01	71-43-2	
Bromobenzene	<0.081	ug/L	0.50	0.081	1		09/09/16 19:01	108-86-1	
Bromoform	<0.16	ug/L	1.0	0.16	1		09/09/16 19:01	74-97-5	
Bromochloromethane	<0.090	ug/L	1.0	0.090	1		09/09/16 19:01	75-27-4	
Bromodichloromethane	<0.23	ug/L	4.0	0.23	1		09/09/16 19:01	75-25-2	
Bromoform	<0.20	ug/L	4.0	0.20	1		09/09/16 19:01	74-83-9	
2-Butanone (MEK)	<0.19	ug/L	5.0	0.19	1		09/09/16 19:01	78-93-3	
n-Butylbenzene	<0.081	ug/L	0.50	0.081	1		09/09/16 19:01	104-51-8	
sec-Butylbenzene	<0.063	ug/L	0.50	0.063	1		09/09/16 19:01	135-98-8	
tert-Butylbenzene	<0.097	ug/L	0.50	0.097	1		09/09/16 19:01	98-06-6	
Carbon disulfide	<0.042	ug/L	1.0	0.042	1		09/09/16 19:01	75-15-0	
Carbon tetrachloride	<0.076	ug/L	1.0	0.076	1		09/09/16 19:01	56-23-5	
Chlorobenzene	<0.068	ug/L	0.50	0.068	1		09/09/16 19:01	108-90-7	
Chloroethane	<0.18	ug/L	1.0	0.18	1		09/09/16 19:01	75-00-3	
Chloroform	<0.10	ug/L	1.0	0.10	1		09/09/16 19:01	67-66-3	
Chloromethane	<0.21	ug/L	4.0	0.21	1		09/09/16 19:01	74-87-3	
2-Chlorotoluene	<0.11	ug/L	0.50	0.11	1		09/09/16 19:01	95-49-8	
4-Chlorotoluene	<0.10	ug/L	0.50	0.10	1		09/09/16 19:01	106-43-4	
1,2-Dibromo-3-chloropropane	<0.18	ug/L	4.0	0.18	1		09/09/16 19:01	96-12-8	
Dibromochloromethane	<0.13	ug/L	0.50	0.13	1		09/09/16 19:01	124-48-1	
1,2-Dibromoethane (EDB)	<0.091	ug/L	0.50	0.091	1		09/09/16 19:01	106-93-4	
Dibromomethane	<0.098	ug/L	1.0	0.098	1		09/09/16 19:01	74-95-3	
1,2-Dichlorobenzene	<0.10	ug/L	0.50	0.10	1		09/09/16 19:01	95-50-1	
1,3-Dichlorobenzene	<0.082	ug/L	0.50	0.082	1		09/09/16 19:01	541-73-1	
1,4-Dichlorobenzene	<0.075	ug/L	0.50	0.075	1		09/09/16 19:01	106-46-7	
trans-1,4-Dichloro-2-butene	<0.15	ug/L	10.0	0.15	1		09/09/16 19:01	110-57-6	CL,L2
Dichlorodifluoromethane	<0.16	ug/L	1.0	0.16	1		09/09/16 19:01	75-71-8	
1,1-Dichloroethane	<0.088	ug/L	0.50	0.088	1		09/09/16 19:01	75-34-3	
1,2-Dichloroethane	<0.092	ug/L	0.50	0.092	1		09/09/16 19:01	107-06-2	
1,1-Dichloroethene	<0.089	ug/L	0.50	0.089	1		09/09/16 19:01	75-35-4	
cis-1,2-Dichloroethene	<0.085	ug/L	0.50	0.085	1		09/09/16 19:01	156-59-2	
trans-1,2-Dichloroethene	<0.11	ug/L	0.50	0.11	1		09/09/16 19:01	156-60-5	
1,2-Dichloropropane	<0.084	ug/L	4.0	0.084	1		09/09/16 19:01	78-87-5	
1,3-Dichloropropane	<0.094	ug/L	0.50	0.094	1		09/09/16 19:01	142-28-9	
2,2-Dichloropropane	<0.097	ug/L	1.0	0.097	1		09/09/16 19:01	594-20-7	
1,1-Dichloropropene	<0.080	ug/L	0.50	0.080	1		09/09/16 19:01	563-58-6	
cis-1,3-Dichloropropene	<0.071	ug/L	0.50	0.071	1		09/09/16 19:01	10061-01-5	
trans-1,3-Dichloropropene	<0.055	ug/L	0.50	0.055	1		09/09/16 19:01	10061-02-6	
Ethylbenzene	<0.051	ug/L	0.50	0.051	1		09/09/16 19:01	100-41-4	
Ethyl methacrylate	<0.071	ug/L	5.0	0.071	1		09/09/16 19:01	97-63-2	
Hexachloro-1,3-butadiene	<0.11	ug/L	4.0	0.11	1		09/09/16 19:01	87-68-3	
2-Hexanone	<0.19	ug/L	5.0	0.19	1		09/09/16 19:01	591-78-6	
Isopropylbenzene (Cumene)	<0.11	ug/L	0.50	0.11	1		09/09/16 19:01	98-82-8	
p-Isopropyltoluene	<0.083	ug/L	0.50	0.083	1		09/09/16 19:01	99-87-6	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 5377 AXUC FOUR CORNERS  
Pace Project No.: 40137763

Sample: POTABLE	Lab ID: 40137763001	Collected: 08/31/16 09:30	Received: 09/03/16 07:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>	Analytical Method: EPA 524.2								
Methylene Chloride	<0.20	ug/L	4.0	0.20	1		09/09/16 19:01	75-09-2	
Methyl methacrylate	<0.12	ug/L	5.0	0.12	1		09/09/16 19:01	80-62-6	
4-Methyl-2-pentanone (MIBK)	<0.34	ug/L	5.0	0.34	1		09/09/16 19:01	108-10-1	
Methyl-tert-butyl ether	<0.058	ug/L	0.50	0.058	1		09/09/16 19:01	1634-04-4	
Naphthalene	<0.064	ug/L	4.0	0.064	1		09/09/16 19:01	91-20-3	
2-Nitropropane	<0.42	ug/L	10.0	0.42	1		09/09/16 19:01	79-46-9	
n-Propylbenzene	<0.096	ug/L	0.50	0.096	1		09/09/16 19:01	103-65-1	
Styrene	<0.075	ug/L	1.0	0.075	1		09/09/16 19:01	100-42-5	
1,1,1,2-Tetrachloroethane	<0.062	ug/L	0.50	0.062	1		09/09/16 19:01	630-20-6	
1,1,2,2-Tetrachloroethane	<0.11	ug/L	0.50	0.11	1		09/09/16 19:01	79-34-5	
Tetrachloroethene	<0.12	ug/L	0.50	0.12	1		09/09/16 19:01	127-18-4	
Toluene	<0.080	ug/L	0.50	0.080	1		09/09/16 19:01	108-88-3	
Total Trihalomethanes (Calc.)	<2.0	ug/L	4.0	2.0	1		09/09/16 19:01		
1,2,3-Trichlorobenzene	<0.10	ug/L	0.50	0.10	1		09/09/16 19:01	87-61-6	
1,2,4-Trichlorobenzene	<0.12	ug/L	0.50	0.12	1		09/09/16 19:01	120-82-1	
1,1,1-Trichloroethane	<0.10	ug/L	0.50	0.10	1		09/09/16 19:01	71-55-6	
1,1,2-Trichloroethane	<0.098	ug/L	0.50	0.098	1		09/09/16 19:01	79-00-5	
Trichloroethene	<0.044	ug/L	0.40	0.044	1		09/09/16 19:01	79-01-6	
Trichlorofluoromethane	<0.13	ug/L	0.50	0.13	1		09/09/16 19:01	75-69-4	
1,2,3-Trichloropropane	<0.073	ug/L	4.0	0.073	1		09/09/16 19:01	96-18-4	
1,2,4-Trimethylbenzene	<0.083	ug/L	0.50	0.083	1		09/09/16 19:01	95-63-6	
1,3,5-Trimethylbenzene	<0.078	ug/L	0.50	0.078	1		09/09/16 19:01	108-67-8	
Vinyl chloride	<0.098	ug/L	0.20	0.098	1		09/09/16 19:01	75-01-4	
Xylene (Total)	<0.073	ug/L	1.5	0.073	1		09/09/16 19:01	1330-20-7	
m&p-Xylene	<0.073	ug/L	1.0	0.073	1		09/09/16 19:01	179601-23-1	
o-Xylene	<0.073	ug/L	0.50	0.073	1		09/09/16 19:01	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%.	75-125		1		09/09/16 19:01	460-00-4	
Toluene-d8 (S)	94	%.	75-125		1		09/09/16 19:01	2037-26-5	
1,2-Dichloroethane-d4 (S)	93	%.	75-125		1		09/09/16 19:01	17060-07-0	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 5377 AXUC FOUR CORNERS

Pace Project No.: 40137763

QC Batch:	434844	Analysis Method:	EPA 524.2
QC Batch Method:	EPA 524.2	Analysis Description:	524.2 MSV
Associated Lab Samples:	40137763001		

METHOD BLANK: 2363671 Matrix: Water

Associated Lab Samples: 40137763001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.062	0.50	09/09/16 16:25	
1,1,1-Trichloroethane	ug/L	<0.10	0.50	09/09/16 16:25	
1,1,2,2-Tetrachloroethane	ug/L	<0.11	0.50	09/09/16 16:25	
1,1,2-Trichloroethane	ug/L	<0.098	0.50	09/09/16 16:25	
1,1-Dichloroethane	ug/L	<0.088	0.50	09/09/16 16:25	
1,1-Dichloroethene	ug/L	<0.089	0.50	09/09/16 16:25	
1,1-Dichloropropene	ug/L	<0.080	0.50	09/09/16 16:25	
1,2,3-Trichlorobenzene	ug/L	<0.10	0.50	09/09/16 16:25	
1,2,3-Trichloropropane	ug/L	<0.073	4.0	09/09/16 16:25	
1,2,4-Trichlorobenzene	ug/L	<0.12	0.50	09/09/16 16:25	
1,2,4-Trimethylbenzene	ug/L	<0.083	0.50	09/09/16 16:25	
1,2-Dibromo-3-chloropropane	ug/L	<0.18	4.0	09/09/16 16:25	
1,2-Dibromoethane (EDB)	ug/L	<0.091	0.50	09/09/16 16:25	
1,2-Dichlorobenzene	ug/L	<0.10	0.50	09/09/16 16:25	
1,2-Dichloroethane	ug/L	<0.092	0.50	09/09/16 16:25	
1,2-Dichloropropane	ug/L	<0.084	4.0	09/09/16 16:25	
1,3,5-Trimethylbenzene	ug/L	<0.078	0.50	09/09/16 16:25	
1,3-Dichlorobenzene	ug/L	<0.082	0.50	09/09/16 16:25	
1,3-Dichloropropane	ug/L	<0.094	0.50	09/09/16 16:25	
1,4-Dichlorobenzene	ug/L	<0.075	0.50	09/09/16 16:25	
2,2-Dichloropropane	ug/L	<0.097	1.0	09/09/16 16:25	
2-Butanone (MEK)	ug/L	<0.19	5.0	09/09/16 16:25	
2-Chlorotoluene	ug/L	<0.11	0.50	09/09/16 16:25	
2-Hexanone	ug/L	<0.19	5.0	09/09/16 16:25	
2-Nitropropane	ug/L	<0.42	10.0	09/09/16 16:25	
4-Chlorotoluene	ug/L	<0.10	0.50	09/09/16 16:25	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.34	5.0	09/09/16 16:25	
Acetone	ug/L	<1.9	20.0	09/09/16 16:25	
Acrylonitrile	ug/L	<0.28	10.0	09/09/16 16:25	
Benzene	ug/L	<0.086	0.50	09/09/16 16:25	
Bromobenzene	ug/L	<0.081	0.50	09/09/16 16:25	
Bromochloromethane	ug/L	<0.16	1.0	09/09/16 16:25	
Bromodichloromethane	ug/L	<0.090	1.0	09/09/16 16:25	
Bromoform	ug/L	<0.23	4.0	09/09/16 16:25	
Bromomethane	ug/L	<0.20	4.0	09/09/16 16:25	
Carbon disulfide	ug/L	<0.042	1.0	09/09/16 16:25	
Carbon tetrachloride	ug/L	<0.076	1.0	09/09/16 16:25	
Chlorobenzene	ug/L	<0.068	0.50	09/09/16 16:25	
Chloroethane	ug/L	<0.18	1.0	09/09/16 16:25	
Chloroform	ug/L	<0.10	1.0	09/09/16 16:25	
Chloromethane	ug/L	<0.21	4.0	09/09/16 16:25	

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 5377 AXUC FOUR CORNERS

Pace Project No.: 40137763

METHOD BLANK: 2363671

Matrix: Water

Associated Lab Samples: 40137763001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	<0.085	0.50	09/09/16 16:25	
cis-1,3-Dichloropropene	ug/L	<0.071	0.50	09/09/16 16:25	
Dibromochloromethane	ug/L	<0.13	0.50	09/09/16 16:25	
Dibromomethane	ug/L	<0.098	1.0	09/09/16 16:25	
Dichlorodifluoromethane	ug/L	<0.16	1.0	09/09/16 16:25	
Ethyl methacrylate	ug/L	<0.071	5.0	09/09/16 16:25	
Ethylbenzene	ug/L	<0.051	0.50	09/09/16 16:25	
Hexachloro-1,3-butadiene	ug/L	<0.11	4.0	09/09/16 16:25	
Isopropylbenzene (Cumene)	ug/L	<0.11	0.50	09/09/16 16:25	
m&p-Xylene	ug/L	<0.073	1.0	09/09/16 16:25	
Methyl methacrylate	ug/L	<0.12	5.0	09/09/16 16:25	
Methyl-tert-butyl ether	ug/L	<0.058	0.50	09/09/16 16:25	
Methylene Chloride	ug/L	<0.20	4.0	09/09/16 16:25	
n-Butylbenzene	ug/L	<0.081	0.50	09/09/16 16:25	
n-Propylbenzene	ug/L	<0.096	0.50	09/09/16 16:25	
Naphthalene	ug/L	<0.064	4.0	09/09/16 16:25	
o-Xylene	ug/L	<0.073	0.50	09/09/16 16:25	
p-Isopropyltoluene	ug/L	<0.083	0.50	09/09/16 16:25	
sec-Butylbenzene	ug/L	<0.063	0.50	09/09/16 16:25	
Styrene	ug/L	<0.075	1.0	09/09/16 16:25	
tert-Butylbenzene	ug/L	<0.097	0.50	09/09/16 16:25	
Tetrachloroethene	ug/L	<0.12	0.50	09/09/16 16:25	
Toluene	ug/L	<0.080	0.50	09/09/16 16:25	
Total Trihalomethanes (Calc.)	ug/L	<2.0	4.0	09/09/16 16:25	
trans-1,2-Dichloroethene	ug/L	<0.11	0.50	09/09/16 16:25	
trans-1,3-Dichloropropene	ug/L	<0.055	0.50	09/09/16 16:25	
trans-1,4-Dichloro-2-butene	ug/L	<0.15	10.0	09/09/16 16:25	CL
Trichloroethene	ug/L	<0.044	0.40	09/09/16 16:25	
Trichlorofluoromethane	ug/L	<0.13	0.50	09/09/16 16:25	
Vinyl chloride	ug/L	<0.098	0.20	09/09/16 16:25	
Xylene (Total)	ug/L	<0.073	1.5	09/09/16 16:25	
1,2-Dichloroethane-d4 (S)	%.	91	75-125	09/09/16 16:25	
4-Bromofluorobenzene (S)	%.	98	75-125	09/09/16 16:25	
Toluene-d8 (S)	%.	93	75-125	09/09/16 16:25	

LABORATORY CONTROL SAMPLE &amp; LCSD: 2363672

2363673

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	20.8	20.6	104	103	70-130	1	20	
1,1,1-Trichloroethane	ug/L	20	22.8	22.3	114	111	70-130	2	20	
1,1,2,2-Tetrachloroethane	ug/L	20	21.1	21.0	106	105	70-130	1	20	
1,1,2-Trichloroethane	ug/L	20	22.2	21.7	111	108	70-130	2	20	
1,1-Dichloroethane	ug/L	20	19.9	19.8	100	99	70-130	1	20	
1,1-Dichloroethene	ug/L	20	21.1	20.6	105	103	70-130	2	20	

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## QUALITY CONTROL DATA

Project: 5377 AXUC FOUR CORNERS

Pace Project No.: 40137763

Parameter	Units	Spike	LCS	LCSD	LCS	LCSD	% Rec	RPD	Max	Qualifiers
		Conc.	Result	% Rec	% Rec	% Rec	Limits		RPD	
1,1-Dichloropropene	ug/L	20	22.3	22.0	112	110	70-130	1	20	
1,2,3-Trichlorobenzene	ug/L	20	18.5	18.4	93	92	70-130	1	20	
1,2,3-Trichloropropane	ug/L	20	21.1	20.9	105	105	70-130	1	20	
1,2,4-Trichlorobenzene	ug/L	20	18.7	19.2	93	96	70-130	3	20	
1,2,4-Trimethylbenzene	ug/L	20	21.0	21.1	105	105	70-130	0	20	
1,2-Dibromo-3-chloropropane	ug/L	50	48.5	47.9	97	96	70-130	1	20	
1,2-Dibromoethane (EDB)	ug/L	20	20.7	20.9	103	105	70-130	1	20	
1,2-Dichlorobenzene	ug/L	20	19.9	20.0	100	100	70-130	0	20	
1,2-Dichloroethane	ug/L	20	20.9	20.8	105	104	70-130	1	20	
1,2-Dichloropropane	ug/L	20	23.6	23.7	118	119	70-130	0	20	
1,3,5-Trimethylbenzene	ug/L	20	20.7	20.6	103	103	70-130	0	20	
1,3-Dichlorobenzene	ug/L	20	19.3	20.0	97	100	70-130	3	20	
1,3-Dichloropropane	ug/L	20	22.5	22.1	112	110	70-130	2	20	
1,4-Dichlorobenzene	ug/L	20	19.4	19.9	97	100	70-130	3	20	
2,2-Dichloropropane	ug/L	20	24.2	23.8	121	119	70-130	1	20	
2-Butanone (MEK)	ug/L	100	102	100	102	100	70-130	2	20	
2-Chlorotoluene	ug/L	20	20.3	20.6	102	103	70-130	1	20	
2-Hexanone	ug/L	100	108	104	108	104	70-130	4	20	
2-Nitropropane	ug/L	100	99.8	97.6	100	98	70-130	2	20	
4-Chlorotoluene	ug/L	20	20.3	20.8	102	104	70-130	2	20	
4-Methyl-2-pentanone (MIBK)	ug/L	100	108	103	108	103	70-130	4	20	
Acetone	ug/L	100	112	110	112	110	70-130	1	20	
Acrylonitrile	ug/L	200	203	195	102	98	70-130	4	20	
Benzene	ug/L	20	23.2	22.6	116	113	70-130	3	20	
Bromobenzene	ug/L	20	20.5	20.7	102	103	70-130	1	20	
Bromochloromethane	ug/L	20	23.6	24.0	118	120	70-130	2	20	
Bromodichloromethane	ug/L	20	22.7	22.7	114	113	70-130	0	20	
Bromoform	ug/L	20	20.1	20.5	100	102	70-130	2	20	
Bromomethane	ug/L	20	16.5	17.1	82	85	70-130	4	20	
Carbon disulfide	ug/L	20	22.3	21.9	112	110	70-130	2	20	
Carbon tetrachloride	ug/L	20	23.7	23.0	119	115	70-130	3	20	
Chlorobenzene	ug/L	20	21.8	21.4	109	107	70-130	2	20	
Chloroethane	ug/L	20	21.7	21.5	109	108	70-130	1	20	
Chloroform	ug/L	20	22.8	22.4	114	112	70-130	1	20	
Chloromethane	ug/L	20	17.9	17.9	89	89	70-130	0	20	
cis-1,2-Dichloroethene	ug/L	20	23.0	23.0	115	115	70-130	0	20	
cis-1,3-Dichloropropene	ug/L	20	23.3	22.6	117	113	70-130	3	20	
Dibromochloromethane	ug/L	20	21.6	21.1	108	105	70-130	3	20	
Dibromomethane	ug/L	20	24.4	24.6	122	123	70-130	1	20	
Dichlorodifluoromethane	ug/L	20	20.3	19.8	102	99	70-130	3	20	
Ethyl methacrylate	ug/L	20	20.2	20.0	101	100	70-130	1	20	
Ethylbenzene	ug/L	20	21.8	21.3	109	107	70-130	2	20	
Hexachloro-1,3-butadiene	ug/L	20	19.6	20.0	98	100	70-130	2	20	
Isopropylbenzene (Cumene)	ug/L	20	20.0	20.1	100	101	70-130	1	20	
m&p-Xylene	ug/L	40	45.5	44.8	114	112	70-130	1	20	
Methyl methacrylate	ug/L	20	23.3	23.2	116	116	70-130	0	20	
Methyl-tert-butyl ether	ug/L	20	20.6	20.5	103	102	70-130	1	20	

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 5377 AXUC FOUR CORNERS

Pace Project No.: 40137763

LABORATORY CONTROL SAMPLE &amp; LCSD: 2363672

2363673

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methylene Chloride	ug/L	20	20.1	20.3	101	101	70-130	1	20	
n-Butylbenzene	ug/L	20	20.5	20.5	102	102	70-130	0	20	
n-Propylbenzene	ug/L	20	19.7	19.9	98	99	70-130	1	20	
Naphthalene	ug/L	20	17.4	17.8	87	89	70-130	2	20	
o-Xylene	ug/L	20	22.5	22.3	112	112	70-130	1	20	
p-Isopropyltoluene	ug/L	20	21.8	21.6	109	108	70-130	1	20	
sec-Butylbenzene	ug/L	20	21.4	21.9	107	109	70-130	2	20	
Styrene	ug/L	20	20.6	20.8	103	104	70-130	1	20	
tert-Butylbenzene	ug/L	20	20.6	21.3	103	106	70-130	3	20	
Tetrachloroethene	ug/L	20	22.3	21.8	111	109	70-130	2	20	
Toluene	ug/L	20	21.9	21.2	109	106	70-130	3	20	
Total Trihalomethanes (Calc.)	ug/L	80	87.1	86.6	109	108	70-130	1	20	
trans-1,2-Dichloroethene	ug/L	20	21.3	21.1	107	106	70-130	1	20	
trans-1,3-Dichloropropene	ug/L	20	21.2	21.4	106	107	70-130	1	20	
trans-1,4-Dichloro-2-butene	ug/L	50	26.2	26.3	52	53	70-130	0	20	CL,L0
Trichloroethene	ug/L	20	23.9	22.7	119	113	70-130	5	20	
Trichlorofluoromethane	ug/L	20	21.1	20.8	105	104	70-130	1	20	
Vinyl chloride	ug/L	20	21.2	20.5	106	102	70-130	4	20	
Xylene (Total)	ug/L	60	68.0	67.2	113	112	70-130	1	20	
1,2-Dichloroethane-d4 (S)	%.				85	85	75-125			
4-Bromofluorobenzene (S)	%.				95	94	75-125			
Toluene-d8 (S)	%.				96	94	75-125			

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 2363674

2363675

Parameter	Units	MS Spike		MSD Spike		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Result	Conc.	Result	% Rec	Result	% Rec				
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	21.2	19.4	106	97	70-130	9	20		
1,1,1-Trichloroethane	ug/L	ND	20	20	24.3	21.4	122	107	70-130	13	20		
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	21.2	19.3	106	96	70-130	10	20		
1,1,2-Trichloroethane	ug/L	ND	20	20	22.5	19.9	113	100	70-130	12	20		
1,1-Dichloroethane	ug/L	ND	20	20	21.2	18.7	106	93	70-130	13	20		
1,1-Dichloroethene	ug/L	ND	20	20	23.3	20.7	116	103	70-130	12	20		
1,1-Dichloropropene	ug/L	ND	20	20	24.4	21.6	122	108	70-130	12	20		
1,2,3-Trichlorobenzene	ug/L	ND	20	20	20.1	17.9	100	89	70-130	12	20		
1,2,3-Trichloropropane	ug/L	ND	20	20	21.4	19.2	107	96	70-130	11	20		
1,2,4-Trichlorobenzene	ug/L	ND	20	20	20.6	17.9	103	90	70-130	14	20		
1,2,4-Trimethylbenzene	ug/L	ND	20	20	22.0	19.7	110	98	70-130	11	20		
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	48.1	43.7	96	87	70-130	10	20		
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	21.6	18.9	108	95	70-130	13	20		
1,2-Dichlorobenzene	ug/L	ND	20	20	20.5	18.9	102	95	70-130	8	20		
1,2-Dichloroethane	ug/L	ND	20	20	20.9	19.0	104	95	70-130	9	20		
1,2-Dichloropropane	ug/L	ND	20	20	24.9	22.4	124	112	70-130	10	20		
1,3,5-Trimethylbenzene	ug/L	ND	20	20	21.1	19.5	106	97	70-130	8	20		

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## QUALITY CONTROL DATA

Project: 5377 AXUC FOUR CORNERS

Pace Project No.: 40137763

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2363674		2363675							
		10361381001	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD
1,3-Dichlorobenzene	ug/L	ND	20	20	20.2	18.4	101	92	70-130	9	20
1,3-Dichloropropane	ug/L	ND	20	20	23.1	20.4	115	102	70-130	12	20
1,4-Dichlorobenzene	ug/L	ND	20	20	20.2	18.4	101	92	70-130	10	20
2,2-Dichloropropane	ug/L	ND	20	20	26.6	22.9	133	114	70-130	15	20 M1
2-Butanone (MEK)	ug/L	ND	100	100	96.6	88.2	97	88	70-130	9	20
2-Chlorotoluene	ug/L	ND	20	20	20.9	19.5	105	98	70-130	7	20
2-Hexanone	ug/L	ND	100	100	102	93.5	102	94	70-130	9	20
2-Nitropropane	ug/L	ND	100	100	98.2	87.9	98	88	70-130	11	20
4-Chlorotoluene	ug/L	ND	20	20	21.0	19.3	105	97	70-130	8	20
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	104	94.1	104	94	70-130	10	20
Acetone	ug/L	ND	100	100	120	104	120	104	70-130	14	20
Acrylonitrile	ug/L	ND	200	200	194	179	97	89	70-130	8	20
Benzene	ug/L	ND	20	20	24.0	21.3	120	106	70-130	12	20
Bromobenzene	ug/L	ND	20	20	21.5	19.4	108	97	70-130	10	20
Bromoform	ug/L	ND	20	20	25.3	22.6	127	113	70-130	11	20
Bromochloromethane	ug/L	ND	20	20	23.7	20.9	118	104	70-130	13	20
Bromodichloromethane	ug/L	ND	20	20	20.7	18.5	104	93	70-130	11	20
Bromoform	ug/L	ND	20	20	17.7	17.5	89	87	70-130	1	20
Carbon disulfide	ug/L	ND	20	20	25.2	21.9	126	109	70-130	14	20
Carbon tetrachloride	ug/L	ND	20	20	26.3	23.5	132	118	70-130	11	20 M1
Chlorobenzene	ug/L	ND	20	20	22.5	20.3	113	102	70-130	10	20
Chloroethane	ug/L	ND	20	20	22.0	21.9	110	109	70-130	1	20
Chloroform	ug/L	ND	20	20	23.4	20.9	117	104	70-130	11	20
Chloromethane	ug/L	ND	20	20	18.3	17.9	92	89	70-130	3	20
cis-1,2-Dichloroethene	ug/L	ND	20	20	24.1	21.5	120	107	70-130	11	20
cis-1,3-Dichloropropene	ug/L	ND	20	20	23.8	21.1	119	105	70-130	12	20
Dibromochloromethane	ug/L	ND	20	20	22.4	20.0	112	100	70-130	11	20
Dibromomethane	ug/L	ND	20	20	24.6	21.8	123	109	70-130	12	20
Dichlorodifluoromethane	ug/L	ND	20	20	25.2	25.0	126	125	70-130	1	20
Ethyl methacrylate	ug/L	ND	20	20	20.3	18.1	101	91	70-130	11	20
Ethylbenzene	ug/L	ND	20	20	22.3	20.3	111	101	70-130	9	20
Hexachloro-1,3-butadiene	ug/L	ND	20	20	23.2	20.2	116	101	70-130	14	20
Isopropylbenzene (Cumene)	ug/L	ND	20	20	20.8	18.9	104	94	70-130	10	20
m&p-Xylene	ug/L	ND	40	40	46.8	42.8	117	107	70-130	9	20
Methyl methacrylate	ug/L	ND	20	20	22.6	20.4	113	102	70-130	10	20
Methyl-tert-butyl ether	ug/L	ND	20	20	20.9	19.0	105	95	70-130	10	20
Methylene Chloride	ug/L	ND	20	20	21.1	18.8	105	94	70-130	12	20
n-Butylbenzene	ug/L	ND	20	20	22.2	19.8	111	99	70-130	11	20
n-Propylbenzene	ug/L	ND	20	20	21.0	18.8	105	94	70-130	11	20
Naphthalene	ug/L	ND	20	20	18.0	16.5	90	82	70-130	9	20
o-Xylene	ug/L	ND	20	20	23.3	20.6	117	103	70-130	12	20
p-Isopropyltoluene	ug/L	ND	20	20	23.3	20.7	116	103	70-130	12	20
sec-Butylbenzene	ug/L	ND	20	20	23.3	20.7	116	104	70-130	11	20
Styrene	ug/L	ND	20	20	20.9	18.8	105	94	70-130	11	20
tert-Butylbenzene	ug/L	ND	20	20	22.2	20.0	111	100	70-130	10	20

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## QUALITY CONTROL DATA

Project: 5377 AXUC FOUR CORNERS  
Pace Project No.: 40137763

Parameter	Units	10361381001		MS		MSD		2363675				Max Qual
		Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD RPD		
Tetrachloroethene	ug/L	ND	20	20	23.4	21.5	117	107	70-130	9	20	
Toluene	ug/L	ND	20	20	22.7	20.2	114	101	70-130	12	20	
Total Trihalomethanes (Calc.)	ug/L	ND	80	80	90.1	80.3	113	100	70-130	12	20	
trans-1,2-Dichloroethene	ug/L	ND	20	20	23.6	20.3	118	102	70-130	15	20	
trans-1,3-Dichloropropene	ug/L	ND	20	20	22.2	19.5	111	98	70-130	13	20	
trans-1,4-Dichloro-2-butene	ug/L	ND	50	50	27.6	24.5	55	49	70-130	12	20	CL,M0
Trichloroethene	ug/L	ND	20	20	24.5	22.1	123	111	70-130	10	20	
Trichlorofluoromethane	ug/L	ND	20	20	24.1	24.0	120	120	70-130	1	20	
Vinyl chloride	ug/L	ND	20	20	22.2	21.8	111	109	70-130	2	20	
Xylene (Total)	ug/L	ND	60	60	70.1	63.4	117	106	70-130	10	20	
1,2-Dichloroethane-d4 (S)	%.						85	85	75-125			
4-Bromofluorobenzene (S)	%.						98	96	75-125			
Toluene-d8 (S)	%.						92	93	75-125			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 5377 AXUC FOUR CORNERS  
Pace Project No.: 40137763

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

### ANALYTE QUALIFIERS

- |    |  |
|----|--|
| CL | The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low. |
| L0 | Analyte recovery in the laboratory control sample (LCS) was outside QC limits.   |
| L2 | Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.                      |
| M0 | Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.                          |
| M1 | Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.                  |

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 5377 AXUC FOUR CORNERS  
Pace Project No.: 40137763

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40137763001	POTABLE	EPA 524.2	434844		

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(Please Print Clearly)



UPPER MIDWEST REGION

MN: 612-607-1700 WI: 920-469-2436

## CHAIN OF CUSTODY

[www.pacelabs.com](http://www.pacelabs.com)

Company Name:	DET
Branch/Location:	
Project Contact:	David Larson
Phone:	53774Kue
Project Number:	
Project Name:	BRNCO RELENS
Project State:	WI
Sampled By (Print):	David Larson
Sampled By (Sign):	<i>David Larson</i>
PO #:	PCPA4444C
Data Package Options	MS/MSD (billable)
<input type="checkbox"/> EPA Level III	<input type="checkbox"/> On your sample (billable)
<input type="checkbox"/> EPA Level IV	<input type="checkbox"/> NOT needed on your sample

\*Preservation Codes

A=None	B=HCl	C=H <sub>2</sub> SO <sub>4</sub>	D=HNO <sub>3</sub>	E=DI Water	F=Methanol	G=NaOH
H=Sodium Bisulfite Solution	I=Sodium Thiosulfate	J=Other				

FILTERED?  
(YES/NO)  
PRESERVATION  
(CODE)\*

Archives Requested

202

3

X

K

3-40ml/B

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)	Reinquished By: <i>John Larson</i> Date/Time: 2-16	Received By:  Date/Time: 40137703
Date Needed:	Reinquished By: <i>WAHC0</i> Date/Time: 9/3/02 0745	Received By:  Date/Time: RCJ
Transmit Prelim Rush Results by (complete what you want):	Reinquished By:  Email #1: Email #2: Telephone: Fax:	Received By:  Date/Time: Samples on HOLD are subject to special pricing and release of liability
Present / Not Present	QSL Adjusted	Cooler Custody Seal Intact / Not Intact



## Sample Condition Upon Receipt

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

Project #:

WO# : 40137763

Client Name: REI

Courier:  Fed Ex  UPS  Client  Pace Other:

Tracking #: 114902-1

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  noCustody Seal on Samples Present:  yes  no Seals intact:  yes  noPacking Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used NA

Type of Ice: Wet  Blue  Dry  None

Cooler Temperature Uncorr: 40.5 /Corr:

Biological Tissue is Frozen:  yes  noTemp Blank Present:  yes  no

Temp should be above freezing to 6°C for all sample except Biota.

Frozen Biota Samples should be received ≤ 0°C.

Comments:

Samples on ice, cooling process has begun

 no

Person examining contents:  
Date: 9/3/16  
Initials: BD

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: - VOA Samples frozen upon receipt	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5. 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 type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used: -Pace Containers Used: -Pace IR Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
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 checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input 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 checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Initial when completed
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Lab Std #ID of preservative
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Date/ Time:
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

## Client Notification/ Resolution:

If checked, see attached form for additional comments 

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review:

Date: 9-6-16

October 11, 2016

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

RE: Project: 5377 FOUR CORNERS  
Pace Project No.: 40139684

Dear DAVID LARSEN:

Enclosed are the analytical results for sample(s) received by the laboratory on October 07, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Brian Basten  
brian.basten@pacelabs.com  
Project Manager

Enclosures



#### REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 5377 FOUR CORNERS  
Pace Project No.: 40139684

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### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302	South Carolina Certification #: 83006001
Florida/NELAP Certification #: E87948	Texas Certification #: T104704529-14-1
Illinois Certification #: 200050	US Dept of Agriculture #: S-76505
Kentucky Certification #: 82	Virginia VELAP Certification ID: 460263
Louisiana Certification #: 04168	Virginia VELAP ID: 460263
Minnesota Certification #: 055-999-334	Wisconsin Certification #: 405132750
Virginia VELAP ID: 460263	Wisconsin DATCP Certification #: 105-444
North Dakota Certification #: R-150	

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 5377 FOUR CORNERS  
 Pace Project No.: 40139684

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40139684001	MW1R	Water	10/05/16 13:30	10/07/16 09:00
40139684002	MW2R	Water	10/05/16 13:15	10/07/16 09:00
40139684003	MW3	Water	10/05/16 12:46	10/07/16 09:00
40139684004	MW4	Water	10/05/16 13:00	10/07/16 09:00
40139684005	MW5	Water	10/05/16 13:20	10/07/16 09:00
40139684006	MW6	Water	10/05/16 13:15	10/07/16 09:00

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## SAMPLE ANALYTE COUNT

Project: 5377 FOUR CORNERS  
 Pace Project No.: 40139684

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40139684001	MW1R	WI MOD GRO	PMS	10
40139684002	MW2R	WI MOD GRO	PMS	10
40139684003	MW3	WI MOD GRO	PMS	10
40139684004	MW4	WI MOD GRO	PMS	10
40139684005	MW5	WI MOD GRO	PMS	10
40139684006	MW6	WI MOD GRO	PMS	10

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 5377 FOUR CORNERS

Pace Project No.: 40139684

Sample: MW1R	Lab ID: 40139684001	Collected: 10/05/16 13:30	Received: 10/07/16 09:00	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO								
Benzene	<b>289</b>	ug/L	1.0	0.40	1		10/10/16 19:43	71-43-2	
Ethylbenzene	<b>8.3</b>	ug/L	1.0	0.39	1		10/10/16 19:43	100-41-4	
Methyl-tert-butyl ether	<b>0.94J</b>	ug/L	1.0	0.48	1		10/10/16 19:43	1634-04-4	
Naphthalene	<b>0.43J</b>	ug/L	1.0	0.42	1		10/10/16 19:43	91-20-3	
Toluene	<b>1.3</b>	ug/L	1.0	0.39	1		10/10/16 19:43	108-88-3	
1,2,4-Trimethylbenzene	<b>0.85J</b>	ug/L	1.0	0.42	1		10/10/16 19:43	95-63-6	
1,3,5-Trimethylbenzene	<b>&lt;0.42</b>	ug/L	1.0	0.42	1		10/10/16 19:43	108-67-8	
m&p-Xylene	<b>1.1J</b>	ug/L	2.0	0.80	1		10/10/16 19:43	179601-23-1	
o-Xylene	<b>0.85J</b>	ug/L	1.0	0.45	1		10/10/16 19:43	95-47-6	
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		10/10/16 19:43	98-08-8	
<hr/>									
Sample: MW2R	Lab ID: 40139684002	Collected: 10/05/16 13:15	Received: 10/07/16 09:00	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO								
Benzene	<b>21.4</b>	ug/L	1.0	0.40	1		10/10/16 20:09	71-43-2	
Ethylbenzene	<b>6.9</b>	ug/L	1.0	0.39	1		10/10/16 20:09	100-41-4	
Methyl-tert-butyl ether	<b>0.98J</b>	ug/L	1.0	0.48	1		10/10/16 20:09	1634-04-4	
Naphthalene	<b>2.5</b>	ug/L	1.0	0.42	1		10/10/16 20:09	91-20-3	
Toluene	<b>&lt;0.39</b>	ug/L	1.0	0.39	1		10/10/16 20:09	108-88-3	
1,2,4-Trimethylbenzene	<b>7.1</b>	ug/L	1.0	0.42	1		10/10/16 20:09	95-63-6	
1,3,5-Trimethylbenzene	<b>&lt;0.42</b>	ug/L	1.0	0.42	1		10/10/16 20:09	108-67-8	
m&p-Xylene	<b>2.5</b>	ug/L	2.0	0.80	1		10/10/16 20:09	179601-23-1	
o-Xylene	<b>0.81J</b>	ug/L	1.0	0.45	1		10/10/16 20:09	95-47-6	
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	104	%	80-120		1		10/10/16 20:09	98-08-8	
<hr/>									
Sample: MW3	Lab ID: 40139684003	Collected: 10/05/16 12:46	Received: 10/07/16 09:00	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO								
Benzene	<b>&lt;0.40</b>	ug/L	1.0	0.40	1		10/10/16 20:35	71-43-2	
Ethylbenzene	<b>&lt;0.39</b>	ug/L	1.0	0.39	1		10/10/16 20:35	100-41-4	
Methyl-tert-butyl ether	<b>&lt;0.48</b>	ug/L	1.0	0.48	1		10/10/16 20:35	1634-04-4	
Naphthalene	<b>&lt;0.42</b>	ug/L	1.0	0.42	1		10/10/16 20:35	91-20-3	
Toluene	<b>&lt;0.39</b>	ug/L	1.0	0.39	1		10/10/16 20:35	108-88-3	
1,2,4-Trimethylbenzene	<b>&lt;0.42</b>	ug/L	1.0	0.42	1		10/10/16 20:35	95-63-6	
1,3,5-Trimethylbenzene	<b>&lt;0.42</b>	ug/L	1.0	0.42	1		10/10/16 20:35	108-67-8	
m&p-Xylene	<b>&lt;0.80</b>	ug/L	2.0	0.80	1		10/10/16 20:35	179601-23-1	
o-Xylene	<b>&lt;0.45</b>	ug/L	1.0	0.45	1		10/10/16 20:35	95-47-6	

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## ANALYTICAL RESULTS

Project: 5377 FOUR CORNERS

Pace Project No.: 40139684

Sample: MW3		Lab ID: 40139684003		Collected: 10/05/16 12:46		Received: 10/07/16 09:00		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO								
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	104	%	80-120		1		10/10/16 20:35	98-08-8	
Sample: MW4		Lab ID: 40139684004		Collected: 10/05/16 13:00		Received: 10/07/16 09:00		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO								
Benzene	<0.40	ug/L	1.0	0.40	1		10/10/16 21:00	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		10/10/16 21:00	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		10/10/16 21:00	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		10/10/16 21:00	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		10/10/16 21:00	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		10/10/16 21:00	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		10/10/16 21:00	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		10/10/16 21:00	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		10/10/16 21:00	95-47-6	
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	103	%	80-120		1		10/10/16 21:00	98-08-8	
Sample: MW5		Lab ID: 40139684005		Collected: 10/05/16 13:20		Received: 10/07/16 09:00		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO								
Benzene	<0.40	ug/L	1.0	0.40	1		10/10/16 21:26	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		10/10/16 21:26	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		10/10/16 21:26	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		10/10/16 21:26	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		10/10/16 21:26	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		10/10/16 21:26	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		10/10/16 21:26	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		10/10/16 21:26	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		10/10/16 21:26	95-47-6	
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1		10/10/16 21:26	98-08-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 5377 FOUR CORNERS  
Pace Project No.: 40139684

Sample: MW6	Lab ID: 40139684006	Collected: 10/05/16 13:15	Received: 10/07/16 09:00	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO								
Benzene	<0.40	ug/L	1.0	0.40	1		10/10/16 21:52	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		10/10/16 21:52	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		10/10/16 21:52	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		10/10/16 21:52	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		10/10/16 21:52	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		10/10/16 21:52	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		10/10/16 21:52	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		10/10/16 21:52	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		10/10/16 21:52	95-47-6	
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	104	%	80-120		1		10/10/16 21:52	98-08-8	

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## QUALITY CONTROL DATA

Project: 5377 FOUR CORNERS

Pace Project No.: 40139684

QC Batch:	237546	Analysis Method:	WI MOD GRO
QC Batch Method:	WI MOD GRO	Analysis Description:	WIGRO GCV Water
Associated Lab Samples:	40139684001, 40139684002, 40139684003, 40139684004, 40139684005, 40139684006		

METHOD BLANK: 1408107 Matrix: Water

Associated Lab Samples: 40139684001, 40139684002, 40139684003, 40139684004, 40139684005, 40139684006

Parameter	Units	Blank	Reporting		Qualifiers
		Result	Limit	Analyzed	
1,2,4-Trimethylbenzene	ug/L	<0.42	1.0	10/10/16 08:53	
1,3,5-Trimethylbenzene	ug/L	<0.42	1.0	10/10/16 08:53	
Benzene	ug/L	<0.40	1.0	10/10/16 08:53	
Ethylbenzene	ug/L	<0.39	1.0	10/10/16 08:53	
m&p-Xylene	ug/L	<0.80	2.0	10/10/16 08:53	
Methyl-tert-butyl ether	ug/L	<0.48	1.0	10/10/16 08:53	
Naphthalene	ug/L	<0.42	1.0	10/10/16 08:53	
o-Xylene	ug/L	<0.45	1.0	10/10/16 08:53	
Toluene	ug/L	<0.39	1.0	10/10/16 08:53	
a,a,a-Trifluorotoluene (S)	%	102	80-120	10/10/16 08:53	

LABORATORY CONTROL SAMPLE &amp; LCSD: 1408108

1408109

Parameter	Units	Spike	LCS	LCSD	LCS	LCSD	% Rec	RPD	Max RPD	Qualifiers
		Conc.	Result	Result	% Rec	% Rec	Limits			
1,2,4-Trimethylbenzene	ug/L	20	21.7	22.4	109	112	80-120	3	20	
1,3,5-Trimethylbenzene	ug/L	20	21.4	22.0	107	110	80-120	3	20	
Benzene	ug/L	20	20.8	20.9	104	105	80-120	1	20	
Ethylbenzene	ug/L	20	20.5	21.0	103	105	80-120	2	20	
m&p-Xylene	ug/L	40	41.1	42.1	103	105	80-120	2	20	
Methyl-tert-butyl ether	ug/L	20	22.6	21.9	113	110	80-120	3	20	
Naphthalene	ug/L	20	22.5	22.0	112	110	80-120	2	20	
o-Xylene	ug/L	20	20.9	21.3	105	106	80-120	1	20	
Toluene	ug/L	20	20.4	20.7	102	103	80-120	2	20	
a,a,a-Trifluorotoluene (S)	%				103	102	80-120			

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 1408422

1408423

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40139690002 Result	Spike Conc.	Spike Conc.	MSD Result						
1,2,4-Trimethylbenzene	ug/L	1090	400	400	1620	1630	133	137	48-177	1	20
1,3,5-Trimethylbenzene	ug/L	308	400	400	784	791	119	121	73-145	1	20
Benzene	ug/L	2770	400	400	3310	3370	137	151	74-139	2	20 M1
Ethylbenzene	ug/L	1150	400	400	1640	1680	121	130	74-140	2	20
m&p-Xylene	ug/L	5330	800	800	6450	6600	140	159	55-165	2	20
Methyl-tert-butyl ether	ug/L	<9.7	400	400	449	437	112	109	80-120	3	20
Naphthalene	ug/L	388	400	400	861	871	118	121	73-133	1	20
o-Xylene	ug/L	2480	400	400	3040	3100	140	156	73-136	2	20 M1
Toluene	ug/L	1060	400	400	1510	1550	114	122	80-128	2	20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 5377 FOUR CORNERS  
 Pace Project No.: 40139684

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:			1408422	1408423								
Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD RPD	Max Qual	
a,a,a-Trifluorotoluene (S)	%	40139690002					101	101	80-120			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 5377 FOUR CORNERS  
Pace Project No.: 40139684

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 5377 FOUR CORNERS  
Pace Project No.: 40139684

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40139684001	MW1R	WI MOD GRO	237546		
40139684002	MW2R	WI MOD GRO	237546		
40139684003	MW3	WI MOD GRO	237546		
40139684004	MW4	WI MOD GRO	237546		
40139684005	MW5	WI MOD GRO	237546		
40139684006	MW6	WI MOD GRO	237546		

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(Please Print Clearly)



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

Page 1 of 12 of 13

40139084

Project Name: Five Cores

Branch/Location: DET  
Project Contact: David Casper

Phone: 715-675-9789  
Project Number: 5377

Project Name: Five Cores

Project State: WI  
Sampled By (Print): Dave Casper

Sampled By (Sign): Handwritten Signature  
PO #:

Regulatory Program: PCTA

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

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

Matrix Codes  
 A = Air  
 B = Biota  
 C = Charcoal  
 O = Oil  
 S = Soil  
 Si = Sludge

COLLECTION  
DATE      TIME      MATRIX

001 MJ1R 10/5/10 1:30 GW  
002 MJ2L  1:15  
003 MJ3  12:45  
004 MJ4  1:00  
005 MJ5  1:20  
006 MJ6  1:15

Rush Turnaround Time Requested - Prelims  
(Rush TAT subject to approval/surcharge)  
Date Needed:  
10-6-10 09:00

Transmit Prelim Rush Results by (complete what you want):  
Email #1:  
Email #2:  
Telephone:  
Fax:

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

Date/Time: 10-7-10 09:00  
Received By: Walt W  
Relinquished By: Walt W

Date/Time: 10-7-10 09:00  
Received By: Walt W  
Relinquished By: Walt W

Date/Time: 10-7-10 09:00  
Received By: Walt W  
Relinquished By: Walt W

Date/Time: 10-7-10 09:00  
Received By: Walt W  
Relinquished By: Walt W

Date/Time: 10-7-10 09:00  
Received By: Walt W  
Relinquished By: Walt W

## CHAIN OF CUSTODY

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

FILTERED? (YES/NO)						
PRESERVATION (CODE)*						
Y / N	H	T				
Print Letter						

Quote #:   
Mail To Contact:   
Mail To Company:   
Mail To Address:

Invoice To Contact:   
Invoice To Company:   
Invoice To Address:

Invoice To Phone:   
CLIENT COMMENTS  
(Lab Use Only)

LAB COMMENTS  
(Lab Use Only)

Profile #: 3-40m13

Analyses Requested



PAGE Project No.  
40139084  
Received By: Walt W  
Date/Time: 10-6-10 09:00

Received By: Walt W  
Date/Time: 10-7-10 09:00  
Receipt Temp = RO1 °C  
Sample Receipt pH  
OK / Adjusted

Received By: Walt W  
Date/Time: 10-7-10 09:00  
Cooler / Custody Seal  
Present / Not Present  
Intact / Not Intact



## Sample Condition Upon Receipt

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

Project #

WO# : 40139684



40139684

Client Name: REI

Courier:  FedEx  UPS Client  Pace Other: Waltco  
Tracking #: 1177579

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  noCustody Seal on Samples Present:  yes  no Seals intact:  yes  noPacking Material:  Bubble Wrap  Bubble Bags  None  OtherThermometer Used NAType of Ice: Wet  Blue  Dry  None Samples on ice, cooling process has begunCooler Temperature Uncorr: 40/Corr: 40Biological Tissue is Frozen:  yes noTemp Blank Present:  yes  no

Temp should be above freezing to 6°C for all sample except Biota.

Frozen Biota Samples should be received ≤ 0°C.

Person examining contents:  
Date: 10-7-16  
Initials: MV

## 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 checked="" 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 type="checkbox"/> No <input type="checkbox"/> N/A	8.		
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 checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.		
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>u</u>			
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input 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 checked="" type="checkbox"/> No <input type="checkbox"/> N/A			
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	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 checked="" type="checkbox"/> No <input 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: \_\_\_\_\_

Project Manager Review: BFDate: 10-7-16

February 06, 2017

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

RE: Project: 5377 AXUC FOUR CORNERS  
Pace Project No.: 40145071

Dear DAVID LARSEN:

Enclosed are the analytical results for sample(s) received by the laboratory on February 01, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Brian Basten  
brian.basten@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 5377 AXUC FOUR CORNERS  
 Pace Project No.: 40145071

---

### Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414  
 Alaska Certification UST-107  
 525 N 8th Street, Salina, KS 67401  
 A2LA Certification #: 2926.01  
 Alaska Certification #: UST-078  
 Alaska Certification #MN00064  
 Alabama Certification #40770  
 Arizona Certification #: AZ-0014  
 Arkansas Certification #: 88-0680  
 California Certification #: 01155CA  
 Colorado Certification #Pace  
 Connecticut Certification #: PH-0256  
 EPA Region 8 Certification #: 8TMS-L  
 Florida/NELAP Certification #: E87605  
 Guam Certification #:14-008r  
 Georgia Certification #: 959  
 Georgia EPD #: Pace  
 Idaho Certification #: MN00064  
 Hawaii Certification #MN00064  
 Illinois Certification #: 200011  
 Indiana Certification#C-MN-01  
 Iowa Certification #: 368  
 Kansas Certification #: E-10167  
 Kentucky Dept of Envi. Protection - DW #90062  
 Kentucky Dept of Envi. Protection - WW #:90062  
 Louisiana DEQ Certification #: 3086  
 Louisiana DHH #: LA140001  
 Maine Certification #: 2013011  
 Maryland Certification #: 322

Michigan DEPH Certification #: 9909  
 Minnesota Certification #: 027-053-137  
 Mississippi Certification #: Pace  
 Montana Certification #: MT0092  
 Nevada Certification #: MN\_00064  
 Nebraska Certification #: Pace  
 New Jersey Certification #: MN-002  
 New York Certification #: 11647  
 North Carolina Certification #: 530  
 North Carolina State Public Health #: 27700  
 North Dakota Certification #: R-036  
 Ohio EPA #: 4150  
 Ohio VAP Certification #: CL101  
 Oklahoma Certification #: 9507  
 Oregon Certification #: MN200001  
 Oregon Certification #: MN300001  
 Pennsylvania Certification #: 68-00563  
 Puerto Rico Certification  
 Saipan (CNMI) #.MP0003  
 South Carolina #:74003001  
 Texas Certification #: T104704192  
 Tennessee Certification #: 02818  
 Utah Certification #: MN000642013-4  
 Virginia DGS Certification #: 251  
 Virginia/VELAP Certification #: Pace  
 Washington Certification #: C486  
 West Virginia Certification #: 382  
 West Virginia DHHR #:9952C  
 Wisconsin Certification #: 999407970

### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302  
 Florida/NELAP Certification #: E87948  
 Illinois Certification #: 200050  
 Kentucky UST Certification #: 82  
 Louisiana Certification #: 04168  
 Minnesota Certification #: 055-999-334  
 New York Certification #: 12064  
 North Dakota Certification #: R-150

Virginia VELAP ID: 460263  
 South Carolina Certification #: 83006001  
 Texas Certification #: T104704529-14-1  
 Wisconsin Certification #: 405132750  
 Wisconsin DATCP Certification #: 105-444  
 USDA Soil Permit #: P330-16-00157  
 Federal Fish & Wildlife Permit #: LE51774A-0

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 5377 AXUC FOUR CORNERS  
 Pace Project No.: 40145071

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40145071001	MW1R	Water	01/26/17 16:30	02/01/17 08:50
40145071002	MW2R	Water	01/26/17 16:40	02/01/17 08:50
40145071003	MW3	Water	01/26/17 16:50	02/01/17 08:50
40145071004	MW4	Water	01/26/17 17:00	02/01/17 08:50
40145071005	MW5	Water	01/26/17 17:10	02/01/17 08:50
40145071006	MW6	Water	01/26/17 17:20	02/01/17 08:50
40145071007	POTABLE	Water	01/26/17 17:30	02/01/17 08:50

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: 5377 AXUC FOUR CORNERS  
 Pace Project No.: 40145071

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40145071001	MW1R	WI MOD GRO	ALD	10	PASI-G
40145071002	MW2R	WI MOD GRO	ALD	10	PASI-G
40145071003	MW3	WI MOD GRO	ALD	10	PASI-G
40145071004	MW4	WI MOD GRO	ALD	10	PASI-G
40145071005	MW5	WI MOD GRO	ALD	10	PASI-G
40145071006	MW6	WI MOD GRO	ALD	10	PASI-G
40145071007	POTABLE	EPA 524.2	DJB	63	PASI-M

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 5377 AXUC FOUR CORNERS  
Pace Project No.: 40145071

Sample: MW1R	Lab ID: 40145071001	Collected: 01/26/17 16:30	Received: 02/01/17 08:50	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO								
Benzene	937	ug/L	10.0	4.0	10		02/02/17 12:19	71-43-2	
Ethylbenzene	7.4J	ug/L	10.0	3.9	10		02/02/17 12:19	100-41-4	
Methyl-tert-butyl ether	<4.8	ug/L	10.0	4.8	10		02/02/17 12:19	1634-04-4	
Naphthalene	<4.2	ug/L	10.0	4.2	10		02/02/17 12:19	91-20-3	
Toluene	<3.9	ug/L	10.0	3.9	10		02/02/17 12:19	108-88-3	
1,2,4-Trimethylbenzene	<4.2	ug/L	10.0	4.2	10		02/02/17 12:19	95-63-6	
1,3,5-Trimethylbenzene	<4.2	ug/L	10.0	4.2	10		02/02/17 12:19	108-67-8	
m&p-Xylene	<8.0	ug/L	20.0	8.0	10		02/02/17 12:19	179601-23-1	
o-Xylene	<4.5	ug/L	10.0	4.5	10		02/02/17 12:19	95-47-6	
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	101	%	80-120		10		02/02/17 12:19	98-08-8	
Sample: MW2R	Lab ID: 40145071002	Collected: 01/26/17 16:40	Received: 02/01/17 08:50	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO								
Benzene	9.5	ug/L	1.0	0.40	1		02/02/17 09:46	71-43-2	
Ethylbenzene	2.5	ug/L	1.0	0.39	1		02/02/17 09:46	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		02/02/17 09:46	1634-04-4	
Naphthalene	0.66J	ug/L	1.0	0.42	1		02/02/17 09:46	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		02/02/17 09:46	108-88-3	
1,2,4-Trimethylbenzene	4.1	ug/L	1.0	0.42	1		02/02/17 09:46	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/02/17 09:46	108-67-8	
m&p-Xylene	0.92J	ug/L	2.0	0.80	1		02/02/17 09:46	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		02/02/17 09:46	95-47-6	
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	105	%	80-120		1		02/02/17 09:46	98-08-8	
Sample: MW3	Lab ID: 40145071003	Collected: 01/26/17 16:50	Received: 02/01/17 08:50	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO								
Benzene	<0.40	ug/L	1.0	0.40	1		02/02/17 10:11	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		02/02/17 10:11	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		02/02/17 10:11	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		02/02/17 10:11	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		02/02/17 10:11	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/02/17 10:11	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/02/17 10:11	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		02/02/17 10:11	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		02/02/17 10:11	95-47-6	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 5377 AXUC FOUR CORNERS  
Pace Project No.: 40145071

Sample: MW3		Lab ID: 40145071003		Collected: 01/26/17 16:50		Received: 02/01/17 08:50		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO								
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		02/02/17 10:11	98-08-8	
Sample: MW4		Lab ID: 40145071004		Collected: 01/26/17 17:00		Received: 02/01/17 08:50		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO								
Benzene	<0.40	ug/L	1.0	0.40	1		02/02/17 10:37	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		02/02/17 10:37	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		02/02/17 10:37	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		02/02/17 10:37	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		02/02/17 10:37	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/02/17 10:37	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/02/17 10:37	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		02/02/17 10:37	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		02/02/17 10:37	95-47-6	
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		02/02/17 10:37	98-08-8	
Sample: MW5		Lab ID: 40145071005		Collected: 01/26/17 17:10		Received: 02/01/17 08:50		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO								
Benzene	<0.40	ug/L	1.0	0.40	1		02/02/17 11:03	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		02/02/17 11:03	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		02/02/17 11:03	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		02/02/17 11:03	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		02/02/17 11:03	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/02/17 11:03	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/02/17 11:03	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		02/02/17 11:03	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		02/02/17 11:03	95-47-6	
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		02/02/17 11:03	98-08-8	

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## ANALYTICAL RESULTS

Project: 5377 AXUC FOUR CORNERS  
Pace Project No.: 40145071

Sample: MW6	Lab ID: 40145071006	Collected: 01/26/17 17:20	Received: 02/01/17 08:50	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO								
Benzene	<0.40	ug/L	1.0	0.40	1		02/02/17 11:28	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		02/02/17 11:28	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		02/02/17 11:28	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		02/02/17 11:28	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		02/02/17 11:28	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/02/17 11:28	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/02/17 11:28	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		02/02/17 11:28	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		02/02/17 11:28	95-47-6	
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1		02/02/17 11:28	98-08-8	
<hr/>									
Sample: POTABLE	Lab ID: 40145071007	Collected: 01/26/17 17:30	Received: 02/01/17 08:50	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>	Analytical Method: EPA 524.2								
Benzene	<0.086	ug/L	0.50	0.086	1		02/03/17 17:16	71-43-2	
Bromobenzene	<0.081	ug/L	0.50	0.081	1		02/03/17 17:16	108-86-1	
Bromoform	<0.16	ug/L	1.0	0.16	1		02/03/17 17:16	74-97-5	
Bromochloromethane	<0.090	ug/L	1.0	0.090	1		02/03/17 17:16	75-27-4	
Bromodichloromethane	<0.23	ug/L	4.0	0.23	1		02/03/17 17:16	75-25-2	
Bromoform	<0.20	ug/L	4.0	0.20	1		02/03/17 17:16	74-83-9	
Bromomethane	<0.081	ug/L	0.50	0.081	1		02/03/17 17:16	104-51-8	
n-Butylbenzene	<0.063	ug/L	0.50	0.063	1		02/03/17 17:16	135-98-8	
sec-Butylbenzene	<0.097	ug/L	0.50	0.097	1		02/03/17 17:16	98-06-6	
Carbon tetrachloride	<0.076	ug/L	1.0	0.076	1		02/03/17 17:16	56-23-5	
Chlorobenzene	<0.068	ug/L	0.50	0.068	1		02/03/17 17:16	108-90-7	
Chloroethane	<0.18	ug/L	1.0	0.18	1		02/03/17 17:16	75-00-3	
Chloroform	<0.10	ug/L	1.0	0.10	1		02/03/17 17:16	67-66-3	
Chloromethane	<0.21	ug/L	4.0	0.21	1		02/03/17 17:16	74-87-3	
2-Chlorotoluene	<0.11	ug/L	0.50	0.11	1		02/03/17 17:16	95-49-8	
4-Chlorotoluene	<0.10	ug/L	0.50	0.10	1		02/03/17 17:16	106-43-4	
1,2-Dibromo-3-chloropropane	<0.18	ug/L	4.0	0.18	1		02/03/17 17:16	96-12-8	
Dibromochloromethane	<0.13	ug/L	0.50	0.13	1		02/03/17 17:16	124-48-1	
1,2-Dibromoethane (EDB)	<0.091	ug/L	0.50	0.091	1		02/03/17 17:16	106-93-4	
Dibromomethane	<0.098	ug/L	1.0	0.098	1		02/03/17 17:16	74-95-3	
1,2-Dichlorobenzene	<0.10	ug/L	0.50	0.10	1		02/03/17 17:16	95-50-1	
1,3-Dichlorobenzene	<0.082	ug/L	0.50	0.082	1		02/03/17 17:16	541-73-1	
1,4-Dichlorobenzene	<0.075	ug/L	0.50	0.075	1		02/03/17 17:16	106-46-7	
Dichlorodifluoromethane	<0.16	ug/L	1.0	0.16	1		02/03/17 17:16	75-71-8	
1,1-Dichloroethane	<0.088	ug/L	0.50	0.088	1		02/03/17 17:16	75-34-3	
1,2-Dichloroethane	<0.092	ug/L	0.50	0.092	1		02/03/17 17:16	107-06-2	
1,1-Dichloroethene	<0.089	ug/L	0.50	0.089	1		02/03/17 17:16	75-35-4	

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## ANALYTICAL RESULTS

Project: 5377 AXUC FOUR CORNERS  
Pace Project No.: 40145071

Sample: POTABLE	Lab ID: 40145071007	Collected: 01/26/17 17:30	Received: 02/01/17 08:50	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>	Analytical Method: EPA 524.2								
cis-1,2-Dichloroethene	<0.085	ug/L	0.50	0.085	1		02/03/17 17:16	156-59-2	
trans-1,2-Dichloroethene	<0.11	ug/L	0.50	0.11	1		02/03/17 17:16	156-60-5	
1,2-Dichloropropane	<0.084	ug/L	4.0	0.084	1		02/03/17 17:16	78-87-5	
1,3-Dichloropropane	<0.094	ug/L	0.50	0.094	1		02/03/17 17:16	142-28-9	
2,2-Dichloropropane	<0.097	ug/L	1.0	0.097	1		02/03/17 17:16	594-20-7	
1,1-Dichloropropene	<0.080	ug/L	0.50	0.080	1		02/03/17 17:16	563-58-6	
cis-1,3-Dichloropropene	<0.071	ug/L	0.50	0.071	1		02/03/17 17:16	10061-01-5	
trans-1,3-Dichloropropene	<0.055	ug/L	0.50	0.055	1		02/03/17 17:16	10061-02-6	
Ethylbenzene	<0.051	ug/L	0.50	0.051	1		02/03/17 17:16	100-41-4	
Hexachloro-1,3-butadiene	<0.11	ug/L	4.0	0.11	1		02/03/17 17:16	87-68-3	
Isopropylbenzene (Cumene)	<0.11	ug/L	0.50	0.11	1		02/03/17 17:16	98-82-8	
p-Isopropyltoluene	<0.083	ug/L	0.50	0.083	1		02/03/17 17:16	99-87-6	
Methylene Chloride	<0.20	ug/L	4.0	0.20	1		02/03/17 17:16	75-09-2	
Naphthalene	<0.064	ug/L	1.0	0.064	1		02/03/17 17:16	91-20-3	
n-Propylbenzene	<0.096	ug/L	0.50	0.096	1		02/03/17 17:16	103-65-1	
Styrene	<0.075	ug/L	0.50	0.075	1		02/03/17 17:16	100-42-5	
1,1,1,2-Tetrachloroethane	<0.062	ug/L	0.50	0.062	1		02/03/17 17:16	630-20-6	
1,1,2,2-Tetrachloroethane	<0.11	ug/L	0.50	0.11	1		02/03/17 17:16	79-34-5	
Tetrachloroethene	<0.12	ug/L	0.50	0.12	1		02/03/17 17:16	127-18-4	
Toluene	<0.080	ug/L	0.50	0.080	1		02/03/17 17:16	108-88-3	
1,2,3-Trichlorobenzene	<0.10	ug/L	0.50	0.10	1		02/03/17 17:16	87-61-6	
1,2,4-Trichlorobenzene	<0.12	ug/L	0.50	0.12	1		02/03/17 17:16	120-82-1	
1,1,1-Trichloroethane	<0.10	ug/L	0.50	0.10	1		02/03/17 17:16	71-55-6	
1,1,2-Trichloroethane	<0.098	ug/L	0.50	0.098	1		02/03/17 17:16	79-00-5	
Trichloroethene	<0.044	ug/L	0.40	0.044	1		02/03/17 17:16	79-01-6	
Trichlorofluoromethane	<0.13	ug/L	0.50	0.13	1		02/03/17 17:16	75-69-4	
1,2,3-Trichloropropane	<0.073	ug/L	4.0	0.073	1		02/03/17 17:16	96-18-4	
1,2,4-Trimethylbenzene	<0.083	ug/L	0.50	0.083	1		02/03/17 17:16	95-63-6	
1,3,5-Trimethylbenzene	<0.078	ug/L	0.50	0.078	1		02/03/17 17:16	108-67-8	
Vinyl chloride	<0.098	ug/L	0.20	0.098	1		02/03/17 17:16	75-01-4	
Xylene (Total)	<0.073	ug/L	1.5	0.073	1		02/03/17 17:16	1330-20-7	
m&p-Xylene	<0.073	ug/L	1.0	0.073	1		02/03/17 17:16	179601-23-1	
o-Xylene	<0.073	ug/L	0.50	0.073	1		02/03/17 17:16	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%.	75-125		1		02/03/17 17:16	460-00-4	
Toluene-d8 (S)	92	%.	75-125		1		02/03/17 17:16	2037-26-5	
1,2-Dichloroethane-d4 (S)	94	%.	75-125		1		02/03/17 17:16	17060-07-0	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 5377 AXUC FOUR CORNERS

Pace Project No.: 40145071

QC Batch: 247516 Analysis Method: WI MOD GRO

QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water

Associated Lab Samples: 40145071001, 40145071002, 40145071003, 40145071004, 40145071005, 40145071006

METHOD BLANK: 1462489 Matrix: Water

Associated Lab Samples: 40145071001, 40145071002, 40145071003, 40145071004, 40145071005, 40145071006

Parameter	Units	Blank Result		Reporting Limit		Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.42		1.0		02/02/17 08:03	
1,3,5-Trimethylbenzene	ug/L	<0.42		1.0		02/02/17 08:03	
Benzene	ug/L	<0.40		1.0		02/02/17 08:03	
Ethylbenzene	ug/L	<0.39		1.0		02/02/17 08:03	
m&p-Xylene	ug/L	<0.80		2.0		02/02/17 08:03	
Methyl-tert-butyl ether	ug/L	<0.48		1.0		02/02/17 08:03	
Naphthalene	ug/L	<0.42		1.0		02/02/17 08:03	
o-Xylene	ug/L	<0.45		1.0		02/02/17 08:03	
Toluene	ug/L	<0.39		1.0		02/02/17 08:03	
a,a,a-Trifluorotoluene (S)	%	102		80-120		02/02/17 08:03	

LABORATORY CONTROL SAMPLE &amp; LCSD: 1462490

1462491

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		18.8	20.2	94	101	80-120	7	20	
1,3,5-Trimethylbenzene	ug/L	20		18.4	19.7	92	98	80-120	7	20	
Benzene	ug/L	20		21.0	21.3	105	106	80-120	1	20	
Ethylbenzene	ug/L	20		19.6	20.6	98	103	80-120	5	20	
m&p-Xylene	ug/L	40		38.6	40.7	96	102	80-120	5	20	
Methyl-tert-butyl ether	ug/L	20		20.4	20.3	102	101	80-120	1	20	
Naphthalene	ug/L	20		18.1	19.3	91	96	80-120	6	20	
o-Xylene	ug/L	20		19.6	20.6	98	103	80-120	5	20	
Toluene	ug/L	20		20.2	20.8	101	104	80-120	3	20	
a,a,a-Trifluorotoluene (S)	%					101	102	80-120			

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 1462529

1462530

Parameter	Units	MS Result		MS Spike Conc.	MS Result	MS % Rec	MS % Rec	% Rec Limits	RPD	Max RPD	Qual
		40145071001	Result	Conc.	Conc.	Result	Rec	Rec		RPD	
1,2,4-Trimethylbenzene	ug/L	<4.2	200	200	170	158	85	79	48-177	7	20
1,3,5-Trimethylbenzene	ug/L	<4.2	200	200	167	156	84	78	73-145	7	20
Benzene	ug/L	937	200	200	1200	1120	130	93	74-139	7	20
Ethylbenzene	ug/L	7.4J	200	200	185	170	89	82	74-140	8	20
m&p-Xylene	ug/L	<8.0	400	400	350	325	88	81	55-165	8	20
Methyl-tert-butyl ether	ug/L	<4.8	200	200	171	163	86	81	80-120	5	20
Naphthalene	ug/L	<4.2	200	200	160	160	80	80	73-133	0	20
o-Xylene	ug/L	<4.5	200	200	176	163	88	81	73-136	8	20
Toluene	ug/L	<3.9	200	200	180	169	90	84	80-128	7	20

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## QUALITY CONTROL DATA

Project: 5377 AXUC FOUR CORNERS  
 Pace Project No.: 40145071

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:			1462529	1462530								
Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD RPD	Max Qual	
a,a,a-Trifluorotoluene (S)	%	40145071001					101	102	80-120			

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## QUALITY CONTROL DATA

Project: 5377 AXUC FOUR CORNERS

Pace Project No.: 40145071

QC Batch:	458599	Analysis Method:	EPA 524.2
QC Batch Method:	EPA 524.2	Analysis Description:	524.2 MSV
Associated Lab Samples:	40145071007		

METHOD BLANK: 2509612 Matrix: Water

Associated Lab Samples: 40145071007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.062	0.50	02/03/17 15:25	
1,1,1-Trichloroethane	ug/L	<0.10	0.50	02/03/17 15:25	
1,1,2,2-Tetrachloroethane	ug/L	<0.11	0.50	02/03/17 15:25	
1,1,2-Trichloroethane	ug/L	<0.098	0.50	02/03/17 15:25	
1,1-Dichloroethane	ug/L	<0.088	0.50	02/03/17 15:25	
1,1-Dichloroethene	ug/L	<0.089	0.50	02/03/17 15:25	
1,1-Dichloropropene	ug/L	<0.080	0.50	02/03/17 15:25	
1,2,3-Trichlorobenzene	ug/L	<0.10	0.50	02/03/17 15:25	
1,2,3-Trichloropropane	ug/L	<0.073	4.0	02/03/17 15:25	
1,2,4-Trichlorobenzene	ug/L	<0.12	0.50	02/03/17 15:25	
1,2,4-Trimethylbenzene	ug/L	<0.083	0.50	02/03/17 15:25	
1,2-Dibromo-3-chloropropane	ug/L	<0.18	4.0	02/03/17 15:25	
1,2-Dibromoethane (EDB)	ug/L	<0.091	0.50	02/03/17 15:25	
1,2-Dichlorobenzene	ug/L	<0.10	0.50	02/03/17 15:25	
1,2-Dichloroethane	ug/L	<0.092	0.50	02/03/17 15:25	
1,2-Dichloropropane	ug/L	<0.084	4.0	02/03/17 15:25	
1,3,5-Trimethylbenzene	ug/L	<0.078	0.50	02/03/17 15:25	
1,3-Dichlorobenzene	ug/L	<0.082	0.50	02/03/17 15:25	
1,3-Dichloropropane	ug/L	<0.094	0.50	02/03/17 15:25	
1,4-Dichlorobenzene	ug/L	<0.075	0.50	02/03/17 15:25	
2,2-Dichloropropane	ug/L	<0.097	1.0	02/03/17 15:25	
2-Chlorotoluene	ug/L	<0.11	0.50	02/03/17 15:25	
4-Chlorotoluene	ug/L	<0.10	0.50	02/03/17 15:25	
Benzene	ug/L	<0.086	0.50	02/03/17 15:25	
Bromobenzene	ug/L	<0.081	0.50	02/03/17 15:25	
Bromochloromethane	ug/L	<0.16	1.0	02/03/17 15:25	
Bromodichloromethane	ug/L	<0.090	1.0	02/03/17 15:25	
Bromoform	ug/L	<0.23	4.0	02/03/17 15:25	
Bromomethane	ug/L	<0.20	4.0	02/03/17 15:25	
Carbon tetrachloride	ug/L	<0.076	1.0	02/03/17 15:25	
Chlorobenzene	ug/L	<0.068	0.50	02/03/17 15:25	
Chloroethane	ug/L	<0.18	1.0	02/03/17 15:25	
Chloroform	ug/L	<0.10	1.0	02/03/17 15:25	
Chloromethane	ug/L	<0.21	4.0	02/03/17 15:25	
cis-1,2-Dichloroethene	ug/L	<0.085	0.50	02/03/17 15:25	
cis-1,3-Dichloropropene	ug/L	<0.071	0.50	02/03/17 15:25	
Dibromochloromethane	ug/L	<0.13	0.50	02/03/17 15:25	
Dibromomethane	ug/L	<0.098	1.0	02/03/17 15:25	
Dichlorodifluoromethane	ug/L	<0.16	1.0	02/03/17 15:25	
Ethylbenzene	ug/L	<0.051	0.50	02/03/17 15:25	
Hexachloro-1,3-butadiene	ug/L	<0.11	4.0	02/03/17 15:25	

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## QUALITY CONTROL DATA

Project: 5377 AXUC FOUR CORNERS

Pace Project No.: 40145071

METHOD BLANK: 2509612

Matrix: Water

Associated Lab Samples: 40145071007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isopropylbenzene (Cumene)	ug/L	<0.11	0.50	02/03/17 15:25	
m&p-Xylene	ug/L	<0.073	1.0	02/03/17 15:25	
Methylene Chloride	ug/L	<0.20	4.0	02/03/17 15:25	
n-Butylbenzene	ug/L	<0.081	0.50	02/03/17 15:25	
n-Propylbenzene	ug/L	<0.096	0.50	02/03/17 15:25	
Naphthalene	ug/L	<0.064	1.0	02/03/17 15:25	
o-Xylene	ug/L	<0.073	0.50	02/03/17 15:25	
p-Isopropyltoluene	ug/L	<0.083	0.50	02/03/17 15:25	
sec-Butylbenzene	ug/L	<0.063	0.50	02/03/17 15:25	
Styrene	ug/L	<0.075	0.50	02/03/17 15:25	
tert-Butylbenzene	ug/L	<0.097	0.50	02/03/17 15:25	
Tetrachloroethene	ug/L	<0.12	0.50	02/03/17 15:25	
Toluene	ug/L	<0.080	0.50	02/03/17 15:25	
trans-1,2-Dichloroethene	ug/L	<0.11	0.50	02/03/17 15:25	
trans-1,3-Dichloropropene	ug/L	<0.055	0.50	02/03/17 15:25	
Trichloroethene	ug/L	<0.044	0.40	02/03/17 15:25	
Trichlorofluoromethane	ug/L	<0.13	0.50	02/03/17 15:25	
Vinyl chloride	ug/L	<0.098	0.20	02/03/17 15:25	
Xylene (Total)	ug/L	<0.073	1.5	02/03/17 15:25	
1,2-Dichloroethane-d4 (S)	%.	98	75-125	02/03/17 15:25	
4-Bromofluorobenzene (S)	%.	98	75-125	02/03/17 15:25	
Toluene-d8 (S)	%.	92	75-125	02/03/17 15:25	

LABORATORY CONTROL SAMPLE &amp; LCSD: 2509613

2509614

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	22.1	22.0	111	110	70-130	1	20	
1,1,1-Trichloroethane	ug/L	20	21.7	21.3	109	106	70-130	2	20	
1,1,2,2-Tetrachloroethane	ug/L	20	20.4	21.0	102	105	70-130	3	20	
1,1,2-Trichloroethane	ug/L	20	22.1	22.0	110	110	70-130	0	20	
1,1-Dichloroethane	ug/L	20	21.3	20.8	106	104	70-130	2	20	
1,1-Dichloroethene	ug/L	20	21.7	21.3	108	106	70-130	2	20	
1,1-Dichloropropene	ug/L	20	23.3	22.3	116	112	70-130	4	20	
1,2,3-Trichlorobenzene	ug/L	20	21.2	21.2	106	106	70-130	0	20	
1,2,3-Trichloropropane	ug/L	20	20.3	20.9	101	105	70-130	3	20	
1,2,4-Trichlorobenzene	ug/L	20	19.5	19.7	97	98	70-130	1	20	
1,2,4-Trimethylbenzene	ug/L	20	19.3	18.9	96	95	70-130	2	20	
1,2-Dibromo-3-chloropropane	ug/L	50	46.4	47.9	93	96	70-130	3	20	
1,2-Dibromoethane (EDB)	ug/L	20	21.2	20.9	106	105	70-130	1	20	
1,2-Dichlorobenzene	ug/L	20	20.7	20.7	104	104	70-130	0	20	
1,2-Dichloroethane	ug/L	20	20.8	20.4	104	102	70-130	2	20	
1,2-Dichloropropane	ug/L	20	22.6	22.0	113	110	70-130	3	20	
1,3,5-Trimethylbenzene	ug/L	20	19.7	19.1	99	96	70-130	3	20	
1,3-Dichlorobenzene	ug/L	20	21.0	20.9	105	105	70-130	1	20	

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 5377 AXUC FOUR CORNERS

Pace Project No.: 40145071

LABORATORY CONTROL SAMPLE &amp; LCSD: 2509613

2509614

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	% Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,3-Dichloropropane	ug/L	20	21.3	21.2	107	106	70-130	1	20	
1,4-Dichlorobenzene	ug/L	20	21.3	20.9	106	105	70-130	2	20	
2,2-Dichloropropane	ug/L	20	20.4	19.6	102	98	70-130	4	20	
2-Chlorotoluene	ug/L	20	19.1	19.1	96	95	70-130	0	20	
4-Chlorotoluene	ug/L	20	20.0	19.8	100	99	70-130	1	20	
Benzene	ug/L	20	20.7	20.3	104	101	70-130	2	20	
Bromobenzene	ug/L	20	22.0	21.6	110	108	70-130	2	20	
Bromoform	ug/L	20	24.5	24.3	123	121	70-130	1	20	
Bromochloromethane	ug/L	20	23.9	23.4	120	117	70-130	2	20	
Bromodichloromethane	ug/L	20	18.6	18.9	93	94	70-130	2	20	
Bromoform	ug/L	20	20.9	21.2	104	106	70-130	1	20	
Bromomethane	ug/L	20	23.1	22.2	116	111	70-130	4	20	
Carbon tetrachloride	ug/L	20	21.1	21.0	106	105	70-130	1	20	
Chlorobenzene	ug/L	20	23.3	21.9	117	109	70-130	6	20	
Chloroethane	ug/L	20	21.4	21.0	107	105	70-130	2	20	
Chloroform	ug/L	20	17.1	17.4	85	87	70-130	2	20	
Chloromethane	ug/L	20	21.7	21.2	108	106	70-130	2	20	
cis-1,2-Dichloroethene	ug/L	20	21.1	21.1	106	105	70-130	0	20	
cis-1,3-Dichloropropene	ug/L	20	21.7	21.9	109	110	70-130	1	20	
Dibromochloromethane	ug/L	20	22.9	22.4	114	112	70-130	2	20	
Dibromomethane	ug/L	20	20.0	19.3	100	96	70-130	4	20	
Ethylbenzene	ug/L	20	20.2	19.8	101	99	70-130	2	20	
Hexachloro-1,3-butadiene	ug/L	20	21.7	21.9	108	109	70-130	1	20	
Isopropylbenzene (Cumene)	ug/L	20	19.5	18.9	97	95	70-130	3	20	
m&p-Xylene	ug/L	40	40.6	39.6	102	99	70-130	3	20	
Methylene Chloride	ug/L	20	23.1	22.9	116	115	70-130	1	20	
n-Butylbenzene	ug/L	20	18.7	18.2	94	91	70-130	3	20	
n-Propylbenzene	ug/L	20	19.4	18.8	97	94	70-130	3	20	
Naphthalene	ug/L	20	17.9	18.4	89	92	70-130	3	20	
o-Xylene	ug/L	20	19.7	19.4	98	97	70-130	1	20	
p-Isopropyltoluene	ug/L	20	18.4	18.1	92	90	70-130	2	20	
sec-Butylbenzene	ug/L	20	19.3	19.0	96	95	70-130	2	20	
Styrene	ug/L	20	20.4	20.2	102	101	70-130	1	20	
tert-Butylbenzene	ug/L	20	19.3	18.7	96	93	70-130	3	20	
Tetrachloroethene	ug/L	20	22.3	21.8	112	109	70-130	3	20	
Toluene	ug/L	20	20.4	20.3	102	102	70-130	0	20	
trans-1,2-Dichloroethene	ug/L	20	22.2	21.9	111	109	70-130	1	20	
trans-1,3-Dichloropropene	ug/L	20	20.6	20.7	103	103	70-130	0	20	
Trichloroethene	ug/L	20	23.9	23.2	120	116	70-130	3	20	
Trichlorofluoromethane	ug/L	20	24.9	24.0	124	120	70-130	4	20	
Vinyl chloride	ug/L	20	21.0	20.5	105	102	70-130	3	20	
Xylene (Total)	ug/L	60	60.3	59.0	101	98	70-130	2	20	
1,2-Dichloroethane-d4 (S)	%.				94	93	75-125			
4-Bromofluorobenzene (S)	%.				95	95	75-125			
Toluene-d8 (S)	%.				93	94	75-125			

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 5377 AXUC FOUR CORNERS

Pace Project No.: 40145071

Parameter	Units	60237026001		MS		MSD		MS		MSD		% Rec	Limits	Max RPD	RPD	Qual
		Result	Conc.	Spike	Conc.	Result	MSD	Result	% Rec	MSD	% Rec					
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	22.2	21.1	111	105	70-130	5	20					
1,1,1-Trichloroethane	ug/L	ND	20	20	22.6	22.0	113	110	70-130	3	20					
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	20.8	20.1	104	101	70-130	3	20					
1,1,2-Trichloroethane	ug/L	ND	20	20	21.5	20.8	108	104	70-130	3	20					
1,1-Dichloroethane	ug/L	ND	20	20	21.5	20.8	107	104	70-130	3	20					
1,1-Dichloroethene	ug/L	ND	20	20	23.2	22.4	116	112	70-130	4	20					
1,1-Dichloropropene	ug/L	ND	20	20	24.1	23.7	120	118	70-130	2	20					
1,2,3-Trichlorobenzene	ug/L	ND	20	20	20.6	21.5	103	108	70-130	4	20					
1,2,3-Trichloropropane	ug/L	ND	20	20	20.7	20.1	103	101	70-130	3	20					
1,2,4-Trichlorobenzene	ug/L	ND	20	20	18.9	19.1	95	95	70-130	1	20					
1,2,4-Trimethylbenzene	ug/L	0.23J	20	20	18.3	17.9	91	89	70-130	2	20					
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	50.6	48.3	101	97	70-130	5	20					
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	20.4	20.2	102	101	70-130	1	20					
1,2-Dichlorobenzene	ug/L	ND	20	20	20.2	19.9	101	100	70-130	1	20					
1,2-Dichloroethane	ug/L	ND	20	20	20.0	19.9	100	100	70-130	1	20					
1,2-Dichloropropane	ug/L	ND	20	20	22.1	22.0	110	110	70-130	1	20					
1,3,5-Trimethylbenzene	ug/L	0.14J	20	20	18.7	18.5	93	92	70-130	1	20					
1,3-Dichlorobenzene	ug/L	ND	20	20	20.2	19.8	101	99	70-130	2	20					
1,3-Dichloropropane	ug/L	ND	20	20	20.9	20.2	105	101	70-130	4	20					
1,4-Dichlorobenzene	ug/L	ND	20	20	20.2	19.8	101	99	70-130	2	20					
2,2-Dichloropropane	ug/L	ND	20	20	21.0	20.2	105	101	70-130	4	20					
2-Chlorotoluene	ug/L	ND	20	20	18.6	18.2	93	91	70-130	2	20					
4-Chlorotoluene	ug/L	ND	20	20	19.5	18.8	98	94	70-130	4	20					
Benzene	ug/L	ND	20	20	20.9	20.5	104	102	70-130	2	20					
Bromobenzene	ug/L	ND	20	20	21.3	21.0	106	105	70-130	1	20					
Bromochloromethane	ug/L	ND	20	20	23.8	23.5	119	117	70-130	1	20					
Bromodichloromethane	ug/L	ND	20	20	23.7	23.2	118	116	70-130	2	20					
Bromoform	ug/L	ND	20	20	18.5	18.3	93	92	70-130	1	20					
Bromomethane	ug/L	ND	20	20	21.5	20.5	107	102	70-130	5	20					
Carbon tetrachloride	ug/L	ND	20	20	23.9	23.3	120	117	70-130	2	20					
Chlorobenzene	ug/L	ND	20	20	21.0	20.3	105	101	70-130	4	20					
Chloroethane	ug/L	ND	20	20	21.6	20.7	108	103	70-130	4	20					
Chloroform	ug/L	ND	20	20	21.3	20.6	106	103	70-130	3	20					
Chloromethane	ug/L	ND	20	20	15.9	16.2	80	81	70-130	2	20					
cis-1,2-Dichloroethene	ug/L	ND	20	20	21.2	21.2	106	106	70-130	0	20					
cis-1,3-Dichloropropene	ug/L	ND	20	20	20.5	19.9	103	100	70-130	3	20					
Dibromochloromethane	ug/L	ND	20	20	21.2	20.8	106	104	70-130	2	20					
Dibromomethane	ug/L	ND	20	20	22.5	22.4	112	112	70-130	0	20					
Dichlorodifluoromethane	ug/L	ND	20	20	24.0	24.1	120	121	70-130	0	20					
Ethylbenzene	ug/L	0.00031J	20	20	20.3	19.7	100	97	70-130	3	20					
		mg/L														
Hexachloro-1,3-butadiene	ug/L	ND	20	20	20.4	21.9	102	110	70-130	7	20					
Isopropylbenzene (Cumene)	ug/L	ND	20	20	18.4	18.0	92	90	70-130	2	20					
m&p-Xylene	ug/L	0.13J	40	40	40.0	38.5	100	96	70-130	4	20					
Methylene Chloride	ug/L	ND	20	20	23.2	22.4	116	112	70-130	3	20					

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## QUALITY CONTROL DATA

Project: 5377 AXUC FOUR CORNERS

Pace Project No.: 40145071

Parameter	Units	60237026001		MS		MSD		MS		MSD		% Rec	Limits	Max	
		Result	Spike Conc.	Spike Conc.	Result	MSD	Result	% Rec	MSD % Rec	RPD RPD	Qual			RPD	Max Qual
n-Butylbenzene	ug/L	ND	20	20	17.2	17.3	86	87	70-130	1	20				
n-Propylbenzene	ug/L	ND	20	20	18.3	18.1	91	90	70-130	1	20				
Naphthalene	ug/L	0.00023J mg/L	20	20	19.5	19.1	96	94	70-130	2	20				
o-Xylene	ug/L	ND	20	20	19.2	18.8	96	94	70-130	2	20				
p-Isopropyltoluene	ug/L	ND	20	20	16.9	16.6	84	83	70-130	2	20				
sec-Butylbenzene	ug/L	ND	20	20	17.7	17.4	89	87	70-130	2	20				
Styrene	ug/L	ND	20	20	19.9	19.4	100	97	70-130	3	20				
tert-Butylbenzene	ug/L	ND	20	20	17.8	17.5	89	88	70-130	1	20				
Tetrachloroethene	ug/L	ND	20	20	22.4	22.2	112	111	70-130	1	20				
Toluene	ug/L	ND	20	20	20.8	19.9	104	99	70-130	5	20				
trans-1,2-Dichloroethene	ug/L	ND	20	20	22.7	22.6	114	113	70-130	1	20				
trans-1,3-Dichloropropene	ug/L	ND	20	20	20.1	19.6	100	98	70-130	3	20				
Trichloroethene	ug/L	ND	20	20	24.2	24.1	121	120	70-130	0	20				
Trichlorofluoromethane	ug/L	ND	20	20	27.8	27.2	139	136	70-130	2	20	M1			
Vinyl chloride	ug/L	ND	20	20	22.5	22.8	112	114	70-130	2	20				
Xylene (Total)	ug/L	ND	60	60	59.2	57.3	99	95	70-130	3	20				
1,2-Dichloroethane-d4 (S)	%						93	93	75-125						
4-Bromofluorobenzene (S)	%						97	97	75-125						
Toluene-d8 (S)	%						93	92	75-125						

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## QUALIFIERS

Project: 5377 AXUC FOUR CORNERS  
Pace Project No.: 40145071

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay  
PASI-M Pace Analytical Services - Minneapolis

### ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 5377 AXUC FOUR CORNERS  
Pace Project No.: 40145071

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40145071001	MW1R	WI MOD GRO	247516		
40145071002	MW2R	WI MOD GRO	247516		
40145071003	MW3	WI MOD GRO	247516		
40145071004	MW4	WI MOD GRO	247516		
40145071005	MW5	WI MOD GRO	247516		
40145071006	MW6	WI MOD GRO	247516		
40145071007	POTABLE	EPA 524.2	458599		

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name:	RET
Branch/Location:	
Project Contact:	Dave Lassila
Phone:	763-675-9767
Project Number:	5377AHC
Project Name:	Fair Grounds
Project State:	IL
Sampled By (Print):	Dave Lassila
Sampled By (Sign):	<i>Dave Lassila</i>
PO #:	



www.pacelets.com

## CHAIN OF CUSTODY

Data Package Options		MS/MSD	Matrix Codes	Preservation Codes	
<input type="checkbox"/>	EPA Level III	<input type="checkbox"/> On your sample	A = Air B = Biota C = Charcoal S = Soil	B = HCl D = H <sub>2</sub> SO <sub>4</sub> E = DI Water F = Methanol G = NaOH H = Sodium Bisulfite Solution I = Sodium Thiosulfate	J = Other
<input type="checkbox"/>	EPA Level IV	<input type="checkbox"/> NOT needed on your sample	W = Water DW = Drinking Water GW = Ground Water SW = Surface Water WW = Waste Water WP = Wipe SI = Sludge	Pick Letter	

Y/N	N	N
PICK LETTER	B	B
Analyses Requested		
PAC/N		
VOC 524.2		

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	TIME	MATRIX	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	Murk	4/26/07	4:30	Cu	X		
002	Murk		4:40		X		
003	Murk		4:50		X		
004	Murk		5:00		X		
005	Murk		5:10		X		
006	Murk	5/20	5		X		
007	Murk		5:30	DW	X		

Relinquished By:	Date/Time:	Received By:	Date/Time:	PACE Project No.
<i>Dave Lassila</i>	1-30-07 08:54AM	<i>Dave Lassila</i>	1/30/07 8:54AM	40145071
Transmit Prelim Rush Results by (complete what you want):				
Relinquished By:	Date/Time:	Received By:	Date/Time:	Receipt Temp =
<i>Dave Lassila</i>	1/31/07 9:00AM	<i>Dave Lassila</i>	1/31/07 9:00AM	40145071
Telephone:	Date/Time:	Received By:	Date/Time:	Sample Receipt pH
Fax:	Date/Time:	Received By:	Date/Time:	OK / Adjusted
Samples on HOLD are subject to special pricing and release of liability	Date/Time:	Received By:	Date/Time:	Cooler Custody Seal
				Present / Not Present
				Intact / Not Intact

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

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40145071

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## Sample Condition Upon Receipt

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

Project #

WO# : 40145071



40145071

Client Name: REI

Courier:  Fed Ex  UPS  Client  Pace Other: WAT10  
Tracking #: 1d72837-1

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  noCustody Seal on Samples Present:  yes  no Seals intact:  yes  noPacking Material:  Bubble Wrap  Bubble Bags  None  OtherThermometer Used: N/AType of Ice: Wet Blue Dry NoneCooler Temperature Uncorr: KD1 /Corr:Biological Tissue is Frozen:  yes noTemp Blank Present:  yes  no

Temp should be above freezing to 6°C for all sample except Biota.

Frozen Biota Samples should be received ≤ 0°C.

Person examining contents:

Date: 4/11/17Initials: JH

## 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: - VOA Samples frozen upon receipt	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	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 type="checkbox"/> No <input type="checkbox"/> N/A	8.		
Correct Containers Used: - Pace Containers Used: - Pace IR Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.		
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 type="checkbox"/> N/A	11.		
Sample Labels match COC: - Includes date/time/ID/Analysis Matrix:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>002 1-40 ml vB no date</u> <u>BB 2/1/17</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"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH +ZnAct		
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
exceptions: <u>VOA</u> coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	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):				

## Client Notification/ Resolution:

If checked, see attached form for additional comments 

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: BBDate: 2/1/17